(This is a public announcement for information purposes only. Not for publication or distribution, directly or indirectly, inside the United States)

PUBLIC ANNOUNCEMENT

IRB INFRASTRUCTURE TRUST

(An irrevocable trust set up under the Indian Trusts Act, 1882 and registered as an infrastructure investment trust with the Securities and Exchange Board of India)

Principal place of business: Off No-11th Floor/1101, Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India

SEBI Registration Number: IN/InvIT/19-20/0012; **Tel**: +91 22 6733 6400 | **Website:** www.irbinfratrust.co.in |

Compliance Officer: Mr. Kaustubh Shevade; **E-mail**: kaustubh.shevade@irb.co.in

Sponsor	Investment Manager	Trustee
IRB Infrastructure Developers Limited	**MMK Toll Road Private Limited**	**IDBI Trusteeship Services Limited**

ISSUE OF UP TO 142,400,006 UNITS (THE "UNITS") REPRESENTING AN UNDIVIDED BENEFICIAL INTEREST IN IRB INFRASTRUCTURE TRUST (THE "TRUST") AT A PRICE OF ₹200.98[*] PER UNIT (THE "ISSUE PRICE") AGGREGATING UP TO ₹28,619.50 MILLION ON A RIGHTS BASIS TO ELIGIBLE UNITHOLDERS IN THE RATIO OF ONE UNIT FOR EVERY 6.17[**] UNITS HELD BY THEM ON THE RECORD DATE (THE "ISSUE"). THE RECORD DATE IS JULY 28, 2023.

[*]*The Issue Price is ₹200.979634. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

[**]*The Rights Entitlement Ratio is one Unit for every 6.174812 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

This public announcement is being made in compliance with paragraph 9.3.5. of Chapter 9 of the Master Circular on Infrastructure Investment Trusts (InvITs) bearing reference number SEBI/HO/DDHS-PoD-2/P/CIR/2023/115 dated July 6, 2023 (the "**SEBI Master Circular**"), issued by the Securities and Exchange Board of India (the "**SEBI**") to inform the public that the Trust has filed a letter of offer dated August 2, 2023 (the "**Letter of Offer**") with SEBI and the National Stock Exchange of India Limited (the "**NSE**" or the "**Stock Exchange**") in relation to the Issue. The Issue is a fast-track rights issue under the SEBI Master Circular.

INVESTMENTS IN UNITS INVOLVE RISKS AND INVESTORS SHOULD NOT INVEST ANY FUNDS IN THE ISSUE UNLESS THEY CAN AFFORD TO TAKE THE RISK OF LOSING THEIR ENTIRE INVESTMENT. FOR MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE TRUST, THE UNITS, THE ISSUE, AND THE LETTER OF OFFER. INVESTORS ARE ADVISED TO CAREFULLY READ THE LETTER OF OFFER, INCLUDING THE SECTIONS "RISK FACTORS" AND "RIGHTS OF UNITHOLDERS". THE UNITS HAVE NOT BEEN RECOMMENDED OR APPROVED BY THE SEBI OR THE NSE NOR DOES THE SEBI OR THE NSE GUARANTEE THE ACCURACY OR ADEQUACY OF THE CONTENTS OF THE LETTER OF OFFER.

ISSUE SCHEDULE[*]

ISSUE OPENS ON	**AUGUST 3, 2023, THURSDAY**
LAST DATE FOR REQUEST FOR RENUNCIATION	**AUGUST 3, 2023, THURSDAY**
ISSUE CLOSES ON	**AUGUST 8, 2023, TUESDAY[#]**

[*] *Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*

[#] *The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.*

Pursuant to the provisions of Chapter 9 of the SEBI Master Circular, the Rights Entitlements, shall be credited only in dematerialized form to the demat account of the Eligible Unitholders before the Issue Opening Date with ISIN INE0C8K20042. Eligible Unitholders can obtain the details of their respective Rights Entitlements from the website of the Registrar (https://rights.kfintech.com) by entering their DP ID and Client ID. The link for details of Rights Entitlements will also be available on the website of the Trust (www.irbinfratrust.co.in).

Capitalized terms used and not defined herein shall have the meanings given to such terms in the Letter of Offer.

LEAD MANAGER	REGISTRAR TO THE ISSUE
VIVRO	KFINTECH
Vivro Financial Services Private Limited 607/608 Marathon Icon, Opp. Peninsula Corporate Park Off. Ganpatrao Kadam Marg Veer Santaji Lane, Lower Parel Mumbai 400 013, Maharashtra, India **Tel**: +91 22 6666 8040 **Email**: investors@vivro.net **Investor grievance email**: investors@vivro.net **Website**: www.vivro.net **SEBI registration number**: INM000010122 **CIN**: U67120GJ1996PTC029182	**Kfin Technologies Limited** Selenium Tower-B, Plot No. 31 &32 Gachibowli, Financial District, Nanakramguda Serilingampally, Hyderabad 500 032, Telangana, India **Tel**: +91 40 6716 2222/1800 309 4001 **Email**: irb.rights@kfintech.com **SEBI registration number**: INR000000221 **Contact person**: M. Murali Krishna **Website**: www.kfintech.com **Investor Grievance Email**: einward.ris@kfintech.com **CIN**: L72400TG2017PLC117649

On behalf of MMK Toll Road Private Limited
(acting in its capacity as the Investment Manager of IRB Infrastructure Trust)
SD/-
Compliance Officer
Place: Mumbai
Date: August 2, 2023

IRB Infrastructure Trust (acting through its investment manager, MMK Toll Road Private Limited), is proposing, subject to the receipt of applicable approvals, market conditions and other considerations, to undertake a rights issue of its units ("**Units**") and has filed a letter of offer dated August 2, 2023 ("**LOF**") with the Securities and Exchange Board of India ("**SEBI**") and the National Stock Exchange of India Limited ("**NSE**"). The LOF is available on the websites of Vivro Financial Services Private Limited (the Lead Manager), the IRB Infrastructure Trust and its Sponsor (IRB Infrastructure Developers Limited) at www.vivro.net, www.irbinfratrust.co.in and www.irb.co.in, respectively, and will be available on the websites of the SEBI and the NSE at https://www.sebi.gov.in and https://www.nseindia.com, respectively. Investors should not that investment in Units involves a high degree of risk and should carefully read the section "*Risk Factors*" on page 15 of the LOF.

The Rights Entitlements and the Units have not been and will not be registered under the U.S. Securities Act, or any U.S. state securities laws and may not be offered, sold, resold or otherwise transferred within the united states, except in a transaction exempt from the registration requirements of the U.S. Securities Act. The Units and Rights Entitlements referred to in the Letter of Offer are being offered and sold in offshore transactions outside the United States in compliance with Regulation S to unitholders located in jurisdictions where such offer and sale of the Units are permitted under laws of such jurisdictions. The Issue is not, and under no circumstances is to be construed as, an offering of any Units or Rights Entitlements for sale in the United States or as a solicitation therein of an offer to buy any of the said securities. The distribution of the Letter of Offer or the disclosure of its contents without the Investment Manager's prior consent to any person other than the Eligible Unitholders is unauthorized and prohibited.

Letter of Offer
Dated August 2, 2023
For Eligible Unitholders only

IRB INFRASTRUCTURE TRUST

(An irrevocable trust set up under the Indian Trusts Act, 1882 and registered as an infrastructure investment trust with the Securities and Exchange Board of India)
Principal place of business: Off No-11th Floor/1101, Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India
SEBI Registration Number: IN/InvIT/19-20/0012; **Tel**: +91 22 6733 6400 | **Website:** www.irbinfratrust.co.in |
Compliance Officer: Mr. Kaustubh Shevade; **E-mail**: kaustubh.shevade@irb.co.in

Sponsor	Investment Manager	Trustee
IRB Infrastructure Developers Limited	**MMK Toll Road Private Limited**	**IDBI Trusteeship Services Limited**

FOR PRIVATE CIRCULATION TO THE ELIGIBLE UNITHOLDERS OF THE IRB INFRASTRUCTURE TRUST ONLY

Issue of up to 142,400,006 units (the "**Units**") representing an undivided beneficial interest in IRB Infrastructure Trust (the "**Trust**") at a price of ₹200.98* per Unit (the "**Issue Price**") aggregating up to ₹28,619.50 million on a rights basis to Eligible Unitholders in the ratio of one Unit for every 6.17** Units held by them on the Record Date (the "**Issue**"). The Record Date is July 28, 2023.

**The Issue Price is ₹200.979634. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
***The Rights Entitlement Ratio is one Unit for every 6.174812 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

THE ISSUE IS BEING MADE ONLY TO ELIGIBLE UNITHOLDERS IN RELIANCE UPON CHAPTER 9 OF THE MASTER CIRCULAR FOR INFRASTRUCTURE INVESTMENT TRUSTS (INVITS) DATED JULY 6, 2023 ISSUED BY THE SECURITIES AND EXCHANGE BOARD OF INDIA ("SEBI MASTER CIRCULAR") AND THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014, EACH AS AMENDED.

This Letter of Offer relates to the Issue to existing Eligible Unitholders as on the Record Date under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 and the SEBI Master Circular.

Each of the Investment Manager and the Lead Manager, having made all reasonable inquiries, accepts responsibility for and confirms that this Letter of Offer contains all information with regard to the Trust, the Units and the Issue, which is material in the context of the Issue, that the information contained in this Letter of Offer is true and correct in all material aspects and is not misleading in any material respect, that the opinions and intentions expressed herein are honestly held and that there are no other facts, the omission of which makes this Letter of Offer as a whole or any of such information or the expression of any such opinions or intentions misleading in any material respect.

The existing Units of the Trust are listed on National Stock Exchange of India Limited ("**NSE**" or the "**Stock Exchange**" or the "**Designated Stock Exchange**"). The Trust has received in-principle approval from the NSE for the listing of the Units to be allotted pursuant to the Issue through its letter dated July 31, 2023. The Investment Manager (on behalf of the Trust) will also make an application to the Stock Exchange to obtain trading approval for the Rights Entitlements. A copy of this Letter of Offer has been submitted to the SEBI and the Stock Exchange.

This Letter of Offer has not been, and will not be, registered as a prospectus, will not be circulated or distributed to the public at large in India or any other jurisdiction, and will not constitute a public offer in India or any other jurisdiction.

THIS LETTER OF OFFER IS PERSONAL TO EACH ELIGIBLE UNITHOLDER. THIS LETTER OF OFFER HAS BEEN PREPARED BY THE INVESTMENT MANAGER SOLELY FOR PROVIDING INFORMATION IN CONNECTION WITH THE ISSUE.

YOU MAY NOT, AND ARE NOT AUTHORIZED TO, (1) DELIVER THIS LETTER OF OFFER TO ANY OTHER PERSON; OR (2) REPRODUCE THIS LETTER OF OFFER IN ANY MANNER WHATSOEVER. ANY DISTRIBUTION OR REPRODUCTION OF THIS LETTER OF OFFER, IN WHOLE OR IN PART, IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS INSTRUCTION MAY RESULT IN A VIOLATION OF THE SECURITIES AND EXCHANGE BOARD OF INDIA (INFRASTRUCTURE INVESTMENT TRUSTS) REGULATIONS, 2014 OR OTHER APPLICABLE LAWS OF INDIA AND OF OTHER JURISDICTIONS.

INVESTMENTS IN UNITS INVOLVE RISKS AND INVESTORS SHOULD NOT INVEST ANY FUNDS IN THE ISSUE UNLESS THEY CAN AFFORD TO TAKE THE RISK OF LOSING THEIR ENTIRE INVESTMENT. FOR MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE TRUST, THE UNITS, THE ISSUE, AND THIS LETTER OF OFFER. INVESTORS ARE ADVISED TO CAREFULLY READ THIS LETTER OF OFFER, INCLUDING THE SECTIONS "RISK FACTORS" AND "RIGHTS OF UNITHOLDERS" ON PAGES 15 AND 257, RESPECTIVELY. THE UNITS HAVE NOT BEEN RECOMMENDED OR APPROVED BY THE SECURITIES AND EXCHANGE BOARD OF INDIA (THE "SEBI") OR THE NATIONAL STOCK EXCHANGE OF INDIA ("NSE" OR THE "STOCK EXCHANGE") NOR DOES THE SEBI OR THE NSE GUARANTEE THE ACCURACY OR ADEQUACY OF THE CONTENTS OF THIS LETTER OF OFFER. EACH ELIGIBLE UNITHOLDER IS ADVISED TO CONSULT ITS OWN ADVISORS ABOUT THE CONSEQUENCES OF AN INVESTMENT IN THE UNITS BEING OFFERED PURSUANT TO THIS LETTER OF OFFER.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

The distribution of this Letter of Offer or the disclosure of their contents without the Investment Manager's prior consent to any person other than the Eligible Unitholders is unauthorized and prohibited. Each Eligible Unitholder, by accepting delivery of this Letter of Offer, agrees to observe the foregoing restrictions and to make no copies of this Letter of Offer or any documents referred to in this Letter of Offer.

ISSUE SCHEDULE*

ISSUE OPENS ON	**AUGUST 3, 2023, THURSDAY**
LAST DATE FOR REQUEST FOR RENUNCIATION	**AUGUST 3, 2023, THURSDAY**
ISSUE CLOSES ON	**AUGUST 8, 2023, TUESDAY#**

** Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*
 # The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.

LEAD MANAGER	REGISTRAR TO THE ISSUE
Vivro Financial Services Private Limited 607/608 Marathon Icon, Opp. Peninsula Corporate Park, Off. Ganpatrao Kadam Marg Veer Santaji Lane, Lower Parel Mumbai 400 013, Maharashtra, India **Tel**: +91 22 6666 8040 **Email**: investors@vivro.net **SEBI registration number**: INM000010122 **Contact person**: Jay Shah **Website**: www.vivro.net **Investor Grievance Email**: investors@vivro.net **CIN**: U67120GJ1996PTC029182	**KFin Technologies Limited** Selenium Tower-B, Plot No. 31 &32 Gachibowli, Financial District, Nanakramguda Serilingampally, Hyderabad 500 032, Telangana, India **Tel**: +91 40 6716 2222/1800 309 4001 **Email**: irb.rights@kfintech.com **SEBI registration number**: INR000000221 **Contact person**: M. Murali Krishna **Website**: www.kfintech.com **Investor Grievance Email**: einward.ris@kfintech.com **CIN**: L72400TG2017PLC117649

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NOTICE TO INVESTORS

The statements contained in this Letter of Offer relating to the Trust, the Units and the Target SPV are material, true, correct and adequate to enable investors to make an informed decision. The opinions and intentions expressed in this Letter of Offer with regard to the Trust, Units and the Target SPV are honestly held, have been reached after considering all relevant circumstances and are based on reasonable assumptions and information presently available with the Investment Manager or the Sponsor/Project Manager. There are no other facts in relation to the Trust, the Units and the Target SPV, the omission of which would, in the context of the Issue, make any statement in this Letter of Offer misleading in any material respect. Further, each of the Investment Manager and the Sponsor/Project Manager has made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements.

This Letter of Offer is solely for the use of the person who has received it from the Investment Manager or the Lead Manager. This Letter of Offer is not to be reproduced or distributed to any other person. Further, this Letter of Offer and the Application Form will be sent only to the e-mail addresses of Eligible Unitholders who have provided their e-mail addresses to the Investment Manager.

Each Applicant must rely on its own examination of the Trust and the Target SPV and the merits and risks involved in investing in the Units. Applicants should not construe the contents of this Letter of Offer as legal, tax, accounting or investment advice.

The delivery of this Letter of Offer, at any time, does not imply that the information contained in it is correct as of any time subsequent to its date. This Letter of Offer is personal to each Eligible Unitholder. This Letter of Offer shall not be relied upon by, and the Lead Manager, the Investment Manager, the Trustee and/or the Sponsor/Project Manager shall not be liable to any subsequent acquirer, transferee or investor of the Units.

The distribution of this Letter of Offer or the disclosure of their contents to any person, other than the Eligible Unitholders to whom they are addressed and those retained by such Eligible Unitholders to enable them to make a decision with respect to their subscription to the Units, is unauthorized and prohibited. Each Applicant agrees to observe the foregoing restrictions and make no copies of this Letter of Offer or any other material in connection with the Issue or the Units.

Each Applicant will be deemed to have made the representations, agreements and acknowledgments as described in this section "*Notice to Investors*". Nothing contained herein will relieve any party of its rights or obligations under the Framework Agreement.

Notice to Investors in certain other jurisdictions

The distribution of this Letter of Offer, the Application Form and the issue of the Units in certain jurisdictions may be restricted by law. As such, this Letter of Offer does not constitute, and may not be used for, or in connection with, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or to any person to whom it is unlawful to make such offer or solicitation. In particular, no action has been taken by the Investment Manager or the Lead Manager which would permit an issue of the Units in any jurisdiction other than India. Accordingly, the Units may not be offered or sold, directly or indirectly, and neither this Letter of Offer nor any Issue materials in connection with the Units be distributed or published in or from any country or jurisdiction that would require registration of the Units in such country or jurisdiction.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

Representations by Applicants

References herein to "you" or "your" is to each Applicant.

By subscribing to the Units pursuant to the Issue, you are deemed to have represented to the Trustee, the Investment Manager, the Lead Manager and the Sponsor/ Project Manager, and you acknowledge and agree as follows:

1. You are permitted to acquire the Units under the laws of any applicable jurisdiction and that you have necessary capacity and authority, and have obtained all necessary consents and authorizations to enable you to commit to this participation in the Issue and to perform your obligations in relation thereto (including, without limitation, on behalf of any person) and honor such obligations;

2. You will make all necessary filings, in relation to the Issue and your investment in Units, with appropriate governmental, statutory or regulatory authorities, including the RBI, as may be required, in accordance with applicable law;

3. You are aware that the Units have not been, and will not be registered through a prospectus under the InvIT Regulations, or under any other law in force in India. This Letter of Offer will be submitted to the SEBI and the Stock Exchange;

4. None of the Trust, the Sponsor/ Project Manager, the Investment Manager, the Trustee, the Lead Manager, the Project SPVs, the Target SPV or any of their respective shareholders, directors, officers, employees, counsel, representatives, advisers, agents or affiliates is making any recommendations to you or advising you regarding the suitability of any transactions it may enter into in connection with the Issue. None of the Trust, the Sponsor/ Project Manager, the Trustee, the Investment Manager, the Lead Manager, the Project SPVs, the Target SPV or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisers, agents or affiliates have any duties or responsibilities to you for providing the protection afforded to their clients, or for providing advice in relation to the Issue and are in no way acting in a fiduciary capacity towards you;

5. All statements, other than statements of historical fact included in this Letter of Offer, including, without limitation, those regarding the Trust's financial position, business strategy, plans and objectives for future operations and the Investment Objectives, are forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause actual results to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. Such forward-looking statements are based on numerous assumptions regarding the Trust's present and future business strategies and the environment in which the Trust will operate in the future. You should not place undue reliance on forward-looking statements, which speak only as of the date of this Letter of Offer. The Trust, the Trustee, the Sponsor, the Lead Manager and the Investment Manager assume no responsibility to update any of the forward-looking statements contained in this Letter of Offer;

6. You have been provided a copy of this Letter of Offer and have read it in its entirety including, in particular, the section "*Risk Factors*" on page 15;

7. You are aware and understand that the Units are being offered only to Eligible Unitholders on the Record Date on a rights basis and are not being offered to the general public;

8. In making your investment decision, you have (i) relied on your own examination of the Trust, the Target SPV, the Units and the terms of the Issue, including the merits and risks involved, (ii) consulted your own independent advisors or otherwise have satisfied yourself concerning, without limitation, the effects of local laws and (iii) received all information in this Letter of Offer that you believe is necessary or appropriate in order to make an investment decision in respect of Trust and the Units;

9. You acknowledge that an investment in the Units involves a high degree of risk and that the Units are, therefore, a speculative investment. You are seeking to subscribe to the Units in the Issue for your own investment and not with a view to resell or distribute in any manner that could characterize you as an underwriter or similar party in any jurisdiction;

10. You will obtain your own independent legal, financial or tax advice and will not rely on the Investment Manager, the Sponsor/ Project Manager, the Trustee, the Lead Manager or any of their respective shareholders, employees, counsel, officers, directors, representatives, advisers, agents or affiliates when evaluating the tax consequences in relation to the Units (including but not limited to the Issue and the use of the proceeds of the Issue);

11. You are not the Trustee, the Valuer of the Trust or an employee of the Valuer of the Trust or the valuer involved in the valuation of the Project SPVs or the Target SPV;

12. You understand that the Units to be Allotted in the Issue will, when issued, be credited as fully paid and will rank *pari passu* in all respect with all other Units, including in respect of the right to receive all distributions declared, made or paid in respect of the Units after the Allotment. For details, see "*Distributions*" on page 254;

13. The Trustee, the Investment Manager, the Sponsor/ Project Manager, the Lead Manager, their respective shareholders, employees, counsel, offices, directors, representatives, advisers, agents or affiliates, will rely on the truth and accuracy of the foregoing representations, warranties, acknowledgements and undertakings which are given to the Trust, the Sponsor/ Project Manager, the Lead Manager, the Investment Manager and the Trustee;

14. You are eligible to invest in India, in the Issue and in the Units under applicable law, including the InvIT Regulations, the SEBI Master Circular and the FEMA Rules, and have not been prohibited by the SEBI or any regulatory authority from buying, selling or dealing in units or securities;

15. You understand that none of the Investment Manager, the Sponsor/ Project Manager, the Lead Manager or the Trustee has any obligation to purchase or subscribe to all, or any part, of the Units subscribed by you in the Issue;

16. Any dispute arising in connection with the Issue will be governed by, and construed in accordance with, the laws of the Republic of India and shall be subject to the jurisdiction of the court in Mumbai, Maharashtra; and

17. You have made the representations, warranties, acknowledgements and agreements provided in this section and each of the representations, warranties, acknowledgements and agreements set out above shall continue to be true and accurate at all times, until and including the Allotment of Units in the Issue.

SECTION I – GENERAL

DEFINITIONS AND ABBREVIATIONS

This Letter of Offer uses certain definitions and abbreviations which, unless otherwise specified or the context otherwise indicates, requires or implies, shall have the meanings as provided below. References to any legislation, act, regulation, rule, guideline, policy, circular, notification or clarification shall be deemed to include all amendments, supplements, re-enactments and modifications thereto from time to time, and any reference to a statutory provision shall include any subordinate legislation made from time to time thereunder.

General Terms

Term	Description
Trust	IRB Infrastructure Trust, an irrevocable trust set up under the Trusts Act and registered as an infrastructure investment trust under the InvIT Regulations
We / us / our	Unless the context otherwise requires or implies, the Trust and the Project SPVs

Trust Related Terms

Term	Description
Associate	"Associate" shall have the meaning given to such term under Regulation 2(1)(b) of the InvIT Regulations
Auditor / Trust's Auditor	Gokhale & Sathe, Chartered Accountants
Capital Contribution	The total subscription amounts by way of cash or share swap or otherwise (including transfer of interest in the Trust Assets by the Sponsor) received by the Trust from Unitholders (including the Sponsor) in connection with any placement, offering or issue of Units
Consolidated Financial Information	(i) Reviewed consolidated financial information of the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, as of and for the quarters ended June 30, 2023 and June 30, 2022, together with the limited review report of the auditors thereon; and (ii) Audited consolidated financial information for the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, and the auditors' reports as of and for the Financial Years 2023, 2022 and 2021
Croxley	Croxley Investment Pte. Ltd.
Current Portfolio	The toll road assets owned, operated and maintained by the Project SPVs
Current Portfolio Valuation Report	Valuation report dated May 12, 2023 issued by the Valuer in relation to the value of the Current Portfolio as of March 31, 2023
Debt Novation Agreements	The debt novation agreements dated February 19, 2020 entered into by the Trust (acting through the Trustee), the Investment Manager and the Sponsor, with each of the Project SPVs (except PDTPL) and the Sponsor's affiliates (as applicable), in relation to the novation of subordinated debt and unsecured loans provided by the Sponsor and its associates to the Project SPVs (except PDTPL), as amended
Designated Stock Exchange or NSE or Stock Exchange	The National Stock Exchange of India Limited
Expanded Portfolio	The Current Portfolio together with the TOT road asset operated by IRB GEPL
Financial Investors	Bricklayers Investment Pte. Ltd., Chiswick Investment Pte. Ltd., Dagenham Investment Pte. Ltd., Anahera Investment Pte. Ltd. and Stretford End Investment Pte. Ltd.
Formation Transactions	The transactions pursuant to which the Trust acquired the shareholding of the Sponsor in the Project SPVs (except PDTPL) and the subordinated debt and unsecured loans provided by the Sponsor and its associates to the Project SPV (except PDTPL) stood novated in favor of the Trust in consideration for Units issued to the Sponsor
Framework Agreement	The framework agreement dated August 6, 2019 among the Sponsor, the Investment Manager, the Financial Investors and Croxley, as amended
Indenture of Trust	The indenture of trust dated August 27, 2019 between the Sponsor and the Trustee to settle the Trust, as amended
Investment Management Agreement	The investment management agreement dated August 27, 2019 between the Trustee (on behalf of the Trust) and the Investment Manager for managing and administration of the Trust, in accordance with the InvIT Regulations, as amended
Investment Manager	MMK Toll Road Private Limited

Term	Description
IRB GEPL or Target SPV	IRB Golconda Expressway Private Limited
IRB GEPL Acquisition	The acquisition by the Trust of IRB GEPL through subscription to equity shares of IRB GEPL
IRB GEPL Project Implementation Agreement	The project implementation agreement dated August 2, 2023 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with IRB GEPL, which sets out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by IRB GEPL in accordance with the InvIT Regulations
IRB GEPL Shareholder Loan Agreement	The shareholder loan agreement dated July 29, 2023 entered into by the Trust (acting through the Trustee) and the Investment Manager with the Target SPV to provide unsecured loans to IRB GEPL
IRB GEPL Share Subscription Agreement	The share subscription agreement dated July 29, 2023 entered into by the Trust (acting through the Trustee), the Investment Manager and the Sponsor with the Target SPV to acquire 99.99% of the equity share capital of IRB GEPL
IRB GEPL Valuation Report or Target Valuation Report	Valuation report dated July 17, 2023 issued by the Valuer in relation to the valuation of IRB GEPL as of June 30, 2023
Manager Group or Manager Group Members	The Investment Manager, the Project SPVs, the Trust and the entities controlled by the Investment Manager/ the Trust, including any other SPVs
Parties to the Trust	The Sponsor, the Investment Manager, the Trustee and the Project Manager
Policies	The policies in relation to the Manager Group as specified in "*Corporate Governance*" on page 139.
Portfolio Valuation Report	Valuation report dated May 12, 2023 issued by Mr. Sunit Khandelwal, the erstwhile valuer of the Trust, in relation to the valuation of the Current Portfolio as of March 31, 2023
Project Entities	The entities through which the Sponsor operates its various road infrastructure projects
Project Implementation Agreements	The project implementation agreements dated February 3, 2020, as amended, entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager, with each of the Project SPVs (except PDTPL) and the project implementation agreement dated May 19, 2022 entered into by the Trustee (on behalf of the Trust), the Investment Manager and the Project Manager with PDTPL, as amended, which set out the obligations of the Project Manager with respect to the execution, operation and maintenance of the project undertaken by such Project SPV in accordance with the InvIT Regulations
Project Manager	IRB Infrastructure Developers Limited
Project SPVs	The entities that form part of the Current Portfolio of the Trust, namely the following: i) AE Tollway Limited; ii) CG Tollway Limited; iii) IRB Hapur Moradabad Tollway Limited; iv) IRB Westcoast Tollway Limited; v) Kaithal Tollway Limited; vi) Kishangarh Gulabpura Tollway Limited; vii) Solapur Yedeshi Tollway Limited; viii) Udaipur Tollway Limited; ix) Yedeshi Aurangabad Tollway Limited; and x) Palsit Dankuni Tollway Private Limited.
Shareholder Loan Agreements or Project SPV Shareholder Loan Agreements	Collectively, the shareholder loan agreements dated February 19, 2020 entered into by the Trust (acting through the Trustee) and the Investment Manager with each of the Project SPVs (except PDTPL), the shareholder loan agreement dated April 7, 2022 entered into by the Trust (acting through the Trustee) and the Investment Manager with PDTPL to provide unsecured loans to each of the Project SPVs
Sponsor	IRB Infrastructure Developers Limited
SPVs or Identified SPVs	The SPVs held by the Trust in accordance with the InvIT Regulations
Standalone Financial Information	(i) Reviewed standalone financial information of the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, as of and for the quarters ended June 30, 2023 and June 30, 2022, together with the limited review report of the auditors thereon; and (ii) Audited standalone financial information for the Trust and the Project SPVs, prepared in accordance with the requirements of the InvIT Regulations and Ind AS, and the related notes, schedules and annexures thereto, and the auditors' reports as of and for the Financial Years 2023, 2022 and 2021
Stock Exchanges	BSE Limited and National Stock Exchange of India Limited
Traffic Consultant	GMD Consultants

Term	Description
Traffic Reports	The reports dated April 2023 prepared by the Traffic Consultant for the underlying road projects operated by the Project SPVs and the report dated June 2023 prepared by the Traffic Consultant for the underlying road project operated by the Target SPV
Trust Assets	The assets owned by the Trust, whether directly or through an SPV or a Holding Company, and shall include all rights, interests and benefits arising from and incidental to ownership of such assets
Trust Documents	The Indenture of Trust, the charter documents of the Investment Manager, the Investment Management Agreement, the Trust Contribution Agreement (if any), the Project Implementation Agreements, any agreements among the Trustee, the Investment Manager and the Unitholders, in relation to the Trust, the Units, any debt securities or instruments or obligations issued by the Trust, any offering document in connection with a capital or debt issuance by the Trust (including the Issue), including any preliminary placement memorandum, final placement memorandum, information memorandum, draft offer document, offer document and final offer document, Policies, the Investment Manager and/or the SPVs/Holdcos, business plans and annual budget adopted by the Investment Manager and such other documents in connection herewith, as executed, issued, adopted and amended, modified, supplemented or restated from time to time
Trust Group or Trust Group Members	The Sponsor and the Manager Group Members
Trustee	IDBI Trusteeship Services Limited
Unitholder	An investor which holds Units of the Trust from time to time
Units	Undivided beneficial interest in the Trust and the Units together represent the entire beneficial interest in the Trust
Valuer	For purposes of the Current Portfolio Valuation Report and the Target Valuation Report, references to "Valuer" are to Mr. Sunit Khandelwal, the erstwhile valuer of the Trust. The Board of Directors of the Investment Manager and the Unitholders have approved the appointment of KPMG Valuation Services LLP, bearing IBBI registration number IBBI/RV-E/06/2020/115 as the Valuer of the Trust for the Financial Year 2024
Working Day	Any day which is not (a) a Saturday or Sunday; or (b) a day on which commercial banks in Mumbai, Delhi or Singapore are closed for ordinary banking business

Project SPVs

Term	Description
AETL	AE Tollway Limited
CGTL	CG Tollway Limited
IRB HMTL	IRB Hapur Moradabad Tollway Limited
IRB WTL	IRB Westcoast Tollway Limited
KGTL	Kishangarh Gulabpura Tollway Limited
KTL	Kaithal Tollway Limited
PDTPL	Palsit Dankuni Tollway Private Limited
SYTL	Solapur Yedeshi Tollway Limited
UTL	Udaipur Tollway Limited
YATL	Yedeshi Aurangabad Tollway Limited

Issue Related Terms

Term	Description
Allotment Advice	The note or advice or intimation of Allotment sent to each successful Applicant who has been or is to be Allotted Units pursuant to the Issue after approval of the Basis of Allotment by the Designated Stock Exchange
Allot/ Allotment/ Allotted	Unless the context otherwise requires, the issue and allotment of Units pursuant to the Issue
Allottees	Persons to whom Units will be issued and Allotted pursuant to the Issue
Applicant	Eligible Unitholders and Renouncees who are entitled to apply or make an application for Units pursuant to the Issue in terms of this Letter of Offer
Application Amount	The amount payable by an Applicant simultaneously with the submission of the Application Form during the Issue Period, for the number of Units applied for at the Issue Price specified in this Letter of Offer

Term	Description
Application Form	The Application Form used to make an application for Allotment of Units in the Issue
Basis of Allotment	The basis on which the Units will be Allotted to successful Applicants in consultation with the Designated Stock Exchange in the Issue, as described in "*Issue Procedure*" on page 640
Cash Escrow Agreement	Agreement dated August 2, 2023 entered into among the Trustee (acting on behalf of, and in its capacity as trustee to, the Trust), the Investment Manager, the Lead Manager and the Escrow Collection Bank for, *inter-alia*, for collection and refund of the Application Amounts
Client ID	Client identification number maintained with one of the Depositories in relation to a demat account
Demographic Details	Details of the Applicants including the Applicant's address, name of the Applicant's father/husband, investor status, occupation and bank account details
Designated Account	The designated account specified in the Application Form, in whose favor Applicants are required to transfer money through direct credit/NEFT/NACH/RTGS in respect of the Application Amount when submitting an Application Form
Eligible Unitholders	Unitholders of the Trust as on the Record Date
Escrow Collection Bank	State Bank of India
Issue	Issue of up to 142,400,006 Units at a price of ₹200.98[*] per Unit aggregating up to ₹28,619.50 million on a rights basis to Eligible Unitholders in the ratio of one Unit for every 6.17[**] Units held by them on the Record Date *[*]The Issue Price is ₹200.979634. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.* *[**]The Rights Entitlement Ratio is one Unit for every 6.174812 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*
Issue Closing Date	August 8, 2023, Tuesday, which is the last date until which the Application Forms shall be accepted. The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days
Issue Opening Date	August 3, 2023, Thursday, prior to which the Application Forms shall be dispatched to Eligible Unitholders by the Investment Manager and the date from which the Investment Manager shall accept Application Forms
Issue Period	Period between the Issue Opening Date and the Issue Closing Date, inclusive of both days, during which Applicants can submit their Application Forms
Issue Price	₹200.98[*] per Unit *[*]The Issue Price is ₹200.979634. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
Issue Proceeds	The gross proceeds of this Issue, being ₹28,619.50 million[*] *[*]Assuming full subscription* For further details in relation to the use of Issue Proceeds, see the section "*Objects of the Issue*" on page 62
Lead Manager	Vivro Financial Services Private Limited
Letter of Offer	This Letter of Offer dated August 2, 2023 filed with the SEBI and the Stock Exchange in connection with the Issue
Off Market Renunciation	The renouncement of Rights Entitlements undertaken by an Eligible Unitholder by transferring them through off market transfer through a depository participant in accordance with applicable law
On Market Renunciation	The renouncement of Rights Entitlements undertaken by an Eligible Unitholder by trading them over the secondary market platform of the Stock Exchange through a registered stock broker in accordance with applicable law
Record Date	July 28, 2023
Registrar and Unit Transfer Agent or Registrar	KFin Technologies Limited
Renouncee	Any person(s) who, not being the original recipient, has/have acquired the Rights Entitlement

Term	Description
Renunciation Period	The period during which Eligible Unitholders can renounce or transfer their Rights Entitlements, which will commence from the Issue Opening Date. Eligible Unitholders are requested to ensure that renunciation is completed in such a manner that Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date
Rights Entitlements	The right to apply for Units being offered pursuant to this Issue in accordance with the InvIT Regulations, in this case being one Unit for every 6.17* Units held by an Eligible Unitholder on the Record Date. The Rights Entitlement for each Eligible Unitholder will be specified in the Application Form **The Rights Entitlement Ratio is one Unit for every 6.174812 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*
Rights Entitlements Letter	Letter including details of Rights Entitlements of the Eligible Unitholders
Working Day	Any day which is not (a) a Saturday or Sunday; or (b) a day on which commercial banks in Mumbai, Delhi or Singapore are closed for ordinary banking business. In respect of the Issue Period, "Working Day" shall mean all days, excluding Saturdays, Sundays and public holidays, on which commercial banks in Mumbai are open for business

Technical/Industry Related Terms/Abbreviations

Term	Description
BOT	Build-Operate-Transfer
CCEA	Cabinet Committee on Economic Affairs
DBFOT	Design-Build-Finance-Operate-Transfer
EPC	Engineering Procurement and Construction
ETC	Electronic Toll Collection
HGCL	Hyderabad Growth Corridor Limited
HMDA	Hyderabad Metropolitan Development Authority
MoRTH	Ministry of Road Transport and Highways
NH	National Highway
NHAI	National Highways Authority of India
NHDP	National Highways Development Project
O&M	Operation and Maintenance
PPP	Public Private Partnership
TOT	Toll-Operate-Transfer

Conventional Terms/Abbreviations

Term	Description
Alternative Investment Funds or AIFs	Alternative investment funds as defined in, and registered under, the SEBI AIF Regulations
CAGR	Compounded Annual Growth Rate
Category I FPIs	FPIs registered as "Category I foreign portfolio investors" under the SEBI FPI Regulations
Category II FPIs	FPIs registered as "Category II foreign portfolio investors" under the SEBI FPI Regulations
CDSL	Central Depository Services (India) Limited
CIN	Corporate Identity Number
Companies Act, 2013	Companies Act, 2013 read with the rules, regulations, clarifications and notifications thereunder
Contract Labour Act	Contract Labour (Regulation and Abolition) Act, 1970
COVID-19	Coronavirus disease 2019
DIN	Director Identification Number
DPIIT	Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India (formerly known as Department of Industrial Policy and Promotion)
DP ID	Depository participant identification
DP/ Depository Participant	A depository participant as defined under the Depositories Act

Term	Description
Debenture Trustees Regulations	Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993
Depositories	NSDL and CDSL
Depositories Act	Depositories Act, 1996
FCNR Account	Foreign Currency Non-Resident Account, and has the meaning ascribed to the term "FCNR(B) account" under the Foreign Exchange Management (Deposit) Regulations, 2016
FDI	Foreign Direct Investment
FDI Policy	The 'Consolidated FDI Policy Circular of 2020' (No. 5(2)/2020-FDI Policy) issued by the DPIIT (FDI Division), which has been effective since October 15, 2020
FEMA	Foreign Exchange Management Act, 1999, read with rules and regulations thereunder
FEMA Rules	The Foreign Exchange Management (Non-debt Instruments) Rules, 2019
Financial Year / Fiscal / FY	Unless stated otherwise, the period of 12 months ending March 31 of that particular year
FPI(s)	Foreign portfolio investors, as defined in and registered under the SEBI FPI Regulations
GoI / Government	Government of India
HUF	Hindu Undivided Family
ICAI	The Institute of Chartered Accountants of India
IFRS	International Financial Reporting Standards
Income Tax Act/ I.T. Act	The Income-tax Act, 1961
Ind AS	Indian Accounting Standards
InvIT Regulations	Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 and the circulars, notifications, guidelines and clarifications issued thereunder, each as amended
IST	Indian Standard Time
km	Kilometres
LLP Act	The Limited Liability Partnership Act, 2008
Mutual Fund(s)	Mutual fund(s) as defined in and registered under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996
NACH	National Automated Clearing House
NAV	Net asset value
NEFT	National Electronic Fund Transfer
NRE Account	Non-Resident External Account, as defined under the Foreign Exchange Management (Deposit) Regulations, 2016
NRI	An individual resident outside India who is a citizen of India
NRO	Non-Resident Ordinary Account, as defined under the Foreign Exchange Management (Deposit) Regulations, 2016
NSDL	National Securities Depository Limited
p.a.	Per annum
PAN	Permanent Account Number
PAT	Profit after tax
Pension Fund	Pension fund, as defined in and registered under the Pension Fund Regulatory and Development Authority Act, 2013
PFRDA	Pension Fund Regulatory and Development Authority
RBI	Reserve Bank of India
Registration Act	Registration Act, 1908
RTGS	Real Time Gross Settlement
SCRA	Securities Contracts (Regulation) Act, 1956
SCRR	Securities Contracts (Regulation) Rules, 1957
SEBI	The Securities and Exchange Board of India constituted under the SEBI Act
SEBI Act	Securities and Exchange Board of India Act, 1992
SEBI AIF Regulations	Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012
SEBI Depository Regulations	Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018
SEBI FPI Regulations	Securities and Exchange Board of India (Foreign Portfolio Investors) Regulations, 2019
SEBI FVCI Regulations	Securities and Exchange Board of India (Foreign Venture Capital Investors) Regulations, 2000
SEBI Intermediaries Regulations	Securities and Exchange Board of India (Intermediaries) Regulations, 2008
SEBI Master Circular	Master Circular for Infrastructure Investment Trusts (InvITs) dated July 6, 2023 issued by the SEBI
SEBI VCF Regulations	Securities and Exchange Board of India (Venture Capital Funds) Regulations, 1996

Term	Description
Trusts Act	Indian Trusts Act, 1882
VCFs	Venture capital funds as defined in and registered with the SEBI under the SEBI VCF Regulations

The words and expressions used but not defined herein shall have the meanings assigned to such terms under the SEBI Act, the SCRA, the InvIT Regulations and the rules, regulations, circulars and guidelines made thereunder.

Notwithstanding the foregoing, terms in "*Statement of Tax Benefits*", "*Regulations and Policies*", "*Summary of the Concession Agreements*", "*Financial Statements*", and "*Material Litigation and Regulatory Action*" on pages 69, 231, 145, 280 and 615, respectively, shall have the meanings given to such terms in these respective sections.

PRESENTATION OF FINANCIAL, INDUSTRY AND MARKET DATA

Certain Conventions

All references to "India" contained in this Letter of Offer are to the Republic of India and all references to the "U.S.", "USA" or the "United States" are to the United States of America.

Unless stated otherwise, all references to page numbers in this Letter of Offer are to the page numbers of this Letter of Offer.

Financial Data

Unless stated otherwise, the financial data included in this Letter of Offer in relation to the Trust and the Project SPVs is derived from the Consolidated Financial Information which has been prepared in accordance with the requirements of the InvIT Regulations and Ind AS. This Letter of Offer also includes the Standalone Financial Information in relation to the Trust. For further information, see "*Financial Statements*" on page 280.

IRB GEPL, the Target SPV proposed to be acquired by the Trust, was incorporated on May 13, 2023. Accordingly, this Letter of Offer includes audited financial information of IRB GEPL as of and for the period from May 13, 2023 to June 30, 2023. For further information, see "*Financial Statements*" on page 280. Given that IRB GEPL was incorporated on the above date, (i) *pro forma* financial information of the Trust and the Target SPV has not been prepared and (ii) summary financial information of IRB GEPL for the above period is not meaningful, and is not included in this Letter of Offer.

This Letter of Offer also includes summary financial statements of (i) the Sponsor as of and for the Financial Years 2023, 2022 and 2021 from the audited consolidated financial statements of the Sponsor which have been prepared in accordance with the Companies Act and Ind AS; and (ii) the Investment Manager for the Financial Years 2023, 2022 and 2021 from the audited financial statements of the Investment Manager which have been prepared in accordance with the Companies Act and Ind AS. For further information, see "*Summary Financial Information*" on page 42.

The financial year for the Trust, the Sponsor, the Investment Manager, the Project SPVs and the Target SPV commences on April 1 and ends on March 31 of the next year. Accordingly, all references to a particular Financial Year or fiscal, unless stated otherwise, are to the 12-month period ended on March 31 of that year.

The degree to which the financial information included in this Letter of Offer will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting policies and practices, the Companies Act, Ind AS and the InvIT Regulations. The Investment Manager has not attempted to explain these differences or quantify their impact on the financial data included in this Letter of Offer, and it is urged that you consult your own advisors regarding such differences and their impact on our financial data. Any reliance by persons not familiar with the accounting policies and practices on the financial disclosures presented in this Letter of Offer should accordingly be limited.

In this Letter of Offer, all figures and percentage figures in decimals have been rounded off to two decimals. However, where any figures may have been sourced from third-party industry sources, such figures may be rounded-off to such number of decimal points as provided in such respective sources. In this Letter of Offer, (i) the sum or percentage change of certain numbers may not conform exactly to the total figure given; and (ii) the sum of the numbers in a column or row in certain tables may not conform exactly to the total figure given for that column or row. Any such discrepancies are due to rounding off.

Unless stated or the context requires otherwise, any percentage amounts, as disclosed in "*Risk Factors*", "*Business*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 15, 111 and 591, respectively, and elsewhere in this Letter of Offer have been calculated on the basis of the Consolidated Financial Information.

Currency and Units of Presentation

All references to:

i) "Rupees" or "Rs." or "INR" or "₹" are to Indian Rupees, the official currency of the Republic of India; and

ii) "US$" or "USD" are to United States Dollars, the official currency of the United States of America.

Certain numerical information in this Letter of Offer has been presented in "million" and "billion" units. One million represents 1,000,000 and one billion represents 1,000,000,000.

Exchange Rates

This Letter of Offer contains conversions of certain other currency amounts into Indian Rupees. These conversions should not be construed as a representation that these currency amounts could have been, or can be converted into Indian Rupees, at any particular rate or at all.

The following table sets forth, for the periods indicated, information with respect to the exchange rate between the Rupee and the U.S. Dollar (in Rupees per U.S. Dollar):

As at	Reference rate (₹ per US$)
June 30, 2023	82.04
March 31, 2023	82.22
March 31, 2022	75.81
March 31, 2021	73.50

Source: Financial Benchmarks India Private Limited reference rate.

Industry and Market Data

Unless stated otherwise, industry and market data used in this Letter of Offer has been obtained or derived from the Traffic Reports prepared by the Traffic Consultant with respect to the toll revenues for the underlying road projects operated by the Project SPVs and the Target SPV, which are commissioned reports, and publicly available information as well as other Government and industry publications and sources. The Investment Manager has commissioned the Traffic Reports, included in this Letter of Offer as "*Annexure A: Traffic Reports*", to provide an independent estimation of the projected traffic volumes with respect to the underlying road projects operated by the Project SPVs and the Target SPV, which is based on historical data and certain assumptions.

Industry as well as Government publications generally state that information contained in those publications has been obtained from sources believed to be reliable but that their accuracy and completeness are not guaranteed and their reliability cannot be assured. Such data involves risks, uncertainties and numerous assumptions and is subject to change based on various factors, including those discussed in the section "*Risk Factors*" on page 15. Accordingly, investment decisions should not be based solely on such information.

The extent to which market and industry data used in this Letter of Offer is meaningful depends on the reader's familiarity with and understanding of methodologies used in compiling such data. There are no standard data gathering methodologies in the industry in which business of the Project SPVs/Trust/Target SPV is conducted, and methodologies and assumptions may vary widely among different industry sources.

Websites

The information contained on the websites of the Trustee, the Sponsor or the other websites referenced in this Letter of Offer or that can be accessed through such websites, neither constitutes part of this Letter of Offer, nor is it incorporated by reference therein and should not form the basis of any investment decision. For details of the websites of the Trust, the Trustee and the Sponsor, see "*General Information*" on page 58.

FORWARD-LOOKING STATEMENTS

This Letter of Offer contains certain "forward-looking statements". These forward-looking statements generally can be identified by words or phrases such as "aim", "anticipate", "believe", "expect", "estimate", "intend", "objective", "plan", "goal", "project", "propose", "seek to", "likely", "will", "will continue", "will pursue", or other words or phrases of similar import. Similarly, statements that describe strategies, objectives, plans or goals are also forward-looking statements. All forward-looking statements are subject to risks, uncertainties and assumptions about the Trust, the Project SPVs and the Target SPV that could cause actual results to differ materially from those contemplated by the forward-looking statements.

The Target Valuation Report is based on certain projections and accordingly, should be read together with the assumptions and notes thereto. The Traffic Reports include projections/estimates in relation to traffic growth, and accordingly, should be read in conjunction with the notes and assumptions thereto. See "*Annexure A: Traffic Reports*" and "*Annexure B: Target Valuation Report*" on pages A-1 and B-1, respectively.

Actual results may differ materially from those suggested by forward-looking statements due to risks or uncertainties associated without expectations with respect to, but not limited to, regulatory changes pertaining to the infrastructure sector in India and our ability to respond to them, our ability to successfully implement our strategy, our growth and expansion plans, technological changes, our exposure to market risks, general economic and political conditions in India which have an impact on our business activities or investments, the monetary and fiscal policies of India, inflation, deflation, unanticipated turbulence in interest rates, foreign exchange rates, equity prices or other rates or prices, the performance of the financial markets in India and globally, changes in domestic laws, regulations and taxes and changes in competition in the infrastructure sector. Certain important factors that could cause actual results to differ materially from our expectations include, but are not limited to, the following:

- The debt financing provided by the Trust to each of the Project SPVs and to be provided by the Trust to the Target SPV is comprised of unsecured, interest-free loans. Such loans to be provided by the Trust to the Target SPV will become interest-bearing at a future date in accordance with the IRB GEPL Shareholder Loan Agreement. The payment obligations of the respective Project SPVs and the Target SPV in relation to such debt financing will be subordinated to all existing and future obligations of the Project SPVs and the Target SPV towards any senior lenders;
- Any payment by the Project SPVs or the Target SPV, including in an event of termination of the relevant concession agreement, is subject to a mandatory escrow arrangement which restricts their flexibility to utilize the available funds;
- The regulatory framework governing infrastructure investment trusts in India is still evolving and the interpretation and enforcement thereof involve uncertainties, which may have a material, adverse effect on the ability of certain categories of investors to invest in the Units, our business, financial condition and results of operations and our ability to make distributions to Unitholders;
- We may not be able to make distributions to Unitholders or the level of distributions may fall;
- Any default under the existing or future financing arrangements by any of the Project SPVs or the Target SPV could adversely impact the Trust's ability to continue to own a majority of each of the Project SPVs and the Target SPV, its cash flows and its ability to make distributions to Unitholders;
- The Consolidated Financial Information may not be indicative of the Trust's future financial condition and results of operations. We may not be able to operate our business successfully or generate sufficient cash flows to make or sustain distributions;
- The Target Valuation Report, and any underlying reports, are not opinions on the commercial merits or financial condition of the Target SPV and the valuation contained in such Target Valuation Report may not be indicative of the true value of the Target SPV's asset;
- We have referred to the data derived from Traffic Reports commissioned from the Traffic Consultant, which are based on certain bases, estimates and assumptions that are subjective in nature and may not be accurate;
- We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the IRB GEPL Acquisition, may adversely affect us; and
- If we are not successful in integrating the Target SPV, our business, financial condition and results of operations may be adversely impacted.

For further discussion on factors that could cause actual results to differ from expectations, see the sections "*Risk Factors*", "*Industry Overview*", "*Business*" and "*Management's Discussion and Analysis of Financial Condition*

and Results of Operations" on pages 15, 106, 111 and 591, respectively. By their nature, certain market risk disclosures are only estimates and could be materially different from what actually occurs in the future. As a result, actual gains or losses could materially differ from those that have been estimated.

Forward-looking statements reflect current views as of the date of this Letter of Offer and are not a guarantee of future performance or returns to investors. These statements are based on certain beliefs and assumptions, which in turn are based on currently available information.

Although the Investment Manager believes the assumptions upon which these forward-looking statements are based are reasonable, any of these assumptions could prove to be inaccurate, and the forward-looking statements based on these assumptions could be incorrect. The Investment Manager, the Trustee, the Sponsor, the Lead Manager or any of their affiliates/advisors do not have any obligation to update or otherwise revise any statements reflecting circumstances arising after the date hereof or to reflect the occurrence of underlying events, even if the underlying assumptions do not come to fruition.

There can be no assurance that the expectations reflected in the forward-looking statements and financial information will prove to be correct. Given these uncertainties, Applicants are cautioned not to place undue reliance on such forward-looking statements and not to regard such statements to be a guarantee or assurance of our future performance or returns to investors.

SECTION II – RISK FACTORS

An investment in the Units involves risks. Prospective investors should carefully consider all the information in this Letter of Offer, including the risks and uncertainties described below. To obtain a complete understanding, prospective investors should read this section together with the sections "Business", "Financial Statements", "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Rights of Unitholders" on pages 111, 280, 591 and 257, respectively, as well as the other information contained in this Letter of Offer. The risks and uncertainties described in this section may not be the only risks and uncertainties the Trust, the Project SPVs and the Target SPV currently face. Additional risks and uncertainties not presently known to the Trustee or the Investment Manager, or that the Trustee or the Investment Manager do not currently consider material, may arise or may adversely affect our business, financial condition, cash flows and results of operations. If any of the following risks, or other risks that are not currently known or are currently considered immaterial, actually occur, our business prospects, results of operations, cash flows and financial condition could suffer, the price of the Units could decline and prospective investors may lose all or part of their investment. Unless otherwise specified in the relevant risk factors, the Trustee and the Investment Manager are not in a position to specify or quantify the financial or other risks mentioned herein.

This Letter of Offer also contains forward-looking statements that involve risks, uncertainties and assumptions. The actual results of the Trust, the Project SPVs and the Target SPV could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the considerations described below and elsewhere in this Letter of Offer.

This Letter of Offer includes (i) limited review consolidated financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) limited review standalone financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; and (iv) audited standalone financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021.

IRB GEPL, the Target SPV proposed to be acquired by the Trust, was incorporated on May 13, 2023. Accordingly, this Letter of Offer includes audited financial information of IRB GEPL as of and for the period from May 13, 2023 to June 30, 2023.

Investors should be aware that the price of the Units, and the income from them, may be subject to volatility. If any of the risks described below occurs, our business and prospects could be materially and adversely affected and investors could lose all or part of their original investment.

In making an investment decision, prospective investors must rely upon their own examinations and the terms of the Issue, including the merits and the risks involved. Prospective investors should consult their tax, financial and legal advisors about the particular consequences of investing in the Issue.

In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs. References herein to the "Current Portfolio" are to the pre-IRB GEPL Acquisition portfolio of the Trust and to the "Expanded Portfolio" are to the post-IRB GEPL Acquisition portfolio of the Trust.

Risks Related to the Structure of the Trust

1. ***The debt financing provided by the Trust to each of the Project SPVs and to be provided by the Trust to the Target SPV is comprised of unsecured, interest-free loans. Such loans to be provided by the Trust to the Target SPV will become interest-bearing at a future date in accordance with the IRB GEPL Shareholder Loan Agreement. The payment obligations of the respective Project SPVs and the Target SPV in relation to such debt financing will be subordinated to all existing and future obligations of the Project SPVs and the Target SPV towards any senior lenders.***

The debt financing provided by the Trust to each of the Project SPVs and to be provided by the Trust to the Target SPV comprises certain unsecured, interest-free loans (the "**Shareholder Loans**"), which is subordinated to the debt owed to the senior lenders of the respective Project SPVs and the Target SPV at all times. The Shareholder Loans for the Project SPVs (except PDTPL, UTL and CGTL) became interest-bearing upon the listing of the Units on the NSE, with effect from April 3, 2023. The Shareholder Loans for PDTPL will become interest-bearing from

the date of completion of construction of the project while the Shareholder Loans for UTL and CGTL will become interest-bearing upon the receipt of consent from the relevant lenders for the projects. The Shareholder Loans for IRB GEPL will become interest-bearing from the appointed date of the project. Also see "*Background and Structure of the Trust – Certain Agreements in relation to the Trust — Shareholder Loan Agreements*" and "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on pages 99 and 62, respectively.

All payment obligations of the Project SPVs and the Target SPV to the Trust under the Shareholder Loan Agreements and the IRB GEPL Shareholder Loan Agreement are proposed to be serviced from the balance amounts remaining in the escrow accounts maintained by each Project SPV/Target SPV as mandated under the relevant concession agreements, after the payment of, among other things, all taxes due, all expenses in connection with the construction of the project, operations and maintenance expenses, including expenses for repair works, payment of concession fees, debt service payments to senior lenders (as defined under the relevant concession agreements), negative grants payable to the concessioning authority, reimbursement of expenditure incurred by the concessioning authority, any payments and damages due and payable and any reserve requirements set forth in the financing agreements, as defined in the relevant concession agreements (the "**Surplus Cash Flows**"). Accordingly, any reduction in the cash flows of the Project SPVs or the Target SPV or any unanticipated increase in any of the payments to be made by the Project SPVs or the Target SPV from the escrow accounts may result in a decrease in the Surplus Cash Flows, which may materially and adversely impact the ability of the Project SPVs and the Target SPV to meet their payment obligations to the Trust in relation to the Shareholder Loans. Further, the receivables of each Project SPV and Target SPV (including the Surplus Cash Flows) are secured in favor of the existing senior lenders to the extent of the amounts payable to such senior lender pursuant to the terms of their respective financing arrangements and restrictive covenants under the financing arrangements with such senior lenders and the concession agreements prevent the Project SPVs and the Target SPV from opening new bank accounts, and accordingly, the Project SPVs and the Target SPV are not permitted to transfer the Surplus Cash Flows (as they arise) to a separate bank account in the name of the Project SPV/Target SPV that can be charged in favor of the Trust. We expect such receivables to remain secured in favor of the senior lenders until all amounts outstanding under such financing arrangements are paid in their entirety to the senior lenders. If an event were to occur under such financing arrangements such that all amounts outstanding under such financing arrangements were to become immediately due and payable, all, or substantially all, of the Surplus Cash Flows may be utilized in satisfying such payment obligations, thereby materially and adversely affecting the ability of such Project SPVs or the Target SPV to meet their payment obligations to the Trust. Any adverse impact on any receivables payable to the Trust under such debt financing will materially and adversely affect the Trust's ability to make distributions to the Unitholders. Further, if the relevant concession agreement is terminated, the Surplus Cash Flows together with the termination payments deposited in the relevant escrow account will be applied towards the payment of the amounts outstanding to the senior lenders prior to the payment of the amounts outstanding under the Shareholder Loans. Accordingly, such amounts may be insufficient to repay all amounts outstanding under the Shareholder Loans.

2. ***Any payment by the Project SPVs or the Target SPV, including in an event of termination of the relevant concession agreement, is subject to a mandatory escrow arrangement which restricts their flexibility to utilize the available funds.***

The escrow arrangements mandated under the concession agreements require all monies that are received by each Project SPV and the Target SPV, including funds constituting the financing package, the fees collected from the operation of the Expanded Portfolio and any termination payments received from the concessioning authority, to be deposited in an escrow account and utilized only in accordance with the order prescribed under the escrow agreement. The consent of the concessioning authority is required to amend the order of outflow of payments from such escrow account. The escrow arrangements typically prioritize the payment of all taxes due, followed by payment of expenses in connection with the construction of the project, operation and maintenance expenses including expenses for repair works, payment of concession fees, debt service payments, negative grant/premium payable to the concessioning authority, reimbursement of expenditure incurred by the concessioning authority, any payments and damages due and payable and any reserve requirements set forth in any financing agreements. For details of the escrow arrangements, see "*Summary of the Concession Agreements*" on page 145.

With respect to withdrawals on termination, the escrow arrangements for the BOT projects typically prioritize the payment of all taxes due, followed by the payment of 90% of debt due to senior lenders (excluding subordinated debt), the payment of any outstanding concession fee, the payment of damages in relation to the concession, retentions and payments arising out of liability for any defects, the remainder of debt due, subordinated debt, operation and maintenance expenses and any other payments under the concession agreement, after which the balance may be withdrawn by the Project SPVs for their own purposes. For IRB GEPL, a TOT project, the

withdrawals on termination under the escrow arrangement prioritize the payment of all taxes due, followed by all payments due to senior lenders, the payment of damages certified by the concessioning authority as being payable by the concessionaire, retentions and payments arising out of liability for any defects and deficiencies, operation and maintenance expenses and any other payments under the concession agreement, after which the balance may be withdrawn by the Target SPV for its own purposes. The Shareholder Loans will be classified as subordinated debt and equity under the concession agreements (other than to the extent of refinancing of the debt availed from existing senior lenders). Accordingly, the ability of the Trust to access such termination payments in relation to the Shareholder Loans will be subordinated to the discharge of all obligations towards the senior lenders and the payment of, among other things, any outstanding concession fees and damages. Any shortfall in the termination payments received from the concessioning authority may prevent us from recovering our investments or returns in the relevant Project SPVs and the Target SPV adequately or at all.

3. *The regulatory framework governing infrastructure investment trusts in India is still evolving and the interpretation and enforcement thereof involve uncertainties, which may have a material, adverse effect on the ability of certain categories of investors to invest in the Units, our business, financial condition and results of operations and our ability to make distributions to Unitholders.*

The SEBI issued the InvIT Regulations with effect from September 26, 2014. The regulations have been amended and supplemented with additional guidelines, circulars and notifications from time to time. While the InvIT Regulations historically provided a framework for unlisted infrastructure investment trusts and the Trust was initially operating under such framework, the SEBI subsequently decided to discontinue to the framework for unlisted infrastructure investment trusts, and the Trust was listed on the NSE on April 3, 2023.

Because the regulatory framework governing infrastructure investment trusts is still evolving, interpretation and enforcement by regulators and courts involves uncertainties. Further, regulations and processes with respect to certain aspects of infrastructure investment trusts, including, but not limited to, the dissolution and delisting of infrastructure investment trusts and the liabilities of Unitholders, have not yet been issued or adopted. For example, infrastructure investment trusts are not "companies" or "bodies corporate" within the meaning of various SEBI regulations. Accordingly, the applicability of several regulations to the Trust is unclear.

Infrastructure investment trusts operate in a relatively unclear regulatory environment. Changes to the Issue structure, changes to agreements entered into or proposed to be entered into in connection with the Issue, cost increases, fines, legal fees or business interruptions may result from changes to regulations, from new regulations, from new interpretations by courts or regulators of existing regulations or from stricter enforcement practices by regulatory authorities of existing regulations. In addition, new costs may arise from audit, certification and/or self-assessment standards required to maintain compliance with new and existing InvIT Regulations. Such changes in regulation, interpretation and enforcement may render it economically infeasible to continue conducting business as an infrastructure investment trust or otherwise have a material, adverse effect on our business, financial condition and results of operations.

Because we operate in an evolving and relatively untested regulatory environment, it is difficult to forecast how any new laws, regulations or standards or future amendments to the InvIT Regulations will affect infrastructure investment trusts and the infrastructure sector in India, and no assurance can be given that the regulatory system will not change in a way that will impair our ability to comply with the regulations, conduct our business, compete effectively or make distributions. Failure to comply with changes in laws, regulations and standards may have a material, adverse effect on our business, financial condition, results of operations and prospects.

4. *We may not be able to make distributions to Unitholders or the level of distributions may fall.*

The Trust's distributions will be based on the NDCF available for distribution and not on whether the Trust makes an accounting profit or loss. The InvIT Regulations provide that not less than 90% of NDCF of each Project SPV (and upon completion of the IRB GEPL Acquisition, IRB GEPL) are required to be distributed to the Trust in proportion of its holding in each of the Project SPVs (and upon completion of the IRB GEPL Acquisition, IRB GEPL) subject to applicable provisions of the Companies Act. Under the InvIT Regulations, not less than 90% of the NDCF of the Trust is required be distributed to the Unitholders not less than once a year. Such distributions are required to be made not later than 15 days from the date of declaration. The Investment Manager has adopted a distribution policy pursuant to which distributions are required to be made to the Unitholders on a quarterly basis. For further details, see "*Distributions*" on page 254.

The utilization of the Issue Proceeds by the Trust is not subject to monitoring by any independent agency.

The Trust primarily relies on interest payments and principal repayments in relation to the Shareholder Loans, the subordinated debt and the unsecured loans for generating its NDCF. NDCF at the Trust level may also be generated through payment of dividends by the Project SPVs or the Target SPV, as applicable, or buy-back of shares of the Project SPVs or the Target SPV. Similar to the Shareholder Loans, a portion of the subordinated debt and unsecured loans of the Project SPVs (except PDTPL, UTL and CGTL) have become interest-bearing upon the listing of the Units and in relation to IRB GEPL, will become interest-bearing upon the receipt of the appointed date for the project. See also *"– The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets."* on page 32.

There can be no assurance or guarantee that the Trust will have sufficient distributable or realized profits or surplus in any future period to make distributions quarterly in any amount or at all. The ability of the Project SPVs and the Target SPV to service the Shareholder Loans, unsecured loans and subordinated debt and pay dividends may be affected by a number of factors including, among other things:

- their respective businesses and financial positions;
- insufficient cash flows received from the assets;
- applicable law which may restrict the payment of dividends by the Project SPVs and the Target SPV;
- operating losses incurred by the Project SPVs or the Target SPV in any financial year;
- changes in accounting standards, taxation laws and regulations, laws and regulations in respect of foreign exchange repatriation of funds, corporation laws and regulations relating thereto; and
- the terms of agreements, including any concession agreements or financing agreements, to which they are, or may become, a party.

Further, the method of calculation of NDCF is subject to change. Any change in the applicable law in India or elsewhere (including, for example, tax laws and foreign exchange controls) may limit the Trust's ability to pay or maintain distributions to Unitholders. No assurance can be given that the Trust will be able to pay or maintain the levels of distributions or that the level of distributions will increase over time, or that future acquisitions will increase the Trust's distributable free cash flow to Unitholders. Any reduction in, or elimination or taxation of, payments of distributions could materially and adversely affect the distributions made by the Trust.

5. ***Any default under the existing or future financing arrangements by any of the Project SPVs or the Target SPV could adversely impact the Trust's ability to continue to own a majority of each of the Project SPVs and the Target SPV, its cash flows and its ability to make distributions to Unitholders.***

Any default under the existing or future financing arrangements by any of the Project SPVs or the Target SPV could adversely impact the Trust's ability to own the Project SPVs and the Target SPV, its cash flows and its ability to make distributions to Unitholders.

In addition, the lenders of the Project SPVs had issued consents in relation to the Formation Transactions pursuant to which the Project SPVs were transferred to the Trust. Such consents impose certain obligations on the Trust, including:

- the existing escrow agreement for the projects and all the toll collection arrangements to be continued;
- no dilution in security and rights of existing lenders;
- IRB group shall continue to hold 51% shareholding in the Trust during the currency of the loan;
- Prior to release of the pledged shares, the Sponsor, the Trust, the Project SPV, and the security trustee (acting on behalf of the lenders) shall execute an agreement setting out, *inter-alia*, the mechanism of and obligations of the parties in relation to the release of the pledge by the security trustee and recreation of the pledge by the Trust to the satisfaction of the lenders;
- unsecured loans availed by the Project SPV from the Trust will be subordinated to the debt from senior lenders through the currency of loan. Any payment towards unsecured loans extended by the Trust shall be governed by the clause relating to 'restricted payment' as per the existing financing documents; and
- any new appointment/removal of the Investment Manager/Project Manager by the Trust shall be with prior approval from lenders.

6. ***The Consolidated Financial Information and Standalone Financial Information includes limited review financial information as of and for the quarters ended June 30, 2023 and June 30, 2022. Such information***

is not audited. Further, the Consolidated Financial Information may not be indicative of the Trust's future financial condition and results of operations. We may not be able to operate our business successfully or generate sufficient cash flows to make or sustain distributions.

This Letter of Offer includes (i) limited review consolidated financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) limited review standalone financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; and (iv) audited standalone financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021. Also see "*Financial Statements*" on page 280.

While the limited review information has been prepared in accordance with applicable law and accounting standards, such information is not audited and should not be considered as a substitute for audited results for the relevant periods.

Further, the Project SPVs (except PDTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. PDTPL was acquired by the Trust on April 2, 2022. IRB GEPL, the Target SPV proposed to be acquired by the Trust, was incorporated on May 13, 2023. Accordingly, this Letter of Offer includes audited financial information of IRB GEPL as of and for the period from May 13, 2023 to June 30, 2023. Given that IRB GEPL was incorporated on the above date, *pro forma* financial information of the Trust and the Target SPV for the previous financial year has not been prepared and is not included in this Letter of Offer. Accordingly, the Consolidated Financial Information included in this Letter of Offer may not be indicative of our financial results, cash flows and financial position in the future, including pursuant to the acquisition of the Target SPV and any future acquisition.

7. *The Target Valuation Report, and any underlying reports, are not opinions on the commercial merits or financial condition of the Target SPV and the valuation contained in such Target Valuation Report may not be indicative of the true value of the Target SPV's asset.*

Mr. Sunit Khandelwal has been appointed to undertake valuation of the Target SPV. The Valuer has issued the Target Valuation Report, included in *Annexure B* to this Letter of Offer, which set out his opinion as to the fair enterprise value of the Target SPV as on June 30, 2023.

In order to issue the Target Valuation Report, the Valuer has based his assumptions regarding the traffic volume, toll rates, operation and maintenance costs, amortization, debt repayments and non-cash net working capital projections on information provided by and discussions with or on behalf of us, the Sponsor/Project Manager, the Lead Manager and the Investment Manager, and which reflects current expectations and views regarding future events and, therefore, necessarily involves known and unknown risks and uncertainties. Please see the Target Valuation Report included as *Annexure B* to this Letter of Offer for a detailed description of the assumptions and methodology. The Target Valuation Report contains forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties. The future events referred to in these forward-looking statements involve risks, uncertainties and other factors which may cause the actual results or performance to be materially different from any future results or performance expressed or implied by the forward-looking statements.

The Target Valuation Report is not an opinion on the commercial merits and structure of the Target SPV, nor is it an opinion, expressed or implied, as to the financial condition of the Trust upon Allotment or listing of the Units in the Issue. The Target Valuation Report does not purport to contain all the information that may be necessary or desirable to fully evaluate the Target SPV or an investment in the Trust or the Units. The Target Valuation Report is not based on a comprehensive review of the business, operational or financial condition of the Target SPV and, accordingly, make no representation or warranty, expressed or implied, in this regard.

The Target Valuation Report does not constitute and should not be construed as any form of assurance as to the financial condition or future performance of the Trust or as to any other forward-looking statements included therein, including those relating to certain macro-economic factors, by or on behalf of the Sponsor/Project Manager, the Investment Manager, the Trustee, the Lead Manager or their respective affiliates. Further, we cannot assure you that the valuations prepared by the Valuer reflect the true value of the net future revenues of the Target SPV or that other valuers would arrive at the same valuation. Accordingly, the valuation contained therein may not be indicative of the true value of the Target SPV's assets. The Target Valuation Report does not take into account any subsequent developments and should not be considered as a recommendation by the Sponsor, the

Investment Manager, the Project Manager, the Trustee, the Lead Manager, their respective affiliates or any other party that any person should take any action based on the Target Valuation Report. Accordingly, Applicants should not rely on the Target Valuation Report in making an investment decision to subscribe to Units in the Issue.

8. *We have referred to the data derived from Traffic Reports commissioned from the Traffic Consultant, which are based on certain bases, estimates and assumptions that are subjective in nature and may not be accurate.*

We have relied on Traffic Reports issued by the Traffic Consultant, and commissioned by the Investment Manager, to forecast the traffic volumes for the Project SPVs' projects and the Target SPV's projects and to prepare traffic reports on the Expanded Portfolio, which are set out in *Annexure A* to this Letter of Offer. The Traffic Reports are subject to various limitations and are based upon certain bases, estimates and assumptions that are subjective in nature and that are based, in part, on information provided by and discussions with or on behalf of us, the Sponsor/Project Manager and the Investment Manager. The Traffic Reports reflect current expectations and views regarding future events, and therefore, necessarily involve known and unknown risks and uncertainties. The Traffic Reports contain forecasts, projections and other "forward-looking" statements that relate to future events, which are, by their nature, subject to significant risks and uncertainties, including population growth, gross domestic product growth, vehicle ownership rates, per capita income, agricultural output and fuel consumption. The future events referred to in the Traffic Reports involve risks, uncertainties and other factors which may cause the actual traffic volumes to be materially different from any future traffic volumes expressed or implied by the Traffic Reports. There can be no assurance that the bases, estimates and assumptions adopted by the Traffic Consultant for the purposes of preparing the Traffic Reports will prove to be accurate. If any of these bases or assumptions is incorrect, future traffic volumes for the Current Portfolio and the Target SPV's asset could be materially different from those that are set out in the Traffic Reports and this Letter of Offer. Also see "*Presentation of Financial, Industry and Market Data – Industry and Market Data*" on page 12.

Risks Related to our Business and Industry

9. *We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the IRB GEPL Acquisition, may adversely affect us.*

The proceeds of the Issue are proposed to be utilized for subscription to the equity shares of IRB GEPL, the Target SPV, by the Trust pursuant to IRB GEPL Share Subscription Agreement and providing unsecured loans to IRB GEPL under the IRB GEPL Shareholder Loan Agreement. The Trust (acting through the Trustee) and the Investment Manager have entered into the IRB GEPL Share Subscription Agreement dated July 29, 2023 with IRB GEPL and the Sponsor for the IRB GEPL Acquisition. Pursuant to the IRB GEPL Share Subscription Agreement, the Trust proposes to subscribe to 715,450,000 equity shares of IRB GEPL, aggregating to 99.99% of the equity share capital of IRB GEPL for a total consideration of ₹7,154.50 million. The Trust (acting through the Trustee) and the Investment Manager have also entered into the IRB GEPL Shareholder Loan Agreement. For details, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 62.

Certain ancillary agreements have also been entered into in connection with the IRB GEPL Acquisition, including amendments to the Framework Agreement and the Name Licensing Agreement, and the IRB GEPL Project Implementation Agreement.

Our ability to complete the acquisition of IRB GEPL is subject to certain conditions precedent and closing conditions. There can be no assurance that the conditions under the IRB GEPL Share Subscription Agreement can be completed in a timely manner or at all. Any inability or delay in satisfying any conditions may result in a delay in or failure to complete the acquisition of the Target SPV. Accordingly, there can be no assurance that we will be able to successfully complete the IRB GEPL Acquisition in the manner set out in the agreements or at all.

Further, pursuant to the IRB GEPL Acquisition, we will assume the existing liabilities of IRB GEPL and its asset. The terms of the agreements for the IRB GEPL Acquisition contain indemnities, which are limited on account of monetary and time limits among other limitations, which will limit our recourse under these agreements. Any losses or liabilities suffered by us in relation to IRB GEPL for which we are unable to recover under these agreements may materially and adversely impact our results of operations, profitability, cash flows and our ability to make distributions to Unitholders.

Also, after the completion of the IRB GEPL Acquisition, the Sponsor (together with its nominee shareholders)

will continue to be a shareholder in IRB GEPL, holding less than 0.01% of the post-acquisition equity share capital of IRB GEPL, as mandatory holding under the concession agreement, for a period of two years from the appointed date for the project, in accordance with the terms of the IRB GEPL Share Subscription Agreement. See " – *The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust.*" on page 34 for risks in relation to our relationship with the Sponsor.

10. *If we are not successful in integrating the Target SPV, our business, financial condition and results of operations may be adversely impacted.*

While we believe that synergies would result from the IRB GEPL Acquisition, there is a risk that such synergies may not actually occur or the extent of synergies actually recognized post-acquisition may not be as expected. Other risks associated with the proposed acquisition include:

- the difficulty of maintaining uniform standards, controls, procedures and policies throughout our business;
- accurately judging micro-market dynamics, growth potential and competitive environment applicable to the Target SPV, given that IRB GEPL will be the first TOT project acquired by the Trust;
- incurring unknown or unexpected potential liabilities;
- obtaining, maintaining and complying with the conditions prescribed under necessary permits certificates, licenses and approvals from governmental and regulatory authorities and agencies; and
- higher than planned expenditure to preserve and grow the value of the Target SPV.

This could materially and adversely affect our business, results of operations and financial condition.

11. *Our failure to extend applicable concession agreements or our inability to identify and acquire new road assets that generate comparable or higher revenue, profits or cash flows than the Project SPVs and the Target SPV may have a material adverse impact on our business, financial condition and results of operations and our ability to make distributions.*

The concession agreements of the Project SPVs and the Target SPV stipulate a limited concession period. Certain concession agreements provide that if the actual traffic volume or revenue falls short of or exceeds the target traffic volume or revenue on a defined date, the concession period may be extended or reduced, respectively, by the concessioning authority, according to a formula specified in the agreement. The table below sets out the details of the Project SPVs' and the Target SPV's concession periods.

Project SPV / Target SPV	Project	Concession period	Commencement of concession period	End of concession period with no reduction or extension	Residual concession period as of June 30, 2023 with no extension or reduction (approx.)
AETL	Agra - Etawah NH-2 Project	24 years	August 1, 2016	July 31, 2040	17 years and 1 month
CGTL	Gulabpura - Chittorgarh NH-79 Project	20 years	November 4, 2017	November 3, 2037	14 years, 4 months and 6 days
IRB HMTL	Hapur - Moradabad NH-9 Project	22 years	May 28 , 2019	May 26, 2041	17 years, 10 months and 26 days
IRB WTL	Goa - Kundapur NH-17 Project	28 years	March 3, 2014	March 2, 2042	18 years, 8 months and 2 days

Project SPV / Target SPV	Project	Concession period	Commencement of concession period	End of concession period with no reduction or extension	Residual concession period as of June 30, 2023 with no extension or reduction (approx.)
KGTL	Kishangarh - Gulabpura NH-79/79A Project	20 years	February 21, 2018	February 20, 2038	14 years, 7 months and 23 days
KTL	Kaithal - Rajasthan Board NH-152/65 Project	27 years	July 15, 2015	July 14, 2042	19 years and 14 days
SYTL	Solapur - Yedeshi NH-211 Project	29 years	January 21, 2015	January 20, 2044	20 years, 6 months and 22 days
UTL	Udaipur - Rajasthan NH-8 Project	21 years	September 3, 2017	September 2, 2038	15 years, 2 months and 5 days
YATL	Yedeshi - Aurangabad NH-211 Project	26 years	July 1, 2015	June 30, 2041	18 years
PDTPL	Palsit-Dankuni NH-19 Project	17 years	April 2, 2022	April 1, 2039	15 years, 9 months and 2 days
IRB GEPL	Hyderabad Outer Ring Road Project	30 years	N/A*	N/A	N/A

** The appointed date for IRB GEPL's project has not been notified and accordingly, the concession period for this project has not yet commenced.*

As at June 30, 2023, the residual periods for the concessions of the Project SPVs ranged from approximately 20 years, 6 months and 22 days to 14 years, 4 months and 6 days. For further details on the residual concession period of each of the Current Portfolio assets, see "*Business*" on page 111.

There can also be no assurance that we will be able to acquire new road assets upon the expiry of the Project SPVs' existing concession agreements or at any time thereafter. Accordingly, the number of assets forming part of our portfolio and the revenue generated by them may vary from time to time. Further, even if new road assets are added to our portfolio, there can be no assurance that such road assets will be able to generate comparable or higher cash flows, revenues and profits than the Project SPVs or the Target SPV whose concession periods have expired. If the Project SPVs or the Target SPV are unable to extend their concession agreements, or if we are unable to acquire new road assets that generate comparable or higher cash flows, revenue or profits than the Project SPVs and the Target SPV, our business, financial condition and results of operations and our ability to make distributions to Unitholders may be materially and adversely affected. For further details on the terms of each of the concession agreements, see "*Summary of the Concession Agreements*" on page 145.

12. *The Project SPVs' and the Target SPV's toll-road concessions may be terminated prematurely under certain circumstances.*

The Current Portfolio comprises our principal assets. Upon the completion of the IRB GEPL Acquisition, we will also hold IRB GEPL and its road asset. We will be unable to continue the operation of a particular road concession without a continuing concession right from the concessioning authority. A concession may be revoked by the concessioning authority for certain reasons set forth in the relevant concession agreement, including, but not limited to, one or more of the following:

- any failure by the relevant Project SPV or the Target SPV to comply with prescribed minimum shareholding requirements;
- any failure by the relevant Project SPV or the Target SPV to participate in, or match the bid of, the successful bidder in the event of any proposed augmentation of capacity of the relevant road asset;
- any failure by the relevant Project SPV or the Target SPV to augment the capacity of the project if the average daily traffic exceeds the traffic capacity for which the project;
- any failure by the relevant Project SPV or the Target SPV to make any payments, including negative grants, to the concession authority in a timely manner;
- any failure by the relevant Project SPV or the Target SPV to comply with operational or maintenance standards;
- any temporary or permanent halt of operations at the relevant Project SPV or the Target SPV;
- any occurrence of an event of default under any financing document where the lender has recalled any part of the loan;
- any continuation of a force majeure event, such as an act of God, act of war, expropriation or compulsory acquisition of any project assets by the government, industrial strikes, and civil commotions, boycotts and political agitations, beyond a specified time; and
- any failure by the relevant Project SPV or the Target SPV to comply with any other material terms of the relevant concession agreement.

The BOT concession agreements also provide that, if the actual traffic volume exceeds the target traffic volume on a defined date, the NHAI may reduce the concession period according to a formula specified in the concession agreement or require the concessionaire to undertake additional capacity augmentation in lieu of a reduction in the concession period. For IRB GEPL, a TOT project, if the actual toll collections exceed the target fee collections on certain dates, as set out in the concession agreement, the concessioning authority may reduce the concession period according to a formula specified in the concession agreement.

For each of the Project SPVs and the Target SPV, we have assumed that we will continue to operate the relevant project until the last date of the concession period as per the relevant concession agreement and have not made provisions for any reduction in the concession periods.

As at the date of this Letter of Offer, completion certificates have not been issued in relation to certain of our four-laning-to-six-laning projects, i.e., IRB WTL and PDTPL. If we are unable to complete the six-laning of these projects within the timelines under the concession agreements or to the satisfaction of the NHAI, our concession agreements may be terminated by the NHAI.

AETL, KTL, SYTL, UTL and YATL have received their final completion certificates. CGTL has received a completion certificate dated August 14, 2021. IRB HMTL has received completion certificates dated July 1, 2022 and April 7, 2023. KGTL has received a completion certificate dated July 20, 2022. IRB WTL has received three provisional completion certificates. The receipt of the final completion certificate is subject to the completion of all conditions specified in the provisional completion certificates, such as quadrant pitching, avenue plantation and completion of rest areas. Certain of these activities are subject to the receipt of certain approvals and/or resources from the NHAI. If IRB WTL is unable to complete the pending items listed in the provisional certificates, its concession agreement may be terminated. For more information, see "*Government and Other Approvals – Approvals in Relation to the Project SPVs and the Target SPV*" on page 634.

In addition, AETL, CGTL, IRB HMTL, KGTL, UTL and PDTPL are required to pay annual premiums in consideration for being granted the right to build and operate their respective projects. Failure to make such payments could result in the termination of the relevant concession agreement by the NHAI.

In accordance with the terms and conditions of the concession agreements, should threshold levels of traffic set out in the concession agreements be exceeded, the Project SPVs may be required to undertake certain development of their respective assets during an extended concession period by way of augmenting the capacity of the relevant

assets. While the Project SPVs are currently in various stages of development, construction and completion, none of the Project SPVs have exceeded the levels of traffic set out in the respective concession agreements and as such, have not been required to undertake certain development of their respective assets, any future requirement to undertake such development may present additional risks to us. Certain concession agreements may impose penalties or provide for termination of such agreement for late or non-completion of certain development of the assets.

Our business, financial condition, reputation and results of operations may be materially and adversely affected if the completion of the construction of the Current Portfolio and/or the conditions specified in the relevant provisional completion certificate is delayed or not achieved in the specified manner. There can be no assurance that these will be completed in the time expected, or at all. Further, there is no assurance that all potential liabilities that may arise from delays or shortfall in performance of contractors will be accurately estimated as part of the planned costs of the construction of the Current Portfolio or conditions specified in the relevant provisional completion certificate, or that the damages that may be claimed from such contractors will be adequate to compensate any loss of revenues or profits resulting from such delays, shortfalls or disruptions. Such risks may increase if completion is delayed for an extended period. If we fail to manage any of the aforesaid risks or any unforeseen risks effectively, our revenues, profitability and results of operations could be materially and adversely affected. For further details on the events that may require the Project SPVs and the Target SPV to undertake certain development of their respective assets as contemplated under the relevant concession agreements, see "*Business*" and "*Summary of the Concession Agreements*" on pages 111 and 145, respectively.

If a concession agreement is terminated by the concessioning authority due to a default by a Project SPV or a Target SPV, or by a Project SPV or a Target SPV due to a default by the concessioning authority, such Project SPV or Target SPV is entitled to termination payments or otherwise from the concessioning authority in accordance with the terms of the relevant concession agreement. The Shareholder Loans may be for a maturity term that exceeds the maturity term of the original facilities obtained from the senior lenders. There can be no assurance that the concessioning authority will recognize such amounts as outstanding after the term of the original facilities obtained by the Project SPVs or the Target SPV from their respective senior lenders. There can also be no assurance that the concessioning authority will pay the termination payments promptly or at all or that any termination payments will be adequate to enable us to recover our investments or returns in the relevant Project SPVs or the Target SPV.

If any of the concession agreements are reduced or terminated prematurely, our business, financial condition and results of operations may be materially and adversely affected. For further details on the termination of the concession agreements, the termination payments, and the definition of "default" as contemplated under the relevant concession agreements, see "*Business*" and "*Summary of the Concession Agreements*" on pages 111 and 145, respectively.

13. *A decline in traffic volumes would materially and adversely affect our business prospects, financial condition and results of operations and our ability to make distributions to Unitholders.*

The Project SPVs currently operate the Current Portfolio assets and the Target SPV will operate its road asset (from the notification of the appointed date). Toll revenues depend on toll receipts, which in turn depend on toll fees and traffic volumes on the toll roads. Traffic volumes are directly or indirectly affected by many external factors, including:

- toll fees;
- fuel prices in India;
- the frequency of traveller use;
- the number and affordability of automobiles;
- the quality, convenience and travel efficiency of alternative routes outside of our network of toll roads;
- the convenience and extent of a toll road's connections with other parts of the local, state and national highway networks;
- the availability and cost of alternative means of transportation, including rail networks and air transport;
- the level of commercial, industrial and residential development in areas served by the Project SPVs' projects;
- adverse weather conditions; and
- seasonal holidays.

In addition, under the terms of the concession agreements entered into by each of the Project SPVs and the NHAI,

the Government and State Governments have the right to construct and open additional roads which may serve as alternate routes to the relevant Current Portfolio assets after the expiry of between eight and 15 years, depending on terms of the concession. The construction of such alternative roads and highways may result in a diversion of vehicular traffic from the relevant Current Portfolio assets and a reduction of revenue from toll receipts. Further, local roads and state highways may be improved so as to serve as alternate routes to the relevant Current Portfolio assets, and tolls may or may not be charged on such local roads and state highways. The existence or improvement of such alternative roads and highways may also result in a diversion of vehicular traffic from the relevant Current Portfolio assets and a reduction of revenue from toll receipts. The concession agreement for the Target SPV, IRB GEPL, a TOT project, also provides for construction of additional roads by the concessioning authority, subject to certain conditions. For additional information on alternate routes, please see the Traffic Reports set out in *Annexure A* to this Letter of Offer. Also see "*Summary of the Concession Agreements*" on page 145.

While most of the Project SPVs' concession agreements provide for an extension in the concession period if the actual traffic volumes are significantly lower than the target traffic volumes set forth in the respective concession agreements, there can be no assurances that the concession period will be actually extended by the NHAI. In the event that the actual traffic volumes are significantly less than the projected traffic volumes, the revenue generated from toll receipts may be lower than anticipated and our business prospects, financial condition and results of operations and our ability to make distributions to Unitholders may be materially and adversely affected. Similarly, while the Target SPV's concession agreement provides for an extension in the concession period if the actual toll collections fall short of the target fee collections on certain dates, as set out in the concession agreement, based on a formula specified in the concession agreement, there can be no assurance that the concession period will be actually extended by the concessioning authority. This may materially and adversely affect our results of operations and financial condition.

14. *We may face limitations and risks associated with debt financing, refinancing and restrictions on investment.*

We are subject to regulatory restrictions in relation to our debt financing and refinancing. We may from time to time require debt financing and refinancing to carry out the Investment Manager's investment strategy. In the event that we undertake debt financing or refinancing, we may be limited by Indian law as to the form of financing or refinancing that we may undertake. For instance, while the RBI has permitted scheduled commercial banks and certain financial institutions to lend to InvITs, such lending is subject to the conditions specified in the circular which include, *inter-alia*, banks putting in place a board-approved policy for exposure to InvITs and the determination of SPVs not being in "financial difficulty" and lending subject to such policies.

As a listed infrastructure investment trust, we are subject to the leverage limits specified under the InvIT Regulations, i.e., up to 70% of the value of the Trust Assets. Pursuant to a letter dated February 28, 2023, the SEBI has exempted us from the requirement to have a mandatory 'AAA' credit rating and a track record of six distributions to raise debt above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, subject to obtaining a credit rating, disclosure of such credit rating and obtaining unitholder approval. We have obtained and disclosed a credit rating for certain long-term loan facilities from CRISIL Ratings ('AAA/stable'). Pursuant to a resolution dated August 1, 2023, we have obtained Unitholder approval for increasing the threshold for borrowings to 55% of the value of the Trust Assets.

In the event that we undertake debt financing or refinancing, we may also be subject to risks associated with debt financing and refinancing, including the risk that our cash flow may be insufficient to meet required payments of principal and interest under such financing and to make distributions to Unitholders. Our ability to generate sufficient cash to satisfy our debt obligations will depend on our future operating performance, which may be affected by prevailing economic conditions and financial, business and other factors beyond our control. There is no assurance that we will be able to generate sufficient cash flow to meet all of our debt obligations. If we are unable to make payments due under our debt facilities, the lenders may be able to declare an event of default and initiate enforcement proceedings relating to any security provided in respect of the loan facilities, and/or call upon any guarantees, and this may materially and adversely affect our ability to make distributions to Unitholders. In case of default, lenders could initiate proceedings against the Trust Assets and the Trust Assets which remain after recovery of the defaulted amount would be remitted to the Unitholders on a proportionate basis. Such default may also result in the termination of certain concession agreements by the concessioning authority.

We may also be subject to certain covenants in connection with any future borrowings that may limit or otherwise materially and adversely affect our operations and our ability to make distributions to Unitholders, such as covenants restricting our ability to acquire assets or undertake other capital expenditure, requirements to set aside funds for

maintenance or repayment of security deposits or requirements to maintain certain financial ratios. For further details, see "*Financial Indebtedness*" on page 610.

Further, if prevailing interest rates or other factors at the time of financing or refinancing (including changes in market conditions and maturity term imposed by any lenders) result in higher interest rates, the interest expense may be significant and may have a material and adverse effect on our cash flow and the amount of distributions available to Unitholders.

Additionally, as privately placed listed infrastructure investment trust, the Trust is permitted to invest only in "eligible infrastructure projects" as defined under the InvIT Regulations, which excludes infrastructure projects that do not meeting certain thresholds. This may restrict the scope of potential acquisitions of assets in the future.

15. *A Project SPV has experienced negative cash flows during the last three financial years.*

The Project SPV set out below has experienced negative cash flows during the periods specified below.

Project SPV	Net cash flow used in operating activities (₹ in million)		
	Financial Year 2023	Financial Year 2022	Financial Year 2021
IRB WTL	(585.47)	2,784.35	854.67

Negative cash flows over extended periods, or significant negative cash flows in the short term, could materially impact our ability to operate our business and implement our construction and growth plans. As a result, our cash flows, business, financial condition and results of operations could be adversely affected.

16. *Leakage of the toll fees on the Project SPVs' and the Target SPV's roads may materially and adversely affect our revenues and financial condition.*

The Project SPVs' and the Target SPV's toll receipts are primarily dependent on the integrity of toll-collection systems and the willingness of road users to pay toll fees. While each of the Project SPVs has, and the Target SPV proposes to have, an integrated toll-collection system in place, the level of revenues derived from collection of tolls may be reduced by leakage through toll evasion, theft, fraud or technical defaults in the Project SPVs' or the Target SPV's toll systems or forced violations by users of the relevant Expanded Portfolio assets. Further, Project SPVs and the Target SPV may also, at times, need to allow users of the relevant Expanded Portfolio assets to pass through without paying applicable tolls due to heavy traffic build-up, or may be unable to collect tolls due to political protests or other agitations relating to tolling. For instance, due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020. The protest was called off on December 15, 2021 and toll collection resumed from December 16, 2021. Pursuant to a circular dated July 2, 2021 issued by the NHAI, the impact of such protest has been considered an indirect political force majeure event for purposes of the concession agreement and concessionaires would accordingly be entitled to appropriate relief with respect to the period of concession, cost of force majeure, interest payment on debt and O&M expenses. For details, see "*Management's Discussion and Analysis of our Financial Condition and Results of Operations – Factors affecting Results of Operations*" and "*Regulations and Policies*" on pages 593 and 231, respectively.

In addition, in certain circumstances, the governmental authorities or Indian courts could seek to suspend toll-collection for or during certain periods, in full or in part, on the Expanded Portfolio assets, which suspension would result in a reduction in our revenues. Further, toll-collection errors may amount to a loss of revenue as there is an inherent risk of under-collection of toll fees given that most users of toll roads pay in cash. Any significant failure by us to monitor and control leakage in toll-collection systems could have a material, adverse effect on our business, prospects, financial condition and results of operations and our ability to make distributions. See "*Summary of the Concession Agreements*" on page 145.

17. *Our business will be subject to seasonal fluctuations that may affect our cash flows.*

Our cash flows will be affected by seasonal factors, which may materially and adversely affect traffic volumes. Traffic volumes tend to decrease during the monsoon season and conversely tend to increase during holiday seasons. The monsoon season may also restrict our ability to carry on activities related to our operation and maintenance of the Expanded Portfolio. This may result in delays in periodic maintenance and reduce productivity, thereby materially and adversely affecting our business, financial condition and results of operations.

18. *Changes in the policies adopted by governmental entities or in the relationships of any of the Trust, the Project SPVs and the Target SPV with the Government of India or state governments could materially and adversely affect our business, financial performance and results of operations.*

The Project SPVs and the Target SPV derive almost all of their revenue from their respective concession agreements with the relevant concessioning authority and must maintain good relationships with the concessioning authorities, the Government of India and the various state governments. We expect that we will continue to depend on, and benefit from, policies relating to the terms of the concessions and other incentives that we will receive from governmental entities in respect of the Project SPVs' and the Target SPV's existing projects and any future projects. In addition, we benefit from, and depend on, the NHAI, the relevant state concessioning authority and various Government of India and state government entities in terms of policies, incentives, budgetary allocations and other resources provided by these entities for the roads industry in general. Any adverse change in any existing governmental policies, incentives, allocations or resources, or any change in our relationships with governmental entities, could materially and adversely affect our business, financial condition and results of operations. Also see "*Regulations and Policies*" on page 231. There can be no assurance that the Government of India will continue to focus on and promote toll-road projects on a build-operate-transfer basis or a toll-operate-transfer basis.

Additionally, toll roads which involve public-private partnerships may be subject to delays, extensive internal processes, policy changes, changes due to local, national and internal political pressures and changes in governmental or external budgetary allocation and insufficiency of funds. Since governmental entities are responsible for awarding concessions and are a party to the development and operation of the awarded projects, our business will be directly and significantly dependent on their support. Any withdrawal of support or adverse changes in their policies, even if not quantifiable monetarily, may lead to the Project SPVs' and the Target SPV's concession agreements being restructured or renegotiated or the concession period being decreased, which could materially and adversely affect the Project SPVs' and the Target SPV's financing, capital expenditure, revenues, development or operations.

19. *Certain provisions of the standard form of concession agreement may be non-negotiable or untested, and the concession agreements may contain certain restrictive terms and conditions which may be subject to varying interpretations.*

Our concession agreements were entered into with the concessioning authorities and we have limited ability to negotiate the terms of these contracts. The concession agreements that we have entered into are based on a model concession agreement prescribed by the NHAI. For example, the toll fees under the BOT project concession agreements are fixed, subject to annual adjustments to account for inflation as specified in the concession agreements and the applicable rules issued by the NHAI. In addition, the operation and maintenance standards and specifications require the Project SPVs and the Target SPV to incur operation and maintenance costs on a regular and periodic basis. The model concession agreement prescribed by the NHAI also provides for a fixed term concession and, although all concession agreements provide for an extension or reduction of the concession period based on certain factors, including actual traffic volumes on the target date, the concession agreements do not provide for renewal of the concession agreement after the expiry of the term.

The form of the concession agreement has evolved within the last decade and there is limited guidance available on the interpretation of a number of provisions and conditions of such concession agreements. In addition, certain terms of the concession agreements, such as those related to an augmentation in the capacity of the toll roads, substitution of the concessioning authorities in any or all of the project agreements, termination payments by the concessioning authorities, construction of additional competing roads by the concessioning authorities, the Government of India or state governments and payment of compensation by the concessioning authorities for changes in law are untested. Accordingly, courts or regulators may consider a different interpretation of certain provisions and conditions in the concession agreements of the Project SPVs and the Target SPV, which may be adverse to us.

The concession agreements of the Project SPVs and the Target SPV also contain certain restrictive covenants. For instance, the concession agreements contain provisions that mandate substitution clauses in the project agreements. Such substitution clauses allow the concessioning authorities to step into project agreements in place of a Project SPV or the Target SPV in the event of suspension or termination of the concession agreements due to a breach or default by such Project SPV or the Target SPV. The concession agreements also provide that the lenders to a Project SPV or the Target SPV may substitute the Project SPV or the Target SPV with new

concessionaires approved by the concessioning authority in the event of a default by the Project SPV or Target SPV under the relevant concession agreement, financing agreements or other project agreements. Additionally, pursuant to a circular dated January 29, 2014 issued by the NHAI, the NHAI or lenders may substitute the Project SPV in the event of a "financial default" by such Project SPV, which includes situations in which the NHAI or lenders have reason to believe that the Project SPV is likely to face financial distress and is likely to default in its compliance with the terms of the relevant concession agreement.

The terms of the Project SPVs' and the Target SPV's concession agreements require the Project SPVs and the Target SPV to indemnify the concessioning authority for losses arising out of the design, engineering, construction, procurement, operation and maintenance of the toll road, defect or deficiency in the provision of services, or arising out of breach of the obligations of the Project SPVs and the Target SPV under the relevant concession agreements, as applicable.

In the event the concessioning authority or a lender invokes any restrictive provision in the concession agreements or interprets any term or condition in an adverse manner, such invocation or interpretation may materially and adversely affect our business, financial condition and results of operations. For further details on the terms of the concession agreements, see "*Summary of the Concession Agreements*" on page 145.

20. *Certain actions of the Project SPVs and the Target SPV require the prior approval of the relevant concessioning authority, and no assurance can be given that the concessioning authority will approve such actions in a timely manner or at all.*

Certain terms and conditions in the Project SPVs' and the Target SPV's concession agreements, financing agreements, and our other approvals require the concessioning authority's prior written approval to be obtained for one or more of the following actions, among others:

- amendment, modification or replacement by the Project SPV or the Target SPV of any project agreements (including financing agreements) relating to the operation of the Expanded Portfolio assets to which the Project SPV or the Target SPV is a party if the amendment, modification or replacement of such agreement increases or imposes any financial liability or obligation on the concessioning authority;
- the creation of any encumbrance or security interest over, or transfer of rights and benefits of the Project SPVs or the Target SPV under, the concession agreements or any project agreements; and
- the selection or replacement of any engineering, procurement and construction contract, operation and maintenance contractor and execution of the engineering, procurement and construction agreements and the operation and maintenance agreements (to the extent applicable).

Pursuant to a letter dated January 3, 2020, the NHAI has approved the establishment of the Trust and the transfer of the Project SPVs to the Trust subject to certain conditions, including, (i) submission of no-objection certificates from the lenders of all the Project SPVs; (ii) the concessionaire/developer complying with all the provisions of the concession agreements including holding 51% in the Trust until two years after the completion / provisional COD of the projects; (iii) the incoming investor complying with all relevant contractual obligations of the concession agreements; (iv) the proposal not having the effect of increasing any financial liability or obligation on the NHAI and not jeopardizing the interests of NHAI in any manner; and (v) an undertaking that all statutory compliances as required by SEBI guidelines will be adhered to.

The concession agreements of the Project SPVs and the Target SPV also require the submission to the concessioning authority, for its review and comments, all project agreements to which a Project SPV or the Target SPV is a party prior to entry, amendment or replacement of such agreements, even if such agreements do not affect the financial liability or obligations of the concessioning authority.

The restrictions described above may impose constraints on our flexibility to conduct our business. Further, if as a result of these restrictions, we are unable to pursue a favorable course of action or to respond to an unfavorable event, condition or circumstance, then our business, financial condition and results of operations may be materially and adversely affected. For details on the terms of the concession agreements, see "*Summary of the Concession Agreements*" on page 145.

21. *We depend on certain directors, executive officers and key employees of the Investment Manager and the Project Manager, and such entities may be unable to retain such personnel or to replace them with similarly qualified personnel, which could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust, the Project SPVs and the Target SPV.*

Our performance depends, in part, upon the continued service and performance of certain directors, executive officers and key employees of the Investment Manager and the Project Manager. The continued operations and growth of our business will be dependent upon the Investment Manager and the Project Manager being able to attract and retain personnel who have the necessary and required experience and expertise. Competition for qualified personnel with relevant industry expertise in India is intense due to the scarcity of qualified individuals in the toll roads business, and the aforesaid entities may not be able to retain their executive officers and key employees or attract and retain fresh talent in the future. Any inability by the Investment Manager or the Project Manager to retain their respective directors, executive officers and key employees, or the inability to replace such individuals with similarly qualified personnel, could have a material, adverse effect on the business, financial condition, results of operations and prospects of the Trust, the Project SPVs and the Target SPV.

22. *There can be no assurance that we will be able to successfully undertake future acquisitions of road assets or efficiently manage the infrastructure road assets we have acquired or may acquire in the future.*

Our growth strategy in the future may involve strategic acquisitions of toll roads and other road assets, including pursuant to the Framework Agreement. Pursuant to the Framework Agreement, the Sponsor has agreed to certain arrangements in relation to submission of bids for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways; or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) with the Financial Investors. For details, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" and " *– The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust."* on pages 246 and 34, respectively. We may not be able to conclude appropriate or viable acquisitions in a timely manner. The success of our past acquisitions and any future acquisitions will depend upon several factors, including:

- our ability to finance and acquire operational toll roads and other road assets on a cost-effective basis;
- our ability to integrate acquired personnel, operations, products and technologies into our organization effectively;
- unanticipated problems or legal liabilities of the acquired businesses; and
- tax or accounting issues relating to the acquired businesses.

There can be no assurance that we will be able to achieve the strategic purpose of such acquisitions or operational integration or an acceptable return on such investments, which may materially and adversely affect our profits, financial condition and distributions.

Further, concession agreements for future road projects may also contain terms and conditions that are more restrictive than those under the current Project SPVs' concession agreements for the Current Portfolio or the Target SPV's concession agreements. These restrictions may restrict our flexibility in managing our business or projects and could in turn materially and adversely affect our business prospects, financial condition and results of operations.

23. *The Project SPVs' and the Target SPV's concessions are illiquid in nature, which may make it difficult for us to realize, sell or dispose of our shareholding in the Project SPVs or the Target SPV.*

The Project SPVs' and the Target SPV's concessions are illiquid in nature, among other reasons, on account of market conditions, the residual periods of the concession agreements, various approvals, consents and confirmations required by the concessioning authorities as per the concession agreements, and a scarcity of disposal options and/or potential acquirers. As a result, it may be difficult for us to realize, sell or dispose of our shareholding in the Project SPVs or the Target SPV at an attractive price, or at the appropriate time, or at all, and such illiquidity may have a material, adverse effect on our market value, business, prospects, financial condition and results of operations. Further, in addition to the restrictions on minimum holding period and divestment under the InvIT Regulations, we are required to comply with the provisions of the concession agreement including holding at least 51% of each of the Project SPVs and the Target SPV until two years after the completion of construction / provisional COD / appointed date with respect to each of the Expanded Portfolio assets.

24. *Our insurance policies may not provide adequate protection against all possible risks associated with our operations.*

The Project SPVs' and the Target SPV's principal types of insurance coverage include standard fire and special

perils insurance, contractor all-risk insurance and money insurance. However, there can be no assurance that all possible risks are adequately insured against or that we will be able to procure adequate insurance coverage at commercially reasonable rates in the future.

Further, the Expanded Portfolio is subject to various risks that we may not be insured against, adequately or at all, including:

- changes in governmental and regulatory policies;
- shortages of, or adverse price movement for, construction materials;
- design and engineering defects;
- breakdown, failure or substandard performance of the road assets and other equipment;
- improper installation or operation of the road assets and other equipment;
- labor disturbances;
- terrorism and acts of war;
- inclement weather and natural disasters;
- environmental hazards, including earthquakes, flooding, tsunamis and landslides; and
- adverse developments in the overall economic environment in India.

Further, we are subject to various risks in the operation of the Expanded Portfolio, including on account of accidents on the Expanded Portfolio assets. For further details, see "*Material Litigation and Regulatory Action*" on page 615. Our insurance may not provide adequate coverage in certain circumstances and is subject to certain deductibles, exclusions and limits on coverage. To the extent we suffer damage or loss which is not covered by insurance, or exceed our insurance coverage, such damage or loss would have to be borne by us. We can make no assurance that material losses in excess of insurance proceeds (if any at all) will not occur in the future, which could materially and adversely affect our financial condition, business and results of operations.

25. *The Project SPVs, the Target SPV, the Sponsor/Project Manager, the Investment Manager and the Trustee are involved in certain legal and other proceedings, which may not be decided in their favor.*

The Project SPVs, the Target SPV, the Sponsor/Project Manager, the Investment Manager and the Trustee are involved in legal proceedings or claims which are pending at different levels of adjudication before various courts, tribunals and regulatory authorities. For details of certain material outstanding legal proceedings, see "*Material Litigation and Regulatory Action"* on page 615. There is no assurance that these legal proceedings and regulatory matters will be decided in favor of the respective entities. Decisions in any of the aforesaid proceedings adverse to our interests may have a material, adverse effect on our or their business, future financial performance and results of operations. If the courts, tribunals or regulatory authorities decide against the Project SPVs, the Target SPV, the Sponsor/Project Manager, the Investment Manager or the Trustee, we or such entities may face monetary and/or reputational losses and may have to make provisions in our financial statements, which could increase expenses and liabilities. While the Sponsor will provide certain indemnities under the relevant share purchase agreement in relation to the Project SPVs and the Target SPV, there can be no assurance that the relevant Project SPV, the Target SPV or the Trust will be able to successfully bring a claim against the Sponsor under the relevant share purchase agreements or that such indemnities will be adequate to satisfy all the losses, damages, costs and expenses suffered by the Trust, the Project SPVs and the Target SPV arising from such proceedings (whether now or in the future) or the consequences thereof.

26. *We do not own the "IRB" trademark and logo. Our license to use the "IRB" trademark and logo may be terminated under certain circumstances and our ability to use the trademark and logo may be impaired.*

We do not own the "IRB" trademark and "IRB" logo, which are registered in the name of, and owned by, the Sponsor. However, pursuant to a separate name licensing agreement, as amended, the Sponsor has granted to the Trust, each of the Project SPVs, the Target SPV and the Investment Manager, the non-transferable and non-assignable right to use the IRB trademark as part of their respective corporate names, if applicable, as well as the IRB logo in connection with their respective businesses, on a non-exclusive basis. The license may be terminated under certain circumstances, including (i) if the Sponsor or any of its subsidiaries ceases to be the sponsor of the Trust for any reason whatsoever; or (ii) if the Sponsor or any of its subsidiaries ceases to hold at least 51% of the equity share capital of the Investment Manager, or an entity which is not a subsidiary of the Sponsor is appointed as the investment manager of the Trust. Upon the termination of any license, the Trust, the Project SPVs and the Target SPV will be required to cease the use of the IRB trademark and change their names to remove IRB from their names within three months from the date of termination, which may have a material, adverse effect on the operations of the

Trust, the Project SPVs and the Target SPV and require management's time and attention.

27. *The Expanded Portfolio is concentrated in the infrastructure sector and toll-road industry in India, and our business could be adversely affected by an economic downturn in that sector or industry. The Project SPVs' and projects are geographically concentrated in Rajasthan and Maharashtra.*

The Current Portfolio comprises 10 toll roads in India. Upon completion of the IRB GEPL Acquisition, the portfolio of the Trust will also include IRB GEPL and its road asset. This concentration may expose us to the risk of economic downturns in the infrastructure sector and the toll-road industry to a greater extent than if our assets were more diversified across other industries in the infrastructure sector or other sectors of the economy.

As at the date of this Letter of Offer, four Current Portfolio assets are located in or pass through Rajasthan. Additionally, two Current Portfolio assets each are located in or pass through Maharashtra and Uttar Pradesh. Our business therefore will be significantly dependent on the general economic conditions, market conditions and natural disasters in the states in which we operate, in particular Rajasthan and Maharashtra. Any regional slowdown in economic activity in these areas resulting in a reduction in traffic on the Current Portfolio assets could materially and adversely affect our business, financial condition and results of operations.

28. *Political and other agitations against the collection of tolls may affect our ability to collect tolls over prolonged periods, which could have a material, adverse effect on our business, results of operation and financial condition.*

Over the past few years, there have been agitations by political parties and local community members against the collection of tolls on local road and state highway projects across various states, including Maharashtra. These agitations have often turned violent and resulted in the destruction of toll-collection booths and other related property. If such events spread to the Project SPVs' or the Target SPV's projects, which are located on national highways or other roads, it may limit our ability to collect tolls over a prolonged period and may have a material, adverse effect on our business, financial condition and results of operations. Further, the Project SPVs' and the Target SPV's concession agreements provide that in the event that the Project SPVs' or the Target SPV's ability to collect tolls is disrupted as a result of political and other agitations over a specified period, either party to the concession agreement may terminate the agreement. While the concession agreements provide for a specified payment mechanism in the case of such termination, there can be no assurance that the Project SPVs or the Target SPV will receive such payments from the concessioning authorities in a timely manner or at all, or that such payments will be adequate to recover our investment or return, which may materially and adversely affect our business, financial condition and results of operations.

29. *We may be unable to renew or maintain the statutory and regulatory permits and approvals required to operate the Expanded Portfolio.*

The Project SPVs and the Target SPV are required to obtain and maintain certain permits, approvals, licenses, registrations and permissions under various regulations, guidelines, circulars and statutes regulated by various regulatory and governmental authorities for operating the Expanded Portfolio assets. Certain approvals may lapse in normal course and the respective Project SPVs and Target SPV make application to the appropriate authorities for renewal of such licenses and/or approvals. For further details, see "*Government and Other Approvals*" on page 634. Under the Project Implementation Agreements, the Project Manager is responsible for the maintenance of such approvals. In relation to the obligations of the Project Manager under the Project Implementation Agreements, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 265. If the Project Manager, the Project SPVs, the Target SPV and/or the third-party contractor(s) fail to obtain or maintain them, or if there is any delay in obtaining or renewing them, our business, financial condition and results of operations could be materially and adversely affected. Further, these permits, approvals, licenses, registrations and permissions could be subject to several conditions, and we can make no assurance that we would be able to continuously meet such conditions or be able to prove compliance with such conditions to the statutory authorities. This could lead to the cancellation, revocation or suspension of relevant permits, licenses or approvals, which may result in the interruption of our operations and may materially and adversely affect our business, financial condition and results of operations.

30. *Compliance with, and changes in, safety, health and environmental laws and regulations in India may materially and adversely affect our business.*

Our business will be subject to environmental, health and safety laws and regulations and various labor, workplace

and related laws and regulations in India and requirements under the concession agreements. For further details, see "*Regulations and Policies*" on page 231. Any changes in, or amendments to, these standards or laws and regulations could further regulate our business and could require us to incur additional, unanticipated expenses in order to comply with these changed standards. Under the Project Implementation Agreements, the Project Manager is responsible for the maintenance of such requirements and standards. In relation to the obligations of the Project Manager under the Project Implementation Agreements, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 264. If we fail to meet safety, health and environmental requirements, we may also be subject to administrative, civil and criminal proceedings by governmental authorities, as well as civil proceedings by environmental groups and other individuals, which could result in substantial fines and penalties against us. Penalties imposed by regulatory authorities on us or third parties upon whom we depend may also disrupt our business and operations.

There can be no assurance that we will not become involved in future litigation or other proceedings or be held responsible in any such future litigation or proceedings relating to safety, health and environmental matters in the future. Clean-up and remediation costs, as well as damages, payment of fines or other penalties, other liabilities and related litigation, could materially and adversely affect our business, prospects, financial condition and results of operations.

31. *The Project SPVs' financing agreements entail interest at variable rates, and any increases in interest rates may adversely affect our results of operations, financial condition and cash flows.*

The Project SPVs are susceptible to changes in interest rates and the risks arising therefrom. For details, see "*Financial Indebtedness*" on page 610. These financing agreements entail interest at variable rates with a provision for the periodic reset of interest rates. Currently, certain of the Project SPVs' borrowings are at floating rates of interest. Further, under the Project SPVs' financing agreements, the lenders are entitled to change the applicable rate of interest depending upon the policies of the RBI and in the event of an adverse change in the Project SPVs' credit risk rating. Any increase in interest rates may have an adverse effect on our results of operations, financial condition and cash flows.

32. *The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets.*

Various financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to:

- effecting any change in the nature or scope of the project or any change in the financing plan;
- effecting any change in capital structure (including shareholding pattern);
- raising any equity or preference share capital;
- making any capital expenditure other than permitted investments;
- making any dividend payments to the Trust or making any other restricted payments (including redemption of any shares of any class, prepayment in relation to any indebtedness, payment of interest on unsecured loans, investment in any entity) except as permitted under the financing agreements;
- creating of any security interest in any of the secured property;
- incurring any other indebtedness, including the issuance of debentures, other than permitted indebtedness;
- entering into any partnership, profit-sharing or royalty agreement;
- removing any person exercising substantial powers of management over the affairs of the Project SPVs in case of an event of default;
- amending the constitutional documents of the Project SPVs;
- undertaking of any new project or making of any investment or taking any assets on lease;
- providing guarantees, indemnities or similar assurances in respect of indebtedness of any other person, (other than in the ordinary course of business);
- repaying or prepaying any subordinated loan or loans brought in as equity taken by the Project SPVs from the Sponsor;
- creating any subsidiary or permit the Project SPV to become a subsidiary;
- undertaking or permitting any scheme of arrangement or compromise with its creditors or shareholders; and
- changing the management/management control or the composition of the board of directors of any Project SPV.

For details, see "*Financial Indebtedness*" on page 610. In addition, these restrictive covenants may also affect some of the Trust's rights as the shareholder of the Project SPV and the Project SPV's ability to pay dividends if it is in breach of its obligations under the applicable financing agreement.

In case of any shortfall in project receivables, the relevant Project SPV may need to make good the shortfall from its own sources and/or arrange for the loan to be repaid through revenue shortfall loans from the relevant concession authority. Such financing agreements also require us to maintain certain financial ratios. In the event of any breach of any covenant contained in these financing agreements, we may be required to immediately repay our borrowings either in whole or in part, together with any related costs. There can be no assurance that we will be able to secure consents from, and/or negotiate revised terms with, the lenders on terms favorable to the Trust or at all.

Further, the financing agreements also contain cross default provisions which could automatically trigger defaults under other financing agreements. Certain lenders are also entitled to accelerate the repayment of the loans at any time based on the lenders' assessment of the cash flows, subject to any approval required from the concessioning authority.

If the Project SPV or the Target SPV is suspended under the concession in relation to any default by such Project SPV or Target SPV, at any time during such suspension, the senior lenders of each Project SPV and Target SPV have the right to request the concessioning authority to substitute the concessionaire in accordance with the substitution agreement.

Any downgrading of the credit rating of the Project SPVs by a credit rating agency or any adverse comment from the statutory auditors of such Project SPV or the Trust may qualify as an event of default under the relevant financing agreements of the Project SPVs. Certain financing agreements also provide the banks and financial institutions with the right to convert amounts due into equity in the event of default, with the approval of the relevant concessioning authority. Certain of these banks and financial institutions also have a right to appoint nominee directors under these financing agreements in the event of default. Pursuant to the provisions of certain loan facilities availed by us, the lenders are entitled to recall the loan at any time on demand or call notice, requiring the borrower to repay (either in full or in part) the amount outstanding on any particular day.

Any or all of the above restrictive covenants may restrict our ability to conduct business and any breach thereof may adversely affect our results of operations and financial condition.

33. *Shares of the Project SPVs are, and shares of the Target SPV may be required to be, pledged in favor of lenders, who may exercise their rights under the respective share pledge agreements in the event of default under relevant financing agreements.*

Shares of the Project SPVs are, and shares of the Target SPV may be required to be, pledged in favor of the lenders to such Project SPVs/Target SPV to secure loan facilities obtained by the Project SPVs/Target SPV. 51% of the equity share capital of each of the Project SPVs has been pledged in favor of their respective lenders and after the completion of the IRB GEPL Acquisition, not more than 51% of the equity share capital of the Target SPV is proposed to be pledged in favor of its lenders, if applicable, in accordance with the relevant financing documents.

If there are any defaults in payment or any breach under the relevant financing agreements, the lenders may exercise their right to enforce the security interest under the financing agreements, including by taking ownership of the pledged shares, selling the pledged shares to any third-party purchaser, and exercising voting rights in respect of the pledged shares on any matter at any meeting of the members of the relevant Project SPVs or the Target SPV. If any such event occurs, we may not be able to fully recognize revenue attributable to these Project SPVs or the Target SPV, if at all. In addition, if we lose ownership or control of any of our Project SPVs or the Target SPV, our business, results of operations and financial condition, and our ability to make distributions, would be adversely affected.

34. *We will enter into related-party transactions. There can be no assurance that we could not have achieved more favorable terms if such transactions had been entered into with third parties.*

The IRB GEPL Acquisition is a related party transaction. We will continue to enter into transactions with related parties, subject to and in accordance with the terms of the Framework Agreement. The procedure with respect to such related party transactions is subject to modification by law, which may have a material, adverse effect on the

Trust. Further, there can be no assurance that we could not achieve more favorable terms had such transactions been entered into with unrelated parties. The transactions that we will enter into may involve conflicts of interest which may be detrimental to us. See "*Related Party Transactions*" on page 245. There can be no assurance that such transactions, individually or in the aggregate, will not have a material, adverse effect on our business, financial condition and results of operations, including because of potential conflicts of interest or otherwise.

Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager

35. ***The Sponsor, whose interests may be different from the other Unitholders, will be able to exercise significant influence over the Trust.***

After the completion of the Issue, the Sponsor is expected to own a maximum of 51.02% of the issued and outstanding Units and will be entitled to vote as a Unitholder on all matters other than matters where it is a related party and not permitted to vote under the InvIT Regulations. Although the Investment Manager has a distinct board of directors, the Sponsor is nonetheless in a position to exercise significant influence in matters which require the approval of Unitholders by virtue of its ownership of Units in the Trust. The interests of the Sponsor may conflict with the interests of our other Unitholders and the Sponsor may, for business considerations or otherwise, seek to benefit itself instead of the Trust or the interests of the other Unitholders. The Sponsor also exercises significant influence over the Investment Manager.

We also rely on the Sponsor to comply with its obligations under the various transaction agreements to which it is a party, including the Framework Agreement. Pursuant to the Framework Agreement, the Sponsor has agreed that prior to the submission of a Bid (as defined under the Framework Agreement) for any Potential Project (as defined under the Framework Agreement), it will consult the Financial Investors in good faith and make best efforts to bid for the Potential Project on behalf of the Trust on such terms as agreed between Sponsor and the Financial Investors. If the Sponsor and the Financial Investors are unable to reach an agreement in relation to the terms of the Bid within a reasonable period, the Sponsor will be free to submit a Bid as it deems fit for the Potential Project provided such Bid is not on terms and conditions less favorable than the terms and conditions proposed by the Financial Investors.

The Sponsor (together with its nominee shareholders) currently holds 50,000 equity shares constituting 100% of the equity share capital of IRB GEPL ("**IRB GEPL IRB Shares**"). Upon completion of the IRB GEPL Acquisition, the shareholding of the Sponsor (together with its nominee shareholders) in IRB GEPL will reduce to less than 0.01% and the Sponsor (together with its nominee shareholders) will continue to hold 50,000 equity shares of IRB GEPL. Under the IRB GEPL Share Subscription Agreement, the Sponsor is required to make an irrevocable invitation to offer to the Trust for the IRB GEPL IRB Shares after the completion of two years from the appointed date (such period, the "**IRB GEPL IRB Shares Offer Period**"). The Trust also has the right to require the Sponsor to make an invitation to offer for the IRB GEPL IRB Shares at any time after the completion of two years from the appointed date. If the Sponsor does not make an invitation to offer to the Trust within the IRB GEPL IRB Shares Offer Period, upon the expiry of such period, the requirement for the Sponsor to make such offer will be automatically triggered.

In addition, as our Project Manager, we rely on the Sponsor to provide construction works for the Project SPVs which are not yet completed and operation and maintenance services for the completed Project SPVs and the Target SPV. Pursuant to the Project Implementation Agreements, IRB WTL and PDTPL will continue to make payments to the Project Manager for the remaining engineering, procurement and construction works in relation to the relevant project on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. Any such payment of fees will be in the nature of a related party transaction and the relevant approvals would be required under the InvIT Regulations. For further information about the fees payable to the Project Manager, please see "*Background and Structure of the Trust – Fees and Expenses*" on page 104.

We also rely on the Sponsor's expertise in executing build-operate-transfer projects in case of any additional work which we may be required to carry out for any of the Project SPVs, the Target SPV or other assets. In the event that the Sponsor does not continue to focus on the infrastructure development sector or the toll-road industry, our business strategy, financial condition and results of operations may be materially and adversely impacted.

36. ***The Sponsor is a listed company, operates other road assets and has sponsored another infrastructure investment trust ("Public InvIT"), and anything that impacts the business, results of operations and trading price of the Sponsor's equity shares or the units of the Public InvIT may have a material adverse***

effect on the Trust.

The Sponsor has been listed on the Stock Exchanges since 2008. The Sponsor has also previously sponsored the Public InvIT, which has been listed on the Stock Exchanges since 2017 and is also engaged in the toll-roads sector. As of June 30, 2023, the Sponsor had eight road projects of which two were operational and six were under-construction or awaiting appointed date. The Public InvIT currently has a portfolio of six toll-road projects, comprising 5 BOT projects and 1 HAM asset. Because of our relationship with the Sponsor and its future toll-road assets, anything that impacts the business, results of operations and trading price of the Sponsor's equity shares or the Public InvIT's units may have a material, adverse effect on the Trust.

The Sponsor is subject to ongoing disclosure obligations under applicable regulations. To the extent that business, financial or other information relating to the Trust and its Project SPVs, including any forward-looking information, can be derived from filings made by the Sponsor with the Stock Exchanges, investors are reminded that such information has not been and will not be prepared for purposes of the Issue and does not form a part of this Letter of Offer.

37. ***The Investment Manager may not be able to implement its capital and risk management strategies.***

There is no assurance that the Investment Manager will be able to implement these strategies successfully or that it will be able to expand our portfolio at any specified rate or to any specified size or to maintain distributions at projected levels. The Investment Manager may not be able to make acquisitions or investments on favorable terms or within a desired time frame, and it may not be able to manage the operations of its underlying assets in a profitable manner. Factors that may affect this risk may include, but are not limited to, changes in the regulatory framework in India, competition for assets, partial award of concessions or licenses favoring local or other competitors of the Trust, changes in the Indian regulatory or legal environment or macro-economic conditions. If the Investment Manager is unable to implement these strategies successfully or expand our portfolio, we will nonetheless be required to pay the Investment Manager an annual management fee, which may be revised with the approval of the Unitholders such that the votes cast in favor of the resolution are not less than one-and-a-half times the votes against such resolution, in accordance with the terms of appointment of the Investment Manager.

Even if the Investment Manager is able to successfully grow the operating business of the underlying assets and to acquire toll roads and other eligible infrastructure projects in India, there can be no assurance that the Investment Manager will achieve any returns on such acquisitions or capital investments.

38. ***Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/Project Manager, the Investment Manager and the Trustee, which could result in the cancellation of the registration of the Trust.***

Parties to the Trust are required to maintain the eligibility conditions specified under Regulation 4 of the InvIT Regulations on an ongoing basis. These eligibility conditions include, among other things, that (a) the Sponsor, Investment Manager and Trustee are separate entities, (b) the Sponsor has a net worth of not less than ₹1,000 million and has a sound track record in the development of infrastructure or fund management in the infrastructure sector, (c) the Investment Manager has a net worth of not less than ₹100 million and has not less than five years' experience in fund management or advisory services or development in the infrastructure sector or the combined experience of the directors/partners/employees of the investment manager in fund management or advisory services or development in the infrastructure sector is not less than 30 years (provided that for computing the combined experience, only the experience of the directors/partners/employees with more than five years of experience in fund management or advisory services or development in the infrastructure sector shall be considered), (d) the Trustee is registered with the SEBI under Securities and Exchange Board of India (Debenture Trustees) Regulations, 1993 and is not an associate of the Sponsor or Investment Manager and (e) each of the Sponsor/Project Manager, the Investment Manager and the Trustee are "fit and proper persons" as defined under Schedule II of the Intermediaries Regulations on an ongoing basis. The Trust may not be able to ensure such ongoing compliance by the Sponsor/Project Manager, the Investment Manager and the Trustee, which could result in the cancellation of the registration of the Trust.

39. ***The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust. There can be no assurance that the Investment Manager will be able to comply with such requirements.***

The Investment Manager is required to comply with certain ongoing reporting and management obligations in relation to the Trust in accordance with the InvIT Regulations. These requirements include, among other things, (a) making investment decisions with respect to the underlying assets or projects of the Trust, (b) overseeing the activities of the Project Manager, (c) investing and declaring distributions in accordance with the InvIT Regulations, (d) submitting reports to the Trustee and (e) ensuring the audit of the Trust's accounts. There can be no assurance that the Investment Manager will be able to comply with such requirements in a timely manner or at all, which could subject the Investment Manager, the other parties to the Trust, the Trust or any person involved in the activity of the Trust to applicable penalties under the InvIT Regulations, the Intermediaries Regulations and/or the SEBI Act. Any such failure to comply or the imposition of any penalty could have a material adverse effect on our business, financial condition and results of operations. Under the InvIT Regulations, the SEBI also has the right to inspect documents, accounts and records relating to the activity of the Trust, the SPVs or Parties to the InvIT and may issue directions in the nature of, *inter-alia*, (i) requiring the Trust to surrender its certificate of registration; (ii) requiring the Trust to wind-up; (iii) requiring the Trust to sell its assets; (iv) requiring the Trust or Parties to the Trust to take such action as may be in the interest of investors; or (v) prohibiting the Trust or Parties to the Trust from operating in the capital markets or from accessing the capital markets for a specified period.

Risks Related to India

40. *Changing laws, rules and regulations, including changes in legislation or the rules relating to tax regimes, legal uncertainties and the political situation in India may materially and adversely affect our business, financial condition and results of operations.*

Our business, financial condition and results of operations could be materially and adversely affected by any change in laws or interpretations of existing, or the promulgation of new, laws, rules and regulations applicable to us and our business. There can be no assurance that the Government of India or the state governments will not implement new regulations and policies which will require the Trust, the Project SPVs or the Target SPV to obtain additional approvals and licenses from governmental and other regulatory bodies or impose onerous requirements and conditions on our operations.

Tax laws and regulations are subject to differing interpretations by tax authorities. Differing interpretations of tax and other fiscal laws and regulations may exist within governmental ministries, including tax administrations and appellate authorities, thus creating uncertainty and potential unexpected results. The degree of uncertainty in tax laws and regulations, combined with significant penalties for default and a risk of aggressive action, including by retrospective legislation, by the governmental or tax authorities, may result in tax risks in the jurisdictions in which we operate being significantly higher than expected. These events may result in a material, adverse effect on our business, financial condition, results of operations and prospects. Tax authorities in India may also introduce additional or new regulations applicable to our business which could adversely affect our business and profitability.

The Government of India has implemented two major reforms in Indian tax laws, namely the goods and services tax and provisions relating to General Anti-Avoidance Rules. Given the relatively recent implementation of these laws, the manner of implementation of these tax regimes could create uncertainty.

The right to own property in India is subject to restrictions that may be imposed by the Government of India. In particular, the Government of India under the provisions of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 ("**Land Acquisition Act**") has the right to compulsorily acquire any land if such acquisition is for a "public purpose," after providing compensation to the owner. However, the compensation paid pursuant to such acquisition may not be adequate to compensate the owner for the loss of such property. The likelihood of such acquisitions may increase as central and state governments seek to acquire land for the development of infrastructure projects such as roads, railways, airports and townships. While the NHAI or the relevant concessioning authority is responsible for the acquisition of the land underlying the toll-road infrastructure projects, any delays or disputes relating to such acquisition could lead to delays and disruptions in the execution of our projects, which would have a material adverse effect on our business, financial condition and results of operations.

The Competition Act, 2002, as amended (the "**Competition Act**"), regulates practices having an appreciable adverse effect on competition in the relevant market in India. The Competition Act aims to, among other things, prohibit all agreements and transactions which may have an appreciable adverse effect on competition in India. Further, the CCI has extra-territorial powers and can investigate any agreements, abusive conduct or combination occurring outside India if such agreement, conduct or combination has an appreciable adverse effect on

competition in India. In the event that that any of the assets proposed to be acquired by us in the future cross the prescribed thresholds, we cannot assure you that we will receive the necessary approvals from the CCI to consummate such transactions. Any prohibition or substantial penalties levied under the Competition Act could materially and adversely affect our financial condition and results of operations. Any adverse impact on our financial condition or operations due to the Competition Act may have a material adverse impact on our business, financial condition, results of operations and prospects and our ability to make distributions to the Unitholders.

41. *Significant increases in the price or shortages in the supply of crude oil and products derived therefrom, including petrol and diesel fuel, could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and the Target SPV and the Indian economy in general, including the infrastructure sector.*

India imports a significant majority of its requirements of crude oil. Crude oil prices are volatile and are subject to a number of factors, including the level of global production and political factors, such as war and other conflicts, particularly in the Middle East, where a substantial proportion of the world's oil reserves are located. The ongoing Russia-Ukraine war has caused significant volatility in the price of crude oil and impacted fuel prices in India. Further increases in the price of or shortages in the supply of crude oil could materially and adversely affect the volume of traffic at the projects operated by the Project SPVs and the Target SPV and materially and adversely affect the Indian economy in general, including the infrastructure sector, which could have a material, adverse effect on our business, financial condition and results of operations.

42. *Our business is dependent on economic growth in India and financial stability in Indian markets, and any slowdown in the Indian economy or in Indian financial markets could have a material adverse effect on our business.*

The Trust is registered in India, and all of our assets are located in India. As a result, we are highly dependent on the prevailing economic conditions in India and our results of operations are significantly affected by factors influencing the Indian economy. Factors that may adversely affect the Indian economy, and hence our results of operations, may include:

- any increase in interest rates or inflation in India;
- any exchange rate fluctuations;
- any scarcity of credit or other financing in India;
- prevailing income, consumption and saving conditions among consumers and corporations in India;
- changes in India's tax, trade, fiscal or monetary policies;
- political instability, terrorism or military conflict in India or in countries in the region or globally, including in India's various neighboring countries;
- the occurrence of natural or man-made disasters, pandemics or epidemics;
- prevailing regional or global economic conditions;
- the balance of trade movements, including export demand and movements in key imports, including oil and oil products; annual rainfall which affects agricultural production;
- civil unrest, riots, protests, acts of violence, terrorist attacks, regional conflicts or situations or war involving India or other countries could materially and adversely affect the financial markets, which could impact our business; and
- other significant regulatory or economic developments in or affecting India or its infrastructure sector.

Any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could have a material, adverse effect on our business, financial condition and results of operations and the price of the Units.

For instance, during the COVID-19 pandemic, the NHAI had temporarily suspended toll collection at toll plazas across India from March 26, 2020. Toll collection subsequently resumed on April 20, 2020. In addition, during the months of April 2021 and May 2021, due to the measures implemented in the states where our projects are under construction, by the respective State Governments, our project sites were required to occasionally close down for short periods of time. Further, from the second fortnight of April 2021, various State Governments imposed restrictions on travel, which led to a decline in our toll collections during the period. Traffic and toll revenue on the Current Portfolio has been and on the Expanded Portfolio may continue to be impacted as a result of such restrictions or economic slowdown caused by COVID-19, which may adversely affect our cash flows, operating results, businesses, assets, financial condition, performance, ability to access the equity and debt

markets, cost of capital and liquidity and prospects.

Further, the Indian economy and Indian financial market are influenced by economic and market conditions in other countries, particularly in emerging market in Asian countries. Financial turmoil in Asia, Europe, the United States and elsewhere in the world in recent years, as well as the ongoing Russia-Ukraine war, has affected the Indian economy. Recent bank collapses in the United States and globally have contributed to instability in the global banking system. Although economic conditions are different in each country, investors' reactions to developments in one country can have a material, adverse effect on the securities of companies in other countries, including India. A loss in investor confidence in the financial systems of other emerging markets may cause increased volatility in Indian financial markets and, indirectly, in the Indian economy in general. Any global financial instability, including any instability related to relation between the United States and China, as well as India and China, could also have a negative impact on the Indian economy. Financial disruptions may occur again and could harm our results of operations and financial condition.

43. ***Any downgrading of India's sovereign debt rating by a domestic or international rating agency could materially and adversely affect our ability to obtain financing and, in turn, our business and financial performance.***

India's sovereign debt rating could be downgraded due to various factors, including changes in tax or fiscal policy or a decline in India's foreign exchange reserves, which are outside of our control. Any adverse revisions to India's credit ratings for domestic and international debt by domestic or international rating agencies may materially and adversely impact our ability to raise additional financing, and the interest rates and other commercial terms at which any such additional financing is available. This could have a material, adverse effect on our business and financial performance, ability to obtain financing for capital expenditures and the price of the Units.

44. ***Fluctuations in the exchange rate of the Indian Rupee with respect to the U.S. Dollar or other currencies will affect the foreign currency equivalent of the value of the Units and any distributions.***

Fluctuations in the exchange rates between the Indian Rupee and other currencies will affect the foreign currency equivalent of the Indian Rupee price of the Units. Such fluctuations will also affect the amount that holders of the Units will receive in foreign currency upon conversion of any cash distributions or other distributions paid in Indian Rupees by us on the Units, and any proceeds paid in Indian Rupees from any sale of the Units.

Risks Related to Ownership of the Units

45. ***It may not be possible for Unitholders to enforce foreign judgements.***

The Trustee, the Investment Manager and the Sponsor are incorporated in India and the Trust is settled and registered in India. All of our assets are located in India and we may, from time to time, invest in toll roads in India. Where investors wish to enforce foreign judgements in India, where our assets are or will be located, they may face difficulties in enforcing such judgements. India is not a party to any international treaty in relation to the recognition or enforcement of foreign judgements. India exercises reciprocal recognition and enforcement of judgements in civil and commercial matters with a limited number of jurisdictions, including Singapore. In order to be enforceable, a judgement obtained in a jurisdiction which India recognizes as a reciprocating territory must meet certain requirements of the Code of Civil Procedure, 1908 ("**Civil Code**"). Further, the Civil Code only permits enforcement of monetary decrees not being in the nature of any amounts payable in respect of taxes, or other charges of a like nature or in respect of a fine or other penalty and does not provide for the enforcement of arbitration awards even if such awards are enforceable as a decree or judgement. Judgements or decrees from jurisdictions not recognized as a reciprocating territory by India cannot be enforced or executed in India except through a fresh suit upon judgement. Even if we or a Unitholder were to obtain a judgement in such a jurisdiction, we or it would be required to institute a fresh suit upon the judgement and would not be able to enforce such judgement by proceedings in execution. In addition, the party which has obtained such judgement must institute the new proceedings within three years of obtaining the judgement. It is unlikely that an Indian court would award damages on the same basis or to the same extent as was awarded in a judgement rendered by a foreign court if the Indian court believed that the amount of damages awarded was excessive or inconsistent with public policy in India. In addition, any person seeking to enforce a foreign judgement in India is required to obtain prior approval of the RBI to repatriate outside India any amount recovered pursuant to the execution of the judgement.

Consequently, it may not be possible to enforce in an Indian court any judgement obtained in a foreign court, or effect service of process outside of India, against Indian companies, their directors and executive officers, and any

other parties resident in India. Additionally, there is no assurance that a suit brought in an Indian court in relation to a foreign judgement will be disposed of in a timely manner.

46. *The Trust may be dissolved, and the proceeds from the dissolution thereof may be less than the amount invested by the Unitholders.*

The Trust is an irrevocable trust registered under the Registration Act and it may only be extinguished, dissolved and terminated in accordance with the InvIT Regulations and other applicable law. Under the Indenture of Trust, in the event of dissolution, the net assets of the Trust, remaining after settlement of all liabilities, and the retention of any reserves which the Trustee deems to be necessary to discharge contingent or unforeseen liabilities, shall be paid to the Unitholders. Should the Trust be dissolved, depending on the circumstances and the terms upon which assets of the Trust are disposed of, there is no assurance that a Unitholder will recover all or any part of its investment. There may also be uncertainty around the interpretation and implementation of certain provisions in relation to the insolvency of a trust under the Insolvency and Bankruptcy Code, 2016.

47. *The reporting requirements and other obligations of infrastructure investment trusts are still evolving. Accordingly, the level of ongoing disclosures made to and the protection granted to Unitholders may be more limited than those made to or available to the shareholders of a listed company in India.*

The InvIT Regulations, along with the guidelines and circulars issued by the SEBI from time to time, govern the affairs of infrastructure investment trusts in India. However, as compared to the statutory and regulatory framework governing listed companies in India, the regulatory framework applicable to infrastructure investment trusts is relatively new and thus, still evolving.

Accordingly, the ongoing disclosures made to Unitholders under the InvIT Regulations may differ from those made to the shareholders of a listed company in accordance with the applicable SEBI regulations. Further, the rights of the Unitholders may not be as extensive as the rights of the shareholders of a listed company and accordingly, the protection available to the Unitholders may be more limited than those available to such shareholders.

48. *The Issue Price may not be indicative of market price of the Units after the Issue and the price of the Units may decline after the Issue.*

The Issue Price determined by the Investment Manager, in consultation with the Lead Manager, may not be indicative of the price of the Units upon completion of the Issue. If the price of the Units declines significantly, Eligible Unitholders may be unable to resell their Units at or above their purchase price, if at all. There can be no assurance that the price of the Units will not fluctuate or decline significantly in the future. The price and value of the Units will depend on many factors, including, among others:

- the perceived prospects of our business and investments and the market for toll roads and other infrastructure projects;
- differences between our actual financial and operating results and those expected by investors and analysts;
- the perceived prospects of future toll roads and other infrastructure projects that may be added to our portfolio in accordance with our investment mandate;
- changes in general economic or market conditions;
- the market value of our assets;
- the perceived attractiveness of the Units against those of other business trusts, equity or debt securities;
- the balance of buyers and sellers of the Units;
- the size and liquidity of the Indian business trusts market;
- any changes to the regulatory system, including the tax system, both generally and specifically in relation to India business trusts;
- the ability of the Investment Manager to implement successfully its investment and growth strategies;
- foreign exchange rates;
- variations in our quarterly operating results;
- additions or departures of key management personnel of the Investment Manager and/or the Project SPVs;
- changes in the amounts of our distributions, if any, and changes in the distribution payment policy or failure to execute the existing distribution policy;
- actions by Unitholders;
- changes in market valuations of similar business entities or companies;
- announcements by us or our competitors of significant contracts, acquisitions, disposals, strategic

partnerships, joint ventures or capital commitments;

- speculation in the press or investment community;
- fluctuations in stock market prices and volume;
- general economic and stock market conditions; and
- changes or proposed changes in laws or regulations affecting the road industry and infrastructure development in India or enforcement of these laws and regulations, or announcements relating to these matters.

To the extent that we retain operating cash flow for investment purposes, working capital reserves or other purposes, these retained funds, while increasing the value of our underlying assets, may not correspondingly increase the price of the Units. Our performance with regard to future earnings and distributions may materially and adversely affect the market price of the Units. In addition, Unitholders who do not, or are not able to, participate in a new issuance of Units may experience a dilution of their interest in the Trust. The Units are not capital-safe products and there is no guarantee that Unitholders can regain the amount invested, in full or in part. If the Trust is extinguished, it is possible that investors may lose a part or all of their investment in the Units.

49. *Any future issuance of Units by us or sales of Units by the Sponsor or any of other significant Unitholders may dilute your Unitholding.*

Any future issuance of Units by us could dilute investors' holdings of Units. Any such future issuance of Units could impact our ability to raise capital through an offering of our securities. There can be no assurance that we will not issue further Units. Upon completion of the Issue, a maximum of 521,239,840 Units (constituting approximately 51.02% of the total number of Units on a post-Issue basis) are expected be held by the Sponsor. While the Sponsor has agreed to certain *inter-se* arrangements in relation to the sale of its Unitholding with the Financial Investors and pre-emptive rights in case of any further issue of Units, if the Sponsor (pursuant to any applicable waivers), directly or indirectly, sells or is perceived as intending to sell a substantial number of its Units, the price for the Units could be materially and adversely affected. These sales may also make it more difficult for us to raise capital through the issue of new units at a time and at a price we deem appropriate. We cannot assure you that the Unitholders, including the Sponsor (subject to the terms of the Framework Agreement), and other significant Unitholders, will not dispose of, pledge or otherwise encumber their Units. For details of the *inter-se* arrangements, see "*Background and Structure of the Trust – Certain Agreements in relation to the Trust – Framework Agreement*" and "*Rights of Unitholders*" on pages 90 and 257, respectively.

50. *Our rights and the rights of the Unitholders to recover claims against the Investment Manager or the Trustee are limited.*

Under the Investment Management Agreement, the Investment Manager is not liable for, among other things, any action for any investment decision taken in respect of the Trust, other than for fraud, gross negligence, or wilful misconduct on the part of the Investment Manager.

Pursuant to the Indenture of Trust, the Trustee is not liable for anything done or omitted to be done or suffered by the Trustee in good faith. Further, the Trustee is not liable for any action or omission that results in any depletion in the value of the trust fund and consequent losses of the Unitholder, except in situations where such depletion is a result of the gross negligence, fraud or wilful default on the part of the Trustee, or a violation of the Investment Management Agreement, as determined by a court of competent jurisdiction whose decision is final and non-appealable. Any costs and expenses incurred by the Trustee in connection with any legal proceedings, in relation to the Trust, shall be incurred by the Trustee from the Trust Assets.

The Investment Management Agreement provides that the Investment Manager is entitled to be indemnified out of the Trust Assets against all taxes and other liabilities, claims, costs, losses, damages and expenses (including reasonable attorney's fees and costs) ("**Losses**") incurred in connection with the Trust, unless arising out of fraud, gross negligence or wilful misconduct. As a result, the Trust's rights and the rights of the Unitholders to recover claims against the Investment Manager are limited. Further, recourse to the Trustee may be limited under the Indenture of Trust. The Indenture of Trust provides for the indemnification of the Trustee for all Losses, except Losses incurred due to any fraud, gross negligence or wilful misconduct, or material breach of the provisions of the Investment Management Agreement, or the provisions of the other Trust Documents, as finally determined by a court of competent jurisdiction.

51. *Information and the other rights of Unitholders under Indian law may differ from such rights available to equity shareholders of an Indian company or under the laws of other jurisdictions.*

The Indenture of Trust and various provisions of Indian law govern our corporate affairs. Legal principles relating to these matters and the validity of corporate procedures, fiduciary duties and liabilities, and Unitholders' rights may differ from those that would apply to a company in India or a trust in another jurisdiction. Unitholders' rights and disclosure standards under Indian law may also differ from the laws of other countries or jurisdictions. Also see "*Rights of Unitholders*" on page 257.

SECTION III – INTRODUCTION

SUMMARY FINANCIAL INFORMATION

The following tables set forth the summary financial information derived from:

A. (i) limited review consolidated financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; and (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021;

B. (i) limited review standalone financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; and (ii) audited standalone financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021;

C. the consolidated financial statements of the Sponsor, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years ended March 31, 2023, March 31, 2022 and March 31, 2021; and

D. the standalone financial statements of the Investment Manager, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years ended March 31, 2023, March 31, 2022 and March 31, 2021.

The degree to which the summary financial information included herein below will provide meaningful information is entirely dependent on the reader's level of familiarity with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations. Accordingly, any reliance by persons not familiar with Indian accounting practices, Ind AS, the Companies Act and the InvIT Regulations on the summary financial information presented below should be limited.

With respect to the Trust, the summary financial information on a standalone and consolidated basis for the quarters ended June 30, 2023 and June 30, 2022 is based on the limited review report and has been presented together with the audited financial information for the Financial Years 2023, 2022 and 2021 for presentation purposes only.

The summary financial information derived from the Consolidated Financial Information, as presented herein below, should be read in conjunction with the Consolidated Financial Information, the notes thereto and the sections "*Financial Statements*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 280 and 591, respectively.

A. Summary Consolidated Financial Information

I. *Consolidated Balance Sheet as at June 30, 2023, March 31, 2023, March 31, 2022 and March 31, 2021*

(*₹ in million*)

	As at June 30, 2023	As at March 31, 2023	As at March 31, 2022	As at March 31, 2021
ASSETS				
Non-current assets				
Property, Plant and Equipment	7.35	7.59	8.85	10.59
Goodwill	604.54	604.54	604.54	604.54
Other Intangible assets	229,752.88	2,28,418.29	2,21,859.48	2,11,717.65
Intangible assets under development	3,111.32	2,421.67	1,290.89	4,684.26
Financial assets				
i) Others	0.36	0.33	2.74	3.28
Other non-current assets	174.07	174.07	656.55	0.14
Deferred tax assets (net)	832.45	755.80	287.67	-
	234,482.97	**2,32,382.29**	**2,24,710.72**	**2,17,020.47**
Current assets				
Financial assets				
i) Investments	1,034.62	1,283.09	659.54	572.50
ii) Trade receivables	461.42	84.67	51.55	100.24
iii) Cash and cash equivalents	293.62	731.31	287.23	413.49
iv) Bank balance other than (iii) above	5,057.36	4,866.69	2,469.97	1,744.35
v) Others	1,552.96	1,448.56	1,604.18	635.99
Current tax assets (net)	44.83	24.81	114.22	147.11
Other current assets	2,862.45	2,657.07	1,677.46	2,166.40
	11,307.26	**11,096.20**	**6,864.15**	**5,780.08**
Total assets	**245,790.23**	**2,43,478.49**	**2,31,574.87**	**2,22,800.55**

	As at June 30, 2023	As at March 31, 2023	As at March 31, 2022	As at March 31, 2021
EQUITY AND LIABILITIES				
Equity				
Equity share capital	87,929.33	87,929.33	85,504.33	81,688.00
Other equity				
Other reserves	(11,544.30)	(10,395.80)	(8,108.29)	(3,669.05)
Total Equity	**76,385.03**	**77,533.53**	**77,396.04**	**78,018.95**
Non-controlling interests	0.89	0.81	-	-
	76,385.92	**77,534.34**	**77,396.04**	**78,018.95**
Non-current liabilities				
Financial liabilities				
i) Borrowings	102,119.86	98,943.95	92,559.82	89,161.31
ii) Other financial liabilities	36,270.06	35,780.80	35,168.79	24,720.81
iii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises		-	-	-
b) total outstanding dues of creditors other than micro enterprises and small enterprises	1,375.47	4,165.72	5,998.85	2,463.41
Provisions	3,118.85	2,965.03	1,350.57	357.84
Deferred tax liabilities (net)			-	424.33
	142,884.24	**1,41,855.50**	**1,35,078.03**	**1,17,127.70**
Current liabilities				
Financial liabilities				
i) Borrowings	6,547.46	6,135.65	4,719.18	4,784.87
ii) Trade payables				
a) total outstanding dues of micro enterprises and small enterprises	1.76	1.61	3.69	13.18
b) total outstanding dues of creditors other than micro enterprises and small enterprises	17,047.59	15,303.87	11,214.65	2,547.07
iii) Other financial liabilities	2,840.69	2,549.37	3,023.13	20,198.86
Other current liabilities	82.57	98.15	140.15	109.78
Current tax liabilities (net)	-			0.14
	26,520.07	**24,088.65**	**19,100.80**	**27,653.90**
Total liabilities	**169,404.31**	**1,65,944.15**	**1,54,178.83**	**1,44,781.60**
Total equity and liabilities	**245,790.23**	**2,43,478.49**	**2,31,574.87**	**2,22,800.55**

II. ***Consolidated Statement of Profit and Loss for the Quarter ended June 2023, June 2022, Financial Years 2023, 2022 and 2021***

(₹ in million)

Particulars	For the quarter ended June 30, 2023	For the quarter ended June 30, 2022	For the year ended March 31, 2023	For the year ended March 31, 2022	For the year ended March 31, 2021
Income					
Revenue from operations	7,282.88	8270.89	26,912.59	12,404.84	10,361.51
Other income	101.43	33.97	263.08	100.13	112.71
Total income	**7,384.31**	**8304.86**	**27,175.67**	**12,504.97**	**10,474.22**
Expenses					
Valuation Expenses	-	-	2.67	1.46	0.46
Audit Fees	1.19	1.02	5.04	3.13	3.88
Operating Expenses	3,705.33	4921.58	12,865.52	2,029.53	2,157.13
Project Management Fees	731.56	659.71	2,647.70	1,960.27	1,826.28
Insurance and Security Expenses	14.69	0.24	14.72	1.12	11.43
Trustee Fees	1.04	2.57	5.95	4.16	3.41
Depreciation on Property, plant and Equipment	0.24	0.31	1.25	1.74	2.59
Amortisation of Intangible Assets	823.56	589.36	2,809.17	1,673.16	1,253.09
Finance costs (Interest)	2,471.36	2177.28	9,005.28	8,670.13	8,046.33
Finance costs (Others)	297.49	355.43	1,249.41	868.58	181.84
Investment Manager Fees	34.22	14.13	56.52	42.48	46.25
Custodian fees	0.71	0.09	0.09	0.18	0.18
Loss on sale of assets	-	-	0.01	-	-
Fair value loss on measurement of other payable	476.74	58.09	560.53	2,161.31	-
Other expenses	48.02	31.03	256.29	235.06	118.97
Total expenses	**8,606.15**	**8810.85**	**29,480.14**	**17,652.31**	**13,651.84**
Profit/(loss) before tax	**(1,221.84)**	**(505.99)**	**(2,304.47)**	**(5,147.34)**	**(3,177.62)**
Tax expenses					
Current tax	3.22	149.92	435.25	8.87	46.20
Deferred tax	(76.65)	(16.92)	(468.13)	(720.23)	369.63
MAT Credit utilisation / (Entitlement)	-	-	-	-	(340.97)
Total tax expenses	**(73.43)**	**133.00**	**(32.88)**	**(711.36)**	**74.86**
Profit/(loss) after tax	**(1,148.42)**	**(638.99)**	**(2,271.59)**	**(4,435.98)**	**(3,252.48)**
Other comprehensive income					
Item that will not be reclassified to profit or loss:					
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-			
Other comprehensive (loss) for the year/ period, net of tax	-	-			-
Total comprehensive income for the year/period	**(1,148.42)**	**(638.99)**	**(2,271.59)**	**(4,435.98)**	**(3,252.48)**

B. Summary Special Purpose Stanalone Financial Information

I. *Special Purpose Standalone Balance Sheet as at June 30, 2023, March 31, 2023, March 31, 2022 and March 31, 2021*

(₹ in million)

	As at June 30, 2023	As at March 31, 2023	As at March 31, 2022	As at March 31, 2021
ASSETS				
Non-current assets				
Financial assets				
i) Investments	94,674.44	94,424.44	90,929.80	88,050.31
ii) Loans	30,363.83	30,351.69	30,302.98	30,254.28
Total non-current assets	**1,25,038.27**	**1,24,776.13**	**1,21,232.78**	**1,18,304.59**
Current assets				
Financial assets				
i) Investments	30.20	20.08	20.04	50.00
ii) Cash and cash equivalents	59.58	6.56	0.25	12.65
iii) Loans	6,010.09	5,421.29	3,492.95	1,810.28
iv) Other financial assets	10,177.03	7,965.17	5,610.67	2,234.78
Other current assets	32.55	4.48	-	0.03
Total current assets	**16,309.45**	**13,417.58**	**9,123.92**	**4,107.74**
TOTAL ASSETS	**1,41,347.72**	**1,38,193.71**	**1,30,356.70**	**1,22,412.32**
EQUITY AND LIABILITIES				
Equity				
Unit capital	87,929.33	87,929.33	85,504.33	81,688.00
Other equity	11,927.76	9,526.42	5,992.74	4,020.25
Total unit holder's equity	**99,857.09**	**97,455.75**	**91,497.07**	**85,708.25**
Non-current liabilities				
Financial liabilities				
i) Other financial liabilities	36,266.91	35,778.03	35,168.79	24,717.75
Total non- current liabilities	**36,266.91**	**35,778.03**	**35,168.79**	**24,717.75**
Current liabilities				
Financial liabilities				
i) Borrowings	5,122.91	4,872.91	3,607.93	3,677.76
ii) Trade payables a) total outstanding dues of micro enterprises and small enterprises and small enterprises	0.01	0.01	-	-

	b) total outstanding dues of creditors other than micro enterprises and small enterprises	93.71	81.34	81.71	67.61
iii)	Other financial liabilities	-	-	-	8,239.25
Other Current liabilities		7.09	5.67	1.20	1.70
	Total current liabilities	**5,223.72**	**4,959.93**	**3,690.84**	**11,986.32**
Total liabilities		**41,490.63**	**40,737.96**	**38,859.63**	**36,704.08**
TOTAL EQUITY AND LIABILITIES		**1,41,347.72**	**1,38,193.71**	**1,30,356.70**	**1,22,412.32**

II. ***Special Purpose Standalone Statement of Profit and Loss for the quarter ended June 2023, June 2022, Financial Years 2023, 2022 and 2021***

(₹ in million)

	For the quarter ended June 30, 2023	For the quarter ended June 30, 2022	For the year ended March 31, 2023	For the year ended March 31, 2022	For the year ended March 31, 2021
Income					
Other income	2,930.47	1,047.25	4,222.87	4,200.44	4,203.30
TOTAL INCOME	**2,930.47**	**1,047.25**	**4,222.87**	**4,200.44**	**4,203.30**
Expenses					
Investment Manager Fees	34.22	14.13	56.52	42.48	46.25
Other expenses	494.90	65.05	617.34	2,182.21	5.83
TOTAL EXPENSES	**529.12**	**79.18**	**673.86**	**2,224.69**	**52.08**
Profit / (Loss) before tax	**2,401.35**	**968.07**	**3,549.01**	**1,975.75**	**4,151.21**
Tax expenses					
Profit / (Loss) after tax (A)	**2,401.35**	**968.07**	**3,549.01**	**1,975.75**	**4,151.21**
Other comprehensive income / (loss) for the year (net of tax)					
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)	-	-	-	-	-
Other comprehensive income/(loss) for the year (net of tax)(B)	-	-	-	-	-
Total comprehensive income for the year, net of tax: (A+B)	**2,401.35**	**968.07**	**3,549.01**	**1,975.75**	**4,151.21**

C. Summary Consolidated Financial Information of the Sponsor

I. *Sponsor's Summary Consolidated Balance Sheet as at March 31, 2023, March 31, 2022 and March 31, 2021*

(₹ in million)

		March 31, 2023	March 31, 2022	March 31, 2021
I	**ASSETS**			
1	**Non-current assets**			
	Property, Plant and Equipment	9,348.85	9,458.46	1,377.31
	Capital work-in-progress	75.35	267.55	360.60
	Right-of-use asset	76.13	115.83	86.18
	Goodwill on consolidation	78.04	78.04	78.04
	Other Intangible assets	2,55,298.04	2,63,058.62	2,69,479.66
	Intangible assets under development	-	357.73	6,369.61
a.	Financial assets			
	i) Investments	49,452.35	44,407.24	44,866.61
	ii) Trade receivable	1,341.72	5,998.85	2,476.18
	iii) Loans	-	-	0.04
	iv) Other financial assets	41,701.12	49,322.13	31,002.45
b.	Deferred tax assets (net)	636.60	1.289.09	710.66
c.	Other non-current assets	2.58	38.10	29.44
		3,58,010.78	**3,74,391.64**	**3,56,836.78**
2	**Current assets**			
a.	Inventories	2,990.01	3,174.59	3,216.72
b.	Financial assets			
	i) Investments	1,956.99	4,634.98	3,122.58
	ii) Trade receivables	16,352.31	9,935.47	3,403.08
	iii) Cash and cash equivalents	3,005.60	529.75	6,534.85
	iv) Bank balance other than (iii) above	21,165.80	16,908.71	16,854.88
	v) Loans	6,176.03	4,179.61	4,248.34
	vi) Other financial assets	6,140.86	2,691.10	13,127.44
c.	Current tax assets (net)	122.57	816.61	767.03
d.	Other current assets	11,740.82	8,403.74	3,624.74
		69,650.99	**51,274.56**	**54,899.66**
	TOTAL ASSETS	**4,27,661.77**	**4,25,666.20**	**4,11,736.44**
		March 31, 2023	**March 31, 2022**	**March 31, 2021**
	EQUITY AND LIABILITIES			
	Equity			
	Equity share capital	6,039.00	6,039.00	3,514.50
	Other equity	1,27,749.99	1,19,617.41	65,493.19
		1,33,788.99	**1,25,656.41**	**69,007.69**
	Liabilities			
	Non-current liabilities			
	Financial liabilities			
	i) Borrowings	1,42,476.99	1,54,747.17	1,70,524.14

ii) Lease liabilities	45.49	85.06	43.17
iii) Other financial liabilities	1,06,490.26	1,12,063.99	1,19,283.37
Provisions	537.52	520.43	421.55
Deferred tax liabilities (net)	1,273.83	853.71	24.06
Other non-current liabilities	3.88	2,965.63	-
	2,50,827.97	**2,71,235.99**	**2,90,296.29**
Current liabilities			
Financial liabilities			
i) Borrowings	24,919.87	12,105.50	21,572.80
ii) Trade payables			
a) total outstanding dues of micro enterprises and small enterprises	419.20	514.59	777.59
b) total outstanding dues of creditors other than micro enterprises	4,603.10	3,302.66	6,368.02
iii) Lease liabilities	39.58	34.92	45.02
iv) Other financial liabilities	8,367.53	10,717.31	17,427.32
Other current liabilities	4,637.45	1,824.80	5,681.09
Provisions	34.39	75.80	80.18
Current tax liabilities (net)	23.69	198.22	480.44
	43,044.81	**28,773.80**	**52,432.46**
Total liabilities	**2,93,872.78**	**3,00,009.79**	**3,42,728.75**
TOTAL EQUITY AND LIABILITIES	**4,27,661.77**	**4,25,666.20**	**4,11,736.44**

II. *Sponsor's Summary Consolidated Statement of Profit and Loss for the Financials Years 2023, 2022 and 2021*

(₹ in million)

	March 31, 2023	March 31, 2022	March 31, 2021
Income			
Revenue from operations	64,016.41	58,037.00	52,986.30
Other income	3,016.73	5,517.47	1,889.00
TOTAL INCOME	**67,033.14**	**63,554.47**	**54,875.30**
Expenses			
Cost of material consumed	4,187.56	4,701.25	3,990.75
Road work and site expenses	20,767.30	19,083.84	17,627.90
Employee benefits expense	3,461.62	2,873.21	2,618.57
Finance costs	15,146.26	18,906.23	16,924.43
Depreciation and amortisation expenses	8,321.20	6,827.70	5,817.04
Other expenses	3,309.60	3,403.77	3,622.46
TOTAL EXPENSES	**55,193.54**	**55,796.00**	**50,601.15**
Profit before share of profit/(loss) from joint venture/ exceptional item and tax	**11,839.60**	**7,758.47**	**4,274.15**
Share of loss from joint ventures (net)	(1,070.09)	(2,262.15)	(1657.96)
Profit before exceptional items and tax	**10,769.51**	**5,496.32**	**2,616.19**
Exceptional item	-	-	-
Profit before tax	**10,769.51**	**5,496.32**	**2,616.19**
Tax expenses			
Current tax	2,500.18	1,781.97	1,862.39
Deferred tax	1,069.22	100.38	(417.69)
TOTAL TAX EXPENSES	**3,569.40**	**1,882.35**	**1,444.70**
Profit for the year	**7,200.11**	**3,613.97**	**1,171.49**
Other comprehensive income			
a) Mark to market gain/(loss) on fair value measurement of investments (net of tax)	1,682.60	244.74	2,775.59
b) Re-measurement loss on defined benefit plans (net of tax)	12.57	(22.31)	(10.93)
Other comprehensive income/(loss) for the year, net of tax	**1,695.17**	**222.43**	**2,764.66**
Total comprehensive income for the year, net of tax	**8,895.28**	**3,836.40**	**3,936.15**

III. *Sponsor's Summary Consolidated flows statement Statement for the Financial Years 2023, 2022 and 2021*

(₹ in million)

		31-Mar-23	31-Mar-22	31-Mar-21
Cash flow from operating activities				
Profit before tax		**10,769.51**	**5,496.32**	**2,616.19**
Adjustments to reconcile profit before tax net cash flows:				
Depreciation and amortisation		8,321.20	6,827.69	5,817.04
Resurfacing expenses		228.26	57.74	86.87
Net loss/ (gain) on sale of property, plant and equipment		(125.19)	(11.52)	(4.35)
Fair value gain on mutual funds		(45.83)	(84.11)	(65.09)
Gain on fair value measurement of other receivables		(560.53)	(2,161.31)	(13.62)
Share of loss from joint ventures		1,070.09	2,262.15	1,657.96
Net (gain) on sale of current Investment		(124.74)	(73.67)	(43.31)
Loss on sale on non current Investment		18.76	-	-
Extinguishment of premium liability		-	(246.41)	(834.95)
Finance costs		15,146.26	18,906.23	16,924.43
Interest income		(2,037.60)	(2,940.39)	(1,590.40)
Other non operative income		-	(197.11)	(120.16)
Allowance for credit impaired		-	64.10	-
Operating profit before working capital changes		**32,660.19**	**27,899.71**	**24,430.61**
Movement in working capital:				
Increase/ (decrease) in trade payables		1,411.95	(3,326.86)	(294.67)
Increase/ (decrease) in provisions		(235.76)	168.73	6.64
Increase/ (decrease) in other financial liabilities		(590.78)	523.91	(3,164.78)
(Decrease)/ increase in other liabilities		1,296.10	(890.65)	(3,567.45)
Decrease / (increase) in trade receivables		(1,759.71)	(8,317.07)	(1,471.69)
Decrease / (increase) in inventories		184.58	42.13	96.83
(Increase) / decrease in loans		27.84	(1.06)	24.09
(Increase) / decrease in other financial assets		(8,864.78)	(5,744.63)	(5,458.72)
(Increase) / decrease in other assets		(4,468.69)	(4,750.14)	238.65
Cash (used for) / generated from operations		**19,660.94**	**5,604.07**	**10,839.51**
Taxes paid (net)		(2,019.64)	(1,962.94)	(2,171.47)
Net cash flows generated from / (used in) operating activities	**(A)**	**17,641.30**	**3,641.13**	**8,668.04**
Cash flows from investing activities				
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances		(3,814.07)	(11,422.77)	(77,780.00)
Proceeds from sale of property, plant and equipment		207.62	152.39	25.76
Purchase of property, plant and equipment		(494.89)	(2,473.04)	(153.04)
Proceeds/ redemption from sale of non-current investments		301.30	333.69	185.37
Consideration received on transfer of subsidiaries		3,418.19	-	1,792.36
Investment in joint venture		(4,663.03)	(1,946.33)	(2,603.81)
Loan given to joint ventures		(2,352.78)	(4,759.00)	(4,155.57)
Loan repaid by Joint Ventures		328.51	4,828.83	-
Other recoverable/advance towards subscription of units in joint venture		-	-	(2,544.40)

Receipt of other recoverable/advance towards subscription of units		-	-	3,413.14
Proceeds from sale/ (purchase) of current investments (net)		2,840.99	(1,354.61)	(2,886.19)
Investments in bank deposits (having original maturity of more than three months) (net)		(4,257.73)	(54.38)	1,423.56
Interest received		1,982.40	1,160.89	1,522.15
Net cash flows generated from investing activities	**(B)**	**(6,503.49)**	**(15,534.33)**	**(81,760.67)**
Cash flow from financing activities				
Proceeds from non-current borrowings		12,975.02	7,934.32	70,140.73
Proceeds from issue of non-convertible debentures		-	3,500.00	41,783.35
Repayments of non-convertible debentures		(1,058.74)	(16,210.00)	-
Repayment of non-current borrowings		(15,083.09)	(16,653.93)	(15,148.86)
Proceeds/ (Repayment) of current borrowings (net)		7,641.41	(8,901.29)	(4,842.85)
Proceeds from Issue of Equity Share Capital		-	52,866.92	-
Payment of lease liabilities		(45.55)	(43.38)	(49.68)
Finance cost paid		(12,279.21)	(16,606.99)	(14,926.64)
Dividend paid on equity shares		(754.88)	-	(1,757.25)
Net cash flows (used in) / generated from financing activities	**(C)**	**(8,605.04)**	**5,885.65**	**75,198.80**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)		**2,532.77**	**(6,007.55)**	**2,106.17**
Cash and cash equivalents at the beginning of the year		472.83	6,480.38	4,374.21
Cash and cash equivalents at the end of the year		**3,005.60**	**472.83**	**6,480.38**
Components of cash and cash equivalents				
Balances with scheduled banks:				
- Trust, retention and other escrow accounts		144.25	68.09	54.01
- Current accounts		2,311.87	246.46	5,613.11
- In deposit accounts with original maturity less than 3 months		439.16	100.78	732.97
Cash on hand		110.32	114.42	134.76
Less : Book overdraft		-	(56.92)	(54.47)
Total Cash and cash equivalents		**3,005.60**	**472.83**	**6,480.38**

D. Summary Standalone Financial Information of the Investment Manager

I. *Investment Manager's Summary Standalone Balance Sheet as at March 31, 2023, March 31, 2022 and March 31, 2021*

(₹ in million)

		March 31, 2023	March 31, 2022	March 31, 2021
I	**ASSETS**			
(1)	**Non-current assets**			
a.	Property, plant and Equipment	0.38	-	-
b.	Financial assets			
	i) Investments	0.10	0.10	0.10
	ii) Loans	-	-	0.07
		0.48	**0.10**	**0.17**
(2)	**Current assets**			
a.	Financial assets			
	i) Investments	5.10	4.01	-
	ii) Trade Receivables	78.54	81.70	96.90
	iii) Cash and cash equivalents	5.39	17.18	10.84
	iv) Bank balance other than (iii) above	10.00	-	-
	v) Other financial assets	0.01	0.12	0.11
b.	Current tax assets (net)	4.84	12.69	8.46
c.	Other current assets	0.01	-	0.63
		103.89	**115.71**	**116.94**
	TOTAL ASSETS	**104.36**	**115.81**	**117.11**
II	**EQUITY AND LIABILITIES**			
	Equity			
a.	Equity share capital	70.00	70.00	70.00
b.	Other equity	19.47	32.68	32.28
		89.47	**102.68**	**102.28**
	Liabilities			
(1)	**Non-current liabilities**			
	Provisions	8.01	2.71	2.37
		8.01	**2.71**	**2.37**
(2)	**Current liabilities**			
a.	Financial liabilities			
	i) Trade payables			
	a) total outstanding dues of micro enterprises and small enterprises	-	-	-
	b) total outstanding dues of creditors other than micro enterprises	0.11	0.90	0.12
	ii) Other financial liabilities	3.52	5.27	5.64
b.	Other current liabilities	2.44	4.12	6.58
c.	Provisions	0.81	0.13	0.12
		6.88	**10.42**	**12.46**
	Total liabilities	**14.89**	**13.13**	**14.83**
	TOTAL EQUITY AND LIABILITIES	**104.36**	**115.81**	**117.11**

II. *Investment Manager's Summary Standalone Statement of Profit and Loss for the the Financial Years 2023, 2022 and 2021*

(₹ in million)

	March 31, 2023	March 31, 2022	March 31, 2021
Income			
Revenue from operations	47.90	36.00	35.09
Other income	1.13	0.49	2.40
TOTAL INCOME	**49.03**	**36.49**	**37.49**
Expenses			
Employee benefits expense	53.61	28.50	29.58
Other expenses	6.35	7.42	5.61
TOTAL EXPENSES	**59.96**	**35.92**	**35.19**
Profit before tax	**(10.93)**	**0.57**	**2.30**
Tax expenses			
Current tax	2.42	0.20	0.70
TOTAL TAX EXPENSES	**2.42**	**0.20**	**0.70**
Profit for the year	**(13.35)**	**0.37**	**1.60**
Other comprehensive income			
Item that will not to be reclassified to profit or loss:			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)	0.14	0.03	0.11
Other comprehensive income/(loss) for the year (net of taxes)	**0.14**	**0.03**	**0.11**
Total comprehensive income for the year	**(13.21)**	**0.40**	**1.71**

III. ***Investment Manager's Summary Standalone Cash Flow Statement for the Financial Years 2023, 2022 and 2021***

(₹ in million)

		March 31, 2023	March 31, 2022	March 31, 2021
Cash flow from operating activities				
Profit before tax		**(10.93)**	**0.57**	**2.30**
Adjustments to reconcile profit before tax net cash flows:				
Re-measurement gains on defined benefit plans (net of taxes)		0.14	-	-
Fair Value Gain on Mutual Funds		(0.10)	(0.01)	-
(Gain) / Loss on sale of investment		-	(0.10)	(0.10)
Interest income on				
Bank deposits		(0.56)	(0.35)	(1.37)
Others		(0.43)	(0.03)	(0.05)
Operating profit before working capital changes		**(11.88)**	**0.08**	**0.77**
Working capital adjustments				
Decrease/(increase) in loans		-	0.07	2.27
Decrease/(increase) in trade receivables		3.16	15.20	(96.90)
Decrease/(increase) in others financial assets		0.10	0.01	26.93
Increase/(decrease) in provisions		5.98	0.38	0.10
Decrease /(Increase) in trade payables		(0.79)	0.78	(7.71)
Decrease/(increase) in other assets		(0.01)	0.63	0.16
Increase/(Decrease) in other financial liabilities		(1.75)	(0.37)	2.71
(Decrease)/Increase in other liabilities		(1.69)	(2.46)	5.20
Cash (used for) / generated from operations		**(6.87)**	**14.32**	**(66.46)**
Taxes paid (net)		5.43	(4.44)	(5.55)
Net cash flows generated from / (used in) operating activities	**(A)**	**(1.44)**	**9.88**	**(72.01)**
Cash flows from investing activities				
Purchase of Property, plant and equipment including CWIP		(0.38)	-	-
Intangible Assets includes Intangible Assets under Development & Capital Advance		-	-	-
Proceeds from sale/(purchase) of current investments		(0.98)	(3.91)	0.10
Bank deposits placed (having original maturity of more than three months)		(10.00)	-	-
Interest received		1.01	0.37	1.41
Dividend received from subsidiary companies		-	-	-
Net cash flows generated from investing activities	**(B)**	**(10.35)**	**(3.54)**	**1.51**
Cash flow from financing activities				
Equity dividend paid		-	-	-
Repayment of current borrowings		-	-	-
Net cash flows (used in) / generated from financing activities	**(C)**	**-**	**-**	**-**
Net increase/ (decrease) in cash and cash equivalents (A+B+C)		**(11.79)**	**6.34**	**(70.50)**
Cash and cash equivalents at the beginning of the year		17.18	10.84	81.34
Cash and cash equivalents at the end of the year		**5.39**	**17.18**	**10.84**
Components of cash and cash equivalents				
Cash on hand		0.00	0.00	0.00
Balances with scheduled banks:				
- In current accounts		0.39	2.02	0.84
- Original maturity less than 3 months		5.00	15.16	10.00
Total Cash and cash equivalents		**5.39**	**17.18**	**10.84**

THE ISSUE

The Issue is a rights issue under the InvIT Regulations. The Issue has been authorized by a resolution of the board of directors of the Investment Manager dated July 18, 2023.

The following table summarizes the details of the Issue:

Issue	Up to 142,400,006 Units aggregating up to ₹28,619.50 million
Rights Entitlements	One Unit for every 6.17[*] Units held on the Record Date
Allotment Lot	200,000 Units
Trading Lot	200,000 Units
Record Date	July 28, 2023
Issue Price	₹200.98[**] per Unit
Terms of Payment	See "*Issue Procedure*" on page 640
Issue Proceeds	See "*Objects of the Issue*" on page 62
Designated Stock Exchange	NSE
Timeline for Listing	The Units issued in the Issue will be listed within six Working Days from the Issue Closing Date, or such other timeline as may be specified under applicable law
Details of outstanding Units	
Units outstanding prior to the Issue	879,293,265 Units
Units outstanding after the Issue	1,021,693,271 Units[***]

[*]*The Rights Entitlement Ratio is one Unit for every 6.174812 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*
[**]*The Issue Price is ₹200.979634. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*
[***]*Assuming full subscription in the Issue to the extent of their respective Rights Entitlements in the Issue*

Pursuant to a letter dated July 26, 2023, the SEBI granted certain exemptions to the Trust from compliance with certain provisions of Chapter 9 of the SEBI Master Circular, pursuant to which the Trust is eligible to undertake a rights issue on a fast-track basis.

The Trust has received in-principle approval from the NSE for the listing of the Units to be allotted pursuant to the Issue through its letter dated July 31, 2023. The Investment Manager (on behalf of the Trust) will also make an application to the Stock Exchange to obtain trading approval for the Rights Entitlements.

The Units will be allotted and traded only in dematerialized form, in accordance with the InvIT Regulations and the SEBI Master Circular. There shall not be multiple classes of Units of the Trust, unless permitted by applicable law.

No person connected with the Issue, including any person connected with the distribution of the Issue, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for making an application for Allotment of the Units.

GENERAL INFORMATION

The Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. The Trust is registered with the SEBI as an infrastructure investment trust under the InvIT Regulations. The Units of the Trust are listed on the NSE.

For details of the business of the Trust, see "*Business*" on page 111.

Principal place of business and correspondence address of the Trust:

IRB Infrastructure Trust
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
E-mail: irbinfrastructuretrust@irb.co.in
Website: https://www.irbinfratrust.co.in/
SEBI registration number: IN/InvIT/19-20/0012
Date of registration with the SEBI: November 25, 2019

Contact Person and Compliance Officer

Mr. Kaustubh Shevade has been designated by the Investment Manager as the Compliance Officer with respect to the Trust, and is the relevant contact person with respect to the Trust. His contact details are as follows:

Mr. Kaustubh Shevade
MMK Toll Road Private Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
E-mail: kaustubh.shevade@irb.co.in

Applicants can contact the Compliance Officer, the Registrar or the Lead Manager in case of any pre-Issue or post-Issue related problems such as non-credit of Rights Entitlements or Allotted Units in the respective beneficiary account and non-receipt of refunds.

Sponsor/Project Manager

IRB Infrastructure Developers Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6640 4220
Email: info@irb.co.in
Contact person: Mr. Mehul Patel

Trustee

IDBI Trusteeship Services Limited
Ground Floor, Universal Insurance Building
Sir Phirozshah Mehta Road, Fort
Mumbai 400 001

Maharashtra, India
Tel: +91 22 4080 7016
Email: itsl@idbitrustee.co.in
SEBI registration number: IND000000460
Contact person: Mr. Shivaji Gunware / Mr. Naresh Sachwani

Investment Manager

MMK Toll Road Private Limited
Off No-11th Floor/1101
Hiranandani Knowledge Park
Technology Street, Hill Side Avenue
Powai, Mumbai 400 076
Maharashtra, India
Tel: +91 22 6733 6400
Email: dhananjay.joshi@irb.co.in
Contact person: Mr. Dhananjay Joshi

Lead Manager

Vivro Financial Services Private Limited
607/608 Marathon Icon, Opp. Peninsula Corporate Park
Off. Ganpatrao Kadam Marg
Veer Santaji Lane, Lower Parel
Mumbai 400 013, Maharashtra, India
Tel: +91 22 6666 8040
Email: investors@vivro.net
Investor grievance email: investors@vivro.net
Website: www.vivro.net
SEBI registration number: INM000010122
CIN: U67120GJ1996PTC029182

Advisors to the Sponsor for the Issue

Avener Capital Private Limited
ONE BKC, 1312, C Wing, 13th Floor
Plot No. C 66, G Block, Bandra-Kurla Complex
Bandra East, Mumbai 400 051
Maharashtra, India

Legal Advisors for the Issue as to Indian law

S&R Associates
One World Center, 1403, Tower 2 B
841 Senapati Bapat Marg, Lower Parel
Mumbai 400 013
Maharashtra, India

Auditor

Gokhale & Sathe, Chartered Accountants
Unit No. 304/308/309
Udyog Mandir No. 1
7-C, Bhagoji Keer Marg, Mahim
Mumbai 400 016
Maharashtra, India
Tel: +91 22 4348 4242
E-mail: office@gokhalesathe.in
Firm registration number: 103264W
Peer Review Certificate number: 012211

Valuer for the Target Valuation Report and the Current Portfolio Valuation Report

Mr. Sunit Khandelwal
Registered Address: 1006 A&B, 10th Floor, Welldone TechPark, Sohna Rd.
Sector-48, Gurgaon 122 018, Haryana, India
Tel: +91 124 436 2995
E-mail: sunitk@incwert.com

Registrar to the Issue

KFin Technologies Limited
Selenium Tower-B, Plot No. 31 &32
Gachibowli, Financial District
Nanakramguda, Serilingampally
Hyderabad 500 032, Telangana, India
Tel: +91 40 6716 2222/1800 309 4001
Email: irb.rights@kfintech.com
SEBI registration number: INR000000221
Contact person: M. Murali Krishna
Website: www.kfintech.com
Investor Grievance Email: einward.ris@kfintech.com
CIN: L72400TG2017PLC117649

Escrow Collection Bank

State Bank of India
Commercial Branch, State Bank Building
NGN Vaidya Marg, Horniman Circle
Fort, Mumbai 400 023
Contact person: Arvind Nema (AGM & COO)
Tel: +91 22 4175 1271
Fax: +91 22 2262 6474
E-mail: agmcoo.06070@sbi.co.in; Arvind.nema@sbi.co.in
Website: www.sbi.co.in
SEBI registration number: INBI00000038

Credit Rating

Certain of our proposed long term loan facilities have received a provisional 'CRISIL AAA/stable' credit rating from CRISIL Ratings on June 9, 2023.

Underwriting

The Issue is not proposed to be underwritten.

Responsibilities of the Lead Manager

S. No.	Activity	Responsibility
1.	Capital structuring with the relative components and formalities such type of instrument, number of instruments to be issued, etc.	Lead Manager
2.	Coordination for drafting and design of the Letter of Offer in accordance with the InvIT Regulations and other stipulated requirements and completion of prescribed formalities with the Stock Exchange and SEBI	Lead Manager
3.	Drafting, design and distribution of the Application Form and Rights Entitlement Letter	Lead Manager
4.	Selection of various agencies connected with Issue, such as Registrars to the Issue and printers	Lead Manager
5.	Drafting and approval of all statutory advertisements	Lead Manager

S. No.	Activity	Responsibility
6.	Selection of various agencies connected with Issue, such as Banker(s) to the Issue etc., as may be applicable and co-ordination of the respective agreements	Lead Manager
7.	Drafting and approval of all publicity material including corporate advertisement, brochure, corporate films, etc., (if applicable)	Lead Manager
8.	Drafting and design of management/investor presentation (if applicable)	Lead Manager
9.	Formulating and coordination of international marketing strategy (if applicable)	Lead Manager
10.	Formulation and coordination of domestic institutional marketing strategy (if applicable)	Lead Manager
11.	Co-ordination with stock exchanges and formalities for use of online software, bidding terminal, mock trading, etc. including any stock exchange deposit	Lead Manager
12.	Non-institutional and retail marketing of the Issue, if applicable, which will cover, *inter-alia*: • Formulating marketing strategies; • Finalizing collection centres; and • Follow-up on distribution of publicity and Issue material including Application Form, Letter of Offer	Lead Manager
13.	Post-Issue activities, which shall involve essential follow-up steps including follow-up with escrow banks and advising the Investment Manager about the closure of the Issue, based on correct figures, finalization of the basis of allotment or weeding out of multiple applications, listing of instruments, dispatch of certificates or demat credit and refunds and coordination with various agencies connected with the post-Issue activity such as Registrar to the Issue etc. and coordination of underwriting arrangement, if any, and release of security deposit, if any	Lead Manager

OBJECTS OF THE ISSUE

This Issue comprises a fresh issue of up to 142,400,006 Units aggregating up to ₹28,619.50 million on a rights basis to Eligible Unitholders.

The Trustee and the Investment Manager shall ensure that the subscription amounts are kept in a separate bank account in the name of the Trust until the listing of the Units pursuant to the Issue and and are only utilized for adjustment against Allotment of Units or refund of money to Eligible Unitholders.

In accordance with the InvIT Regulations, the Investment Manager (on behalf of the Trust) intends to utilize the Issue Proceeds towards the objects set out below.

Issue Proceeds

The details of the Issue Proceeds are set forth in the following table:

(₹ in million)

Particulars	Amount*
Gross proceeds from the Fresh Issue	28,619.50
Issue Proceeds	**28,619.50**

**Assuming full subscription in this Issue*

Utilization of Issue Proceeds

The proposed utilisation of the Issue Proceeds is set forth in the table below:

(₹ in million)

S. No.	Particulars	Amount*
1.	Acquisition of the Target SPV (IRB GEPL) through subscription to the equity shares of IRB GEPL pursuant to the IRB GEPL Share Subscription Agreement	7,154.50
2.	Providing loans to IRB GEPL towards funding of the total project cost	21,465.00
Issue Proceeds		**28,619.50**

**Assuming full subscription in this Issue*

The fund requirements mentioned above and the proposed deployment are based on the estimates of the Investment Manager and have not been appraised by any bank, financial institution or any other external agency. The Issue Proceeds will be utilized in accordance with applicable law.

Details of Utilization of Issue Proceeds

The details of utilization of the Issue Proceeds are set forth herein below:

I. *Acquisition of IRB GEPL through subscription to equity shares of IRB GEPL pursuant to the IRB GEPL Share Subscription Agreement*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹7,154.50 million ("**IRB GEPL Subscription Amount**") from the Issue Proceeds to pay the subscription amount for subscription to 715,450,000 equity shares of IRB GEPL ("**Subscription Shares**") pursuant to the IRB GEPL Share Subscription Agreement. The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and IRB GEPL have entered into the IRB GEPL Share Subscription Agreement dated July 29, 2023 for the acquisition of IRB GEPL by the Trust. Certain other agreements are have also been entered into in connection with the acquisition of IRB GEPL by the Trust. For details, see "*Background and Structure of the Trust – The IRB GEPL Acquisition*" on page 92.

Also see "*Risk Factors – We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the IRB GEPL Acquisition, may adversely affect us*" on page 20.

Key terms of the IRB GEPL Share Subscription Agreement are set out below.

IRB GEPL Share Subscription Agreement

Certain definitions

"**Closing Date**" shall mean the date of completion of the actions set out in the IRB GEPL Share Subscription Agreement. Closing shall occur within five days from the date of allotment in the Issue.

"**Governmental Authority**" shall include the SEBI, the National Highways Authority of India, the Ministry of Road Transport and Highways of the Government of India, the Hyderabad Growth Corridor Limited, the Hyderabad Metropolitan Development Authority or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the IRB GEPL Share Subscription Agreement and the IRB GEPL transaction documents.

"**Indemnified Party**" shall mean the Trust.

"**IRB GEPL Material Adverse Change**" shall mean any fact, circumstance, or condition that, individually or in the aggregate, has a material adverse effect on or material adverse change in: (i) the business, assets (whether tangible or intangible), liabilities, financial condition or regulatory status of IRB GEPL or the Sponsor; or (ii) the ability of the Sponsor to perform its obligations under any IRB GEPL transaction document, or to complete any of the transactions contemplated thereunder; or (iii) the validity, legality or enforceability of the rights or remedies of the Trust or the Investment Manager under the IRB GEPL Share Subscription Agreement.

"**Subscription Price**" shall mean the price of ₹10 per IRB GEPL Subscription Share.

Issuance and subscription of the IRB GEPL Subscription Shares

Subject to the terms and conditions of the IRB GEPL Share Subscription Agreement, IRB GEPL has agreed to issue the IRB GEPL Subscription Shares to the Trust, and the Trust has agreed to subscribe to all the IRB GEPL Subscription Shares, free and clear from all encumbrances, together with all rights, title, interest and benefits appertaining thereto, on the Closing Date, at the Subscription Price per IRB GEPL Subscription Share.

The Trust shall ensure that such number of the Subscription Shares aggregating to not more than 51% of the total equity share capital of IRB GEPL are pledged with the relevant lenders of IRB GEPL within a specified timeline from the Closing Date in accordance with the financing documents of IRB GEPL.

IRB GEPL is also required to complete the necessary form filings with the Registrar of Companies, Maharashtra in relation to the actions contemplated under the IRB GEPL Share Subscription Agreement post-closing. Further, IRB GEPL is also required to provide a valuation report to the Trust for tax purposes in relation to the fair market value of the Subscription Shares.

The Trust has undertaken to ensure that the proceeds of the share subscription are utlilized solely for funding of the total project cost of IRB GEPL's project and that the concession fee is paid to the relevant concessioning authority by IRB GEPL within the prescribed timelines, failing which the parties have agreed to certain arrangements in relation to dealing with the proceeds of the share subscription.

Conditions Precedent

The obligations of the parties to complete the transaction under the IRB GEPL Share Subscription Agreement is subject to the fulfilment of certain conditions by the Sponsor and the Target SPV on or before the Closing Date, to the satisfaction of the Trust, unless waived or deferred in writing by the Trust at its sole discretion, which, *inter-alia*, include:

- no Governmental Authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any applicable law that prohibits or makes illegal the consummation of transactions contemplated under any of the IRB GEPL transaction documents;
- there shall be no legal proceeding pending against, or threatened against (to the knowledge of the Sponsor) the Sponsor, its promoters or IRB GEPL wherein an unfavorable judgment, decree, injunction or order could

reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;

- the IRB GEPL business plan and the IRB GEPL annual budget shall be in agreed form;
- the representations and warranties provided by IRB under the IRB GEPL Share Subscription Agreement shall be true, complete and accurate in all respects as of the date of execution of the IRB GEPL Share Subscription Agreement and as of the Closing Date (except those representations and warranties that address matters only as of a specified date, which shall be true, complete and accurate in all respects as of that specified date);
- the Sponsor (and its Affiliates) shall have obtained all necessary consents in connection with the execution of the IRB GEPL Share Subscription Agreement, the IRB GEPL transaction documents and the completion of the transactions contemplated thereunder;
- no IRB GEPL Material Adverse Change shall be subsisting as on the Closing Date;
- IRB GEPL and the Sponsor shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the IRB GEPL transaction documents to be performed or complied with by them prior to or on the Closing Date;
- IRB GEPL shall have passed: (i) a resolution of its board of directors authorizing the issuance and allotment of the Subscription Shares to the Trust, on a private placement basis, subject to the approval of IRB GEPL's shareholders; and (ii) a special resolution of the shareholders of IRB GEPL approving the issue and allotment of the Subscription Shares to the Trust, on a private placement basis, and certified copies of such resolutions shall have been delivered to the Investment Manager (on behalf of the Trust);
- IRB GEPL shall have issued a private placement offer letter in the form prescribed under the Companies Act to the Trust in relation to the issuance of the Subscription Shares and shall have recorded the names of the Trust in the form prescribed under the Companies Act;
- IRB GEPL shall have completed the filing with the Registrar of Companies, Maharashtra of the Forms MGT-14 in relation to the board and shareholder resolutions;
- IRB GEPL shall have obtained a valuation report from a registered valuer appointed in accordance with Section 247 of the Companies Act;
- IRB GEPL shall have opened a separate bank account to receive the IRB GEPL Subscription Amount as required in accordance with Section 42 of the Companies Act and shall have provided the necessary details relating to such account to the Trust;
- there shall not have been any restriction or any threatened restriction, under applicable law which: (i) involves a challenge to or seeks to or prohibits, prevents, restrains, restricts, delays, makes illegal or otherwise interferes with the consummation of any of the transactions contemplated under the IRB GEPL Share Subscription Agreement, or impairs or prejudices the due, proper and irrevocable consummation of the transactions contemplated under the IRB GEPL Share Subscription Agreement, or (ii) seeks to impose conditions upon the ownership or operations of the Sponsor/IRB GEPL or which affects the ability of the Trust to invest in IRB GEPL as contemplated under the IRB GEPL Share Subscription Agreement; and
- the Trust shall have received a certificate (along with all the supporting documents), dated the Closing Date and signed by a duly authorized officer of IRB GEPL, that each of the conditions set forth above have been satisfied in the prescribed format.

Representations and Warranties

The Sponsor has provided representations and warranties in relation to, *inter-alia*, the organization, status and authority of IRB GEPL, no conflict with other obligations, the capital structure and shareholding of IRB GEPL, no conduct of business by IRB GEPL until the Closing Date, filing of the IRB GEPL transaction documents with any Governmental Authority in India, obtaining of all material consents required for carrying out business activities by IRB GEPL and no material breach of any of the conditions of such consents, material contracts, powers of attorney and proceedings, financial close and financial statements, anti-bribery and anti-corruption laws, anti-money-laundering and sanctions laws, no immunity and the absence of any personnel other than external professional advisors.

The Sponsor has represented that its and its nominee shareholders' shareholding in IRB GEPL constitute mandatory holding of shares, interest and rights in IRB GEPL required to be held by the Sponsor as per the regulations, circulars and guidelines of the concessioning authority and IRB GEPL's concession agreement.

The Sponsor has agreed that it will not exercise any rights that prevent the Trust from complying with the provisions of the InvIT Regulations. Notwithstanding anything to the contrary contained in the IRB GEPL Share Subscription Agreement or the IRB GEPL transaction documents, the provisions of the InvIT Regulations will

prevail in case of inconsistencies between such agreements and the obligations cast upon the Trust under the InvIT Regulations.

The Investment Manager and the Trust (acting through the Trustee) have provided representations and warranties in relation to, *inter-alia*, their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement and no conflicts.

The Trust and IRB GEPL have agreed and acknowledged that IRB and its affiliates can continue to include IRB GEPL and its project as part of their experience and eligibility in any bids for infrastructure projects submitted by the Sponsor or its affiliates in the future even after the Closing Date subject to the conditions set out in the IRB GEPL Share Subscription Agreement.

Shareholding of the Sponsor in IRB GEPL

The Sponsor is required to make an irrevocable invitation to offer to the Trust for the IRB GEPL IRB Shares (i.e., the shareholding of the Sponsor and its nominee shareholders in IRB GEPL) after the completion of two years from the appointed date (such period is referred to as the IRB GEPL IRB Shares Offer Period).

The Trust also has the right, but not the obligation, at any time after the completion of a period of two years from the appointed date, to cause the Sponsor to invite the Trust to offer for all, but not less than all, of the IRB GEPL IRB Shares, by the delivery of a notice to the Sponsor requesting the Sponsor to immediately make an invitation to offer for the IRB GEPL IRB Shares.

In the event that the Sponsor does not make an invitation to offer to the Trust and the Trust has not called for such invitation to offer, then upon the expiry of the IRB GEPL IRB Shares Offer Period, without any further action by any person, the requirement for the Sponsor to make an invitation to offer shall automatically be triggered whereby the Sponsor shall be required to make an irrevocable invitation to offer to the Trust within five days of the expiry of the IRB GEPL IRB Shares Offer Period and the Trust shall have the right to make or decline to make an offer for the IRB GEPL IRB Shares.

Indemnification

The Sponsor has agreed to indemnify the Trust against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to: (i) any claim against the Indemnified Party or IRB GEPL that has occurred or relates to the period prior to the Closing Date; (ii) breach or inaccuracy of any of the Sponsor's warranties; (iii) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor or IRB GEPL; (iv) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor or IRB GEPL under the IRB GEPL Share Subscription Agreement; and (v) certain other matters, subject to and in accordance with the terms of the IRB GEPL Share Subscription Agreement.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the IRB GEPL Share Subscription Agreement. Further, the Trust will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the Indemnified Party in respect of any such claim. Subject to the limitations set out in the IRB GEPL Share Subscription Agreement, the Seller's liability for all monetary claims for breach of warranties, including claims for damages, will not exceed a specified amount agreed under the IRB GEPL Share Subscription Agreement.

Governing Law, Dispute Resolution and Termination

The IRB GEPL Share Subscription Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The IRB GEPL Share Subscription Agreement may be terminated prior to the Closing Date: (i) by the mutual written agreement of the parties; (ii) upon termination of the Framework Agreement; or (iii) by the Trust and the

Sponsor jointly if closing has not occurred on or prior to the long stop date (six months from the date of the IRB GEPL Share Subscription Agreement).

II. *Providing loans to IRB GEPL towards funding of the total project cost*

The Investment Manager, on behalf of the Trust, proposes to utilize an estimated amount of ₹21,465.00 million from the Issue Proceeds to provide unsecured loans to IRB GEPL under the IRB GEPL Shareholder Loan Agreement after the completion of acquisition of IRB GEPL under the IRB GEPL Share Subscription Agreement. Such amounts will be provided pursuant to the IRB GEPL Shareholder Loan Agreement. IRB GEPL in turn intends to utilize the proceeds of such financing towards funding of the total cost of its project. Also see "*Risk Factors – We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the IRB GEPL Acquisition, may adversely affect us*" on page 20.

Key terms of the IRB GEPL Shareholder Loan Agreement are set out below.

Purpose	IRB GEPL shall utilize the loan amounts solely for funding of the total project cost of IRB GEPL. Any loan amounts disbursed to IRB GEPL out of the Issue Proceeds shall be utilized solely for such purpose.
Term	IRB GEPL shall repay the loan at the end of the concession period under the relevant concession agreement as mutually agreed between the parties to the Shareholder Loan Agreement.
Interest	• IRB GEPL shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 15% p.a., or or such other rate as may be decided mutually by the parties to the IRB GEPL Shareholder Loan Agreement from time to time. • Interest will accrue and be chargeable from the appointed date under the concession agreement. • Interest will be payable when able following the appointed date in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that IRB GEPL, may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid.
Repayment	• The Trust may call on IRB GEPL to prepay the loan, in full or part, or permit IRB GEPL to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the IRB GEPL Shareholder Loan Agreement until the final settlement date (as defined in the IRB GEPL Shareholder Loan Agreement). • IRB GEPL may prepay the whole or part of the loan together with interest on that amount accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the IRB GEPL Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of IRB GEPL on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. IRB GEPL shall promptly give written notice to the Trust of any Event of Default and of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by IRB GEPL in connection therewith. • **Non-Payment:** IRB GEPL fails to pay any amount due under the IRB GEPLShareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event

	of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** IRB GEPL breaches any provision of the IRB GEPL Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by IRB GEPL in any finance document or any other document delivered by or on behalf of IRB GEPL under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on PDTPL or its project. • **Cessation of Business**: IRB GEPL ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** IRB GEPL is unable to, or presumed or deemed to be unable to, or admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of IRB GEPL, other than a solvent liquidation or reorganization of IRB GEPL; (b) a composition or arrangement with any creditor of IRB GEPL, or an assignment for the benefit of creditors generally of IRB GEPL, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of IRB GEPL, or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction. • **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for IRB GEPL to perform its obligations under the IRB GEPL Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of IRB GEPL or the whole or substantially whole or part of its project, resulting in IRB GEPL being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on IRB GEPL or the relevant project on the operation of the business of IRB GEPL. • **Cross Default**: IRB GEPL defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of IRB GEPL. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to IRB GEPL of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the IRB GEPL Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.
Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be Delhi, India.
Governing Law	Laws of India

In addition to the above, the Investment Manager may utilize the Issue Proceeds towards other expenditure (in the ordinary course of business of the Trust) considered expedient. Any such utilization other than as contemplated

towards the objects of the Issue described above will be subject to the consent of all the Unitholders. In case of a shortfall in the Issue Proceeds or cost overruns, the Investment Manager may explore a range of options including utilizing the Trust's, the Project SPVs' or the Target SPV's internal accruals or seeking debt financing in accordance with the business plan and annual budget. The objects of this Issue are proposed to be financed solely through the Issue Proceeds.

Schedule of Deployment

The Investment Manager proposes to deploy the Issue Proceeds during the Financial Year 2024, depending on various factors, including the actual timing of completion of this Issue and the receipt of the Issue Proceeds.

Interim use of Issue Proceeds

Pending utilization of the Issue Proceeds for the purposes described above, the Investment Manager may invest the funds only in deposits in one or more scheduled commercial banks included in the Second Schedule of RBI Act. Pending utilization of the Issue Proceeds for the objects of this Issue, the Investment Manager shall not utilize the Issue Proceeds for any investment in the equity markets (excluding any investment in the equity shares of the Project SPVs), real estate or related products.

STATEMENT OF TAX BENEFITS

Statement of possible tax consideration / benefits available to the Trust and its Unitholders under applicable laws in India

To,

IDBI TRUSTEESHIP SERVICES LIMITED
(Trustee of IRB Infrastructure Trust) Ground Floor, Universal Insurance Building, Sir Phirozshah Mehta Road Fort, Mumbai 400 001, Maharashtra India

MMK Toll Road Private Limited
(As the Investment Manager of the IRB Infrastructure Trust) Off No-11th Floor/1101,
Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076,

Dear Sirs/Madam,

Sub: Statement of possible tax considerations / benefits available to the IRB Infrastructure Trust and its Unitholders under the Income-tax Act, 1961.

We refer to the proposed rights issue (the "Issue") of the units of IRB Infrastructure Trust ("the Trust") and enclose the statement showing the current position of tax considerations / benefits available to the Trust and to its Unitholders as per the provisions of the Income-tax Act, 1961 ('the IT Act') presently in force in India (i.e. applicable for the financial year ending 31 March 2024 relevant to the assessment year 2024-25) for inclusion in the letter of offer to be issued in connection with the Issue.

This statement is provided for general information purposes only and each investor is advised to consult its own tax consultant with respect to specific income tax implications arising out of participation in the rights issue.

Unless otherwise specified, sections referred below are sections of the IT Act. The benefits set out below are subject to conditions specified therein read with the Income-tax Rules, 1962 presently in force.

The benefits outlined in the enclosed statement based on the information and particulars provided by the Trust are neither exhaustive nor conclusive.

We do not express any opinion or provide any assurance as to whether:

- the Trust or its Unitholders will continue to obtain these benefits in future;
- the conditions prescribed for availing the benefits have been/would be met with; and
- the revenue authorities/courts will concur with the views expressed herein.

We hereby give our consent to include the enclosed statement regarding tax benefits available to the Trust and to its Unitholders in letter of offer in connection with the rights issue of the units of the Trust which is intended to be filed with Securities and Exchange Board of India, the National Stock Exchange of India Limited (being the stock exchange where the units of the Trust are listed) and any regulatory authority as may be required under applicable law.

Limitations

No assurance is given that the revenue authorities/courts will concur with the views expressed herein. Our views are based on the existing provisions of law and its interpretation, which are subject to changes from time to time. We do not assume responsibility to update the views consequent to such changes. We shall not be liable to any claims, liabilities or expenses relating to this assignment except to the extent of fees relating to this assignment, as finally judicially determined to have resulted primarily from bad faith or intentional misconduct. We will not be liable to any other person in respect of this statement.

This statement of possible direct tax benefits enumerated above is as per the Income-tax Act as amended by the Finance Act 2023. The statement of possible Direct-tax Benefits sets out the possible tax benefits available to the Trust and its Unitholders under the current tax laws presently in force in India. Several of these benefits available are dependent on the Trust or its Unitholders fulfilling the conditions prescribed under the relevant tax laws.

The information provided above sets out the possible tax benefits available to the Unitholders in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership and disposal of units, under the current tax laws presently in force in India. It is not exhaustive or comprehensive and is not intended to be a substitute for professional advice.

For Gokhale & Sathe,
Chartered Accountants,
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande, Partner
Membership No. 121011
UDIN: 23121011BGXXZC4270
Place: Mumbai
Date: July 29, 2023

ANNEXURE TO STATEMENT OF POSSIBLE TAX BENEFITS AVAILABLE TO IRB INFRASTRUCTURE TRUST AND ITS UNITHOLDERS UNDER APPLICABLE LAWS IN INDIA UNDER THE INCOME-TAX ACT, 1961 (hereinafter referred to as 'the Act')

TAX BENEFITS AVAILABLE TO IRB INFRASTRUCTURE TRUST ('TRUST') UNDER THE ACT

IRB Infrastructure Trust is an Infrastructure Investment Trust under the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, made under the Securities and Exchange Board of India Act, 1992.

Section 2(13A) of the Income Tax Act which defines "Business Trust" has been amended by Finance Act 2020 with effect from 1st April 2021 (i.e. from AY 2021-22) to remove the requirement of listing of units of the trust on stock exchange.

The following benefits are available to a Business Trust after fulfilling conditions as per applicable provisions of the Act and the guidelines prescribed by the Securities and Exchange Board of India ('SEBI') (including the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014, as amended) ('SEBI Regulations').

Tax benefit in the hands of the Trust in respect of interest and dividend income:

(a) Interest received or receivable by the Trust from the Special Purpose Vehicle (SPV) would be exempt from tax. [10(23FC)(a)]

(b) Dividend received or receivable by the Trust from a Special Purpose Vehicle (SPV) shall be exempt from tax. [10(23FC)(b)]

For the purpose of the above, "special purpose vehicle" would mean an Indian company in which the business trust holds controlling interest and any specific percentage of shareholding or interest, as may be required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014.

Accordingly, sec. 194A(3)(xi) exempts SPV from the provisions of tax deduction at source in respect of interest paid/payable to the business trust.

Also, sec. 194 provides that the tax deduction at source is not applicable in respect of dividend credited or paid to a business trust by a special purpose vehicle.

The Act has amended section 193 to remove the requirement to withhold tax on payment of interest on securities (like debentures) by SPV to a business trust.

Section 10(34A) of the Act - Income from buy back of shares:

Further, income arising from buy-back shall not be taxable as per section 10(34A) of the Act in the hands of the Trust.

Section 115UA(2) read with section 111A, section 112 and section 112A of the Act – Taxability of business income, capital gains and income from other sources in the hands of the Trust:

In terms of section 115UA(2) of the Act, the total income of the Trust shall be chargeable to tax at the maximum marginal rates in force except for the income chargeable to tax on transfer of Short-Term Capital assets under section 111A and Long Terms Capital assets under section 112 and section 112A of the Act and income referred to in Sec. 10(23FC)

If the period of holding of a security (other than a unit) listed on a recognized stock exchange in India or a unit of the Unit Trust of India or a unit of an equity-oriented fund or a zero-coupon bond is more than 12 months, it will be considered a long-term capital asset as per section 2(29AA) of the Act. With respect to shares of a company not being listed on a recognized stock exchange or immovable property, being land, building, or both, the determinative period of holding shall be more than 24 months for it to be regarded as long- term capital asset. With respect to other assets including a unit of a mutual fund other than equity oriented mutual fund or unit of a

business trust, the determinative period of holding is more than 36 months for it to be regarded as long-term capital asset.

As per the provisions of section 111A of the Act, any income arising from transfer of short- term capital asset being an equity share in a company or a unit of an equity-oriented fund or a unit of an eligible business trust, transacted through a recognized stock exchange and subject to STT, will be taxable at a concessional rate of 15% (plus applicable surcharge and cess, if any).

As per the provisions of section 112(1)(d) of the Act, gains arising on the transfer of long- term capital assets shall be chargeable to tax in the hands of the Trust at the rate of 20% (plus applicable surcharge and cess). However, as per the proviso to section 112 of the Act, the tax on long term capital gains on transfer of listed securities (other than units) or Zero-Coupon Bonds shall be at the rate of 10% (plus applicable surcharge and cess) without indexation benefit.

Further, as per section 112A, with effect from FY 2018-19, gains exceeding one lakh rupees arising on the transfer of long-term capital asset, being an equity share in a company or a unit of an equity-oriented fund or a unit of a business trust, transacted through a recognized stock exchange and subject to STT, shall be chargeable to tax in the hands of the Trust at the rate of 10% (plus applicable surcharge and cess) without indexation benefit.

With a view to grandfather gains notionally earned by investors up to 31st January 2018, for securities acquired till such date, it has been provided that taxable gains will be determined considering the cost which will be higher of:

- Actual cost of acquisition; or
- Lower of sale price and Fair Market Value (as specifically defined under the Act) (Sec. 55(2)(ac))

In accordance with, and subject to the conditions, including the limit of investment of ₹ 50 lakhs, capital gains arising on transfer of a long term capital asset, being land or building or both, shall be exempt from capital gains under section 54EC if the gains are invested within 6 months from the date of transfer in purchase of specified bonds (redeemable after five years and issued on or after 1 April 2018) issued by National Highways Authority of India (NHAI) or Rural Electrification Corporation Ltd (RECL) or any other bond notified by the Central Government, if permitted to be invested by an Investment trust as per the extant governing regulations. In case the whole of the gains are not so invested, the exemption shall be allowed on a pro rata basis.

As per section 70 read with section 74 of the Act, short term capital loss arising during a year is allowed to be set-off against short term capital gains as well as long term capital gains. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act r.w. section 74, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

TAX BENEFITS AVAILABLE TO UNITHOLDERS OF THE TRUST

SPECIAL BENEFITS AVAILABLE TO THE UNITHOLDERS OF THE TRUST:

Following tax benefit is specifically available to the unitholders of the Trust subject to the fulfilment of the conditions specified in the Act and SEBI Regulations:

Section 10(23FD) of the Act - Tax exemption in respect of income distributed by the Trust:

As per the provisions of section 115UA(1) of the Act, the income distributed by the Trust shall be deemed to be of the same nature and in the same proportion in the hands of the Unitholder as it had been received by or accrued to the business trust. However, as per sub-section 3A inserted in section 115UA by the Finance Act, 2023, w.e.f. 01.04.2024, the provisions of sub-section (1) shall not apply in respect of any sum referred to in clause (xii) of section 56(2), received by a unit holder from a business trust.

As per the provisions of section 10(23FD), any income referred to in section 115UA(1) of the Act and distributed by the Trust (except for that proportion of interest income referred in section 10(23FC)(a) of the Act or dividend received/receivable from an SPV referred to in section 10(23FC)(b) in a case where the SPV has exercised the

option under section 115BAA; which is taxable under section 115UA(3) of the Act) shall not be included in the total income of the unit- holders.

The Finance Act, 2023 has inserted section 56(2)(xii) w.e.f. 01.04.2024 (i. e. AY 2024-25). The section provides that any specified sum received by unit holder from a business trust during the previous year, with respect to units held by it at any time during the previous year will be taxable as “income from other sources”. The section has introduced a computation methodology to ascertain “specified sum”.
The specified sum is the aggregate of sum distributed [which is not in the nature of income u/s 10(23FC) or which is not chargeable to tax at level of business trust u/s 115UA(2)] by business trust in the previous year or during any earlier previous years to such unitholder who holds such unit on the date of distribution or to any other unit holder who held such unit at any time prior to the date of distribution, and reduced by amount at which such unit was issued by the business trust and further reduced by amount charged to tax u/s 56(2)(xii) in any earlier previous year,

The Finance Act has also introduced Explanation 1 and Explanation 2 in clause (ii) of section 48 w.e.f. AY 2024-25.
Explanation 1 provides that the cost of acquisition of a unit of business trust shall be reduced and shall be deemed to have always been reduced by any sum received by a unit holder from the business trust w.r.t. such unit, if the sum is-

- Not in the nature of income referred to in section 10(23FC)
- Not chargeable to tax u/s 56(2)(xii)
- Not chargeable to tax u/s 115UA(2)

Explanation 2 covers the situation where the transaction of transfer of a unit is not considered as transfer under section 47 and cost of acquisition of such unit is determined under section 49. It provides that sum received with respect to such unit before such transaction as well as after such transaction shall be reduced from the cost of acquisition. Thus, if an assessee has received unit of business trust under a transaction which is not regarded as 'transfer', the cost of acquisition of such unit shall be reduced by the sum received from the business trust by the assessee as well as the previous unit holder provided such sum is not chargeable to tax either in the hands of the assessee, the previous unit holder and the business trust.

There is no provision for withholding tax obligation to the business trust u/s 194LBA in relation to amount taxable u/s 56(2)(xii) unlike section 195, wherein the trust is liable to withhold tax u/s 195 on distributions to non-resident unitholders.

According to sec. 47(xvii), any transfer of a capital asset, being share of a special purpose vehicle to a business trust in exchange of units allotted by that trust to the transferor shall not be regarded as transfer and accordingly not be liable to capital gains tax.

According to sec. 49(2AC) the cost of units acquired in lieu of shares in SPV shall be deemed to be cost of acquisition of shares in SPV.

As per clause (hc) of explanation 1 of sec. 2(42A), for ascertaining the period of holding of such units, the period of holding of shares in SPV shall also be included.

Notional gain arising on transfer of share of special purpose vehicle to business trust in exchange of units allotted by that trust as referred u/s 47(xvii) or notional gain arising upon change in carrying amount of the units and realised gain on transfer of these units are to be excluded in calculation of book profits for the purposes of MAT u/s 115JB. (clause (iie)) to explanation 1 to section 115JB).

GENERAL BENEFITS AVAILABLE TO ALL UNITHOLDERS OF THE TRUST:

For resident Unitholder- Long-term capital gains:
Income arising on transfer of units of the Trust through a recognized stock exchange, on which STT is paid, shall be chargeable to tax in the hands of the Unitholders at a rate of 10% without indexation benefit (plus applicable surcharge and cess) under section 112A of the Act if the said units are long-term capital assets. The determinative period of holding for such units to qualify as long-term capital asset is more than 36 months. Income arising on transfer of units of the Trust that are long term capital assets, which is not through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 20%, with indexation benefit (plus applicable surcharge and cess) under section 112 of the Act. In case of a Unitholder being an individual or HUF, where the total taxable income as reduced by long-term capital gains is below the basic exemption limit, the long-term capital gains will be reduced to the extent of the shortfall and only the balance long-term capital gains will be subjected to such tax in accordance with the proviso to clause (a) of sub-section (1) of section 112 of the Act.

For resident Unitholder- Short-term capital gains:
Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 15% (plus applicable surcharge and cess) as per the provisions of section 111A of the Act provided such transaction is subject to STT and through a recognized stock exchange. In case of a Unitholder being an individual or HUF, where the total taxable income as reduced by short-term capital gains is below the basic exemption limit, the short-term capital gains will be reduced to the extent of the shortfall and only the balance short- term capital gains will be subjected to such tax in accordance with the proviso to sub- section (1) of section 111A of the Act.

For resident Unitholder- Set-off of losses:
Short Term Capital Loss computed for the given year is allowed to be set-off against Short Term/ Long Term Capital Gains computed for the said year under section 70 of the Act. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act, long term capital loss arising during a year is allowed to be set-off only against long term capital gains. Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

For resident Unitholder- Deduction of Securities Transaction Tax:
Where the gains arising on the transfer of the units of the Trust are included in the business income of an assessee assessable under the head “Profits and Gains from Business or Profession” and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act. The characterization of gains/ losses, arising from transfer of units, as capital gains or business income would depend on the nature of holding in the hands of the unitholders and various other factors.

Section 197 of the Act is amended to include reference to section 194LBA meaning thereby that the unit holder can make application to the assessing officer for obtaining certificate for lower or nil deduction of tax.
For non-resident Unitholder- Long-term capital gains:
Income arising on transfer of units of the Trust, shall be chargeable to tax in the hands of the Unitholders at a rate of 10% without indexation benefit (plus applicable surcharge and cess) under section 112A of the Act if the said units are long-term capital assets and transfer is through a recognized stock exchange and subject to STT. These assets turn long term if they are held for more than 36 months. Income arising on transfer of units of the Trust that are long term capital assets, which is not through a recognized stock exchange and not subject to STT, shall be chargeable to tax at 20%, with indexation benefit (plus applicable surcharge and cess) under section 112 of the Act.

For non-resident Unitholder- Short-term capital gains:
Short-term capital gains arising on transfer of the units of the Trust will be chargeable to tax at the rate of 15% (plus applicable surcharge and cess) as per the provisions of section 111A of the Act if such transaction is chargeable to STT.

For non-resident Unitholder- Set-off of losses:
Short Term Capital Loss computed for the given year is allowed to be set-off against Short Term/ Long Term Capital Gains computed for the said year under section 70 of the Act. Balance loss, if any, shall be carried forward and set-off against any capital gains arising during subsequent eight assessment years. Also, as per section 70 of the Act, long term capital loss arising during a year is allowed to be set-off only against long term capital gains.

Balance loss, if any, shall be carried forward and set-off against long term capital gains arising during subsequent eight assessment years.

For non-resident Unitholder- Deduction of Securities Transaction Tax:

Where the gains arising on the transfer of units of the trust are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act.

For non-resident Unitholder- Benefits under Double Taxation Avoidance Agreements:
Under the provisions of section 90(2) of the Act, a non-resident will be governed by the provisions of the Double Tax Avoidance Agreement (DTAA) between India and the country of tax residence of the non-resident and the provisions of the Act apply to the extent they are more beneficial to the assessee.

As per explanation 4 to section 115JB(2), the provisions of section 115JB shall not be applicable to a foreign company if the foreign company is a resident of a country having DTAA with India and such foreign company does not have a permanent establishment within the definition of the term in the relevant DTAA, or the foreign company is a resident of a country which does not have a DTAA with India and such foreign company is not required to seek registration under section 592 of the Companies Act 1956 or section 380 of the Companies Act 2013.

For non-resident Unitholder- Section 194LBA – Tax Deduction on certain income from units of the Trust:
Where any distributed income referred in section 115UA, is in the nature referred to in clause (23FC) of section 10 payable by the Trust to its unit holder being a non-resident unit holder, then the same shall be subjected to the tax deduction at the rate of 5% in case of income of the nature referred to in sub-clause (a) [interest income] and 10% in case of income of the nature referred to in sub-clause (b) [dividend income] of clause (23FC) of section 10 (plus applicable surcharge and cess). However, in view of section 90(2) of the Act, a non-resident will be governed by the provisions of the Agreement for Avoidance of Double Taxation (AADT) between India and the country of tax residence of the non-resident and the provisions of the Act apply to the extent they are more beneficial to the assessee.

Section 197 of the Act is amended to include reference to section 194LBA meaning thereby that the unit holder can make application to the assessing officer for obtaining certificate for lower or nil deduction of tax.

For unitholders who are Foreign Portfolio Investors ('FPIs')/ Foreign Institutional Investors ('FIIs'):
Where the gains arising on the transfer of units of the Trust are included in the business income of an assessee assessable under the head "Profits and Gains from Business or Profession" and on which securities transaction tax has been charged, such securities transaction tax shall be a deductible expense from business income as per the provisions of section 36(1)(xv) of the Act.

As per section 2(14) of the Act, any securities held by a FII which has invested in such securities in accordance with the regulations made under the Securities and Exchange Board of India Act, 1992 shall be deemed to be treated as Capital asset. As per section 196D, no tax is to be deducted from any income, by way of capital gains arising from the transfer of units, payable to Foreign Institutional Investor. In respect of non- residents, the tax rates and consequent taxation mentioned above will be further subject to any benefits available under the Tax Treaty, if any, between India and the country in which the FPI/FII has Fiscal domicile. As per the provisions of section 90(2) of the Act, the provisions of the Act would prevail over the provisions of the Tax Treaty to the extent they are more beneficial to the FII.

Pursuant to Central Board of Direct Tax press release dated 24 September 2015, the Government has clarified the inapplicability of Minimum Alternate Tax provisions to FIIs/FPIs.

For unit holders who are Sovereign Wealth Funds:
Under section 10(23FE) of the Act, any income of Sovereign Wealth Fund in the nature of dividend, interest, specified sum referred to in section 56(2)(xii) or long-term capital gains arising from an investment made by it in Business Trust in India is exempt from tax provided such investment is made before 31st March, 2024 and is held for at least three years.

However, the said exemption is not available if a sovereign wealth fund has loans or borrowings, directly or indirectly, for the purpose of making the investment in India.

The exemption would be applicable to a sovereign wealth fund which satisfies stipulated conditions mentioned in Explanation 1 to section 10(23FE) and is notified by the Central Government.

For unitholders who are Mutual Funds:
Under section 10(23D) of the Act, any income earned by a Mutual Fund registered under the Securities and Exchange Board of India Act, 1992, or a Mutual Fund set up by a public sector bank or a public financial institution, or a Mutual Fund authorized by the Reserve Bank of India would be exempt from income-tax, subject to such conditions as the Central Government may by notification in the Official Gazette specify in this behalf.

The Trust is not required to withhold tax on interest payment to Mutual Fund set up under section 10(23D) of the Act.

The above statement of possible direct tax benefits sets out the provisions of law in a summary manner only and is not a complete analysis or listing of all potential tax consequences of the purchase, ownership and disposal of shares and units.

The stated benefits will be available only to the sole/ first named holder in case the units are held by joint holders.

In respect of non-residents, the tax rates and the consequent taxation mentioned above shall be further subject to any benefits available under the applicable DTAA, if any, between India and the country in which the non-resident has fiscal domicile.

SECTION IV – ABOUT THE TRUST

BACKGROUND AND STRUCTURE OF THE TRUST

Background of the Trust

The Trust has been settled by the Sponsor as an irrevocable trust under the provisions of the Trusts Act in New Delhi, India pursuant to the Indenture of Trust dated August 27, 2019, as amended. The Indenture of Trust is registered under the Registration Act. The Trust is registered with the SEBI as an infrastructure investment trust under the InvIT Regulations. The Units of the Trust are listed on the NSE.

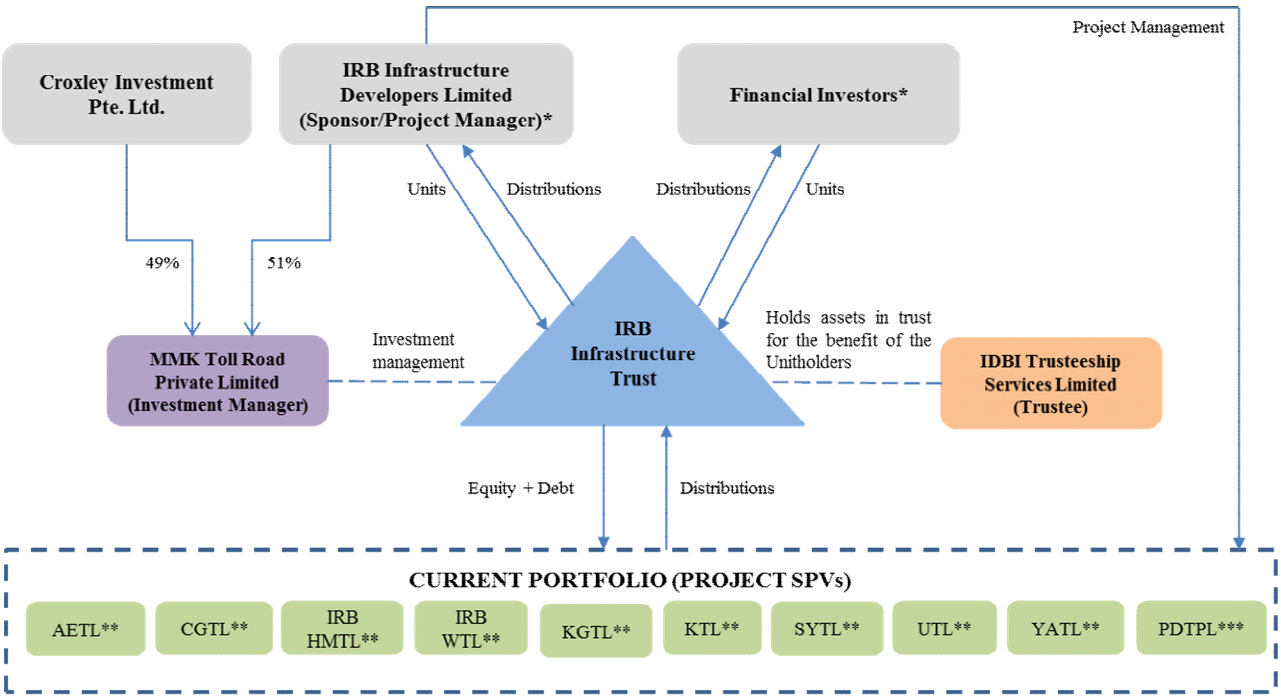
The object and purpose of the Trust, as described in the Indenture of Trust, is to carry on the activity of an infrastructure investment trust under the InvIT Regulations. Investment by the Trust shall only be in holding companies, SPVs, infrastructure projects, securities in India or other permitted investments in accordance with the InvIT Regulations, the investment strategy and the Trust Documents. The principal investment objective of the Trust is to own, operate and invest in infrastructure projects in India, directly or through holding companies or SPVs and make other investments and undertake such activities in such jurisdictions as may be permissible under the InvIT Regulations, other applicable law and the Trust Documents. For further details in relation to the business and investment strategy of the Trust, see "*Business*" on page 111.

The Trust is required to make distributions to the Unitholders in accordance with the InvIT Regulations and the Distribution Policy. For details in relation to the distribution policy of the Trust, see "*Distributions*" on page 254.

Parties to the Trust and Structure of the Trust

In accordance with the InvIT Regulations, the Parties to the Trust are (i) the Sponsor; (ii) the Investment Manager; (iii) the Trustee; and (iv) the Project Manager. For details, see "*The Sponsor and Project Manager*", "*The Investment Manager*" and "*The Trustee*" on pages 263, 266 and 273, respectively.

The following diagram illustrates the relationship among the Trust, the Project SPVs in the Current Portfolio, the Trustee, the Investment Manager and the Unitholders (which includes the Sponsor) as on the date of this Letter of Offer:



** Unitholders of the Trust*
***100% of each Project SPV held by the Trust, together with nominee shareholders*
****99.96% of PDTPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding the remaining 0.04%*

For details in relation to the IRB GEPL Acquisition, see "*Business*", "*Objects of the Issue*" and "*– The IRB GEPL Acquisition*" on pages 111, 62 and 92, respectively. For details in relation to the Target SPV, see " *– Details of the Target SPV*" on page 83.

Details of the Project SPVs

1. AETL

Corporate Information

AETL was incorporated on July 21, 2015 as a private limited company under the Companies Act, 1956, having CIN U45209MH2015PTC266741. AETL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45209MH2015PLC266741. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of AETL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Laning of Agra to Etawah Bypass section of NH-2 from km 199.660 to km 323.525 in the State of Uttar Pradesh under NHDP Phase V on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of AETL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	436,500,000
Issued, subscribed and paid-up capital	436,500,000

Shareholding Pattern

The shareholding pattern of AETL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	436,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Anushree Joshi**	1	Negligible
Total		**436,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

2. CGTL

Corporate Information

CGTL was incorporated on October 18, 2016 as a private limited company under the Companies Act, having CIN U45200MH2016PTC286895. CGTL was converted into a public limited company under the Companies Act, and

a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45200MH2016PLC286895. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of CGTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance, and Operation of Six Laning of Kishangarh Udaipur Ahmedabad Section from km 90.000 (near Gulabpura) to km 214.870 (end of Chittorgarh Bypass) of NH-79 in the State of Rajasthan Package-2 under NHDP Phase – V on BOT(Toll) mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of CGTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	203,500,000
Issued, subscribed and paid-up capital	203,500,000

Shareholding Pattern

The shareholding pattern of CGTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	203,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		**203,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

3. IRB HMTL

Corporate Information

IRB HMTL was incorporated on April 18, 2018 as a private limited company under the Companies Act, having CIN U45400MH2018PTC308187. IRB HMTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2018PLC308187. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB HMTL, is as follows:

"*To carry on the business of infrastructure development in respect of Six Laning of Hapur bypass to Moradabad Section including Hapur bypass from Km 50.000 (Design Chainage 50.000) to Km 148.277 (Design Chainage 149.867) of NH-24 (New NH-9) in the State of Uttar Pradesh under NHDP Phase V (Bharatmala Pariyojna) on DBFOT (Toll) mode, including collection and retention of the toll of fee and to carry out the ancillary activities,*

in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)."

Capital Structure

The capital structure of IRB HMTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	375,000,000
Issued, subscribed and paid-up capital	371,500,000

Shareholding Pattern

The shareholding pattern of IRB HMTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	371,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		**371,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

4. IRB WTL

Corporate Information

IRB WTL was incorporated on August 22, 2012 as a private limited company under the Companies Act, 1956, having CIN U45400MH2012PTC234786. IRB WTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2012PLC234786. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB WTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance, and Operation of Four Laning of Goa/Karnataka border to Kundapur section of NH-17 from existing km 93.700 to km 283.300 in the State of Karnataka under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, inclduing collection and retention of toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of IRB WTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	174,194,303
Issued, subscribed and paid-up capital	174,194,303

Shareholding Pattern

The shareholding pattern of IRB WTL is as follows:

S No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	174,194,297	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Shailesh Joshi**	1	Negligible
5.	Nikhil Maniar**	1	Negligible
6.	Arati Taskar**	1	Negligible
7.	Anushree Joshi**	1	Negligible
Total		**174,194,303**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

5. KGTL

Corporate Information

KGTL was incorporated on January 12, 2017 as a private limited company under the Companies Act, having CIN U45203MH2017PTC289501. KGTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 14, 2019 was issued, having CIN U45203MH2017PLC289501. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of KGTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Laning of Kishangarh to Gulabpura Section of NH 79A and NH 79 in the state of Rajasthan (length 90.000 km) under NHDP Phase V package – I on DBFOT (Toll) mode, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of KGTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	155,500,000
Issued, subscribed and paid-up capital	155,500,000

Shareholding Pattern

The shareholding pattern of KGTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	155,499,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar **	1	Negligible

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Vinod Kumar Menon**	1	Negligible
Total		155,500,000	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

6. KTL

Corporate Information

KTL was incorporated on June 11, 2014 as a private limited company under the Companies Act, having CIN U45201MH2014PTC255454. KTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 14, 2019 was issued, having CIN U45201MH2014PLC255454. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of KTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Kaithal to Rajasthan Border section of NH-152/65 from km 33+250 (Design Km – 0.500) to km 241+580 (Design Km 165.759) in the State of Haryana under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of KTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	328,000,000
Issued, subscribed and paid-up capital	328,000,000

Shareholding Pattern

The shareholding pattern of KTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	327,999,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Dhananjay K. Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Shailesh Joshi**	1	Negligible
6.	Nikhil Maniar**	1	Negligible
7.	Anushree Joshi*	1	Negligible
Total		**328,000,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

7. SYTL

Corporate Information

SYTL was incorporated on January 10, 2014 as a private limited company under the Companies Act, 1956, having CIN U45400MH2014PTC251983. SYTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45400MH2014PLC251983. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of SYTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Solapur to Yedeshi section of NH-211 from km 0.000 to km 100.000 (Design Length 98.717 km) in the State of Maharashtra under NHDP Phase IV on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of SYTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	98,250,000
Issued, subscribed and paid-up capital	98,250,000

Shareholding Pattern

The shareholding pattern of SYTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	98,249,994	100
2.	Dhananjay K. Joshi**	1	Negligible
3.	Mahesh Kavthekar**	1	Negligible
4.	Shailesh Joshi**	1	Negligible
5.	Nikhil Maniar**	1	Negligible
6.	Arati Taskar**	1	Negligible
7.	Anushree Joshi**	1	Negligible
Total		**98,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

8. UTL

Corporate Information

UTL was incorporated on October 6, 2016 as a private limited company under the Companies Act, having CIN U45203MH2016PTC286600. UTL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45203MH2016PLC286600. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of UTL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Six Lanning from km 287.400 to km 401.200 section of NH-8 in the States of Rajasthan and Gujarat (approx. length 113.800 km) on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis under NHDP Phase V (package – V), including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of UTL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	116,800,000
Issued, subscribed and paid-up capital	116,800,000

Shareholding Pattern

The shareholding pattern of UTL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	116,799,994	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Shailesh Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Dhananjay K. Joshi**	1	Negligible
6.	Vinod Kumar Menon**	1	Negligible
7.	Nikhil Maniar**	1	Negligible
Total		**116,800,000**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

9. YATL

Corporate Information

YATL was incorporated on May 17, 2014, as a private limited company under the Companies Act, 2013, having CIN U45300MH2014PTC255280. YATL was converted into a public limited company under the Companies Act, and a fresh certificate of incorporation dated November 13, 2019 was issued, having CIN U45300MH2014PLC255280. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of YATL, is as follows:

"*To carry on the business of infrastructure development in respect of the work of Design, Build, Finance and Operation of Four Laning of Yedeshi to Aurangabad section of NH-211 from km 100.000 to km 290.200 in the State of Maharashtra under NHDP Phase IVB on Design, Build, Finance, Operate and Transfer (DBFOT) Toll basis, including collection and retention of the toll or free and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be excuted with National Highways Authority of India (NHAI).*"

Capital Structure

The capital structure of YATL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	216,000,000
Issued, subscribed and paid-up capital	215,757,001

Shareholding Pattern

The shareholding pattern of YATL is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	215,756,995	100
2.	Mahesh Kavthekar**	1	Negligible
3.	Shailesh Joshi**	1	Negligible
4.	Arati Taskar**	1	Negligible
5.	Dhananjay K. Joshi**	1	Negligible
6.	Anushree Joshi**	1	Negligible
7.	Nikhil Maniar**	1	Negligible
Total		**215,757,001**	**100**

** On behalf of the Trust*
*** As a nominee of the Trust*

10. PDTPL

Corporate Information

PDTPL was incorporated on April 15, 2021, as a private limited company under the Companies Act, 2013, having CIN U45201MH2021PTC359020. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of PDTPL, is as follows:

"To carry on the business of infrastructure development in respect of 6 Laning of National Corridor NH-19 from Palsit to Dankuni (up to NH-6 Connector) from km. 588.870 to km. 652.700 (total design length 63.830 km) in the State of West Bengal under Bharatmala Pariyojana to be executed on BOT (Toll) basis Project including collection and retention of the toll or fee and to carry out the ancillary activities, in relation of the foregoing, as specified in the Concession Agreement to be executed with National Highways Authority of India (NHAI)."

Capital Structure

The capital structure of PDTPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	121,250,000
Issued, subscribed and paid-up capital	121,250,000

Shareholding Pattern

The shareholding pattern of PDTPL is as follows:

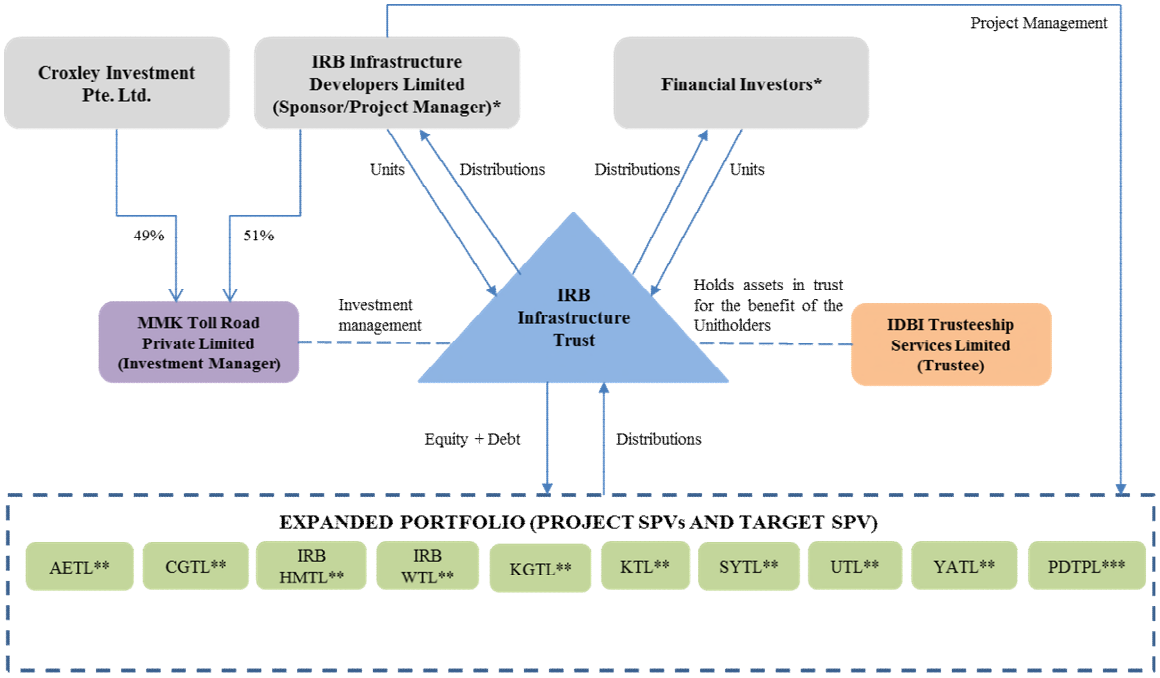
S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	121,200,000	99.96

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
2.	IRB Infrastructure Developers Limited	49,994	0.04
3.	Rajpaul Sharma**	1	Negligible
4.	Vinod Kumar Menon**	1	Negligible
5.	Amitabh Murarka**	1	Negligible
6.	Dhananjay K. Joshi**	1	Negligible
7.	Arati Taskar**	1	Negligible
8.	Anushree Joshi**	1	Negligible
Total		**121,250,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

Details of the Target SPV

The following diagram illustrates the relationship among the Trust, the Project SPVs and the Target SPV constituting the Expanded Portfolio, the Trustee, the Investment Manager and the Unitholders (which includes the Sponsor) pursuant to the completion of the IRB GEPL Acquisition after the completion of the Issue. For details of the IRB GEPL Acquisition, see "*Business*", "*Objects of the Issue*" and " *– The IRB GEPL Acquisition*" on pages 111, 62 and 92, respectively. Also see "*Risk Factors – We are in the process of acquiring the Target SPV (pursuant to definitive acquisition agreements), which if not completed in a timely manner or at all, or any failure to realize the anticipated benefits of the IRB GEPL Acquisition, may adversely affect us*" on page 20.



** Unitholders of the Trust*
***100% of each Project SPV held by the Trust, together with nominee shareholders*
****99.96% of PDTPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding the remaining 0.04%*
#99.99% of IRB GEPL held by the Trust, with the Sponsor and the Sponsor's nominee shareholders holding less than 0.01%

IRB GEPL

Corporate Information

IRB GEPL was incorporated on May 13, 2023, as a private limited company under the Companies Act, 2013, having CIN U42101MH2023PTC402917. Its registered office is situated at Off. No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Powai, Mumbai 400 076, Maharashtra, India.

Main Object

The main object, as contained in the memorandum of association of IRB GEPL, is as follows:

"To carry on the business of infrastructure development in respect of Tolling, Operation, Maintenance and Transfer (TOT) of Nehru Outer Ring Road (from Km. 0+000 to Km. 158+000 in Hyderabad, Telangana and to carry out the ancillary activities, including collection and retention of the toll or fee, as specified in the Concession Agreement to be executed with Hyderabad Metropolitan Development Authority (HMDA / Authority) and/or the Hyderabad Growth Corridor Limited (HGCL / Implementing Authority)."

Capital Structure

The capital structure of IRB GEPL is as follows:

Particulars	No. of equity shares of face value of ₹10 each
Authorized capital	50,000
Issued, subscribed and paid-up capital	50,000

Upon completion of the IRB GEPL Acquisition, the issued, subscribed and paid-up capital of IRB GEPL is proposed to increase to 715,500,000 equity shares of face value of ₹10 each.

Shareholding Pattern

The shareholding pattern of IRB GEPL as on the date of this Letter of Offer is as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IRB Infrastructure Developers Limited	49,994	99.99
2.	Nikhil Maniar*	1	Negligible
3.	Amitabh Murarka*	1	Negligible
4.	Rajpaul Sharma *	1	Negligible
5.	Dhananjay Joshi*	1	Negligible
6.	Shailesh Joshi *	1	Negligible
7.	Mahesh Kavthekar *	1	Negligible
Total		**50,000**	**100**

** As a nominee of IRB Infrastructure Developers Limited*

The shareholding pattern of IRB GEPL upon completion of the IRB GEPL Acquisition will be as follows:

S. No.	Name of the shareholder	No. of equity shares of face value of ₹10 each	Percentage of the issued, paid-up and subscribed capital (%)
1.	IDBI Trusteeship Services Limited*	715,450,000	99.99
2.	IRB Infrastructure Developers Limited	49,994	Less than 0.01
3.	Nikhil Maniar**	1	Negligible
4.	Amitabh Murarka**	1	Negligible
5.	Rajpaul Sharma **	1	Negligible
6.	Dhananjay Joshi**	1	Negligible
7.	Shailesh Joshi **	1	Negligible
8.	Mahesh Kavthekar **	1	Negligible
Total		**715,500,000**	**100**

** On behalf of the Trust*
*** As a nominee of IRB Infrastructure Developers Limited*

The IRB GEPL Acquisition

The Trust intends to acquire 99.99% of the equity shares of IRB GEPL through subscription to 715,450,000 equity shares of IRB GEPL after the listing of the Units issued pursuant to the Issue. A portion of the proceeds of the Issue will be utilized to pay the subscription amount for the acquisition of equity shares of IRB GEPL. The

Sponsor (together with its nominee shareholders) will continue to hold 50,000 equity shares or less than 0.01% of the post-acquisition equity share capital of IRB GEPL. The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor and IRB GEPL have entered into the IRB GEPL Share Subscription Agreement for the acquisition of IRB GEPL by the Trust. For a summary of the indicative terms of the proposed IRB GEPL Share Subscription Agreement, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 62.

In connection with the IRB GEPL Acquisition, the Sponsor, the Investment Manager, the Financial Investors and Croxley have entered into an amendment to the Framework Agreement dated July 29, 2023 to record the terms and conditions in relation to, *inter-alia*, investment into the Trust for funding the acquisition of IRB GEPL and further funding for the completion of the project. For details, see " *– Certain Agreements in relation to the Trust – Framework Agreement*" below.

The Trustee (on behalf of the Trust) and the Investment Manager have also entered into a Shareholder Loan Agreement with IRB GEPL to provide shareholder loans to IRB GEPL. For details, see "*Objects of the Issue – Details of Utilization of Issue Proceeds*" on page 62.

Further, the Trustee (on behalf of the Trust), the Investment Manager, IRB GEPL and the Sponsor have entered into the IRB GEPL Project Implementation Agreement to appoint the Sponsor as the Project Manager with respect to IRB GEPL's project. For details, see "*The Sponsor and Project Manager – Functions, Duties and Responsibilities of the Project Manager*" on page 264.

The Trustee (on behalf of the Trust), the Investment Manager, the Sponsor, the Project SPVs and IRB GEPL have entered into an amendment agreement to the Name Licensing Agreement, which will be effective from the date of the closing date under the IRB GEPL Share Subscription Agreement. For details, see "*Business – Intellectual Property*" on page 138.

Certain Agreements in relation to the Trust

Framework Agreement

The Sponsor, the Investment Manager, the Financial Investors and Croxley have entered into the Framework Agreement to record the terms and conditions in relation to, *inter-alia*, subsequent investment into the Trust by the Sponsor and further funding for completion of the projects of the Project SPVs. The promoter of the Sponsor has also provided undertakings in relation to his shareholding in the Sponsor and other matters.

Pursuant to the terms of the Framework Agreement and the Share Purchase Agreements, the Current Portfolio was acquired by the Trust. Further, Croxley and the Investment Manager entered into the IM SHA in connection with Croxley's investment in the Investment Manager. See "*Corporate Governance*" and "*The Investment Manager*" on pages 139 and 266, respectively, for details of the arrangements under these agreements.

A summary of the key provisions of the Framework Agreement is set out below.

Covenants

The Sponsor has provided covenants and undertakings to the Financial Investors in relation to certain matters under the Framework Agreement. These include, *inter-alia*:

- *Correspondence and regulatory filings:* other than routine or annual filings made by the Manager Group Member with the SEBI or the RBI, regulatory correspondence and filings between the Trustee or Manager Group Member and the SEBI or RBI as specified in the Framework Agreement require the prior written consent of the Financial Investors;

- *Project management works*: the Sponsor will act as the Project Manager in accordance with the terms of the Project Implementation Agreements and provide operation and maintenance services for a period of at least 10 years under the Project Implementation Agreements. For further details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" and "*The Sponsor and Project Manager*" on pages 104 and 263, respectively;

- *Sponsor categorization*: Unless otherwise agreed by the parties, the Sponsor will continue to act as a sponsor of the Trust so long as the Sponsor and/or its affiliates hold Units and shall fulfil the obligations of a sponsor under the InvIT Regulations; and

- *Right of first offer in relation to the IRB InvIT Fund:* the Sponsor has agreed to provide the Financial Investors a right of first offer over any units of the IRB InvIT Fund held by the Sponsor and its affiliates and proposed to be transferred by them to any person (other than the entities controlled by the Sponsor or its subsidiaries) at any time after the closing date.

In addition, the Sponsor has also undertaken to comply with provisions in relation to material contracts, business plans, policies and initial tax orders and ensure certain information rights. Upon the Project SPVs achieving completion of the projects as required under the relevant concession agreements, the Sponsor has undertaken to ensure that no more than 51% of the equity shares (on a fully diluted basis) of all the Project SPVs will be encumbered in favor of the lenders and/or a debenture trustee.

Additional covenants in relation to the IRB GEPL Acquisition

The Sponsor has provided certain additional covenants and undertakings to the Financial Investors in relation to IRB GEPL under the Framework Agreement. These include, *inter-alia*, that IRB GEPL is not permitted to engage any employees, consultants, contract laborers or workers (howsoever categorized, except external professional advisors) without the prior written consent of the Financial Investors. Further, all claims (other than construction related claims) made or intended to be made by IRB GEPL against the relevant concessioning authority or other Governmental Authority shall be considered Future Claims and shall be treated similar to Future Claims for the Project SPVs.

The Trust has undertaken to ensure that the proceeds of the Issue are utlilized solely for funding of the total project cost of IRB GEPL's project and that the concession fee is paid to the relevant concessioning authority by IRB GEPL within the prescribed timelines, failing which the parties have agreed to certain arrangements in relation to dealing with the proceeds of the Issue.

Conditions precedent in relation to the IRB GEPL Acquisition

The obligation of the parties to complete the IRB GEPL Acquisition is subject to the fulfilment of certain conditions by the Sponsor on or before the Closing Date, to the satisfaction of the Financial Investors, unless waived or deferred in writing by the Financial Investors at their sole discretion, which, *inter-alia,* include:

- the IRB GEPL transaction documents, in agreed form, shall have been duly executed by the parties thereunder (through their respective authorized representatives), and delivered to the other parties thereunder;
- no governmental authority of competent jurisdiction shall have enacted, issued, promulgated or enforced any applicable law that prohibits or makes illegal the consummation of the transactions contemplated under any of the IRB GEPL transaction documents;
- there shall be no legal proceeding pending against, or threatened against (to the knowledge of the Sponsor) the Sponsor, its promoters or IRB GEPL wherein an unfavorable judgment, decree, injunction or order could reasonably result in any of the transactions contemplated herein being declared unlawful or rescinded, and no such judgment, decree, injunction or order shall be in effect;
- the IRB GEPL business plan and the IRB GEPL annual budget shall be in agreed form;
- the representations and warranties provided by the Sponsor under the Framework Agreement and the other IRB GEPL transaction documents shall be true, complete and accurate in all respects as of the date of execution of the execution date and as of the closing date (except those representations and warranties that address matters only as of a specified date, which shall be true, complete and accurate in all respects as of that specified date);
- the Sponsor (and its Affiliates) shall have obtained all necessary consents in connection with the execution of the IRB GEPL transaction documents and the completion of the transactions contemplated thereunder;
- no IRB GEPL material adverse change shall be subsisting as on the closing date;
- IRB GEPL, the Investment Manager and the Sponsor shall have duly performed and complied in all respects with all agreements, covenants and conditions required by the IRB GEPL transaction documents to be performed or complied with by them prior to or on the closing date; and

- the Financial Investors shall have received a certificate, dated the closing date and signed by a duly authorized officer of the Sponsor, that the conditions precedent have been satisfied in the prescribed format.

Representations and Warranties in relation to the IRB GEPL Acquisition

The Sponsor has provided representations and warranties in relation to, *inter-alia,* the organization, status and authority of IRB GEPL, no conflict with other obligations, the capital structure and shareholding of IRB GEPL, no conduct of business by IRB GEPL until the closing date, filing of the IRB GEPL transaction documents with any Governmental Authority in India, obtaining of all material consents required for carrying out business activities by IRB GEPL and no material breach of any of the conditions of such consents, material contracts, powers of attorney and proceedings, financial close and financial statements, anti-bribery and anti-corruption laws, anti-money-laundering and sanctions laws, no immunity and the absence of any personnel other than external professional advisors.

The Financial Investors and Croxley have provided representations and warranties in relation to their incorporation, existence, authority to enter into the agreement, eligibility to undertake the transactions under the agreement and no conflicts.

Reserved Matters

For details of Reserved Matters, see "*Rights of Unitholders – Approval of Unitholders – Reserved Matters*" on page 258.

Further funding in relation to the Current Portfolio

The Financial Investors have agreed to contribute a portion of the total equity commitment required for completion of the project of each Project SPV (the "**Project SPV Commitment**") in accordance with the business plan and the annual budget as set out in the Framework Agreement. Such contribution is proposed to be through subscription to additional Units on a periodic basis. In the first instance, the internal accruals of the relevant Project SPVs for the relevant period will be applied towards the Project SPV Commitment in such period, and any shortfall or excess as per the forecasts in the business plan will be adjusted towards the Project SPV Commitment requirements in the subsequent period. The Sponsor and the Financial Investors will together invest the required funding into the Trust in an agreed proportion.

The Financial Investors, the Sponsor and the Investment Manager have also agreed that the very next primary issuance of Units by the Trust after the Issue will be undertaken in a manner such that upon completion of the such issuance, the Sponsor holds 51% of the Units of the Trust and the Financial Investors (along with their transferees, if any) cumulatively hold the remaining 49% Units of the Trust.

Potential Projects

For details in relation to Potential Projects, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" on page 246.

Further issue of Units, transfer of Units and rights in relation to Unitholding

For details of arrangements agreed in relation to further issue of Units, transfer of Units and rights in relation to Unitholding, see "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors*" on page 258.

Event of Default

For details of events of default and consequences, see "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors – Events of Default and Consequences*" on page 258.

Indemnification in relation to the Formation Transactions

In relation to the Formation Transactions, the Sponsor has agreed to indemnify the Indemnified Parties (i.e., (a) the Financial Investors, their respective affiliates, their respective directors, officers, employees; and (b) at the

option of the Financial Investors, any Manager Group Member, provided the Sponsor agrees to indemnify the relevant Manager Group Member of the entire loss suffered/ incurred by such Manager Group Member in relation to an indemnity event) against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to: (i) breach or inaccuracy of any of the Sponsor's warranties; (ii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the transaction documents; (iii) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor or any Manager Group Member; and (iv) certain specific indemnity matters.

The Sponsor's indemnification obligations are subject to certain limitations as to time and quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of PDTPL

In relation to the acquisition of PDTPL by the Trust, the Sponsor has agreed to indemnify the Indemnified Parties against, any losses incurred or sustained by, or imposed upon, the Indemnified Parties based upon, arising out of, with respect to or relating to: (i) any claim against PDTPL that has occurred prior to the PDTPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to PDTPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the PDTPL transaction documents; and (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or PDTPL.

The Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties, in relation to the acquisition of PDTPL, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Indemnification in relation to the acquisition of IRB GEPL

In relation to the IRB GEPL Acquisition, the Sponsor has agreed to indemnify the indemnified parties against, any losses incurred or sustained by, or imposed upon, the indemnified parties based upon, arising out of, with respect to or relating to: (i) any claim against IRB GEPL that has occurred prior to the IRB GEPL closing date; (ii) breach or inaccuracy of any of the Sponsor's warranties in relation to IRB GEPL; (iii) any non-fulfilment, non-performance or other breach of any covenant or obligation of the Sponsor, its affiliates and/or any Manager Group Member contained in the IRB GEPL transaction documents; (iv) any matter involving fraud, gross negligence or wilful misconduct by the Sponsor, the Investment Manager or IRB GEPL; and (v) certain other matters subject to and in accordance with the terms of the Framework Agreement.

Except in certain specified cases, the Sponsor's indemnification obligations are subject to certain limitations as to quantum as specified in the Framework Agreement. Further, the indemnified parties will not be entitled to claim any losses with respect to a particular indemnity event unless the losses exceed a particular amount. Payments by the Sponsor in respect of any loss will be limited to the amount of any liability or damage that remains after deducting any insurance proceeds received by the indemnified party in respect of any such claim. Subject to the limitations and carve-outs set out in the Framework Agreement, the Sponsor's liability for all monetary claims for breach of warranties in relation to the IRB GEPL Acquisition, including claims for damages, will not exceed a specified amount agreed under the Framework Agreement.

Governing Law, Dispute Resolution and Termination

The Framework Agreement is governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the SIAC Rules

for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be London, United Kingdom.

The Framework Agreement will stand automatically terminated without any further action (i) as against the Financial Investors, when the entire Unitholding of the Financial Investors is sold and the entire shareholding of Croxley in the Investment Manager is sold, in accordance with the terms of the transaction documents; or (ii) as against the Sponsor, when the entire Unitholding of the Sponsor is sold or transferred in accordance with the terms of the Framework Agreement.

Debt Novation Agreements

In connection with the initial offer of Units by the Trust, the Investment Manager and the Trust (acting through the Trustee) entered into Debt Novation Agreements dated February 19, 2020 for the novation of subordinated debt and unsecured loans from the Sponsor and its Associates in consideration for the issue of Units to the Sponsor and the payment of certain amounts to the Sponsor and its Associates. The Debt Novation Agreements also provide for the treatment of Sponsor Claims and Future Claims and repayment of such debt by the Project SPVs (except PDTPL) to the Trust on an ongoing basis.

Certain definitions in the Debt Novation Agreements are set out below:

"**Debt**" shall mean the Subordinated Debt and the Unsecured Loans;

"**Future Claims**" shall mean, with respect to a Project SPV, the claims (including any administrative, legal or other similar proceedings) made or intended to be made by such Project SPV against any Governmental Authority for events pertaining to the period after the Reference Date, including any claims for events pertaining to the period prior to the Closing Date (defined below) but which would likely adversely impact the toll revenue of the Project SPV during periods subsequent to the Closing Date;

"**Governmental Authority**" shall include the SEBI, the NHAI, the Ministry of Road Transport and Highways of the Government of India or any state or union territory of India, the Reserve Bank of India, and any national, state, regional or local government or governmental, regulatory, statutory, administrative, fiscal, taxation, judicial, or government-owned body, department, commission, authority, court, arbitrator, tribunal, agency or entity, in India or outside India, in each case, having jurisdiction over any of the parties, their operations, or the transactions contemplated in the Debt Novation Agreement and the transaction documents;

"**Lenders**" shall mean the Sponsor and its associates that have provided Subordinated Debt and Unsecured Loans to the Project SPV in connection with its project;

"**Reference Date**" shall mean, with respect to a Project SPV, the later of the (i) the Closing Date; and (ii) the project completion date under the Concession Agreement, provided that if a provisional completion certificate is issued under the terms of the Concession Agreement and additional construction is required to be undertaken after the date of such certificate, this date shall be the date of issue of the final completion certificate;

"**Sponsor Claims**" shall mean, with respect to a Project SPV: (a) any kind of claim made by such Project SPV for events pertaining to the period prior to the Reference Date and the impact of which also solely pertains to the period prior to the Reference Date; and/or (b) all construction related claims (including any administrative, legal or other similar proceedings in relation to utilities shifting, change of scope, construction, delays in construction, idling of resources, interest during construction or other matters) made or intended to be made by such Project SPV against any Governmental Authority for events pertaining to the period prior or after to the Reference Date;

"Subordinated Debt" shall mean, with respect to a Project SPV, the outstanding interest-free subordinated debt provided by the Lenders to such Project SPV; and

"**Unsecured Loans**" shall mean, with respect to a Project SPV, the outstanding interest-free unsecured loans provided by the Lenders to such Project SPV.

Treatment of Sponsor Claims and Future Claims

In consideration for the transfer and release of a portion of Subordinated Debt and Unsecured Loans by the Lenders, and all rights and obligations in relation to such Debt, the Trust and the Investment Manager have agreed that the Amounts (defined below) will be paid by the Trust to the Lenders to the extent that any such amounts are received by the Project SPV in a settlement or adjudication (including arbitration) of Sponsor Claims.

The payment of Amounts to the Lenders shall constitute full, final and complete discharge of the obligation of the Trust with respect to payment of consideration for such Subordinated Debt and Unsecured Loans.

Any payments received by the Project SPV in a settlement or adjudication (including arbitration) of Sponsor Claims will be transferred by the Project SPV to the Trust immediately upon receipt (the "**Amounts**"). The Trust may also pay up to specified amount, in case of IRB WTL, to the Lenders towards the Amounts, including out of its cash flows, and any such amounts paid will be reduced from the aggregate Amounts. If a bank guarantee is required to be submitted to the relevant Governmental Authority in lieu of such Amounts (or any part thereof), the Lenders will provide the bank guarantee. Upon the receipt of the Amounts by the Trust, the Amounts will forthwith be paid by the Trust to the Lenders. All taxes in relation to such payments will be solely borne by the Lenders.

If the final settlement or adjudication in relation to the relevant Sponsor Claim is unsuccessful, the Trust will promptly inform the Lenders, as applicable, and the Sponsor and the Financial Investors will mutually agree on treatment of any outstanding amounts in relation to such Sponsor Claims based on tax considerations in a manner mutually agreed between the Financial Investors and the Sponsor. Any tax impact on the Trust or the Project SPVs on account of such outstanding debt and/ or write-off such debt (whether pertaining to the period prior to the Closing Date or after) will only be to the account of the Lenders, and no Manager Group Member (as defined in the Debt Novation Agreements) and/or any other Unitholder should suffer/ incur a loss in connection with such debt.

The Project SPV, the Investment Manager and the Trust will render all reasonable assistance necessary to enable the payment of the Amounts to the Lenders, as applicable, including to obtain any required approval and authorization required from the NHAI or other Governmental Authority or any of the senior lenders of the Project SPV.

Any amounts received by the Project SPV or the Trust pursuant to the settlement or adjudication of Future Claims shall be distributed among the Unitholders in the proportion of their respective Unitholding percentages in the Trust in such manner as may be permitted under applicable law. In the event of any restructuring as set out above, any amounts received pursuant to Future Claims for periods prior to such restructuring shall be distributed among the Unitholders in the proportion of their respective Unitholding percentages.

Repayment of the Debt by the Project SPVs

The Project SPVs (except PDTPL) will repay the Subordinated Debt and Unsecured Loans to the Trust as may be mutually agreed between the Parties based on availability of cash flows. Interest at rate of 14% p.a. was chargeable on the above Debt with effect from the earlier of (i) the project completion date under the relevant concession agreement and (ii) the date of listing of the Units on one or more Stock Exchanges, and the parties have mutually agreed that interest was chargeable from the date of listing of the Units on the NSE, except in the case of UTL and CGTL, where payment of interest is subject to receipt of approval from the relevant lenders. The terms of the repayment of the unsecured loans extended to PDTPL are set out in the shareholder loan agreement dated April 5, 2022. See "*— Shareholder Loan Agreements*" below.

The above Debt shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the relevant escrow agreement, payments towards such Debt (including interest) will be made out of balance available in the escrow account for utilization in accordance with the instructions of the Project SPV, on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.

Governing Law, Dispute Resolution and Termination

The Debt Novation Agreements will be governed by the laws of India. Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the SIAC Rules for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall

be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings will be Delhi, India.

The Debt Novation Agreements will stand terminated and fall away automatically without any further act by the parties (i) upon the repayment or settlement of all amounts (including interests and other charges) in relation to the Debt and (ii) there are no Amounts remaining due to the Lenders.

Shareholder Loan Agreements

The Trust has provided Shareholder Loans in the form of unsecured loans to the Project SPVs under the shareholder loan agreements dated February 19, 2020 with each Project SPV (except PDTPL) and a shareholder loan agreement dated April 5, 2022 with PDTPL (collectively, the "**Project SPV Shareholder Loan Agreements**"). Additional debt is proposed to be provided by the Trust to the Project SPVs through disbursements under the Project SPV Shareholder Loan Agreements from time to time towards, *inter-alia*, funding of total project cost and working capital requirements of the Project SPVs.

A summary of the key terms of the Project SPV Shareholder Loan Agreements is set forth below.

Purpose	***AETL, IRB WTL, KTL, SYTL and YATL*** The Project SPV shall utilize the loan amounts solely for (i) the purpose of partial refinancing of certain secured loans provided to the Project SPV by the senior lenders; (ii) funding of total project cost; and (iii) working capital requirements or general corporate purposes of the Project SPV. ***CGTL, IRB HMTL, KGTL and UTL*** The Project SPV shall utilize the loan amounts solely for (i) funding of total project cost; and (ii) working capital requirements or general corporate purposes of the Project SPV. ***PDTPL*** The Project SPV shall utilize the loan amounts solely for funding of the total project cost of the Project SPV.
Term	The Project SPV shall repay the loan at the end of the concession period under the relevant concession agreement as mutually agreed between the parties to the Project SPV Shareholder Loan Agreement.
Interest	• The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 14% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. Interest will accrue from the date of disbursement of the loan. • Interest will be chargeable from the earlier of the (i) project completion date under the relevant concession agreement and (ii) the date of listing of the Units on one or more Stock Exchanges. The parties have agreed that interest was chargeable from the date of listing of the Units on the NSE (except for UTL and CGTL, where charging of interest remains subject to the receipt of consent from the relevant lenders). • Interest will be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid. ***PDTPL*** • The Project SPV shall pay accrued interest (subject to withholding of applicable taxes) at the rate of 14.5% p.a., or or such other rate as may be decided mutually by the parties to the Project SPV Shareholder Loan Agreement from time to time. Interest will accrue from the date of disbursement of the loan. • Interest will be chargeable from the project completion date under the concession agreement.

	• Interest will be payable in arrears on a quarterly basis, on or before the expiry of the calendar month immediately succeeding the completion of each quarter, provided that the Project SPV may, at its discretion, elect to pay interest on a monthly basis, and such interest shall be payable on the first day of the subsequent month for which the interest is being paid
Repayment	• The Trust may call on the Project SPV to prepay the loan, in full or part, or permit the Project SPV to make payments of the outstanding loan, in full or part, after the date such payment is due, at any time during the term of the Project SPV Shareholder Loan Agreement until the final settlement date (as defined in the Project SPV Shareholder Loan Agreement). • The Project SPV may prepay the whole or part of the loan together with interest on that amount accrued up to the date of prepayment, by giving a prior written notice of not less than 30 days to the Trust, specifying the amount to be prepaid and the date of proposed prepayment. • The loan (in one or more tranches) provided under the Project Shareholder Loan Agreement shall, at all times be subordinate to the debt provided by the senior lenders. Subject to the terms of the financing agreements and the escrow agreements, payments towards the loan amounts (including interest) shall be made out of balance available in the escrow account for utilization in accordance with the instructions of the Project SPV on the relevant interest payment date or repayment date, after meeting all payments due to the senior lenders as of such date.
Security	Unsecured
Events of Default	The occurrence of any of the events or circumstances set out below shall constitute an "**Event of Default**", if not remedied within 180 days (or such extended period as may be provided by the Trust at its sole discretion) from the date of receiving notice of such default from the Trust. The Project SPV shall promptly give written notice to the Trust of any Event of Default and of any other event which, with the giving of notice or lapse of time or otherwise could constitute an Event of Default, and inform the Trust of any action taken or proposed to be taken by the Project SPV in connection therewith. • **Non-Payment:** The Project SPV fails to pay any amount due under the Project SPV Shareholder Loan Agreement or any other finance documents within a period of 180 days from the relevant due date. If debt due to senior lenders is outstanding, the Trust may declare a non-payment Event of Default only if one or more of the senior lenders declares an Event of Default in relation to amounts due to such senior lenders. • **Breach of Covenants and Undertakings:** The Project SPV breaches any provision of the Project SPV Shareholder Loan Agreement or any other finance documents. • **Misrepresentation:** Any representation or statement made by the Project SPV in any finance document or any other document delivered by or on behalf of the Project SPV under or in connection with any transaction document is or proves to have been incorrect or misleading in any material respect when made or results in a material adverse effect on the Project SPV or the relevant project. • **Cessation of Business**: The Project SPV ceasing or threatening or likely to cease, to carry on all or substantially all of its business or operations. • **Insolvency:** The Project SPV is unable to, or presumed or deemed to be unable to, or admits its inability to, pay its debts as they fall due, suspends making payments on any of its debts or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its indebtedness. • **Insolvency proceedings:** Any corporate action, legal proceedings or other procedure is taken in relation to: (a) the suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration, provisional supervision or reorganization (by way of voluntary arrangement, scheme of arrangement or otherwise) of the Project SPV other than a solvent liquidation or reorganization of the Project SPV; (b) a composition or arrangement with any creditor of the Project SPV, or an assignment for the benefit of creditors generally of the Project SPV, or a class of such creditors; (c) the appointment of a liquidator, receiver, and manager, administrator, administrative receiver, compulsory manager, provisional supervisor or other similar officer in respect of the Project SPV or any of its assets; or (d) or any analogous procedure is taken in any jurisdiction.

	• **Unlawfulness and Invalidity:** (a) It is or becomes unlawful for the Project SPV to perform its obligations under the Project SPV Shareholder Loan Agreement or any other finance documents; or (b) any finance document is not or ceases to be legal, valid, binding or enforceable. • **Nationalization or Expropriation**: Any governmental authority has taken or has threatened to take any action to expropriate, condemn, nationalize or seize the relevant project or whole or part of the assets of the Project SPV, or the whole or substantially whole or part of the relevant project, resulting in the Project SPV being deprived or threatened to deprive to carry on its business or which will have a material adverse effect on the Project SPV or the relevant project on the operation of the business of the Project SPV. • **Cross Default**: The Project SPV defaults in the payment of any principal, interest, premium or other amount due (whether by scheduled maturity, mandatory prepayment, acceleration or demand) under any loan or credit agreement and/or defaults in the payments due under any existing facility agreement or the occurrence of an event of default under the existing facility agreements of the Project SPV. On and at any time after the occurrence of an Event of Default which has not been waived or cured and which is continuing, the Trust may, upon the delivery of seven business days' notice to the Project SPV of the occurrence of an Event of Default: (i) require all or part of the outstanding amounts to be payable immediately; and (ii) exercise such other rights as may be available to the Trust under the Project SPV Shareholder Loan Agreement, the finance documents or under applicable law. No further disbursement shall be made after the occurrence of an Event of Default.
Dispute Resolution	Any dispute shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("**SIAC Rules**") for the time being in force. The arbitration panel will consist of three arbitrators, each of which shall be appointed by SIAC in accordance with the SIAC Rules. The seat and venue of the arbitration proceedings shall be Delhi, India.
Governing Law	Laws of India

Unitholding pattern of the Trust

The table below provides details of the pre-Issue Unitholding pattern of the Trust as of June 30, 2023:

Category	Category of Unitholder	No. of Units	As a % of the total outstanding Units	No. of Units mandatorily held		Number of Units pledged or otherwise encumbered	
				No. of Units	As a % of total Units held	No. of Units	As a % of total Units held
(A)	**Sponsor(s)/Investment Manager/Project Manager(s) and their associates/related parties**						
(1)	**Indian**						
(a)	Individuals/HUF	0	0.00	0	0.00	0	0.00
(b)	Central/State Govt.	0	0.00	0	0.00	0	0.00
(c)	Financial Institutions/Banks	0	0.00	0	0.00	0	0.00
(d)	Any other (specify)	0	0.00	0	0.00	0	0.00
	BODIES CORPORATE	448,439,840	51.00	131,893,990	29.41	180,220,846	
	Sub-total (A)(1)	**448,439,840**	**51.00**	**131,893,990**	**29.41**	**180,220,846**	**40.19**
(2)	**Foreign**						
(a)	Individuals (Non Resident Indians/Foreign Individuals)	0	0.00	0	0.00	0	0.00
(b)	Foreign government	0	0.00	0	0.00	0	0.00
(c)	Institutions	0	0.00	0	0.00	0	0.00
(d)	Foreign Portfolio Investors	0	0.00	0	0.00	0	0.00
(e)	Any other (specify)	0	0.00	0	0.00	0	0.00
	Sub-total (A)(2)	0	0.00	0	0.00	0	0.00
	Total unitholding of Sponsor and Sponsor group (A) = (A)(1) + (A)(2)	**448,439,840**	**51.00**	**131,893,990**	**29.41**	**180,220,846**	**40.19**
(B)	**Public holding**						
(1)	**Institutions**	0	0.00				
(a)	Mutual Funds	0	0.00				
(b)	Financial Institutions/Banks	0	0.00				
(c)	Central/State Govt.	0	0.00				
(d)	Venture Capital Funds	0	0.00				
(e)	Insurance companies	0	0.00				
(f)	Provident/pension funds	0	0.00				
(g)	Foreign portfolio investors	219,823,181	25.00				
(h)	Foreign venture capital investors	0	0.00				

Category	Category of Unitholder	No. of Units	As a % of the total outstanding Units	No. of Units mandatorily held		Number of Units pledged or otherwise encumbered	
				No. of Units	As a % of total Units held	No. of Units	As a % of total Units held
(i)	Foreign bodies	211,030,244	24.00				
	Sub-total (B)(1)	**430,853,425**	**49.00**				
(2)	**Non-institutions**						
(a)	Central government/state government(s)/President of India	0	0.00				
(b)	Individuals	0	0.00				
(c)	NBFCs registered with RBI	0	0.00				
(d)	Any other (specify)	0	0.00				
	TRUSTS	0	0.00				
	NON RESIDENT INDIANS	0	0.00				
	CLEARING MEMBERS	0	0.00				
	BODIES CORPORATE	0	0.00				
	Sub-total (B)(2)	0	0.00				
	Total public unitholding (B) = (B)(1) + (B)(2)	**430,853,425**	**49.00**				
	Total Units outstanding (C) = (A) + (B)	**879,293,265**	**100.00**				

Unitholders holding more than 5% of the Units as of June 30, 2023

S. No.	Name of the Unitholder	Pre-Issue		Post-Issue*#	
		No. of Units	% of Unitholding	No. of Units	% of Unitholding
1.	IRB Infrastructure Developers Limited	448,439,840	51.00	521,063,887@	51.00@
2.	Anahera Investment Pte. Ltd.	219,823,181	25.00	255,423,160	25.00
3.	Bricklayers Investment Pte. Ltd.	52,757,561	6.00	61,301,556	6.00
4.	Chiswick Investment Pte. Ltd.	52,757,561	6.00	61,301,556	6.00
5.	Stretford End Investment Pte. Ltd.	52,757,561	6.00	61,301,556	6.00
6.	Dagenham Investment Pte. Ltd.	52,757,561	6.00	61,301,556	6.00
TOTAL		**879,293,265**	**100.00**	**1,021,693,271**	**100.00**

**Subject to finalization of the Basis of Allotment*

#Assuming full subscription by all Eligible Unitholders to the extent of their respective Rights Entitlements in the Issue.

@The Sponsor has undertaken to subscribe to its entire Rights Entitlements and indicated its intention to subscribe to up to 175,953 additional Units, such that its maximum post-Issue Unitholding will not exceed 521,239,840 Units (constituting approximately 51.02% of the total number of Units on a post-Issue basis). Also see "Other Regulatory Disclosures – Participation by the Sponsor" on page 639.

Fees and Expenses

1. *Fees and expenses of the Investment Manager*

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("**Management Fees**"). The Management Fees were initially proposed to be an annual amount of ₹36.00 million per annum. The Management Fees may be revised for every Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution.

Pursuant to a resolution dated July 4, 2023 of the Board of Directors of the Investment Manager and a resolution dated July 27, 2023 of the Unitholders, the Management Fees have been revised to be equivalent to 110% of the cost incurred by the Investment Manager in connection with providing investment management services to the Trust including routine administrative and operational expenses (exclusive of any out of pocket expenses, reimbursements and taxes).

2. *Fees and expenses of the Trustee ("Trusteeship Fee")*

The fee payable to the Trustee for acting as the trustee to the Trust pursuant to an engagement letter dated June 27, 2019 is set out below. Any amendment to trusteeship fees will require the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution.

Particulars	Description
Service charges	Service charges are payable on a quarterly basis, i.e., ₹0.28 million plus applicable taxes payable quarterly in advance on April 1 for April to June, July 1 for July to September, October 1 for October to December and January 1 for January to March each year until full and final repayment of funds to Unitholders, winding up of the Trust and termination of the Indenture of Trust.
Delayed payment charges	In case the payment of service charges is not received within a period of 30 days from the date of the bill, the Trustee reserves the right to charge delayed payment charges at the rate of 12% p.a. on the outstanding amount.
Reset clause	The Trustee has the right to reset the service charges after expiry of two years from the date of execution of the Indenture of Trust as mutually agreed with the Investment Manager.
Out-of-pocket expenses	To be claimed by the Trustee on an actual basis within intimation to the Sponsor/Investment Manager
Invocation and enforcement	Any other work relating to invocation and enforcement of the Trust Assets in case of default would attract separate expenses and fees

In case of late payment of the above fees, penal interest on the outstanding amount would be payable in accordance with the terms of the Indenture of Trust (if applicable).

The above fee structure is subject to certain conditions specified in the engagement letter.

3. *Fees and expenses of the Project Manager*

Pursuant to the Project Implementation Agreements, the Project SPVs which operate road assets that have not been completed will make payments to the Project Manager for the remaining engineering, procurement and construction works in relation to the relevant project ("**EPC Payments**") on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. The agreed EPC Payments are set forth in the relevant Project Implementation Agreements, copies of which will be available for inspection to Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 651.

Pursuant to the Project Implementation Agreements, the Project SPVs will also make payments to the Project Manager for the operation and maintenance works in relation to the relevant project ("**O&M Payments**", and together with the EPC Payments, the "**Project Management Payments**") on a monthly basis, or as otherwise agreed among the parties to the Project Implementation Agreements based on invoices raised by the Project Manager. The agreed O&M Payments applicable for the initial term of the Project Implementation Agreements (i.e., 10 years from the date of the relevant agreement) are set forth in the relevant Project Implementation

Agreements, copies of which will be available for inspection by the Eligible Unitholders from the date of this Letter of Offer until the Issue Closing Date. See "*Material Contracts and Material Documents for Inspection*" on page 591.

No additional payments, including those on account of out of pocket expenses, delay in construction timeline, payment of taxes, any statutory liabilities, any actual losses or damages incurred on any account whatsoever, will be made to the Project Manager over and above the Project Management Payments, except for any payments related to change of scope (as defined in the relevant concession agreement) or utility shifting as required by the NHAI, which will be paid by the relevant Project SPV to the Project Manager as and when such payments are received from the NHAI. If a Project SPV has made any payments to NHAI related to change of scope, such amount will be reduced from the EPC Payments. If any payment due to a Project SPV by the NHAI in respect of the EPC works or the O&M works is delayed in terms of the relevant concession agreement, the payment obligations of the Project SPV to the Project Manager will be correspondingly delayed until the Project SPV receives payment from the NHAI.

Pursuant to addenda dated May 6, 2021 (the "**Addenda**") to the Project Implementation Agreements for CGTL, IRB HMTL, KGTL, IRB WTL and UTL, such Project SPVs have agreed to pay the Project Manager additional costs in relation to certain delays by NHAI and the lockdowns implemented due COVID-19 in the manner and subject to the conditions set out in the Addenda. Under the Project Implementation Agreement for PDTPL, PDTPL is entitled to retain a certain percentage of the total EPC Payments for the project which will be released to the Project Manager upon the completion of the project or as may be mutually agreed among the parties. Certain arrangements in relation to a mobilization advance have also been agreed under such Project Implementation Agreement.

Pursuant to the IRB GEPL Project Implementation Agreement, IRB GEPL will make payments to the Project Manager for the operation and maintenance works (the "**IRB GEPL Project Management Payments**") in relation to the relevant project on a monthly basis, or as otherwise agreed among the parties to the IRB GEPL Project Implementation Agreement based on invoices raised by the Project Manager. The agreed IRB GEPL Project Management Payments applicable for the initial term of the IRB GEPL Project Implementation Agreements (i.e., 10 years from the date of the relevant agreement) are set forth in the IRB GEPL Project Implementation Agreement. No additional payments, including those on account of out of pocket expenses, delay in construction timeline, payment of taxes, any statutory liabilities, any actual losses or damages incurred on any account whatsoever, will be made to the Project Manager over and above the IRB GEPL Project Management Payments, except for (i) any payments related to change of scope (as defined in the relevant concession agreement) or utility shifting as required by the concessioning authority, which will be paid by IRB GEPL to the Project Manager as and when such payments are received from the concessioning authority; and (ii) any payment received by IRB GEPL from the concessioning authority as compensation for additional expenses actually incurred by the Project Manager pursuant to a change in law for the execution of the O&M works. If IRB GEPL makes any payments to the concessioning authority related to change of scope, such amount will be reduced from the IRB GEPL Project Management Payments. If any payment due to IRB GEPL by the concessioning authority in respect of the works for the project is delayed in terms of the relevant concession agreement, the payment obligations of IRB GEPL to the Project Manager will be correspondingly delayed until IRB GEPL receives payment from the concessioning authority.

4. *Fees and expenses of the Auditor and Valuer*

The fees and expenses paid or payable by the Investment Manager to the Valuer and the Auditor is approximately ₹0.23 million and approximately ₹0.63 million, respectively, along with goods and services tax.

Set-up costs

In connection with the establishment and registration of the Trust, the Sponsor has incurred ₹1.1 million in expenses.

INDUSTRY OVERVIEW

The information contained in this section is derived from various government and other industry sources. The Investment Manager, the Trustee, the Sponsor, the Lead Manager or any other person connected with the Issue have not independently verified this information. Industry sources and publications generally state that the information contained therein has been obtained from sources generally believed to be reliable, but that their accuracy, completeness and underlying assumptions are not guaranteed and their reliability cannot be assured. Industry publications are also prepared on information as of specific dates and may no longer be current or reflect current trends. Accordingly, investment decisions should not be based on such information. All references to years refer to calendar years except as otherwise stated.

Overview of the Global and Indian Economies

India is the fastest-growing trillion-dollar economy in the world and the fifth-largest overall, with a GDP of $3.47 trillion in 2022. India became the fifth-largest economy, overtaking the United Kingdom and France. The country ranked third when GDP was compared in terms of purchasing power parity at $11.67 trillion. India's nominal GDP per capita is $2,466. (*Source: IMF World Economic Outlook Database: October 2020; World Bank GDP ranking 2020*)

According to data from the Department of Economic Affairs, as of March 03, 2023, foreign exchange reserves in India reached US$ 562.4 billion mark. According to the Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflow in India stood at US$ 46.03 billion between April 2022 and March 2023.

Growth is projected at 7.0 percent in FY2022/2023 vs 8.7 percent in FY2021/22. Headline inflation is projected at 6.8 percent in FY2022/23, amid elevated price pressures. Emanating from the revenue loss to the Centre on account of the excise duty cut, lower-than-budgeted transfer of the RBI's surplus, additional spending on food, fertilizer and LPG subsidies are estimated to have led to a widening of the fiscal deficit to 6.7 of GDP in FY2021/22.

Dwelling on the outlook for 2023-24, India's recovery from the pandemic was relatively quick, and growth in the upcoming year will be supported by solid domestic demand and a pickup in capital investment. Aided by healthy financials, incipient signs of a new private sector capital formation cycle are visible, compensating for the private sector's caution in capital expenditure, the government raised capital expenditure substantially.

Budgeted capital expenditure rose 2.7 times in the last seven years, from FY16 to FY23, reinvigorating the capital expenditure cycle. Structural reforms such as the introduction of the Goods and Services Tax and the Insolvency and Bankruptcy Code enhanced the efficiency and transparency of the economy and ensured financial discipline and better compliance.

Global growth is forecasted to slow from 3.2 percent in 2022 to 2.7 per cent in 2023 as per IMF's World Economic Outlook, October 2022. A slower growth in economic output coupled with increased uncertainty will dampen trade growth. This is seen in the lower forecast for growth in global trade by the World Trade Organisation, from 3.5 per cent in 2022 to 1.0 per cent in 2023.

Entrenched inflation may prolong the tightening cycle, and therefore, borrowing costs may stay higher for longer. In such a scenario, global economy may be characterized by low growth in FY24. However, the scenario of subdued global growth presents two silver linings – oil prices will stay low, and India's CAD will be better than currently projected. The overall external situation will remain manageable.

India's Infrastructure Opportunity

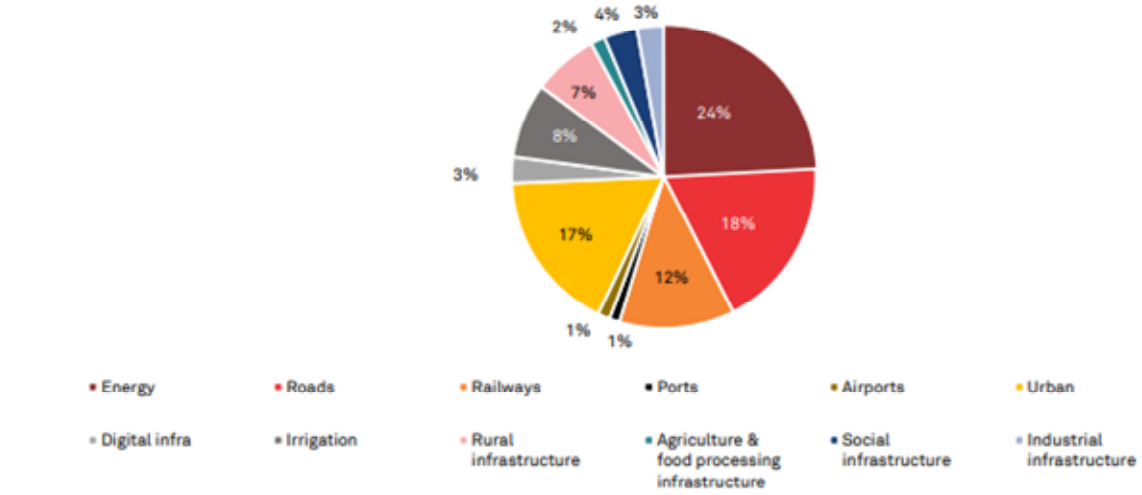
Infrastructure sector is a key driver for the Indian economy. Growing urbanization, demand for energy and financing needs for sustainable living pose a challenge for the infrastructural setup in the country. Infrastructure, and the lack of it, is envisaged as the primary growth constraint, while good infrastructure is widely recognized as an enabler of growth. In the coming era of supply chain disruptions, new technologies and reversal of financial deleveraging, infrastructure growth must keep pace with the need created for it. The opportunities in the infrastructure sector have seen an incremental curve over previous years and are growing to establish the sector as a key driver in India's development story at a high rate. The Government of India has given a massive push to the capital expenditure for key infrastructure sectors, especially highways, has got a big boost in Budget 2023-2024. The total allocation for the highways sector has increased to Rs.2.7 lakh crore from Rs.1.99lakh crore in FY 2022-2023. *(Source: Government of India, Ministry of Finance, Union Budget 2023-2024).*

National Infrastructure Pipeline

In December 2019, the Government launched the National Infrastructure Pipeline (the "NIP"), an investment plan for enhancing infrastructure in identified sectors, which is a first-of-its-kind exercise to provide world-class infrastructure across the country and improve the quality of life for all citizens. NIP is expected to enable a forward outlook on infrastructure projects to create jobs, improve ease of living and provide equitable access to infrastructure for all, thereby making growth more inclusive. NIP includes economic and social infrastructure projects.

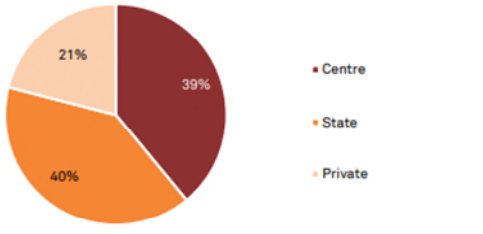
During the Financial Years 2020 to 2025, sectors such as energy (24%), roads (18%), urban (17%) and railways (12%) are expected to amount to approximately 71% of the projected infrastructure investments in India, with a total capital expenditure projected at ₹111 lakh crore. (*Source: National Infrastructure Pipeline – Report of the Task Force, Department of Economic Affairs, Ministry of Finance, Government of India – Volume I (the "Task Force Report – Volume I")*)

Figure 11 Sector-wise break-up of capital expenditure of Rs 111 lakh crore during fiscals 2020-2025



Source: Ministries/ departments/state governments/private sector

The Government of India (39%) and state governments (40%) are expected to have an almost equal share in implementing the NIP in India, followed by the private sector (21%). (*Source: The Task Force Report – Volume I*)



Source: PIRF submitted by ministries/ departments/state governments/private sector

Out of the total expected capital expenditure of ₹111 lakh crore, projects worth ₹44 lakh crore (40% of NIP) are under implementation, projects worth ₹33 lakh crore (30%) are at conceptual stage and projects worth ₹22 lakh crore (20%) are under development. Information regarding project stage are unavailable for projects worth ₹11 lakh crore (10%). (*Source: The Task Force Report – Volume I*)

Roads and Highways

According to the MoRTH, Financial Year 2022-23 was the year of consolidation of the gains that accrued from major policy decisions taken in the previous eight years, a time for monitoring of ongoing projects, tackling road blocks and adding to the already impressive pace of work achieved during the past years. During the year, the MoRTH and its associated organizations have expanded the national highways network in the country, taking various steps to make these highways safe for the commuters and making best efforts to minimize adverse impact on the environment. As a result, over the last eight years, length of National Highways has gone up by 48.12% from 97,830 km (FY 2014-15) to 144,955 km (as on March 31, 2023) out of the set target of 200,000 kms for 2024-2025. *(Source: MoRTH press release titled "Year End Review 2022: Ministry of Road Transport and Highways" dated January 04, 2023 and MoRTH Annual Report 2022-23).*

Details of National Highway length constructed per day during last five Financial Years are as follows:

Year	Length in km	Pace (km per day)
2017-18	9,829	26.93
2018-19	10,855	29.74
2019-20	10,237	27.97
2020-21	13,327	36.51
2021-22	10,457	28.64

(Source: MoRTH press release titled "Year End Review 2022: Ministry of Road Transport and Highways" dated January 04, 2023)

The MoRTH achieved the record-breaking milestone of constructing ~37 km highways per day in the Financial Year 2020-2021 *(Source: MoRTH press release titled "Year End Review 2021: Ministry of Road Transport and Highways" dated December 31, 2021)*. The pace of national highway construction had slowed to 28.64 km a day in 2021-22, due to pandemic-related disruptions and a longer-than-usual monsoon in some parts of the country. However, in order to provide a boost to infrastructure development and enable it to overcome the impact of COVID-19 pandemic, the MoRTH has increased the annual project award by 42% in the past three years from 8,948 km in Financial Year 2019-2020 to 12,731 km in Financial Year 2021-2022.

Schemes

Bharatmala Pariyojana: This is the umbrella program for the highways sector that aims to optimize the efficiency of road traffic movement across the country by bridging critical infrastructure gaps. The Phase I of the Bharatmala Pariyojana approved in October 2017, focuses on development of 34,800 km of National Highways. The Pariyojana emphasized on a "corridor based National Highway development" to ensure infrastructure symmetry and consistent road user experience. The key components of the Pariyojana are Economic Corridors development, Inter-corridor and feeder routes development, National Corridors Efficiency Improvement, Border and International Connectivity Roads, Coastal and Port Connectivity Roads and Expressways.

The Bharatmala (approved for estimated cost of Rs. 6,92,324 crore including other ongoing schemes) is to be funded from CRIF Cess (Rs. 2,37,024 crore) collected form Petrol & Diesel (as per Central Road & Infrastructure Fund Act, 2000, erstwhile CRF Act, 2000), amount collected from toll remittances (Rs. 46,048 crore) apart from additional budgetary support (Rs. 59,973 crore), expected monetisation of NHs through TOT (Toll-Operate-Transfer) (Rs. 34,000 crore), Internal & Extra Budgetary Resources (IEBR) (Rs. 2,09,279 crore) and Private Sector Investment (Rs. 1,06,000 crore) as per Financing Plan upto 2021-22. However, due to increase in the project cost as well as cost of land acquisition, the revised financial proposal for the Bharatmala Pariyojana is under process for approval. The status of various components of Bharatmala Pariyojana Phase-I and other schemes up to December 31, 2022 are as under:

S No.	Components	Total Length in km	Total Length Completed until December 31, 2022 in km
1.	Economic corridors development	9,000	3,155
2.	Inter-corridor and feeder roads	6,000	1,381

S No.	Components	Total Length in km	Total Length Completed until December 31, 2022 in km
3.	National Corridors Efficiency improvements	5,000	1,412
4.	Border and International connectivity roads	2,000	1,213
5.	Coastal and port connectivity roads	2,000	93
6.	Expressways	800	779
7.	Subtotal	24,800	8,033
8.	Balance road works under NHDP	10,000	3,756
9.	**Grand Total**	34,800	11,789

(Source: MoRTH Annual Report for Financial Year 2022-23)

According to the MoRTH Annual Report 2022 23, Bharatmala Pariyojana envisages 60% projects on Hybrid Annuity Mode, 10% projects on BOT (Toll) Mode and 30% projects on EPC mode respectively. Total aggregate length of 25,713 km with a total capital cost of Rs. 7,81,845 crore have been approved and awarded till date under Bharatmala Pariyojana (including 6,649 km length of residual NHDP with a total capital cost of Rs. 1,51,991 crore). Out of the total approved 25,713 km, an aggregate length of 14,317 km have been approved on EPC mode, an aggregate length of 10,989 km on HAM mode and an aggregate length of 408 km on BOT (Toll) mode (EPC: HAM: BOT:: 56%:42%:2%).

Out of the 24,800 km approved under Bharatmala Pariyojana Phase-I, total length of 18,348 km have been awarded upto 31.12.2022. Similarly, out of the residual NHDP component to be completed under Bharatmala Phase-I, a total length of 6,412 km have been awarded upto 31.12.2022. *(Source: MoRTH Annual Report 2022 23)*.

Pradhan Mantri (PM) Gati Shakti National Master Plan (NMP): The seven engines that drive PM Gati Shakti are Roads, Railways, Airports, Ports, Mass Transport, Waterways and Logistics Infrastructure. The scope of PM Gati Shakti National Master Plan will encompass the seven engines for economic transformation, seamless multimodal connectivity and logistics efficiency. The projects pertaining to these 7 engines in the National Infrastructure Pipeline will be aligned with PM Gati Shakti framework. PM Gati Shakti National Master Plan is a critical tool for integrating economic & infrastructural planning and development *(Source: National Master Plan (pmgatishakti.gov.in))*. About 100 critical infrastructure gap projects have been prioritized for development in FY 2023-24 and Rs. 75,000 Cr. have been allocated for the same. Similarly, with multimodal infrastructure development, India's logistics cost will reduce further, improve ease of living and ease of doing business in the country. The main aim of this program is a faster approval process which can be done through the Gati Shakti portal and digitized the approval process completely.

National Electronic Toll Collection (FASTag) programme: the flagship initiative of MoRTH and NHAI has been implemented on pan India basis in order to remove bottlenecks and ensure seamless movement of traffic and collection of user fee as per the notified rates, using passive Radio Frequency Identification (RFID) technology which is made compulsory with effect from February 15, 2021. The implementation of the FASTag system for toll collection in India has been a resounding success, with a consistent growth trajectory. The daily revenue collected from tolls through the use of FASTag has reached an all-time high, of over INR 193 crore as on 29 April 2023 *(Source: MoRTH press release dated November 21, 2019 and NHAI press release dated May 2, 2023)*.

Outlook

India's infrastructure sector is rapidly evolving and the key trends demonstrate positivity and optimism. The market for roads and highways in India is projected to exhibit a CAGR of 36.16% during 2016-2025, on account of growing Government initiatives to improve transportation infrastructure in the country. For the period of 2016-17 to 2021-22, the CAGR stands at 20%.

Development and maintenance of road infrastructure is a key Government priority, the sector has received strong budgetary support over the years. During the past years, the standardized processes for Public Private Partnership & public funded projects and a clear policy framework relating to bidding and tolling have also been developed.

The major initiatives undertaken by the Government such as National Infrastructure Pipeline (NIP) and the PM Gati Shakti National Master Plan will raise productivity, and accelerate economic growth and sustainable development.

The highways sector in India has been at the forefront of performance and innovation. The government is committed towards expanding the National Highway network to 2 lakh kilometres by 2025 emphasizing the construction of the World Class Road infrastructure in time bound & target oriented way. India has a well-developed framework for Public-Private-Partnerships (PPP) in the highway sector. The Asian Development Bank ranked India at the first spot in PPP operational maturity and also designated India as a developed market for PPPs. The Hybrid Annuity Model (HAM) has balanced risk appropriated between private and public partners and boosted PPP activity in the sector. In the recent past, the Build Operate Transfer (BOT) projects have witnessed renewed interest from private players, therefore it is envisaged that the NHAI may come out with more tenders on BOT mode in the coming year. Asset recycling, through the Toll Operate Transfer (TOT) model has also been taken up by the NHAI and other State Government agencies.

The MoRTH has set a target of developing 40 km of National Highways and Expressways per day across the country for FY 2023-2024. In order to improve the comfort and convenience of the highway users, the Ministry has planned development of state-of-the-art Way Side Amenities (WSA) at approximately every 40 kms along the National Highways. NHAI proposes to monetize 46 operational highway stretches of total length of 2,612 kms in the FY 2023-2024 through TOT/ InvIT mode.

The second phase of the Government of India's Bharatmala programme has been announced for launch. 5,000 km worth of projects are expected to be constructed under the aegis of this programme and Detailed Project Reports (DPRs) are being prepared prior to the approval of the projects so as to speed up the implementation process. In order to facilitate seamless travel between important economic centres, Bharatmala Phase-2 seeks to improve connectivity to a number of infrastructure projects, including multi-modal logistics parks (MMLPs) and under-construction expressways. The new phase would also take up the construction of highways that decongest existing roads, ring roads around major industrial centres and bypasses. The simultaneous implementation of phase-II projects will help in operationalising the remaining projects under phase-I, which is now scheduled to be completed by 2027.

BUSINESS

Some of the information in this section, including information with respect to our plans and strategies, contains forward-looking statements that involve risks and uncertainties. Please see "Forward-Looking Statements" and "Risk Factors" on pages 13 and 15, respectively, for a discussion of certain factors that may affect our business, results of operations or financial condition. Our actual results may differ materially from those expressed in or implied by these forward-looking statements.

Prospective investors should read this section together with the sections "Industry Overview", "Financial Statements" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Summary of the Concession Agreements" on pages 106, 280, 591 and 145, respectively, as well as the other information contained in this Letter of Offer.

This Letter of Offer includes (i) limited review consolidated financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) limited review standalone financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; and (iv) audited standalone financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021.

IRB GEPL, the Target SPV proposed to be acquired by the Trust, was incorporated on May 13, 2023. Accordingly, this Letter of Offer includes audited financial information of IRB GEPL as of and for the period from May 13, 2023 to June 30, 2023.

In this section, unless the context otherwise requires, a reference to "we", "us" and "our" refers collectively to the Trust and the Project SPVs. References herein to the "Current Portfolio" are to the pre-IRB GEPL Acquisition portfolio of the Trust and to the "Expanded Portfolio" are to the post-IRB GEPL Acquisition portfolio of the Trust.

Overview

The Trust is a registered infrastructure investment trust under the InvIT Regulations. The Current Portfolio of the Trust comprises 10 toll-road assets in the states of West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra and Karnataka in India. These toll roads are operated and maintained pursuant to concessions awarded by the NHAI.

The Trust has acquired the Current Portfolio comprised of the Project SPVs from the Sponsor and in the case of PDTPL, holds the Project SPV together with the Sponsor. Each of the Project SPVs is an eligible infrastructure project as defined under the InvIT Regulations. As of June 30, 2023, the Project SPVs owned the following toll road assets comprising 6,275 Lane Kilometers of highway:

- The Agra - Etawah NH-2 Project: A 124.52 km section of NH-2 between Agra and Etawah Bypass in Uttar Pradesh which is held by AETL;
- The Gulabpura - Chittorgarh NH-79 Project: A 124.87 km section of NH-79 between Gulabpura and Chittorgarh Bypass in Rajasthan which is held by CGTL;
- The Hapur - Moradabad NH-9 Project: A 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh which is held by IRB HMTL;
- The Goa - Kundapur NH-17 Project: A 187.28 km section of NH-17 between Goa/Karnataka border and Kundapur in Karnataka which is held by IRB WTL;
- The Kishangarh - Gulabpura NH-79/79A Project: A 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan which is held by KGTL;
- The Kaithal - Rajasthan Border NH-152/65 Project: A 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana which is held by KTL;

- The Solapur - Yedeshi NH-211 Project: A 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra which is held by SYTL;

- The Udaipur - Rajasthan Border NH-8 Project: A 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat which is held by UTL;

- The Yedeshi - Aurangabad NH-211 Project: A 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra which is held by YATL; and

- The Palsit – Dankuni NH-19 Project: A 63.83 km section of NH-19 between Palsit and Dankuni in West Bengal which is held by PDTPL.

The map set out below depicts the location of the Current Portfolio:



The Sponsor of the Trust is IRB Infrastructure Developers Limited, one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. The Sponsor has been listed on the Stock Exchanges since 2008. As at June 30, 2023, the Sponsor had eight road projects of which two were operational and six were under-construction or awaiting appointed date. The Sponsor also acts as the Project Manager. For further details, see "*The Sponsor and Project Manager*" on page 263.

The Investment Manager of the Trust is MMK Toll Road Private Limited. The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital in the Investment Manager is held by the Sponsor and 49% of the equity share capital of the Investment Manager is held by Croxley. For further details, see "*The Investment Manager*" and "*Corporate Governance*" on pages 266 and 139, respectively.

The Trustee of the Trust is IDBI Trusteeship Services Limited. The Trustee is registered with the SEBI as a debenture trustee under the Debenture Trustees Regulations. For further details, see "*The Trustee*" on page 273.

IRB GEPL is currently a wholly-owned subsidiary of the Sponsor. IRB GEPL has entered into a concession agreement with the HMDA, HGCL and the Sponsor for the development, operation, maintenance and management of Nehru Outer Ring Road of km 0+000 to km 158+000, in Hyderabad, Telangana on toll operate transfer basis. The Trust proposes to acquire IRB GEPL by subscribing to 99.99% of the equity share capital of IRB GEPL, with the Sponsor (and its nominee shareholders) holding the remaining equity share capital in IRB

GEPL. For further details, see "*Objects of the Issue*" and "*Background and Structure of the Trust*" on pages 62 and 82, respectively.

Competitive Strengths

We believe that our key competitive strengths are as follows:

Portfolio of assets in key growth markets

The Trust owns 100% of nine of the Project SPVs and 99.96% of PDTPL. Each of these Project SPVs is the concessionaire of a BOT toll-road project in India.

The Project SPVs' gross toll revenues are set out below:

(₹ in million)

Project SPV	Project	Gross toll revenue in the quarter ended June 30, 2023	Gross toll revenue in the quarter ended June 30, 2022	Gross toll revenue in the Financial Year 2023	Gross toll revenue in the Financial Year 2022	Gross toll revenue in the Financial Year 2021
KTL	Kaithal - Rajasthan Board NH-152/65 Project	361.87	393.86	1,504.69	441.10*	701.85*
SYTL	Solapur - Yedeshi NH-211 Project	366.55	308.35	1,295.10	839.58	693.07
YATL	Yedeshi - Aurangabad NH-211 Project	713.10	573.52	2,555.29	1,612.72	1,315.15
IRB WTL	Goa - Kundapur NH-17 Project	349.47	298.14	1,207.89	851.88	697.90
AETL	Agra - Etawah NH-2 Project	587.97	549.86	2,199.03	1,896.30	1,230.60
UTL	Udaipur - Rajasthan NH-8 Project	704.52	637.91	2,528.50	2,003.24	1,177.94
CGTL	Gulabpura - Chittorgarh NH-79 Project	931.42	821.57	3,445.69	2,276.44	1,402.25
KGTL	Kishangarh - Gulabpura NH-79/79A Project	614.83	303.34	2,024.38	1,050.58	935.71
IRB HMTL	Hapur - Moradabad NH-9 Project	766.78	387.56	2,274.59	1,405.59	1,270.85
PDTPL	Palsit-Dankuni NH-19 Project**	469.24	544.60	2,062.31	-	-
Total		**5,865.75**	**4,818.71**	**21,097.47**	**12,377.43**	**9,425.32**

** Due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 25, 2020. The protest was called off on December 15, 2021 and toll collection resumed from December 16, 2021.*

*** Project commenced toll collection on April 2, 2022.*

For further information, see "*Financial Statements*" on page 280.

Upon completion of the IRB GEPL Acquisition, the Trust is expected to own 99.99% of IRB GEPL. IRB GEPL is the concessionaire of a TOT toll-road project in India.

We believe that the Current Portfolio and the Expanded Portfolio have growth potential due to expected growth in traffic volumes as a result of regional growth and expected increases in toll fees as a result of inflation adjustments.

Diversified road project portfolio and revenue base

The Current Portfolio and the Expanded Portfolio consist of a mix of infrastructure toll road projects spread across several states in India. We believe that the geographic diversity of the Current Portfolio and the Expanded Portfolio will play a significant role in developing our experience and expertise, including our ability to evaluate, acquire, operate and maintain new projects.

The Current Portfolio assets and the Expanded Portfolio assets are primarily located along economic corridors and across tourist hubs in India.

The Project SPVs' concession agreements are also temporally diverse in that they commenced and are expected to expire at different times. The concession agreements' residual terms range between 14 years, 4 months and 6

days to 20 years, 6 months and 22 days as at June 30, 2023. IRB GEPL has not yet received the appointed date for its project.

We believe that our geographically and temporally diverse project portfolio provides us with an advantage in capitalizing on new opportunities available in the roads and highways sector. We believe that this diversification strengthens our business by reducing our reliance on any specific region or project and reducing the potential impact on our business of any economic slowdown or force majeure event in any particular region or with respect to any particular project.

Experienced Sponsor/Project Manager and Investment Manager with consistent track record in operating and maintaining projects in the roads and highways sector in India

The Sponsor is one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. As at June 30, 2023, the Sponsor had eight road projects of which two were operational and six were under-construction or awaiting appointed date.

The Sponsor also acts as the Project Manager. The Sponsor's BOT project portfolio includes the Ahmedabad Vadodara section of NH 8 and the Ahmedabad Vadodara Expressway, the Meerut Budaun (Group-I) section of Ganga Expressway and the Samakhiyali-Santalpur section of NH-27. The Sponsor's HAM project portfolio includes the under construction Gandeva to Ena project on the Vadodara-Mumbai eight lane expressway, four-laning of Punjab/Himachal Border to Mo Section of NH-154 and the recently awarded six-laning of Chittoor Thachur road. The Sponsor's TOT project includes the Yashwantrao Chavan Expressway (Mumbai Pune Expressway) and Mumbai – Pune section of NH-48 (old NH-4). The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions.

The Sponsor/Project Manager has experience in the execution of construction work for roads, highways, and other relevant structures and had a track record of constructing over 13,500 Lane Kilometres of roads and highways as of June 30, 2023.

The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital of the Investment Manager is held by the Sponsor and 49% of the equity share capital of the Investment Manager is held by Croxley.

Experienced management team with industry experience

We are managed by qualified personnel of the Investment Manager who have management and operational experience in the roads and highways sector. For further details, see "*The Investment Manager*" on page 266. We believe that the experience and leadership of these teams contribute to our growth and success and position the Current Portfolio (and will position the Expanded Portfolio) to be operated and managed in an efficient manner.

Attractive sector with strong underlying fundamentals

India has one of the largest road networks in the world, with approximately 6,371,847 km of roads comprising national highways, state highways, other public works department roads, district roads, rural roads, urban roads and project roads. (*Source: MoRTH Annual Report 2021-2022)*

India's national highways carry 40% of the total road-based traffic despite constituting less than 2% of the total road network. State highways together with major district roads constitute a secondary system of road transportation and contribute significantly to the development of India's rural economy and industrial growth. The secondary road system also carries about 40% of the total road traffic, despite constituting only 13% of the total road network. At the tertiary level are the rural roads. *(Source: Twelfth Five Year Plan (2012-2017), Economic Sectors, Volume II)*

The Government of India has emphasised on all forms of physical connectivity through Pradhan Mantri Gram Sadak Yojana, industrial corridors, dedicated freight corridors, Bharatmala and Sagarmala projects, Jal Marg Vikas and Ude Desh ke Aam Nagrik - UDAN schemes. According to the Union Budget 2019-20, the Pradhan Mantri Gram Sadak Yojana is envisaged to upgrade 125,000 km of road length over the next five years, with an estimated cost of ₹802,500 million under Pradhan Mantri Gram Sadak Yojana-III. 30,000 km of such roads have been built using green technology, waste plastic and cold mix technology.

MoRTH has planned to execute infrastructure projects worth Rs. 7 lakh crore over the next two to three years. In August 2021, the Government announced its plan to monetize assets worth Rs. 6 trillion between 2021-2022 and 2024-2025 under the National Monetisation Pipeline scheme. Roads have been included as a priority sector and the Government is expected to monetize assets worth Rs 1.6 trillion from the roads sector. The total length of road assets being considered for monetisation over four years is 26,700 km, which is around 22 percent of the total National Highways (with an approximate value of 121,155 km) excluding the network operated by private sector under build-operate-transfer (BOT) (Toll) based public private partnership (PPP) concessions.

Investment Strategy and Risk and Capital Management Strategy

Our principal business strategies which are proposed to be implemented by the Investment Manager are set out below:

Organic growth through proactive management

Our principal investment strategy is to proactively manage the Current Portfolio and the Expanded Portfolio to support growth. In particular, the Investment Manager will seek to maintain or improve the SPVs' net incomes by, among other initiatives, curbing leakages, conducting proper due diligence, formulating and adopting policies and procedures and structuring investments to address tax or regulatory considerations. The Project Manager will assist the Investment Manager by carrying out the construction, operations, management and maintenance of the project in accordance with the relevant concession agreement and the Project Implementation Agreements and by procuring, operating and maintaining the project's toll management systems, including but not limited to, employing staff for toll collection, monitoring toll collection and providing security arrangements at toll plazas.

The Investment Manager will also focus on minimizing project operating expenses. The roads and highways sector is a highly competitive sector that is capital intensive and requires significant expenditure. Our ability to efficiently manage the costs associated with the Current Portfolio and the Expanded Portfolio is critical to maintaining the SPVs' profit margins. The Investment Manager intends to focus on increasing the margins of the SPVs by strengthening internal processes and systems so as to improve utilization of resources and reduce costs. As part of our operations and maintenance systems and processes, the Investment Manager intends to work closely with the Project Manager to promote best practices, to minimize downtime or defects with respect to the Current Portfolio and the Expanded Portfolio and to monitor performance of toll booth operators and maintenance contractors. The Investment Manager also intends to work with the Project Manager and the SPVs to upgrade technology as needed, to manage any leakages in toll collections and to streamline collection, route and maintenance operations. With this focus on proactive asset management and operating expense minimization, the Investment Manager hopes to increase our profit margins and achieve long-term growth.

Acquisition and divestment of toll road projects

The Investment Manager intends to expand our portfolio by identifying and selectively bidding for and acquiring additional toll road projects in accordance with the Procurement and Divestment Policy. Pursuant to the Framework Agreement, the Sponsor has agreed to certain arrangements in relation to submission of bids for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways; or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) with the Financial Investors. For details, see "*Related Party Transactions – Details of Related Party Transactions proposed to be undertaken*" on page 246. The Investment Manager may also consider divestment of certain toll road assets, depending on the maturity and profile of the relevant asset and subject to the Procurement and Divestment Policy. For details of the Procurement and Divestment Policy, see "*Corporate Governance – Policies of the Manager Group*" on page 141.

Optimization of capital structure

The Investment Manager will seek to employ appropriate financing policies and diversify its sources of financing with the objective of minimizing our overall cost of capital. The Investment Manager will ensure compliance with the provisions of the Indenture of Trust, the InvIT Regulations and other applicable law for borrowing. The Investment Manager may also pursue growth opportunities that require raising additional capital through the issuance of new Units.

Details of the Project SPVs and the Current Portfolio

The Current Portfolio comprises 10 toll-roads in the Indian states of West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra and Karnataka that the Project SPVs operate and maintain pursuant to concessions granted by the NHAI. In relation to the projects for which construction has not been completed, see "*Government and Other Approvals*" on page 634 for information about the status of approvals and "*Risk Factors*" on page 15 for a discussion of risks in relation to delay of completion of the projects.

See "*Summary of the Concession Agreements*" on page 145 for a summary of the key terms of the concession agreements entered into by the Project SPVs with the NHAI.

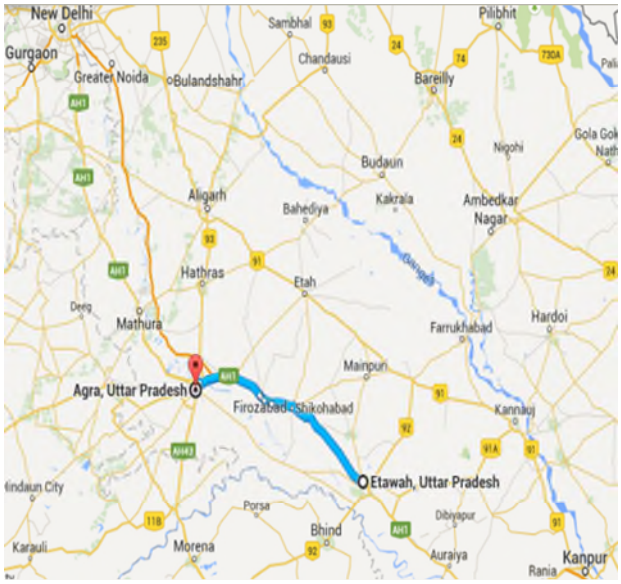
Details of the Project SPVs are set out below:

Project SPV	Project	Ownership of Project by the Trust	Lane km	Commencement of Concession Period	Commencement of Toll Collection	End of Concession Period	Concession Period (years)	Percentage of construction completion as at June 30, 2023 (in %)	Expected Completion
AETL	Agra - Etawah NH-2 Project	100%	747	August 1, 2016	August 1, 2016	July 31, 2040	24	N.A.	Received completion certificate dated November 24, 2020
CGTL	Gulabpura - Chittorgarh NH-79 Project	100%	749	November 4, 2017	November 4, 2017	November 3, 2037	20	N.A.	Received completion certificate dated August 14, 2021
IRB HMTL	Hapur - Moradabad NH-9 Project	100%	599	May 28, 2019	May 28, 2019	May 26, 2041	22	100	Received completion certificate dated July 1, 2022
IRB WTL	Goa - Kundapur NH-17 Project	100%	758	March 3, 2014	February 11, 2020	March 2, 2042	28	99	During Financial Year 2024
KGTL	Kishangarh - Gulabpura NH-79/79A Project	100%	540	February 21, 2018	February 21, 2018	February 20, 2038	20	100	Received completion certificate dated July 20, 2022
KTL	Kaithal - Rajasthan Board NH-152/65 Project	100%	665	July 15, 2015	September 6, 2017	July 14, 2042	27	N.A.	Received completion certificate dated March 29, 2019
SYTL	Solapur - Yedeshi NH-211 Project	100%	395	January 21, 2015	March 7, 2018	January 20, 2044	29	N.A.	Received completion certificate dated October 15, 2019
UTL	Udaipur - Rajasthan NH-8 Project	100%	683	September 3, 2017	September 3, 2017	September 2, 2038	21	N.A.	Received completion certificate dated May 31, 2021
YATL	Yedeshi - Aurangab	100%	756	July 1, 2015	March 17, 2019	June 30, 2041	26	N.A.	Received completion

Project SPV	Project	Ownership of Project by the Trust	Lane km	Commencement of Concession Period	Commencement of Toll Collection	End of Concession Period	Concession Period (years)	Percentage of construction completion as at June 30, 2023 (in %)	Expected Completion
	ad NH-211 Project								certificate dated September 24, 2020
PDTPL	Palsit – Dankuni NH-19 Project	99.96%	363	April 2, 2022	April 2, 2022	April 1, 2039	17	43.02	Financial Year 2025

A summary of the key features of each Current Portfolio asset is discussed below.

1. *Agra – Etawah NH-2 Project*



Map of the Agra – Etawah NH-2 Project

On September 1, 2015, the NHAI and AETL entered into a concession agreement in respect of the Agra - Etawah NH-2 Project. AETL was engaged to augment a 124.52 km section of NH-2 between Agra and Etawah in Uttar Pradesh by six-laning on a DBFOT basis. Being a four-laning to six-laning project, the concession period and the collection of toll commenced on August 1, 2016. As per the relevant concession agreement, the Agra - Etawah NH-2 Project comprises the section of NH-2 from km 199.660 to km 323.525. The completion certificate in relation to the project was issued on November 24, 2020.

Corridor description

The Agra - Etawah NH-2 Project is a 124.52 km six-lane road, forming part of the section between Agra and Etawah in Uttar Pradesh. The Agra - Etawah NH-2 Project passes through the cities of Agra, Firozabad, and Etawah in the state of Uttar Pradesh and settlements *en-route* include Agra, Tundla, Firozabad, Shikohabad, Sirsaganj, and Jaswantnagar.

The Agra - Etawah NH-2 Project is a part of the Golden Quadrilateral, that connects Delhi in the north to Kolkata in the east on the NH19 (Old NH2) corridor. The Golden Quadrilateral is the longest road project in India and the fifth-longest highway in the world, connecting four major cities: Delhi, Mumbai, Chennai, and Kolkata. The Agra - Etawah NH-2 Project also connects large industrial and urban clusters of Kanpur and Lucknow to Delhi and Mathura.

The Agra - Etawah NH-2 Project facilitates east-west movement primarily between the eastern states and southern parts of Delhi NCR and Rajasthan. The Delhi-Lucknow corridor is an important traffic contributor. The corridor has a mix of both industrial and agricultural activities. Industries like leather and textile are located Agra and Kanpur, brass manufacturing in Moradabad, special economic zones based industrial development Rudrapur/Rampur area (in the state of Uttarakhand) and glass based manufacturing located in Firozabad are some of industrial settlements in the region. According to the Traffic Reports, a section of NH-2 from Agra to Etawah is part of major transportation link in the area connecting industrial cities of Agra- Kanpur and Lucknow. Important cities of Firozabad, Shikohabad and Jaswant Nagar fall on project alignment.

Concession period and revenue sharing arrangement

The NHAI granted AETL a concession for a period of 24 years for this project. The concession period commenced on August 1, 2016 and is expected to expire on July 31, 2040. AETL began collecting toll with respect to this project on August 1, 2016.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause AETL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires AETL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2025 and 52,995 PCUs, respectively.

In consideration of the grant of concession, AETL pays the NHAI a concession fee of ₹1 per annum. Additionally, AETL was required to pay on the appointed date a premium in the form of an additional concession fee equal to ₹810 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the concession period, the premium is determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	184.79*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

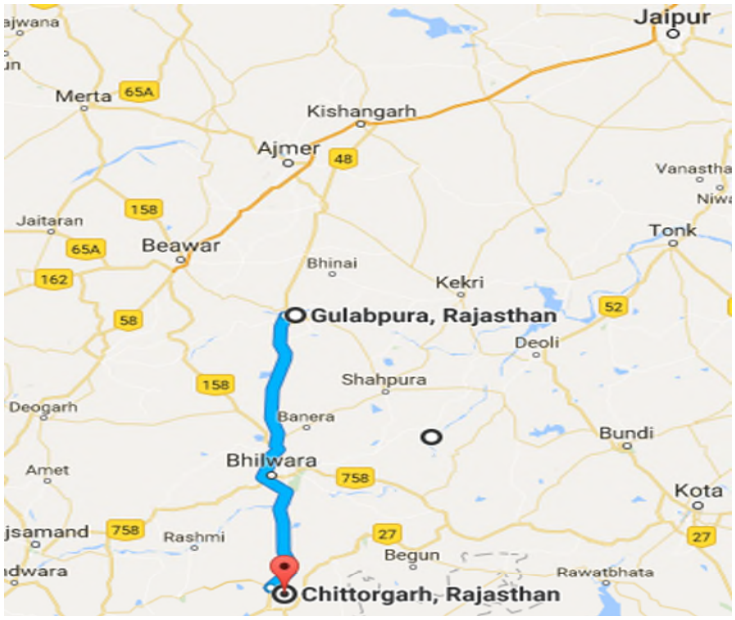
Land

The NHAI owns the land that underlies the Agra - Etawah NH-2 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

2. *Gulabpura – Chittorgarh NH-79 Project*



Map of the Gulabpura – Chittorgarh NH-79 Project

On December 9, 2016, the NHAI and CGTL entered into a concession agreement in respect of the Gulabpura - Chittorgarh NH-79 Project. CGTL was engaged to augment a 124.87 km section of NH-79 between Gulabpura and Chittorgarh in Rajasthan by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on November 4, 2017. As per the relevant concession agreement, the Gulabpura - Chittorgarh NH-79 Project comprises the section of NH-79 from km 90.00 to km 214.870. The completion certificate in relation to the project was issued on August 14, 2021.

Corridor description

The Gulabpura - Chittorgarh NH-79 Project is an approximately 125 km six-lane toll road on NH48 located in Rajasthan and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. It is also a part of the direct link between Kishangarh-Bhilwara and Chittorgarh.

The Gulabpura - Chittorgarh NH-79 Project forms part of the Golden Quadrilateral NH48 corridor. The key cities of Delhi, Ahmedabad, Vadodara, and Mumbai are connected by NH48. According to the Traffic Reports, the NH-79 is important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south. According to the Traffic Reports, It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

The Gulabpura - Chittorgarh NH-79 Project serves long-distance traffic travelling between Delhi and Ahmedabad (and the south). The Gulabpura - Chittorgarh NH-79 Project also caters to the demand of local movements between Bhilwara, Chittorgarh and Udaipur in addition to medium distance movements between Bhilwara, Ahmedabad, industrial towns in Gujarat (such as Morbi, Kandla and Mundra). The presence of various tourism centres such as Chittorgarh also contributes to tourism activity.

Concession period and revenue sharing arrangement

The NHAI granted CGTL a concession for a period of 20 years for this project. The concession period commenced on November 4, 2017 and is expected to expire on November 3, 2037. Being a four-to-six-laning project, CGTL began collecting toll with respect to this project on November 4, 2017. The completion certificate in relation to the project was issued on August 14, 2021.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than

2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause CGTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires CGTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is June 1, 2026 and 76,316 PCUs, respectively.

In consideration of the grant of concession, CGTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary of the COD, CGTL is required to pay a premium in the form of an additional concession fee equal to ₹2,286.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year until the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year, and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	300.87*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

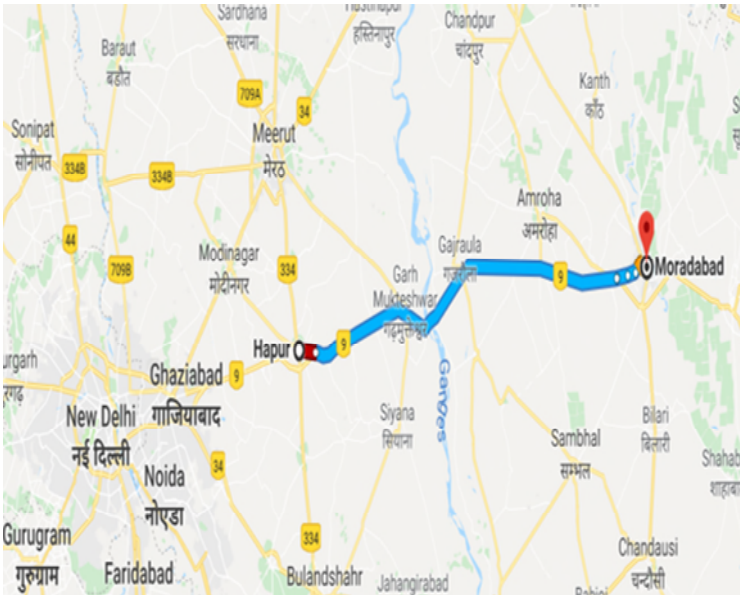
Land

The NHAI owns the land that underlies the Gulabpura - Chittorgarh NH-79 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

3. *Hapur – Moradabad NH-9 Project*



Map of the Hapur - Moradabad NH-9 Project

On May 29, 2018, the NHAI and IRB HMTL entered into a concession agreement in respect of the Hapur – Moradabad NH-9 Project. IRB HMTL was engaged to augment a 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh by six laning on a DBFOT basis. The concession period and the collection of tolls commenced on May 28, 2019. As per the relevant concession agreement, the Hapur – Moradabad NH-9 Project comprises the section of NH-9 from km 50.00 to km 148.277. Completion certificates in relation to the project were issued on July 1, 2022 and April 7, 2023.

Corridor description

The Hapur-Moradabad NH-9 Project is an approximately 100 km six-lane highway currently under capacity expansion from four lanes to six lanes located in Uttar Pradesh. The Hapur-Moradabad NH-9 Project is part of the NH9 corridor that connects Delhi to Moradabad and lies on the Delhi-Lucknow corridor. It is also part of the direct link between the northern states and east India and Nepal. It also connects Delhi to the state of Uttarakhand, which is a key tourism and industrial cluster in the country, and to Lucknow which further connects to NH27 for east-west movements.

The section has one end in Moradabad which houses industries including the metal and export business. The west-end of the Hapur-Moradabad NH-9 Project, Hapur, has medium and small-scale industries including paper, textiles, and steel tube production. Hapur is an important commercial centre for grains, jiggery and potato. Apart from catering to the Agra-Lucknow corridor and the long-distance movement between the northern and eastern states, the Hapur-Moradabad NH-9 Project is a key route for the tourist movements towards Uttarakhand from Delhi and Western Uttar Pradesh. Religious places along the route such as Brijghat and Garh Mukteshwar also attract tourist traffic.

The Hapur-Moradabad NH-9 Project facilitates east-west movement primarily between the eastern states/Uttarakhand/Nepal and Haryana/Punjab/ northern Rajasthan. The Delhi-Lucknow corridor is an important traffic contributor. The corridor has a mix of both industrial and agricultural activities. Industries like leather and textile are located Agra and Kanpur, brass manufacturing in Moradabad, special economic zones based industrial development Rudrapur/Rampur area (in the state of Uttarakhand), and glass based manufacturing located in Firozabad as some of industrial settlements in the region. According to the Traffic Reports, induced traffic from the developments around Hapur-Moradabad NH-9 Project corridor will be a positive contributing factor to the traffic growth on the project corridor.

Concession period and revenue sharing arrangement

The NHAI granted IRB HMTL a concession for a period of 22 years for this project. The concession period commenced on May 28, 2019 and is expected to expire on May 26, 2041. Being a four-to-six-laning project, IRB HMTL began collecting toll with respect to this project on May 28, 2019.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause IRB HMTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires IRB HMTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2028 and 67,413 PCUs, respectively.

In consideration of the grant of concession, IRB HMTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary year of the COD, IRB HMTL is required to pay a premium in the form of an additional concession fee equal to ₹315.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	182.11*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

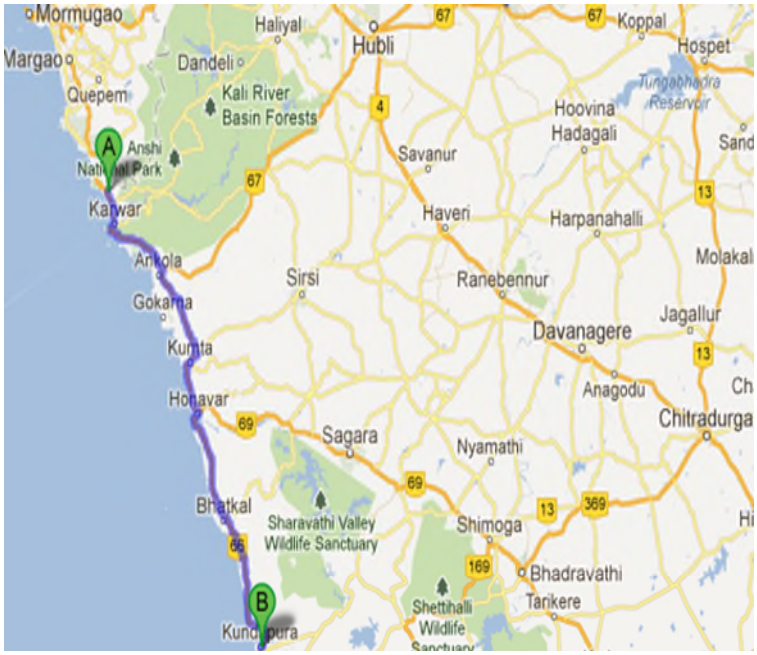
Land

The NHAI owns the land that underlies the Hapur – Moradabad NH-9 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

4. *Goa – Kundapur NH-17 Project*



Map of the Goa – Kundapur NH-17 Project

On March 25, 2013, the NHAI and IRB WTL entered into a concession agreement in respect of the Goa – Kundapur NH-17 Project. IRB WTL was engaged to augment a 187.28 km section of NH-17 between Goa and Kundapur in Karnataka by four-laning on a DBFOT basis. The concession period commenced on March 3, 2014. As per the relevant concession agreement, the Goa – Kundapur NH-17 Project comprises the section of NH-17 from km 93.700 to km 283.300. Provisional completion certificates in relation to the project were issued on January 31, 2020, February 28, 2022 and March 24, 2023.

Corridor description

The Goa – Kundapur NH-17 Project is situated in the state of Karnataka, connecting Goa-Karnataka border to Kundapur in the south. The Goa – Kundapur NH-17 Project forms part of Panvel-Kochi-Kanyakumari Highway (NH66) on the west coast of India.

Some of the key urban centers along the Goa – Kundapur NH-17 Project are Ankola, Bhatkal, Kumta and Karwar. The highway facilitates the north-south movement as it connects Maharashtra in the north to Kerala in the south.

Kumta, Murdeshwar and Shivamogga are major religious and recreational tourism centres in the region and contribute to tourism traffic. Apart from these tourism-related cities, the Goa – Kundapur NH-17 Project generates tourism on its own as the highway runs parallel to the Arabian Sea. The port of Mangalore which is located 90 km south of Kundapur is a major commercial traffic generator. Coal traffic also moves from Mangalore port to Bagalkotti, Bijapur and Gulbarga. The Belekeri plaza to the north of the Goa – Kundapur NH-17 Project has agricultural activity and hosts a naval base.

Concession period and revenue sharing arrangement

The NHAI granted IRB WTL a concession for a period of 28 years for this project. The concession period commenced on March 3, 2014 and is expected to expire on March 2, 2042. IRB WTL commenced tolling on February 11, 2020.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the

target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause IRB WTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires IRB WTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is April 1, 2022 and 21,307 PCUs, respectively.

In consideration of the grant of concession, IRB WTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	90.04*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

Land

The NHAI owns the land that underlies the Goa – Kundapur NH-17 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

5. *Kishangarh – Gulabpura NH-79/79A Project*



Map of the Kishangarh – Gulabpura NH-79/79A Project

On February 22, 2017, the NHAI and KGTL entered into a concession agreement in respect of the Kishangarh – Gulabpura NH-79/79A Project. KGTL was engaged to augment a 90.00 km section of NH-79/79A between

Kishangarh and Gulabpura in Rajasthan by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on February 21, 2018. As per the relevant concession agreement, the Kishangarh – Gulabpura NH-79/79A Project comprises the section of NH-79/79A from km 0.000 to km 90.000. The completion certificate in relation to the project was issued on July 20, 2022.

Corridor description

The Kishangarh – Gulabpura NH-79/79A Project is a 90 km stretch on NH48 between Kishangarh and Gulabpura in Rajasthan. The project is located in Rajasthan and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. It is also part of the direct link between Kishangarh-Bhilwara and Chittorgarh.

The Kishangarh – Gulabpura NH-79/79A Project connects Ajmer to Gulabpura, traversing through major settlement stretches such as Gulabpura, Bhilwara, Chittorgarh, Mangalwad, and finally Udaipur. The Kishangarh – Gulabpura NH-79/79A Project primarily serves traffic travelling between Delhi, Rajasthan, Gujarat, Maharashtra and Southern states (Kerala, Tamil Nadu, Karnataka). There are also several textile industries and marble/granite industries bordering the Kishangarh – Gulabpura NH-79/79A Project. According to the Traffic Reports, major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally Jaipur, Ajmer, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on the project corridor section.

Concession period and revenue sharing arrangement

The NHAI granted KGTL a concession for a period of 20 years for this project. The concession period commenced on February 21, 2018 and is expected to expire on February 20, 2038. KGTL began collecting toll with respect to this project on February 21, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause KGTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires KGTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is May 1, 2026 and 76,236 PCUs, respectively.

In consideration of the grant of concession, KGTL pays the NHAI a concession fee of ₹1 per annum. Additionally, after the third anniversary year of the COD, KGTL is required to pay a premium in the form of an additional concession fee equal to ₹1,863.00 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	195.83*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

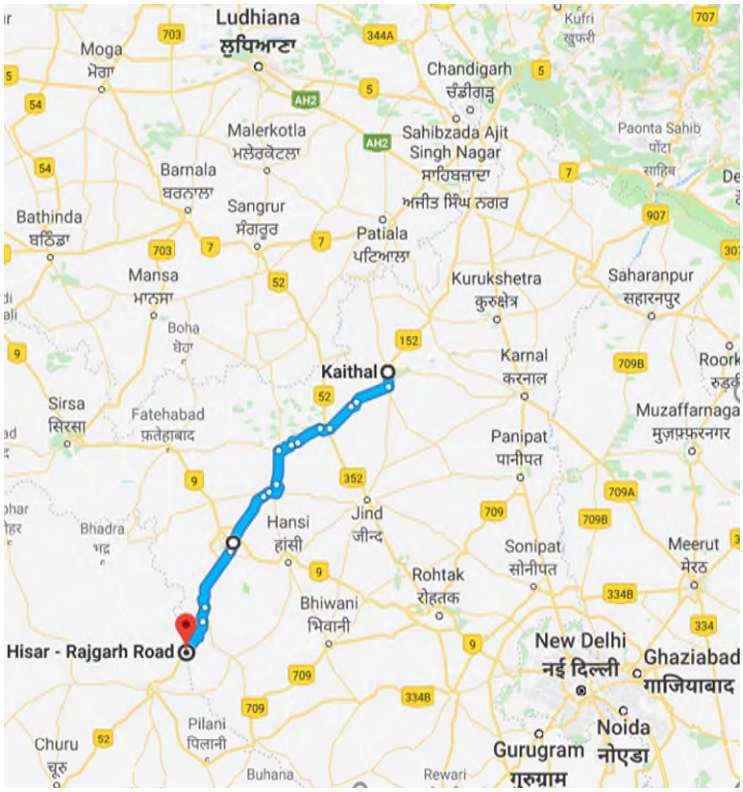
Land

The NHAI owns the land that underlies the Kishangarh – Gulabpura NH-79/79A Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

6. *Kaithal – Rajasthan Border NH-152/65 Project*



Map of the Kaithal – Rajasthan Border NH-152/65 Project

On June 23, 2014, the NHAI and KTL entered into a concession agreement in respect of the Kaithal – Rajasthan Border NH-152/65 Project. KTL was engaged to augment a 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana by four-laning on a DBFOT basis. The concession period commenced on July 15, 2015 and the collection of toll commenced on September 6, 2017. As per the relevant concession agreement, the Kaithal - Rajasthan Border NH-152/65 Project comprises the section of NH-152/65 from km 33.250 to km 241.580. Provisional completion certificates dated September 6, 2017 and July 9, 2018 and a completion certificate dated March 29, 2019 have been issued in relation to the project.

Corridor description

The Kaithal - Rajasthan Border NH-152/65 Project is an approximately 166 km long four-lane section connecting Kaithal and Haryana-Rajasthan border in the state of Haryana. The Kaithal - Rajasthan Border NH-152/65 Project is part of the NH-52 corridor connecting northern states including Haryana, Punjab, and Himachal Pradesh with Rajasthan and Gujarat in the west.

The areas surrounding the Kaithal - Rajasthan Border NH-152/65 Project is predominantly agricultural along with dairy related activities. According to the Traffic Reports, the project road forms part of an important transportation corridor which connects northern states like Haryana, Punjab and Himachal Pradesh to southern states and development centers on the west coast line of India.

Concession period and revenue sharing arrangement

The NHAI granted KTL a concession for a period of 27 years for this project. The concession period commenced on July 15, 2015 and is expected to expire on July 14, 2042. KTL began collecting toll with respect to this project on September 6, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause KTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires KTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume set out in the concession agreement is April 1, 2023 and 21,919 PCUs, respectively.

In consideration of the grant of concession, KTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	111.89*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

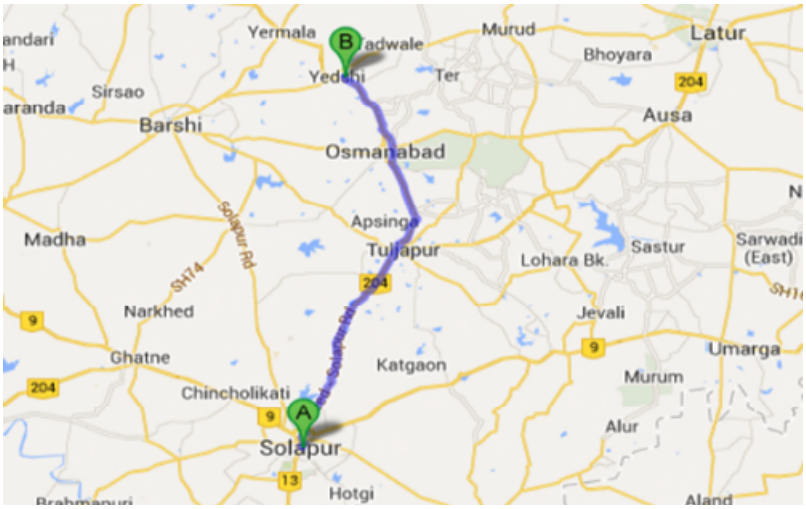
Land

The NHAI owns the land that underlies the Kaithal – Rajasthan Border NH-152/65 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

7. *Solapur – Yedeshi NH-211 Project*



Map of the Solapur - Yedeshi NH-211 Project

On March 3, 2014, the NHAI and SYTL entered into a concession agreement in respect of the Solapur – Yedeshi NH-211 Project. SYTL was engaged to augment a 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra by four-laning on a DBFOT basis. The concession period commenced on January 21, 2015 and the collection of toll commenced on March 7, 2018. As per the relevant concession agreement, the Solapur – Yedeshi NH-211 Project comprises the section of NH-211 from km 0.000 to km 100.000. A provisional completion certificate was issued on March 5, 2018. The completion certificate for the project was issued on October 15, 2019.

Corridor description

The Solapur – Yedeshi NH-211 Project is a 98.717 km stretch that forms part of the NH52 north-south corridor. The Solapur – Yedeshi NH-211 Project connects Delhi and northern parts of India with major cities such as Bengaluru, Chennai, Hyderabad in the south. The Solapur – Yedeshi NH-211 Project also caters to east-west movement between Gujarat and eastern states such as Telangana (Hyderabad), Andhra Pradesh (Vijaywada) and parts of Tamil Nadu (Chennai). The Solapur – Yedeshi NH-211 Project has significant areas of industrial influence and tourism influence.

According to the Traffic Reports, the project road forms part of an important transportation corridor which works as gateway to Karnataka and rest of south India for Marathwada region of Maharashtra. It connects Solapur – Dhule and forms an important transportation link for traffic from Vijapur, Hubli and other parts of north Karnataka to Aurangabad, Jalna, Beed and other places in the Marathwada region.

Concession period and revenue sharing arrangement

The NHAI granted SYTL a concession for a period of 29 years for this project. The concession period commenced on January 21, 2015 and is expected to expire on January 20, 2044. SYTL began collecting toll with respect to this project on March 7, 2018.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause SYTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event

that the NHAI requires SYTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 22,210 PCUs, respectively.

In consideration of the grant of concession, SYTL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	111.27*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

Land

The NHAI owns the land that underlies the Solapur - Yedeshi NH-211 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

8. *Udaipur - Rajasthan Border NH-8 Project*



Map of the Udaipur – Rajasthan Border NH-8 Project

On December 9, 2016, the NHAI and UTL entered into a concession agreement in respect of the Udaipur - Rajasthan Border NH-8 Project. UTL was engaged to augment a 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat by six-laning on a DBFOT basis. Being a four-to-six-laning project, the concession period and the collection of toll commenced on September 3, 2017. As per the relevant concession agreement, the Udaipur - Rajasthan Border NH-8 Project comprises the section of NH-8 from km 287.400 to km 401.200. The completion certificate in relation to the project was issued on May 31, 2021.

Corridor description

The 114 km four-lane toll road (NH-48) is located in Rajasthan and forms part of the Delhi-Mumbai arm of the Golden Quadrilateral. It is also part of the direct link between Ahmedabad and Udaipur.

The Udaipur - Rajasthan Border NH-8 Project acts as a funnel for traffic using the northern sections of NH48 section, NH58 (Bhilwara-Rajsamand-Udaipur) section for trips between areas north of Udaipur and Udaipur/Ahmedabad/Mumbai and the south. According to the Traffic Reports, the area around the project stretch from Udaipur to Gujarat border has green marble mines and other establishments. Major religious centres like Shamlaji and Ekling ji contribute to substantial passenger traffic on the project stretch.

Concession period and revenue sharing arrangement

The NHAI granted UTL a concession for a period of 21 years for this project. The concession period commenced on September 3, 2017 and is expected to expire on September 2, 2038. UTL began collecting toll with respect to this project on September 3, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in any accounting year, the NHAI may, at its discretion, cause UTL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires UTL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is September 21, 2026 and 61,435 PCUs, respectively.

In consideration of the grant of concession, UTL pays the NHAI a concession fee of ₹1 per annum. Additionally, immediately after the third anniversary year of the COD, a premium in the form of an additional concession fee equal to ₹1,638.00 million is required to be paid by UTL as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the premium will be determined by increasing the amount of premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the concession period, the premium will be determined by increasing the amount of premium in the respective year by an additional 8% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	229.65*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

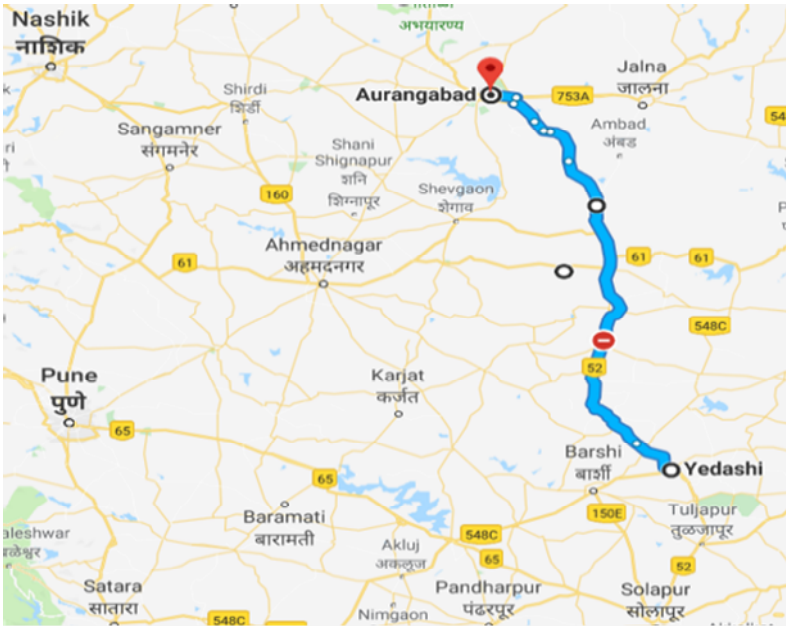
Land

The NHAI owns the land that underlies the Udaipur - Rajasthan Border NH-8 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

9. *Yedeshi – Aurangabad NH-211 Project*



Map of the Yedeshi - Aurangabad NH-211 Project

On May 30, 2014, the NHAI and YATL entered into a concession agreement in respect of the Yedeshi - Aurangabad NH-211 Project. YATL was engaged to augment a 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra by four-laning on a DBFOT basis. The concession period commenced on July 1, 2015 and the collection of toll commenced on March 17, 2019. As per the relevant concession agreement, the Yedeshi – Aurangabad NH-211 Project comprises the section of NH-211 from km 100.00 to km 290.200. A provisional completion certificate was issued on March 15, 2019. The completion certificate was issued on September 24, 2020.

Corridor description

The Yedeshi – Aurangabad NH-211 Project forms part of the NH52 north-south corridor. The Yedeshi – Aurangabad NH-211 Project connects Delhi and northern parts of India with major cities such as Bengaluru, Chennai, Hyderabad in the south. The Yedeshi – Aurangabad NH-211 Project also caters to east-west movement between Gujarat and eastern states such as Telangana (Hyderabad), Andhra Pradesh (Vijaywada) and parts of Tamil Nadu (Chennai). The Yedeshi – Aurangabad NH-211 Project has significant areas of industrial influence and tourism influence.

According to the Traffic Reports, the project road passes through important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The project road passes through the districts of Beed and Aurangabad.

Concession period and revenue sharing arrangement

The NHAI granted YATL a concession for a period of 26 years for this project. The concession period commenced on July 1, 2015 and is expected to expire on June 30, 2041. YATL began collecting toll with respect to this project on March 17, 2017.

The concession agreement provides that if the actual traffic volume falls short of or exceeds the target traffic volume on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic volume by more than 2.5%, the concession period may be reduced by 0.75% for every 1.00% excess in actual average traffic as compared to the target traffic volume, provided that such reduction in the concession period does not exceed 10% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic volume by more than 2.5%, the concession period may be extended by 1.5% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that, if the actual average traffic exceeds the design capacity in

any accounting year, the NHAI may, at its discretion, cause YATL to undertake suitable capacity augmentation of the project. If capacity augmentation is required, the concession period would be for a period of up to five years so as to yield a post-tax return on equity of 16% per annum. The concession agreement also states that in the event that the NHAI requires YATL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

For this project, the target date and target traffic volume in the concession agreement is October 1, 2023 and 24,407 PCUs, respectively.

In consideration of the grant of concession, YATL pays the NHAI a concession fee of ₹1 per annum.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	229.09*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

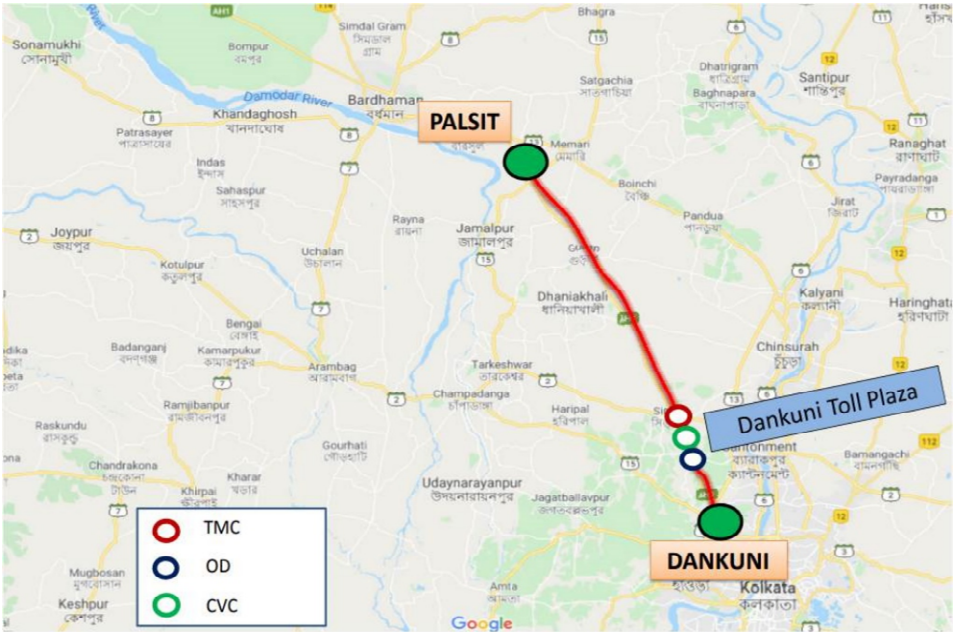
Land

The NHAI owns the land that underlies the Yedeshi – Aurangabad NH-211 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

10. Palsit – Dankuni NH-19 Project



Map of the Palsit – Dankuni NH-19 Project

On June 14, 2021, the NHAI and PDTPL entered into a concession agreement in respect of the Palsit – Dankuni NH-19 Project. PDTPL was engaged to augment a section of NH-19 Palsit to Dankuni (upto NH-6 Connector) from KM 588.870 to KM 652.700 (total design length 63.830 km) in West Bengal by six-laning on a BOT (toll) basis. Being a four-laning to six-laning project, the concession period and the collection of toll commenced on April 2, 2022. As per the relevant concession agreement, the Palsit – Dankuni NH-19 Project comprises the section of NH-19 from KM 588.870 to KM 652.700.

Corridor description

The asset is located on National Highway 19 (NH2). NH2 runs over 1,465 km and connects some of the major states of Delhi, Haryana, Uttar Pradesh with the eastern states of Bihar, Jharkhand and West Bengal. The highway also connects Delhi with cities like, Mathura, Agra, Kanpur, Allahabad, Durgapur and later stretches to connect to Kolkata. All these cities have major industrial centres. The asset becomes a key link in connecting Haldia port, in south of the asset, to the rest of West Bengal, Uttar Pradesh, Bihar, Jharkhand, Assam, Arunachal Pradesh, and Nepal. The asset lies in close proximity to state capital, Kolkata, which is one of the key distribution centres and has good connectivity with several parts of the country and generates a significant volume of traffic on the asset. The areas along the asset are agricultural along with industries and warehouse concentrated around urban areas. The key industrial areas include Durgapur, Asansol, Panagarh and Dankuni.

According to the Traffic Reports, section of NH-19 from Palsit to Dankuni is part of a major transportation link in the area connecting industrial cities of Dhanbad, Asansol, Durgapur and Kolkata. The project stretch acts as a gateway link to Kolkata from northern India.

Concession period and revenue sharing arrangement

The NHAI granted PDTPL a concession for a period of 17 years for this project. The concession period commenced on April 2, 2022 and is expected to expire on April 1, 2039. PDTPL began collecting toll with respect to this project on April 2, 2022.

The concession agreement provides that if the actual average traffic falls short of or exceeds the target traffic on the target date, the concession period will be extended or reduced, respectively. As per the concession agreement, in the event the actual average traffic on the target date exceeds the target traffic by more than 5%, the concession period may be reduced by 1.00% for every 1.00% excess in actual average traffic as compared to the target traffic, provided that such reduction in the concession period does not exceed 20% of the original concession period. In the event that the actual average traffic on the target date falls short of the target traffic by more than 5%, the concession period may be extended by 1.00% for every 1.00%, provided that such extension in the concession period does not exceed 20% of the original concession period. The concession agreement, however, also stipulates that if the average daily traffic exceeds the design capacity in any accounting year, an indirect political event under the concession agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the concession agreement. If PDTPL has completed the construction works necessary for augmenting the capacity of the project such that its capacity has increased sufficiently for carrying the then current traffic, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

For this project, the target dates are expected to be May 1, 2026, May 1, 2031 and May 1, 2036. The target traffic on these dates is expected to be 65,830 PCUs, 84,018 PCUs and 107,270 PCUs, respectively, and the actual average traffic will be derived based on the procedures prescribed by the NHAI in accordance with the concession agreement.

In consideration of the grant of concession, PDTPL pays the NHAI a concession fee of ₹1 per annum. Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by PDTPL. The premium to be paid for the second year after the project completion date is equal to 10.8% of the realisable fee and is required to be paid by PDTPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

Monthly toll revenue

The following table sets out the gross monthly toll revenues received from the project for the period indicated:

Period	Toll revenue (₹ in millions)
July 2023	129.01*

**This amount has not been audited or reviewed, is preliminary and subject to adjustment and reconciliation based on the FASTag system.*

Land

The NHAI owns the land that underlies the Palsit – Dankuni NH-19 Project.

Structure of ownership of the project

For information about the structure of ownership of the project by the Trust, see "*Background and Structure of the Trust*" on page 82.

Details of the Target SPV

IRB GEPL is the concessionaire for the tolling, operation, maintenance and management of Nehru Outer Ring Road (from Km 0+000 to Km 158+000) in Hyderabad, Telangana to be executed on a toll-operate-transfer basis in the Indian state of Telangana. See "*Government and Other Approvals*" on page 634 for information about the status of approvals and "*Risk Factors*" on page 15 for a discussion of risks in relation, *inter-alia*, the proposed acquisition of the project.

See "*Summary of Concession Agreements*" on page 145 for a summary of the key terms of the concession agreement entered into by IRB GEPL and the Sponsor with the Hyderabad Metropolitan Development Authority ("**HMDA**") and Hyderabad Growth Corridor Limited ("**HGCL**").

A summary of the key features of the road asset is discussed below.

Hyderabad ORR Project



On May 26, 2023, IRB GEPL and the Sponsor entered into a concession agreement with the HMDA and HGCL in respect of the Hyderabad ORR Project. IRB GEPL was engaged to implement the tolling, operation, maintenance and management of Nehru Outer Ring Road (from Km 0+000 to Km 158+000) in Hyderabad, Telangana on a toll-operate-transfer basis. The concession period for the project will commence from the appointed date. As of the date of this Letter of Offer, the appointed date notification for the project has not been issued by the concessioning authority.

Corridor description

The Nehru Outer Ring Road is a 158 km, 8-lanes ring road expressway encircling Hyderabad, Telangana and provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur,

Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. The expressway is fenced and 33 radial roads connect it with the Inner Ring Road. A large part, 124 km (covering urban nodes viz., Hi-Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the length of the asset was opened to traffic in years 2015-16 and has contributed to a great extent to not only to ease out traffic flow, but also influenced the development of Hyderabad around the Outer Ring Road.

According to the Traffic Reports, the Nehru Outer Ring Road gives easy connectivity between NH-44, NH-65, NH-161, NH-765 and NH-163 from Hyderabad to Vijayawada and Warangal as well as state highways leading to Vikarabad Nagarjuna Sagar and Karimnagar / Mancherial. This has also helped in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad and Adilabad.

Concession period and revenue sharing arrangement

The HMDA has granted IRB GEPL a concession for a period of 30 years commencing from the appointed date, which has not yet been received by IRB GEPL. Accordingly, as of the date of this Letter of Offer, IRB GEPL has not begun collecting toll with respect to this project.

The concession agreement provides that if the average of the actual toll revenue collected by IRB GEPL over certain specified time periods falls short of or exceeds the target revenue for such periods (being ₹1,731.80 million and ₹4,482.5 million, respectively) by more than 20% or 30%, then for every 1% shortfall or increase as compared to the target revenue, the concession period shall be increased by 1.5% or decreased by 0.75% thereof, subject to the limits specified in the concession agreement. The concession agreement also states that in the event that the HMDA requires IRB GEPL to undertake capacity augmentation, there will be no reduction in the concession period pursuant to any other provision of the concession agreement.

In consideration of the grant of concession, IRB GEPL is required to pay the HMDA a concession fee of ₹73,800 million.

Monthly toll revenue

As of the date of this Letter of Offer, IRB GEPL has not commenced toll collection.

Operation and Maintenance Services

Our key business activity is the development, operation and maintenance of the Current Portfolio (and upon completion of the IRB GEPL Acquisition, the Expanded Portfolio) pursuant to, and in accordance with, the provisions of the concession and other road project related agreements (as applicable). The Project SPVs and the Target SPV are required to operate and maintain their respective assets in accordance with the relevant concession agreement, including by modifying, repairing or otherwise making improvements to the road. In particular, each of the concession agreements requires the Project SPV and the Target SPV to maintain their respective assets to certain standards during the concession period. The concessioning authorities have used, and will likely continue to use, independent engineers to carry out periodic tests to assess the quality of the roads or bridges and their related maintenance.

The Project Manager manages the critical day-to-day operation and maintenance of the Current Portfolio (and will be responsible for the operation and maintenance of the Expanded Portfolio). The Project Manager, through the relevant Project Implementation Agreement, provides project and contract management support, such as liaising with and supervising sub-contractors, managing design and planning and obtaining necessary licenses and approvals for the projects.

A Project SPV or the Target SPV is generally responsible for carrying out operation and maintenance activities at its toll road during its concession period. The scope of a Project SPV's or the Target SPV's operation and maintenance activities is usually defined in the relevant concession agreement. Within the scope of such operation and maintenance obligations, the Project SPV or the Target SPV may be required to undertake routine and periodic maintenance of project roads, maintain and comply with safety standards to ensure smooth and safe traffic movement, deploy adequate human resources for incident management, maintain proper medical and sanitary arrangements for personnel deployed at the site, prevent any unauthorized entry to and exit from the project as may be required. The activities of the Project SPVs are undertaken, and the activities of the Target SPV will be undertaken, by the Project Manager pursuant to the Project Implementation Agreements.

A computerised maintenance management system is used to ensure that all maintenance is systematically and correctly scheduled, carried out and recorded. In addition, it is used to assure planning, control and monitoring of each maintenance activity. Maintenance methodologies and system performance are regularly reviewed and examined for optimisation of resource deployment.

Operations

Toll collection system

Toll is collected for each journey through each of the toll plazas. Signs setting out the toll rates are displayed at the toll booths and tolls can be paid or tendered by the driver of any vehicle in the following manner:

Cash

Tolls paid by means of cash are collected by toll collectors at the manual toll booths.

Electronic toll collection

The Project SPVs make, and the Target SPV will make, use of technology for the operation of the projects which helps in improving operational efficiency and ensuring transparency in the process of toll collection, including through electronic toll collection system based on radio-frequency identification technology, which was implemented in the projects. Further, the Project SPVs use, and the Target SPV will use, weight based tolling systems with the help of devices that are designed to capture and record axle weights and gross vehicle weights as vehicles drive over a measurement device fitted in each lane.

Monitoring

Toll collection

Payments at the toll plazas, both electronic as well as cash payments are processed through a semi-automated or a fully-automated toll collection system, depending on complexity of the project. Both these systems collect and store traffic and payment data, thereby reducing the need for manual operation. A semi-automated system consists of revenue collection software desktop, barrier gate, smart cards and monitoring cameras and a fully automated system includes equipment such as vehicle counting classifier, vehicle audit system, communication channels and traffic control equipment in addition to all the components of a semi-automated system.

For the purpose of identifying categories of vehicles and to charge an appropriate toll rate, the automatic vehicle identification based in-road/infrared sensors are also used. The Project SPVs and the Target SPV also use/will use weigh-in-motion technology for projects where weight based toll collection is mandated. The weight based tolling systems are integrated with the fully automatic toll collection system for enhanced revenue controls.

There are cameras installed particularly for capturing and recording any toll evasion incidents by vehicles. There is also a back-up power supply system to ensure that there is no interruption to power supply at the toll plazas in order to maintain a stable power supply for the sub-systems and equipment. Servers used in the toll collection systems at the toll plazas are capable of real time uploading of transaction data from toll lane equipment and performing an automatic daily backup to prevent any toll data loss and to enable quick system recovery, which allows the Project SPVs and the Target SPV to collect variable amounts of tolls depending on the class of motor vehicles and serves as a traffic information system.

Only certain authorized persons have access to the toll collection systems and the activities are recorded for security purposes. The Project Manager is responsible for operating the toll collection system at the toll plazas of the Project SPVs and the Target SPV and taking regular preventive and corrective measures to maintain such systems at the highest levels of security and reliability.

We have set up a centralized control room ("**Control Room**") at our office in Mumbai that consolidates cameras at the toll plazas to enable video based monitoring of the toll operations throughout the day.

Traffic control

There is an emergency telephone system to provide a reliable communication channel for the drivers in cases of emergency where they need to communicate with staff at the Control Room. Emergency telephone systems and emergency helpline numbers are provided at all projects where such systems and numbers are required by the relevant concession agreement. There are also patrol vehicles that patrol an assigned section of the relevant project for regulating traffic and undertaking surveillance activities.

Safety Measures

Under the terms of the concession agreements, concessionaires are required to ensure certain safety requirements, which include measures such as road signs, pavement marking, traffic control devices, roadside furniture, highway design elements, enforcement and emergency response. The concessionaires are bound by, *inter-alia*, applicable law and applicable permits, the Manual for Safety in Road Design as issued by MoRTH, relevant standards and guidelines of the Indian Roads Congress and good industry practice. The concessionaires also carry out safety audits of the projects from time to time, by appointing a safety consultant, which is comprised of, among others, one road safety expert and one traffic planner. These safety requirements apply to all phases of construction, operation and maintenance with emphasis on identification of factors associated with accidents and implementation of appropriate remedial measures.

Management

We are managed by qualified personnel of the Investment Manager, all of whom have management and operational experience in the roads and highways sector. The board of directors of the Investment Manager has also constituted committees required under the InvIT Regulations.

The Investment Manager, in consultation with the Trustee, has appointed the directors on the board of each Project SPV in accordance with the InvIT Regulations. Each Project SPV's board of directors has also formed committees as may be required under the Companies Act, 2013 and rules made thereunder.

Upon completion of the IRB GEPL Acquisition, the Investment Manager, in consultation with the Trustee, will appoint the directors on the board of the Target SPV in accordance with the InvIT Regulations.

For further details about the Investment Manager, see "*The Investment Manager*" on page 266.

Various financing agreements that the Project SPVs have entered into with certain banks and financial institutions contain certain restrictive covenants, including, but not limited to, requirements that they obtain consent from the lenders prior to changing the composition of any board of directors of any Project SPV. For more details, see "*Risk Factors – The Project SPVs are subject to restrictive covenants under their financing agreements that could limit our flexibility in managing our business or to use cash or other assets*" on page 32.

Seasonality

Traffic volume tends to decrease during the monsoon season and conversely tends to increase during holiday seasons. While the northern parts of India experience monsoon rains during the period from June or July until September or October every year, the southern parts of India, especially Tamil Nadu and some parts of coastal Andhra Pradesh, experience monsoon rains even during the months of October to December. The monsoon season may also restrict the ability to carry on activities related to operation and maintenance of toll roads. For further details on risk associated with seasonality, see "*Risk Factors – Our business will be subject to seasonal fluctuations that may affect our cash flows*" on page 26. Conversely, traffic volume tends to increase during holiday seasons.

Health, Safety and Environment

The Investment Manager and Project Manager believe that the Trust, the Project SPVs and the Target SPV are in compliance, in all material respects, with applicable health, safety and environmental regulations and other requirements in their operations. The Project Manager believes that accidents and occupational health hazards can be significantly reduced through a systematic analysis and control of risks and by providing appropriate training to management, employees and sub-contractors. Project managers appointed by the Project SPVs or the Target SPV, as applicable, for a project are principally responsible for ensuring that safety standards are met at the relevant project sites.

Intellectual Property

We do not own the "IRB" trademark and "IRB" logo, which are registered in the name of, and owned by, the Sponsor. However, pursuant to a separate name licensing agreement, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the "IRB" trademark as part of their respective corporate names, if applicable, as well as the "IRB" logo in connection with their respective businesses, on a non-exclusive basis. The license may be terminated under certain circumstances, including (i) if the Sponsor or any of its subsidiaries ceases to be the sponsor of the Trust for any reason whatsoever; or (ii) if the Sponsor or any of its subsidiaries ceases to hold at least 51% of the equity share capital of the Investment Manager, or an entity which is not a subsidiary of the Sponsor is appointed as the investment manager of the Trust. Upon the termination of the license, the Trust or the relevant Project SPV, as the case may be, will be required to cease the use of the IRB trademark and change its name to remove IRB from its name within three months from the date of termination, which may have a material adverse effect on the operations of the Project SPVs and require management's time and attention. Pursuant to an amendment agreement, which will be effective from the date of closing under the IRB GEPL Share Subscription Agreement, IRB GEPL has been made a party to the Name Licensing Agreement.

See also "*Risk Factors – We do not own the 'IRB' trademark and logo. Our license to use the 'IRB' trademark and logo may be terminated under certain circumstances and our ability to use the trademark and logo may be impaired*" on page 30.

Property

The Investment Manager's registered office is located in Mumbai from which all its administrative and reporting activities are conducted. The principal place of business of the Trust is located in Mumbai. The Investment Manager and the Trust also have an office located in New Delhi. The Project SPVs and the Target SPV typically lease various premises across India to facilitate their work at their project sites. These leases usually expire upon completion of the relevant project.

Insurance

The Project SPVs' and the Target SPV's operations are subject to hazards inherent in providing operation and maintenance services, such as risk of equipment failure, work accidents, fire, earthquake, flood and other force majeure events. This includes hazards that may cause injury and loss of life, damage and destruction of property, equipment and environmental damage. The principal types of insurance coverage for the Expanded Portfolio include standard fire and special perils insurance, contractor all-risk insurance and money insurance. The Investment Manager also maintains management liability insurance. The Investment Manager and the Trustee confirm that the amount of insurance that we presently maintain represents an adequate and appropriate level of coverage required to insure the Project SPVs' business and operations and all the infrastructure assets held by the Project SPVs, and is in accordance with the concession agreements and industry standards in India and will perform regular assessment on the adequacy of its insurance coverage on a yearly basis. The Investment Manager and the Trustee also confirm that the insurance coverage to be maintained by IRB GEPL upon the receipt of the appointed date for its project will represent an adequate and appropriate level of coverage required to insure IRB GEPL's business and operations and the infrastructure assets operated by IRB GEPL, and will be in accordance with the concession agreements and industry standards in India.

Legal Proceedings

The Project SPVs, the Target SPV, the Sponsor, the Investment Manager, the Project Manager and the Trustee are or may be involved in legal proceedings or claims from time to time. Certain proceedings or claims are currently pending at different levels of adjudication before various courts, tribunals and regulatory authorities. For a description of the material legal proceedings that are outstanding, see "*Material Litigation and Regulatory Action*" on page 615.

CORPORATE GOVERNANCE

Set out below is a summary of the corporate governance framework which is applicable in relation to the Trust, the Investment Manager and the Project SPVs and upon completion of the IRB GEPL Acquisition, will also be applicable to IRB GEPL.

Composition of the Board of Directors of the Investment Manager

As at the date of this Letter of Offer, the Sponsor holds 51% of the equity share capital of the Investment Manager and Croxley Investment Pte. Ltd. ("**Croxley**") holds 49% of the equity share capital of the Investment Manager. For details of the current board of directors of the Investment Manager (the "**Board**"), see "*The Investment Manager*" on page 266.

The Sponsor, Croxley and the Investment Manager have entered into a shareholders agreement dated August 6, 2019, as amended (the "**IM SHA**"). For details of the rights in relation to shareholding and certain other rights of Croxley in the Investment Manager, see "*The Investment Manager*" on page 266.

The Board shall consist of eight directors in accordance with the terms of the IM SHA. The composition of the Board is as follows:

(a) the Sponsor is entitled to nominate two directors on the Board (the "**Sponsor Directors**");

(b) Croxley is entitled to nominate two directors on the Board (the "**Investor Directors**"); and

(c) four independent directors are to be appointed in accordance with the InvIT Regulations, of which: (i) the Sponsor is entitled to recommend for appointment of two independent directors; (ii) Croxley is entitled to recommend the appointment of two independent director; and (ii) at least one of the independent directors shall be a woman director.

Under the IM SHA, an alternate director may be appointed to act as an alternate to the Sponsor Directors or Investor Directors during such director's absence for a period of at least three months from India, in accordance with the Companies Act.

The Investment Manager will reimburse the Board for all actual travel and accommodation expenses incurred by them or their alternate directors in connection with the performance of their duties as directors of the Investment Manager in accordance with the IM SHA. The directors will be entitled to sitting fees or any other remuneration for attending meetings as mutually agreed in writing by the parties.

In addition to the right to nominate directors on the Board, the Sponsor and Croxley are entitled to appoint one observer on the Board and/or the committees of the Board.

Chairperson

The chairperson of the Board will be the Sponsor Director unless an Event of Default has occurred.

Quorum

Subject to the provisions of the InvIT Regulations, the quorum for every meeting of the Board shall be one-third of its total strength or three directors, whichever is higher, including at least one independent director (including any meetings held by video-conferencing or by other audio-visual means).

If quorum is not present within 30 (thirty) minutes of the scheduled time for any meeting of the Board or ceases to exist at any time during such meeting, the meeting of the Board will be automatically adjourned and be reconvened on the same day in the following week, time and place and if such day is not a Business Day, then the immediately following Business Day. At any such adjourned meeting, the presence of at three directors shall be required to constitute the quorum; provided that no reserved matters will be taken up for discussion or voted upon at any board meeting (including any adjourned board meeting) unless at least one Investor Director and at least one IRB Director are present in such meeting, or if prior written consent in respect of such reserved matters has been obtained in accordance with the IM SHA. No matters which were not part of the agenda for the original board meeting will be discussed at such adjourned meeting. Subject to the terms of the IM SHA, the Investor Directors and the Sponsor Directors may at any time waive their respective right to form part of the quorum for a

particular board meeting, in writing, and at any such board meeting, no new matters other than those forming part of the agenda for such board meeting will be discussed or taken up.

Frequency of meetings

Subject to the provisions of the InvIT Regulations, the Board will meet at least four times a year and once every 120 days, at any location mutually agreed between the Sponsor Directors and the Investor Directors.

Committees

The Investment Manager has constituted (i) an audit committee; (ii) a capex monitoring committee; (iii) a health and safety monitoring committee; (iv) nomination and remuneration committee; (v) stakeholders relationship committee; (vi) risk management committee; and (vii) a prevention of sexual harassment committee, in accordance with the terms of the InvIT Regulations (as applicable).

The Sponsor and Croxley have the right to nominate a Sponsor Director and an Investor Director, respectively, as a member of any committee or sub-committee of the board. In addition to the committees of the Board set out above, the Board may constitute committees for various functions from time to time.

Reserved Matters

In accordance with the terms of the IM SHA, the Sponsor and Croxley have agreed that no resolution will be passed or decision or action be taken by the Investment Manager in relation to any Manager Group Member, in any manner, including by the Board, the shareholders or otherwise in respect of any of the Reserved Matters, unless the written consents of an Investor Director and a Sponsor Director have been obtained in the manner specified in the IM SHA, prior to any decisions on Reserved Matters being taken in any other manner. Subject to applicable law, the Sponsor, Croxley, each of the the Sponsor Directors and/or each of the Investor Directors will have the right to require that any Reserved Matter be decided at a shareholder meeting instead of at a Board meeting and/or with the prior written consent of Croxley or of the Sponsor in accordance with the terms of the IM SHA.

Under the IM SHA, any obligation on any Manager Group Member is deemed to be a simultaneous and corresponding obligation on the Sponsor to exercise its voting rights in relation to the Investment Manager to perform such obligation.

For details of the Reserved Matters, see "*Rights of Unitholders – Approval of Unitholders*" on page 259.

Directors of the SPVs

The Investment Manager, in consultation with the Trustee, has appointed the directors on the board of each Project SPV in accordance with the InvIT Regulations. Upon the completion of the IRB GEPL Acquisition, the Investment Manager will appoint the directors on the board of the Target SPV in accordance with the InvIT Regulations. Further, pursuant to the terms of the IM SHA, each of the Sponsor and the Croxley have the right to require a director or observer on the board of directors of any SPV as a representative of the Investment Manager.

Fall-Away

The rights of the Sponsor and Croxley in relation to the board of directors of the Investment Manager, shareholders meetings and voting and reserved matters under the IM SHA will terminate with respect to such party upon such party's (together its affiliates') shareholding in the Investment Manager (calculated on a fully diluted basis) falling below 20% of the share capital of the Investment Manager.

All rights of the Sponsor or Croxley under the IM SHA other than the economic and voting rights attached to the securities held by them shall terminate with respect to such party upon such party's (together with its affiliates') shareholding in the Investment Manager (calculated on a fully diluted basis) falling below 10% of the share capital of the Investment Manager.

Policies of the Manager Group

Pursuant to the terms of the IMA SHA, the Investment Manager (on behalf of itself and the Trust), each of the Project SPVs are required to adopt certain policies for corporate governance, key terms of which are set out below. Each Manager Group Member is required to ensure that these policies remain in full force and effect and consider amendments in accordance with the terms of the Framework Agreement. Mr. Kaustubh Shevade has been designated by the Investment Manager as the Compliance Officer with respect to the Trust.

Code of Conduct

The Code of Conduct serves as a basis for maintaining the standards of honest and ethical business conduct including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships, ensuring confidentiality of corporate information and data of the Manager Group, the Sponsor/Project Manager, and the Trustee (together the "**Trust Entities**") and compliance with the applicable laws and the InvIT Regulations. The key terms of the Code of Conduct include *inter-alia*:

(i) Duties must be carried out in an honest, fair, diligent and ethical manner within the scope of the authority conferred and in accordance with applicable laws, rules, regulations, agreements, guidelines, standards, and internal policies and procedures.

(ii) Assets, properties, and human resources of the Manager Group Members are to be used only for the official business of the Trust Entities, and the security of all confidential information must be ensured.

(iii) The Trust Entities must not, and ensure that their employees do not engage in any business activity that conflicts with the interest of a Manager Group Member.

(iv) The Trust and the parties to the Trust must conduct all affairs in the interest of the unitholders of the InvIT, and they shall make adequate, accurate, explicit and timely disclosure of relevant material information to all unit holders, exchanges and the Securities and Exchange Board of India in accordance with the InvIT Regulations.

(v) The Trust, the parties to the Trust and any third party appointed by the Investment Manager shall not use any unethical means to sell, market or induce any person to buy units of the Trust and where a third party appointed by the Investment Manager fails to comply with this condition, the Investment Manager shall be held liable for the same. The Trust and the parties to the Trust shall render at all times high standards of service, exercise due diligence, ensure proper care and exercise independent professional judgment.

Disclosure of Information Policy

This policy sets out the process and procedure for determining materiality of information in relation to periodic disclosures required under applicable law, including the InvIT Regulations. The key terms of the Disclosure of Information Policy include *inter-alia*:

(i) The following information in relation to the Manager Group shall be provided to the Unitholders:
   a. quarterly management accounts within 20 days from the end of each calendar month;
   b. unaudited quarterly financial statements (including profit and loss accounts and a balance sheet) and management accounts for each financial quarter within 45 days from the end of such financial quarter;
   c. audited annual financial statements (including profit and loss accounts and a balance sheet) for every Financial Year within 60 days of the end of such Financial Year;
   d. notices, agenda and minutes of meetings of board of directors, committees of the board and shareholders of the Manager Group Member as may be requested by the unitholders;
   e. copies of all agreements, business projections, reports, certificates and any material information regularly provided to any other security holder or lender (in their capacity as security holders or lenders), including any management or audit or investigative reports provided to any security holder or lender, simultaneously with such security holder or lender;
   f. proposed Annual Budget for the upcoming Financial Year by March 15 of the preceding Financial Year;
   g. toll collection MIS data and lenders' independent engineers' reports for each SPV on monthly basis;
   h. prior intimation, to the extent practicable, regarding initiation of any criminal litigation to which the Manager Group Member is a party; and

i. prior intimation regarding initiation of any civil or administrative litigation, arbitration or other legal proceedings to which the Manager Group Member is a party and which relate to a claim amount exceeding INR 25 million.

(ii) Disclosure of information to regulators:
   a. The Manager Group Member shall submit the information required to be submitted to the SEBI, the NHAI, MoRTH, the RBI, the Stock Exchanges or any other governmental, regulatory, statutory, administrative, or judicial body under applicable law, including or such further information or clarification required by any of them; and
   b. The Manager Group Member shall inform the SEBI, in writing, if any information or particulars previously submitted to SEBI are found to be false or misleading in any material particular or if there is any material change in the information already submitted, in accordance with InvIT Regulations.

Distribution Policy

For details of the Distribution Policy, see "*Distributions*" on page 254.

Procurement and Divestment Policy

This policy sets out the guidelines for procurement and divestment of the Trust Assets and the assets of any Manager Group Member (collectively, the "**Manager Group Assets**"). The key terms of the Procurement and Divestment Policy include, *inter-alia*:

(i) The Investment Manager is empowered to make all investment decisions with respect to the underlying assets or projects of the Trust, including, without limitation, investigation, selection, development, negotiation, structuring, restructuring, commitment to or monitoring and any further investment or divestment of the underlying assets or projects of the Trust.

(ii) The Investment Manager shall focus on addition of new assets to the existing portfolio of the Manager Group Assets. The projects acquired shall be in the under-construction phase in order to utilize and leverage the experience and technical expertise of the Manager Group Members.

(iii) Any decision for procurement and divestment of the Manager Group Assets must be made in accordance with the Annual Budget, the Business Plan and the terms of the Framework Agreement and the IM SHA. Any procurement or divestment that is not in accordance with such documents will require the written consent of the shareholders of the Investment Manager and the Unitholders of the Trust. It is clarified that this shall be treated as a matter which is not in the ordinary course of business and will require the approval of the unitholders under Regulation 22(5)(d) of the InvIT Regulations.

Leverage Policy

For details of the Leverage Policy, see "*Leverage*" on page 239.

Nomination and Remuneration Policy

This policy sets out the guidelines regarding the nomination, remuneration and removal of directors, key managerial personnel and employees of the Manager Group. The key terms of the Nomination and Remuneration Policy include, *inter-alia*:

(i) The board of directors of the Manager Group Members shall, as applicable, have the required number of independent directors in terms of the applicable law, including the Companies Act.

(ii) The board of directors of each of the Manager Group Members, is, as applicable, expected to possess the required expertise, skill and experience to effectively manage and direct the Manager Group Members to attain its organizational and business goals. They are expected to be persons with vision, leadership qualities, and proven competence and integrity.

(iii) Each member of the board of directors of the Manager Group Members, as applicable, shall ensure that their personal interest does not run in conflict with the any of the Manager Group Member's interests.

(iv) The annual performance and remuneration review of the employees of the Manager Group Members shall be done once every year. The review of remuneration will be undertaken on the basis of the following criteria:
   a. Performance of the employee;
   b. Performance of the team to which such employee belongs;
   c. Overall performance of the Manager Group Member; and
   d. Prevailing business environment and requirement of manpower for future projects.

Additionally, the following terms will be applicable to the Investment Manager:

   a. The board of directors shall constitute a capex monitoring committee, a health and safety monitoring committee, an audit committee and all such other committees of the board of directors as are required to be constituted by the Investment Manager under applicable law.
   b. The board of directors shall appoint and designate such key managerial personnel as are required under applicable law, including a Chief Executive Officer, a Chief Financial Officer and a Company Secretary of the Investment Manager. These key managerial persons shall be jointly nominated by the Sponsor and Croxley, and appointed by the board of directors.

Record Retention Policy

The policy sets out the guidelines for the identification of documents and records which are required to be preserved, storage, maintenance and preservation of documents and records of the Manager Group and protection and preservation of all the necessary documents and records as per the statutory requirements. The key terms of the Record Retention Policy include, *inter-alia*:

(i) The policy applies to all the documents required to be maintained in terms of the InvIT Regulations, the applicable secretarial standards, and any other applicable law which shall be preserved under the custody of the compliance officer of the respective Manager Group Members. It also applies to all financial records required to be maintained in terms of the InvIT Regulations, the prescribed accounting standards, the Income Tax Act, 1961, and any other applicable law which shall be maintained under the custody of the chief financial officer of the respective Manager Group Member.

(ii) All documents which are required to be preserved by virtue of applicable laws shall be preserved either permanently or for such periods as may be mandated by applicable laws from time to time.

(iii) Documents which are required to be preserved for a period of not less than eight years after the completion of the relevant transaction shall be determined by the relevant heads of departments of the Manager Group Member from time to time.

(iv) Documents shall be preserved in a chronological manner for each financial year.

(v) The Manager Group Members shall maintain back-up of all documents maintained in electronic form. Documents which are confidential in nature shall, wherever possible, be kept under lock and key and shall be shared on a 'need to know' basis only, with persons directly involved in the transaction involving such documents and records.

(vi) Certain documents may be required to be kept open by the Manager Group Member for inspection in the manner specified under such applicable law. Regulatory authorities, including the SEBI, have the right of access to all registers and records.

(vii) Documents which are statutorily required to be hosted on the website of any Manager Group Member shall be hosted within the prescribed timeline from the occurrence of the event.

(viii) Where documents are no longer required to be preserved, or on the expiration of the specified period of time for which they were required to be preserved, they may be discarded or disposed off in accordance with the procedure specified under the applicable law, and where no procedure has been specified, they may be discarded or disposed off in accordance with the standard operating procedures applicable to the respective departments.

In addition, the Investment Manager (on behalf of itself and the Trust) and each of the Project SPVs have also adopted, and upon completion of the acquisition of the Target SPV, the Target SPV will adopt, policies on

corporate social responsibility, environment, health and safety, maternity benefits, equal opportunities, procurement, prohibited practices and anti-trust practices, anti-corruption practices, prevention of sexual harassment and anti-harassment, personal data protection, whistle-blowing / vigil mechanism, corporate disclosures, internal procedure and insider trading, conflict of interest policy, appointment of directors, cyber matters, environmental, social and corporate governance commitments, grievance redressal, human rights, internal control, compensation in case of accident, risk management, secretarial compliance and succession policy.

SUMMARY OF THE CONCESSION AGREEMENTS

Set out below are summaries of the concession agreements entered into by the Project SPVs and the Target SPV in relation to their respective business. The descriptions and summaries of the agreements below are not and nor do they purport to be complete descriptions or summaries of all terms of such agreements. Certain terms used in this section have the meanings assigned to such terms in the respective concession agreements. Copies of these concession agreements will be made available for inspection at the office of the Trust in New Delhi. See "Material Contracts and Documents for Inspection" on page 651.

1. Concession Agreement between AETL and the NHAI dated September 1, 2015

AETL has entered into a concession agreement for six-laning of km 199.660 to km 323.525, Agra to Etawah Bypass section of NH-2 in Uttar Pradesh on build, operate and transfer ("**BOT**") basis (the "**AETL Concession Agreement**"), for a period of 24 years, from August 1, 2016 ("**AETL Appointed Date**") or until such date on which the AETL Concession Agreement is terminated by a termination notice ("**AETL Termination Date**", and the period between the AETL Appointed Date and the AETL Termination Date, the "**AETL Concession Period**").

Certain Definitions

"**AETL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the AETL Debt Due is convertible into equity at the option of the senior lenders and/or AETL, it shall, for the purposes of the AETL Concession Agreement, be deemed to be AETL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**AETL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**AETL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of AETL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the AETL Project Highway (as defined below), but does not include additional facilities;

"**AETL Project Highway**" shall mean the site comprising the existing road comprising section of six-laning of Agra-Etawah Bypass section of NH-2 from km 199.660 to km 323.525 in the State of Uttar Pradesh under NHDP Phase-V on BOT(Toll) mode and all AETL Project Assets, and its subsequent development and augmentation in accordance with the AETL Concession Agreement;

"**AETL Project**" shall mean the construction, operation, and maintenance of the AETL Project Highway in accordance with the provisions of the AETL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by AETL in the form of an additional concession fee, as set forth in the bid for each year of the AETL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the AETL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to AETL, and AETL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the AETL Concession Agreement, to construct, operate and maintain the AETL Project for a period of 24 years from the AETL Appointed Date.

Subject to, and in accordance with the provisions of the AETL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, AETL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the AETL Concession Agreement;

b) finance and construct the AETL Project Highway;

c) manage, operate, and maintain the AETL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the AETL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of AETL's obligations under and in accordance with the AETL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of AETL under the AETL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the AETL Concession Agreement, or the concession granted, or on the whole or any part of the AETL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the AETL Concession Agreement or the agreement for the substitution of AETL entered into by AETL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, AETL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the AETL Concession Agreement and the applicable rules and regulations, provided that for ease of payment, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, AETL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the AETL Concession Agreement, AETL shall not collect any fees in relation to exempted vehicles.

AETL shall not collect any fee from a local user for non-commercial use of the AETL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the AETL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, AETL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, AETL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the AETL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, AETL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, AETL was required to pay to the NHAI on the AETL Appointed Date, a Premium in the form of an additional concession fee equal to ₹810 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year of the AETL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 5% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the AETL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

AETL was required to, prior to the AETL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the AETL Concession Agreement read with the escrow agreement entered into amongst AETL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

AETL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the AETL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

AETL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by AETL for and in respect of the AETL Project Highway;

b) all payments relating to construction of the AETL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the AETL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;
f) monthly proportionate provision of AETL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by AETL, including repayment of revenue shortfall loan;

i) monthly proportionate provision of AETL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of AETL.

AETL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the AETL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by AETL for and in respect of the AETL Project Highway;

b) 90% of the AETL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by AETL, including the Premium and the repayment of the revenue shortfall loan;

e) retention and payments relating to the liability for defects and deficiencies set forth in the AETL Concession Agreement;

f) outstanding AETL Debt Service including balance of AETL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the AETL Concession Agreement; and

j) balance, if any, in accordance with the instructions of AETL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the AETL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the AETL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the AETL Concession Agreement and the costs thereof shall be expended by AETL and reimbursed by the NHAI.

If AETL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the AETL Concession Agreement, or inform AETL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of AETL being in material default or breach of the AETL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the AETL Concession Agreement.

In the event of the NHAI being in material default of the AETL Concession Agreement at any time after the AETL Appointed Date, it shall pay to AETL by way of compensation, all direct costs suffered or incurred by AETL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary

particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the AETL Concession Agreement.

In the event that a material default or breach of the AETL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the AETL Concession Period as provided in the AETL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the AETL Concession Agreement, the NHAI shall pay to AETL, for each day of the breach, compensation as provided in the AETL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the AETL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the AETL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the AETL Concession Period shall, subject to payment of concession fee in accordance with the AETL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in AETL Concession Period shall not in any case exceed 20% (twenty percent) of the AETL Concession Period.

Subject to the provisions of the AETL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the AETL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in AETL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in AETL Concession Period under the AETL Concession Agreement, AETL may elect to pay, in addition to the concession fee that would be due and payable if the AETL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by AETL no later than two years prior to the AETL Termination Date contemplated by the AETL Concession Agreement, NHAI shall waive the reduction in AETL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in AETL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the AETL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the AETL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The AETL Concession Period, may be extended so that it yields for AETL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the AETL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to AETL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by AETL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this AETL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the AETL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the AETL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the AETL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and AETL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, AETL shall be deemed to be in default of the AETL Concession Agreement ("**AETL Default**"), unless the default has occurred solely as a result of any breach of the AETL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the AETL Concession Agreement and AETL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the AETL Concession Agreement, AETL fails to cure, within a cure period of 90 days, the AETL Default for which whole or part of the performance security was appropriated;

c) AETL does not achieve the latest outstanding project milestone due in accordance with the AETL Concession Agreement and continues to be in default for 90 days;

d) AETL abandons or manifests intention to abandon the construction or operation of the AETL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the AETL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the AETL Concession Agreement;

g) AETL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) AETL has failed to make any payment to the NHAI within the period specified in the AETL Concession Agreement;

i) an escrow default has occurred and AETL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and AETL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by AETL has caused a material adverse effect;

l) AETL creates an encumbrance in breach of the AETL Concession Agreement;

m) AETL repudiates the AETL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the AETL Concession Agreement;

n) a change in ownership has occurred in breach of the AETL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of AETL under any of the project agreements, or of (ii) all or part of the assets or undertaking of AETL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of AETL has caused a material adverse effect;

q) AETL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for AETL or for the whole or material part of its assets that has a material bearing on the AETL Project;

r) AETL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of AETL is passed, or any petition for winding up of AETL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or AETL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of AETL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of AETL under the AETL Concession Agreement and the project agreements; provided that:

    i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the AETL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the AETL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of AETL as at the AETL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of AETL which is, as of the date hereof, found to be materially false, incorrect or misleading or AETL is at any time hereafter found to be in breach thereof;

u) AETL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) AETL has failed to fulfil any obligation, for which failure termination has been specified in the AETL Concession Agreement; or

w) AETL commits a default in complying with any other provision of the AETL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the AETL Concession Agreement, upon the occurrence of an AETL Default, the NHAI shall be entitled to terminate the AETL Concession Agreement by issuing a termination notice to AETL. Before issuing the termination notice, the NHAI shall, by notice, inform AETL of its intention to issue a termination notice and grant 15 days to AETL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the AETL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute AETL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of AETL. On a written request from the lenders' representative and AETL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by AETL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the AETL Concession Agreement, the NHAI shall be deemed to be in default of the AETL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the AETL Concession Agreement by AETL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the AETL Concession Agreement and such default has a material adverse effect on AETL;

b) the NHAI has failed to make any payment to AETL within the period specified in the AETL Concession Agreement;

c) the NHAI repudiates the AETL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the AETL Concession Agreement; or

d) the State of Uttar Pradesh commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on AETL and the breach continues for a period of 90 days from the date of notice given in this behalf by AETL to the NHAI.

Without prejudice to any other rights or remedies which AETL may have under the AETL Concession Agreement, upon the occurrence of an NHAI Default, AETL shall be entitled to terminate the AETL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, AETL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an AETL Default during the operation period, the NHAI shall pay to AETL, by way of termination payment, an amount equal to 90% of the AETL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of AETL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to AETL, by way of termination payment, an amount equal to:

a) AETL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to AETL within 15 days of a demand being made by AETL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the AETL Concession Agreement shall constitute a full and final settlement of all claims of AETL on account of termination of the AETL Concession Agreement for any reason whatsoever and AETL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

AETL shall be responsible for all defects and deficiencies in the AETL Project Highway for a period of 120 days after termination. AETL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the AETL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the AETL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

1.1. Supplementary Agreement between AETL and the NHAI dated April 7, 2018

AETL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated September 1, 2015 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to AETL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. AETL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. AETL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

AETL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or

renewed, as the case may be, by AETL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by AETL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by AETL. The NHAI shall provide reasonable assistance in this regard.

Timeline

AETL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of issuance of the change of scope work order by the NHAI and the release of advance payment.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to AETL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on AETL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

AETL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of AETL, the NHAI shall not be liable for any compensation to AETL, and AETL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to AETL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

AETL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to AETL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then AETL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.
Upon termination, AETL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. AETL shall ensure that all the warranties are duly assigned in favor of the NHAI and AETL shall bear the cost and expenses towards the assignment.

1.2. Supplementary Agreement between AETL and the NHAI dated May 1, 2017

AETL has entered into a supplementary agreement with the NHAI to amend the concession agreement dated September 1, 2015 (the "**Concession Agreement**") to provide for dispute resolution through the Society for Affordable Redressal of Disputes ("**SAROD**").

Any dispute arising out of the Concession Agreement which is not resolved amicably shall be finally settled by arbitration. The dispute shall be referred to SAROD for resolution by arbitration in accordance with the rules of SAROD and the Arbitration and Conciliation Act, 1996. AETL and the NHAI shall choose the arbitrators from a panel of arbitrators empanelled by SAROD. The arbitral tribunal shall consist of a sole arbitrator in case the total claim of the dispute is ₹30 million or less, and in case the claim is more than ₹30 million, the tribunal shall consist of an odd number of arbitrators to be nominated by the parties.

The arbitral proceedings shall be held at Delhi (India) and the language of the arbitral proceedings, and that of all the correspondence between the parties shall be English. The dispute shall be governed by the substantive law of India.

2. Concession Agreement between CGTL and the NHAI dated December 9, 2016

CGTL has entered into a concession agreement for six-laning of Kishangarh Udaipur Ahmedabad section from km 90.000 (near Gulabpura) to km 214.870 (end of Chittorgarh bypass), of NH-79 in Rajasthan on build, operate and transfer ("**BOT**") basis (the "**CGTL Concession Agreement**"), for a period of 20 years, from November 4, 2017 ("**CGTL Appointed Date**") or until such date on which the CGTL Concession Agreement is terminated by a termination notice ("**CGTL Termination Date**", and the period between the CGTL Appointed Date and the CGTL Termination Date, the "**CGTL Concession Period**").

Certain Definitions

"**CGTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the CGTL Debt Due is convertible into equity at the option of the senior lenders and/or CGTL, it shall, for the purposes of the CGTL Concession Agreement, be deemed to be CGTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**CGTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**CGTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of CGTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the CGTL Project Highway (as defined below), but does not include additional facilities;

"**CGTL Project Highway**" shall mean the site comprising the existing road comprising NH-79 from km 90.000 to km 214.870 and all CGTL Project Assets, and its subsequent development and augmentation in accordance with the CGTL Concession Agreement;

"**CGTL Project**" shall mean the construction, operation, and maintenance of the CGTL Project Highway in accordance with the provisions of the CGTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by CGTL in the form of an additional concession fee, as set forth in the bid for each year of the CGTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the CGTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to CGTL, and CGTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the CGTL Concession Agreement, to construct, operate and maintain the CGTL Project for a period of 20 years from the CGTL Appointed Date.

Subject to, and in accordance with the provisions of the CGTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, CGTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the CGTL Concession Agreement;

b) finance and construct the CGTL Project Highway;

c) manage, operate, and maintain the CGTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the CGTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of CGTL's obligations under and in accordance with the CGTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of CGTL under the CGTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the CGTL Concession Agreement, or the concession granted, or on the whole or any part of the CGTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the CGTL Concession Agreement or the agreement for the substitution of CGTL entered into by CGTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, CGTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the CGTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, CGTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the CGTL Concession Agreement, CGTL shall not collect any fees in relation to exempted vehicles.

CGTL shall not collect any fee from a local user for non-commercial use of the CGTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the CGTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, CGTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, CGTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the CGTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, CGTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, CGTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹2,286,000,000 as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year, and for each subsequent year of the CGTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year

by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the CGTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

CGTL was required to, prior to the CGTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the CGTL Concession Agreement read with the escrow agreement entered into amongst CGTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

CGTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the CGTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

CGTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by CGTL for and in respect of the CGTL Project Highway;

b) all payments relating to construction of the CGTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the CGTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of CGTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by CGTL, including repayment of revenue shortfall loan. CGTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the CGTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of CGTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of CGTL.

CGTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the CGTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by CGTL for and in respect of the CGTL Project Highway;

b) 90% of the CGTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by CGTL, including the repayment of the revenue shortfall loan. CGTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the CGTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the CGTL Concession Agreement;

f) outstanding CGTL Debt Service including balance of CGTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the CGTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of CGTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the CGTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the CGTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the CGTL Concession Agreement and the costs thereof shall be expended by CGTL and reimbursed by the NHAI.

If CGTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the CGTL Concession Agreement, or inform CGTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of CGTL being in material default or breach of the CGTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the CGTL Concession Agreement.

In the event of the NHAI being in material default of the CGTL Concession Agreement at any time after the CGTL Appointed Date, it shall pay to CGTL by way of compensation, all direct costs suffered or incurred by

CGTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the CGTL Concession Agreement.

In the event that a material default or breach of the CGTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the CGTL Concession Period as provided in the CGTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the CGTL Concession Agreement, the NHAI shall pay to CGTL, for each day of the breach, compensation as provided in the CGTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the CGTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the CGTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the CGTL Concession Period shall, subject to payment of concession fee in accordance with the CGTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in CGTL Concession Period shall not in any case exceed 20% (twenty percent) of the CGTL Concession Period.

Subject to the provisions of the CGTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the CGTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in CGTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in CGTL Concession Period under the CGTL Concession Agreement, CGTL may elect to pay, in addition to the concession fee that would be due and payable if the CGTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by CGTL no later than two years prior to the CGTL Termination Date contemplated by the CGTL Concession Agreement, NHAI shall waive the reduction in CGTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in CGTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the CGTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the CGTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The CGTL Concession Period, may be extended so that it yields for CGTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the CGTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to CGTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by CGTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this CGTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the CGTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the CGTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the CGTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and CGTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, CGTL shall be deemed to be in default of the CGTL Concession Agreement ("**CGTL Default**"), unless the default has occurred solely as a result of any breach of the CGTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the CGTL Concession Agreement and CGTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the CGTL Concession Agreement, CGTL fails to cure, within a cure period of 90 days, the CGTL Default for which whole or part of the performance security was appropriated;

c) CGTL does not achieve the latest outstanding project milestone due in accordance with the CGTL Concession Agreement and continues to be in default for 90 days;

d) CGTL abandons or manifests intention to abandon the construction or operation of the CGTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the CGTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the CGTL Concession Agreement;

g) CGTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) CGTL has failed to make any payment to the NHAI within the period specified in the CGTL Concession Agreement;

i) an escrow default has occurred and CGTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and CGTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by CGTL has caused a material adverse effect;

l) CGTL creates an encumbrance in breach of the CGTL Concession Agreement;

m) CGTL repudiates the CGTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the CGTL Concession Agreement;

n) a change in ownership has occurred in breach of the CGTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of CGTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of CGTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of CGTL has caused a material adverse effect;

q) CGTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for CGTL or for the whole or material part of its assets that has a material bearing on the CGTL Project;

r) CGTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of CGTL is passed, or any petition for winding up of CGTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or CGTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of CGTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of CGTL under the CGTL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the CGTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the CGTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of CGTL as at the CGTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of CGTL which is, as of the date hereof, found to be materially false, incorrect or misleading or CGTL is at any time hereafter found to be in breach thereof;

u) CGTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) CGTL has failed to fulfil any obligation, for which failure termination has been specified in the CGTL Concession Agreement; or

w) CGTL commits a default in complying with any other provision of the CGTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the CGTL Concession Agreement, upon the occurrence of a CGTL Default, the NHAI shall be entitled to terminate the CGTL Concession Agreement by issuing a termination notice to CGTL. Before issuing the termination notice, the NHAI shall, by notice, inform CGTL of its intention to issue a termination notice and grant 15 days to CGTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the CGTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute CGTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of CGTL. On a written request from the lenders' representative and CGTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by CGTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the CGTL Concession Agreement, the NHAI shall be deemed to be in default of the CGTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the CGTL Concession Agreement by CGTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the CGTL Concession Agreement and such default has a material adverse effect on CGTL;

b) the NHAI has failed to make any payment to CGTL within the period specified in the CGTL Concession Agreement;

c) the NHAI repudiates the CGTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the CGTL Concession Agreement; or

d) the State of Rajasthan commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on CGTL and the breach continues for a period of 90 days from the date of notice given in this behalf by CGTL to the NHAI.

Without prejudice to any other rights or remedies which CGTL may have under the CGTL Concession Agreement, upon the occurrence of an NHAI Default, CGTL shall be entitled to terminate the CGTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, CGTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a CGTL Default during the operation period, the NHAI shall pay to CGTL, by way of termination payment, an amount equal to 90% of the CGTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of CGTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to CGTL, by way of termination payment, an amount equal to:

a) CGTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to CGTL within 30 days of a demand being made by CGTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the CGTL Concession Agreement shall constitute a full and final settlement of all claims of CGTL on account of termination of the CGTL Concession Agreement for any reason whatsoever and CGTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

CGTL shall be responsible for all defects and deficiencies in the CGTL Project Highway for a period of 120 days after termination. CGTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the CGTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the CGTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

3. Concession Agreement between IRB HMTL and the NHAI dated May 29, 2018

IRB HMTL has entered into a concession agreement for six-laning of Hapur Bypass to Moradabad section including Hapur Bypass from km 50.000 (design chainage 50.000) to km 148.277 (design chainage 149.867) of NH-24 (new NH-9) in Uttar Pradesh on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**IRB HMTL Concession Agreement**"), for a period of 22 years, from May 28, 2019 ("**IRB HMTL Appointed Date**") or until such date on which the IRB HMTL Concession Agreement is terminated by a termination notice ("**IRB HMTL Termination Date**", and the period between the IRB HMTL Appointed Date and the IRB HMTL Termination Date, the "**IRB HMTL Concession Period**").

Certain Definitions

"**IRB HMTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principal**") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the IRB HMTL Debt Due is convertible into equity at the option of the senior lenders and/or IRB HMTL, it shall, for the purposes of the IRB HMTL Concession Agreement, be deemed to be IRB HMTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**IRB HMTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**IRB HMTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of IRB HMTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the IRB HMTL Project Highway (as defined below), but does not include additional facilities;

"**IRB HMTL Project Highway**" shall mean the site comprising the existing road comprising Hapur Bypass to Moradabad section including Hapur Bypass from km 50.000 (design chainage km 50.000) to km 148.277 (design chainage km 149.867) of NH-24 (new NH-9) and all IRB HMTL Project Assets, and its subsequent development and augmentation in accordance with the IRB HMTL Concession Agreement;

"**IRB HMTL Project**" shall mean the construction, operation, and maintenance of the IRB HMTL Project Highway in accordance with the provisions of the IRB HMTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount paid to the NHAI by IRB HMTL in the form of an additional concession fee, as set forth in the bid for each year of the IRB HMTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB HMTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB HMTL, and IRB HMTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB HMTL Concession Agreement, to construct, operate and maintain the IRB HMTL Project for a period of 22 years from the IRB HMTL Appointed Date.

Subject to, and in accordance with the provisions of the IRB HMTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB HMTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB HMTL Concession Agreement;

b) finance and construct the IRB HMTL Project Highway;

c) manage, operate, and maintain the IRB HMTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB HMTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of IRB HMTL's obligations under and in accordance with the IRB HMTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB HMTL under the IRB HMTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB HMTL Concession Agreement, or the concession granted, or on the whole or any part of the IRB HMTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB HMTL Concession Agreement or the agreement for the substitution of IRB HMTL entered into by IRB HMTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, IRB HMTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB HMTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, IRB HMTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the IRB HMTL Concession Agreement, IRB HMTL shall not collect any fees in relation to exempted vehicles.

IRB HMTL shall not collect any fee from a local user for non-commercial use of the IRB HMTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB HMTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB HMTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB HMTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB HMTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, IRB HMTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, IRB HMTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹315 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the IRB HMTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the IRB HMTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

IRB HMTL was required to, prior to the IRB HMTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB HMTL Concession Agreement read with the escrow agreement entered into amongst IRB HMTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB HMTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the IRB HMTL Project Highway, including the proceeds

of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

IRB HMTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB HMTL for and in respect of the IRB HMTL Project Highway;

b) all payments relating to construction of the IRB HMTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB HMTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of IRB HMTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by IRB HMTL, including repayment of revenue shortfall loan. IRB HMTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the IRB HMTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of IRB HMTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of IRB HMTL.

IRB HMTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB HMTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB HMTL for and in respect of the IRB HMTL Project Highway;

b) 90% of the IRB HMTL Debt Due excluding the subordinated debt;
c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by IRB HMTL, including the repayment of the revenue shortfall loan. IRB HMTL has agreed to give irrevocable instruction to the Escrow

Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the IRB HMTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the IRB HMTL Concession Agreement;

f) outstanding IRB HMTL Debt Service including balance of IRB HMTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the IRB HMTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of IRB HMTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB HMTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the IRB HMTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the IRB HMTL Concession Agreement and the costs thereof shall be expended by IRB HMTL and reimbursed by the NHAI.

If IRB HMTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB HMTL Concession Agreement, or inform IRB HMTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB HMTL being in material default or breach of the IRB HMTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB HMTL Concession Agreement.

In the event of the NHAI being in material default of the IRB HMTL Concession Agreement at any time after the IRB HMTL Appointed Date, it shall pay to IRB HMTL by way of compensation, all direct costs suffered or incurred by IRB HMTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB HMTL Concession Agreement.

In the event that a material default or breach of the IRB HMTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB HMTL Concession Period as provided in the IRB HMTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the IRB HMTL Concession Agreement, the NHAI shall pay to IRB HMTL, for each day of the breach, compensation as provided in the IRB HMTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB HMTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the IRB HMTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the IRB HMTL Concession Period shall, subject to payment of concession fee in accordance with the IRB HMTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in IRB HMTL Concession Period shall not in any case exceed 20% (twenty percent) of the IRB HMTL Concession Period.

Subject to the provisions of the IRB HMTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the IRB HMTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in IRB HMTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in IRB HMTL Concession Period under the IRB HMTL Concession Agreement, IRB HMTL may elect to pay, in addition to the concession fee that would be due and payable if the IRB HMTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by IRB HMTL no later than two years prior to the IRB HMTL Termination Date contemplated by the IRB HMTL Concession Agreement, NHAI shall waive the reduction in IRB HMTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in IRB HMTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the IRB HMTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the IRB HMTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The IRB HMTL Concession Period, may be extended so that it yields for IRB HMTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the IRB HMTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to IRB HMTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by IRB HMTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this IRB HMTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the IRB HMTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the IRB HMTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB HMTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB HMTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB HMTL shall be deemed to be in default of the IRB HMTL Concession Agreement ("**IRB HMTL Default**"), unless the default has occurred solely as a result of any breach of the IRB HMTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB HMTL Concession Agreement and IRB HMTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB HMTL Concession Agreement, IRB HMTL fails to cure, within a cure period of 90 days, the IRB HMTL Default for which whole or part of the performance security was appropriated;

c) IRB HMTL does not achieve the latest outstanding project milestone due in accordance with the IRB HMTL Concession Agreement and continues to be in default for 90 days;

d) IRB HMTL abandons or manifests intention to abandon the construction or operation of the IRB HMTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the IRB HMTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the IRB HMTL Concession Agreement;

g) IRB HMTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) IRB HMTL has failed to make any payment to the NHAI within the period specified in the IRB HMTL Concession Agreement;

i) an escrow default has occurred and IRB HMTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB HMTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by IRB HMTL has caused a material adverse effect;

l) IRB HMTL creates an encumbrance in breach of the IRB HMTL Concession Agreement;

m) IRB HMTL repudiates the IRB HMTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB HMTL Concession Agreement;

n) a change in ownership has occurred in breach of the IRB HMTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB HMTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB HMTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of IRB HMTL has caused a material adverse effect;

q) IRB HMTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB HMTL or for the whole or material part of its assets that has a material bearing on the IRB HMTL Project;

r) IRB HMTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of IRB HMTL is passed, or any petition for winding up of IRB HMTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB HMTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB HMTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB HMTL under the IRB HMTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB HMTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB HMTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB HMTL as at the IRB HMTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of IRB HMTL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB HMTL is at any time hereafter found to be in breach thereof;

u) IRB HMTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) IRB HMTL has failed to fulfil any obligation, for which failure termination has been specified in the IRB HMTL Concession Agreement; or

w) IRB HMTL commits a default in complying with any other provision of the IRB HMTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB HMTL Concession Agreement, upon the occurrence of an IRB HMTL Default, the NHAI shall be entitled to terminate the IRB HMTL Concession Agreement by issuing a termination notice to IRB HMTL. Before issuing the termination notice, the NHAI shall, by notice, inform IRB HMTL of its intention to issue a termination notice and grant 15 days to IRB HMTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the IRB HMTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute IRB HMTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of IRB HMTL. On a written request from the lenders' representative and IRB HMTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by IRB HMTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB HMTL Concession Agreement, the NHAI shall be deemed to be in default of the IRB HMTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB HMTL Concession Agreement by IRB HMTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB HMTL Concession Agreement and such default has a material adverse effect on IRB HMTL;

b) the NHAI has failed to make any payment to IRB HMTL within the period specified in the IRB HMTL Concession Agreement;

c) the NHAI repudiates the IRB HMTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB HMTL Concession Agreement; or

d) the State of Uttar Pradesh commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on IRB HMTL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB HMTL to the NHAI.

Without prejudice to any other rights or remedies which IRB HMTL may have under the IRB HMTL Concession Agreement, upon the occurrence of an NHAI Default, IRB HMTL shall be entitled to terminate the IRB HMTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB HMTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB HMTL Default during the operation period, the NHAI shall pay to IRB HMTL, by way of termination payment, an amount equal to 90% of the IRB HMTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of IRB HMTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB HMTL, by way of termination payment, an amount equal to:

a) IRB HMTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to IRB HMTL within 30 days of a demand being made by IRB HMTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB HMTL Concession Agreement shall constitute a full and final settlement of all claims of IRB HMTL on account of termination of the IRB HMTL Concession Agreement for any reason whatsoever and IRB HMTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB HMTL shall be responsible for all defects and deficiencies in the IRB HMTL Project Highway for a period of 120 days after termination. IRB HMTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB HMTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB HMTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

4. Concession Agreement between IRB WTL and the NHAI dated March 25, 2013

IRB WTL has entered into a concession agreement for four-laning of Goa/Karnataka Border to Kundapur section from km 93.700 to km 283.300 of NH-17 in Karnataka on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**IRB WTL Concession Agreement**"), for a period of 28 years, from March 3, 2014 ("**IRB WTL Appointed Date**") or until such date on which the IRB WTL Concession Agreement is terminated by a termination notice ("**IRB WTL Termination Date**", and the period between the IRB WTL Appointed Date and the IRB WTL Termination Date, the "**IRB WTL Concession Period**").

Certain Definitions

"**IRB WTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the IRB WTL Debt Due is convertible into equity at the option of the senior lenders and/or IRB WTL, it shall, for the purposes of the IRB WTL Concession Agreement, be deemed to be IRB WTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**IRB WTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**IRB WTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of IRB WTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the IRB WTL Project Highway (as defined below), but does not include additional facilities;

"**IRB WTL Project Highway**" shall mean the site comprising the existing road comprising NH-17 from km 93.700 to km 283.300 and all IRB WTL Project Assets, and its subsequent development and augmentation in accordance with the IRB WTL Concession Agreement;

"**IRB WTL Project**" shall mean the construction, operation, and maintenance of the IRB WTL Project Highway in accordance with the provisions of the IRB WTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to IRB WTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB WTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to IRB WTL, and IRB WTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the IRB WTL Project for a period of 28 years from the IRB WTL Appointed Date.

Subject to, and in accordance with the provisions of the IRB WTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB WTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB WTL Concession Agreement;

b) finance and construct the IRB WTL Project Highway;

c) manage, operate, and maintain the IRB WTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the IRB WTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of IRB WTL's obligations under and in accordance with the IRB WTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB WTL under the IRB WTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the IRB WTL Concession Agreement, or the concession granted, or on the whole or any part of the IRB WTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB WTL Concession Agreement or the agreement for the substitution of IRB WTL entered into by IRB WTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, IRB WTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB WTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. In accordance with the IRB WTL Concession Agreement, IRB WTL shall not collect any fees in relation to exempted vehicles.

IRB WTL shall not collect any fee from a local user for non-commercial use of the IRB WTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the IRB WTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, IRB WTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, IRB WTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the IRB WTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to IRB WTL cash support by way of an outright grant equal to ₹5,362.2 million as set out in the bid. The grant shall be disbursed to IRB WTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by IRB WTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to IRB WTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from IRB WTL along with necessary particulars. In the event of the occurrence of an IRB WTL Default (as defined below), disbursement of equity support shall be suspended till the IRB WTL Default has been cured.

Concession Fee

In consideration of the grant of concession, IRB WTL shall pay to the NHAI by way of concession fee a sum of ₹1.00 per annum.

The concession fee payable under the provisions of the IRB WTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

IRB WTL was required to, prior to the IRB WTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB WTL Concession Agreement read with the escrow agreement entered into amongst IRB WTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

IRB WTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the IRB WTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

IRB WTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB WTL for and in respect of the IRB WTL Project Highway;

b) all payments relating to construction of the IRB WTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the IRB WTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of IRB WTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by IRB WTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of IRB WTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of IRB WTL.

IRB WTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB WTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB WTL for and in respect of the IRB WTL Project Highway;

b) 90% of the IRB WTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by IRB WTL, including the repayment of the revenue shortfall loan. retention and payments relating to the liability for defects and deficiencies set forth in the IRB WTL Concession Agreement;

e) outstanding IRB WTL Debt Service including balance of IRB WTL Debt Due;

f) outstanding subordinated debt;

g) incurred or accrued O&M expenses;

h) any other payments required to be made under the IRB WTL Concession Agreement; and

i) balance, if any, in accordance with the instructions of IRB WTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the IRB WTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the IRB WTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the IRB WTL Concession Agreement and the costs thereof shall be expended by IRB WTL and reimbursed by the NHAI.

If IRB WTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB WTL Concession Agreement, or inform IRB WTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB WTL being in material default or breach of the IRB WTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB WTL Concession Agreement.

In the event of the NHAI being in material default of the IRB WTL Concession Agreement at any time after the IRB WTL Appointed Date, it shall pay to IRB WTL by way of compensation, all direct costs suffered or incurred by IRB WTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB WTL Concession Agreement.

In the event that a material default or breach of the IRB WTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the IRB WTL Concession Period as provided in the IRB WTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the IRB WTL Concession Agreement, the NHAI shall pay to IRB WTL, for each day of the breach, compensation as provided in the IRB WTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the IRB WTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the IRB WTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the IRB WTL Concession Period shall, subject to payment of concession fee in accordance with the IRB WTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in IRB WTL Concession Period shall not in any case exceed 20% (twenty percent) of the IRB WTL Concession Period.

Subject to the provisions of the IRB WTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the IRB WTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in IRB WTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in IRB WTL Concession Period under the IRB WTL Concession Agreement, IRB WTL may elect to pay, in addition to the concession fee that would be due and payable if the IRB WTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by IRB WTL no later than two years prior to the IRB WTL Termination Date contemplated by the IRB WTL Concession Agreement, NHAI shall waive the reduction in IRB WTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in IRB WTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the IRB WTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the IRB WTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The IRB WTL Concession Period, may be extended so that it yields for IRB WTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the IRB WTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to IRB WTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by IRB WTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this IRB WTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the IRB WTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the IRB WTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the IRB WTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB WTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, IRB WTL shall be deemed to be in default of the IRB WTL Concession Agreement ("**IRB WTL Default**"), unless the default has occurred solely as a result of any breach of the IRB WTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB WTL Concession Agreement and IRB WTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB WTL Concession Agreement, IRB WTL fails to cure, within a cure period of 90 days, the IRB WTL Default for which whole or part of the performance security was appropriated;

c) IRB WTL does not achieve the latest outstanding project milestone due in accordance with the IRB WTL Concession Agreement and continues to be in default for 120 days;

d) IRB WTL abandons or manifests intention to abandon the construction or operation of the IRB WTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the IRB WTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the IRB WTL Concession Agreement;

g) IRB WTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) IRB WTL has failed to make any payment to the NHAI within the period specified in the IRB WTL Concession Agreement;

i) an escrow default has occurred and IRB WTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB WTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by IRB WTL has caused a material adverse effect;

l) IRB WTL creates an encumbrance in breach of the IRB WTL Concession Agreement;

m) IRB WTL repudiates the IRB WTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB WTL Concession Agreement;

n) a change in ownership has occurred in breach of the IRB WTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB WTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB WTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of IRB WTL has caused a material adverse effect;

q) IRB WTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB WTL or for the whole or material part of its assets that has a material bearing on the IRB WTL Project;

r) IRB WTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of IRB WTL is passed, or any petition for winding up of IRB WTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or IRB WTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB WTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB WTL under the IRB WTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB WTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB WTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB WTL as at the IRB WTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of IRB WTL which is, as of the date hereof, found to be materially false, incorrect or misleading or IRB WTL is at any time hereafter found to be in breach thereof;

u) IRB WTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) IRB WTL has failed to fulfil any obligation, for which failure termination has been specified in the IRB WTL Concession Agreement; or

w) IRB WTL commits a default in complying with any other provision of the IRB WTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the IRB WTL Concession Agreement, upon the occurrence of an IRB WTL Default, the NHAI shall be entitled to terminate the IRB WTL Concession Agreement by issuing a termination notice to IRB WTL. Before issuing the termination notice, the NHAI shall, by notice, inform IRB WTL of its intention to issue a termination notice and grant 15 days to IRB

WTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the IRB WTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute IRB WTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of IRB WTL. On a written request from the lenders' representative and IRB WTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by IRB WTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB WTL Concession Agreement, the NHAI shall be deemed to be in default of the IRB WTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the IRB WTL Concession Agreement by IRB WTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the IRB WTL Concession Agreement and such default has a material adverse effect on IRB WTL;

b) the NHAI has failed to make any payment to IRB WTL within the period specified in the IRB WTL Concession Agreement;

c) the NHAI repudiates the IRB WTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB WTL Concession Agreement; or

d) the State of Karnataka commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on IRB WTL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB WTL to the NHAI.

Without prejudice to any other rights or remedies which IRB WTL may have under the IRB WTL Concession Agreement, upon the occurrence of an NHAI Default, IRB WTL shall be entitled to terminate the IRB WTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, IRB WTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB WTL Default during the operation period, the NHAI shall pay to IRB WTL, by way of termination payment, an amount equal to 90% of the IRB WTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of IRB WTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to IRB WTL, by way of termination payment, an amount equal to:

a) IRB WTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to IRB WTL within 15 days of a demand being made by IRB WTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB WTL Concession Agreement shall constitute a full and

final settlement of all claims of IRB WTL on account of termination of the IRB WTL Concession Agreement for any reason whatsoever and IRB WTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB WTL shall be responsible for all defects and deficiencies in the IRB WTL Project Highway for a period of 120 days after termination. IRB WTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB WTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the IRB WTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

5. Concession Agreement between KGTL and the NHAI dated February 22, 2017

KGTL has entered into a concession agreement for six-laning of Kishangarh to Gulabpura section of NH-79A and NH-79 in Rajasthan with a length of 90.000 km on design, build, finance, operate and transfer ("D**BFOT**") basis (the "**KGTL Concession Agreement**"), for a period of 20 years, from February 21, 2018 ("**KGTL Appointed Date**") or until such date on which the KGTL Concession Agreement is terminated by a termination notice ("**KGTL Termination Date**", and the period between the KGTL Appointed Date and the KGTL Termination Date, the "**KGTL Concession Period**").

Certain Definitions

"**KGTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the KGTL Debt Due is convertible into equity at the option of the senior lenders and/or KGTL, it shall, for the purposes of the KGTL Concession Agreement, be deemed to be KGTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**KGTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**KGTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of KGTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the KGTL Project Highway (as defined below), but does not include additional facilities;

"**KGTL Project Highway**" shall mean the site comprising the existing road comprising NH-79A and 79 from km 0.000 to km 90.000 and all KGTL Project Assets, and its subsequent development and augmentation in accordance with the KGTL Concession Agreement;

"**KGTL Project**" shall mean the construction, operation, and maintenance of the KGTL Project Highway in accordance with the provisions of the KGTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project;

"**Premium**" shall mean an amount paid to the NHAI by KGTL in the form of an additional concession fee, as set forth in the bid for each year of the KGTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the KGTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to KGTL, and KGTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the KGTL Concession Agreement, to construct, operate and maintain the KGTL Project for a period of 20 years from the KGTL Appointed Date.

Subject to, and in accordance with the provisions of the KGTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, KGTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the KGTL Concession Agreement;

b) finance and construct the KGTL Project Highway;

c) manage, operate, and maintain the KGTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the KGTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of KGTL's obligations under and in accordance with the KGTL Concession Agreement;
f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of KGTL under the KGTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the KGTL Concession Agreement, or the concession granted, or on the whole or any part of the KGTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the KGTL Concession Agreement or the agreement for the substitution of KGTL entered into by KGTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, KGTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the KGTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, KGTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the KGTL Concession Agreement, KGTL shall not collect any fees in relation to exempted vehicles.

KGTL shall not collect any fee from a local user for non-commercial use of the KGTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the KGTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, KGTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, KGTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the KGTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, KGTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, KGTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹1,863 million as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the KGTL Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the KGTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

KGTL was required to, prior to the KGTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the KGTL Concession Agreement read with the escrow agreement entered into amongst KGTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

KGTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the KGTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

KGTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by KGTL for and in respect of the KGTL Project Highway;

b) all payments relating to construction of the KGTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the KGTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of KGTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by KGTL, including repayment of revenue shortfall loan. KGTL has agreed to give irrevocable instructions to the Escrow Bank to make

payments from the Escrow Account in accordance with the instructions of the NHAI under the KGTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of KGTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of KGTL.

KGTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the KGTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by KGTL for and in respect of the KGTL Project Highway;

b) 90% of the KGTL Debt Due excluding the subordinated debt;
c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by KGTL, including the repayment of the revenue shortfall loan. KGTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the KGTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the KGTL Concession Agreement;

f) outstanding KGTL Debt Service including balance of KGTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the KGTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of KGTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the KGTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the KGTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the KGTL Concession Agreement and the costs thereof shall be expended by KGTL and reimbursed by the NHAI.

If KGTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the KGTL Concession Agreement, or inform KGTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of KGTL being in material default or breach of the KGTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the KGTL Concession Agreement.

In the event of the NHAI being in material default of the KGTL Concession Agreement at any time after the KGTL Appointed Date, it shall pay to KGTL by way of compensation, all direct costs suffered or incurred by KGTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the KGTL Concession Agreement.

In the event that a material default or breach of the KGTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the KGTL Concession Period as provided in the KGTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the KGTL Concession Agreement, the NHAI shall pay to KGTL, for each day of the breach, compensation as provided in the KGTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the KGTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the KGTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the KGTL Concession Period shall, subject to payment of concession fee in accordance with the KGTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in KGTL Concession Period shall not in any case exceed 20% (twenty percent) of the KGTL Concession Period.

Subject to the provisions of the KGTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the KGTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in KGTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in KGTL Concession Period under the KGTL Concession Agreement, KGTL may elect to pay, in addition to the concession fee that would be due and payable if the KGTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by KGTL no later than two years prior to the KGTL Termination Date contemplated by the KGTL Concession Agreement, NHAI shall waive the reduction in KGTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in KGTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the KGTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the KGTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The KGTL Concession Period, may be extended so that it yields for KGTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the KGTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to KGTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by KGTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this KGTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the KGTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the KGTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the KGTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and KGTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, KGTL shall be deemed to be in default of the KGTL Concession Agreement ("**KGTL Default**"), unless the default has occurred solely as a result of any breach of the KGTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the KGTL Concession Agreement and KGTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the KGTL Concession Agreement, KGTL fails to cure, within a cure period of 90 days, the KGTL Default for which whole or part of the performance security was appropriated;

c) KGTL does not achieve the latest outstanding project milestone due in accordance with the KGTL Concession Agreement and continues to be in default for 90 days;

d) KGTL abandons or manifests intention to abandon the construction or operation of the KGTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the KGTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the KGTL Concession Agreement;

g) KGTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) KGTL has failed to make any payment to the NHAI within the period specified in the KGTL Concession Agreement;

i) an escrow default has occurred and KGTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and KGTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by KGTL has caused a material adverse effect;

l) KGTL creates an encumbrance in breach of the KGTL Concession Agreement;

m) KGTL repudiates the KGTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the KGTL Concession Agreement;

n) a change in ownership has occurred in breach of the KGTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of KGTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of KGTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of KGTL has caused a material adverse effect;

q) KGTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for KGTL or for the whole or material part of its assets that has a material bearing on the KGTL Project;

r) KGTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of KGTL is passed, or any petition for winding up of KGTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not

been set aside within 90 days of the date thereof, or KGTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of KGTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of KGTL under the KGTL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the KGTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the KGTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of KGTL as at the KGTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of KGTL which is, as of the date hereof, found to be materially false, incorrect or misleading or KGTL is at any time hereafter found to be in breach thereof;

u) KGTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) KGTL has failed to fulfil any obligation, for which failure termination has been specified in the KGTL Concession Agreement; or

w) KGTL commits a default in complying with any other provision of the KGTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the KGTL Concession Agreement, upon the occurrence of a KGTL Default, the NHAI shall be entitled to terminate the KGTL Concession Agreement by issuing a termination notice to KGTL. Before issuing the termination notice, the NHAI shall, by notice, inform KGTL of its intention to issue a termination notice and grant 15 days to KGTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the KGTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute KGTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of KGTL. On a written request from the lenders' representative and KGTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by KGTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the KGTL Concession Agreement, the NHAI shall be deemed to be in default of the KGTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the KGTL Concession Agreement by KGTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the KGTL Concession Agreement and such default has a material adverse effect on KGTL;

b) the NHAI has failed to make any payment to KGTL within the period specified in the KGTL Concession Agreement;

c) the NHAI repudiates the KGTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the KGTL Concession Agreement; or

d) the State of Rajasthan commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on KGTL and the breach continues for a period of 90 days from the date of notice given in this behalf by KGTL to the NHAI.

Without prejudice to any other rights or remedies which KGTL may have under the KGTL Concession Agreement, upon the occurrence of an NHAI Default, KGTL shall be entitled to terminate the KGTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, KGTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a KGTL Default during the operation period, the NHAI shall pay to KGTL, by way of termination payment, an amount equal to 90% of the KGTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of KGTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to KGTL, by way of termination payment, an amount equal to:

a) KGTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to KGTL within 30 days of a demand being made by KGTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the KGTL Concession Agreement shall constitute a full and final settlement of all claims of KGTL on account of termination of the KGTL Concession Agreement for any reason whatsoever and KGTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

KGTL shall be responsible for all defects and deficiencies in the KGTL Project Highway for a period of 120 days after termination. KGTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the KGTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the KGTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

6. Concession Agreement between KTL and the NHAI dated June 23, 2014

KTL has entered into a concession agreement for four-laning of Kaithal – Rajasthan border section of NH-152/65 in Haryana from km 33+250 (design km -0.500) to km 241+580 (design km 165.759) on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**KTL Concession Agreement**"), for a period of 27 years, from July 15, 2015 ("**KTL Appointed Date**") or until such date on which the KTL Concession Agreement is terminated by a termination notice ("**KTL Termination Date**", and the period between the KTL Appointed Date and the KTL Termination Date, the "**KTL Concession Period**").

Certain Definitions

"**KTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the KTL Debt Due is convertible into equity at the option of the senior lenders and/or KTL, it shall, for the purposes of the KTL Concession Agreement, be deemed to be KTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**KTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**KTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of KTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the KTL Project Highway (as defined below), but does not include additional facilities;

"**KTL Project Highway**" shall mean the site comprising the existing road comprising NH-152/65 from km 33.250 to km 241.580 and all KTL Project Assets, and its subsequent development and augmentation in accordance with the KTL Concession Agreement;

"**KTL Project**" shall mean the construction, operation, and maintenance of the KTL Project Highway in accordance with the provisions of the KTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to KTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the KTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to KTL, and KTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the KTL Project for a period of 27 years from the KTL Appointed Date.

Subject to, and in accordance with the provisions of the KTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, KTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the KTL Concession Agreement;

b) finance and construct the KTL Project Highway;

c) manage, operate, and maintain the KTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the KTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of KTL's obligations under and in accordance with the KTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of KTL under the KTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the KTL Concession Agreement, or the concession granted, or on the whole or any part of the KTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the KTL Concession Agreement or the agreement for the substitution of KTL entered into by KTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, KTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the KTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, KTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the KTL Concession Agreement, KTL shall not collect any fees in relation to exempted vehicles.

KTL shall not collect any fee from a local user for non-commercial use of the KTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the KTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, KTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, KTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the KTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to KTL cash support by way of an outright grant equal to ₹2340 million as set out in the bid. The grant shall be disbursed to KTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by KTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to KTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from KTL along with necessary particulars. In the event of the occurrence of a KTL Default (as defined below), disbursement of equity support shall be suspended till the KTL Default has been cured.

Concession Fee

In consideration of the grant of concession, KTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

KTL was required to, prior to the KTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the KTL Concession Agreement read with the escrow agreement entered into amongst KTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

KTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the KTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

KTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by KTL for and in respect of the KTL Project Highway;

b) all payments relating to construction of the KTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the KTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of KTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by KTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of KTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of KTL.

KTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the KTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by KTL for and in respect of the KTL Project Highway;

b) 90% of the KTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by KTL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the KTL Concession Agreement;

f) outstanding KTL Debt Service including balance of KTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the KTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of KTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the KTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the KTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the KTL Concession Agreement and the costs thereof shall be expended by KTL and reimbursed by the NHAI.

If KTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the KTL Concession Agreement, or inform KTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of KTL being in material default or breach of the KTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the KTL Concession Agreement.

In the event of the NHAI being in material default of the KTL Concession Agreement at any time after the KTL Appointed Date, it shall pay to KTL by way of compensation, all direct costs suffered or incurred by KTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the KTL Concession Agreement.

In the event that a material default or breach of the KTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the KTL Concession Period as provided in the KTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the KTL Concession Agreement, the NHAI shall pay to KTL, for each day of the breach, compensation as provided in the KTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the KTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the KTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the KTL Concession Period shall, subject to payment of concession fee in accordance with the KTL Concession

Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in KTL Concession Period shall not in any case exceed 20% (twenty percent) of the KTL Concession Period.

Subject to the provisions of the KTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the KTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in KTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in KTL Concession Period under the KTL Concession Agreement, KTL may elect to pay, in addition to the concession fee that would be due and payable if the KTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by KTL no later than two years prior to the KTL Termination Date contemplated by the KTL Concession Agreement, NHAI shall waive the reduction in KTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in KTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the KTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the KTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The KTL Concession Period, may be extended so that it yields for KTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the KTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to KTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by KTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this KTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the KTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the KTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the KTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and KTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, KTL shall be deemed to be in default of the KTL Concession Agreement ("**KTL Default**"), unless the default has occurred solely as a result of any breach of the KTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the KTL Concession Agreement and KTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the KTL Concession Agreement, KTL fails to cure, within a cure period of 90 days, the KTL Default for which whole or part of the performance security was appropriated;

c) KTL does not achieve the latest outstanding project milestone due in accordance with the KTL Concession Agreement and continues to be in default for 120 days;

d) KTL abandons or manifests intention to abandon the construction or operation of the KTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the KTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the KTL Concession Agreement;

g) KTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) KTL has failed to make any payment to the NHAI within the period specified in the KTL Concession Agreement;

i) an escrow default has occurred and KTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and KTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by KTL has caused a material adverse effect;

l) KTL creates an encumbrance in breach of the KTL Concession Agreement;

m) KTL repudiates the KTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the KTL Concession Agreement;

n) a change in ownership has occurred in breach of the KTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of KTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of KTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of KTL has caused a material adverse effect;

q) KTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for KTL or for the whole or material part of its assets that has a material bearing on the KTL Project;

r) KTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of KTL is passed, or any petition for winding up of KTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or KTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of KTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of KTL under the KTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the KTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the KTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of KTL as at the KTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of KTL which is, as of the date hereof, found to be materially false, incorrect or misleading or KTL is at any time hereafter found to be in breach thereof;

u) KTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) KTL has failed to fulfil any obligation, for which failure termination has been specified in the KTL Concession Agreement; or

w) KTL commits a default in complying with any other provision of the KTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the KTL Concession Agreement, upon the occurrence of a KTL Default, the NHAI shall be entitled to terminate the KTL Concession Agreement by issuing a termination notice to KTL. Before issuing the termination notice, the NHAI shall, by notice, inform KTL of its intention to issue a termination notice and grant 15 days to KTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the KTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute KTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of KTL. On a written request from the lenders' representative and KTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by KTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the KTL Concession Agreement, the NHAI shall be deemed to be in default of the KTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the KTL Concession Agreement by KTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the KTL Concession Agreement and such default has a material adverse effect on KTL;

b) the NHAI has failed to make any payment to KTL within the period specified in the KTL Concession Agreement;

c) the NHAI repudiates the KTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the KTL Concession Agreement; or

d) the State of Haryana commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on KTL and the breach continues for a period of 90 days from the date of notice given in this behalf by KTL to the NHAI.

Without prejudice to any other rights or remedies which KTL may have under the KTL Concession Agreement, upon the occurrence of an NHAI Default, KTL shall be entitled to terminate the KTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, KTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a KTL Default during the operation period, the NHAI shall pay to KTL, by way of termination payment, an amount equal to 90% of the KTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of KTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to KTL, by way of termination payment, an amount equal to:

a) KTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to KTL within 15 days of a demand being made by KTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the KTL Concession Agreement shall constitute a full and final settlement of all claims of KTL on account of termination of the KTL Concession Agreement for any reason whatsoever and KTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

KTL shall be responsible for all defects and deficiencies in the KTL Project Highway for a period of 120 days after termination. KTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the KTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the KTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

6.1. Supplementary Agreement between KTL and the NHAI dated April 5, 2018

KTL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated June 23, 2014 (the "**Concession Agreement**") to provide for the installation of a new electronic toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to KTL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. KTL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. KTL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

KTL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by KTL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by KTL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by KTL. The NHAI shall provide reasonable assistance in this regard.

Timeline

KTL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of signing the Supplementary Agreement.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to KTL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on KTL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

KTL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of KTL, the NHAI shall not be liable for any compensation to KTL, and KTL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to KTL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

KTL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to KTL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then KTL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.

Upon termination, KTL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. KTL shall ensure that all the warranties are duly assigned in favor of the NHAI and KTL shall bear the cost and expenses towards the assignment.

7. Concession Agreement between SYTL and the NHAI dated March 3, 2014

SYTL has entered into a concession agreement for four-laning of Solapur to Yedeshi section of NH-211 in Maharashtra from km 0.000 to km 100.000 (design length – 98.717 km) on build, operate and transfer ("**BOT**") basis (the "**SYTL Concession Agreement**"), for a period of 29 years, from January 21, 2015 ("**SYTL Appointed Date**") or until such date on which the SYTL Concession Agreement is terminated by a termination notice ("**SYTL Termination Date**", and the period between the SYTL Appointed Date and the SYTL Termination Date, the "**SYTL Concession Period**").

Certain Definitions

"**SYTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the SYTL Debt Due is convertible into equity at the option of the senior lenders and/or SYTL, it shall, for the purposes of the SYTL Concession Agreement, be deemed to be SYTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**SYTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**SYTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of SYTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the SYTL Project Highway (as defined below), but does not include additional facilities;

"**SYTL Project Highway**" shall mean the site comprising the existing road comprising NH-211 from km 0.000 to km 100.000 and all SYTL Project Assets, and its subsequent development and augmentation in accordance with the SYTL Concession Agreement;

"**SYTL Project**" shall mean the construction, operation, and maintenance of the SYTL Project Highway in accordance with the provisions of the SYTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to SYTL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the SYTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to SYTL, and SYTL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the SYTL Project for a period of 29 years from the SYTL Appointed Date.

Subject to, and in accordance with the provisions of the SYTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, SYTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the SYTL Concession Agreement;

b) finance and construct the SYTL Project Highway;

c) manage, operate, and maintain the SYTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the SYTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of SYTL's obligations under and in accordance with the SYTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of SYTL under the SYTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the SYTL Concession Agreement, or the concession granted, or on the whole or any part of the SYTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the SYTL Concession Agreement or the agreement for the substitution of SYTL entered into by SYTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, SYTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the SYTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, SYTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the SYTL Concession Agreement, SYTL shall not collect any fees in relation to exempted vehicles.

SYTL shall not collect any fee from a local user for non-commercial use of the SYTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the SYTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, SYTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, SYTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the SYTL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to SYTL cash support by way of an outright grant equal to ₹1,890 million as set out in the bid. The grant shall be disbursed to SYTL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by SYTL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to SYTL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from SYTL along with necessary particulars. In the event of the occurrence of an SYTL Default (as defined below), disbursement of equity support shall be suspended till the SYTL Default has been cured.

Concession Fee

In consideration of the grant of concession, SYTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

SYTL was required to, prior to the SYTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the SYTL Concession Agreement read with the escrow agreement entered into amongst SYTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

SYTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the SYTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

SYTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by SYTL for and in respect of the SYTL Project Highway;

b) all payments relating to construction of the SYTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the SYTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of SYTL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by SYTL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of SYTL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of SYTL.

SYTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the SYTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by SYTL for and in respect of the SYTL Project Highway;

b) 90% of the SYTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by SYTL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the SYTL Concession Agreement;

f) outstanding SYTL Debt Service including balance of SYTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the SYTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of SYTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the SYTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the SYTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions

of the SYTL Concession Agreement and the costs thereof shall be expended by SYTL and reimbursed by the NHAI.

If SYTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the SYTL Concession Agreement, or inform SYTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of SYTL being in material default or breach of the SYTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the SYTL Concession Agreement.

In the event of the NHAI being in material default of the SYTL Concession Agreement at any time after the SYTL Appointed Date, it shall pay to SYTL by way of compensation, all direct costs suffered or incurred by SYTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the SYTL Concession Agreement.

In the event that a material default or breach of the SYTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the SYTL Concession Period as provided in the SYTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the SYTL Concession Agreement, the NHAI shall pay to SYTL, for each day of the breach, compensation as provided in the SYTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the SYTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the SYTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the SYTL Concession Period shall, subject to payment of concession fee in accordance with the SYTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in SYTL Concession Period shall not in any case exceed 20% (twenty percent) of the SYTL Concession Period.

Subject to the provisions of the SYTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the SYTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in SYTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in SYTL Concession Period under the SYTL Concession Agreement, SYTL may elect to pay, in addition to the concession fee that would be due and payable if the SYTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by SYTL no later than two years prior to the SYTL Termination Date contemplated by the SYTL Concession Agreement, NHAI shall waive the reduction in SYTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in SYTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the SYTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the SYTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication

no. IRC -64, 1990 or any substitute thereof. The SYTL Concession Period, may be extended so that it yields for SYTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the SYTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to SYTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by SYTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this SYTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the SYTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the SYTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the SYTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and SYTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, SYTL shall be deemed to be in default of the SYTL Concession Agreement ("**SYTL Default**"), unless the default has occurred solely as a result of any breach of the SYTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the SYTL Concession Agreement and SYTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the SYTL Concession Agreement, SYTL fails to cure, within a cure period of 90 days, the SYTL Default for which whole or part of the performance security was appropriated;

c) SYTL does not achieve the latest outstanding project milestone due in accordance with the SYTL Concession Agreement and continues to be in default for 120 days;

d) SYTL abandons or manifests intention to abandon the construction or operation of the SYTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the SYTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the SYTL Concession Agreement;

g) SYTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) SYTL has failed to make any payment to the NHAI within the period specified in the SYTL Concession Agreement;

i) an escrow default has occurred and SYTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and SYTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by SYTL has caused a material adverse effect;

l) SYTL creates an encumbrance in breach of the SYTL Concession Agreement;

m) SYTL repudiates the SYTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the SYTL Concession Agreement;

n) a change in ownership has occurred in breach of the SYTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of SYTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of SYTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of SYTL has caused a material adverse effect;

q) SYTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for SYTL or for the whole or material part of its assets that has a material bearing on the SYTL Project;

r) SYTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of SYTL is passed, or any petition for winding up of SYTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or SYTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of SYTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of SYTL under the SYTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the SYTL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the SYTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of SYTL as at the SYTL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of SYTL which is, as of the date hereof, found to be materially false, incorrect or misleading or SYTL is at any time hereafter found to be in breach thereof;

u) SYTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) SYTL has failed to fulfil any obligation, for which failure termination has been specified in the SYTL Concession Agreement; or

w) SYTL commits a default in complying with any other provision of the SYTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the SYTL Concession Agreement, upon the occurrence of an SYTL Default, the NHAI shall be entitled to terminate the SYTL Concession Agreement by issuing a termination notice to SYTL. Before issuing the termination notice, the NHAI shall, by notice, inform SYTL of its intention to issue a termination notice and grant 15 days to SYTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the SYTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute SYTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of SYTL. On a written request from the lenders' representative and SYTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by SYTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the SYTL Concession Agreement, the NHAI shall be deemed to be in default of the SYTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the SYTL Concession Agreement by SYTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the SYTL Concession Agreement and such default has a material adverse effect on SYTL;

b) the NHAI has failed to make any payment to SYTL within the period specified in the SYTL Concession Agreement;

c) the NHAI repudiates the SYTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the SYTL Concession Agreement; or

d) the State of Maharashtra commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on SYTL and the breach continues for a period of 90 days from the date of notice given in this behalf by SYTL to the NHAI.

Without prejudice to any other rights or remedies which SYTL may have under the SYTL Concession Agreement, upon the occurrence of an NHAI Default, SYTL shall be entitled to terminate the SYTL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, SYTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an SYTL Default during the operation period, the NHAI shall pay to SYTL, by way of termination payment, an amount equal to 90% of the SYTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of SYTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to SYTL, by way of termination payment, an amount equal to:

a) SYTL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to SYTL within 15 days of a demand being made by SYTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the SYTL Concession Agreement shall constitute a full and final settlement of all claims of SYTL on account of termination of the SYTL Concession Agreement for any reason whatsoever and SYTL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

SYTL shall be responsible for all defects and deficiencies in the SYTL Project Highway for a period of 120 days after termination. SYTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the SYTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the SYTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

7.1. Supplementary Agreement between SYTL and the NHAI dated April 12, 2018

SYTL has entered into a supplementary agreement (the "**Supplementary Agreement**") to amend the concession agreement dated March 3, 2014 (the "**Concession Agreement**") to provide for the installation of a new electronic

toll collection system (the "**Hybrid ETC System**") for electronic payment of user fee using RFID tags or any other such device.

Change of Scope

The NHAI shall provide a change in the scope of work order at prices discovered by the NHAI to SYTL to provide for, as per the defined technical specifications, installation, testing, commissioning, operations and maintenance of the Hybrid ETC System in all lanes of the toll plaza. SYTL shall ensure that the requisite civil work is completed prior to the installation, integration, testing and commissioning of the Hybrid ETC System. It shall also ensure the smooth flow of traffic during installation, integration, testing and commissioning of the Hybrid ETC System. SYTL will have no claim against the NHAI on account of any lane closure, if any, on account of any third party claims.

Scope of Work

SYTL shall install, integrate, test, commission, operate and maintain the Hybrid ETC System in all the lanes of the toll plazas. The Hybrid ETC System shall be installed, commissioned, operated and maintained for a period of five years or the end of the Concession Agreement, whichever is earlier, beyond which it will be replaced or renewed, as the case may be, by SYTL or the NHAI, at the cost of the NHAI. The cycle shall be maintained till the end of the concession period in accordance with the Concession Agreement.

The provisions of the Concession Agreement relating to change of scope shall not apply to the Supplementary Agreement.

Any permission required by SYTL under the applicable laws for the installation of the Hybrid ETC System shall be procured and maintained by SYTL. The NHAI shall provide reasonable assistance in this regard.

Timeline

SYTL shall complete all responsibilities, obligations and works as described in the Supplementary Agreement within a period of 120 days from the date of signing the Supplementary Agreement.

Damages for Delay

In case of delay in installation, testing, or commissioning of the Hybrid ETC System at the toll plazas as per the time schedule prescribed on account of reasons attributable to SYTL, damages at 0.1% of the cost of installation, testing, or commissioning of the Hybrid ETC System for each day of the delay, subject to a maximum of 10% of the cost of installation, testing, or commissioning of the Hybrid ETC System shall be levied on SYTL. Damages for delay will not be applicable in case of a delay in implementation due to delayed payment release by the NHAI.

SYTL shall not be entitled to any additional benefit either in monetary terms or on any other account including, but not limited to any extension of time, save on account of and NHAI Default or force majeure.

Compensation

In case of any damage to the Hybrid ETC System due to any act or omission of SYTL, the NHAI shall not be liable for any compensation to SYTL, and SYTL shall bear the cost of repair, replacement or renewal of the damaged Hybrid ETC System equipment or hardware itself.

In case of any damage to the Hybrid ETC System due to the occurrence of any force majeure event, the compensation to SYTL shall be derived as per the provisions of the Concession Agreement.

End of the Concession Period

SYTL shall hand over all the Hybrid ETC equipment or hardware in an operational condition to the NHAI or a third party as directed by the NHAI at the end of the concession period, beyond which no O&M payment shall be made to SYTL. If any Hybrid ETC System equipment or hardware is found to be non-operational, then SYTL shall be liable to replace or pay for the replacement of the Hybrid ETC System equipment or hardware required to make the Hybrid ETC System operational on all lanes of the toll plazas to the NHAI promptly.

Upon termination, SYTL shall assign warranties received from the original equipment manufacturer and for the components or equipment, and provide the respective warranty assignment agreements and necessary documents. SYTL shall ensure that all the warranties are duly assigned in favor of the NHAI and SYTL shall bear the cost and expenses towards the assignment.

8. Concession Agreement between UTL and the NHAI dated December 9, 2016

UTL has entered into a concession agreement for six-laning of NH-8 in Rajasthan and Gujarat from km 287.400 to km 401.200 (approx. length 113.800 km) on design, build, finance, operate and transfer ("D**BFOT**") basis (the "**UTL Concession Agreement**"), for a period of 21 years, from September 3, 2017 ("**UTL Appointed Date**") or until such date on which the UTL Concession Agreement is terminated by a termination notice ("**UTL Termination Date**", and the period between the UTL Appointed Date and the UTL Termination Date, the "**UTL Concession Period**").

Certain Definitions

"**UTL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the UTL Debt Due is convertible into equity at the option of the senior lenders and/or UTL, it shall, for the purposes of the UTL Concession Agreement, be deemed to be UTL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**UTL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**UTL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of UTL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the UTL Project Highway (as defined below), but does not include additional facilities;

"**UTL Project Highway**" shall mean the site comprising the existing road comprising NH-8 from km 287.400 to km 401.200 and all UTL Project Assets, and its subsequent development and augmentation in accordance with the UTL Concession Agreement;

"**UTL Project**" shall mean the construction, operation, and maintenance of the UTL Project Highway in accordance with the provisions of the UTL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project;

"**Premium**" shall mean an amount paid to the NHAI by UTL in the form of an additional concession fee, as set forth in the bid for each year of the UTL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the UTL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to UTL, and UTL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the UTL Concession Agreement, to construct, operate and maintain the UTL Project for a period of 21 years from the UTL Appointed Date.

Subject to, and in accordance with the provisions of the UTL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, UTL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the UTL Concession Agreement;

b) finance and construct the UTL Project Highway;

c) manage, operate, and maintain the UTL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the UTL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of UTL's obligations under and in accordance with the UTL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of UTL under the UTL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the UTL Concession Agreement, or the concession granted, or on the whole or any part of the UTL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the UTL Concession Agreement or the agreement for the substitution of UTL entered into by UTL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, UTL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the UTL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, UTL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the UTL Concession Agreement, UTL shall not collect any fees in relation to exempted vehicles.

UTL shall not collect any fee from a local user for non-commercial use of the UTL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the UTL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, UTL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, UTL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the UTL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, UTL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, UTL was required to pay to the NHAI, immediately after the third anniversary year of the COD, a Premium in the form of an additional concession fee equal to ₹1,638,000,000 as due to the NHAI during that year, due and payable for the period remaining in that year; and for each subsequent year till the ninth anniversary of the COD, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 3% as compared to the immediately preceding year and for each subsequent year of the UTL

Concession Period, the Premium shall be determined by increasing the amount of Premium in the respective year by an additional 8% as compared to the immediately preceding year. The Premium is deemed to be a part of the concession fee.

The concession fee payable under the provisions of the UTL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

UTL was required to, prior to the UTL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the UTL Concession Agreement read with the escrow agreement entered into amongst UTL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

UTL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the UTL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

UTL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by UTL for and in respect of the UTL Project Highway;

b) all payments relating to construction of the UTL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the UTL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of UTL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by UTL, including repayment of revenue shortfall loan. UTL has agreed to give irrevocable instructions to the Escrow Bank to make payments from the Escrow Account in accordance with the instructions of the NHAI under the UTL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of UTL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of UTL.

UTL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the UTL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by UTL for and in respect of the UTL Project Highway;

b) 90% of the UTL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by UTL, including the repayment of the revenue shortfall loan. UTL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the UTL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the UTL Concession Agreement;

f) outstanding UTL Debt Service including balance of UTL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the UTL Concession Agreement; and

j) balance, if any, in accordance with the instructions of UTL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the UTL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the UTL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the UTL Concession Agreement and the costs thereof shall be expended by UTL and reimbursed by the NHAI.

If UTL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the UTL Concession Agreement, or inform UTL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of UTL being in material default or breach of the UTL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the UTL Concession Agreement.

In the event of the NHAI being in material default of the UTL Concession Agreement at any time after the UTL Appointed Date, it shall pay to UTL by way of compensation, all direct costs suffered or incurred by UTL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary

particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the UTL Concession Agreement.

In the event that a material default or breach of the UTL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the UTL Concession Period as provided in the UTL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the UTL Concession Agreement, the NHAI shall pay to UTL, for each day of the breach, compensation as provided in the UTL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the UTL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the UTL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the UTL Concession Period shall, subject to payment of concession fee in accordance with the UTL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in UTL Concession Period shall not in any case exceed 20% (twenty percent) of the UTL Concession Period.

Subject to the provisions of the UTL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the UTL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in UTL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in UTL Concession Period under the UTL Concession Agreement, UTL may elect to pay, in addition to the concession fee that would be due and payable if the UTL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by UTL no later than two years prior to the UTL Termination Date contemplated by the UTL Concession Agreement, NHAI shall waive the reduction in UTL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in UTL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the UTL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the UTL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The UTL Concession Period, may be extended so that it yields for UTL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the UTL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to UTL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by UTL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this UTL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the UTL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the UTL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the UTL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and UTL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, UTL shall be deemed to be in default of the UTL Concession Agreement ("**UTL Default**"), unless the default has occurred solely as a result of any breach of the UTL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the UTL Concession Agreement and UTL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the UTL Concession Agreement, UTL fails to cure, within a cure period of 90 days, the UTL Default for which whole or part of the performance security was appropriated;

c) UTL does not achieve the latest outstanding project milestone due in accordance with the UTL Concession Agreement and continues to be in default for 90 days;

d) UTL abandons or manifests intention to abandon the construction or operation of the UTL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the UTL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the UTL Concession Agreement;

g) UTL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) UTL has failed to make any payment to the NHAI within the period specified in the UTL Concession Agreement;

i) an escrow default has occurred and UTL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and UTL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by UTL has caused a material adverse effect;

l) UTL creates an encumbrance in breach of the UTL Concession Agreement;

m) UTL repudiates the UTL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the UTL Concession Agreement;

n) a change in ownership has occurred in breach of the UTL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of UTL under any of the project agreements, or of (ii) all or part of the assets or undertaking of UTL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of UTL has caused a material adverse effect;

q) UTL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for UTL or for the whole or material part of its assets that has a material bearing on the UTL Project;

r) UTL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of UTL is passed, or any petition for winding up of UTL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or UTL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of UTL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of UTL under the UTL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the UTL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the UTL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of UTL as at the UTL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of UTL which is, as of the date hereof, found to be materially false, incorrect or misleading or UTL is at any time hereafter found to be in breach thereof;

u) UTL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) UTL has failed to fulfil any obligation, for which failure termination has been specified in the UTL Concession Agreement; or

w) UTL commits a default in complying with any other provision of the UTL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the UTL Concession Agreement, upon the occurrence of a UTL Default, the NHAI shall be entitled to terminate the UTL Concession Agreement by issuing a termination notice to UTL. Before issuing the termination notice, the NHAI shall, by notice, inform UTL of its intention to issue a termination notice and grant 15 days to UTL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the UTL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute UTL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of UTL. On a written request from the lenders' representative and UTL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by UTL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the UTL Concession Agreement, the NHAI shall be deemed to be in default of the UTL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the UTL Concession Agreement by UTL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the UTL Concession Agreement and such default has a material adverse effect on UTL;

b) the NHAI has failed to make any payment to UTL within the period specified in the UTL Concession Agreement;

c) the NHAI repudiates the UTL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the UTL Concession Agreement; or

d) the State of Rajasthan or Gujarat commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on UTL and the breach continues for a period of 90 days from the date of notice given in this behalf by UTL to the NHAI.

Without prejudice to any other rights or remedies which UTL may have under the UTL Concession Agreement, upon the occurrence of an NHAI Default, UTL shall be entitled to terminate the UTL Concession Agreement by

issuing a termination notice to the NHAI. Before issuing the termination notice, UTL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a UTL Default during the operation period, the NHAI shall pay to UTL, by way of termination payment, an amount equal to 90% of the UTL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of UTL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to UTL, by way of termination payment, an amount equal to:

a) UTL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to UTL within 30 days of a demand being made by UTL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the UTL Concession Agreement shall constitute a full and final settlement of all claims of UTL on account of termination of the UTL Concession Agreement for any reason whatsoever and UTL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

UTL shall be responsible for all defects and deficiencies in the UTL Project Highway for a period of 120 days after termination. UTL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the UTL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the UTL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

9. Concession Agreement between YATL and the NHAI dated May 30, 2014

YATL has entered into a concession agreement for four-laning of Yedeshi-Aurangabad section of NH-211 in Maharashtra from km 100.000 to km 290.200 on design, build, finance, operate and transfer ("**DBFOT**") basis (the "**YATL Concession Agreement**"), for a period of 26 years, from July 1, 2015 ("**YATL Appointed Date**") or until such date on which the YATL Concession Agreement is terminated by a termination notice ("**YATL Termination Date**", and the period between the YATL Appointed Date and the YATL Termination Date, the "**YATL Concession Period**").

Certain Definitions

"**YATL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the

financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the YATL Debt Due is convertible into equity at the option of the senior lenders and/or YATL, it shall, for the purposes of the YATL Concession Agreement, be deemed to be YATL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**YATL Debt Service**" shall mean the sum of all payments on account of Principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**YATL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of YATL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the YATL Project Highway (as defined below), but does not include additional facilities;

"**YATL Project Highway**" shall mean the site comprising the existing road comprising NH-211 from km 100.000 to km 290.200 and all YATL Project Assets, and its subsequent development and augmentation in accordance with the YATL Concession Agreement;

"**YATL Project**" shall mean the construction, operation, and maintenance of the YATL Project Highway in accordance with the provisions of the YATL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Grant**" shall mean the cash support provided to YATL by the NHAI which is equal to the sum set forth in the bid.

Grant of Concession

Subject to, and in accordance with the provisions set out in the YATL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to YATL, and YATL has accepted the concession, including the exclusive right, license, and authority to construct, operate and maintain the YATL Project for a period of 26 years from the YATL Appointed Date.

Subject to, and in accordance with the provisions of the YATL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, YATL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the YATL Concession Agreement;

b) finance and construct the YATL Project Highway;

c) manage, operate, and maintain the YATL Project Highway and regulate the use thereof by third parties;

d) demand, collect, and appropriate fee from vehicles and users liable for payment of fee for using the YATL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

e) perform and fulfil all of YATL's obligations under and in accordance with the YATL Concession Agreement;

f) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of YATL under the YATL Concession Agreement; and

g) neither assign, transfer or sublet, or create any lien or encumbrance on the YATL Concession Agreement, or the concession granted, or on the whole or any part of the YATL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the YATL Concession Agreement or the

agreement for the substitution of YATL entered into by YATL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, YATL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the YATL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, YATL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the YATL Concession Agreement, YATL shall not collect any fees in relation to exempted vehicles.

YATL shall not collect any fee from a local user for non-commercial use of the YATL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the YATL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, YATL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, YATL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the YATL Project Highway and does not cross a toll plaza.

Grant

The NHAI has agreed to pay to YATL cash support by way of an outright grant equal to ₹5,580 million as set out in the bid. The grant shall be disbursed to YATL by way of equity support. It shall be credited to the Escrow Account (as defined below) and shall be applied by YATL for meeting the total project cost. The equity support shall not exceed the sum specified, but shall in no case be greater than twice the equity, and shall be further restricted to a sum not exceeding 40% of the total project cost.

The equity support shall be due and payable to YATL after it has expended the equity, and shall be disbursed proportionately along with the loan funds thereafter remaining to be disbursed by the senior lenders under the financing agreements. The NHAI shall disburse each tranche of the equity support as and when due, but no later than 15 days of receiving a request from YATL along with necessary particulars. In the event of the occurrence of a YATL Default (as defined below), disbursement of equity support shall be suspended till the YATL Default has been cured.

Concession Fee

In consideration of the grant of concession, YATL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Escrow Account

YATL was required to, prior to the YATL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the YATL Concession Agreement read with the escrow agreement entered into amongst YATL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

YATL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the YATL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

YATL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by YATL for and in respect of the YATL Project Highway;

b) all payments relating to construction of the YATL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the YATL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee due and payable to the NHAI;

f) monthly proportionate provision of YATL Debt Service due in an accounting year;

g) all payments and damages certified by the NHAI as due and payable to it by YATL, including repayment of revenue shortfall loan.

h) monthly proportionate provision of YATL Debt Service payments due in an accounting year in respect of subordinated debt;

i) any reserve requirements set forth in the financing agreements; and

j) balance, if any, in accordance with the instructions of YATL.

YATL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the YATL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by YATL for and in respect of the YATL Project Highway;

b) 90% of the YATL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by YATL, including the repayment of the revenue shortfall loan.

e) retention and payments relating to the liability for defects and deficiencies set forth in the YATL Concession Agreement;

f) outstanding YATL Debt Service including balance of YATL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the YATL Concession Agreement; and

j) balance, if any, in accordance with the instructions of YATL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the YATL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the YATL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the YATL Concession Agreement and the costs thereof shall be expended by YATL and reimbursed by the NHAI.

If YATL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 15 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the YATL Concession Agreement, or inform YATL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of YATL being in material default or breach of the YATL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the YATL Concession Agreement.

In the event of the NHAI being in material default of the YATL Concession Agreement at any time after the YATL Appointed Date, it shall pay to YATL by way of compensation, all direct costs suffered or incurred by YATL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the YATL Concession Agreement.

In the event that a material default or breach of the YATL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the YATL Concession Period as provided in the YATL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the YATL Concession Agreement, the NHAI shall pay to YATL, for each day of the breach, compensation as provided in the YATL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the YATL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the YATL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic, then for every 1% (one percent) shortfall as compared to the target traffic, the YATL Concession Period shall, subject to payment of concession fee in accordance with the YATL Concession Agreement, be increased by 1.5% (one point five percent) thereof; provided that such increase in YATL Concession Period shall not in any case exceed 20% (twenty percent) of the YATL Concession Period.

Subject to the provisions of the YATL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic, then for every 1% (one percent) excess as compared to the target traffic, the YATL Concession Period shall be reduced by 0.75% (zero point seven five percent) thereof; provided that such reduction in YATL Concession Period shall not in any case exceed 10% (ten percent) thereof.

Provided further that in lieu of a reduction in YATL Concession Period under the YATL Concession Agreement, YATL may elect to pay, in addition to the concession fee that would be due and payable if the YATL Concession Period were not reduced hereunder, a further premium equal to 25% (twenty five percent) of the realizable fee, and upon notice given to this effect by YATL no later than two years prior to the YATL Termination Date contemplated by the YATL Concession Agreement, NHAI shall waive the reduction in YATL Concession Period hereunder forthwith.

Notwithstanding anything to the contrary contained in YATL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the YATL Project Highway, the NHAI at its option may cause preparation of detailed project report which will assess the cost that may have to be incurred for augmenting the capacity of the YATL Project Highway so that its capacity is sufficiently increased for carrying the then current traffic in accordance with the corresponding provisions of the Indian Roads Congress publication no. IRC -64, 1990 or any substitute thereof. The YATL Concession Period, may be extended so that it yields for YATL a post-tax return on equity of 16% per annum. This assessment will be made at an assumed debt to equity ratio of 70:30. The extension of the YATL Concession Period shall be however limited to five years. The NHAI may thereafter, at their sole option, issue a notice to YATL, to undertake within six months of such notice, the augmentation so determined by the NHAI. The refusal, non-acceptance, or failure by YATL to undertake such augmentation on the due date so intimated by the NHAI, will be considered an indirect political event and the NHAI may at its discretion terminate this YATL Concession Agreement by issuing a termination notice and making a termination payment in accordance with the provisions of the YATL Concession Agreement without the NHAI being liable to issue any further notice under it.

Termination of the YATL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the YATL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and YATL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, YATL shall be deemed to be in default of the YATL Concession Agreement ("**YATL Default**"), unless the default has occurred solely as a result of any breach of the YATL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the YATL Concession Agreement and YATL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the YATL Concession Agreement, YATL fails to cure, within a cure period of 90 days, the YATL Default for which whole or part of the performance security was appropriated;

c) YATL does not achieve the latest outstanding project milestone due in accordance with the YATL Concession Agreement and continues to be in default for 120 days;

d) YATL abandons or manifests intention to abandon the construction or operation of the YATL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the YATL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the YATL Concession Agreement;

g) YATL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) YATL has failed to make any payment to the NHAI within the period specified in the YATL Concession Agreement;

i) an escrow default has occurred and YATL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and YATL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by YATL has caused a material adverse effect;

l) YATL creates an encumbrance in breach of the YATL Concession Agreement;

m) YATL repudiates the YATL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the YATL Concession Agreement;

n) a change in ownership has occurred in breach of the YATL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of YATL under any of the project agreements, or of (ii) all or part of the assets or undertaking of YATL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of YATL has caused a material adverse effect;

q) YATL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for YATL or for the whole or material part of its assets that has a material bearing on the YATL Project;

r) YATL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of YATL is passed, or any petition for winding up of YATL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or YATL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of YATL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of YATL under the YATL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the YATL Concession Agreement and the project agreements;

   ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the YATL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of YATL as at the YATL Appointed Date; and

   iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of YATL which is, as of the date hereof, found to be materially false, incorrect or misleading or YATL is at any time hereafter found to be in breach thereof;

u) YATL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) YATL has failed to fulfil any obligation, for which failure termination has been specified in the YATL Concession Agreement; or

w) YATL commits a default in complying with any other provision of the YATL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the YATL Concession Agreement, upon the occurrence of a YATL Default, the NHAI shall be entitled to terminate the YATL Concession Agreement by issuing a termination notice to YATL. Before issuing the termination notice, the NHAI shall, by notice, inform YATL of its intention to issue a termination notice and grant 15 days to YATL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the YATL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 15 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute YATL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of YATL. On a written request from the lenders' representative and YATL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by YATL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the YATL Concession Agreement, the NHAI shall be deemed to be in default of the YATL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the YATL Concession Agreement by YATL, or due to force majeure. The default referred to herein shall include:

a) the NHAI commits a material default in complying with any of the provisions of the YATL Concession Agreement and such default has a material adverse effect on YATL;

b) the NHAI has failed to make any payment to YATL within the period specified in the YATL Concession Agreement;

c) the NHAI repudiates the YATL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the YATL Concession Agreement; or

d) the State of Maharashtra commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on YATL and the breach continues for a period of 90 days from the date of notice given in this behalf by YATL to the NHAI.

Without prejudice to any other rights or remedies which YATL may have under the YATL Concession Agreement, upon the occurrence of an NHAI Default, YATL shall be entitled to terminate the YATL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, YATL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 15 days to the NHAI to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a YATL Default during the operation period, the NHAI shall pay to YATL, by way of termination payment, an amount equal to 90% of the YATL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of YATL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to YATL, by way of termination payment, an amount equal to:

a) YATL Debt Due; and
b) 150% of the adjusted equity.

Termination payment shall become due and payable to YATL within 15 days of a demand being made by YATL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the YATL Concession Agreement shall constitute a full and final settlement of all claims of YATL on account of termination of the YATL Concession Agreement for any reason

whatsoever and YATL, or any shareholder thereof, shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

YATL shall be responsible for all defects and deficiencies in the YATL Project Highway for a period of 120 days after termination. YATL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the YATL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the YATL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

10. Concession Agreement between PDTPL and the NHAI dated June 14, 2021

PTDTPL has entered into a concession agreement for the six-laning of National Corridor NH-19 from Palsit to Dankuni (upto NH-6 Connector) from KM 588.870 to KM 652.700 (total design length 63.830 km) in the State of West Bengal under Bharatmala Pariyojana to be executed on BOT (Toll) basis (the "**PDTPL Concession Agreement**"), for a period of 17 years, from April 2, 2022 ("**PDTPL Appointed Date**") or until such date on which the PDTPL Concession Agreement is terminated by a termination notice ("**PDTPL Termination Date**", and the period between the PDTPL Appointed Date and the PDTPL Termination Date, the "**PDTPL Concession Period**").

Certain Definitions

"**PDTPL Debt Due**" shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the transfer date:

a) the principal amount of the debt provided by the senior lenders under the financing agreements for financing the total project cost (the "**Principa**l") but excluding any part of the Principal that had fallen due for repayment two years prior to the transfer date;

b) all accrued interest, financing fees and charges payable under the financing agreements on, or in respect of, the debt referred to in the sub-clause above until the transfer date but excluding (i) any interest, fees or charges that had fallen due one year prior to the transfer date, (ii) any penal interest or charges payable under the financing agreements to any senior lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to an NHAI Default (as defined below); and

c) any subordinated debt which is included in the financing package and disbursed by lenders for financing the total project cost;

If all, or any part of the PDTPL Debt Due is convertible into equity at the option of the senior lenders and/or PDTPL, it shall, for the purposes of the PDTPL Concession Agreement, be deemed to be PDTPL Debt Due even after the conversion and the Principal thereof shall be dealt with as if such conversion had not been undertaken;

"**PDTPL Debt Service**" shall mean the sum of all payments on account of principal, interest, financing fees and charges due and payable in an accounting year to the senior lenders under the financing agreements;

"**PDTPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) project facilities situated on the site; (d) all rights of PDTPL under the project agreements; (e) financial assets, such as receivables, security deposits etc.; (f) insurance proceeds; and (g) applicable permits and authorizations relating to or in respect of the PDTPL Project Highway (as defined below), but does not include additional facilities;

"**PDTPL Project Highway**" shall mean the site comprising the existing road comprising NH-19 from km 588.870 to km 652.700 and all PDTPL Project Assets, and its subsequent development and augmentation in accordance with the PDTPL Concession Agreement;

"**PDTPL Project**" shall mean the construction, operation, and maintenance of the PDTPL Project Highway in accordance with the provisions of the PDTPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Premium**" shall mean an amount payable to the NHAI by PDTPL in the form of an additional concession fee, as set forth in the bid for each year of the PDTPL Concession Period.

Grant of Concession

Subject to, and in accordance with the provisions set out in the PDTPL Concession Agreement, the applicable laws and the applicable permits, the NHAI has granted to PDTPL, and PDTPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the PDTPL Concession Agreement, to construct, operate and maintain the PDTPL Project for a period of 17 years from the PDTPL Appointed Date.

Subject to, and in accordance with the provisions of the PDTPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, PDTPL to:

h) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the PDTPL Concession Agreement;

i) finance and construct the PDTPL Project Highway;

j) manage, operate, and maintain the PDTPL Project Highway and regulate the use thereof by third parties;

k) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the PDTPL Project Highway or any part thereof and refuse entry of any vehicle if the fee due is not paid;

l) perform and fulfil all of PDTPL's obligations under and in accordance with the PDTPL Concession Agreement;

m) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of PDTPL under the PDTPL Concession Agreement; and

n) neither assign, transfer or sublet, or create any lien or encumbrance on the PDTPL Concession Agreement, or the concession granted, or on the whole or any part of the PDTPL Project Highway, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the PDTPL Concession Agreement or the agreement for the substitution of PDTPL entered into by PDTPL, the NHAI, and the lenders' representative on behalf of the senior lenders (the "**Substitution Agreement**").

Fees

On and from the commercial operation date ("**COD**") till the transfer date, PDTPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the PDTPL Concession Agreement and the applicable rules and regulations, provided that for ease of payment and collection, such fee shall be rounded off to the nearest five rupees in accordance with the applicable fee rules, as updated from time to time. Further, PDTPL may determine and collect fee at such lower rates as it may, by public notice to the users, specify in respect of all or any category of users or vehicles. In accordance with the PDTPL Concession Agreement, PDTPL shall not collect any fees in relation to exempted vehicles.

PDTPL shall not collect any fee from a local user for non-commercial use of the PDTPL Project Highway, and shall issue a pass in respect thereof for commuting on a section of the PDTPL Project Highway as specified in the pass and for crossing the toll plaza specified therein. For carrying out these provisions, PDTPL shall formulate, publish and implement an appropriate scheme, and make such modifications to the scheme as may reasonably be suggested by the NHAI or by local users from time to time. For defraying its expenses on issuing of passes and handling of local users, PDTPL shall be entitled to charge a monthly fee of ₹150, with reference to the base year 2007-08, to be revised annually in accordance with the fee rules to reflect the variation in WPI, and then rounded off to the nearest five rupees; provided that no passes will be required or fee collected from a vehicle that uses part of the PDTPL Project Highway and does not cross a toll plaza.

Concession Fee

In consideration of the grant of concession, PDTPL shall pay to the NHAI by way of concession fee a sum of ₹1 per annum.

Additionally, immediately after the first anniversary of the project completion date, a premium in the form of an additional concession fee for every year of the remaining concession period is payable by PDTPL. The premium to be paid for the second year after the project completion date is equal to 10.8% of the realisable fee and is required to be paid by PDTPL as due to the NHAI during that year. For subsequent years, the premium will be determined based on the total realisable fee in the respective year at the percentage to be arrived at by increasing the percentage of premium in the respective year by an additional 1% as compared to the immediately preceding year.

The concession fee payable under the provisions of the PDTPL Concession Agreement shall be due and payable in monthly instalments within seven days of the close of each month.

Escrow Account

PDTPL was required to, prior to the PDTPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the PDTPL Concession Agreement read with the escrow agreement entered into among PDTPL, the NHAI, the Escrow Bank and the senior lenders through the lenders' representative (the "**Escrow Agreement**").

PDTPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;
b) all fee and any other revenues from or in respect of the PDTPL Project Highway, including the proceeds of any deposits, capital receipts or insurance claims; and
c) all payments by the NHAI, after deducting any outstanding concession fee.

The senior lenders may make direct disbursements to the EPC contractor in accordance with the express provisions contained in this behalf in the financing agreements.

Withdrawals during Concession Period

PDTPL was required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, *inter-alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by PDTPL for and in respect of the PDTPL Project Highway;

b) all payments relating to construction of the PDTPL Project Highway, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) operation and management ("**O&M**") expenses, subject to the ceiling, if any, set forth in the financing agreements;

d) O&M expenses and other costs and expenses incurred by the NHAI in accordance with the provisions of the PDTPL Concession Agreement, and certified by the NHAI as due and payable to it;

e) concession fee and premium due and payable to the NHAI;

f) monthly proportionate provision of PDTPL Debt Service due in an accounting year;

g) premium due and payable to the NHAI;

h) all payments and damages certified by the NHAI as due and payable to it by PDTPL, including repayment of revenue shortfall loan. PDTPL has agreed to give irrevocable instructions to the Escrow Bank to make

payments from the Escrow Account in accordance with the instructions of the NHAI under the PDTPL Concession Agreement and debit the payment to O&M expenses;

i) monthly proportionate provision of PDTPL Debt Service payments due in an accounting year in respect of subordinated debt;

j) any reserve requirements set forth in the financing agreements; and

k) balance, if any, in accordance with the instructions of PDTPL.

PDTPL shall not, in any manner, modify the order of payment specified except with prior written approval from the NHAI.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by PDTPL for and in respect of the PDTPL Project Highway;

b) 90% of the PDTPL Debt Due excluding the subordinated debt;

c) outstanding concession fee;

d) all payments and damages certified by the NHAI as due and payable to it by PDTPL, including the repayment of the revenue shortfall loan. PDTPL has agreed to give irrevocable instruction to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the NHAI under the PDTPL Concession Agreement and debit the payment to O&M expenses.

e) retention and payments relating to the liability for defects and deficiencies set forth in the PDTPL Concession Agreement;

f) outstanding PDTPL Debt Service including balance of PDTPL Debt Due;

g) outstanding subordinated debt;

h) incurred or accrued O&M expenses;

i) any other payments required to be made under the PDTPL Concession Agreement; and

j) balance, if any, in accordance with the instructions of PDTPL.

No appropriations shall be made until a vesting certificate has been issued by the NHAI.

Change of Scope

The NHAI may, notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, require the provision of additional works and services which are not included in the scope of the project as contemplated by the PDTPL Concession Agreement. Any such change of scope shall be made in accordance with the provisions of the PDTPL Concession Agreement and the costs thereof shall be expended by PDTPL and reimbursed by the NHAI in accordance with the PDTPL Concession Agreement.

If PDTPL determines at any time that a change in scope is necessary for providing safer and improved services to the users, it shall, by notice in writing, require the NHAI to consider such change of scope. The NHAI shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the PDTPL Concession Agreement, or inform PDTPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of PDTPL being in material default or breach of the PDTPL Concession Agreement, it shall pay to the NHAI by way of compensation, all direct costs suffered or incurred by the NHAI as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the PDTPL Concession Agreement.

In the event of the NHAI being in material default or breach of the PDTPL Concession Agreement at any time after the PDTPL Appointed Date, it shall pay to PDTPL by way of compensation, all direct costs suffered or incurred by PDTPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the PDTPL Concession Agreement.

In the event that a material default or breach of the PDTPL Concession Agreement causes a delay in achieving COD or leads to suspension of, or reduction in collection of fee, as the case may be, the NHAI shall, in addition to the payment of compensation, extend the PDTPL Concession Period as provided in the PDTPL Concession Agreement. In the event that an additional toll way or a competing road, as the case may be, is opened to traffic in breach of the PDTPL Concession Agreement, the NHAI shall pay to PDTPL, for each day of the breach, compensation as provided in the PDTPL Concession Agreement, until the breach is cured. The payment of compensation by the NHAI shall be deemed to cure the breach of the PDTPL Concession Agreement so long as the NHAI continues to pay the compensation.

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Effects of Variation in Traffic Growth

Subject to the provisions of the PDTPL Concession Agreement, in the event actual average traffic shall have fallen short of the target traffic by more than 5% (five percent), then for every 1% (one percent) shortfall as compared to the target traffic, the PDTPL Concession Period shall, subject to payment of concession fee and additional concession fee in accordance with the PDTPL Concession Agreement, be increased by 1% (one percent) thereof; provided that such increase in PDTPL Concession Period shall not in any case exceed 20% (twenty percent) of the PDTPL Concession Period.

Subject to the provisions of the PDTPL Concession Agreement, in the event actual average traffic shall have exceeded the target traffic by more than 5% (five percent), then for every 1% (one percent) increase as compared to the target traffic, the PDTPL Concession Period shall be reduced by 1% (one percent) thereof; provided that such reduction in PDTPL Concession Period shall not in any case exceed 20% (ten percent) of the PDTPL Concession Period.

Notwithstanding anything to the contrary contained in the PDTPL Concession Agreement, if the average daily traffic of PCUs in any accounting year shall exceed the designed capacity of the PDTPL Project Highway, an indirect political event under the PDTPL Concession Agreement will be deemed to have occurred and the NHAI may, at its discretion, terminate the PDTPL Concession Agreement. If PDTPL has completed the construction works necessary for augmenting the capacity of the PDTPL Project Highway such that its capacity has increased sufficiently for carrying the then current traffic in accordance with the corresponding provisions of the relevant Indian Roads Congress publication, prior to the issue of a termination notice by the NHAI, the indirect political event will deemed to have been cured.

Termination of the PDTPL Concession Agreement

Termination by the NHAI

Save as otherwise provided in the PDTPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and PDTPL fails to cure the default within the cure period, or where no cure period is specified, then within a cure period of 60 days, PDTPL shall be deemed to be in default of the PDTPL Concession Agreement ("**PDTPL Default**"), unless the default has occurred solely as a result of any breach of the PDTPL Concession Agreement by the NHAI or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the PDTPL Concession Agreement and PDTPL fails to replenish or provide fresh performance security within a cure period of 30 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the PDTPL Concession Agreement, PDTPL fails to cure, within a cure period of 90 days, the PDTPL Default for which whole or part of the performance security was appropriated;

c) PDTPL does not achieve the latest outstanding project milestone due in accordance with the PDTPL Concession Agreement and continues to be in default for 90 days;

d) PDTPL abandons or manifests intention to abandon the construction or operation of the PDTPL Project Highway without the prior written consent of the NHAI;

e) project completion date does not occur within the period specified in the PDTPL Concession Agreement;

f) the punch list items have not been completed within the period set forth in the PDTPL Concession Agreement;

g) PDTPL is in breach of the maintenance requirements or the safety requirements as the case may be;

h) PDTPL has failed to make any payment to the NHAI within the period specified in the PDTPL Concession Agreement;

i) an escrow default has occurred and PDTPL fails to cure the default within a cure period of 15 days;

j) upon occurrence of a financial default, the lenders' representative has, by notice, required the NHAI to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and PDTPL fails to cure the default within the cure period specified hereinabove;

k) a breach of the project agreements by PDTPL has caused a material adverse effect;

l) PDTPL creates an encumbrance in breach of the PDTPL Concession Agreement;

m) PDTPL repudiates the PDTPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the PDTPL Concession Agreement;

n) a change in ownership has occurred in breach of the PDTPL Concession Agreement;

o) there is a transfer, pursuant to law either of (i) the rights and/or obligations of PDTPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of PDTPL, and such transfer causes a material adverse effect;

p) an execution levied on any of the assets of PDTPL has caused a material adverse effect;

q) PDTPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for PDTPL or for the whole or material part of its assets that has a material bearing on the PDTPL Project;

r) PDTPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the NHAI, a material adverse effect;

s) a resolution for winding up of PDTPL is passed, or any petition for winding up of PDTPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 days of the date thereof, or PDTPL is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of PDTPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of PDTPL under the PDTPL Concession Agreement and the project agreements; provided that:

   i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the PDTPL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the PDTPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of PDTPL as at the PDTPL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

t) any representation or warranty of PDTPL which is, as of the date hereof, found to be materially false, incorrect or misleading or PDTPL is at any time hereafter found to be in breach thereof;

u) PDTPL submits to the NHAI any statement, notice or other document, in written or electronic form, which has a material effect on the NHAI's rights, obligations or interests and which is false in material particulars;

v) PDTPL has failed to fulfil any obligation, for which failure termination has been specified in the PDTPL Concession Agreement; or

w) PDTPL commits a default in complying with any other provision of the PDTPL Concession Agreement if such default causes a material adverse effect on the NHAI.

Without prejudice to any other rights or remedies which the NHAI may have under the PDTPL Concession Agreement, upon the occurrence of a PDTPL Default, the NHAI shall be entitled to terminate the PDTPL Concession Agreement by issuing a termination notice to PDTPL. Before issuing the termination notice, the NHAI shall, by notice, inform PDTPL of its intention to issue a termination notice and grant 15 days to PDTPL to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice subject to the provisions of the PDTPL Concession Agreement.

If there are senior lenders, the NHAI shall send a copy of its notice of intention to issue a termination notice to inform the lenders' representative and grant 30 days to the lenders' representative for making a representation on behalf of the senior lenders stating the intention to substitute PDTPL in accordance with the Substitution Agreement. If the NHAI receives a representation on behalf of the senior lenders, it shall, in its discretion, either withhold termination for a period not exceeding 180 days from the date of the representation, or exercise its right of suspension, as the case may be, to enable the lenders' representative to exercise the senior lenders' right of substitution in accordance with the Substitution Agreement. The lenders' representative may, instead of exercising the senior lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid 180 days, and upon the curing, the NHAI shall withdraw its notice and restore the rights of PDTPL. On a written request from the lenders' representative and PDTPL, the NHAI shall extend the period of 180 days by a further period not exceeding 90 days as it may deem appropriate.

Termination by PDTPL

In the event that any of the defaults specified below shall have occurred, and the NHAI fails to cure the default within a cure period of 90 days or such longer period as provided in the PDTPL Concession Agreement, the NHAI shall be deemed to be in default of the PDTPL Concession Agreement ("**NHAI Default**"), unless the default has occurred as a result of a breach of the PDTPL Concession Agreement by PDTPL, or due to force majeure. The default referred to herein shall include:

e) the NHAI commits a material default in complying with any of the provisions of the PDTPL Concession Agreement and such default has a material adverse effect on PDTPL;

f) the NHAI has failed to make any payment to PDTPL within the period specified in the PDTPL Concession Agreement;

g) the NHAI repudiates the PDTPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the PDTPL Concession Agreement; or

h) the State of West Bengal commits a material default in complying with the provisions of the state support agreement if such default has a material adverse effect on PDTPL and the breach continues for a period of 90 days from the date of notice given in this behalf by PDTPL to the NHAI.

Without prejudice to any other rights or remedies which PDTPL may have under the PDTPL Concession Agreement, upon the occurrence of an NHAI Default, PDTPL shall be entitled to terminate the PDTPL Concession Agreement by issuing a termination notice to the NHAI. Before issuing the termination notice, PDTPL shall, by notice, inform the NHAI of its intention to issue a termination notice and grant 30 days to the NHAI to make a representation, and may, after the expiry of the 30 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of a PDTPL Default during the operation period, the NHAI shall pay to PDTPL, by way of termination payment, an amount equal to 90% of the PDTPL Debt Due less insurance cover. If any insurance claims forming part of the insurance cover are not admitted and paid, then 80% of such unpaid claims shall be included in the computation of PDTPL Debt Due.

Upon termination on account of an NHAI Default, the NHAI shall pay to PDTPL, by way of termination payment, an amount equal to:

a) PDTPL Debt Due; and
b) 150% of the adjusted equity.

The termination payment shall not be less than an amount equal to the product of six and the average monthly fee actually realized 12 months prior to the transfer date.

Termination payment shall become due and payable to PDTPL within 30 days of a demand being made by PDTPL to the NHAI with the necessary particulars, and in the event of any delay, the NHAI shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the PDTPL Concession Agreement shall constitute a full and final settlement of all claims of PDTPL on account of termination of the PDTPL Concession Agreement for any reason whatsoever and PDTPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

PDTPL shall be responsible for all defects and deficiencies in the PDTPL Project Highway for a period of 120 days after termination. PDTPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the PDTPL Project Highway as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the NHAI in this behalf. A sum as specified in the PDTPL Concession Agreement shall be retained in the Escrow Account for a period of 120 days after termination for meeting the liabilities, if any, arising out of, or in connection with this provision.

Concession Agreement in relation to the Target SPV

Concession Agreement among IRB GEPL, IRB, HMDA and HGCL dated May 26, 2023

IRB GEPL has entered into a concession agreement for development, operation, maintenance, and management of Nehru Outer Ring Road from km 0+000 to km 158+000, in Hyderabad, Telangana on toll operate transfer ("**TOT**") basis (the "**IRB GEPL Concession Agreement**"), for a period of 30 years, from the appointed date under the IRB GEPL Concession Agreement ("**IRB GEPL Appointed Date**") or until such date on which the IRB GEPL Concession Agreement is terminated by a termination notice ("**IRB GEPL Termination Date**", and the period between the IRB GEPL Appointed Date and the IRB GEPL Termination Date, the "**IRB GEPL Concession Period**").

Certain Definitions

"**IRB GEPL Debt**" shall mean the financial assistance provided by lenders in terms of the financial agreement, relevant financial package, towards meeting the debt component of the concession fee amount that is paid by IRB GEPL to HMDA in terms hereof.

"**IRB GEPL Project Assets**" shall mean all physical and other assets relating to and forming part of the site including (a) rights over the site in the form of licence, right of way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, interchanges, bridges, culverts, road overbridges, drainage works, traffic signals, sign boards, kilometre-stones, toll plazas, electrical systems, communication systems, rest areas, relief centres, maintenance depots and administrative offices; (c) all rights of IRB GEPL under the project agreements; (d) security deposits (e) insurance proceeds; and (f) applicable permits and authorizations relating to or in respect of the IRB GEPL Project Road (as defined below) but does not include additional facilities;

"**IRB GEPL Project Road**" shall mean the site comprising the existing road comprising and all IRB GEPL Project Assets, and its operation and maintenance subject to and in accordance with IRB GEPL Concession Agreement

Stretch	State	Start (KM)	End (KM)	Length (KM)
Nehru Outer Ring Road	Telangana	0.000	158.010	158.010

;

"**IRB GEPL Project**" shall mean the operation, and maintenance of the IRB GEPL Project Road in accordance with the provisions of the IRB GEPL Concession Agreement, and includes all works, services, and equipment relating to and in respect of the scope of the project; and

"**Substitution Agreement**" shall mean the agreement to be entered into between HMDA, IRB GEPL and the lenders in the form set in IRB GEPL Concession Agreement.

Grant of Concession

Subject to, and in accordance with the provisions set out in the IRB GEPL Concession Agreement, the applicable laws and the applicable permits, the HMDA has granted to IRB GEPL, and IRB GEPL has accepted the concession, including the exclusive right, license, and authority during the subsistence of the IRB GEPL Concession Agreement, to collect and demand appropriate fee, operate, manage and maintain the IRB GEPL Project for a period of 30 years from the IRB GEPL Appointed Date.

Subject to, and in accordance with the provisions of the IRB GEPL Concession Agreement, the concession granted shall oblige or entitle, as the case may be, IRB GEPL to:

a) right of way, access and license to the site for the purpose of, and to the extent conferred by the provisions of the IRB GEPL Concession Agreement;

b) manage, operate, and maintain IRB GEPL Project Road and regulate the use thereof by third parties in accordance with the terms of the IRB GEPL Concession Agreement;

c) demand, collect, and appropriate fee from vehicles and persons liable for payment of fee for using the IRB GEPL Project Road or any part thereof and refuse entry of any vehicle if the fee due is not paid;

d) perform and fulfil all of IRB GEPL's obligations under and in accordance with the IRB GEPL Concession Agreement;

e) bear and pay all costs, expenses, and charges in connection with or incidental to the performance of the obligations of IRB GEPL under the IRB GEPL Concession Agreement; and

f) neither assign, transfer or sublet, or create any lien or encumbrance on IRB GEPL Concession Agreement, or the concession granted, or on the whole or any part of IRB GEPL Project Road, nor transfer, lease, or part possession thereof, save and except as expressly permitted by the IRB GEPL Concession Agreement

Fees

On and from the IRB GEPL appointed date till the transfer date (as defined under the IRB GEPL Concession Agreement), IRB GEPL shall have the sole and exclusive right to demand, collect, and appropriate fee from the users subject to, and in accordance with the IRB GEPL Concession Agreement and the applicable rules and regulations, provided that IRB GEPL may determine and collect fee at such lower rates as it may, by public notice

to the users, specify in respect of all or any category of users or vehicles. In accordance with the IRB GEPL Concession Agreement, IRB GEPL shall not collect any fees in relation to exempted vehicles.

IRB GEPL acknowledges and agrees that upon payment of fee, any user shall be entitled to use IRB GEPL Project Road and IRB GEPL shall not place, or cause to be placed, any restriction on such use, except to the extent specified in any applicable law, applicable permit or provisions of the IRB GEPL Concession Agreement.

Concession Fee

In consideration of the grant of concession, IRB GEPL shall pay to the HMDA in accordance with terms of the IRB GEPL Concession Agreement and prior to IRB GEPL Appointed Date, the lumpsum upfront concession fee of an amount equivalent to ₹73.80 billion.

Escrow Account

IRB GEPL is required to, prior to the IRB GEPL Appointed Date, open and establish an escrow account (the "**Escrow Account**") with a bank (the "**Escrow Bank**") in accordance with the IRB GEPL Concession Agreement read with the escrow agreement entered into amongst IRB GEPL, the HMDA, the Escrow Bank and the lenders through the lenders' representative (the "**Escrow Agreement**").

IRB GEPL shall deposit, or cause to be deposited the following inflows and receipts into the Escrow Account:

a) all funds constituting the financial package;

b) all fee and any other revenues from or in respect of the IRB GEPL Project Road, including the proceeds of any deposits, capital receipts or insurance claims; and

c) all payments by the HMDA including, if any, in relation to the change of scope in the IRB GEPL Project Road.

Withdrawals during Concession Period

IRB GEPL is required to, at the time of opening the Escrow Account, give irrevocable instructions, by way of the Escrow Agreement, to the Escrow Bank instructing, inter alia, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month, then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in a month when due:

a) all taxes due and payable by IRB GEPL for and in respect of the IRB GEPL Project Road;

b) all payments relating to construction of the IRB GEPL Project Road, subject to and in accordance with the conditions, if any, set forth in the financing agreements;

c) Operation and Management ("**O&M**") expenses;

d) O&M expenses and other costs and expenses incurred by the HMDA in accordance with the provisions of the IRB GEPL Concession Agreement, and certified by the HMDA as due and payable to it;

e) monthly proportionate provision of debt service payment due in an accounting year;

f) all payments and damages certified by the HMDA as due and payable to it by IRB GEPL,

g) balance, if any, in accordance with the instructions of IRB GEPL.

IRB GEPL shall not, in any manner, modify the order of payment specified except with prior written approval from the HMDA and the lenders.

Withdrawals upon Termination

Notwithstanding anything to the contrary contained in the IRB GEPL Concession Agreement, all amounts standing to the credit of the Escrow Account shall, upon termination, be appropriated in the following order:

a) all taxes due and payable by IRB GEPL for and in respect of the IRB GEPL Project Road;

b) payment due to lenders;

c) all payments and damages certified by the HMDA as due and payable to it by IRB GEPL;

d) retention and payments relating to the liability for defects and deficiencies set forth in the IRB GEPL Concession Agreement;

e) incurred or accrued O&M expenses;

f) any other payments required to be made under the IRB GEPL Concession Agreement; and

g) balance, if any, in accordance with the instructions of IRB GEPL.

No appropriations shall be made until a vesting certificate has been issued by the HMDA.

Change of Scope

The HMDA and/or HGCL may, notwithstanding anything to the contrary contained in the IRB GEPL Concession Agreement, but subject to provisions on 'restriction on certain works' in the IRB GEPL Concession Agreement, require IRB GEPL to alterations/modifications in the scope of IRB GEPL Project. Any such change of scope shall be made in accordance with the provisions of the IRB GEPL Concession Agreement and the costs thereof shall be expended by IRB GEPL and reimbursed by the HMDA.

If IRB GEPL determines at any time that a change in scope is necessary, it shall, by notice in writing, require the HMDA to consider such change of scope. The HMDA and/or HGCL shall, within 60 days of receipt of such notice, either accept the change of scope with modifications, if any, and initiate proceedings thereof in accordance with the provisions of the IRB GEPL Concession Agreement, or inform IRB GEPL in writing of its reasons for not accepting such change of scope.

Compensation for Breach of Agreement

In the event of IRB GEPL being in material default or breach of the IRB GEPL Concession Agreement, it shall pay to the HMDA by way of compensation, all direct costs suffered or incurred by the HMDA as a consequence of the material default or breach, within 30 days of the receipt of the demand supported by the necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages are expressly specified and payable under the IRB GEPL Concession Agreement or for any consequential losses incurred by HMDA.

In the event of the HMDA being in material default of the IRB GEPL Concession Agreement at any time after the IRB GEPL Appointed Date, it shall pay to IRB GEPL by way of compensation, all direct costs suffered or incurred by IRB GEPL as a consequence of the material default or breach within 30 days of receipt of the demand supported by necessary particulars thereof. No compensation shall be payable for any material breach or default in respect of which damages have been expressly specified in the IRB GEPL Concession Agreement. Compensation payable may include O&M Expenses and all other costs directly attributable to such material breach or default but shall not include loss of fee revenues or debt repayment or other consequential losses. In the event that a material default or breach of the IRB GEPL Concession Agreement leads to suspension of, or reduction in collection of fee, as the case may be, the HMDA shall, in addition to the payment of compensation, extend the IRB GEPL Concession Period as provided in the IRB GEPL Concession Agreement

The compensation payable shall be in addition to, and not in substitution for, or derogation of, termination payment, if any.

Termination of the IRB GEPL Concession Agreement

Termination by the HMDA

Save as otherwise provided in the IRB GEPL Concession Agreement, in the event that any of the defaults specified below shall have occurred, and IRB GEPL fails to cure the default within the specified cure period, or where no cure period is specified, then within a cure period of 60 days, IRB GEPL shall be deemed to be in default of the IRB GEPL Concession Agreement ("**IRB GEPL Default**"), unless the default has occurred solely as a result of any breach of the IRB GEPL Concession Agreement by the HMDA and/or HGCL or due to force majeure. The defaults referred to herein shall include:

a) the performance security has been encashed and appropriated in accordance with the IRB GEPL Concession Agreement and IRB GEPL fails to replenish or provide fresh performance security within a cure period of 15 days;

b) subsequent to the replenishment or furnishing of fresh performance security in accordance with the IRB GEPL Concession Agreement, IRB GEPL fails to cure, within a cure period of 60 days, the IRB GEPL Default for which whole or part of the performance security was appropriated;

c) IRB GEPL abandons or manifests intention to abandon the operation and maintenance of IRB GEPL Project Road/additional facilities without the prior written consent of HMDA

d) IRB GEPL fails/omits to facilitate HMDA and / or HGCL during construction/development of the additional facilities in terms IRB GEPL Concession Agreement;

e) IRB GEPL fails to roll over, renew and furnish new bank guarantee performance security subject to and in accordance with IRB GEPL Concession Agreement, at least three months prior to expiry of subsisting bank guarantee;

f) IRB GEPL is in breach of the maintenance requirements or the safety requirements as the case may be;

g) IRB GEPL fails to do additional operations & maintenance in terms of IRB GEPL Concession Agreement;

h) IRB GEPL has failed to make any payment to the HMDA and/or HGCL within the period specified in the IRB GEPL Concession Agreement;

i) upon occurrence of a financial default, the lenders' representative has, by notice, required the HMDA to undertake suspension or termination, as the case may be, in accordance with the Substitution Agreement and IRB GEPL fails to cure the default within the cure period specified hereinabove;

j) a breach of the project agreements by IRB GEPL has caused a material adverse effect;

k) IRB GEPL creates an encumbrance in breach of the IRB GEPL Concession Agreement;

l) IRB GEPL repudiates the IRB GEPL Concession Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the IRB GEPL Concession Agreement;

m) a change in ownership has occurred in breach of the IRB GEPL Concession Agreement;

n) there is a transfer, pursuant to law either of (i) the rights and/or obligations of IRB GEPL under any of the project agreements, or of (ii) all or part of the assets or undertaking of IRB GEPL, and such transfer causes a material adverse effect;

o) an execution levied on any of the assets of IRB GEPL has caused a material adverse effect;

p) IRB GEPL is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for IRB GEPL or for the whole or material part of its assets that has a material bearing on the IRB GEPL Project;

q) IRB GEPL has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the HMDA, a material adverse effect;

r) a resolution for winding up of IRB GEPL is passed, or any petition for winding up of IRB GEPL is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has

not been set aside within 90 days of the date thereof, or IRB GEPL is ordered to be wound up by Court except for the purpose of amalgamation or reconstruction, provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of IRB GEPL are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of IRB GEPL under the IRB GEPL Concession Agreement and the project agreements; provided that:

i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under the IRB GEPL Concession Agreement and the project agreements;

ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under the IRB GEPL Concession Agreement and the project agreements and has a creditworthiness at least as good as that of IRB GEPL as at the IRB GEPL Appointed Date; and

iii) each of the project agreements remains in full force and effect;

s) any representation or warranty of IRB GEPL which is, as of the date of execution of the IRB GEPL Concession Agreement, found to be materially false, incorrect or misleading

t) IRB GEPL submits to the HMDA and/or HGCL any statement, notice or other document, in written or electronic form, which has a material effect on the HMDA's and/or HGCL's rights, obligations or interests and which is false in material particulars;

u) IRB GEPL has failed to fulfil any obligation, for which failure termination has been specified in the IRB GEPL Concession Agreement; or

v) IRB GEPL commits a default in complying with any other provision of the IRB GEPL Concession Agreement if such default causes a material adverse effect on the HMDA and/or HGCL.

w) an escrow default has occurred and IRB GEPL fails to cure the default within a cure period of 15 days;

Without prejudice to any other rights or remedies which the HMDA may have under the IRB GEPL Concession Agreement, upon the occurrence of an IRB GEPL Default, the HMDA shall be entitled to issue a notice of its intention to terminate the IRB GEPL Concession Agreement with a copy thereof to the lenders.

Immediately upon the issue by Authority of the notice of intention to terminate, the lenders shall have the right to nominate an entity to replace IRB GEPL and perform IRB GEPL's obligations hereunder (the "**Substitute Entity**"). IRB GEPL shall procure that lenders shall notify HMDA about whether they are exercising their right of substitution within 60 days of receipt of notice of intention to terminate, or the lenders' notice of Default (as defined in the Substitution Agreement). Any such Substitute Entity shall have the legal, financial and technical capability reasonably necessary to perform the obligations of IRB GEPL in accordance with the terms of IRB GEPL Concession Agreement. Any such Substitute Entity shall be nominated in accordance with the procedure as set out in the Substitution Agreement.

Termination by IRB GEPL

In the event that any of the defaults specified below shall have occurred, and the HMDA fails to cure the default within a cure period of 90 days or such longer period as provided in the IRB GEPL Concession Agreement, the HMDA shall be deemed to be in default of the IRB GEPL Concession Agreement ("**HMDA Default**"), unless the default has occurred as a result of a breach of the IRB GEPL Concession Agreement by IRB GEPL, or due to force majeure. The default referred to herein shall include:

a) the HMDA commits a material default in complying with any of the provisions of the IRB GEPL Concession Agreement and such default has a material adverse effect on IRB GEPL;

b) the HMDA repudiates the IRB GEPL Concession Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by the IRB GEPL Concession Agreement; or

c) the State commits a material default in complying with the provisions of the state's letter of comfort, if such default has a material adverse effect on IRB GEPL and the breach continues for a period of 90 days from the date of notice given in this behalf by IRB GEPL to the HMDA.

Without prejudice to any other rights or remedies which IRB GEPL may have under the IRB GEPL Concession Agreement, upon the occurrence of an HMDA Default, IRB GEPL shall be entitled to terminate the IRB GEPL Concession Agreement by issuing a termination notice to the HMDA. Before issuing the termination notice, IRB GEPL shall, by notice, inform the HMDA of its intention to issue a termination notice and grant 15 days to the HMDA to make a representation, and may, after the expiry of the 15 days, whether or not it is in receipt of such representation, issue the termination notice.

Termination Payment

Upon termination on account of an IRB GEPL Default during the IRB GEPL Concession Period, the performance security shall be forfeited and IRB GEPL would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the termination and also for the obligations including divestment requirements that must be fulfilled in terms hereof after termination. In addition to this, HMDA shall pay to IRB GEPL 70% of the unexpired cash flow.

Upon termination on account of an HMDA Default, the HMDA shall pay to IRB GEPL, by way of termination payment, an amount equal to 105% of the unexpired cash flow.

IRB GEPL shall be entitled to receive termination payment only upon furnishing to HMDA no objection certificate issued by lenders/lenders' representative recording/effecting release; vacation/discharge of the charge on IRB GEPL Project receivables (if any) created by IRB GEPL for securing repayment of IRB GEPL Debt.

Without prejudice to the respective rights or remedy of the HMDA and IRB GEPL, the termination payment shall become due and payable to IRB GEPL within 15 days of a demand being made by IRB GEPL to the HMDA with the necessary particulars, and in the event of any delay, the HMDA shall pay interest at a rate equal to 3% above the bank rate on the amount of termination payment remaining unpaid. The delay shall not exceed 90 days. The termination payment under the IRB GEPL Concession Agreement shall constitute a full and final settlement of all claims of IRB GEPL on account of termination of the IRB GEPL Concession Agreement for any reason whatsoever and IRB GEPL shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

Defects Liability after Termination

IRB GEPL shall be responsible for all defects and deficiencies in the IRB GEPL Project Road for a period of 60 days after termination. IRB GEPL shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies in the IRB GEPL Project Road as observed by the independent engineer. The repair or rectification of the defect or deficiency shall be done within a period of 15 days from the date of notice issued by the HMDA and/or HGCLin this behalf. A sum equal to the performance security shall be retained in the Escrow Account for a period of 90 days after termination for meeting the liabilities, if any, arising out of, or in connection with the provisions governing ‘defects liability after termination’ in the IRB GEPL Concession Agreement.

REGULATIONS AND POLICIES

The following description is a summary of certain key regulations and policies which are applicable to the operations of the Trust, the Project SPVs and the Target SPV. The information detailed in this section has been obtained from publications available in the public domain. The regulations set out below may not be exhaustive, and are only intended to provide general information to the investors and are neither designed nor intended to substitute for professional legal advice. The information in this section is based on the current provisions of applicable law that are subject to change or modification by subsequent legislative, regulatory, administrative or judicial decisions in India.

Laws Relating to the Business and Operations of the Trust, the Project SPVs and the Target SPV

The primary central legislations governing the road sector are the National Highways Act, 1956 (the "**NH Act**") and the National Highways Authority of India Act, 1988 (the "**NHAI Act**").

The NH Act

In accordance with the NH Act, the GoI is vested with the power to declare a highway as a national highway and also to acquire land for this purpose. The GoI may, by notification, declare its intention to acquire any land when it is satisfied that, for a public purpose, such land is required for the building, maintenance, management or operation of a national highway, or part thereof. The NH Act prescribes the procedure for such land acquisition. Such procedure includes, *inter-alia*, a declaration of an intention to acquire, entering and inspecting such land, hearing of objections, a declaration of the acquisition and the power to take possession. The NH Act also provides for payment of compensation to owners and any other person whose right of enjoyment in the land has been affected.

The GoI is responsible for the development and maintenance of national highways. However, it may direct that such functions may also be exercised by the government of a state in which the highway is located or by any officer or authority subordinate to the GoI or to the state government. Further, the GoI has the power to enter into an agreement with any person for the development and maintenance of a part or whole of the highway. Such person would have the right to collect and retain fees at such rates as may be notified by the GoI and will also have the powers to regulate and control the traffic, for proper management of the highway, in accordance with the provisions of the Motor Vehicles Act, 1988, as amended. The GoI also has the power to make rules for carrying out the purposes of the NH Act.

National Highways Fee (Determination of Rates and Collection) Rules, 2008

The National Highways Fee (Determination of Rates and Collection) Rules, 2008 (the "**NH Fee Rules**"), regulates the collection of fees for the use of national highways. In accordance with the NH Fee Rules, the GoI may, by a notification, levy a fee for use of any section of a national highway, permanent bridge, bypass or tunnel forming part of a national highway, as the case may be. However, the GoI may, by notification, exempt any section of a national highway, permanent bridge, bypass or tunnel constructed through a public funded project from levy of such fee.

The NH Fee Rules supersede the National Highways (Temporary Bridges) Rules, 1964, the National Highways (Collection of Fees by any Person for the Use of Section of National Highways/ Permanent Bridge/ Temporary Bridge on National Highways) Rules, 1997, the National Highways (Fees for the use of National Highways Section and Permanent Bridges – Public Funded Project) Rules, 1997 and the National Highways (Rate of Fees) Rules, 1997 other than in respect of things done or omitted to be done under such rules prior to supersession. The NH Fee Rules do not apply to agreements and contracts executed or bids invited prior to the publication of such rules, i.e., prior to December 5, 2008.

The collection of fees in case of a public funded project shall commence within 45 days from the date of completion of the project. The NH Fee Rules further provide a base rate of fees applicable for the use of a section of the national highway for different categories of vehicles and the fees collected by the executing authority shall be remitted to the GoI. However, the GoI may, by notification, allow any or all of the executing authorities to appropriate the whole, or part of such fees for purposes as may be specified.

FASTag lanes on fee plazas is a policy initiative of the GoI in which there is an exclusive lane in the fee plaza for movement of vehicles fitted with FASTag. The FASTag is a device which is fitted on the front windscreen of

vehicles to indicate online toll payment. The amended NH Fee Rules impose a penalty equivalent to two times the fee applicable if a vehicle not fitted with FASTag enters the exclusive FASTag lane. However, in case a user is unable to pay, due to malfunctioning electronic toll collection infrastructure, the user will be permitted to pass the fee plaza without payment.

The NH Fee rules were also amended to provide that the driver or owner of a mechanical vehicle which is loaded in excess of permissible load specified for its category, (i) shall not be permitted to use the national highway or cross the fee plaza until the excess load has been removed, and (ii) shall be liable to pay a fee to the toll collection agency equal to ten times of the fee applicable to such category of mechanical vehicle. However, in case no weighbridge has been installed at the toll plaza, no fee for overloading shall be levied.

The National Highways Rules, 1957

The National Highway Rules, 1957 (the "**NH Rules**") provide that in situations where the estimate cost of the execution of any original work on a national highway exceeds ₹1,000,000, a detailed estimated of the cost is to be forwarded to the GoI. An application for allotment of funds for meeting expenditure on an original work on a national highway must also be made to the GoI. The executing agency of the highway is required to furnish monthly progress reports and a completion report on the conclusion of the work. The NH Rules also give the consulting engineer of the GoI the right to inspect the work while it is in progress or after completion.

The NHAI Act

NHAI

The National Highways Authority of India (the "**NHAI**") was constituted pursuant to the NHAI Act and became operational in 1995. The NHAI Act details the functions the NHAI, which primarily are the development, maintenance and management of national highways and any other highways vested in, or entrusted to it, by the GoI, and matters connected therewith or incidental thereto. In accordance with the NHAI Act, the GoI carries out development and maintenance of the national highway system through NHAI. Subject to the provisions of the NHAI Act, the NHAI has the power to enter into and perform any contract necessary for the discharge of its functions. The NHAI has the power to acquire any land to discharge its functions, and such acquired land will be deemed to be land needed for a public purpose. The NHAI Act prescribes a limit in relation to the value of the contracts that may be entered into by NHAI. However, the NHAI may enter into contracts exceeding the specified value, on obtaining prior approval of the GoI. The NHAI Act provides that the contracts for acquisition, sale, or lease of immovable property on behalf of the NHAI cannot exceed a term of 30 years unless previously approved by the GoI.

As per the NHAI Works Manual, 2006, NHAI's mandate is the time and cost bound implementation of the National Highways Development Project (the "**NHDP**"). The sources of finance available to the NHAI include fund assistance from external funding agencies like the World Bank and the Asian Development Bank. NHDP Phase – I also strives to provide road connectivity to major ports. NHAI's role encompasses involving the private sector in provision, maintenance and operation of the national highways.

Financing of the NHDP

The GoI, under the Central Road Fund Act, 2000 created a fund which is required to be utilized for the development and maintenance of national highways (the "**Central Road Fund**"). Section 18 of the NHAI Act also provides for the creation of a separate NHAI Fund. Any capital grant or aid received, loan taken, borrowing made, or any other sum received by the NHAI is credited to the NHAI Fund. Certain sources for financing of the NHDP are through dedicated accruals under the Central Road Fund by levy of cess on fuel as well as involving the private sector and encouraging public private partnerships. The NHDP is also financed through long-term external loans from the World Bank, the Asian Development Bank and the Japan Bank for International Cooperation as well as through tolling of roads for different projects undertaken by the NHAI.

Private Participation in NHDP

In an effort to attract private sector participation in the NHDP, the NHAI has formulated model concession agreements where a private entity being the concessionaire is awarded a concession to build, operate and collect toll on a road for a specified period of time, which is usually up to 30 years.

The bidding for the projects takes place in two stages as per the process provided below:

1. in the pre-qualification stage, the NHAI selects certain bidders on the basis of technical and financial expertise, prior experience in implementing similar projects and previous track record; and

2. in the second stage, the NHAI invites commercial bids from the pre-qualified bidders on the basis of which the right to develop the project is awarded.

In accordance with the model concession agreement for projects above ₹1,000 million, the concessionaire meets the upfront cost and expenditure on annual maintenance and recovers the entire cost along with the interest from toll collections during the concession period. As per the 'Guidelines for Investment in Road Sector' issued by the Ministry of Shipping, Road Transport and Highways ("**MoRTH**") in 2009, in order to increase the viability of projects, a capital grant of up to 40% of the project cost is provided by the NHAI or the GoI. The quantum of grant is determined on a case to case basis and typically constitutes the bid parameter in Build, Operate, Transfer ("**BOT**") projects which are generally not viable based on toll revenue alone. For certain projects with high traffic volumes, concessionaire also offers a negative grant (i.e., premium) to the NHAI. The concessionaire at the end of the concession period transfers the road back to the Government (free of charge and clear of all encumbrances). The concessionaire's investment in the road is recovered directly through user fees collected by way of tolls. As per the model concession agreement for annuity based projects, the concessionaire is required to meet the entire upfront cost (no grant is paid by the NHAI or the GoI) and the expenditure on annual maintenance for annuity based projects. The concessionaire recovers the entire investment through pre-determined annuity payments to be made by the NHAI or the GoI. Furthermore, MoRTH approved certain amendments to the model concession agreement, *inter-alia*, in relation to deferment of premium payments.

Exit Policy

The CCEA in May 2015 approved a comprehensive exit policy framework with the objective to mobilize funds in the market. This policy framework now permits divestment of 100% equity by concessionaires/developers after two years of completion of construction to facilitate unlocking of funds for new projects. The equity divested is required to be invested by promoters in their new projects. This comprehensive exit policy framework is expected to harmonize certain conditions across all concessions signed prior to 2009 with the policy framework for post 2009 contracts which permit divestment of equity up to 100%, two years after completion of construction.

In November 2020, the MoRTH in modified the change in ownership clause in the Hybrid Annuity Mode ("**HAM**") projects and permitted the bidders/consortium members to dilute their equity after a period of six months from the commercial operations date ("**COD**"). Prior to the relaxation, the concessionaire/bidders/consortium members had to retain their equity for a period of two years from COD. Further, MoRTH in May 2022 approved changes in the model concession agreements of Build-Operate-Transfer projects and permitted the change of ownership from the existing two years to one year after COD/issuance of completion certificate and completion of punch list items.

Rationalized Compensation

The CCEA in November 2015 approved a policy for rationalized compensation to concessionaires for languishing national highway projects in BOT mode for delays that are not attributable to the concessionaires. Under the policy, the NHAI is authorized to allow an extension of the concession period for BOT (Toll) projects while keeping the original operation period unchanged. The NHAI has also been authorised to pay compensatory annuities to the concessionaire corresponding to the actual period of delay that is not attributable to the concessionaire upon successful completion of the project. In these cases, the construction period will be enhanced but the tenure of the concession will remain unchanged.

One Time Fund Infusion

The CCEA in October 2015 gave its approval to the NHAI for a one-time infusion of funds with the purpose of reviving and physically completing stalled projects in the advanced stages of completion. As per the policy, the amount of funds required in each case shall be approved by NHAI on a case to case basis.

Bidder Information

MoRTH has developed the Bidder Information Management System ("**BIMS**") to streamline the process of pre-qualification of bidders for EPC mode of contracts for all national highway works, with enhanced transparency and objectivity. BIMS works as a data base of bidder information that covers basic details, civil works experience, cash accruals and networth, and annual turnover so that bidders' pre-qualification can be assessed based on evaluation parameters like threshold capacity and bid capacity from already stored data and the technical evaluation can be carried out in a faster manner.

Land Acquisition

While land is acquired for national highway projects under the NH Act, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (the "**Land Acquisition Act**") must also be complied with. MoRTH has issued comprehensive guidelines on land acquisition for national highways taking into account the applicability of the Land Acquisition Act.

Arbitral Awards

CCEA on August 31, 2016 approved various measures to revive the construction sector. An office memorandum dated September 5, 2016 was issued by the National Institute for Transforming India with certain proposals. On November 20, 2019, the CCEA approved certain proposals in relation to the arbitrations by or against government entities, for the effective implementation of the CCEA's decision on August 31, 2016 on its initiatives to revive the construction sector. Initially, the CCEA had approved the proposal that government agencies will be required to pay 75% of the arbitral award to the concessionaire against a bank guarantee, in cases where the award already announced is challenged. However, pursuant to a press release dated November 20, 2019, the CCEA approved, *inter-alia*, that where a government entity has challenged an arbitral award, resultant of which the amount of the arbitral award has not been paid, 75% of such award will be paid by the government entity to the contractor or the concessionaire against a bank guarantee only for the said 75% and not for its interest component. In relation to interest payable to the government entity, if a subsequent court order required the refund of 75% of the amount, the payment of such amounts will be required to be made as per the court orders. On October 29, 2021, the Department of Expenditure inserted a new Rule 227A in the General Finance Rules, 2017 ("**GFR**") to incorporate the above decision of the CCEA. The above rule further requires payment to be made into a designated escrow account with the stipulation that the proceeds will be used: (i) for the payment of lenders' dues; (ii) for completion of the project, and (iii) for completion of other projects. The balance remaining in the escrow account may be used by the contractor/concessionaire with prior approval of the lead banker and the ministry/department. Retention money and other amounts withheld may also be released against the bank guarantee subject to eligibility conditions and applicable contractual provisions.

Indian Tolls Act, 1851

In accordance with the Indian Tolls Act, 1851 (the "**Tolls Act**"), state governments have been vested with the power to levy tolls at such rates as they deem fit, to be levied upon any road or bridge, made or repaired at the expense of the GoI or any state government. The tolls levied under the Tolls Act, are deemed to be 'public revenue' and the collection of tolls can be placed under the management of any person the state governments' may deem fit. Such persons are instructed with the same responsibilities as if they were employed in the collection of land revenue. Further, all police officers are bound to assist the toll collectors when required in the implementation of the Tolls Act. The Tolls Act further gives power for recovery of toll and exempts certain category of people from payment of toll.

Provisions under the Constitution of India and other legislations in relation to collection of toll

Entry 59, List II of Schedule VII read with Article 246 of the Constitution of India vests state governments with the power to levy tolls. Further, in accordance with the Tolls Act, state governments have been vested with the power to levy tolls at such rates as they deem fit.

Control of National Highways (Land and Traffic) Act, 2002

The Control of National Highways (Land and Traffic) Act, 2002 (the "**Control of NH Act**") provides for control of land within national highways, right of way and traffic moving on national highways and also for removal of unauthorised occupation thereon.

In accordance with the provisions of the Control of NH Act, the GoI has established the Highway Administration which is governed by Highway Administration Rules, 2004. Its functions include maintenance of land records and issuance of permits. Under the Control of NH Act, all land that forms part of a highway which vests in the GoI, or that which does not already vest in the GoI but has been acquired for the purpose of highways shall be deemed to be the property of the GoI. The Control of NH Act prohibits any person from occupying any highway land or discharging any material through drain on such land without the permission of the Highway Administration or any officer authorised by such administration. The Control of NH Act permits the grant of lease and license for use of highway land for temporary use.

Other Laws and Regulations

In addition to the aforementioned legislations which are applicable to the Trust, the Project SPVs and the Target SPV, certain other material legislations that are applicable to the operations of the Trust, the Project SPVs and the Target SPV are set out below.

In addition to such legislations, we are also required to comply with the provisions of various tax-related legislations, intellectual-property related legislations and other applicable law for our day-to-day operations.

Indian Trusts Act, 1882

The Indian Trusts Act, 1882 ("**Trusts Act**") governs all private trusts in India.

The Trusts Act sets out the purpose for which private trusts can be established, the manner in which they may be created, executed and extinguished. The person creating a trust under the Trusts Act is the author of such trust, the person to whom the author grants the power and authority to regulate the trust is the trustee and the persons for whose benefit such trust has been created are the beneficiaries of such trust. The Trust Act sets out the rights, duties, liabilities and powers of the trustees and the beneficiaries *vis-a-vis* the trust. The Trust has been settled in accordance with the provisions of the Trusts Act.

InvIT Regulations

The InvIT Regulations set out the framework for infrastructure investment trusts and the registration and regulation thereof. An infrastructure investment trust is required to obtain a certificate of registration from the SEBI. The InvIT Regulations prescribe, *inter-alia*, the eligibility criteria and the rights and responsibilities of the parties to an infrastructure investment trust, namely its sponsor, investment manager, trustee and project manager; and the rights and responsibilities of the valuer and auditor of an infrastructure investment trust. Parties to an infrastructure investment trust are required to maintain the eligibility conditions specified under the InvIT Regulations of the InvIT Regulations on an ongoing basis. Infrastructure investment trusts and parties to infrastructure investment trusts are also required to comply with the code of conduct prescribed under the InvIT Regulations.

Environment Regulation

Infrastructure projects must also ensure compliance with environmental legislation such as the Water (Prevention and Control of Pollution) Act, 1974 ("**Water Pollution Act**"), the Air (Prevention and Control of Pollution) Act, 1981 ("**Air Pollution Act**") and the Environment Protection Act, 1986 ("**Environment Act**"). The Water Pollution Act aims to prevent and control water pollution. This legislation provides for the constitution of a Central Pollution Control Board and State Pollution Control Boards. The functions of the Central Pollution Control Board include, *inter-alia*, coordination of activities of the State Pollution Control Boards, collecting data relating to water pollution and the measures devised for the prevention and control of water pollution and prescription of standards for streams or wells. The State Pollution Control Boards are responsible for, *inter-alia*, the planning for programmes for prevention and control of pollution of streams and wells, collecting and disseminating information relating to water pollution and its prevention and control, inspection of sewage or trade effluents, works and plants for their treatment and to review the specifications and data relating to plants set up for treatment and purification of water, laying down or annulling the effluent standards for trade effluents and for the quality of the receiving waters, and laying down standards for treatment of trade effluents to be discharged. This legislation prohibits any person from establishing any industry, operation or process or any treatment and disposal system, which is likely to discharge trade effluent into a stream, well or sewer, or bring into use any new or altered outlet for discharge of sewage, or begin to make any new discharge of sewage without taking prior consent of the State Pollution Control Board.

The Central and State Pollution Control Boards constituted under the Water Pollution Act are also to perform functions as per the Air Pollution Act for the prevention and control of air pollution. The Air Pollution Act aims for the prevention, control and abatement of air pollution. It is mandated under this Act that no person can, without the previous consent of the State Pollution Control Board, establish or operate any industrial plant in an air pollution control area as notified by the State Government. The Environment Act has been enacted for the protection and improvement of the environment. The Environment Act empowers the GoI to take measures to protect and improve the environment such as by laying down standards for emission or discharge of pollutants, providing for restrictions regarding areas where industries may operate and so on. The GoI may make rules for regulating environmental pollution.

With respect to forest conservation, the Forest (Conservation) Act, 1980 ("**Forest Conservation Act**") applies to forest land in the country. The Lok Sabha has recently passed the Forest (Conservation) Amendment Bill, 2023, which seeks to the amend the provisions of the Forest Conservation Act, including, *inter-alia*, changing the name of the legislation to Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and exemptions to strategic projects related to national security and public utility projects from the provisions of the Forest Conversation Act.

The Ministry of Environment and Forests (the "**MoEF**") mandates that Environment Impact Assessment ("**EIA**") must be conducted for specified projects. In the process, the MoEF receives proposals for the setting up of projects and assesses their impact on the environment before granting clearances to the projects. The EIA Notification S.O. 1533, issued on September 14, 2006 (the "**EIA Notification**") and amended from time to time, under the provisions of the Environment Act, prescribes that new construction of specified projects require prior environmental clearance from the MoEF. The environmental clearance must be obtained from the MoEF according to the procedure specified in the EIA Notification. No construction work or preparation of land by the project management except for securing the land, relating to the setting up of a specified project can be undertaken until such clearance is obtained. Under the EIA Notification, the environmental clearance process for new projects consists of four stages – screening, scoping, public consultation and appraisal. After completion of public consultation, the applicant is required to make appropriate changes in the draft 'EIA Report' and the 'Environment Management Plan.' The final EIA Report has to be submitted to the concerned regulatory authority for appraisal. The regulatory authority is required to give its decision within 105 days of the receipt of the final EIA Report. The EIA Guidance Manual for Highways, 2010 explains the four stages of the environmental clearance process and the contents of the EIA Report required to be submitted by highway projects.

Public Liability Insurance Act, 1991

The Public Liability Insurance Act, 1991 (the "**Public Liability Act**"), imposes liability on the owner or controller of hazardous substances for any damage arising out of an accident involving such hazardous substances. A list of 'hazardous substances' covered by the legislation has been enumerated by the Government by way of a notification. The owner or handler is also required to take out an insurance policy insuring against liability under the legislation. The rules made under the Public Liability Act mandate that the employer has to contribute towards the Environment Relief Fund, a sum equal to the premium paid on the insurance policies. This amount is payable to the insurer.

Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015

In September 2015, MoRTH has launched Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy, 2015 which will require road developers to earmark one per cent of a project's total cost for planting of trees and shrubs across the national highways. Under this policy, the maintenance of such plantations will be outsourced through a bidding process to plantation agencies. MoRTH/NHAI will appoint the authorized agency for empanelment of such plantation agencies.

Foreign Investment Regulations

Foreign investment in Indian securities is governed by the provisions of the FEMA, read with the applicable FEMA Rules, the FEMA (Mode of payment and Reporting of Non-Debt Instruments) Regulations, 2019 and the consolidated FDI Policy issued by the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government. Foreign investment is permitted (except in the prohibited sectors) either through the automatic route or the approval route, depending upon the sector in which foreign investment is sought to be made. Under the FEMA Rules and the current consolidated FDI Policy, effective from October 15, 2020, an infrastructure investment trust registered and regulated by the SEBI under the InvIT Regulations, being an

'investment vehicle', is permitted to receive foreign investment from a person resident outside India subject to the terms and conditions specified in the FEMA Rules.

All investments by entities of a country which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country will require prior approval of the Government of India. Further, in the event of transfer of ownership of any existing or future foreign direct investment in an entity in India, directly or indirectly, resulting in the beneficial ownership falling within the purview of the above restriction, such subsequent change in the beneficial ownership will also require approval of the Government of India. A multilateral bank or fund, of which India is a member, shall not be treated as an entity of a particular country nor shall any country be treated as the beneficial owner of the investments of such bank or fund in India.

Downstream investment by an infrastructure investment trust shall be regarded as indirect foreign investment if either the sponsor or the investment manager of such an infrastructure investment trust is not Indian 'owned and controlled' as defined in FEMA Rules.

Downstream investment by an 'investment vehicle' is required to conform to the sectoral caps and conditions/restrictions, if any, as applicable to the company in which the downstream investment is made as per the FDI Policy. Foreign investment of up to 100% through the automatic route is permitted in the infrastructure sector in India. An infrastructure investment trust that receives foreign investment shall be required to make such report and in such format to the RBI or to the SEBI as may be prescribed by them from time to time.

The payment for the units of an infrastructure investment trust acquired by a person resident or registered/ incorporated outside India shall be made in accordance with the Foreign Exchange Management (Deposit) Regulations, 2016 and other applicable law.

Further, any person who is a non-resident and holds units of an infrastructure investment trust in accordance with the FEMA Rules may pledge such units (i) in favor of a bank in India to secure the credit facilities being extended to the Indian company for bona fide purposes; (ii) in favor of an overseas bank to secure the credit facilities being extended to the person, or a person resident outside India who is the promoter of the Indian company or the overseas group company of the Indian company; (iii) in favor of a Non-Banking Financial Company registered with the RBI to secure credit facilities being extended to the Indian company for bona fide purposes; and (iv) subject to the authorized dealer bank satisfying itself of the compliance of the conditions stipulated by the RBI in this regard.

Laws Relating to Employment

Certain other laws and regulations that may be applicable to the Trust, the Project SPVs and the Target SPV include the following:

- Contract Labour (Regulation and Abolition) Act, 1970;
- Payment of Wages Act, 1936;
- Payment of Bonus Act, 1965;
- Employees' State Insurance Act, 1948;
- Employees' Provident Funds and Miscellaneous Provisions Act, 1952;
- Equal Remuneration Act, 1976;
- Payment of Gratuity Act, 1972;
- Shops and Commercial Establishments Acts, where applicable;
- Minimum Wages Act 1948;
- Industrial Disputes Act, 1947;
- Employees Compensation Act, 1923;
- The Code of Wages, 2019;
- The Occupational Safety, Health and Working Conditions Code, 2020;
- The Industrial Relations Code, 2020; and
- The Code on Social Security, 2020

The Code on Wages, 2019 will come into force on such date as may be notified in the official gazette of India by the central government. Once effective, it will subsume the Equal Remuneration Act, 1976, the Minimum Wages Act, 1948, the Payment of Bonus Act, 1965 and the Payment of Wages Act, 1936. However, certain provisions relating to the central advisory board have been brought into force by the Ministry of Labor and Employment.

Further, the Occupational Safety, Health and Working Conditions Code, 2020, the Industrial Relations Code, 2020 and the Code on Social Security, 2020 will subsume various legislations including the Contract Labour (Regulation and Abolition) Act, 1970, the Industrial Disputes Act, 1947, the Employees Compensation Act, 1923, the Employees' State Insurance Act, 1948, the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Maternity Benefit Act, 1961 and the Payment of Gratuity Act, 1972, upon being brought into force.

LEVERAGE

The following tables present (a) the capital structure of the Trust (including any borrowings or deferred payments) on a consolidated basis and a standalone basis as at June 30, 2023; (b) the capital structure of each of the Project SPVs (including any borrowings or deferred payments) on a standalone basis as at June 30, 2023; and (c) the capital structure of the Target SPV (including any borrowings or deferred payments) on a standalone basis as at June 30, 2023.

The information presented below should be read in conjunction with the sections "*Objects of the Issue*", "*Financial Statements*" and "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" on pages 62, 280 and 591, respectively.

Consolidated capital structure of the Trust (including any borrowings or deferred payments)

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue[(1)] (₹ in millions)
Shareholders' Funds:		
Unit Capital	87,929.33	102,169.33
Subordinate Debt	-	-
Other Equity	(11,544.30)	(11,544.30)
Minority Interest	0.89	0.89
Total Shareholders' Funds	**76,385.92**	**90,625.92**
Borrowings*		
Borrowings from related parties	5,600.72	5,600.72
Long term borrowings	1,02,119.86	1,02,119.86
Current maturities of long term borrowings	942.81	942.81
Total Debt	**1,08,663.39**	**1,08,663.39**
Total Capitalization	**1,85,049.31**	**199,289.31**

(1) Assuming full subscription in the Issue. As adjusted to reflect the number of Units issued pursuant to the Issue and the use of proceeds from the Issue.

Standalone capital structure of the Trust (including any borrowings or deferred payments)

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue[(1)] (₹ in millions)
Shareholders' Funds:		
Unit Capital	87,929.33	102,169.33
Subordinate Debt	-	-
Other Equity	11,927.76	11,927.76
Total Shareholders' Funds	**99,857.09**	**114,097.09**
Borrowings*		
Borrowings from related parties	5,122.91	5,122.91
Long term borrowings	-	-
Current maturities of long term borrowings	-	-
Total Debt	**5,122.91**	**5,122.91**
Total Capitalization	**1,04,980.00**	**1,19,220.00**

(1) Assuming full subscription in the Issue. As adjusted to reflect the number of Units issued pursuant to the Issue and the use of proceeds from the Issue.

Standalone capital structure of the Project SPVs (including any borrowings or deferred payments)

AETL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	4,365.00	4,365.00
Subordinate Debt	10,265.88	10,265.88
Other Equity	(5,932.60)	(5,932.60)
Total Shareholders' Funds	**8,698.29**	**8,698.29**
Borrowings*		
Borrowings from related parties	10,022.30	10,022.30
Long term borrowings	7,170.97	7,170.97
Current maturities of long term borrowings	33.24	33.24
Total Debt	**17,226.51**	**17,226.51**
Total Capitalization	**25,924.80**	**25,924.80**

CGTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	2,035.00	2,035.00
Subordinate Debt	2,727.80	2,727.80
Other Equity	(524.27)	(524.27)
Total Shareholders' Funds	**4,238.53**	**4,238.53**
Borrowings*		
Borrowings from related parties	722.30	722.30
Long term borrowings	13,842.15	13,842.15
Current maturities of long term borrowings	116.45	116.45
Total Debt	**14,680.90**	**14,680.90**
Total Capitalization	**18,919.43**	**18,919.43**

IRB HMTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	3,715.00	3,715.00
Subordinate Debt	10,048.52	10,048.52
Other Equity	(66.39)	(66.39)
Total Shareholders' Funds	**13,697.13**	**13,697.13**
Borrowings*		
Borrowings from related parties	-	-
Long term borrowings	14,410.04	14,410.04
Current maturities of long term borrowings	240.78	240.78

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Total Debt	**14,650.82**	**14,650.82**
Total Capitalization	**28,347.95**	**28,347.95**

IRB WTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,741.94	1,741.94
Subordinate Debt	12,203.92	12,203.92
Other Equity	(3722.92)	(3722.92)
Total Shareholders' Funds	**10,222.94**	**10,222.94**
Borrowings*		
Borrowings from related parties	6,465.58	6,465.58
Long term borrowings	9,831.69	9,831.69
Current maturities of long term borrowings	310.12	310.12
Total Debt	**16,607.39**	**16,607.39**
Total Capitalization	**26,830.33**	**26,830.33**

KGTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,555.00	1,555.00
Subordinate Debt	2,495.38	2,495.38
Other Equity	(600.34)	(600.34)
Total Shareholders' Funds	**3,450.04**	**3,450.04**
Borrowings*		
Borrowings from related parties	-	-
Long term borrowings	10,007.67	10,007.67
Current maturities of long term borrowings	50.96	50.96
Total Debt	**10,058.63**	**10,058.63**
Total Capitalization	**13,508.67**	**13,508.67**

KTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	3,280.00	3,280.00
Subordinate Debt	4,426.04	4,426.04

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Other Equity	(4,962.82)	(4,962.82)
Total Shareholders' Funds	**2,743.22**	**2,743.22**
Borrowings*		
Borrowings from related parties	8,992.13	8,992.13
Long term borrowings	5,231.94	5,231.94
Current maturities of long term borrowings	113.68	113.68
Total Debt	**14,337.75**	**14,337.75**
Total Capitalization	**17,080.97**	**17,080.97**

SYTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	982.50	982.50
Subordinate Debt	4,423.70	4,423.70
Other Equity	(2,450.07)	(2,450.07)
Total Shareholders' Funds	**2,956.13**	**2,956.13**
Borrowings*		
Borrowings from related parties	4,114.82	4,114.82
Long term borrowings	5,910.00	5,910.00
Current maturities of long term borrowings	-	-
Total Debt	**10,024.82**	**10,024.82**
Total Capitalization	**12,980.95**	**12,980.95**

UTL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,168.00	1,168.00
Subordinate Debt	8,338.40	8,338.40
Other Equity	(3,906.15)	(3,906.15)
Total Shareholders' Funds	**5,600.25**	**5,600.25**
Borrowings*		
Borrowings from related parties	1,846.90	1,846.90
Long term borrowings	15,215.22	15,215.22
Current maturities of long term borrowings	77.57	77.57
Total Debt	**17,139.69**	**17,139.69**
Total Capitalization	**22,739.94**	**22,739.94**

YATL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	2,157.57	2,157.57
Subordinate Debt	16,319.79	16,319.79
Other Equity	(3,366.92)	(3,366.92)
Total Shareholders' Funds	**15,110.44**	**15,110.44**
Borrowings*		
Borrowings from related parties	4,687.70	4,687.70
Long term borrowings	15,150.00	15,150.00
Current maturities of long term borrowings	-	-
Total Debt	**19,837.70**	**19,837.70**
Total Capitalization	**34,948.14**	**34,948.14**

PDTPL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)
Shareholders' Funds:		
Equity Share Capital	1,212.50	1,212.50
Subordinate Debt	1,213.00	1,213.00
Other Equity	1,624.84	1,624.84
Total Shareholders' Funds	**4,050.34**	**4,050.34**
Borrowings*		
Borrowings from related parties	-	-
Long term borrowings	6960.08	6960.08
Current maturities of long term borrowings	-	-
Total Debt	**6,960.08**	**6,960.08**
Total Capitalization	**11,010.42**	**11,010.42**

Target SPV

IRB GEPL

Particulars	As at June 30, 2023	
	Pre-Issue (₹ in millions)	Post-Issue (₹ in millions)+
Shareholders' Funds:		
Equity Share Capital	0.50	7,155.00
Subordinate Debt	-	21,465.00
Other Equity	(0.11)	(0.11)
Total Shareholders' Funds	**0.39**	**28,619.89**
Borrowings*		
Borrowings from related parties	15.78	15.78
Long term borrowings	-	-
Current maturities of long term borrowings	-	-
Total Debt	**15.78**	**15.78**
Total Capitalization	**16.17**	**28,635.67**

+ As adjusted to reflect the capital structure post completion of the IRB GEPL Acquisition, assuming full subscription in the Issue.

** Excludes Interest accrued but not due.*

Leverage Policy

This policy sets out the framework for selection and repayment of borrowings by the Manager Group. The policy should be read together with a letter dated February 28, 2023 issued by the SEBI, pursuant to which the SEBI has exempted us from the requirement to have a mandatory 'AAA' credit rating and a track record of six distributions to raise debt above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, subject to obtaining a credit rating, disclosure of such credit rating and obtaining unitholder approval.

The key terms of the Leverage Policy include, *inter-alia*:

(i) The Manager Group Members may avail additional borrowings or debt from time to time in accordance with the Annual Budget and Business Plan of the respective Manager Group Members, the Transaction Documents, and the InvIT Regulations. Any additional borrowing or creation of security that is not in accordance with the Annual Budget and Business Plan will require the prior approval of the shareholders of the Investment Manager.

(ii) In accordance with Regulation 20 of the InvIT Regulations, if the aggregate consolidated borrowings and deferred payments of the Trust, holdco, and the SPVs, net of cash and cash equivalents exceeds 25% of the value of the Trust Assets, then for any further borrowing:

a. Up to 49% of the value of the Trust Assets, the Trust shall:
   - obtain credit rating from a credit rating agency registered with the SEBI; and
   - seek approval of the Unitholders in the manner as specified in Regulation 22 of the InvIT Regulations.

b. Above 49% of the value of the Trust Assets and up to 70% of the value of the Trust Assets, the Trust shall:
   - obtain a credit rating from a credit rating agency registered with the SEBI and disclose it to the stock exchange(s);
   - utilize the funds only for acquisition or development of infrastructure projects;
   - obtain the one-time approval of Unitholders.

(iii) If either of the conditions specified above are breached on account of market movements of the price of the underlying assets or securities, the Investment Manager shall inform the Trustee at the earliest and ensure that the condition is satisfied within six months of the breach, in accordance with the InvIT Regulations.

(iv) The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust, any Holdcos and the SPVs, net of cash and cash equivalents, shall be as approved by at least 60% of the Unitholders from time to time, unless otherwise provided under the InvIT Regulations.

(v) In no event will the aggregate borrowings exceed 70% of the value of the Trust Assets, or such other limit as provided under the InvIT Regulations.

(vi) The Trust shall be permitted to borrow monies through any permitted means, by any instrument, in Indian or foreign currency, as permitted by applicable law.

(vii) The Investment Manager shall be permitted to borrow monies on behalf of the Trust, subject to the approval of its board of directors or such other committee of the board of directors of the Investment Manager as may be constituted in this regard.

(viii) Any borrowing and/or creation of security for any borrowing by the Manager Group Members incorporated under the Companies Act, 1956 or the Companies Act, 2013, will be in accordance with the conditions prescribed therein.

(ix) The Investment Manager may secure the payment of any sum of money for and on behalf of the Manager Group Member in such manner and upon such terms and conditions in all respects as set out in the Annual Budget or the Business Plan, including by mortgage or pledge or charge upon all or any Trust Assets (present or future).

RELATED PARTY TRANSACTIONS

Under Regulation 2(1)(zv) of the InvIT Regulations, a 'related party' will be as defined under the Companies Act, 2013 or under the applicable accounting standards (i.e., Ind AS 24 on "Related Party Disclosures") and will also include (i) the Parties to the Trust and (ii) the promoters, directors and partners of the Parties to the Trust. Further, any transaction between the Trust and one or more infrastructure investment trusts having a common investment manager or sponsor, or a transaction where the Investment Manager or the Sponsor is an Associate of the investment manager or sponsor of the other infrastructure investment trust, will be deemed to be related party transactions for such parties. Also see "*Financial Statements*" on page 280.

A. Procedure for dealing with Related Party Transactions

General Requirements

In accordance with relevant provisions of the InvIT Regulations, all related party transactions will be on an arms' length basis, in compliance with applicable accounting standards and any other guidelines issued by the SEBI from time to time. Such related party transactions shall be in the best interest of the Unitholders, must be consistent with the strategy and investment objectives of the Trust and must be disclosed to the Stock Exchange in accordance with the requirements of the InvIT Regulations.

Approval of the Unitholders

In the case of related party transactions proposed to be entered into, if such related party transaction is a Reserved Matter, approval from Unitholders will be obtained such that the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution, provided that if the InvIT Regulations specify a different threshold for the approval by Unitholders of such matter, the threshold specified in the InvIT Regulations will prevail. Further, if such related party transaction is a Reserved Matter and does not require the approval of the Unitholders to be obtained at a Unitholders meeting under the InvIT Regulations, then, a meeting of the Unitholders shall not be required if the prior approval in writing of the Unitholders holding at least 60% of the Unitholding of the Trust has been obtained by IRB in respect of such Reserved Matter. For details of the Reserved Matters, see "*Corporate Governance*" and "*Rights of Unitholders*" on pages 139 and 257, respectively.

Voting by any person who is a related party with respect to any transaction as well as the voting by the Associates of such person will not be considered on the specific issue.

Role of the Investment Manager

The Investment Manager is responsible for formulating and maintaining all such internal processes and relevant controls with respect to related party transactions, so as to ensure compliance with the InvIT Regulations and applicable accounting standards. Further, the Investment Manager will convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations and maintain records pertaining to such meetings in the manner prescribed. The Investment Manager will also ensure compliance with any additional guidelines, circulars or regulations with respect to related party transactions issued by the SEBI or the stock exchanges in the future.

The Investment Manager or its Associates will not obtain any commission, rebate or any other remuneration, by whatever name called, arising out of transactions pertaining to the Trust, other than as specified in the relevant documents for any offering of Units or any other document as may be specified by the SEBI for the issue of Units.

Disclosure and Reporting

The Investment Manager will submit quarterly reports on the activities of the Trust, including the status of compliance with the requirements specified under the InvIT Regulations in relation to related party transactions to the Trustee within 30 days of the end of each quarter.

Further, in accordance with the InvIT Regulations, the Investment Manager will submit an annual report and a half-yearly report to the Trustee, the Unitholders and the stock exchanges, electronically or through physical copies within the timelines specified under the InvIT Regulations, which will contain, *inter-alia*, details of all related party transactions, including acquisitions or disposal of any projects, directly or through SPVs during the year, the value of which exceeded 5% of the value of the Trust Assets.

B. Details of Related Party Transactions undertaken prior to the filing of this Letter of Offer

The Trust (acting through the Trustee) has entered into, *inter-alia*, the following related party transactions prior to the filing of this Letter of Offer:

S. No.	Name of the Related Party	Nature of Relationship with the Trust	Nature of Transaction
1.	IRB Infrastructure Developers Limited	Sponsor	The Trust was settled with an initial settlement amount of ₹1,000.00 by the Sponsor.
2.	MMK Toll Road Private Limited	Investment Manager	The Trustee (acting on behalf of the Trust) has entered into the Investment Management Agreement dated August 27, 2019, as amended on September 16, 2019 and May 31, 2023, with the Investment Manager for managing and administering the Trust, in accordance with the InvIT Regulations. The Investment Manager will be paid Management Fees in accordance with the terms of the Investment Management Agreement. For details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Investment Manager*" and "*The Investment Manager*" on pages 104 and 266, respectively.
3.	IRB Infrastructure Developers Limited	Project Manager	The Trustee (on behalf of the Trust) has entered into the Project Implementation Agreements with the Project Manager, with respect to each of the Project SPVs, which set out the obligations of the Project Manager with respect to the execution of each of the projects, in accordance with the InvIT Regulations. The Project Manager will be paid EPC Payments and O&M Payments, as applicable, by the respective Project SPVs in accordance with the terms of the Project Implementation Agreements. For details, see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" and "*The Sponsor and Project Manager*" on pages 104 and 263, respectively.
4.	IRB Infrastructure Developers Limited	Sponsor	Pursuant to the Name Licensing Agreement dated February 13, 2020, as amended, the Sponsor has granted to the Trust, each of the Project SPVs and the Investment Manager, the non-transferable and non-assignable right to use the "IRB" trademark as part of their respective corporate names, if applicable, as well as the "IRB" logo in connection with their respective businesses, on a non-exclusive basis. No licensing fee is payable to the Sponsor under the Name Licensing Agreement.
5.	IRB Infrastructure Developers Limited and its Associates	Sponsor and its Associates	The Project SPVs (except PDTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. The Subordinated Debt and Unsecured Loans were also novated in favor of the Trust. The Trust acquired PDTPL through subscription to 99.96% of the equity share capital of PDTPL on April 2, 2022.

For details of the related party transactions entered into by the Project SPVs during the quarters ended June 30, 2023 and June 30, 2022 and the Financial Years 2023, 2022 and 2021, see "*Financial Statements*" on page 280.

C. Details of Related Party Transactions proposed to be undertaken

Pursuant to the terms of the Framework Agreement, the Sponsor has agreed that prior to the submission of a bid ("**Bid**") for (i) any new concession by the Sponsor and/or its affiliates involving the development or operation of roads and highways ("**New Projects**"); or (ii) over any extensions of the concession period of road projects held by the Sponsor and/or its affiliates (other than the Project SPVs) ("**Extension Projects**", and together with the New Projects, the "**Potential Projects**"), it will consult the Financial Investors in good faith and make best efforts to Bid for the Potential Project on behalf of the Trust on such terms as agreed between the Sponsor and the Financial Investors. If IRB and the Financial Investors are unable to reach an agreement in relation to the terms

of the Bid within a reasonable period, the Sponsor will be free to submit a Bid subject to the terms of the Framework Agreement.

The proceeds of the Issue are proposed to be utilized for the payment of the subscription amount for IRB GEPL under the IRB GEPL Share Subscription Agreement and to provide shareholder loans to IRB GEPL under the IRB GEPL Shareholder Loan Agreement. The Project Manager is also proposed to be appointed as the project manager with respect to IRB GEPL pursuant to the IRB GEPL Project Imeplementation Agreement. These are related party transactions under the InvIT Regulations. Unitholder approval for such related party transactions has been obtained pursuant to a resolution dated August 1, 2023. The IRB GEPL Acquisition also involves certain other agreements with related parties, including amendments to the Framework Agreement and the Name Licensing Agreement. For further details, see "*Objects of the Issue*" and "*Background and Structure of the Trust – The IRB GEPL Acquisition*" on pages 62 and 92, respectively.

In order to conduct its business, the Trust may enter into transactions with related parties in the future, which will be carried out in compliance with the above policy for dealing with related party transactions, applicable accounting standards and the provisions of the InvIT Regulations.

D. Potential Conflicts of Interest

We may be subject to potential conflicts of interest arising out of our relationship with our Sponsor and its respective Associates, and we will enter into transactions with related parties in the future. Details in relation to our policies for dealing with related party transactions are provided above. Also see "*Risk Factors – Risks Related to the Trust's Relationships with the Sponsor and the Investment Manager*" on page 34.

While the Sponsor operates various road infrastructure projects and accordingly, has interests in road infrastructure assets apart from those of the Project SPVs and the Target SPs, none of these other road infrastructure assets compete or are likely to compete, directly or indirectly, with the activities of the Trust. The Sponsor confirms that it shall perform its duty in relation to the Trust independent of its related business.

VALUATION

In relation to the valuation of the Current Portfolio of the Trust (which excludes the Target SPV), the valuation report dated May 12, 2023 setting out the valuation of the Current Portfolio as of March 31, 2023 ("**Current Portfolio Valuation Report**"), is available on the website of the Trust at <https://www.irbinfratrust.co.in/home/wp-content/uploads/2023/05/IRBIT_25052023200744_IntimationValReport31032023IRBInfrastructureTrustfinalsd.pdf>. This is the last available valuation report for the Current Portfolio under the InvIT Regulations.

The Valuer has also undertaken valuations of the Target SPV as at June 30, 2023 and has issued a valuation report dated July 17, 2023 ("**Target Valuation Report**") which is included as "*Annexure B: Target Valuation Report*" on page B.

A. Summary of the Valuation and Valuation Methodology of the Current Portfolio

Valuation methodology

The standard of value used in the Valuer's analysis is fair value which is often defined as the price, in terms of cash or equivalent, that a buyer could reasonably be expected to pay, and a seller could reasonably be expected to accept, if the business were exposed for sale on the open market for a reasonable period of time, with both buyer and seller being in possession of the pertinent facts and neither being under any compulsion to act.

There are several commonly used and internationally accepted methods for determining the fair value of companies, which have been considered in the present case, to the extent relevant and applicable. Accordingly, The Valuer has carried out valuation of the Project SPVs as on 31 March 2023.

It should be understood that the valuation of any company or its assets is inherently subjective and is subject to certain uncertainties and contingencies, all of which are difficult to predict and are beyond the Valuer's control. In performing the analysis, the Valuer made assumptions with respect to industry performance and general business and economic conditions, many of which are beyond the control of the Project SPVs. In addition, the valuation will fluctuate with changes in prevailing market conditions, the conditions and prospects, financial and otherwise, of the Project SPVs, and other factors which generally influence the valuation analysis.

The application of any particular method of valuation depends on the purpose for which the valuation is done. Although different values may exist for different purposes, it cannot be too strongly emphasized that a valuer can only arrive at one value for one purpose. The Valuer's choice of methodology of valuation has been arrived at using usual and conventional methodologies adopted for transactions of a similar nature and the Valuer's reasonable judgment, in an independent and bona fide manner is based on the Valuer's previous experience of assignments of a similar nature.

In respect of going concerns, certain valuation techniques have evolved over time and are commonly in vogue. These can be broadly categorised as follows:

Market Price (MP) Method

The market price of an equity share as quoted on a Stock Exchange is generally considered as the value of the equity shares of that company where such quotations are arising from the shares being regularly and freely traded in, subject to the element of speculative support that may be inbuilt in the value of the shares.

Equity shares of the Project SPVs are not listed on any stock exchange. Hence, this method has not been considered for the purpose of valuation.

Comparable Companies Market Multiple ("CCM") Method

Under this method, the value of the equity shares of a company/ business undertaking is arrived at by using multiples derived from valuations of comparable companies, as apparent through stock market valuations of listed companies. This valuation is based on the principle that market valuations, taking place between informed buyers and informed sellers, incorporate all factors relevant for the assessment of the value of the company.

Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances. The Valuer has not considered this method in its valuation analysis in the absence of closely comparable listed companies having similar geographical locations, stage of growth, size, terms and profitability.

Comparable Companies Transaction Multiple ("CTM") Method

Under the CTM method, the value of the equity shares of a company/ business undertaking is arrived at by using the prices implied by reported transactions/ deals of comparable companies.

Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances.

The Valuer has not been able to identify any comparable company to the Project SPVs for which a transaction has taken place in the last one year. The Valuer believes that the older transactions are not relevant for its valuation considering share price movements and changes in the macro-economic situation in India. Also, transactions multiples at times tend to be biased due to premium which may be embedded in the price for strategic benefits and synergies which an acquirer may perceive in the target. Accordingly, the Valuer has not applied the Comparable Transactions Multiple Method for the valuation of the Project SPVs.

Net Asset Value (NAV) Method

The asset-based valuation technique is based on the value of the underlying net assets of the business either on a book value basis or realisable value basis or replacement cost basis. The cost approach assumes that a prudent investor would pay no more for an entity than the amount for which he could replace or re-create it or an asset with similar utility. Under a going-concern premise, the cost approach usually is best suited for use in valuing asset-intensive companies, such as investment or real estate holding companies, or companies with unstable or unpredictable earnings.

In the present case of valuing the Project SPVs, the Valuer has not considered this method as the underlying earnings are fairly stable, and a going concern business plan has been provided by the Management.

Discounted Cash Flows (DCF) Method

Under the DCF method, the projected free cash flows to the firm are discounted at the weighted average cost of capital. The sum of the discounted value of such free cash flows is the value of the firm.

Using the DCF analysis involves determining the following:

Estimating future free cash flows:

Free cash flows are the cash flows expected to be generated by the company that is available to all providers of the company's capital — both debt and equity.

Appropriate discount rate to be applied to cash flows, i.e. the cost of capital:

This discount rate, which is applied to the free cash flows, should reflect the opportunity cost to all the capital providers (namely shareholders and creditors), weighted by their relative contribution to the total capital of the company. The opportunity cost to the capital provider equals the rate of return the capital provider expects to earn on other investments of equivalent risk.

The value so computed by discounting the cash flows to the firm is adjusted for net borrowings, surplus asset including investments, minority interests, equity instruments granted as part of the share-based payment, and other matters to arrive at an aggregate equity value of the company.

In the present case, the Valuer has been provided with the financial projections of all the 10 SPVs. As such, the Valuer has considered this method for valuing the Project SPVs.

Valuation Summary

FCFF method- Equity value of the Trust			
Sl. No	Name of SPV	Short name of SPV	Enterprise value (INR crores)
1	Goa Kundapur	IWTL	3,569.8
2	Solapur Yedeshi	SYTL	2,385.3
3	Yedeshi Aurangabad	YATL	4,143.1
4	Kaithal - Rajasthan	KTL	2,483.7
5	Agra Etawah	AETL	3,150.0
6	Udaipur Rajasthan Gujarat	UTL	2,661.8
7	Gulabpura Chittorgarh	CGTL	2,833.8
8	Kishangarh Gulabpura	KGTL	2,191.8
9	Hapur Moradabad	IHMTL	4,186.8
10	Dankuni - Palsit	PDTPL	1,127.7
	Total Enterprise Value	**Total**	**28,733.9**

Computation of fair value of the equity of the Trust			
Valuation approach	**Method**	**INR crores**	**Weight (%)**
Income approach	DCF	28,733.9	100%
Market approach	Comparable companies method	n/a	0%
Cost approach	NAV	n/a	0%
Enterprise value for the combined portfolio of 10 SPVs		28,733.9	100%
Less: Debt		(10,508.0)	
Less: Debt-like-items		0.0	
Less: Present value of stand alone expenses pertaining to InvIT as on 31 March 2023		(158.3)	
Add: Cash and cash equivalents		74.8	
Add: Surplus assets		132.3	
Value of 100% interest in equity (on a control, marketable basis)		**18,274.7**	
Number of units outstanding		879,293,265	
Value per unit		**207.83**	

Notes:

1. *Adjustments for debt, cash & cash equivalents and surplus assets have been made considering Unaudited Consolidated financial statements of InvIT as on 31 March 2023.*
2. *Debt of INR 10,508.0 crores includes loan from banks, loan from financial institutions, non-convertible debentures and loan from related parties.*
3. *Surplus assets of INR 132.3 crores primarily comprise investments in Canara Robeco liquid fund, Canara Robeco overnight fund, IDBI liquid fund, SBI liquid fund, SBI overnight fund interest accrued on fixed deposit, interest receivable from bank and current tax assets (advance income tax(net of provision for tax)).*
4. *Standalone expenses pertaining to InvIT has been considered based on Management business plan.*
5. *Management has represented that the probability of devolvement of contingent liabilities is insignificant and accordingly no adjustment was required to be carried out in the valuation of the 10 SPVs.*
6. *Money payable to related parties (INR 3594.6 crores) forming part of non-current liabilities (INR 3,577.8 crores) and current liabilities (INR 16.8 crores) on the Trust combined balance sheet as on Valuation Date and will be settled against amount receivable from NHAI against claim. Hence, the same has not been considered as a Debt-like item based on management representation.*

B. Summary of the Valuation and Valuation Methodology of IRB GEPL

Valuation methodology

The standard of value used in the Valuer's analysis is fair value which is often defined as the price, in terms of cash or equivalent, that a buyer could reasonably be expected to pay, and a seller could reasonably be expected to accept, if the business were exposed for sale on the open market for a reasonable period of time, with both buyer and seller being in possession of the pertinent facts and neither being under any compulsion to act.

There are several commonly used and internationally accepted methods for determining the fair value of companies, which have been considered in the present case, to the extent relevant and applicable. Accordingly, The Valuer has carried out valuation of the Target SPV as on 30 June 2023.

It should be understood that the valuation of any company or its assets is inherently subjective and is subject to certain uncertainties and contingencies, all of which are difficult to predict and are beyond the Valuer's control. In performing the analysis, the Valuer made assumptions with respect to industry performance and general business and economic conditions, many of which are beyond the control of the Target SPV. In addition, the valuation will fluctuate with changes in prevailing market conditions, the conditions and prospects, financial and otherwise, of the asset, and other factors which generally influence the valuation analysis.

The application of any particular method of valuation depends on the purpose for which the valuation is done. Although different values may exist for different purposes, it cannot be too strongly emphasized that a valuer can only arrive at one value for one purpose. The Valuer's choice of methodology of valuation has been arrived at using usual and conventional methodologies adopted for transactions of a similar nature and the Valuer's reasonable judgment, in an independent and bona fide manner is based on the Valuer's previous experience of assignments of a similar nature.

In respect of going concerns, certain valuation techniques have evolved over time and are commonly in vogue. These can be broadly categorised as follows:

Market Price (MP) Method

The market price of an equity share as quoted on a Stock Exchange is generally considered as the value of the equity shares of that company where such quotations are arising from the shares being regularly and freely traded in, subject to the element of speculative support that may be inbuilt in the value of the shares.

Equity shares of the Target SPV are not listed on any stock exchange. Hence, this method has not been considered for the purpose of valuation.

Comparable Companies Market Multiple ("CCM") Method

Under this method, the value of the equity shares of a company/ business undertaking is arrived at by using multiples derived from valuations of comparable companies, as apparent through stock market valuations of listed companies. This valuation is based on the principle that market valuations, taking place between informed buyers and informed sellers, incorporate all factors relevant for the assessment of the value of the company.

Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances. The Valuer has not considered this method in its valuation analysis in the absence of closely comparable listed companies having similar geographical locations, stage of growth, size, terms and profitability.

Comparable Companies Transaction Multiple ("CTM") Method

Under the CTM method, the value of the equity shares of a company/ business undertaking is arrived at by using the prices implied by reported transactions/ deals of comparable companies.

Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances.

The Valuer has not been able to identify any comparable company to the SPV for which a transaction has taken place in the last one year. The Valuer believes that the older transactions are not relevant for its valuation considering share price movements and changes in the macro-economic situation in India. Also, transactions multiples at times tend to be biased due to premium which may be embedded in the price for strategic benefits and synergies which an acquirer may perceive in the target. Accordingly, the Valuer has not applied the Comparable Transactions Multiple Method for the valuation of the Target SPV.

Net Asset Value (NAV) Method

The asset-based valuation technique is based on the value of the underlying net assets of the business either on a book value basis or realisable value basis or replacement cost basis. The cost approach assumes that a prudent investor would pay no more for an entity than the amount for which he could replace or re-create it or an asset with similar utility. Under a going-concern premise, the cost approach usually is best suited for use in valuing asset-intensive companies, such as investment or real estate holding companies, or companies with unstable or unpredictable earnings.

In the present case of valuing the Target SPV, the Valuer has not considered this method as the underlying earnings are fairly stable, and a going concern business plan has been provided by the Management.

Discounted Cash Flows (DCF) Method

Under the DCF method, the projected free cash flows to the firm are discounted at the weighted average cost of capital. The sum of the discounted value of such free cash flows is the value of the firm.

Using the DCF analysis involves determining the following:

Estimating future free cash flows:

Free cash flows are the cash flows expected to be generated by the company that is available to all providers of the company's capital — both debt and equity.

Appropriate discount rate to be applied to cash flows, i.e. the cost of capital:

This discount rate, which is applied to the free cash flows, should reflect the opportunity cost to all the capital providers (namely shareholders and creditors), weighted by their relative contribution to the total capital of the company. The opportunity cost to the capital provider equals the rate of return the capital provider expects to earn on other investments of equivalent risk.

The value so computed by discounting the cash flows to the firm is adjusted for net borrowings, surplus asset including investments, minority interests, equity instruments granted as part of the share-based payment, and other matters to arrive at an aggregate equity value of the company.

In the present case, the Valuer has been provided with the financial projections of the Target SPV. As such, the Valuer has considered this method for valuing the Target SPV.

Valuation Summary

Computation of fair value of the equity of the Trust					
Valuation approach	Method	Equity value (INR crores)	Value per share	Weight (%)	Weighted average Equity value (INR crores)
Income approach	Discounted cash flows	5216.8	10,43,368.94	100%	5,216.8
Market approach	Comparable companies method	n/a	n/a	n/a	n/a
Cost approach	NAV	n/a	n/a	n/a	n/a
Value of 100% interest in equity				**100%**	**5,216.8**
Number of units outstanding					50,000
Value per unit					**10,43,368.94**

Note: n/a = Not applicable

Valuation Conclusion	
Present value of cash flows	5,164.0
Present value of terminal value	-
Release of WC at the end of concession period	54.4
Enterprise value	**5,218.4**
Less: Debt	-
Less: Debt like items	(1.6)
Add: Cash & cash equivalents	0.0
Add: Investments & other surplus assets	-
Value of 100% interest in equity	**5,216.8**

Note: Debt like items includes Interest free unsecured loan from related party

C. Frequency of Valuation

In accordance with the InvIT Regulations, a full valuation of the Trust Assets (including physical inspection of each of the Trust's infrastructure projects) shall be conducted by the Valuer not less than once every financial year, and that such a full valuation shall be conducted at the end of each financial year, within two months from the end of such financial year. An updated valuation report taking into account any material developments during

the previous half-year is also required to be issued by the Valuer as part of the half-yearly report to be submitted by the Investment Manager to the Trustee, the Unitholders and the Stock Exchange.

However, in case of any material development that may have an impact on the valuation of the Trust Assets, the Investment Manager will require the Valuer to undertake a full valuation of the infrastructure project under consideration, within not more than two months from the date of such event, and disclose the same to the Trustee within 15 days of such valuation. Any valuation reports received by the Investment Manager are required to be disclosed to the Stock Exchange within 15 days of receipt.

As a listed InvIT, in case the consolidated borrowings and deferred payments of the Trust are above 49% of the value of the Trust Assets, the valuation of the assets of the Trust is required to be conducted by the Valuer for the quarters ending June, September and December, for incorporating any key changes in the previous quarter and such quarterly reports are required to be prepared within one month of the end of such quarter.

D. Declaration of NAV

The Investment Manager will ensure that computation and declaration of NAV of the Trust is based on the valuation done by the Valuer, not later than 15 days from the date of valuation.

DISTRIBUTIONS

Distribution

Distributions shall be made by the Trust to the Unitholders, from time to time, in accordance with the Indenture of Trust and the InvIT Regulations. The Trustee shall make and shall ensure that the Investment Manager declares distributions on a quarterly basis. However, Unitholders should note that there is no assurance or guarantee that distributions will be made in any amount or at all.

The InvIT Regulations provide that not less than 90% of net distributable cash flows of each Project SPV, and any other SPV that may be acquired by the Trust, are required to be distributed to the Trust in proportion of its holding in each of the Project SPVs, and any other SPV that may be acquired by the Trust, subject to applicable provisions of the Companies Act. Further, not less than 90% of net distributable cash flows of the Trust shall be distributed to the Unitholders. Such distributions are required be declared and made not less than once every year and shall be made not later than 15 days from the date of such declaration.

In the event distributions are not made within 15 days of declaration, the Investment Manager shall pay interest at the rate of 15% per annum until the distribution is made to the Unitholders. Such interest is not and will not be recoverable by the Investment Manager from the Trust in the form of fees or any other charges payable by the Trust to the Investment Manager. Any amount remaining unclaimed or unpaid out of the distributions declared by the Trust shall be transferred to the "Investor Protection and Education Fund" constituted by the SEBI, in such manner as may be specified by the SEBI.

Distributions shall be made *pro rata* to the total subscription amount of a Unitholder and in accordance with the provisions of the Indenture of Trust, the InvIT Regulations, the Distribution Policy, the preliminary placement memorandum and the placement memorandum.

Since the establishment of the Trust, there have not been any distributions made on the Units.

The Trust's distribution policy is to distribute as per the Trust's net distributable cash flows (the "**Net Distributable Cash Flows**"). The Trust's distribution policy is to distribute at least 90% of the Net Distributable Cash Flows of the Trust. Unless otherwise decided by the Unitholders, the Trust shall declare 100% of the Net Distributable Cash Flows as distributions to the Unitholders.

See "*Risk Factors*" on page 15 for a description of factors that may adversely affect the ability of the Trust to make distributions to Unitholders.

The requirements in relation to distributions will become applicable with respect to the Target SPV upon completion of the IRB GEPL Acquisition.

Distribution Policy of the Trust

In accordance with the InvIT Regulations, and the applicable guidelines, as may be issued by SEBI from time to time:

a) Each Project SPV, and any other SPV that may be acquired by the Trust, shall distribute its respective Net Distributable Cash Flows to the Trust, subject to the applicable provisions under Companies Act or any other applicable law, not less than once every three months; and

b) The Trust shall distribute at least 90% of the Net Distributable Cash Flows to the Unitholders not less than once every three months. Unless otheriwse decided by the Unitholders, the Trust shall declare 100% of the Net Distributable Cash Flows as distributions to the Unitholders.

The indicative framework for calculation of net distributable cash flows, as provided herein below, is subject to change, including pursuant to any amendments to the InvIT Regulations or by way of any circulars or guidelines issued by SEBI in this regard:

A. ***Indicative Calculation of Net Distributable Cash Flows at a Standalone SPV Level***

S. No.	Description
1.	**Profit after tax as per profit and loss account (standalone) (A)**
2.	**Add:** Depreciation and amortisation as per profit and loss account
3.	**Add/less:** Loss/gain on sale of infrastructure assets
4.	**Add:** Proceeds from sale of infrastructure assets adjusted for the following: • related debts settled or due to be settled from sale proceeds • directly attributable transaction costs • proceeds reinvested or planned to be reinvested in accordance with Regulation 18 (7) (a) of the InvIT Regulations
5.	**Add:** Proceeds from sale of infrastructure assets not distributed pursuant to an earlier plan to re-invest, if such proceeds are not intended to be invested subsequently net of any profit/(loss) recognized in the P&L account
6.	**Add/less:** Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager, including but not limited to: • any decrease / increase in carrying amount of an asset or of a liability recognised in profit and loss • account on measurement of the asset or the liability at fair value; • interest cost as per effective interest rate method; • deferred tax; • reserve for major maintenance to the extent payments are not due in the next period; and • any other items charged / credited to the P&L account which do not involve corresponding cash flows
7.	**Less:** Repayment of external debt (principal) / redeemable preference shares / debentures
8.	**Less:** Any premium / negative grant payments to NHAI
9.	**Less:** Capital expenditure towards the project
10.	**Total Adjustments (B)**
11.	**Net Distributable Cash Flows (C)=(A+B)**

A minimum of 90% of the net distributable cash flows arrived at in (C) above shall be distributed by each Project SPV and any other SPVs that may be acquired in the future, to the Trust, subject to the applicable provisions of Companies Act/LLP Act or any other applicable laws, net of applicable taxes, if any, proportionate to the Trust's equity shareholding in such SPV.

B. ***Indicative Calculation of Net Distributable Cash Flows at the Standalone Trust Level***

S. No.	Description
1.	Cash flows received from the Identified SPVs in the form of interest
2.	Cash flows received from the Identified SPVs in the form of dividend
3.	Any other income accruing at the Trust level and not captured above, including but not limited to interest / return on surplus cash invested by the Trust
4.	Cash flows received from the Identified SPVs towards the repayment of the debt issued to the Identified SPVs by the Trust
5.	Proceeds from the Identified SPVs for any capital reduction by way of buy back etc., subject to applicable laws
6.	Proceeds from sale of assets of the Identified SPVs not distributed pursuant to an earlier plan to re-invest, or if such proceeds are not intended to be invested subsequently
7.	**Total cash inflow at the Trust level (A)**
8.	**Less:** Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager
9.	**Less:** Capital expenditure towards the Identified SPVs
10.	**Less:** Costs/retention associated with sale of assets of the project SPVs: • related debts settled or due to be settled from sale proceeds of Identified SPVs • transaction costs paid on sale of the assets of the Identified SPVs
11.	**Less:** Proceeds reinvested or planned to be reinvested in accordance with Regulation 18(7)(a) of the InvIT Regulations
12.	**Less:** Repayment of external debt at the Trust level
13.	**Less:** Income tax (if applicable) at the standalone Trust Level (including capital gains taxes on sale of assets / share in Identified SPVs / other investments)
14.	**Less:** Contribution towards maintaining minimum cash balance of INR 150,000,000 (Rupees One Hundred and Fifty Million) and/or such other reserve/minimum cash balance as agreed by Unitholders
15.	**Total cash outflows / retention at the Trust level (B)**
16.	**Net Distributable Cash Flows (C)=(A+B)**

A minimum of 90% of the Net Distributable Cash Flows arrived at in (C) above shall be distributed by the Trust to the Unitholders, subject to the applicable provisions of InvIT Regulations, net of applicable taxes, if any.

Distribution on Disposition

Subject to the InvIT Regulations, if (i) any asset is sold by the Trust or (ii) if the equity shares or interest in the Trust Assets are sold by the Trust then (a) if the Trust proposes to re-invest the sale proceeds into another infrastructure asset, it shall not be required to distribute any sale proceeds to the Trust or the Unitholders; but (b) if the Trust proposes not to invest the sales proceeds into any other infrastructure Assets, then such sales proceeds shall be regarded as Net Distributable Cash Flows and the Trust shall be required to distribute such proceeds in accordance with the Distribution Policy.

Distribution on Dissolution

In the event of dissolution or winding up of the Trust, all of the Trust Assets or the proceeds therefrom shall be distributed or used as follows and in the following order of priority:

a) First, towards the payment of the debts and liabilities of the Trust, including without limitation any fees, any amounts due to the Investment Manager, or the Project Manager and the expenses of liquidation;

b) Second, towards the setting up of any reserves which the Trustee, in consultation with the Investment Manager, or the authority in-charge of the dissolution of the Trust may deem reasonably necessary for any contingent or unforeseen liabilities or obligations of the Trust; and

c) Third, towards the Unitholders in accordance with the terms of the Distribution Policy, the Indenture of Trust, and applicable law.

In-specie Distribution

Subject to the provisions of applicable law and the Trust Documents, the Trustee, in consultation with the Investment Manager, may anytime during the life of the Trust make *in-specie* distributions of the Trust Assets.

RIGHTS OF UNITHOLDERS

The rights and interests of the Unitholders are included in this Letter of Offer and the InvIT Regulations. Under the the Indenture of Trust and the Investment Management Agreement, these rights and interests are safeguarded by the Trustee and the Investment Manager respectively. Any rights and interests of Unitholders as specified in this Letter of Offer would be deemed to be amended to the extent of any amendment to the InvIT Regulations.

Please note that nothing contained in this Letter of Offer (including any declarations provided by the directors of the Investment Manager) will relieve any party of its rights or obligations under the Framework Agreement and the IM SHA.

Beneficial Interest

Each Unit represents an undivided beneficial interest in the Trust. A Unitholder has no equitable or proprietary interest in the Trust Assets and is not entitled to transfer of the Trust Assets (or any part thereof) or any interest in the Trust Assets (or any part thereof). A Unitholder's right is limited to the right to require due administration of the Trust in accordance with the provisions of the Indenture of Trust and the Investment Management Agreement.

Ranking

No Unitholder of the Trust shall enjoy superior voting or any other rights over another Unitholder. Further, the Units shall not have multiple classes, except any subordinate Units that may be issued only to the Sponsor and its Associates, where such subordinate units carry only inferior voting or any other rights compared to other Units in the future, in accordance with Regulation 4(2)(h) of the InvIT Regulations.

Distribution

The Trustee shall ensure that the Investment Manager makes timely declaration of distributions to the Unitholders in accordance with the InvIT Regulations. If the distributions are not made within 15 days of declaration, then the Investment Manager shall be liable to pay interest to the Unitholders at the rate of 15% per annum till the distribution is made. The Investment Manager shall maintain records of the distributions declared and made to the Unitholders. For details, see "*Distributions*" on page 254.

Rights of Unitholders

Subject to the provisions of the InvIT Regulations, the Indenture of Trust, and applicable rules, regulations and guidelines, the rights of the Unitholders include:

a) right to receive income or distributions with respect to the Units held in accordance with the InvIT Regulations and in the manner set forth in the preliminary placement memorandum and the placement memorandum;

b) right to attend the annual general meeting and other meetings of the Unitholders of the Trust;

c) right to vote upon any matters/resolutions proposed in relation to the Trust;

d) right to receive periodic information having a bearing on the operation or performance of the Trust in accordance with the InvIT Regulations; and

e) right to apply to the Trustee to take up certain issues at meetings for Unitholders approval;

Pre-emptive rights: In addition, the Investment Manager (on behalf of the Trust) will ensure that Unitholders will have the right to subscribe to their respective proportionate share of the proposed issue of Units at the same price to maintain their respective proportionate ownership in the Trust if the Trust proposes to issue any new units after the completion of the initial offer of Units to any person (except as contemplated in any business plan). The Investment Manager and the Trustee will also ensure that Unitholders exercise their rights in relation to Reserved Matters and Events of Default.

For details of Reserved Matters, see "*Corporate Governance*" and " – *Approval of Unitholders*" on pages 139 and

259, respectively. For details of Events of Default, see " – *Arrangements between the Sponsor and the Financial Investors*" below.

The Trustee shall hold the Trust Assets in the name of the Trust for the benefit of the Unitholders in accordance with the Indenture of Trust and the InvIT Regulations and shall oversee the activities of the Investment Manager in the interest of the Unitholders. All related party transactions shall be on an arms' length basis in accordance with the relevant accounting standards, and in the best interests of the Unitholders. Further, the Trustee shall maintain records relating to the notices and agenda sent to the Unitholders for meetings held and the disclosures made to the Unitholders.

The rights given by the Sponsor to the Financial Investors will be made available to any new Unitholder that acquires Units of the Trust. Pursuant to a letter dated February 28, 2023, the SEBI has permitted *inter-se* rights among the existing Unitholders of the Trust to continue post-Listing, provided that such rights are extended to all Unitholders other than the Sponsor and its Associates post-Listing.

Arrangements between the Sponsor and the Financial Investors

In addition to the rights set out above, pursuant to the Framework Agreement, the Sponsor and the Financial Investors have agreed to certain *inter-se* arrangements in relation to their Unitholding in the Trust. Key terms of such arrangements are set out below:

Put option: The Financial Investors had the right to require the Sponsor to purchase the Units held by them in the Trust upon the occurrence of certain events within the period of 12 months from the date of allotment in the initial offer of Units.

Right of first offer: The Financial Investors have a right of first offer over Units proposed to be transferred by the Sponsor to any person other than the subsidiaries of the Sponsor.

Tag along right: If the Sponsor proposes to transfer the Units held by it to a third party buyer (which is not a subsidiary of the Sponsor), the Financial Investors have a right to require such buyer to purchase from the Financial Investors, (i) the entire Unitholding of the Financial Investors, if the Sponsor proposes to transfer in excess of 20% of the total outstanding Units or (ii) up to such percentage of Units held by the Financial Investors that are *pro rata* to the percentage of Units proposed to be transferred by the Sponsor if the Sponsor proposes to transfer 20% or less of the total outstanding Units.

Reserved Matters: See " – *Approval of Unitholders*" below.

Encumbrances on the Sponsor's Units: The Sponsor is restricted from creating any encumbrances on its Units until the expiry of five years from the date of allotment of Units in the initial offer of Units. However, the Sponsor can pledge up to a certain percentage of its Units in favor of permitted lenders, the Financial Investors or their affiliates subject to certain conditions as agreed between the Sponsor and the Financial Investors.

Transfer of Units by the Sponsor: The Sponsor will only sell its Units to a person that is willing to be bound by the existing arrangements between Sponsor and the Financial Investors.

Event of Default and Consequences

The Financial Investors have the right to call an event of default ("**Event of Default**") under the Framework Agreement under certain circumstances.

If an Event of Default is declared by the Financial Investors:

- *Credit of distributions into an escrow account controlled by the Investment Manager*: The Sponsor and the Investors will cause any distributions that are to be made to them to be credited into the escrow account. The Trustee and the Investment Manager will ensure compliance with obligations in relation to distributions under Regulation 18(6) of the InvIT Regulations.

- *Operations of the Trust*: Other than operating in the ordinary course of business, no action shall be taken by any Manager Group Member in relation to the operations and business of the Trust without the unanimous consent of the Unitholders. However, if the InvIT Regulations specify a different threshold for the approval

by Unitholders of such matter, the threshold specified in the InvIT Regulations will be followed instead of the unanimous consent requirement. If the Financial Investors vote against a resolution on any such matter for which a different threshold is specified under the InvIT Regulations, the Sponsor has agreed that it will also vote against the resolution on such matter.

The Sponsor may elect to dispute the event of default notice within a specified time period. If the Sponsor does not dispute such notice or the dispute is decided in favour of the Financial Investors:

- *Default call option and default put option*: The Financial Investors will have the right to require (i) the Sponsor to sell its Unitholding to them or (ii) the Sponsor to purchase the Investors' Unitholding in accordance with the conditions specified in the Framework Agreement.

- *Right to cause the Sponsor to take actions*: The Financial Investors will have the right to require the Sponsor to require the Trustee to call for a meeting of the Unitholders for change of the investment manager and the project manager. The Sponsor will vote in favor of the appointment of any entity proposed by the Financial Investors as the new investment manager of the Trust as per the InvIT Regulations. The Sponsor and its affiliates will forfeit all their rights under the transaction documents. This will not impact any responsibilities of the Sponsor under the InvIT Regulations.

- *Resolution of dispute relating to an Event of Default*: Upon the resolution of the dispute relating to the event of default, the distributions in the escrow account will immediately be released to the relevant party, i.e., Sponsor and Financial Investors. The party (against whom the dispute has been resolved unfavorably) shall be required to pay interest to the other party on the distributions credited to the escrow account for the delayed period.

Meetings of Unitholders

Subject to the provisions of the IM SHA, the Investment Manager shall convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with Regulation 26 of the InvIT Regulations.

A Unitholder may be present at and may vote at any Unitholders' meeting in person, electronically, by proxy or attorney or by a duly authorized representative, and any such proxy, attorney or representative shall be counted for the purposes of constituting a quorum, to the extent permissible under applicable law. Voting on all matters to be considered at a Unitholders meeting shall be by poll, in proportion of the Units held by each Unitholder. Each Unit shall carry one vote. The Unitholders shall be entitled to participate, be counted towards quorum and vote in Unitholders' meetings by e-voting, postal ballot or any other means, subject to applicable law.

Approval of Unitholders

The Investment Manager and the Trustee are required to ensure that no resolution is passed in respect of any of the Reserved Matters without the approval of Unitholders such that the votes cast by Unitholders so entitled and voting in favor of the resolution are not less than one-and-a-half times the votes cast against such resolution at a validly convened Unitholders meeting (i.e., Unitholders holding at least 60% of the Unitholding of the Trust), provided that if the InvIT Regulations specify a different threshold for approval by Unitholders of any Reserved Matter, the threshold specified in the InvIT Regulations will prevail. If the Financial Investors vote against a resolution on a Reserved Matter for which the InvIT Regulations specify an approval threshold below 60%, the Sponsor has agreed that it will also vote against the resolution on such matter. If a Reserved Matter does not require the approval of the Unitholders to be obtained at a Unitholders meeting under the InvIT Regulations, then, a meeting of the Unitholders shall not be required if the prior approval in writing of the Unitholders holding at least 60% of the Unitholding of the Trust has been obtained by IRB in respect of such Reserved Matter.

After the allotment of Units pursuant to the initial offer of Units, where any act under any Trust Document requires a 'consultation with the Trustee' or involves the exercise of powers by the Trustee which have not or cannot be delegated to the Investment Manager, then the performance of such act shall be deemed to include the obligation to obtain the approval of the Unitholders such that the votes cast by Unitholders so entitled and voting in favor of the resolution are not less than one-and-a-half times the votes cast against such resolution.

The limits in relation to the aggregate consolidated borrowings and deferred payments of the Trust and its Project

SPVs, net of cash and cash equivalents (which includes investments in overnight mutual funds, characterized by their investments in overnight securities, having maturity of one day), shall be up to 70% of the Trust Assets. Also see *"Leverage"* on page 239 for details of the leverage policy of the Trust.

Reserved Matters

Certain Reserved Matters relating to the operations of the Trust, the Investment Manager, the Project SPVs and any other Manager Group Members which would require the approval of the board of directors, shareholders and Unitholders of the relevant entities, as applicable, have been identified and agreed under the Framework Agreement and the IM SHA. Such Reserved Matters include, *inter-alia*, matters in relation to:

- changes to the capital structure of any Manager Group Member;
- amendments to the charter documents of any Manager Group Member;
- listing of any Manager Group Member;
- approval of annual budgets and business plans;
- acquisition or divestment of road assets by the Trust;
- replacement or removal of certain managerial personnel;
- distributions in deviation from the Distribution Policy;
- indebtedness and encumbrances of assets of any Manager Group Member;
- amendment or termination of material contracts;
- major transactions;
- accounting and tax matters; and
- litigation and delegation of authority.

Matters for Approval under the InvIT Regulations

Under the InvIT Regulations, with respect to any matter requiring approval of the Unitholders:

a) a resolution shall be considered as passed when the votes cast by Unitholders, so entitled and voting, in favor of the resolution exceed a certain percentage (as specified in InvIT Regulations) of votes cast against;

b) the voting may also be done by postal ballot or electronic mode;

c) a notice of not less than 21 days (or such other time period specified under the InvIT Regulations) shall be provided to the Unitholders; and

d) voting by any person who is a related party in such transaction as well as the voting by any Associates of such person(s), shall not be considered on the specific issue.

The Investment Manager shall be responsible for all the activities relating to conducting of a meeting of the Unitholders, subject to the Trustee's oversight. However, in accordance with Regulation 22(2) of the InvIT Regulations, the Trustee shall convene and handle all activities relating to the conduct of the meetings in respect of issues relating to the Investment Manager, such as change, removal or change in control of the Investment Manager. Further, in respect of issues pertaining to the Trustee, including any change in the Trustee, the Trustee shall not be involved in any manner in the conduct of the meetings of the Unitholders.

Under the InvIT Regulations, approval from the Unitholders shall be required where the votes cast in favor of the resolution shall be more than the votes cast against the resolution, with respect to the resolutions of the Unitholders on, *inter-alia*, the following matters:

a) any approval from the unitholders required in terms of Regulation 18 (Investment Conditions and Dividend Policy), Regulation 19 (Related Party Transactions), and Regulation 21 (Valuation of Assets) of the InvIT Regulations, to the extent applicable;

b) any transaction, other than borrowing, the value of which is equal to or greater than the threshold prescribed under the InvIT Regulations (currently 25% of the Trust Assets);

c) any issue of Units after the initial offer by the Trust, in whatever form, other than any issue of Units which is considered by the SEBI under Regulation 22(5) of the InvIT Regulations;

d) increasing period for compliance with investment conditions to one year in accordance with Regulation 18(5)(c) of the InvIT Regulations;

e) any issue, which in the ordinary course of business, in the opinion of the Sponsor, the Trustee or the Investment Manager, is material and requires approval of the Unitholders;

f) declassification of the status of a sponsor;

g) any issue for which the SEBI or the stock exchanges require the approval of the Unitholders under Regulation 22(4) of the InvIT Regulations; and

h) any issue taken up at an annual meeting of the Unitholders under Regulation 22(3) of the InvIT Regulations, which requires approval of the Unitholders other than as specified in Regulation 22(6) of the InvIT Regulations.

Under the InvIT Regulations, approval from the Unitholders shall be required where the votes cast in favor of the resolution shall not be less than one and a half times the votes cast against the resolution, with respect to the resolutions of the Unitholders on, *inter-alia*, the following matters:

a) any change in the Investment Manager, including removal or change in control of the Investment Manager;

b) any material change in the investment strategy of the Trust or its management fees;

c) the Trustee and the Investment Manager proposing to seek delisting of the Units of the Trust under Regulation 17(1)(e) of the InvIT Regulations;

d) any issue, not in the ordinary course of business, which in the opinion of the Sponsor, the Investment Manager or the Trustee, requires approval of the Unitholders;

e) any issue for which SEBI or the stock exchanges require the approval of the Unitholders under Regulation 22(5) of the InvIT Regulations;

f) any issue taken up at the request of the Unitholders, including:

   i) removal of the Investment Manager, and the appointment of another investment manager to the Trust;

   ii) removal of the Auditor, and appointment of another auditor with respect to the Trust;

   iii) removal of the Valuer, and appointment of another valuer with respect to the Trust;

   iv) delisting of the Trust, if the Unitholders have sufficient reason to believe that such delisting would act in their interest;

   v) any issue which the Unitholders have sufficient reason to believe is detrimental to their interest; or

   vi) a change in the Trustee if the Unitholders have sufficient reason to believe that the acts of the Trustee are detrimental to their interests.

In relation to any issue taken up at the request of the Unitholders as described above, the Trustee will require the Investment Manager to place the issue for voting in the manner specified in the InvIT Regulations on receipt of such applications.

Redressal of Grievances

The Investment Manager shall ensure adequate and timely redressal of all Unitholders' grievances pertaining to the activities of the Trust, and the Trustee shall periodically review the status of Unitholders' complaints and their redressal undertaken by the Investment Manager. The Investment Manager shall maintain records of the

Unitholders' grievances and the actions taken thereon, including copies of correspondences made with the Unitholders. The Trust has obtained authentication on the SEBI Complaints Redress System (SCORES).

All claims, differences or disputes between investors and the Investment Manager arising out of or in relation to the activities of the Investment Manager in the securities market shall be submitted to a resolution mechanism that includes mediation and/or conciliation and/or arbitration, in accordance with the procedure specified by the SEBI under a circular dated July 31, 2023, to the extent applicable.

No loss or damage or expenses incurred by the Investment Manager or officers of the Investment Manager, including those in relation to resolution of claims or disputes of investors, shall be met out of the Trust property.

Limitation of the Liability of the Unitholders

The liability of each Unitholder towards the payment of any amount (that may arise in relation to the Trust including any taxes, duties, fines, levies, liabilities, costs or expenses) shall be limited only to the extent of the Capital Contribution of such Unitholder and after such capital contribution shall have been paid in full by the Unitholder, the Unitholder shall not be obligated to make any further payments.

Periodic Information and Disclosures

The Investment Manager shall submit an annual report to all Unitholders and the stock exchanges, electronically or by physical copies. In addition, the Investment Manager shall submit a half-yearly report, and if the Trust's consolidated borrowings and deferred payments in terms of Regulation 20 of the InvIT Regulations is above 49%, a quarterly report and valuation report to the stock exchanges.

The Investment Manager shall disclose to the stock exchanges any information having bearing on the operation or performance of the Trust as well as price sensitive information which includes, but is not restricted to the following:

a) acquisition or disposal of any projects, directly or through a holdco or SPV, the value of which exceeds 5% of the value of the Trust Assets;

b) additional borrowing, at level of holdco or SPV or the Trust, exceeding 15% of value of the Trust assets;

c) additional issue of Units by the Trust;

d) details of any credit rating obtained by the Trust and any change in such rating;

e) any issue which requires the approval of the Unitholders;

f) any legal proceedings which may have significant bearing on the functioning of the Trust;

g) notices and results of meetings of the Unitholders;

h) any instance of non-compliance with the InvIT Regulations, including any breach of limits specified under the InvIT Regulations; and

i) any material issue that, in the opinion of the Investment Manager or Trustee, needs to be disclosed to the Unitholders.

The Investment Manager (on behalf of the Trust) shall submit such information to the Unitholders and the Designated Stock Exchange on a periodic basis as may be required under the InvIT Regulations and applicable law, including an annual secretarial compliance report and the quarterly report on corporate governance compliance. Further, the Investment Manager (on behalf of the Trust) shall disclose to the Unitholders, the Designated Stock Exchange and SEBI, all such information, in the manner as may be specified by SEBI. For details of the responsibilities of the Investment Manager in relation to making periodic disclosures with respect to the valuation of the Trust Assets and the computation and declaration of NAV of the Trust, see "*Valuation*" on page 248.

SECTION V – PARTIES TO THE TRUST

THE SPONSOR AND PROJECT MANAGER

The Sponsor of the Trust is IRB Infrastructure Developers Limited. The Sponsor has settled the Trust pursuant to the Indenture of Trust dated August 27, 2019, as amended, and has appointed the Trustee in accordance with the provisions of the InvIT Regulations.

The Sponsor has also been appointed as the Project Manager pursuant to the Project Implementation Agreements.

The details of the Sponsor and Project Manager are as follows:

A. Details of the Sponsor and Project Manager

a) **Name:** IRB Infrastructure Developers Limited;

b) **Registered Office:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

c) **Correspondence Address:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

d) **Telephone Number:** +91 22 6640 4220;

e) **Website:** www.irb.co.in

f) **E-mail:** info@irb.co.in

B. Details of the Contact Person of the Sponsor

a) **Name:** Mr. Mehul Patel;

b) **Telephone Number:** +91 22 6640 4220; and

c) **E-mail:** mehul.patel@irb.co.in

C. Background and Past Experience of the Sponsor and Project Manager

The Sponsor is one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. As at June 30, 2023, the Sponsor had eight road projects of which two were operational and six were under-construction or awaiting appointed date.

The Sponsor also acts as the Project Manager. The Sponsor's BOT project portfolio includes the Ahmedabad Vadodara section of NH 8 and the Ahmedabad Vadodara Expressway, the Meerut Budaun (Group-I) section of Ganga Expressway and the Samakhiyali-Santalpur section of NH-27. The Sponsor's HAM project portfolio includes the under construction Gandeva to Ena project on the Vadodara-Mumbai eight lane expressway, four-laning of Punjab/Himachal Border to Mo Section of NH-154 and the recently awarded six-laning of Chittoor Thachur road. The Sponsor's TOT project includes the Yashwantrao Chavan Expressway (Mumbai Pune Expressway) and Mumbai – Pune section of NH-48 (old NH-4). The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions. The Sponsor has experience in developing road and highway infrastructure and has received various industry awards and recognitions.

The Sponsor/Project Manager has experience in the execution of construction work for roads, highways, and other relevant structures and had a track record of constructing over 13,500 Lane Kilometres of roads and highways as of June 30, 2023.

The Sponsor is listed on the Stock Exchanges with a market capitalization of ₹161.00 billion as at July 28,

2023. As at March 31, 2023, the Sponsor has a consolidated networth of ₹133.79 billion. The Sponsor recorded a consolidated turnover of ₹67.03 billion in the Financial Year 2023 with a profit after tax of ₹7.2 billion.

In accordance with the eligibility criteria specified under the InvIT Regulations, the Sponsor had a net worth of ₹89.53 billion as on March 31, 2023, on a standalone basis. As on March 31, 2023, the Sponsor had a consolidated net worth of ₹133.79 billion. The Sponsor has an experience of more than 20 years as a developer in the infrastructure sector.

Further, neither the Sponsor/Project Manager, nor its promoters or directors:

a) is debarred from accessing the securities market by the SEBI; or

b) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Sponsor/Project Manager is a fugitive economic offender declared under Section 12 of the Fugitive Economic Offenders Act, 2018.

D. Details of the Holding or the Proposed Holding by Sponsor in the Trust

The Sponsor currently holds 51% of the units of the Trust. The Sponsor has undertaken to subscribe to its entire Rights Entitlement and proposes to subscribe to additional Units in the Issue such that its maximum post-Issue unitholding is 51.02%.

E. Summary of the Consolidated Financial Statements of the Sponsor

For a summary of the financial statements of the Sponsor, as derived from the consolidated financial statements of the Sponsor, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years 2023, 2022 and 2021, see "*Summary Financial Information*" on page 42.

F. Functions, Duties and Responsibilities of the Project Manager

The Project Manager has agreed to provide professional services to carry out engineering, procurement, construction, operations and maintenance of the Project SPVs, including making arrangements for the appropriate maintenance, either directly or through sub-contractors, in accordance with the terms and conditions of the relevant project agreements, the InvIT Regulations, other applicable law and good industry practice (the "**Works**"). CGTL, IRB HMTL, KGTL, IRB WTL and UTL have also executed addenda dated May 6, 2021 to their respective Project Implementation Agreements, in connection with the payment of certain additional costs to the Project Manager.

Under the terms of the Project Implementation Agreements, the Project Manager is required to, *inter-alia*, provide the following Works:

(a) engineering, procurement and construction works in relation to the project as required under the project agreements;
(b) operations and maintenance for the project as stipulated under the project agreements, including tolling, which shall include procuring, operating and maintaining the toll management system at its toll plazas, including employing staff for toll collection, security arrangements at toll plazas and printing of toll tickets;
(c) any and all activities required to be performed by the Project SPVs pursuant to the project agreements or pursuant to any communication from NHAI or any other governmental authority, including in relation to shifting of utilities, associated roads, felling of trees and related works with respect to the project site or any work to be undertaken pursuant to a change of scope order based on a determination of change of scope by the NHAI under the relevant concession agreement; and
(d) other administrative services such as software usage support services, information technology support services, support services for legal matters, support services for accounting and tax matters, support services for general administration and investor relations, and support services and payroll and related services.

The Project Manager may engage duly qualified third-party service providers including but not limited to architects, surveyors and technical consultants for provision of the Works. If more than 50% of the Works are sub-contracted to any person other than Modern Road Makers Private Limited or any other affiliate of the Project Manager, then such sub-contract will be subject to prior approval of the Investment Manager (as confirmed by Unitholders of the Trust).

The Project Manager will inform the Investment Manager about any transactions between the Project Manager and its Associates which may involve a conflict of interest and where the Project Manager has advised that there may be a conflict of interest, and will obtain confirmation from the practicing chartered accountant or the valuer, as applicable, that such transaction is on an arms' length basis.

The Project Manager will ensure that it provides a compliance certificate to the Investment Manager and the Trustee on a quarterly basis or such other intervals as required in accordance with the InvIT Regulations with a copy to the Financial Investors.

The Project Manager has confirmed that it will provide the Works to the Project SPVs on a most preferred basis and if the Project Manager offers same or similar works to any person on better terms than offered to a Project SPV, then the Project SPV will be automatically entitled to the such better terms, and the Project Manager will ensure that the such better terms are forthwith made applicable to the Project SPV.

The Project Manager has also agreed to indemnify the Investment Manager, the Project SPVs and their respective officers, directors, shareholders, partners, members and employees subject to the terms, conditions and limitations specified in the Project Implementation Agreements.

The Project Implementation Agreements are valid for an initial period of 10 years. The Project Implementation Agreements may be terminated by the Investment Manager, *inter-alia*, with prior written notice of a specified period, provided that such right shall not be exercisable by the Investment Manager until the later of (i) the completion of the first major maintenance cycle in relation to the first Project SPV that undergoes a major maintenance cycle; or (ii) the commencement of the fifth year of the initial term. The above right of termination shall be exercisable by the Investment Manager collectively in relation to all the Project Implementation Agreements and not selectively in relation to one or more (but less than all) Project Implementation Agreements, provided that selective termination in respect of a Project SPV shall be permitted if (a) the Project Implementation is terminated pursuant to the other provisions of the agreement; or (b) if the Project SPV is undergoing a major maintenance or the construction period or any EPC Work, in which case, unless otherwise required by the Investment Manager for such Project SPV, the other Project Implementation Agreements shall stand terminated. The Investment Manager shall obtain approvals from the Unitholders and any governmental authority as may be applicable, in relation to such termination.

The Investment Manager also has the right to terminate the Project Implementation Agreements by issuing a notice of termination in case of certain events, including breach of the agreement by the Project Manager and the breach is not remedied within 60 days, occurrence of an Event of Default under the Framework Agreement, change in control of the Project Manager, occurrence of an insolvency event in relation to the Project Manager or a force majeure event continues for a period of 180 days or more within a continuous period of 365 days.

The IRB GEPL Project Implementation Agreement will be effective from the date of closing under the IRB GEPL Share Subscription Agreement. The Project Manager will provide initial upgradation works and operation and maintenance works to the Target SPV under the IRB GEPL Project Implementation Agreement similar to the Project SPVs under their respective Project Implementation Agreements. Also see "*Background and Structure of the Trust – Fees and Expenses – Fees and expenses of the Project Manager*" on page 104.

THE INVESTMENT MANAGER

MMK Toll Road Private Limited is the Investment Manager of the Trust, and has been designated as such pursuant to the Investment Management Agreement. The Investment Manager is responsible for making investment decisions with respect to the underlying assets or projects of the Trust, including any further investment or divestment of its assets, in accordance with the InvIT Regulations and the Investment Management Agreement.

The details of the Invesment Manager are as follows:

A. Details of the Investment Manager

a) **Name:** MMK Toll Road Private Limited;

b) **Registered Office:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

c) **Correspondence Address:** Off No-11th Floor/1101, Technology Street, Hill Side Avenue, Powai, Mumbai 400 076, Maharashtra, India;

d) **Telephone Number:** +91 22 6733 6400; and

e) **E-mail:** dhananjay.joshi@irb.co.in

B. Details of the Contact Person of the Investment Manager

a) **Name:** Mr. Dhananjay Joshi;

b) **Telephone Number:** +91 22 6733 6400; and

c) **Email:** dhananjay.joshi@irb.co.in

C. Background and Past Experience of the Investment Manager

MMK Toll Road Private Limited ("**Investment Manager**") was incorporated on April 12, 2002. The Investment Manager has experience in operating a road BOT project for a period of 13 years and in developing, operating and maintaining toll roads in the infrastructure sector.

The Investment Manager has executed the BOT project of improving and strengthening the Mohol – Kurul – Kamti – Mandrup Road in Solapur District (length: 33 km). The cost of the project was ₹180 million, which was financed by equity of ₹70.00 million and RTL of ₹110.00 million. The commercial operations date of the project was in May 2002 and the concession period was 13 years which expired in May 2015.

Being part of the IRB group, the Investment Manager has the infrastructure for acting as the Investment Manager for managing the assets and investments of the Trust.

The net worth of the Investment Manager as on June 30, 2023 stood at ₹100.10 million on a standalone basis. The key managerial personnel of the Investment Manager have over five years of experience each, in providing advisory services to a developer in the infrastructure sector. One such key managerial personnel has experience of over five years in the roads sector which is the relevant sub-sector in which the Trust primarily proposes to invest.

The Investment Manager confirms that it has, and undertakes to ensure that it will at all times maintain, adequate infrastructure, personnel and resources to perform its functions, duties and responsibilities with respect to the management of the Trust, in accordance with the InvIT Regulations, the Investment Management Agreement and other applicable law.

Further, neither the Investment Manager, nor its promoters or directors:

a) is debarred from accessing the securities market by the SEBI; or

b) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Investment Manager is a fugitive economic offender declared under Section 12 of the Fugitive Economic Offenders Act, 2018.

The Investment Manager conducts the operations of the Trust from its offices in Mumbai and New Delhi.

D. Brief Profiles of the Investment Manager's Directors

a) **Mr. Virendra D. Mhaiskar**

Mr. Virendra D. Mhaiskar, is a non-independent director of the Investment Manager. He holds a Diploma in Civil Engineering from Shriram Polytechnic, Navi Mumbai. Mr. Mhaiskar has over 30 years of experience in the construction and infrastructure industry. He joined the IRB group in June 1990 and is responsible for leading and directing the IRB group's strategy in BOT and funded projects.

b) **Mr. Kunnasagaran Chinniah**

Mr. Kunnasagaran Chinniah is a non-independent director of the Investment Manager. He is a Chartered Financial Analyst with a bachelor's degree in electrical engineering from the National University of Singapore and an MBA from the University of California, Berkeley. He has more than three decades of experience in the financial and infrastructure sectors. He is presently a director of Changi Airport International, Azalea Asset Management, Capitaland Ascendas REIT, Hindu Endowments Board, Singapore and several other companies. Earlier, he retired as the Managing Director/Global Head of Portfolio, Strategy & Risk group and Head of Infrastructure with GIC Special Investments ("**GICSI**"), the Private Equity arm of the Government of Singapore Investment Corporation ("**GIC**"). He joined GIC in 1989 and has held various positions with the Special Investments Department of GIC in their North American, European and Asian regions.

c) **Mr. Boon Chin Hau**

Mr. Boon Chin Hau is an additional non-independent director of the Investment Manager. He is the Managing Director, Head, Asia & Emerging Markets, Infrastructure - GIC Infrastructure Group. He joined the GIC Infrastructure Group in 2008. He has degrees from Imperial College London and the University of Chicago.

d) **Mr. Aryan Mhaiskar**

Mr. Aryan Mhaiskar is an additional non-independent director of the Investment Manager. He holds a bachelor's degree of science in economics and finance. He is associated with Avener Capital as a senior analyst. He was a management intern with IRB Infrastructure Developers Limited. Presently, he is associated with ADVent Partners LLP as a designated partner. He is an FIDE-rated international chess player and provides chess coaching to underprivileged children. He is also involved in animal welfare initiatives.

e) **Mr. K G Krishnamurthy**

Mr. K.G. Krishnamurthy, is an independent director of the Investment Manager. He was the Managing Director and CEO of HDFC Property Ventures Limited. He holds a degree in Bachelor of Architecture from Indian Institute of Technology Kharagpur. He was associated with Housing Development Finance Corporation ("**HDFC**") for more than two decades and held various leadership positions during his tenure with HDFC. He was also deputed to HDFC Venture Capital Limited (a subsidiary of HDFC) as Managing Director and CEO in the year 2005.

f) **Mrs. Ranjana Paranjape**

Mrs. Ranjana Paranjape, is an independent director of the Investment Manager. She holds a Diploma in Financial Management and a master's degree of Commerce from the University of Mumbai. She is also a Certified Associate of the Indian Institute of Bankers. She was associated with IDBI Bank for over 38 years and retired in October 2016 as a Chief General Manager.

g) **Mr. Nagendraa Parakh**

Mr. Nagendraa Parakh is an additional independent director of the Investment Manager. He is a rank holder chartered accountant and company secretary by professional qualification having more than 36 years of varied experiences. He retired as an executive director of the SEBI in October 2022. He played a key role in in development and regulation of capital and commodities markets. He was instrumental in introduction of equity derivatives markets, T+2 Rolling settlements and derivatives risk management system. He was exposed to many other departments including regulation of intermediaries like brokers, depository participants, credit ratings agencies, debenture trustees etc, and also worked extensively for Investor education and protection. He was also instrumental in introduction of pledge-repledge system to deposit client's margin in form of securities and resolution of defaults by Brokers. He was appointed as a Member of the Forward Market Commission during July 2012 to September 2015. He has also represented SEBI on various committees, international forums and on councils of exchanges and clearing corporations.

h) **Mr. Amyn Jassani**

Mr. Amyn Jassani, is an additional independent director of the Investment Manager and has over 30 years of experience primarily with the big four accounting firms. He is a Fellow member of the Institute of Chartered Accountants of India and is also a member of the Institute of Company Secretaries of India. Additionally, he has passed examinations for Certified Information System Auditor (CISA) and Social Auditors Certification.

The directors are not directors or members of the governing board of an investment manager of another infrastructure investment trust.

E. Brief Profiles of the Investment Manager's Key Personnel

a) **Mr. Dhananjay K. Joshi, Chief Executive Officer**

Mr. Dhananjay K. Joshi, 49 years, joined the IRB group in November 1998. He was appointed as the Chief Executive Officer of MMK Toll Road Private Limited with effect from February 10, 2020. He holds a bachelor's degree in commerce and a bachelor's degree in law from the University of Mumbai. He also holds a post-graduate diploma in business management and a masters in business administration from Shivaji University, Kolhapur. He has been a part of the IRB group for over 22 years.

b) **Ms. Shilpa C. Todankar, Chief Financial Officer**

Ms. Shilpa C. Todankar, 39 years, joined the IRB group in September 2009. She is a member of the Institute of Chartered Accountants of India since 2011. She holds a diploma in Information System Audit from Institute of Chartered Accountants of India. She has more than 10 years of experience in the fields of accountancy, audit and taxation in the IRB group. She is also a director on the board of the nine Project SPVs.

c) **Mr. Kaustubh Shevade, Company Secretary and Compliance Officer**

Mr. Kaustubh Shevade, 36 years, joined the IRB group in December 2019. He is an associate member of the Institute of Company Secretaries of India. He holds a bachelor of legal sciences degree and a bachelor of laws degree from the University of Mumbai. He also holds a master of business laws degree from the National Law School of India University, Bengaluru. Prior to joining the Investment Manager, he was associated with Tata Realty and Infrastructure Limited and Reliance Infrastructure Limited.

F. Details of the Holding or the Proposed Holding by the Investment Manager and its Directors in the Trust

The Investment Manager and its directors do not hold any Units as on date. None of the directors of the Investment Manager or the Investment Manager propose to hold any Units in the Trust.

G. Summary of the Standalone Financial Statements of the Investment Manager

For a summary of the financial statements of the Investment Manager, as derived from the standalone financial statements of the Investment Manager, prepared in accordance with Ind AS and the Companies Act, as of and for the Financial Years 2023, 2022 and 2021, see "*Summary Financial Information*" on page 42.

H. Functions, Duties and Responsibilities of the Investment Manager

Below is the brief description of the functions, duties and responsibilities of the Investment Manager provided in the Investment Management Agreement in accordance with the InvIT Regulations, which *inter-alia*, include:

a) Coordinating with the Trustee, as may be necessary, with respect to the operations of the Trust.
b) Ensuring that the valuation of the Trust Assets is done by the Valuer in accordance with the InvIT Regulations.
c) Arranging for adequate insurance coverage for the Trust Assets in accordance with the InvIT Regulations.
d) Maintaining proper books of accounts, documents and records with respect to the Trust, in the manner set out in the Indenture of Trust and in accordance with Applicable Law.
e) Ensuring that the audit of the accounts of the Trust by the Auditor is undertaken in accordance with the InvIT Regulations.
f) Making Distributions to Unitholders in accordance with Regulations 9(8) and 18 of the InvIT Regulations, the Trust Documents and the Investment Strategy. Subject to the Trust Documents, Applicable Law and the Investment Strategy, at least such percentage of the net distributable cash flows of the SPVs and Holdcos (as applicable) shall be distributed to the InvIT, as prescribed in the InvIT Regulations. The Distributions shall be made not less than once every year or at such other intervals as may be specified in the relevant Trust Documents or applicable under the InvIT Regulations;
g) To convene meetings of the Unitholders in accordance with Regulation 22 of the InvIT Regulations, including at the written request of the Unitholders as specified therein, and maintain records pertaining to the meetings in accordance with Regulation 26 of the InvIT Regulations.
h) To intimate the Trustee prior to any change in control of the Investment Manager to enable the Trustee to seek prior approval from the Unitholders (and the SEBI or any other governmental authority, if applicable) and ensuring that no such change is given effect to, until the approval of the Unitholders (and the SEBI or any other governmental authority, as applicable) has been obtained, or the Investemnt Management Agreement is terminated and a new investment manager has been appointed in accordance with the terms in the Investment Management Agreement, or in compliance with any other requirement under the InvIT Regulations, other applicable law and the Trust Documents.
i) To place before the board of directors, a report on the activity and performance of the Trust in accordance with the InvIT Regulations. To designate an appropriately qualified employee to act as the compliance officer for monitoring of compliance with the InvIT Regulations and any circulars or guidelines issued thereunder and intimating the SEBI in case of non-compliance.
j) Maintaining records pertaining to the activity of the Trust in terms of Regulation 26 of the InvIT Regulations.
k) To manage the Trust in accordance with applicable law (including the InvIT Regulations) and the Trust Documents and the investment strategy, to make all investment decisions with respect to the Trust Assets and ensure that the investments made by the Trust are in accordance with the investment conditions specified in the applicable provisions of the InvIT Regulations and in accordance with the investment strategy as specified in the Investment Management Agreement.
l) To appoint, in consultation with the Trustee, the Valuer, Auditor (for a period of not more than five consecutive years or such other period as may be prescribed under the InvIT Regulations), regsitrar

and transfer agent, merchant bankers, custodians, credit rating agencies, and any other intermediaries or service providers.

m) To ensure all activities of the intermediaries, agents, or service providers appointed by the Investment Manager are in accordance with the InvIT Regulations and guidelines and circulars issued thereunder, as applicable.

n) Overseeing the activities of the Project Manager, ensuring that the Project Manager conplies with the InvIT Regulations, and reviewing the transactions carried out between the Project Manager and its Associates and where the Project Manager has advised that there may be a conflict of interest, to obtain confirmation from a practicing chartered accountant or valuer, as applicable, that such transaction is on an arms' length basis.

o) To ensure adequate and timely redressal of Unitholders' grievances pertaining to the activities of the Trust in accordance with the InvIT Regulations. The Investment Manager is required to submit quarterly reports on Unitholders' grievances to the Trustee, as applicable.

p) To provide to the SEBI, the stock exchanges and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI, the stock exchanges or other governmental authorities, as applicable, in relation to the activities of the Trust

q) To ensure that disclosures and reporting to the Unitholders, SEBI, the Trustee, and the stock exchanges are in accordance with the applicable provisions of the InvIT Regulations (including disclosure to the Trustee and the Unitholders of any information having a bearing on the operation or performance of the Trust) in accordance with the timelines specified in the InvIT Regulations.

r) To intimate the Trustee and the Unitholders on the occurrence of any event that may have a material impact on the Investment Manager and its ability to perform its obligations under the Trust Documents, including any change in control of the Investment Manager.

s) To be responsible for all activities pertaining to the issue of Units including filing of any placement memorandum, final placement memorandum, draft offer document, offer document or final offer document with the SEBI and dealing with all matters relating to the allotment of Units to Unitholders.

t) To ensure that disclosures in the placement memorandum or offer document are material, true, correct and adequate and in accordance with the InvIT Regulations. The Trust may list its Units on one or more stock exchanges subject to compliance with the conditions specified under the InvIT Regulations and directions issued by the SEBI or the stock exchanges, as applicable.

u) Fulfiling its obligations under the applicable provisions of the InvIT Regulations and the Trust Documents.

v) The Investment Manager is required to submit to the Trustee:

   i. quarterly reports on the activities of the Trust including receipts for all funds received by it and for all payments made, status of compliance with the InvIT Regulations, specifically Regulations 18, 19 and 20 of the InvIT Regulations, performance report, status of development of under-construction projects, within time period specified under the InvIT Regulations, whichever is earlier;

   ii. valuation reports as required under the InvIT Regulations within the time period specified under the InvIT Regulations;

   iii. decision to acquire or sell or develop or bid for any Trust Asset or project or expand existing completed Trust Assets or projects along with rationale for the same;

   iv. details of any action which requires approval from the Unitholders as may be required under the InvIT Regulations; and

   v. details of any other material fact including change in its directors, change in its shareholding, any legal proceedings that may have a significant bearing on the activity of the Trust, within the time period specified under the InvIT Regulations.

w) To submit within the time period prescribed under the InvIT Regulations, annual reports and half yearly reports to all the Unitholders electronically or provide physical copies and, if applicable, to the stock exchanges.

x) To keep segregated at all times the assets and liabilities of the Trust from the assets and liabilities of the Investment Manager and the assets and liabilities of any other trusts managed by the Investment Manager. The assets held under the Trust shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any person claiming under any other fund or trust administered or managed by the Investment Manager.

y) To be responsible for monitoring, administering and giving effect to all claims and adjustments arising out of the share purchase agreements executed in respect of the acquisition of Trust Assets and any payments required to be made by or to the Trust.

z) Other duties include:

i. ensuring that computation of the net asset value of the Trust is based on the valuation done by the Valuer in accordance with the InvIT Regulations;
ii. maintaining regular interaction with the Trustee on performance of the Trust and providing the Trustee with any information in relation to the operations of the Trust as may be required;
iii. conducting its affairs and the affairs of the Trust in such a manner that Unitholders will not have personal liability with respect to liabilities or obligations of the Trust;
iv. collecting all dividends, fees, property and other payments due and receivable by the Trust in the manner set out in the Indenture and in terms of the InvIT Regulations;
v. ensuring that no commission or rebate or any other remuneration, arising out of transaction pertaining to the Trust is collected by the Investment Manager or its Associates, other than as specified in the offer document or any other document as may be specified by SEBI for the purpose of the issue of the units of the Trust;
vi. ensuring that the Trust Assets have proper and legal marketable titles and that all the material contracts entered into or on behalf of the Trust or the Trust Assets or the SPVs, or the Holdcos are legal, valid, binding and enforceable by and on behalf of the Trust or the Trust Assets or the SPVs or the Holdcos, as applicable;
vii. keeping the Unitholders informed and updated on investment activities of the Trust in accordance with the Trust Documents;
viii. ensuring that any possible conflict of interest involving its role as an Investment Manager is reported to the Trustee and the Unitholders;
ix. ensuring that disclosures and reporting to the Unitholders, SEBI and the Trustee are in accordance with applicable law and InvIT Regulations;
x. to immediately notify the Trustee and the Unitholders of any act which is detrimental to the interest of the Unitholders;
xi. informing the Trustee and Unitholders in writing about any change in the representations and warranties provided by the Investment Manager under the Investment Management Agreement or any of the Trust Documents;
xii. providing assistance to the Trustee as may be required in fulfilling its obligations towards the Trustee and the Unitholders, under applicable law, by any governmental authority or under the Trust Documents;
xiii. providing to the SEBI, the Trustee and if applicable, the stock exchanges, such information as may be sought by the SEBI, the Trustee or the stock exchanges in relation to the activities of the Trust, and providing, in parallel, to the Unitholders a copy of all reports and submissions made hereunder;
xiv. taking any other actions incidental to any of the foregoing or necessary or convenient in order to fully effect or evidence any action or transaction contemplated under the Investment Management Agreement; and
xv. to perform any other duties specified in the InvIT Regulations and the Trust Documents.

I. Rights in relation to shareholding in the Investment Manager

Pursuant to the terms of the IM SHA, the Sponsor and Croxley have agreed to the following arrangements in relation to their shareholding in the Investment Manager:

- ***Put option***: Croxley has the right to require the Sponsor to purchase the equity shares held by it in the Investment Manager upon the occurrence of certain events within the period of 12 months from the date of allotment in the initial offer of Units.

- ***Right of first refusal***: Croxley has a right of first refusal over equity shares of the Investment Manager proposed to be transferred by the Sponsor to any person other than the subsidiaries of the Sponsor.

- ***Tag along right***: Subject to lock-in below, if the Sponsor proposes to transfer equity shares of the Investment Manager held by it to a third party buyer (which is not a subsidiary of the Sponsor), Croxley has a right to require such buyer to purchase from the Investors, (i) the entire shareholding of Croxley if the Sponsor proposes to transfer in excess of 20% of the total outstanding equity shares or (ii) up to such percentage of equity shares held by Croxley that is *pro rata* to the percentage of equity shares proposed to be transferred by the Sponsor if the Sponsor proposes to transfer 20% or less of the total outstanding equity shares.

- ***Lock-in***: The Sponsor is not permitted to transfer the equity shares held by in the Investment Manager to any person, including to its affiliates without the prior written permission of Croxley.

- ***Deed of Adherence***: The Sponsor has agreed that any transfer of its shareholding to any person will be valid only if such person executes a deed of adherence and agrees to be bound by the terms and conditions of the IM SHA.

- ***Pre-emptive rights***: If the Investment Manager proposes to issue any new equity shares to any person including an existing shareholder, including by way of a preferential allotment, subject to certain exceptions specified in the IM SHA, then until the date of completion of any initial public offering of the Investment Manager, the Investment Manager will provide a right to the existing shareholders to subscribe to their respective proportionate share (in the proportion of their shareholding in the Investment Manager) of such proposed issuance at the same price as is offered to the proposed recipient, so as to maintain their respective proportionate ownership in the Investment Manager.

- ***Events of Default and consequences***: See "*Rights of Unitholders – Arrangements between the Sponsor and the Financial Investors*" on page 258.

THE TRUSTEE

The Sponsor has settled the Trust pursuant to the Indenture of Trust and appointed IDBI Trusteeship Services Limited in accordance with the provisions of the InvIT Regulations.

The details of the Trustee are as follows:

A. Details of the Trustee

a) **Name:** IDBI Trusteeship Services Limited;

b) **Registered Office:** Ground Floor, Universal Insurance Building, Sir Phirozshah Mehta Road, Fort, Mumbai – 400001;

c) **Telephone Number:** +91 22 4080 7000;

d) **Fax Number:** +91 22 6631 1776

B. Details of the Contact Persons of the Trustee

Ms. Sheetal Mehta
+91 22 4080 7062
sheetal@idbitrustee.com

Mr. Munjal G. Dhanani
+91 22 4080 7060
munjal@idbitrustee.com

C. Details of Trustee's Registration with SEBI

The Trustee is registered with SEBI as a debenture trustee with registration number IND000000460.

D. Background of the Trustee

The Trustee is a trusteeship company which has been registered with SEBI, and has been jointly promoted by IDBI Bank Limited, Life Insurance Corporation and General Insurance Corporation for providing corporate and other trusteeship services.

The Trustee is permitted to engage in the following activities.

a) Debenture / bond trustee;
b) Security trustee/ facility agent;
c) Securitization trustee;
d) Share pledge trustee / share monitoring agent;
e) Escrow agent;
f) VCF trustees/ AIF Trustees;
g) Safe keeping / lockers services;
h) Management of private trusts / execution of wills; and
i) Special corporate services (e.g. provision of nominee directors)

The Trustee is the one of the largest trusteeship companies in India. The Trustee provides trusteeship services to corporates across diverse industries as well as domestic and foreign banks and financial institutions.

The Trustee is not an Associate of the Sponsor/Project Manager or the Investment Manager. Further, the Trustee is not and has not been (i) not debarred from accessing the securities market by the SEBI; or (ii) a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or infrastructure investment trust which is debarred from accessing the capital market under any order or directions made by the SEBI.

None of the promoters or directors of the Trustee are or have been (i) declared as a fugitive economic offender under Section 12 of the Fugitive Economic Offenders Act, 2018; (ii) debarred from accessing the securities market by SEBI; (iii) a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust or an infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; and/or (iv) declared a wilful defaulter by any bank or financial institution or consortium thereof in accordance with the guidelines on wilful defaulters issued by the Reserve Bank of India.

E. Names and Profiles of the Directors of the Trustee

The names and profiles of board of directors of the Trustee, are as follows:

S. No.	Name	Designation	DIN
1.	Mr. Pradeep Kumar Jain	Director	07829987
2.	Mr. Pradeep Kumar Malhotra	Managing Director and Chief Executive Officer	09817764
3.	Ms. Jayashree Ranade	Director	09320683
4.	Ms. Baljinder Kaur Mandal	Additional Director	06652016
5.	Mr. Jayakumar S. Pillai	Additional Director and Chairman	10041362

The Trustee confirms that it has, and undertakes to ensure that it will at all times maintain, adequate infrastructure, personnel and resources to perform its functions, duties and responsibilities with respect to the Trust, in accordance with the InvIT Regulations, the Indenture of Trust and applicable law.

F. Functions, Duties and Responsibilities of the Trustee

a) Interests of the Unitholders

The Trustee shall carry on and conduct its business in a proper and efficient manner in the best interest of the Unitholders in accordance with the Trust Documents. The Trustee shall duly perform all its duties, responsibilities and powers as set out in the InvIT Regulations in the interest of the Unitholders and in accordance with the provisions of the Trust Documents.

b) Appointment of the Investment Manager, the Project Manager and enter into the Investment Management Agreement and the Project Implementation Agreements

The Trustee, on behalf of the Trust, shall within a reasonable time from the date of execution of the Indenture of Trust, appoint an Investment Manager and a Project Manager (in consultation with the Investment Manager) and enter into an Investment Management Agreement and the Project Implementation Agreements. The Trustee shall have the power to execute the Project Implementation Agreement or any other agreement or arrangement, from time to time, with the Project Manager, any holding company or the SPV in this regard. The Trustee shall obtain a compliance certificate from the Investment Manager and the Project Manager on a quarterly basis, or such other time and in the form as may be prescribed under the InvIT Regulations.

c) Supervision of the Investment Manager

i. The Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee shall require the Investment Manager to rectify such delay or discrepancy on an urgent basis.

ii. The Trustee shall oversee the activities of the Investment Manager in the interest of the Unitholders, ensure that the Investment Manager complies with the applicable provisions of the InvIT Regulations, including in relation to reporting and disclosure requirements and shall obtain a compliance certificate from the Investment Manager on a quarterly basis.

iii. The Trustee shall review transactions between the Investment Manager and its Associates and where the Investment Manager has advised that there may be a conflict of interest, obtain a confirmation that such transaction is on an arm's length basis from a practicing

chartered account, a valuer or as may be otherwise prescribed under the InvIT Regulations, as applicable.

iv. The Trustee shall ensure that the Investment Manager reviews the valuation reports issued by the valuer and submitted to the Trustee by the Investment Manager in accordance with the InvIT Regulations.

v. The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for effective monitoring of the functioning of the Trust.

vi. The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and oversees voting by the Unitholders and declaration of results (except where the Trustee is required to carry out such functions under the InvIT Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

d) Providing information to the SEBI

The Trustee shall ensure that the Investment Manager shall provide to the SEBI and other governmental authorities, as applicable, information as may be requested or required under applicable law by the SEBI or other governmental authorities, as applicable, in relation to the activities of the Trust. The Trustee shall comply with the information and intimation requirements under the InvIT Regulations. The Trustee shall ensure that the activity of the Trust is operated in accordance with the provisions of the Indenture of Trust, the InvIT Regulations, other applicable law and the Trust Documents.

e) Documents and information to be provided to Unitholders

The Trustee shall, and shall ensure that the Investment Manager shall, provide documents and information to the Unitholders with respect to the activities carried on by the Trust, as may be required by the SEBI or other governmental authority, as applicable, under applicable law.

f) Change in Control

The Trustee shall obtain approvals, if required under the Trust Documents, the InvIT Regulations, other applicable law and any concession agreement, for any proposed change in control of the Trustee, the Investment Manager or the Project Manager, as applicable.

g) Change in Investment Manager or Project Manager

In the event of any proposed change or termination in the investment manager or project manager, the Trustee shall ensure that all conditions in connection with the removal of such investment manager or project manager and appointment of a new investment manager or project manager prescribed under the InvIT Regulations, the Trust Documents and other applicable law are complied with. The previous investment manager or project manager shall continue to act as such at the discretion of the Trustee until such time as the new investment manager or project manager is appointed. The Trustee shall ensure that the new investment manager or project manager shall stand substituted as a party in all the documents (to the extent applicable) to which the earlier investment manager or project manager was a party. The Trustee shall also ensure that the earlier investment manager or project manager continues to be liable for all its acts of omissions and commissions for the period during which it served as investment manager or project manager, notwithstanding its change or termination.

h) Subscription amounts

The Trustee shall and shall ensure that the Investment Manager ensures that subscription amounts in case of any offering by the Trust (including the Issue) are collected and utilized in accordance with the InvIT Regulations, the relevant Trust Documents and conditions specified by the SEBI, as applicable.

i) Distribution

The Trustee shall make Distributions and ensure that the Investment Manager makes timely declarations of Distributions to the Unitholders in accordance with the InvIT Regulations.

j) Maintenance of books of accounts and other records

The Trustee shall cause the books of accounts and other records of the Trust to be maintained in accordance with the Indenture of Trust, the Trust Documents and applicable law.

k) Payment of statutory charges, operation of bank accounts etc.

i. The Trustee shall ensure that the Investment Manager shall make payments of all taxes, duties and any other statutory charges or levies that may be payable by the Trust or on behalf of the Unitholders from the Trust Assets, subject to the provisions of the Trust Documents and applicable law.
ii. The Trustee shall be responsible for opening and operating bank accounts and demat accounts on behalf of the Trust.

l) Attainment of objects of the Trust

The Trustee shall ensure that all acts, deeds and things are done for the fulfilment of the investment objectives of the Trust in accordance with the InvIT Regulations, the Trust Documents and to secure the best interests of the Unitholders.

m) Reports to be filed by the Trust

The Trustee shall file such reports as may be required by the SEBI or any other governmental authority or as required under applicable law in relation to the activities carried on by the Trust.

n) Unitholder Complaints

The Trustee shall periodically review the status of Unitholders' complaints and their redressal by the Investment Manager. The Investment Manager shall provide quarterly reports on Unitholders' grievances to the Trustee, as applicable.

o) Segregation of assets and liabilities

The assets and liabilities of the Trust shall at all times be segregated from the assets and liabilities of the Trustee and the assets and liabilities of other trusts managed by the Trustee. The Trust Assets shall be held for the exclusive benefit of the Unitholders and such assets shall not be subject to the claims of any creditor or any Person claiming under any other fund or trust administered or managed by the Trustee or the Investment Manager.

p) Valuer

i. The Trustee shall ensure that the valuer is not an Associate of the Sponsor, the Investment Manager or the Trustee.
ii. The Trustee shall ensure that the Investment Manager ensures that a detailed valuation is undertaken of the Trust Assets by the valuer at such intervals and in the manner specified under the InvIT Regulations and the Trust Documents.
iii. The Trustee shall ensure that the remuneration of the valuer is not linked to or based on the value of the asset being valued.

q) Investment by Trustee

The Trustee shall invest in Units only if permitted under Applicable Law and such investments shall be in accordance with applicable law.

r) Compliance with the InvIT Regulations

The Trustee shall fulfil its obligations under applicable provisions of the InvIT Regulations.

s) Delegation to the Investment Manager

The Trustee shall delegate all such powers to the Investment Manager as may be required by the Investment Manager to carry out its obligations under the Investment Management Agreement and Applicable Law and as may be required for the benefit of the Unitholders. Also see "*Rights of Unitholders – Approval of Unitholders*"on page 259.

t) Related Party Transactions

The Trustee shall review the transactions carried out between the Investment Manager and its Associates and obtain a certificate from a practising chartered accountant or a valuer, as applicable with respect to any related party transactions involving the Investment Manager and its Associates, where the Investment Manager has advised that there may be a conflict of interest, stating that such transactions have been done at an arms-length basis.

u) Monitoring

The Trustee shall require the Investment Manager to set up such systems and procedures and submit such reports to the Trustee, as may be necessary for the effective monitoring or the functioning of the Trust. The Trustee shall oversee activities of the Investment Manager in the interest of the Unitholders, shall ensure that the Investment Manager is in compliance with the provisions of the InvIT Regulations at all times and shall obtain a compliance certificate from the Investment Manager on a quarterly basis. Further, the Trustee shall ensure that the Investment Manager complies with reporting and disclosure requirements in accordance with the InvIT Regulations and in case of any delay or discrepancy, the Trustee will ensure that the Investment Manager rectifies such delay or discrepancy on an urgent basis.

v) Unitholders Meeting

The Trustee shall ensure that the Investment Manager convenes meetings of the Unitholders in accordance with the InvIT Regulations and shall also oversee the voting by the Unitholders and the declaration of results (excpet where the Trustee is required to carry out such functions under the InvIt Regulations). The Trustee shall ensure that the Investment Manager convenes meetings of Unitholders within the period prescribed under the InvIT Regulations and the period between such meetings shall not exceed the period prescribed under the InvIT Regulations.

w) Others

The Trustee shall ensure that the activity of the Trust is operated in accordance with the Indenture of Trust, InvIT Regulations, other applicable law and the Trust Documents. In the event, any discrepancy is noticed by the Trustee, then the Trustee shall promptly inform the SEBI in writing. The Trustee shall provide to the SEBI such information as may be sought by the SEBI pertaining to the activity of the Trust.

The Trustee shall have the power to take up with SEBI or with the stock exchanges, as applicable, any matter which has been approved in any meeting of Unitholders post the initial offer by the Trust, if the matter requires such action.

x) Compliance Certificate

The Trustee shall obtain a compliance certificate in the form and manner prescribed under applicable law on a quarterly basis, from each of the Investment Manager and the Project Manager.

SECTION VI – OTHER PARTIES

AUDITOR

The Investment Manager, in consultation with the Trustee, and pursuant to the approval of the Unitholders, has appointed Gokhale & Sathe, Chartered Accountants as the Trust's Auditor until the conclusion of the ninth annual meeting of Unitholders of the Trust. The Auditor has audited the Consolidated Financial Information and their reports thereon have been included in this Letter of Offer.

Policy for Appointment of Auditor

The Investment Manager shall appoint an auditor of the Trust to hold office from the date of conclusion of the annual meeting in which the auditor is appointed until the date of conclusion of the sixth annual meeting of the unitholders thereafter in accordance with the procedure for selection of auditors as may be specified by the SEBI. The Investment Manager is not permitted to appoint or re-appoint an individual as the auditor for more than one term of five consecutive years, and an audit firm as the auditor for more than two terms of five consecutive years, subject to a cooling-off period of five years. With respect to the appointment of the auditor of the Trust and the fees of such an auditor, an approval from the Unitholders shall be required at the annual meeting in accordance with Regulation 22 of the InvIT Regulations.

The Investment Manager shall ensure that the auditor carries out an audit of the accounts of the Trust at such intervals as may be required under the InvIT Regulations.

In accordance with the InvIT Regulations, the auditor of the Trust shall:

a) conduct an audit of the accounts of the Trust and draft the audit report based on the accounts examined, after taking into account the relevant accounting and auditing standards, as may be specified by SEBI in this regard;

b) to the best of its information and knowledge, ensure that the accounts and financial statements give a true and fair view of the state of the affairs of the Trust, including profit or loss and cash flow for the period and such other matters as may be specified;

c) have a right of access at all times to the books of accounts and vouchers pertaining to activities of the Trust;

d) have a right to require such information and explanation pertaining to activities of the Trust, as it may consider necessary for the performance of its duties as auditor from the employees of Trust or the Sponsor, the Investment Manager, the Project Manager or the Trustee or the SPVs or any other person in possession of such information; and

e) undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust as per the applicable Indian Accounting Standards (Ind AS) and any addendum thereto as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, in such manner as may be specified by the SEBI.

Auditing Standards

The Auditor shall conduct an audit of the accounts of the Trust and issue the audit report based on the accounts examined, after taking into account the relevant accounting and auditing standards, as may be specified by SEBI and/or the ICAI, from time to time, in this regard. Further, the Auditor shall undertake a limited review of the audit of all the entities or companies whose accounts are to be consolidated with the accounts of the Trust, in accordance with the relevant accounting standards, in such manner as may be specified by the SEBI.

VALUER

The Investment Manager, in consultation with the Trustee, appointed Mr. Sunit Khandelwal as the Valuer of the Trust until March 31, 2023. Mr. Sunit Khandelwal is a co-founder of Incwert. For details in relation to the availability of the latest valuation report for the Current Portfolio, see "*Valuation*" on page 248. Mr. Khandelwal has also undertaken a full valuation of the Target SPV and his Target Valuation Report dated July 17, 2023 has been included in this Letter of Offer.

The Board of Directors of the Investment Manager and the Unitholders have approved the appointment of KPMG Valuation Services LLP, bearing IBBI registration number IBBI/RV-E/06/2020/115 as the Valuer of the Trust for the Financial Year 2024.

The Valuer is not an Associate of the Sponsor, the Investment Manager or the Trustee, and has not less than five years of experience in the valuation of infrastructure assets.

SECTION VII – FINANCIAL INFORMATION

FINANCIAL STATEMENTS

A. CONSOLIDATED FINANCIAL INFORMATION

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gokhale & sathe (regd.)
chartered accountants
304,308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

Limited Review Report

To
The Board of Directors,
MMK Toll Road Private Limited
(Investment Manager)

We have reviewed the accompanying Statement of Consolidated Unaudited Financial Results ("the statement") of **IRB Infrastructure Trust** ('the Trust') and its subsidiaries (the Parent and its subsidiaries together referred to as "the Group") for the quarter ended 30th June 2023. This statement, prepared for the purpose of consolidation with the Unaudited Results of IRB Infrastructure Developers Limited, is the responsibility of the Investment Manager's management and has been approved by the Board of Directors of the Investment Manager. Our responsibility is to issue a report on these Financial Statements based on our review.

We conducted our review in accordance with the Standard on Review Engagement (SRE) 2410, Review of Interim Financial Information performed by the Independent Auditor of the Entity issued by the Institute of Chartered Accountants of India. This standard requires that we plan and perform the review to obtain moderate assurance as to whether the Financial Statements are free of material misstatement. A review is limited primarily to inquiries of company personnel and analytical procedures applied to financial data and thus provide less assurance than an audit. We have not performed an audit and accordingly, we do not express an audit opinion.

Based on our review conducted as above and based on the consideration of review reports of the other auditors referred to in paragraph 4 below, for the purpose of consolidation with the Unaudited Financial Results of IRB Infrastructure Developers Limited, nothing has come to our notice that causes us to believe that the accompanying Statement of Consolidated Unaudited Financial Results prepared in accordance with applicable Accounting Standards and other recognized accounting practices has not disclosed the information required to be disclosed in terms of Regulation 33 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, including the manner in which it is to be disclosed or that it contains any material misstatement.

We have not reviewed the Financial Information pertaining to the five subsidiaries embedded in the Consolidated Unaudited Financial Results, that includes, before consolidation adjustments, for the Quarter ended 30th June 2023, (a) Total Income of INR 5,547.32 Million, (b) Total loss after tax of INR 1,471.25 Million and (c) Total Assets as INR 1,16,253.71 Million. The Financial Information have been reviewed by other auditors whose reports have been furnished to us by the management and our conclusion on the statement, in so far as it relates to the amounts and disclosures included in respect of these five subsidiaries is solely based on the report of other auditors and the procedures performed by us as stated in the paragraph 2 above. Our conclusion on the statement is not modified in respect of the above matters.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No: 103264W

SD /-
CA Kaustubh Deshpande,
Partner
Membership No.: 121011
UDIN: 23121011BGXXYY9096
Place: Mumbai
Date: July 28, 2023

tel.: (022) 43484242 | office@gokhalesahe.in

IRB Infrastructure Trust
Consolidated Balance sheet as at June 30, 2023

(Amounts in Millions.)

	Notes	As at June 30, 2023	As at March 31, 2023
ASSETS			
Non-current assets			
Property, Plant and Equipment	1	7.35	7.59
Goodwill		604.54	604.54
Other Intangible assets	1	2,29,752.88	2,28,418.29
Intangible assets under development	1	3,111.32	2,421.67
Financial assets			
i) Others	4	0.36	0.33
Other non-current assets	6	174.07	174.07
Deferred tax assets (net)	5	832.45	755.80
		2,34,482.97	**2,32,382.29**
Current assets			
Financial assets			
i) Investments	2	1,034.62	1,283.09
ii) Trade receivables	3	461.42	84.67
iii) Cash and cash equivalents	7	293.62	731.31
iv) Bank balance other than (iii) above	8	5,057.36	4,866.69
v) Others	4	1,552.96	1,448.56
Current tax assets (net)	9	44.83	24.81
Other current assets	10	2,862.45	2,657.07
		11,307.26	**11,096.20**
Total assets		**2,45,790.23**	**2,43,478.49**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	11	87,929.33	87,929.33
Other equity	12		
Other reserves		(11,544.30)	(10,395.80)
Total Equity		**76,385.03**	**77,533.53**
Non-controlling interests		**0.89**	**0.81**
		76,385.92	**77,534.34**
Non-current liabilities			
Financial liabilities			
i) Borrowings	13	1,02,119.86	98,943.95
ii) Other financial liabilities	15	36,270.06	35,780.80
iii) Trade payables	16	1,375.47	4,165.72
Provisions	17	3,118.85	2,965.03
		1,42,884.24	**1,41,855.50**
Current liabilities			
Financial liabilities			
i) Borrowings	13	6,547.46	6,135.65
ii) Trade payables	14		
a) total outstanding dues of micro enterprises and small enterprises		1.76	1.61
b) total outstanding dues of creditors other than micro enterprises and small enterprises		17,047.59	15,303.87
iii) Other financial liabilities	15	2,840.69	2,549.37
Other current liabilities	18	82.57	98.15
		26,520.07	**24,088.65**
Total liabilities		**1,69,404.31**	**1,65,944.15**
Total equity and liabilities		**2,45,790.23**	**2,43,478.49**

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 28.07.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 28.07.2023

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the quarter ended June 30, 2023

(Amounts in Millions.)

Particulars	Notes	For the quarter ended June 30, 2023	For the quarter ended June 30, 2022	For the year ended March 31, 2023
Income				
Revenue from operations	19	7,282.88	8,270.89	26,912.59
Other income	20	101.43	33.97	263.08
Total income		**7,384.31**	**8,304.86**	**27,175.67**
Expenses				
Valuation Expenses		-	-	2.67
Audit fees	25	1.19	1.02	5.04
Operating Expenses	21	3,705.33	4,921.58	12,865.52
Project Management Fees		731.56	659.71	2,647.70
Insurance and Security Expenses		14.69	0.24	14.72
Trustee Fees		1.04	2.57	5.95
Depreciation on Property, plant and Equipment	22	0.24	0.31	1.25
Amortisation of Intangible Assets	22	823.56	589.36	2,809.17
Finance costs (Interest)	23	2,471.36	2,177.28	9,005.28
Finance costs (Others)	23	297.49	355.43	1,249.41
Investment Manager Fees		34.22	14.13	56.52
Custodian fees		0.71	0.09	0.09
Loss on sale of assets		-	-	0.01
Fair value loss on measurement of other payable		476.74	58.09	560.53
Other expenses	24	48.02	31.03	256.29
Total expenses		**8,606.15**	**8,810.85**	**29,480.14**
Profit/(loss) before tax for the period/year		**(1,221.84)**	**(505.99)**	**(2,304.47)**
Tax expenses				
Current tax		3.22	149.92	435.25
Deferred tax		(76.65)	(16.92)	(468.13)
MAT Credit utilisation / (Entitlement)		-	-	-
Total tax expenses		**(73.43)**	**133.00**	**(32.88)**
Profit/(loss) after tax for the period/year		**(1,148.42)**	**(638.99)**	**(2,271.59)**
Other comprehensive income				
Item that will not be reclassified to profit or loss:				
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-	-
Other comprehensive income/ (loss) for the period/year, net of tax		-	-	-
Total comprehensive income /(loss) for the period/year		**(1,148.42)**	**(638.99)**	**(2,271.59)**
Profit/(loss) after tax for the period/year		**(1,148.42)**	**(638.99)**	**(2,271.59)**
Attributable to:				
Owners of the Project SPV Group		(1,148.50)	(639.18)	(2,272.18)
Non-controlling interests		0.08	0.19	0.59
Total comprehensive income for the period/year				
Attributable to:				
Equity holders of the Project SPV Group		(1,148.50)	(639.18)	(2,272.18)
Non-controlling interests		0.08	0.19	0.59
Earnings per unit (of Rs 100 each)				
Basic		(1.31)	(0.73)	(2.59)
Diluted		(1.31)	(0.73)	(2.59)

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 28.07.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 28.07.2023

IRB Infrastructure Trust
Notes to Consolidatd Financial Statements for the quarter ended June 30, 2023

Note 1 : Property, Plant and Equipment

(Amounts in Millions.)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	0.09	-	0.09
At 31 March 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	-
At 30 June 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.19**
Depreciation					
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.34**
Additions	1.20	0.00	0.03	0.01	1.25
Disposals/ Adjustments	-	-	0.08	-	0.08
At 31 March 2023	**8.60**	**0.29**	**1.23**	**0.39**	**10.51**
Additions	0.23	-	0.00	0.00	0.24
Disposals/ Adjustments	-	-	-	-	-
At 30 June 2023	**8.83**	**0.29**	**1.23**	**0.39**	**10.75**
Net Book value					
At 30 June 2023	**7.26**	**0.01**	**0.07**	**0.00**	**7.35**
At 31 March 2023	**7.49**	**0.01**	**0.08**	**0.00**	**7.59**

Net Book value	**June 30, 2023**	**March 31, 2023**
Property, Plant and Equipment	7.35	7.59

Note 1 : Intangible Assets and Intangible Assets under development

Intangible Assets (Amounts in Millions.)

Particulars	Toll Collection Rights	Total
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Additions	9,663.30	9,663.30
Deletions	295.32	295.32
Adjustments	-	-
At 31 March 2023	**2,37,527.40**	**2,37,527.40**
Additions	2,158.15	2,158.15
Deletions	-	-
Adjustments	-	-
At 30 June 2023	**2,39,685.54**	**2,39,685.54**
Amortisation		
At 31 March 2022	**6,299.93**	**6,299.93**
Additions	2,809.17	2,809.17
Deletions	-	-
Adjustments	-	-
At 31 March 2023	**9,109.10**	**9,109.10**
Additions	823.56	823.56
Deletions	-	-
Adjustments	-	-
At 30 June 2023	**9,932.66**	**9,932.66**
Net Book value		
At 30 June 2023	2,29,752.88	
At 31 March 2023	2,28,418.29	

Particulars	June 30, 2023	March 31, 2023
Toll Collection Rights	2,29,752.88	2,28,418.29
Total	**2,29,752.88**	**2,28,418.29**

Intangible assets under development

(Amounts in Millions.)

Particulars	June 30, 2023	March 31, 2023
Toll Collection Rights		
At the beginning of the year	**2,421.67**	**1,290.89**
Add : development during the period/year	689.65	11,128.99
	3,111.32	12,419.88
Less : Transfer to Intangible Asset (Toll Collection Rights)	-	9,998.21
Closing balance	**3,111.32**	**2,421.67**
Total	**3,111.32**	**2,421.67**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Amounts in Millions.)

Particulars	June 30, 2023				March 31, 2023			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 2 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	11,922.88	32.71	-	1,000	18,486.04	49.85	-
Canara Robeco Overnight Fund - Direct Plan - Growth	1,000	25,455.81	30.01	-	1,000	5,174.20	6.00	-
IDBI Liquid Fund - Direct Plan - Growth	1,000	1,16,169.12	286.13		1,000	64,718.69	156.76	
SBI Liquid Fund - Direct Growth	1,000	1,72,503.33	618.25	-	1,000	2,91,778.24	1,028.03	-
SBI Overnight Fund - Direct Growth	1,000	18,208.56	67.52	-	1,000	11,632.96	42.44	-
			1,034.62	**-**			**1,283.09**	**-**
Total			**1,034.62**	**-**			**1,283.09**	**-**
Aggregate book value of quoted investments			**1,034.62**				**1,271.74**	
Market value of quoted investments			**1,034.62**				**1,283.09**	

IRB Infrastructure Trust
Notes to Consolidatd Financial Statements for the quarter ended June 30, 2023

(Amounts in Millions.)

	June 30, 2023		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Note 3 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.61	-	0.61	-
Others	460.81	-	84.05	-
Total	**461.42**	**-**	**84.67**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**461.42**	**-**	**84.67**	**-**
Note 4 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	20.16	-	11.57	-
Interest receivable from others	3.73	-	3.73	-
Retention money receivable	546.47	-	530.54	-
Receivable from Government Authorities (NHAI)	901.26	-	816.07	-
Other receivable	70.35	-	75.65	-
Security and other deposits	10.99	0.36	10.99	0.33
Total	**1,552.96**	**0.36**	**1,448.56**	**0.33**

(Amounts in Millions.)

	June 30, 2023	March 31, 2023
Note 5 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	98.98	36.80
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current period/year but allowed for tax purposes in following years	-	-
Deferred tax liabilities (net)	**98.98**	**36.80**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	-	-
MAT credit entitlement	-	-
Deferred Tax assets on Fair valuation	931.43	792.60
Deferred Tax Assets	**931.43**	**792.60**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(832.45)**	**(755.80)**
Note 6 : Other non - current assets		
Duties and taxes receivable	174.07	174.07
Total	**174.07**	**174.07**

IRB Infrastructure Trust
Notes to Consolidatd Financial Statements for the quarter ended June 30, 2023

(Amounts in Millions.)

	June 30, 2023	March 31, 2023
Note 7 : Cash and cash equivalents		
Cash and Bank balances		
Balances with banks:		
-on current accounts	116.74	279.37
-on trust, retention and other escrow accounts	166.78	394.06
Deposits with banks		
-Original maturity less than 3 months	-	49.50
Cash on hand	10.11	8.38
Total	**293.62**	**731.31**
Note 8 : Bank balance other than cash and cash equivalent		
Maturity more than 3 months less than 12 months		
Other deposits	15.06	15.09
Debt service reserve account with banks /earmarked balance	3,650.30	3,459.60
Major Maintenance Reserve Account	1,390.00	1,390.00
Maturity more than 12 months		
Other deposits	2.00	2.00
Total	**5,057.36**	**4,866.69**
Note 9 : Current tax assets (net)		
Advance income-tax (net of provision for tax)	44.83	24.81
Total	**44.83**	**24.81**
Note 10 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties	1,525.86	1,347.33
- Others	46.56	45.29
Mobilisation advances	33.68	33.68
Prepaid expenses	70.17	45.88
Duties and taxes receivable	1,186.18	1,184.89
Total	**2,862.45**	**2,657.07**

IRB Infrastructure Trust
Notes to Consolidatd Financial Statements for the quarter ended June 30, 2023

Note : 11 : Unit capital

(Amount in Millions.)

	June 30, 2023		March 31, 2023	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	87,92,93,265	87,929.33
	87,92,93,265	**87,929.33**	**87,92,93,265**	**87,929.33**
Issued Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	87,92,93,265	87,929.33
Total	**87,92,93,265**	**87,929.33**	**87,92,93,265**	**87,929.33**

Note : 12 : Other equity

Attributable to the equity holders

Other reserves	**June 30, 2023**	**March 31, 2023**
Retained earnings		
At the beginning of the year	(10,395.80)	(8,108.29)
Profit for the period/year	(1,148.50)	(2,272.18)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	-	(15.33)
At the end of the period/year	**(11,544.30)**	**(10,395.80)**
Total	**(11,544.30)**	**(10,395.80)**

(Amount in Millions.)

	June 30, 2023	March 31, 2023
Financial liabilities		
Note : 13 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	62,210.18	61,005.36
Less : current maturities expected to be settled within 12 month from balance sheet date	(780.69)	(639.16)
Total (a)	**61,429.49**	**60,366.20**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	9,065.13	6,931.65
Less : current maturities expected to be settled within 12 month from balance sheet date	(16.65)	(9.75)
Total (b)	**9,048.48**	**6,921.90**
Non-convertible debentures (secured)	33,397.26	33,432.82
Less : current maturities expected to be settled within 12 month from balance sheet date	(145.47)	(130.59)
Total (c)	**33,251.79**	**33,302.22**
Less: Unamortised transaction cost **(d)**	(1,609.91)	(1,646.37)
Total non current borrowings (e = a + b + c + d)	**1,02,119.86**	**98,943.95**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	780.69	639.16
Indian rupee loan from financial institutions (secured)	16.65	9.75
Non convertible debentures (secured)	145.47	130.59
Interest accrued but not due on borrowings	3.93	5.43
(Unsecured & repayable on demand)		
Loan from related parties	5,600.72	5,350.72
Total current borrowings (f)	**6,547.46**	**6,135.65**
Total borrowings (e+f)	**1,08,667.32**	**1,05,079.60**
Note : 14 : Trade payables		
Total outstanding dues of micro enterprises and small enterprises	1.76	1.61
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties	15,666.84	13,812.18
- Others	1,380.74	1,491.69
Total	**17,049.35**	**15,305.48**

(Amounts in Millions.)

	June 30, 2023		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Note 15 : Other financial liabilities				
Obligation for construction	1,098.03	-	1,102.31	-
Directors sitting fees payable	0.24	-	0.44	-
Deposit	1.18	-	1.18	-
Retention money payable	-	-		
- Related parties	901.89	-	636.46	-
- Others	289.73	3.15	295.83	2.77
Revenue share payable	381.92	-	345.46	-
Other payable	-	-		
- Related parties	167.70	36,266.91	167.70	35,778.03
Total	**2,840.69**	**36,270.06**	**2,549.37**	**35,780.80**

	June 30, 2023	**March 31, 2023**
Note : 16 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises		
micro and small enterprises		
'- Related parties	1,375.47	4,165.72
	1,375.47	**4,165.72**

Note 17 : Provisions

	June 30, 2023		March 31, 2023	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses	-	3,118.85	-	2,965.03
Total	**-**	**3,118.85**	**-**	**2,965.03**

	June 30, 2023	**March 31, 2023**
Note 18 : Other current liabilities		
Duties and taxes payable	45.85	64.12
Advance from customer- Others	36.73	34.03
Total	**82.57**	**98.15**

(Amount in Millions.)

	June 30, 2023	June 30, 2022	March 31, 2023
Note 19 : Revenue from operations			
Contract revenue (road construction)	3,346.71	4,789.32	11,672.04
Income from toll collection (gross)	5,865.75	4,818.71	21,097.46
Less - Revenue Share to NHAI	(1,886.52)	(1,281.80)	(5,671.70)
Income arising out of toll collection (net)	3,979.24	3,536.91	15,425.76
Revenue share to NHAI- Fastag	(43.07)	(55.34)	(185.44)
Other operating revenue	-	-	0.23
Total	**7,282.88**	**8,270.89**	**26,912.59**
Note 20 : Other income			
Interest income on			
- Bank deposits	78.88	22.03	178.88
- Others	-	2.74	7.17
Dividend income on :			
- Other investments (non-trade, non-current)	0.03	-	-
Profit on sale of investments	17.64	6.42	62.95
Fair value gain on mutual funds	3.48	2.42	11.35
Other non operating income	1.39	0.36	2.73
Total	**101.43**	**33.97**	**263.08**
Note 21 : Road work and site expenses			
Contract expenses	3,263.83	4,635.28	11,330.91
Operation and maintenance expenses	429.86	272.64	1,471.41
Site and other direct expenses	-	-	0.00
Sub-contracting / Security expenses	-	-	0.35
Technical consultancy and supervision charges	11.64	13.67	62.84
Total	**3,705.33**	**4,921.58**	**12,865.52**
Note 22 : Depreciation and amortisation expenses			
Depreciation on property, plant and equipment (refer note 1)	0.24	0.31	1.25
Amortisation on intangible assets (refer note 1)	823.56	589.36	2,809.17
Total	**823.80**	**589.68**	**2,810.42**
Note 23 : Finance cost			
Interest expense			
- Banks and financial institutions	1,751.07	2,065.73	7,387.76
- Debentures	720.30	111.55	1,617.52
- Unwinding of retention money	12.14	12.14	-
Other borrowing costs			
- Amortisation of Transaction cost	40.49	21.17	128.80
- Unwinding of discount on provision of MMR	77.53	35.76	143.04
- Interest unwinding on loan/retention money	-	-	48.71
- Interest unwinding of Trade Payable- Associates	156.28	261.09	765.06
- Others	11.06	25.26	163.82
Total	**2,768.86**	**2,532.71**	**10,254.69**

(Amount in Millions.)

	June 30, 2023	June 30, 2022	March 31, 2023
Note 24 : Other expenses			
Rent	0.03	0.01	0.03
Rates and taxes	1.10	2.18	81.75
Travelling and conveyance	1.40		0.01
Membership & subscriptions	0.05	-	-
Director sitting fees	0.24	0.25	1.83
Legal and professional expenses	42.97	27.26	163.58
Bank charges	0.66	0.33	2.83
Miscellaneous expenses	1.56	1.00	3.76
Total	**48.02**	**31.03**	**256.29**
Note 25 : Payment to auditor (including GST)			
As auditors:			
- Statutory audit fees	0.35	0.30	1.42
- Limited review fees	0.67	0.58	2.05
In other capacity	-	-	-
- Other services (certification fees)	0.10	0.06	1.37
Reimbursement of expenses	0.06	0.08	0.20
Total	**1.19**	**1.02**	**5.04**

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Consolidated Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at March 31, 2023, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Unit Holder's Equity for the year then ended and the Consolidated Statement of Net Assets at Fair value as at March 31, 2023, the Consolidated Statement of Total Returns at Fair Value and the consolidated statement of Net Distributable Cash Flows ('NDCFs') of the trust and each of the subsidiaries for the year then ended, and notes to the Consolidated Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 ("Ind AS"), as amended and other accounting principles generally accepted in India, of the consolidated State of Affairs of the Group as at March 31, 2023, its Consolidated Loss and Total Comprehensive Loss, consolidated movement of the unit holders' funds and its consolidated cash flows for the year ended March 31, 2023, its consolidated Net Assets at fair value as at March 31, 2023, its consolidated total Returns at fair value and the Net Distributable Cash Flows ('NDCFs') of the trust and each of the subsidiaries for the year ended March 31, 2023.

BASIS FOR OPINION

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated IND AS financial statements section of

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our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Consolidated Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management.

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PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations but, does not include the Consolidated Financial Statements and our auditor's report thereon.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors of Investment Manager ('the Management') is responsible for the preparation of these Consolidated Financial Statements that give a true and fair view of the consolidated financial position as at 31 March 2023, consolidated financial performance including other comprehensive income, consolidated movement of the unit holder's funds and consolidated cash flows for the year ended March 31, 2023, the consolidated net assets at fair value as at 31 March 2023, its consolidated total returns at fair value and the net distributable cash flow of the trust and each of its subsidiaries in

accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified and/or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended read with the Securities and Exchange Board of India (Infrastructure Investment Trusts)Regulation 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "InvIT Regulations").

The Board of Directors of Investment Manager and the respective Board of Directors of the companies included in the Group are responsible for maintenance of adequate accounting records in accordance with the provisions of the relevant laws for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error, which have been used for the purpose of preparation of the consolidated financial statements by the management of the trust, as aforesaid.

In preparing the Consolidated Financial Statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate,

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they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.
- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group of which we are the independent auditors, to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the Financial Statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For companies included in the consolidated financial statement, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

Materiality is the magnitude of misstatements in the Consolidated Financial Statements that, individually or in aggregate, makes it probable that the economic decisions of a

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reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the Financial Statements.

We communicate with those charged with governance of the trust included in the consolidated financial statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the Key Audit Matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER MATTERS

We did not audit the Financial Statements and other financial information of 5 subsidiaries, whose Financial Statements reflect Total Assets of INR 1,13,238.70 Million, Net Assets of INR 35,029.67 Million as at 31 March 2023, Total Revenues of IINR 19,132.81 Million, Losses after taxes of INR 1,657.28 Million and Net Cash Inflow amounting to INR 201.07 Million for the year ended on 31 March 2023, as considered in the Consolidated Financial Statements before giving effect to elimination of intra-group transactions. These Financial Statements and other financial information have been audited by other auditor whose reports have been furnished to us by the Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries and our report in terms of InvIT regulations, in so far as it relates to the aforesaid subsidiaries is based solely on the reports of the other auditor.

Our opinion above, on the Consolidated Financial Statements, and our report on other legal and regulatory requirements below, is not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditor.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

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a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

b. The consolidated Balance Sheet, and the consolidated Statement of Profit and Loss including other comprehensive income dealt with by this report are in agreement with the books of account maintained for the purpose of preparation of the consolidated financial statements; and

c. In our opinion, the aforesaid consolidated financial statements comply with the Indian Accounting Standards (Ind AS) and / or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 23121011BGXXWC5823
Date: 12th May 2023
Place: Mumbai

IRB Infrastructure Trust
Consolidated Balance sheet as at March 31, 2023

(Rs. in Millions)

	Notes	As at March 31, 2023	As at March 31, 2022
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	7.59	8.85
Goodwill		604.54	604.54
Other Intangible assets	4	2,28,418.29	2,21,859.48
Intangible assets under development	4	2,421.67	1,290.89
Financial assets			
i) Others	7	0.33	2.74
Other non-current assets	9	174.07	656.55
Deferred tax assets (net)	8	755.80	287.67
		2,32,382.29	**2,24,710.72**
Current assets			
Financial assets			
i) Investments	5	1,283.09	659.54
ii) Trade receivables	6	84.67	51.55
iii) Cash and cash equivalents	10	731.31	287.23
iv) Bank balance other than (iii) above	11	4,866.69	2,469.97
v) Others	7	1,448.56	1,604.18
Current tax assets (net)	12	24.81	114.22
Other current assets	13	2,657.07	1,677.46
		11,096.20	**6,864.15**
Total assets		**2,43,478.49**	**2,31,574.87**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	14	87,929.33	85,504.33
Other equity	15		
Other reserves		(10,395.80)	(8,108.29)
Total Equity		**77,533.53**	**77,396.04**
Non-controlling interests		**0.81**	**-**
		77,534.34	**77,396.04**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	98,943.95	92,559.82
ii) Other financial liabilities	18	35,780.80	35,168.79
iii) Trade payables	19	4,165.72	5,998.85
Provisions	20	2,965.03	1,350.57
		1,41,855.50	**1,35,078.03**
Current liabilities			
Financial liabilities			
i) Borrowings	16	6,135.65	4,719.18
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small		1.61	3.69
b) total outstanding dues of creditors other than micro enterprises and small enterprises		15,303.87	11,214.65
iii) Other financial liabilities	18	2,549.37	3,023.13
Other current liabilities	21	98.15	140.15
		24,088.65	**19,100.80**
Total liabilities		**1,65,944.15**	**1,54,178.83**
Total equity and liabilities		**2,43,478.49**	**2,31,574.87**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the year ended March 31, 2023

(Rs. in Millions)

Particulars	Notes	For the year ended March 31, 2023	For the year ended March 31, 2022
Income			
Revenue from operations	22	26,912.59	12,404.84
Other income	23	263.08	100.13
Total income		**27,175.67**	**12,504.97**
Expenses			
Valuation Expenses		2.67	1.46
Audit fees	27A	5.04	3.13
Operating Expenses	24	12,865.52	2,029.53
Project Management Fees		2,647.70	1,960.27
Insurance and Security Expenses		14.72	1.12
Trustee Fees		5.95	4.16
Depreciation on Property, plant and Equipment	25	1.25	1.74
Amortisation of Intangible Assets	25	2,809.17	1,673.16
Finance costs (Interest)	26	9,005.28	8,670.13
Finance costs (Others)	26	1,249.41	868.58
Investment Manager Fees		56.52	42.48
Custodian fees		0.09	0.18
Loss on sale of assets		0.01	-
Fair value loss on measurement of other payable		560.53	2,161.31
Other expenses	27	256.29	235.06
Total expenses		**29,480.14**	**17,652.31**
Profit/(loss) before tax		**(2,304.47)**	**(5,147.34)**
Tax expenses			
Current tax		435.25	8.87
Deferred tax		(468.13)	(720.23)
MAT Credit utilisation / (Entitlement)		-	-
Total tax expenses		**(32.88)**	**(711.36)**
Profit/(loss) after tax		**(2,271.59)**	**(4,435.98)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		**-**	**-**
Total comprehensive income /(loss) for the year		**(2,271.59)**	**(4,435.98)**
Profit/(loss) after tax		**(2,271.59)**	**(4,435.98)**
Attributable to:			
Owners of the Project SPV Group		(2,272.18)	(4,435.98)
Non-controlling interests		0.59	-
Total comprehensive income for the year			
Attributable to:			
Equity holders of the Project SPV Group		(2,272.18)	(4,435.98)
Non-controlling interests		0.59	-
Earnings per unit (of Rs 100 each)	43		
Basic		(2.59)	(5.26)
Diluted		(2.59)	(5.26)
Summary of significant accounting policies	3		

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2023		As at March 31, 2022	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,43,478.49	2,99,372.54	2,31,574.87	2,52,287.18
B. Liabilities (at book value)	1,65,944.15	1,16,629.02	1,54,178.83	1,05,330.89
C. Net Assets (A-B)	77,534.34	1,82,743.52	77,396.04	1,46,956.29
D. Number of units (in millions)	879.29	879.29	855.04	855.04
E. NAV (C/D) (Amount in Rs.)	**88.18**	**207.83**	**90.52**	**171.87**

Project wise break up of fair value of total assets:

Name of the project	**As at March 31, 2023**
IRB Westcoast Tollway Limited (IRBWTL)	36,482.81
Solapur Yedeshi Tollway Limited (SYTL)	24,790.88
Yedeshi Aurangabad Tollway Limited (YATL)	43,312.69
Kaithal Tollway Limited (KTL)	25,383.75
AE Tollway Limited (AETL)	32,259.22
Udaipur Tollway Limited (UTL)	27,580.66
CG Tollway Limited (CGTL)	29,523.00
Kishangarh Gulabpura Tollway Limited (KGTL)	23,223.41
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	43,631.92
Palsit Dankuni Tollway Private Limited (PDTPL)	12,478.53
Subtotal	**2,98,666.88**
Add : IRB Infrastructure Trust Assets	**705.66**
Total assets	**2,99,372.54**

B. Consolidated statement of total returns at fair value :

(Rs. in Millions)

Particulars	**For the year ended March 31, 2023**	**For the year ended March 31, 2022**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(2,271.59)	(4,435.98)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	1,05,209.18	69,560.25
Total Return	**1,02,937.59**	**65,124.27**

Notes :
Fair value of assets as at March 31, 2023 and March 31, 2022 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Cash flow from operating activities		
Profit/(loss) before tax	(2,304.47)	(5,147.34)
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	2,810.42	1,674.90
Resurfacing expenses	1,614.45	992.73
Fair value gain on mutual funds	(11.35)	(0.78)
Net (gain) on sale of current Investment	(62.95)	(13.93)
Finance costs	10,111.65	9,538.70
Interest income	(186.05)	(81.69)
Gain/(loss) on fair value measurement of other payable	560.53	2,161.31
Operating profit before working capital changes	**12,532.23**	**9,123.91**
Movement in working capital:		
Increase/ (decrease) in trade payables	1,178.92	11,498.13
Increase/ (decrease) in provisions	-	-
Increase/ (decrease) in other financial liabilities	435.72	306.46
(Decrease)/ increase in other liabilities	(45.01)	30.37
Decrease / (increase) in trade receivables	(33.12)	48.69
(Increase) / decrease in other financial assets	134.16	(989.59)
(Increase) / decrease in other assets	(343.36)	(167.46)
Cash generated from operations	**13,859.54**	**19,850.51**
Taxes paid (net)	(345.84)	32.09
Net cash flows generated from operating activities (A)	**13,513.70**	**19,882.59**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(11,055.81)	(17,617.12)
Proceeds from sale/ (purchase) of current investments (net)	(549.25)	(72.33)
Investments in bank deposits (having original maturity of more than three months) (net)	(2396.72)	(725.62)
Interest received	200.12	103.63
Net cash flows (used in) investing activities (B)	**(13,801.66)**	**(18,311.44)**
Cash flows from financing activities		
Proceeds from non-current borrowings	32,302.27	3,988.29
Repayment of non-current borrowings	(25923.75)	(775.43)
Proceed of current borrowings	1,532.48	4759.00
Repayment of current borrowings	(447.97)	(4828.83)
Issue of equity share capital	2,425.00	3,816.33
Unit issue expenses	(15.33)	(3.26)
Finance cost paid	(9,140.79)	(8,653.52)
Net cash flows (used in)/generated from financing activities (C)	**731.91**	**(1,697.41)**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**443.95**	**(126.26)**
Cash and cash equivalents at the beginning of the year	287.23	413.49
Add: Cash acquired during business combination	0.13	
Cash and cash equivalents at the end of the year (refer note 10)	**731.31**	**287.23**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	394.06	161.56
- Others	279.37	118.03
- In deposit accounts with original maturity less than 3 months	49.50	-
Cash on hand	8.38	7.64
Total cash and cash equivalents	**731.31**	**287.23**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	94,124.22	90,833.34
Short term borrowing	4,085.74	4,155.57
Movements		
Cash Flows		
Long term borrowing	7,245.60	3,290.88
Short term borrowing	1264.98	(69.83)
Non-cash changes		
Long term borrowing	-	-
Short term borrowing	-	-
Closing balances		
Long term borrowing	1,01,369.82	94,124.22
Short term borrowing	5,350.72	4,085.74

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.

3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies 3
The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Statement of changes in Unitholders equity
A. Unit capital:

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
Issue of Unit capital (Note 14)	2,42,50,000	2,425.00	3,81,63,265	3,816.33
Balance at the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

B. Other equity

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Retained earnings		
Balance at the beginning of the year	(8,108.29)	(3,669.05)
Profit/(loss) for the year	(2,272.18)	(4,435.98)
Pre-incorporation profit		
Unit Issue expenses	(15.33)	(3.26)
Balance at the end of the year	**(10,395.80)**	**(8,108.29)**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date attached

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date: 12.05.2023

Place: Mumbai
Date: 12.05.2023

Additional Disclosures as required by Paragraph 6 to SEBI Circulars No. CIR/MD/DF/127/2016

a. Net Distributable Cash Flow for the half year ended March 31, 2023

(i) IRB Infrastructure Trust

(Rs. in Millions)

Sr. No.	Particulars	Year ended March 31, 2023#	Year ended March 31, 2022
1	Cash flows received from Project SPVs in the form of Interest	2,097.00	825.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	0.92	0.40
4	Cash flows received from the project SPVs towards the repayment (Net) of the debt issued to the Project SPVs by the Trust	(1,928.34)	(1,682.67)
5	**Total cash inflow at the Trust level (A)**	**169.58**	**(857.27)**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(113.33)	(63.38)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	-	-
9	**Total cash outflows / retention at the Trust level (B)**	**(113.33)**	**(63.38)**
10	**Net Distributable Cash Flows (C) = (A+B)**	**56.25**	**(920.65)**

The same is earmarked towards capex for ongoing projects.

Note :

1 Excludes interest due but not received of Rs.922.36, Rs.1,202.41 millions,Rs. 1,729.24 millions,Rs. 2,124.77 millions and Rs. 3,375 Millions for the six months ended March 31, 2023, six months ended September 30, 2022, six months ended March 31, 2022, year ended March 31, 2023 and year ended March 31, 2022.

2 Netted - off with disbursement of short-term unsecured loan to project SPVs. (Refer RPT disclosures of standalone financial results).

(ii) IRB Westcoast Tollway Limited (IRBWC)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(1,135.93)	(815.33)
2	Add: Depreciation and amortisation as per Statement of profit and loss	164.74	113.19
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	137.31	64.76
4	Add: Interest paid/payable to the Trust	530.18	491.37
5	Add :- Provision for resurfacing expenses (Net)		
6	Less: Principal repayment of external debt	(70.97)	(86.97)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total adjustments (B)	**761.26**	**582.35**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(374.67)**	**(232.98)**

(ii) Yedeshi Aurangabad Tollway Limited (YATL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(264.71)	(834.88)
2	Add: Depreciation and amortisation as per Statement of profit and loss	559.99	305.02
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	41.68	3.08
4	Add: Interest paid/payable to the Trust	581.77	560.00
5	Add :- Provision for resurfacing expenses (Net)	109.06	102.67
6	Less: Principal repayment of external debt	(60.29)	(361.08)
7	Less: Tax paid		
8	Less: Creation of MMRA	(220.00)	
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,012.21**	**609.69**
11	**Net Distributable Cash Flows (C) = (A+B)**	**747.50**	**(225.19)**

(iii) Solpaur Yedeshi Tollway Limited (SYTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(225.45)	(543.70)
2	Add: Depreciation and amortisation as per Statement of profit and loss	168.97	116.74
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	20.80	7.61
4	Add: Interest paid/payable to the Trust	560.00	560.00
5	Add :- Provision for resurfacing expenses (Net)	60.75	59.68
6	Less: Principal repayment of external debt	(5.86)	(111.88)
7	Less: Tax paid		
8	Less: Creation of MMRA	(80.00)	
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**724.66**	**632.15**
11	**Net Distributable Cash Flows (C) = (A+B)**	**499.21**	**88.45**

(iii) Kaithal Tollway Limited (KTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022*
1	Profit after tax as per profit and loss account (A)	(848.69)	(896.42)
2	Add: Depreciation and amortisation as per Statement of profit and loss	212.13	52.97
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	96.97	77.30
4	Add: Interest paid/payable to the Trust	1,186.02	1,186.02
5	Add :- Provision for resurfacing expenses (Net)	176.65	171.38
6	Less: Principal repayment of external debt	(121.25)	(66.45)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,550.52**	**1,421.22**
11	**Net Distributable Cash Flows (C) = (A+B)**	**701.83**	**524.80**

* Profit after tax is inclusive of compensation income towards toll suspension due to farmers agitation amounting to Rs.900.90 millions.

(v) Agra Etawah Tollway Limited (AETL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022*
1	Profit after tax as per profit and loss account (A)	(1,749.13)	(1,669.85)
2	Add: Depreciation and amortisation as per Statement of profit and loss	309.71	262.06
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	32.54	12.68
4	Add: Interest paid/payable to the Trust	1,333.98	1,333.98
5	Add :- Provision for resurfacing expenses (Net)	185.82	178.57
6	Less: Principal repayment of external debt	(68.51)	(37.63)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**1,793.54**	**1,749.66**
11	**Net Distributable Cash Flows (C) = (A+B)**	**44.41**	**79.81**

* Profit after tax is inclusive of compensation income towards toll suspension due to farmers agitation amounting to Rs.64.26 millions.

(vi) Udaipur Tollway Limited (UTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(1,903.87)	(1,291.68)
2	Add: Depreciation and amortisation as per Statement of profit and loss	364.50	267.28
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.39	164.27
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for resurfacing expenses (Net)	432.11	349.85
6	Less: Principal repayment of external debt	(28.84)	(32.90)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**888.16**	**748.50**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(1,015.71)**	**(543.18)**

(vii) Chittorgarh Gulabpura Tollway Limited (CGTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(936.67)	(213.49)
2	Add: Depreciation and amortisation as per Statement of profit and loss	371.14	243.63
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	(110.79)	145.29
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	126.16	76.99
6	Less: Repayment of external debt (principal)	(79.44)	(51.48)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**307.08**	**414.43**
11	**Net Distributable Cash Flows (C) = (A+B)**	**(629.59)**	**200.94**

(viii) Kishangarh Gulabpura Tollway Limited (KGTL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(247.35)	(405.09)
2	Add: Depreciation and amortisation as per Statement of profit and loss	212.76	103.80
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	249.35	174.35
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	110.67	
6	Less: Repayment of external debt (principal)	(36.32)	(15.94)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project		
10	Total Adjustments (B)	**536.46**	**262.21**
11	**Net Distributable Cash Flows (C) = (A+B)**	**289.11**	**(142.88)**

The said funds are earmarked towards NHAI premium payment.

(ix) IRB Hapur Muradabad Tollway Limited (IRBHM)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#	Year ended March 31, 2022
1	Profit after tax as per profit and loss account (A)	(75.48)	(285.44)
2	Add: Depreciation and amortisation as per Statement of profit and loss	351.78	210.21
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	120.02	87.52
4	Add: Interest paid/payable to the Trust	-	-
5	Add :- Provision for Resurfacing Expenses (Net)	270.19	
6	Less: Repayment of external debt (principal)	(134.90)	(11.10)
7	Less: Tax paid		
8	Less: Creation of MMRA		
9	Less: Capital expenditure towards the project	(62.03)	(10.20)
10	Total Adjustments (B)	**545.06**	**276.43**
11	**Net Distributable Cash Flows (C) = (A+B)#**	**469.58**	**(9.01)**

The said funds are earmarked towards balance Capex.

(x) Palsit Dankuni Tollway Private Limited (PDTPL)

(Rs. in Millions)

Sr. No.	Description	Year ended March 31, 2023#
1	Profit after tax as per profit and loss account (A)	1,430.69
2	Add: Depreciation and amortisation as per Statement of profit and loss	94.71
3	Add/less: Any other item of non-cash expense / non cash income (net of actual cash flows for these items), if deemed necessary by the Investment Manager	193.17
4	Add: Interest paid/payable to the Trust	
5	Add :- Provision for Resurfacing Expenses (Net)	
6	Less: Repayment of external debt (principal)	
7	Less: Tax paid	(363.10)
8	Less: Creation of MMRA	
9	Less: Capital expenditure towards the project	(1,332.99)
10	Total Adjustments (B)	**(1,408.21)**
11	**Net Distributable Cash Flows (C) = (A+B)**	**22.48**

The said funds are earmarked towards balance Capex.

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2023

1 **Corporate Information**

The IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of ten road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	18 years 11 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	20 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	18 years 3 Months 1 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	19 years 3 Months 15 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	17 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	15 years 5 Months 4 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	14 years 7 Months 5 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	14 years 10 Months 22 days	100%	Subsidiary	Operating		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	18 years 1 Months 25 days	100%	Subsidiary	Operating		India
Palsit Dankuni Tollway Private Limited (PDTPL) w.e.f 02.04.2022	16 years 0 Months 1 days	100%	Subsidiary	Tolling and Construction		India

* Represents residual concession life as at March 31, 2023 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.
The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 12, 2023.
The Trust has been listed on NSE w.e.f. 03.04.2023.

2 **Basis of preparation**

A. Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31, 2023 and March 31, 2022, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow Statement, the Consolidated Statement of Changes in Equity of the movement of the unit holders for the year ended March 31, 2023 and March 31, 2022, the consolidated statement of Net Assets at Fair Value as at March 31, 2023 and March 31, 2022 and the Consolidated Statement of Total Returns at Fair Value for the year ended March 31, 2023 and March 31, 2022, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.The Consolidated Financial Statements have been prepared on a accrued and historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

B Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the Financial Statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The Financial Statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.
Consolidation procedure:

(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.
Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)

Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.19)

3.03 **Business Combinations**

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred measured at fair value on acquisition date and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their acquisition date fair values. For this purpose, the liabilities assumed include contingent liabilities representing present obligation and they are measured at their acquisition fair values irrespective of the fact that outflow of resources embodying economic benefits is not probable.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognised for non-controlling interests, and any previous interest held, over the net identifiable assets acquired and liabilities assumed. If the fair value of the net assets acquired is in excess of the aggregate consideration transferred, the Group re-assesses whether it has correctly identified all of the assets acquired and all of the liabilities assumed and reviews the procedures used to measure the amounts to be recognised at the acquisition date. If the reassessment still results in an excess of the fair value of net assets acquired over the aggregate consideration transferred, then the gain is recognised in OCI and accumulated in equity as capital reserve. However, if there is no clear evidence of bargain purchase, the entity recognises the gain directly in equity as capital reserve, without routing the same through OCI.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

A cash generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit.

Any impairment loss for goodwill is recognised in profit or loss. An impairment loss recognised for goodwill is not reversed in subsequent periods. Where goodwill has been allocated to a cashgenerating unit and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

3.04 **Asset acquisition**

The acquisition of an asset or a group of assets that does not constitute a business. In such cases the acquirer shall identify and recognise the individual identifiable asset acquired including those assets that meet the definition of, and recognition criteria for, intangible asset in IND AS 38, Intangible Assets and Liabilities assumed. The cost of the group is allocated to the individual identifiable assets and liabilities on the basis of their relative fail values at the date of purchase. Such a transaction or event does not give rise to goodwill.

3.05 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
Disclosures for valuation methods, significant estimates and assumptions (note 3.02)
Financial instruments (including those carried at amortised cost) (note 5,6,7,11,17,18,19,31)
Quantative disclosure of fair value measurement hierarchy (note 32)

3.06 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:
The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:
Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:
1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue
Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs. Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset’s economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Income from toll contracts
The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income
For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends
Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables
A receivable represents the Project SPV Group’s right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.07 **Government Grants**
Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.
Such benefits are earned and reasonable certainty exists of the collection.
Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.
Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.08 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

Goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:
When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.09 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers	3 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.10 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its “Toll Collection Rights” (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.11 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.12 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases, it sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.13 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.14 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision required for resurfacing expenses are measured at the present value of the expenditure required to settle the present obligation at the end of reporting period. The discount rate used to determine the present value is a pre-tax rate that reflects risks specific to the liability. The increase in the provision due to the passage of time is recognised as finance cost. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.15 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.16 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
-The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL

The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables

The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.17 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.18 **Cash dividend to equity holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.19 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.20 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment policies:

Based on "Management Approach" as defined in Ind AS 108 -Operating Segments, the Management evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.21 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.22 **Foreign currencies**

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances

Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.
Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.
Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.23 **Recent pronouncements**

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Amendment Rules, 2023, as below:

Ind AS 1: Disclosure of Material Accounting policy information and similar consequential amendment to Ind AS 34.
Ind AS 1: Disclosure of the judgements, apart from those involving estimations, that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.
Ind AS 8: Definition of Accounting Estimate as "Accounting estimates are monetary amounts in financial statements that are subject to measurement uncertainty". Further amendments to paragraphs delineating Changes to Accounting Estimates.
Ind AS 12: Amendments to taxable temporary difference, initial recognition of asset or liability and Deductible taxable differences.
Ind AS 12: Deferred tax related to assets and liabilities arising from Single Transaction.
Ind AS 107: Information about measurement basis (or bases) for financial instruments to be disclosed as material accounting policy.
Ind AS 109: Amendment to paragraph on reassessment of embedded derivative.
Ind AS 115: Amendments to Appendix 1 which gives there in the major differences, if any, between Indian Accounting Standard (Ind AS) 115 and the corresponding International Financial Reporting Standard (IFRS) 15, Revenue from Contracts with Customers, IFRIC 12, Service Concession Arrangements and SIC 29 Service Concession Arrangements: Disclosures, issued by the International Accounting Standards Board

Based on the preliminary assessment, the company does not expect these amendment to have any significant impact on its consolidated financial statements.

Note 4 : Property, Plant and Equipment

(Rs. in Millions)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions	-	-	-	-	-
Disposals/ Adjustments	-	-	0.09	-	0.09
At 31 March 2023	**16.09**	**0.30**	**1.31**	**0.39**	**18.10**
Depreciation					
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Additions	1.61	0.00	0.09	0.04	1.74
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.34**
Additions	1.20	0.00	0.03	0.01	1.25
Disposals/ Adjustments	-	-	0.08	-	0.08
At 31 March 2023	**8.60**	**0.29**	**1.23**	**0.39**	**10.51**
Net Book value					
At 31 March 2023	**7.49**	**0.01**	**0.08**	**0.00**	**7.59**
At 31 March 2022	**8.69**	**0.02**	**0.12**	**0.02**	**8.85**

Net Book value	**March 31, 2023**	**March 31, 2022**
Property, Plant and Equipment	7.59	8.85

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets (Rs. in Millions)

Particulars	Toll Collection Rights	Total
At 31 March 2021	**2,16,344.42**	**2,16,344.42**
Additions	11,814.99	11,814.99
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Additions	9,663.30	9,663.30
Deletions	295.32	295.32
Adjustments	-	-
At 31 March 2023	**2,37,527.40**	**2,37,527.40**
Amortisation		
At 31 March 2021	**4,626.78**	**4,626.78**
Additions	1,673.16	1,673.16
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**6,299.93**	**6,299.93**
Additions	2,809.17	2,809.17
Deletions	-	-
Adjustments	-	-
At 31 March 2023	**9,109.10**	**9,109.10**

Net Book value

At 31 March 2023	2,28,418.29
At 31 March 2022	2,21,859.48

Particulars	March 31, 2023	March 31, 2022
Toll Collection Rights	2,28,418.29	2,21,859.48
Total	**2,28,418.29**	**2,21,859.48**

Intangible assets under development

(Rs. in Millions)

Particulars	March 31, 2023	March 31, 2022
Toll Collection Rights		
At the beginning of the year	1,290.89	4,684.26
Add : development during the year	11,128.99	835.34
	12,419.88	5,519.60
Less : Transfer to Intangible Asset (Toll Collection Rights)	9,998.21	4,228.70
Closing balance	**2,421.67**	**1,290.89**
Total	**2,421.67**	**1,290.89**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Rs. in Millions)

Particulars	March 31, 2023				March 31, 2022			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
Canara Robeco Liquid Fund - Direct Plan - Growth	1,000	18,486.04	49.85	-	1,000	-	-	-
Canara Robeco Overnight Fund - Direct Plan - Growth	1,000	5,174.20	6.00	-	1,000	-	-	-
IDBI Liquid Fund - Direct Plan - Growth	1,000	64,718.69	156.76		1,000	48,116.73	110.24	-
ABSL Liquid Fund - Direct Plan - Growth	100		-	-	100	53,926.78	18.50	-
SBI Liquid Fund - Direct Growth	1,000	2,91,778.24	1,028.03	-	1,000	1,53,238.96	510.75	-
SBI Overnight Fund - Direct Growth	1,000	11,632.96	42.44	-	1,000	5,790.54	20.04	-
			1,283.09	**-**			**659.54**	**-**
Total			**1,283.09**	**-**			**659.54**	**-**
Aggregate book value of quoted investments			**1,271.74**				**658.76**	
Market value of quoted investments			**1,283.09**				**659.54**	
Aggregate amount of unquoted investments			-				-	
Aggregate amount of impairment in value of investments			-				-	
Refer note 31 for determination of fair value of investments			-				-	

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.61	-	0.51	-
Others	84.05	-	51.03	-
Total	**84.67**	**-**	**51.55**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**84.67**	**-**	**51.55**	**-**

The Group has not identifed any credit impairment loss as at March 31, 2023 and March 31, 2022.

Note 7 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	11.57	-	25.64	-
Interest receivable from others	3.73	-	23.99	-
Retention money receivable	530.54	-	526.28	-
Receivable from Government Authorities (NHAI)	816.07	-	965.24	-
Other receivable	75.65	-	56.15	-
Security and other deposits	10.99	0.33	6.89	2.74
Total	**1,448.56**	**0.33**	**1,604.18**	**2.74**

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Note 8 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	36.80	1,350.50
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current year but allowed for tax purposes in following years	-	-
Deferred tax liabilities (net)	**36.80**	**1,350.50**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	-	428.55
MAT credit entitlement	-	582.83
Deferred Tax assets on Fair valuation	792.60	626.79
Deferred Tax Assets	**792.60**	**1,638.17**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(755.80)**	**(287.67)**
Note 9 : Other non - current assets		
Duties and taxes receivable	174.07	656.55
Total	**174.07**	**656.55**

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Note 10 : Cash and cash equivalents		
Cash and Bank balances		
Balances with banks:		
-on current accounts	279.37	118.03
-on trust, retention and other escrow accounts*	394.06	161.56
Deposits with banks		
-Original maturity less than 3 months	49.50	-
Cash on hand	8.38	7.64
Total	**731.31**	**287.23**
Note 11 : Bank balance other than cash and cash equivalent		
Maturity more than 3 months less than 12 months		
Other deposits	15.09	102.53
Debt service reserve account with banks /earmarked balance**	3,459.60	2,365.43
Major Maintenance Reserve Account	1,390.00	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	-	-
Other deposits	2.00	2.00
Total	**4,866.69**	**2,469.97**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts

Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

** The deposits to the extent of Rs. 3,459.60 millions (March 31, 2022 : Rs. 2,365.43 millions) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head “Other bank balances” since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 4.70% to 7.95% p.a.

Refer note 16 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

(Rs. in Millions)

	March 31, 2023	March 31, 2022
Balance with banks:		
-on current accounts	279.37	118.03
-on trust, retention and other escrow accounts	394.06	161.56
Fixed deposits less than 3 months	49.50	-
Cash on hand	8.38	7.64
Less: Bank overdraft	-	-
Total	**731.31**	**287.23**
Note 12 : Current tax assets (net)		
Advance income-tax (net of provision for tax)	24.81	114.22
Total	**24.81**	**114.22**
Note 13 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 34)	1,347.33	502.89
- Others	45.29	32.22
Mobilisation advances (refer note 34)	33.68	435.80
Prepaid expenses	45.88	0.51
Duties and taxes receivable	1,184.89	706.04
Total	**2,657.07**	**1,677.46**

Note : 14 : Unit capital

(Amount in Millions.)

	March 31, 2023		March 31, 2022	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	85,50,43,265	85,504.33
	87,92,93,265	**87,929.33**	**85,50,43,265**	**85,504.33**
Issued Unit capital				
Units having face value of Rs.100 each	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Total	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	March 31, 2023		March 31, 2022	
Units issued, subscribed and fully paid	**No. of units**	**Rs.**	**No. of units**	**Rs.**
Units having face value of Rs. 100/-				
At the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
lssued during the year	2,42,50,000	2,425.00	3,81,63,265	3,816.33
At the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

Details of unit holders holding more than 5% units:

	March 31, 2023		March 31, 2022	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%
Anahera Investments Pte Ltd	21,98,23,181	25%	21,37,60,685	25%
Bricklayers Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Chiswick Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Stretford End Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Dangenham Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%

Details of Sponsor units	**March 31, 2023**		**March 31, 2022**	
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%

Note : 15 : Other equity

Attributable to the equity holders

Other reserves	**March 31, 2023**	**March 31, 2022**
Retained earnings		
At the beginning of the year	(8,108.29)	(3,669.05)
Profit for the year	(2,272.18)	(4,435.98)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	(15.33)	(3.26)
At the end of the year	**(10,395.80)**	**(8,108.29)**
Total	**(10,395.80)**	**(8,108.29)**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Financial liabilities		
Note : 16 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	61,005.36	78,298.59
Less : current maturities expected to be settled within 12 month from balance sheet date	(639.16)	(429.15)
Total (a)	**60,366.20**	**77,869.44**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	6,931.65	10,328.45
Less : current maturities expected to be settled within 12 month from balance sheet date	(9.75)	(59.79)
Total (b)	**6,921.90**	**10,268.66**
Non-convertible debentures (secured)	33,432.82	5,497.18
Less : current maturities expected to be settled within 12 month from balance sheet date	(130.59)	(110.76)
Total (c)	**33,302.22**	**5,386.42**
Less: Unamortised transaction cost **(d)**	(1,646.37)	(964.70)
Total non current borrowings (e = a + b + c + d)	**98,943.95**	**92,559.82**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	639.16	429.15
Indian rupee loan from financial institutions (secured)	9.75	59.79
Non convertible debentures (secured)	130.59	110.76
Interest accrued but not due on borrowings	5.43	33.73
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 34)	5,350.72	4,085.74
Total current borrowings (f)	**6,135.65**	**4,719.18**
Total borrowings (e+f)	**1,05,079.60**	**97,279.00**
Aggregate secured loans	99,723.46	93,159.52
Aggregate unsecured loans	5,350.72	4,085.74

(i) Project loans for SPVs

March 31, 2023: Rs.1,01,369.83 millions; March 31, 2022: Rs. 94,124.22 millions; pertains to term loans taken by SPV's (Special Purpose Vehicles) for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 7.75% to 10.75% p.a. (March 31, 2022: 8.25% to 10.40% p.a.) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the company to the extent of 125% of the outstanding loan.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, present and future; assignment of all receivables; book debts and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iii) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

Repayment terms

The Indian rupee loans are repayable in structured monthly installments commencing after commercial operation date such that the total tenor does not exceed 17 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note : 17 : Trade payables		
Total outstanding dues of micro enterprises and small enterprises (refer note 29)	1.61	3.69
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 34)	13,812.18	10,022.93
- Others	1,491.69	1,191.71
Total	**15,305.48**	**11,218.34**

(Rs. in Millions)

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Note 18 : Other financial liabilities				
Obligation for construction	1,102.31	-	2,009.01	-
Directors sitting fees payable	0.44	-	0.36	-
Deposit	1.18	-	1.13	-
Retention money payable				
- Related parties (refer note 34)	636.46	-	256.48	-
- Others	295.83	2.77	336.92	-
Revenue share payable	345.46	-	225.81	-
Other payable				
- Related parties (refer note 34)	167.70	35,778.03	193.42	35,168.79
Total	**2,549.37**	**35,780.80**	**3,023.13**	**35,168.79**

	March 31, 2023	**March 31, 2022**
Note : 19 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises		
micro and small enterprises		
'- Related parties	4,165.72	5,998.85
	4,165.72	**5,998.85**

Note 20 : Provisions

	March 31, 2023		March 31, 2022	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses		2,965.03	-	1,350.57
Total	**-**	**2,965.03**	**-**	**1,350.57**

The movement in provision for resurfacing expenses is as follows:

	March 31, 2023	**March 31, 2022**
Opening balance	1,350.57	357.84
Obligation on new toll projects	1,614.45	992.73
Utilised / reversed during the year	**-**	**-**
Closing balance	**2,965.03**	**1,350.57**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

	March 31, 2023	**March 31, 2022**
Note 21 : Other current liabilities		
Duties and taxes payable	64.12	129.65
Advance from customer- Others	34.03	10.50
Total	**98.15**	**140.15**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Note 22 : Revenue from operations		
Contract revenue (road construction)	11,672.04	1,054.48
Income from toll collection (gross)	21,097.46	12,377.44
Less - Revenue Share to NHAI	(5,671.70)	(1,779.36)
Income arising out of toll collection (net)	15,425.76	10,598.07
Revenue share to NHAI- Fastag	(185.44)	(212.87)
Other operating revenue	0.23	965.16
Total	**26,912.59**	**12,404.84**
Note 23 : Other income		
Interest income on		
- Bank deposits	178.88	73.64
- Others	7.17	8.05
Profit on sale of investments	62.95	13.93
Fair value gain on mutual funds	11.35	0.78
Other non operating income	2.73	3.73
Total	**263.08**	**100.13**
Note 24 : Road work and site expenses		
Contract expenses	11,330.91	1,036.47
Operation and maintenance expenses	1,471.41	939.15
Site and other direct expenses	0.00	-
Sub-contracting / Security expenses	0.35	0.72
Technical consultancy and supervision charges	62.84	53.20
Total	**12,865.52**	**2,029.53**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	1.25	1.74
Amortisation on intangible assets (refer note 4)	2,809.17	1,673.16
Total	**2,810.42**	**1,674.90**
Note 26 : Finance cost		
Interest expense		
- Banks and financial institutions	7,387.76	8,670.13
- Debentures	1,617.52	-
- Unwinding of retention money	-	48.71
Other borrowing costs		
- Amortisation of Transaction cost	128.80	78.02
- Unwinding of discount on provision of MMR	143.04	39.64
- Interest unwinding on loan/retention money	48.71	-
- Interest unwinding of Trade Payable- Associates	765.06	655.78
- Others	163.82	46.44
Total	**10,254.69**	**9,538.70**

(Amount in Millions.)

	March 31, 2023	March 31, 2022
Note 27 : Other expenses		
Rent	0.03	0.24
Rates and taxes	81.75	31.64
Water charges	-	-
Travelling and conveyance	0.01	-
Director sitting fees	1.83	1.61
Legal and professional expenses	163.58	186.84
Corporate social responsibilities expenditure	-	8.00
Donations	2.50	-
Bank charges	2.83	5.54
Miscellaneous expenses	3.76	1.19
Fair value loss on measurement of other payable	-	-
Total	**256.29**	**235.06**
Note 27A : Payment to auditor (including GST)		
As auditors:		
- Statutory audit fees	1.42	1.23
- Limited review fees	2.05	1.70
In other capacity	-	-
- Other services (certification fees)	1.37	0.17
Reimbursement of expenses	0.20	0.04
Total	**5.04**	**3.13**

Note 28 : Commitment and Contingencies

a. Leases

Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease

(Rs in millions)

	March 31, 2023	March 31, 2022
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.03	0.24
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2023	March 31, 2022
Estimated value of contracts in capital account remaining to be executed	14,295.07	625.98

c. Contingent liabilities

Contingent liabilities not provided for

	March 31, 2023	March 31, 2022
Guarantees given by the Group to suppliers, government bodies and performance guarantee		
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.

During the year premium payment to NHAI has been commenced in IRBHM and KGTL.

Note 29 : Trade payable

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2023 based on the information received and available with the Group.

Particulars	March 31, 2023	March 31, 2022
Principal amount remaining unpaid to any supplier as at the period end	1.61	3.69
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	March 31, 2023	March 31, 2022
MSME Undisputed Dues	-	-
Less than 1 year	1.61	3.69
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**1.61**	**3.69**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	March 31, 2023	March 31, 2022
Undisputed Dues		
Less than 1 year	7,438.37	13,369.16
1-2 Years	9,433.59	3,808.21
2-3 Years	2,559.45	12.82
More than 3 years	38.18	23.32
Total dues to creditors other than micro enterprises and small enterprises as at	**19,469.59**	**17,213.50**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

c) out of the above unbilled amount	2,660.17	3,191.66

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development (Rs in millions)

Particulars	March 31, 2023	March 31, 2022
Less than 1 year	2,339.97	1,055.74
1-2 Years	54.59	59.90
2-3 Years	27.11	175.24
More than 3 years		-
Total	**2,421.67**	**1,290.89**

b) Intangible asset under development

Particulars	March 31, 2023	March 31, 2022
To be completed in		
Less than 1 year	2,421.67	1,290.89
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**2,421.67**	**1,290.89**

Note 31 : Fair values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount		Fair Value	
	March 31, 2023	**March 31, 2022**	**March 31, 2023**	**March 31, 2022**
Financial assets				
Financial assets measured at amortised cost				
Loans	-	-	-	-
Other Financial assets	1,448.89	1,606.92	1,448.89	1,606.92
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	1,283.09	659.54	1,283.09	659.54
Financial assets measured at amortised cost				
Investments (Unquoted)	-	-	-	-
Trade receivable	84.67	51.55	84.67	51.55
Cash and cash equivalents	731.31	287.23	731.31	287.23
Other Bank balances	4,866.69	2,469.97	4,866.69	2,469.97
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	19,471.20	17,217.19	19,471.20	17,217.19
Borrowings	1,05,079.60	97,279.00	1,05,079.60	97,279.00
Other financial liabilities	38,330.17	38,191.92	38,330.17	38,191.92

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2023:

(Rs in millions)

	As on Mar 31, 2023	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**1,283.09**	1,283.09	-	-
Trade Receivable	**84.67**	-	-	84.67
Cash and cash equivalents	**731.31**	-	-	731.31
Bank balance other than above	**4,866.69**	-	-	4,866.69
Loans	**-**	-	-	-
Other Financial assets	**1,448.89**	-	-	1,448.89
Liabilities				
Borrowings	**1,05,079.60**	-	-	1,05,079.60
Trade Payable	**19,471.20**	-	-	19,471.20
Other financial liabilities	**38,330.17**	-	-	38,330.17

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2022:

(Rs in millions)

	As on Mar 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**659.54**	659.54	-	-
Trade Receivable	**51.55**	-	-	51.55
Cash and cash equivalents	**287.23**	-	-	287.23
Bank balance other than above	**2,469.97**	-	-	2,469.97
Loans	**-**	-	-	-
Other Financial assets	**1,606.92**	-	-	1,606.92
Liabilities				
Borrowings	**97,279.00**	-	-	97,279.00
Trade Payable	**17,217.19**	-	-	17,217.19
Other financial liabilities	**38,191.92**	-	-	38,191.92

There has been no transfer between Level 1, Level 2 & Level 3 during the year.

Note 33 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on financial assets
Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments
Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances
Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2023.

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in millions)

Gross Carrying Amount	**March 31, 2023**	**March 31, 2022**
Undisputed Trade recievables -		-
Less than 6 months	33.02	-
6 months - 1 year	0.10	29.37
1-2 Years	29.37	0.51
2-3 Years	0.51	21.66
More than 3 years	21.66	
Total	**84.67**	**51.55**

Other financial assets
Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest rate risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The

Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity
The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

(Rs in millions)

	Borrowings	Fixed Deposits	Borrowings	Fixed Deposits
Balance of Fixed Deposit and Borrowings	March 31, 2023		March 31, 2022	
- INR Millions	1,01,369.82	4,866.69	94,124.22	2,469.97
Increase in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	(506.85)	24.33	(470.62)	12.35
Decrease in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	506.85	(24.33)	470.62	(12.35)

Liquidity risk

Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2023	Carrying amt	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Long term Borrowings (Gross of unamortised transaction cost)	1,06,725.97	1,06,725.97	5,350.72	784.93	17,853.83	82,736.49
Other financial liabilities	38,330.17	38,330.17	-	2,549.37	35,780.80	-
Trade payables	19,471.20	19,471.20	-	15,305.48	4,165.72	
Total	**1,64,527.34**	**1,64,527.34**	**5,350.72**	**18,639.78**	**57,800.35**	**82,736.49**

As at March 31, 2022	Carrying amt	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Long term Borrowings (Gross of unamortised transaction cost)	98,243.70	98,243.70	4,085.74	633.43	14,152.24	79,372.29
Other financial liabilities	38,191.92	38,191.92	-	3,023.13	35,168.79	-
Trade payables	17,217.19	17,217.19	-	11,218.34	5,998.85	-
Total	**1,53,652.81**	**1,53,652.81**	**4,085.74**	**14,874.90**	**55,319.88**	**79,372.29**

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

Note 34 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mrs. Priti Savla	Mr. Virendra D. Mhaiskar Mr. Kunnasagaran Chinniah **Independent Directors** Mr. K G Krishnamurthy Mrs. Ranjana Paranjape	Mr. Samuel Joseph Jebaraj Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Limited (IRBWTL) 2. Solapur Yedeshi Tollway Limited (SYTL) 3. Yedeshi Aurangabad Tollway Limited (YATL) 4. Kaithal Tollway Limited (KTL) 5. AE Tollway Limited (AETL) 6. Udaipur Tollway Limited (UTL) 7. CG Tollway Limited (CGTL) 8. Kishangarh Gulabpura Tollway Limited (KGTL) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) 10. Palsit Dankuni Tollway Private Limited (PDTPL) **Others** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited) 10. MMK Toll Road Private Limited (MMK) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited) 19. VK1 Expressway Private Limited (VK1) 20. Modern Estate (Partnership Firm) 21. Pathankot Mandi Highway Private Limited 22. Chittoor Thachur Highway Private Limited 23. Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 24. VM7 Expressway Private Limmited 25. Samakhiyali Tollway Private Limited w.e.f 14.03.2023		

C) Other Associate Companies of Sponsor / Project Manager

1. Virendra D. Mhaiskar (HUF)
2. VCR Toll Services Private Limited
3. VDM Ventures Private Limited
4. DEUX Farming Films Private Limited
5. IRB Charitable Foundation

Key Managerial personnel of Project SPV Group (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end)

1. Ms. Shilpa Todankar
2. Mr. Abhay Phatak (w.e.f. March 09, 2022)
3. Mr. Darshan Sangurdekar
4. Mr. Omprakash Singh
5. Mr. Chandrashekhar Kaptan
6. Mrs. Ranjana Paranjape (w.e.f October 06, 2021)
7. Mrs. Arati Taskar
8. Mr. Sudhir Rao Hoshing
9. Mr. Amitabh Murarka
10. Mr. Jitendra Sharma (upto February 28, 2022)
11. Mrs. Heena Raja (upto October 01, 2021)

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2023

I. Related Party Transactions

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
1	**Contract expenses**	-	-	-	-	**858.69**	**629.52**	-	-	-	-
	IRB Infrastructure Developers Limited	-	-	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	858.69	629.52	-	-	-	-
2	**Operation & Main. Expenses**	**2,719.41**	**1,906.45**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	2,719.41	1,906.45	-	-	-	-	-	-	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	-	-	-	-	**765.06**	**655.79**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	765.06	655.79	-	-	-	-
4	**Mobilisation advances recovered**	**509.07**	**743.02**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	509.07	743.02	-	-	-	-	-	-	-	-
5	**Material Aggregate Purchase**	-	-	-	-	**588.05**	**1,555.19**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	588.05	1,555.19	-	-	-	-
6	**Advance given including BG margin given**	**896.12**	**451.03**	-	-	-	**62.57**	-	-	-	-
	IRB Infrastructure Developers Limited	896.12	451.03	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	62.57	-	-	-	-
7	**General advance recovered - EPC**	-	**394.25**	-	-	-	**62.48**	-	-	-	-
	IRB Infrastructure Developers Limited	-	394.25	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	62.48	-	-	-	-
8	**Construction cost**	**11,171.92**	**8,484.71**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	11,171.92	8,484.71	-	-	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-	-	-
9	**Amount held up**	**77.81**	-	-	-	**74.86**	**2.76**	-	-	-	-
	IRB Infrastructure Developers Limited	77.81	-	-	-						
	Modern Road Makers Private Limited	-	-			74.86	2.76	-	-	-	-
10	**Retention / Held up release during Year**	-	-	-	-	**45.63**	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	45.63	-	-	-	-	-
11	**Other payable**	**560.52**	**2,161.31**	-	-	**48.73**	**48.71**	-	-	-	-
	IRB Infrastructure Developers Limited	560.52	2,161.31	-	-	-	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	48.71	48.71	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.02	-	-	-	-	-
12	**Expenses incurred on our behalf**	-	**1.77**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	-	1.77	-	-	-	-	-	-	-	-
13	**Unsecured Loan received**	**1,532.48**	**4,759.00**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1,532.48	4,759.00	-	-	-	-	-	-	-	-
14	**Unsecured Loan repaid**	**267.50**	**4,828.83**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	267.50	4,828.83	-	-	-	-	-	-	-	-
15	**Units Issued**	**1,236.75**	**1,946.33**	-	-	-	-	-	-	-	-
	IRB Infrastructure Developers Limited	1,236.75	1,946.33	-	-	-	-	-	-	-	-
16	**Trade payable**	**212.45**	-	-	**12.88**	**12.80**		-	-	-	-
	IRB Infrastructure Developers Limited	212.45	-	-	-	-		-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	12.80		-	-	-	-
	MMK Toll Road Private Limited	-	-	-	12.88	-		-	-	-	-
17	**Additional Intangible Asset**	-	-	-	-	-	**7,148.39**	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	-	7,148.39	-	-	-	-
18	**Deletion Intangible Asset**	-	-	-	-	**23.46**	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	23.46	-	-	-	-	-
19	**Interest unwinding of Intangible Asset**	-	-	-	-	**33.74**	-	-	-	-	-
	Modern Road Makers Limited	-	-	-	-	33.74	-	-	-	-	-

I. Related Party Transactions

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV Group		Trustee of IRB Infrastructure Trust	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
20	**Investment Management Fees**	**-**	**-**	**56.52**	**42.48**	-	-	-	-	**-**	**-**
	MMK Toll Road Pvt Limited	-	-	56.52	42.48	-	-	-	-	-	-
21	**Trustee Fees**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5.30**	**3.33**
	IDBI Trusteeship Services Limited	-	-	-	-	-	-	-	-	5.30	3.33
22	**Director sitting fees paid**	-	-	-	-	-	-	**1.83**	**1.65**	**1.83**	**1.65**
	Mrs. Arati Taskar	-	-	-	-	-	-	0.06	-	0.06	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.22	0.23	0.22	0.23
	Mr.Omprakash Singh	-	-	-	-	-	-	0.19	0.23	0.19	0.23
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.06	-	0.06	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	-	0.41	-	0.41
	Mrs. Heena Raja	-	-	-	-	-	-	-	0.06	-	0.06
	Mr. C S Kaptan	-	-	-	-	-	-	0.33	0.39	0.33	0.39
	Ms. Shilpa Todankar	-	-	-	-	-	-	0.51	0.26	0.51	0.26
	Mrs.Ranjana Paranjape	-	-	-	-	-	-	0.13	0.05	0.13	0.05
	Mr. Abhay Pathak	-	-	-	-	-	-	0.25	0.02	0.25	0.02
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.06	-	0.06	-

II. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Investment Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
1	**Short-term borrowings**	**477.81**	**477.81**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	477.81	477.81	-	-	-	-	-	-
2	**Trade payable**	**4,931.60**	**1,189.05**	**78.54**	**80.31**	**12,475.69**	**11,888.28**	**-**	**-**
	IRB Infrastructure Developers Limited	4,931.60	1,189.05	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	12,475.69	11,888.28	-	-
	MMK Toll Road Private Limited	-	-	78.54	80.31	-	-	-	-
3	**Mobilisation advances**	**33.68**	**435.80**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	33.68	435.80	-	-	-	-	-	-
4	**Advance given**	**451.18**	**502.86**	**-**	**-**	**0.03**	**0.03**	**-**	**-**
	IRB Infrastructure Developers Limited	451.18	502.86	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	0.03	0.03	-	-
5	**Retention payable**	**-**	**-**	**-**	**-**	**281.35**	**256.49**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	281.35	256.49	-	-
6	**Other payable including BG margin payable**	**32,246.65**	**31,711.77**	**-**	**-**	**3,697.39**	**3,648.68**	**-**	**-**
	IRB Infrastructure Developers Limited	32,246.65	31,711.77	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	-	1,800.84	1,800.83	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	1,544.86	1,544.86	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	351.69	302.98	-	-
7	**Other payable (Exp incurred on our behalf)**	**1.77**	**1.77**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	1.77	1.77	-	-	-	-	-	-
8	**Unsecured Loan / other payable**	**4,872.91**	**3,607.93**	**-**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	4,872.91	3,607.93	-	-	-	-	-	-
9	**Trade Receivable**	**-**	**-**	**-**	**-**	**0.61**	**0.51**	**-**	**-**
	Modern Road Makers Private Limited	-	-	-	-	0.61	0.51	-	-
10	**Expense payable**	**491.53**	**938.23**	**-**	**-**	**-**	**-**	**0.51**	**-**
	IRB Infrastructure Developers Limited	491.53	938.23	-	-	-	-	-	-
	Modern Road Makers Private Limited	-	-			-	-	-	-
	IDBI Trusteeship Services Limited							0.51	-
11	**Other receivable**	**-**	**-**	**0.08**	**-**	**-**	**-**	**-**	**-**
	MMK Toll Road Private Limited	-	-	0.08	-	-	-	-	-
12	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**-**	**-**	**0.44**	**0.43**
	Mr. Mukeshlal Gupta	-	-	-	-	-	-	-	-
	Mr. Dhananjay K. Joshi	-	-	-	-	-	-	-	-
	Mr. Ajay P. Deshmukh	-	-	-	-	-	-	-	-
	Mr. Rajendra kumar Agarwal	-	-	-	-	-	-	-	0.01
	Mrs. Aarti Taskar	-	-	-	-	-	-	0.01	-
	Mr. Darshan Sangurdekar	-	-	-	-	-	-	0.05	0.05
	Mr. Omprakash Singh	-	-	-	-	-	-	0.04	0.05
	Mr. Sudhir Hoshing	-	-	-	-	-	-	0.01	-
	Mr. Jitendra Sharma	-	-	-	-	-	-	0.02	0.09
	Mr. Rajpaul S. Sharma	-	-	-	-	-	-	-	-
	Mrs. Heena Raja	-	-	-	-	-	-	-	-
	Mr. C S Kaptan	-	-	-	-	-	-	0.08	0.11
	Mrs. Kshama Vengsarkar	-	-	-	-	-	-	-	-
	Miss Shilpa Todankar	-	-	-	-	-	-	0.13	0.09
	Mr. Abhay Pathak	-	-	-	-	-	-	0.07	-
	Mr. Amitabh Murarka	-	-	-	-	-	-	0.01	-
	Mrs. Ranjana Paranjape	-	-	-	-	-	-	0.03	0.03

Note 35 : Capital management

Capital includes equity attributable to the unitholders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise unitholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to unitholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2023.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2023	March 31, 2022
Borrowings	1,05,079.60	97,279.00
Less: cash and cash equivalents (Note 10)	(731.31)	(287.23)
Net debt	1,04,348.29	96,991.77
Equity (Note 14 and 15)	77,533.53	77,396.04
Total equity	77,533.53	77,396.04
Capital and net debt	1,81,881.82	1,74,387.81
Gearing ratio (%)	57.37%	55.62%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 36: Details of Project management fees and Investment management fees

Details of fees paid to project manager and investment manager as required pursuant to SEBI Circular No, CIRIMD/DFIl27i2016, dated November 29,2016 are as under:

i) Project Management Fees

In accordance with the Project Implementation Agreements, the fees and remuneration payable by the Project SPVs to the Project Manager has been worked out and agreed upon for the duration of current financial year, between the Project Manager, Investment Manager and the respective Project SPV, on an arm's length basis, after taking into account the extent of work to be done in respect of maintenance and other services to be provided by the Project Manager to such Project SPV.

ii) Investment Management Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it (“Management Fees”). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the Financial Year 2023 has been revised to Rs.47.70 millions

Note 37: Revenue share / premium payment to NHAI

(a) During the year ended March 31, 2023, the Group has paid/accrued Rs. 5,671.70 millions (March 31, 2022, Rs. 1,779.36 millions) as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of KGTL and IRBHM where premium payment has commenced during the current year.

Note 38: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	**-**	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWTL	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	**-**

Note 39 : Events after reporting period

The Trust has been listed on NSE from April 3, 2023.

Note 40: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to Condensed Interim Special Purpose Consolidated / Combined Financial Statements

Note 41 : Debt payment history

(Amount in Millions.)

Particulars	Opening Balance as on April 1, 2022	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2023
Secured loan from Bank and Financial Institution	88,627.04	5,109.36	25,799.39	67,937.01
Debenture	5,497.18	28,060.00	124.36	33,432.82
Loan from related party	4,085.74	1532.48	267.5	5,350.72
Total	**98,209.96**	**34,701.84**	**26,191.25**	**1,06,720.55**

Particulars	Opening Balance as on April 1, 2021	Loan availed during the period	Loan repaid during the period	Closing Balance as at March 31, 2022
Secured loan from Bank and Financial Institution	85,269.71	4,066.31	708.98	88,627.04
Debenture	5,563.63		66.45	5,497.18
Loan from related party	4,155.57	3746.5	3816.326547	4,085.74
Total	**94,988.91**	**7,812.81**	**4,591.75**	**98,209.96**

Note 42: Capitalisation Statement

Particulars	**As at Mar 31, 2023**
Shareholders' Funds:	
Unit Capital	87,929.33
Subordinate Debt	
Other Equity	(10,395.80)
Minority interest	0.81
Total Shareholders' Funds	**77,534.34**
Borrowings	
Borrowings from related parties	5,350.72
Long term borrowings	98,943.95
Current maturities of long term borrowings	784.93
Total Debt	**1,05,079.60**
Total Capitalisation	**1,82,613.94**

Note 43: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

(Rs in millions)

	March 31, 2023	**March 31, 2022**
Profit attributable to unit holders for earnings	(2,271.59)	(4,435.98)
Weighted average number of Units for EPU	87,79,64,498	84,29,14,666
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(2.59)	(5.26)

Note 44 : Corporate Social Responsibility (CSR) Activities :

(₹ in Millions)

	As at March 31, 2023	**As at March 31, 2022**
Gross amount required to be spent by the company during the period	-	5.69

a) Amount spent during the year ending on March 31, 2023	**In cash**	**Yet to be paid in**	**Total**
i) Construction/acquisition of any asset	-	-	-
ii) On purposes other than (i) above (including previous year unspent amount)	-	-	-
	-	**-**	**-**

	In cash	**Yet to be paid in**	**Total**
a) Amount spent during the year ending on March 31, 2022			
i) Construction/acquisition of any asset	-	-	-
ii) On purposes other than (i) above	8.00	-	8.00
b) Yet to be paid in cash for ongoing project	-	-	-
	8.00	**-**	**8.00**

Amount spent in the current is inclusive of unspent amount of precious year

Note 45 : Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

Note 46 : Other Statutory information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Group.

iii) The Group do not have any transactions with companies struck off.

iv) The Group have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vi) The Group has not declared a wilful defaulter by any bank/ financial institution or any other lender during the year.

Note 47 : Previous year comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm current period's classification.

Note 48 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022
10	Palsit Dankuni Tollway Private Limited	April 2, 2022	April 1, 2039	17 years from Appointed Date	Under construction

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 49 : Segment reporting

The Group's activities comprise of Toll collection in various parts of India based on the guiding principles given in Ind AS - 108 "Operating Segments", this activity falls within a single operating segment and accordingly the disclosures of the standard have not separately been given.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 12.05.2023

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place : Mumbai
Date: 12.05.2023

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT
To the Unit Holders of IRB Infrastructure Trust
REPORT ON THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Consolidated Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the Consolidated Balance Sheet as at 31 March 2022, the Consolidated Statement of Profit and Loss including Other Comprehensive Income, the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Unit Holder's Equity and the Consolidated Statement of Total Returns at Fair Value for the year ended 31 March 2022, the Consolidated Statement of Net Assets at Fair value as at 31 March 2022 and notes to the Consolidated Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015 ("Ind AS"), as amended and other accounting principles generally accepted in India, of the consolidated State of Affairs of the Group as at 31 March 2022, its consolidated Loss including other comprehensive income, its consolidated Cash Flows, consolidated changes in Unit Holders' Equity, the consolidated total Returns at fair value for the year ended 31 March 2022 and the consolidated Net Assets at fair value as at 31 March 2022.

BASIS FOR OPINION

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Consolidated Financial Statements.

KEY AUDIT MATTERS

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Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. <u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.
3. Cost Overrun We have been informed that, since April 2020, Due to pandemic situation, construction of certain projects have been affected and delayed, which has resulted into additional costs to projects in relation to machinery idling, labor expenses, material prices, restoration of damaged works etc. Considering above, SPVs have been charged with such additional costs. We were further informed that SPVs will raise claim with NHAI in this regard which shall, repay the costs immediately upon receipt of claims. Based on nature of transactions, the same are considered to be Key Audit Matter.	• We perused the legal opinion obtained in an earlier matter in case of one of the project SPVs, IRB WC, over similar issue to understand the tenability of the claims to be filed with the Authority. • We reviewed addendum to the Project Implementation Agreement. • We also referred to the invoices raised on the SPVs. • Tested the arithmetical accuracy of fair valuation of trade payables towards Cost Overrun.

INFORMATION OTHER THAN THE CONSOLIDATED FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations but, does not include the Consolidated Financial Statements and our report thereon.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Consolidated Financial Statements that give a true and fair view of the consolidated financial position as at 31 March 2022, consolidated financial performance including other comprehensive income, consolidated cash flows and consolidated changes in unit holder's equity and the consolidated total returns at fair value for the year ended 31

March 2022, the consolidated net assets at fair value as at 31 March 2022 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Consolidated Financial Statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE CONSOLIDATED IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

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- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the Financial Statements of such entities included in the Consolidated Financial Statements.

Materiality is the magnitude of misstatements in the Consolidated Financial Statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the Financial Statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the Key Audit Matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

OTHER MATTERS

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We did not audit the Financial Statements of 4 subsidiaries, whose Financial Statements reflect Total Assets of Rs. 1,01,778.62 million and Net Assets of Rs. 34261.74 million as at 31 March 2022, Total Revenues of Rs. 4,936.64 million, Losses after taxes of Rs. 3944.85 million and Net Cash Outflows amounting to Rs. 25.66 million for the year ended on 31 March 2022, as considered in the Consolidated Financial Statements. These Financial Statements have been audited by other auditor whose reports have been furnished to us by the Investment Manager and our opinion on the Consolidated Financial Statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries, is based solely on the reports of the other auditor.

Our opinion above, on the Consolidated Financial Statements, and our report on other legal and regulatory requirements below, are not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditor.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

b. In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept by the Trust so far as it appears from our examination of those books and the reports of the other auditors.

c. The consolidated Balance Sheet, the consolidated Statement of Profit and Loss, the consolidated Statement of Cash Flows, the consolidated Statement of Changes in Unit Holders' Equity, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value are in agreement with the books of account.

d. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 22121011AJBCRQ6176
Date: 06th May 2022
Place: Mumbai

tel.: (22) 43 48 42 42 | fax: (22) 43 48 42 41 | office@gokhalesathe.in

IRB Infrastructure Trust
Consolidated Balance sheet as at March 31, 2022

(Amount in Millions.)

	Notes	As at March 31, 2022	As at March 31, 2021
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	8.85	10.59
Goodwill		604.54	604.54
Other Intangible assets	4	2,21,859.48	2,11,717.65
Intangible assets under development	4	1,290.89	4,684.26
Financial assets			
i) Others	7	2.74	3.28
Other non-current assets	9	656.55	0.14
Deferred tax assets (net)	8	287.67	-
		2,24,710.72	**2,17,020.47**
Current assets			
Financial assets			
i) Investments	5	659.54	572.50
ii) Trade receivables	6	51.55	100.24
iii) Cash and cash equivalents	10	287.23	413.49
iv) Bank balance other than (iii) above	11	2,469.97	1,744.35
v) Others	7	1,604.18	635.99
Current tax assets (net)	12	114.22	147.11
Other current assets	13	1,677.46	2,166.40
		6,864.15	**5,780.08**
Total assets		**2,31,574.87**	**2,22,800.55**
EQUITY AND LIABILITIES			
Equity			
Equity share capital	14	85,504.33	81,688.00
Other equity	15		
Other reserves		(8,108.29)	(3,669.05)
Total Equity		**77,396.04**	**78,018.95**
Non-controlling interests			
		77,396.04	**78,018.95**
Non-current liabilities			
Financial liabilities			
i) Borrowings	16	92,559.82	89,161.31
ii) Other financial liabilities	18	35,168.79	24,720.81
iii) Trade payables	19	5,998.85	2,463.41
Provisions	20	1,350.57	357.84
Deferred tax liabilities (net)	8	-	424.33
		1,35,078.03	**1,17,127.70**
Current liabilities			
Financial liabilities			
i) Borrowings	16	4,719.18	4,784.87
ii) Trade payables	17		
a) total outstanding dues of micro enterprises and small enterprises		3.69	13.18
b) total outstanding dues of creditors other than micro enterprises and small enterprises		11,214.65	2,547.07
iii) Other financial liabilities	18	3,023.13	20,198.86
Other current liabilities	21	140.15	109.78
Current tax liabilities (net)		-	0.14
		19,100.80	**27,653.90**
Total liabilities		**1,54,178.83**	**1,44,781.60**
Total equity and liabilities		**2,31,574.87**	**2,22,800.55**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Consolidated Statement of Profit and Loss for the year ended March 31, 2022

(Amount in Millions.)

Particulars	Notes	For the year ended March 31, 2022	For the year ended March 31, 2021
Income			
Revenue from operations	22	12,404.84	10,361.51
Other income	23	100.13	112.71
Total income		**12,504.97**	**10,474.22**
Expenses			
Road work and site expenses	24	3,989.80	3,983.41
Depreciation and amortisation expenses	25	1,674.90	1,255.69
Finance costs	26	9,538.70	8,228.17
Investment Manager Fees		42.48	46.25
Other expenses	27	2,406.43	138.32
Total expenses		**17,652.31**	**13,651.84**
Profit/(loss) before tax		**(5,147.34)**	**(3,177.62)**
Tax expenses			
Current tax		8.87	46.20
Deferred tax		(720.23)	369.63
MAT Credit utilisation / (Entitlement)		-	(340.97)
Total tax expenses		**(711.36)**	**74.86**
Profit/(loss) after tax		**(4,435.98)**	**(3,252.48)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)		-	-
Other comprehensive income/ (loss) for the year, net of tax		-	-
Total comprehensive income /(loss) for the year		**(4,435.98)**	**(3,252.48)**
Profit/(loss) after tax		**(4,435.98)**	**(3,252.48)**
Attributable to:			
Owners of the Project SPV Group		(4,435.98)	(3,252.48)
Non-controlling interests			-
Total comprehensive income for the year			
Attributable to:			
Equity holders of the Project SPV Group		(4,435.98)	(3,252.48)
Non-controlling interests		-	-
Earnings per unit (of Rs 100 each)			
Basic		(5.26)	(4.14)
Diluted		(5.26)	(4.14)

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes) are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2022		As at March 31, 2021	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,31,574.87	2,52,287.18	2,22,800.55	2,45,589.09
B. Liabilities (at book value)	1,54,178.83	1,52,169.83	1,42,318.19	1,31,113.67
C. Net Assets (A-B)	77,396.04	1,00,117.36	80,482.36	1,14,475.43
D. Number of units (in millions)	855.04	855.04	816.88	816.88
E. NAV (C/D) (Amount in Rs.)	**90.52**	**117.09**	**98.52**	**140.14**

Project wise break up of fair value of total assets:

Name of the project	**As at March 31, 2022**
IRB Westcoast Tollway Limited (IRBWTL)	29,419.81
Solapur Yedeshi Tollway Limited (SYTL)	19,669.34
Yedeshi Aurangabad Tollway Limited (YATL)	35,731.21
Kaithal Tollway Limited (KTL)	28,036.76
AE Tollway Limited (AETL)	29,936.78
Udaipur Tollway Limited (UTL)	27,731.21
CG Tollway Limited (CGTL)	25,806.63
Kishangarh Gulabpura Tollway Limited (KGTL)	19,940.03
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	35,707.46
Subtotal	**2,51,979.23**
Add : IRB Infrastructure Trust Assets	**307.96**
Total assets	**2,52,287.18**

B. Consolidated statement of total returns at fair value :

Particulars	**For the year ended March 31, 2022**	**For the year ended March 31, 2021**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(4,435.98)	(3,252.48)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	22,721.31	33,993.07
Total Return	**18,285.33**	**30,740.59**

Notes :
Fair value of assets as at March 31, 2022 and March 31, 2021 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2022

(Amount in Millions.)

Particulars	For the year ended March 31, 2022	For the year ended March 31, 2021
Cash flow from operating activities		
Profit/(loss) before tax	(5,147.34)	(3,177.62)
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	1,674.90	1,255.69
Resurfacing expenses	992.73	292.88
Fair value gain on mutual funds	(0.78)	(1.43)
Net (gain) on sale of current Investment	(13.93)	(13.08)
Finance costs	9,538.70	8,228.17
Interest income	(81.69)	(82.04)
Other non operative income	(3.73)	(13.28)
Gain/(loss) on fair value measurement of other payable	2,161.31	(2.86)
Operating profit before working capital changes	**9,120.17**	**6,486.41**
Movement in working capital:		
Increase/ (decrease) in trade payables	12,193.54	2,277.55
Increase/ (decrease) in other financial liabilities	306.46	(2,516.37)
(Decrease)/ increase in other liabilities	30.37	(52.75)
Decrease / (increase) in trade receivables	48.69	251.88
(Decrease) in loans	-	(4.53)
(Increase) / decrease in other financial assets	(989.59)	(213.15)
(Increase) / decrease in other assets	(167.46)	1,232.51
Cash generated from operations	**20,542.18**	**7,461.55**
Taxes paid (net)	32.09	14.70
Net cash flows generated from operating activities (A)	**20,574.27**	**7,476.25**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(17,617.12)	(18,933.90)
Proceeds from sale/ (purchase) of current investments (net)	(72.33)	(557.99)
Investments in bank deposits (having original maturity of more than three months) (net)	(725.62)	(167.95)
Interest received	107.36	75.08
Net cash flows (used in) investing activities (B)	**(18,307.71)**	**(19,584.76)**
Cash flows from financing activities		
Proceeds from non-current borrowings	4,066.31	9,204.86
Repayment of non-current borrowings	(775.43)	(39.62)
Proceed of current borrowings	4759.00	4,155.57
Repayment of current borrowings	(4828.83)	-
Issue of equity share capital	3,816.33	5,105.50
Unit issue expenses	(3.26)	(103.82)
Finance cost paid	(9,426.95)	(5,990.16)
Net cash flows (used in)/generated from financing activities (C)	**(2,392.82)**	**12,332.32**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**(126.26)**	**223.81**
Cash and cash equivalents at the beginning of the year	413.49	189.70
Cash and cash equivalents at the end of the year (refer note 10)	**287.23**	**413.49**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	161.56	113.94
- Others	118.03	288.60
- In deposit accounts with original maturity less than 3 months	-	-
Cash on hand	7.64	10.96
Total cash and cash equivalents	**287.23**	**413.49**

IRB Infrastructure Trust
Consolidated Statement of Cash Flows for the year ended March 31, 2022

(Amount in Millions.)

Particulars	For the year ended March 31, 2022	For the year ended March 31, 2021
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	90,833.34	78,815.63
Short term borrowing	4,155.57	-
Movements		
Cash Flows		
Long term borrowing	3,290.88	9,165.24
Short term borrowing	(69.83)	4,155.57
Non-cash changes		
Long term borrowing	-	2,852.47
Short term borrowing	-	-
Closing balances		
Long term borrowing	94,124.22	90,833.34
Short term borrowing	4,085.74	4,155.57

Notes :

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.

3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Statement of changes in equity
A. Unit capital:

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
i) Units issued, subscribed and fully paid	**No.**	**Rs.**	**No.**	**Rs.**
Units having face value of Rs. 100/-				
Balance at the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
Issue of Unit capital (Note 14)	3,81,63,265	3,816.33	5,10,55,000	5,105.50
Balance at the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

B. Other equity

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Retained earnings		
Balance at the beginning of the year	(3,669.05)	(312.75)
Profit/(loss) for the year	(4,435.98)	(3,252.48)
Pre-incorporation profit		
Unit Issue expenses	(3.26)	(103.82)
Balance at the end of the year	**(8,108.29)**	**(3,669.05)**

Summary of significant accounting policies 3

The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Consolidated Financial Statements.

As per our report of even date attached

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

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Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place: Mumbai
Date: 06/05/2022

Place: Mumbai
Date: 06/05/2022

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

1 **Corporate Information**

The IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Fund is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Fund is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects as listed below:-

Project SPV Name**	Residual Concession life*	Proposed shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	19 years 11 Months 2 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	21 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	19 years 3 Months 1 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	20 years 3 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	18 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	16 years 5 Months 3 days	100%	Subsidiary	Operating		India
CG Tollway Limited (CGTL)	15 years 7 Months 5 days	100%	Subsidiary	Operating		India
Kishangarh Gulabpura Tollway Limited (KGTL)	15 years 10 Months 22 days	100%	Subsidiary	Tolling and Construction		India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	19 years 1 Months 25 days	100%	Subsidiary			India

* Represents residual concession life as at March 31, 2022 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTLand KGTL on November 14, 2019 .

2 **Basis of preparation**

A. Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheet as at March 31 2022 and 31 March 2021 , the Consolidated Statement of Profit and Loss (including Other Comprehensive Income) of the Project SPV group, the Consolidated Statement of Cash Flow Statement, the Consolidated Statement of Changes in Equity of the movement of the unit holders for the year ended March 31 2022 and March 31, 2021 , the consolidated statement of net assets at fair value as at March 31 2022 and March 31, 2021 and the consolidated statement of total returns at fair value for the year ended March 31, 2022 and March 31, 2021, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with other relevant provisions of the Act.The ConsolidatedFinancial Statements have been prepared on a historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

B Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the financial statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The financial statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date i.e. year ended on March 31.

Consolidation procedure:

(a) Consolidate like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:

- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments (refer note 31)

Provision for major maintenance (refer note 20)
Impairment of non financial assets (refer note 3.17)

3.03 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 31) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Investment Manager and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 3.02)

Financial instruments (including those carried at amortised cost) (note 5,6,7,8,11,17,18,19,31)

Quantative disclosure of fair value measurement hierarchy (note 32)

3.04 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:
Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:
1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs. Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset's economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of Premium and revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

Trade receivables

A receivable represents the Project SPV Group's right to an amount of consideration that is unconditional i.e. only the passage of time is required before payment of consideration is due.

3.05 **Government Grants**

Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.
Such benefits are earned and reasonable certainty exists of the collection.
Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.

Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.06 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Being DTA tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

3.07 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life
Building	30 years*
Office equipment	5 years
Computers	3 years
Furniture & fixtures	10 years

* The useful life of building has been calculated by management as per their technical estimate.

3.08 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its "Toll Collection Rights" (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.09 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.10 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases, it sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.11 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.12 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. Provision for the planned expenditure is made for the period upto end of the period for which periodic maintenance is required, out of the total entitiled period.The same is stated in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.13 **Contingent liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.14 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
- The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL
The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables
The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -

-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.
The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 16.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.15 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.16 **Cash dividend to equity holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to equity holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the shareholders. A corresponding amount is recognised directly in equity.

3.17 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.18 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment policies:

Based on "Management Approach" as defined in Ind AS 108 -Operating Segments, the Management evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.19 **Earnings per unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to unitholders by the weighted average number of units outstanding during the period. For the purpose of calculating diluted earnings per unit, the net profit or loss for the period attributable to unitholders and the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

Note 4 : Property, Plant and Equipment and Capital work in progress

(Amount in Millions.)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
Cost or deemed cost					
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions					-
Disposals/ Adjustments					-
At 31 March 2022	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Depreciation					
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Additions	1.61	0.00	0.09	0.04	1.74
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2022	**7.40**	**0.29**	**1.28**	**0.38**	**9.33**
Net Book value					
At 31 March 2022	**8.69**	**0.02**	**0.12**	**0.02**	**8.85**
At 31 March 2021	**10.30**	**0.01**	**0.22**	**0.05**	**10.59**

Net Book value	**March 31, 2022**	**March 31, 2021**
Property, Plant and Equipment	8.85	10.59

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets	(Amount in Millions.)	
Particulars	**Toll Collection Rights**	**Total**
Cost or deemed cost		
At 31 March 2021	**2,16,344.42**	**2,16,344.42**
Additions	11,814.99	11,814.99
Deletions		-
Adjustments	-	-
At 31 March 2022	**2,28,159.42**	**2,28,159.42**
Amortisation		
At 31 March 2021	**4,626.78**	**4,626.78**
Additions	1,673.16	1,673.16
Deletions	-	-
Adjustments	-	-
At 31 March 2022	**6,299.93**	**6,299.93**
Net Book value		
At 31 March 2022	2,21,859.48	
At 31 March 2021	2,11,717.65	

Particulars	**March 31, 2022**	**March 31, 2021**
Toll Collection Rights	2,21,859.48	2,11,717.65
Total	**2,21,859.48**	**2,11,717.65**

Intangible assets under development

Particulars	**March 31, 2022**	**March 31, 2021**
Toll Collection Rights		
At the beginning of the year	4,684.26	13,853.63
Add : development during the year	835.34	1,274.74
	5,519.60	15,128.37
Less : Transfer to Intangible Asset (Toll Collection Rights)	4,228.70	10,444.11
Closing balance	**1,290.89**	**4,684.26**
Total	**1,290.89**	**4,684.26**

Tangible and Intangible assets given as security

Tangible and Intangible assets are subject to first charge to secured long-term borrowings from the lenders.

(Amount in Millions.)

Particulars	March 31, 2022				March 31, 2021			
	Face Value Rs.	No of Units	Current	Non-current	Face Value Rs.	No of Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
IDBI Liquid Fund - Direct Plan - Growth	1,000	48,116.73	110.24		1,000	1,57,836.12	349.34	
ABSL Liquid Fund - Direct Plan - Growth	100	53,926.78	18.50	-	100	20,666.89	23.00	-
SBI Liquid Fund - Direct Growth	1,000	1,53,238.96	510.75	-	1,000	13,342.03	43.00	-
SBI Overnight Fund - Direct Growth	1,000	5,790.54	20.04		1,000	47,796.46	157.16	
			659.54	**-**			**572.50**	**-**
Total			**659.54**	**-**			**572.50**	**-**
Aggregate book value of quoted investments			**658.76**				**571.07**	
Market value of quoted investments			**659.54**				**572.50**	
Aggregate amount of unquoted investments			-				-	
Aggregate amount of impairment in value of investments			-				-	
Refer note 31 for determination of fair value of investments			-				-	

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Related parties	0.51	-	-	-
Others	51.03	-	100.24	-
Total	**51.55**	**-**	**100.24**	**-**
Less: Allowances for expected credit loss/ bad and doubtful debt	-	-	-	-
Total	**51.55**	**-**	**100.24**	**-**

The Group has not identifed any credit impairment loss as at March 31, 2022 and March 31, 2021.

Note 7 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	25.64	-	47.57	-
Interest receivable from banks	23.99	-	117.00	-
Retention money receivable	526.28	-	446.62	-
BG Margin receivable	-	-	-	0.54
Receivable from Government Authorities (NHAI)	965.24	-	1.44	-
Other receivable	56.15	-	16.47	-
Security and other deposits	6.89	2.74	6.89	2.74
Total	**1,604.18**	**2.74**	**635.99**	**3.28**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 8 : Deferred tax assets		
Deferred tax liabilities (net):		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	1,350.50	2,636.80
Deferred tax assets:		
Effect of expenditure debited to profit and loss account in the current year but allowed for tax purposes in following years		
Deferred tax liabilities (net)	**1,350.50**	**2,636.80**
Deferred tax assets:		
Deferred tax assets:		
Depreciation	428.55	1,629.65
MAT credit entitlement	582.83	582.82
Expenses allowed for tax purposes on payment basis - Gratuity		
Deferred Tax assets on Fair valuation	626.79	
Deferred Tax Assets	**1,638.17**	**2,212.47**
Deferred Tax liabilities:		
Difference in Depreciation/ amortisation and other differences		
Tax losses	-	-
Deferred tax (assets) / liabilities	**(287.67)**	**424.33**
Note 9 : Other non - current assets		
(Unsecured, considered good)		
Capital advances	-	0.14
Duties and taxes receivable	656.55	-
Total	**656.55**	**0.14**

(Amount in Millions.)

	March 31, 2022	March 31, 2021

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

Note 10 : Cash and cash equivalents

Cash and Bank balances		
Balances with banks:		
-on current accounts	118.03	288.60
-on trust, retention and other escrow accounts*	161.56	113.94
Deposits with banks		
-Original maturity less than 3 months	-	-
Cash on hand	7.64	10.96
Total	**287.23**	**413.49**

Note 11 : Bank balance other than cash and cash equivalent

Maturity more than 3 months less than 12 months		
Other deposits	102.53	76.09
Debt service reserve account with banks /earmarked balance**	2,365.43	-
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance**	-	1,668.23
Other deposits	2.00	0.03
Total	**2,469.97**	**1,744.35**

Debt service reserve account/ major maintenance reserve account and trust, retention and other escrow accounts
Bank deposits are marked lien / pledged against the non current secured loan as per term loan agreement with the lender, further the lenders have first charge on trust, retention and other escrow accounts.

* First charge on above to the extent of amount payable as per the waterfall mechanism as defined in the Concession Agreement / Common Loan Agreement.

** The deposits to the extent of Rs. 2,365.43 millions (March 31, 2021 : Rs. 1,668.23 millions) maintained by the Project SPV Group with bank includes time deposits, which are held against Debt Service Reserve (DSR), are considered as current portion under the head “Other bank balances” since the same are encashable by the lenders in the event of default by the Project SPV Group, if any.

Current deposits are made for varying periods of between one day and three months, depending on the immediate cash requirements of the group and earn interest at the respective current deposit rates. Other time deposits earn interest at the rate of 3 % to 5.10% p.a.

Refer note 16 for details of security against term loans.

For the purpose of statement of cash flows, cash and cash equivalents comprise the following:

	March 31, 2022	March 31, 2021
Balance with banks:		
-on current accounts	118.03	288.60
-on trust, retention and other escrow accounts	161.56	113.94
Fixed deposits less than 3 months	-	-
Cash on hand	7.64	10.96
Total	**287.23**	**413.49**

Note 12 : Current tax assets (net)

Advance income-tax (net of provision for tax)	114.22	147.11
Total	**114.22**	**147.11**

Note 13 : Other current assets

(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties (refer note 39)	502.89	1,014.28
- Others	32.22	22.05
Mobilisation advances (refer note 39)	435.80	610.61
Prepaid expenses	0.51	47.68
Duties and taxes receivable	706.04	471.78
Total	**1,677.46**	**2,166.40**

Note : 14 : Unit capital (Amount in Millions.)

	March 31, 2022		March 31, 2021	
Unit capital				
Authorised Unit capital				
Units having face value of Rs.100 each	85,50,43,265	85,504.33	81,68,80,000	81,688.00
	85,50,43,265	**85,504.33**	**81,68,80,000**	**81,688.00**
Issued Unit capital				
Units having face value of Rs.100 each	85,50,43,265	85,504.33	81,68,80,000	81,688
Total	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688**

Terms / rights attached to equity shares

The Project SPVs have only one class of equity shares having par value of Rs. 100/- per share Each holder of equity shares is entitled to one vote per share. The Project SPVs declares and pays dividend in Indian rupees.

In the event of liquidation of the Project SPV, the holders of equity shares will be entitled to receive remaining assets of the Project SPV, after distribution of all preferential amounts. The distribution will be in proportion to the number of equity shares held by the shareholders.

Reconciliation of the number of unit outstanding and the amount of Unit capital:

	March 31, 2022		March 31, 2021	
Units issued, subscribed and fully paid	**No. of units**	**Rs.**	**No. of units**	**Rs.**
Units having face value of Rs. 100/-				
At the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
lssued during the year	3,81,63,265	3,816.33	5,10,55,000	5,105.50
At the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

Details of unit holders holding more than 5% units:

	March 31, 2022		March 31, 2021	
	No. of units	**% of total unit capital**	**No. of units**	**% of total unit capital**
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%
Anahera Investments Pte Ltd	21,37,60,685	25%	20,42,19,865	25%
Bricklayers Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Chiswick Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Stretford End Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Dangenham Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%

Details of Sponsor units	**March 31, 2022**		**March 31, 2021**	
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%

Note : 15 : Other equity

Attributable to the equity holders

Other reserves	**March 31, 2022**	**March 31, 2021**
Retained earnings		
At the beginning of the year	(3,669.05)	(312.75)
Profit for the year	(4,435.98)	(3,252.48)
Less: Appropriations		
Pre-incoporation Profits		
Unit Issue expenses	(3.26)	(103.82)
At the end of the year	**(8,108.29)**	**(3,669.05)**
Total	**(8,108.29)**	**(3,669.05)**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Financial liabilities		
Note : 16 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	78,298.59	74,939.04
Less : current maturities expected to be settled within 12 month from balance sheet date	(429.15)	(467.24)
Total (a)	**77,869.44**	**74,471.80**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	10,328.45	10,330.67
Less : current maturities expected to be settled within 12 month from balance sheet date	(59.79)	(99.91)
Total (b)	**10,268.66**	**10,230.76**
Non-convertible debentures (secured)	5,497.18	5,563.63
Less : current maturities expected to be settled within 12 month from balance sheet date	(110.76)	(62.15)
Total (c)	**5,386.42**	**5,501.48**
Less: Unamortised transaction cost **(d)**	(964.70)	(1,042.72)
Total non current borrowings (e = a + b + c + d)	**92,559.82**	**89,161.31**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	429.15	467.24
Indian rupee loan from financial institutions (secured)	59.79	99.91
Non convertible debentures (secured)	110.76	62.15
Interest accrued but not due on borrowings	33.73	-
(Unsecured, repayable on demand and interest free)		
Loan from related parties (refer note 39)	4,085.74	4,155.57
Total current borrowings (f)	**4,719.18**	**4,784.87**
Total borrowings (e+f)	**97,279.00**	**93,946.18**
Aggregate secured loans	93,159.52	89,161.31
Aggregate unsecured loans	4,085.74	4,155.57

(i) Project loans for SPVs

March 31, 2022: Rs. 94,124.22 millions; March 31, 2021: Rs. 90,833.34 millions; pertains to term loans taken by SPV's (Special Purpose Vehicles) for Project financing.

Rate of interest

Rate of interest on the Indian Rupee loan from banks and financial institutions varies from 8.25% to 10.40% p.a. (March 31, 2021: 9.85% to 11.90%) and are secured by pledge of shares of its subsidiaries and subservient charge on the current assets of the company to the extent of 125% of the outstanding loan.

Nature of security

i) Secured by first charge on the movable/immovable asset by way of mortgage/hypothecation; first charge on all intangible assets, present and future; assignment of all receivables; book debts and all rights and interest in project, both present and future, excluding the Project Assets of respective companies;

ii) Secured by first charge on the Escrow Account, Debt Service Reserve Account and any other reserves and other bank accounts of the respective Companies.

iii) An irrevocable and unconditional corporate guarantee from IRB Infrastructure Developers Limited to meet shortfall (if any) between debt due and termination payments received from Concessioning Authority in case of termination of Concession Agreement for any reason in case of Project SPV's.

Repayment terms

The Indian rupee loans are repayable in structured monthly installments commencing after commercial operation date such that the total tenor does not exceed 17 years and repayable as per the repayment schedule specified in common loan agreement with the Lenders.

Note : 17 : Trade payables		
Total outstanding dues of micro enterprises and small enterprises (refer note 29)	3.69	13.18
Total outstanding dues of creditors other than micro and small enterprises		
- Related parties (refer note 39)	10,022.93	1,655.04
- Others	1,191.71	892.03
Total	**11,218.34**	**2,560.24**

(Amount in Millions.)

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Note 18 : Other financial liabilities				
Obligation for construction	2,009.01	-	11,204.52	-
Directors sitting fees payable	0.36	-	0.25	-
Deposit	1.13	-	1.07	-
Retention money payable				
- Related parties (refer note 39)	256.48	-	190.34	-
- Others	336.92	-	318.04	3.05
Revenue share payable	225.81	-	51.97	-
Other payable				
- Related parties (refer note 39)	193.42	35,168.79	8,432.67	24,717.75
Total	**3,023.13**	**35,168.79**	**20,198.86**	**24,720.81**

	March 31, 2022	**March 31, 2021**
Note : 19 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises		
micro and small enterprises		
'- Related parties	5,998.85	2,463.41
'- Others	-	-
	5,998.85	**2,463.41**

Note 20 : Provisions

	March 31, 2022		March 31, 2021	
	Current	**Non-current**	**Current**	**Non-current**
Others				
Major maintenance expenses	-	1,350.57	-	357.84
Total	**-**	**1,350.57**	**-**	**357.84**

The movement in provision for resurfacing expenses is as follows:

	March 31, 2022	**March 31, 2021**
Opening balance	357.84	64.96
Obligation on new toll projects	992.73	292.88
Utilised / reversed during the year	-	-
Closing balance	**1,350.57**	**357.84**

The above provisions are based on current best estimation of expenses that may be required to fulfill the resurfacing obligation as per the service concession agreement with regulatory authorities. It is expected that significant portion of the costs will be incurred over the period. The actual expense incurred may vary from the above. No reimbursements are expected from any sources against the above obligation.

	March 31, 2022	**March 31, 2021**
Note 21 : Other current liabilities		
Advance from customers		
Duties and taxes payable	129.65	59.05
Advance from customer- Others	10.50	50.73
Total	**140.15**	**109.78**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 22 : Revenue from operations		
Contract revenue (road construction)	1,054.48	1,863.70
Income arising out of toll collection (net)	10,598.07	8,549.77
Revenue share to NHAI- Fastag	(212.87)	(51.97)
Other operating revenue	965.16	-
Total	**12,404.84**	**10,361.51**
Note 23 : Other income		
Interest income on		
- Bank deposits	73.64	74.46
- Others	8.05	7.59
Profit on sale of investments	13.93	13.08
Fair value gain on mutual funds	0.78	1.43
Other non operating income	3.73	13.28
Gain/(loss) on fair value measurement of other payable	-	2.86
Total	**100.13**	**112.71**
Note 24 : Road work and site expenses		
Contract expenses	1,036.47	1,807.12
Operation and maintenance expenses	2,899.41	2,113.67
Site and other direct expenses	-	41.03
Sub-contracting / Security expenses	0.72	5.31
Technical consultancy and supervision charges	53.20	16.28
Total	**3,989.80**	**3,983.41**
Note 25 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment (refer note 4)	1.74	2.59
Amortisation on intangible assets (refer note 4)	1,673.16	1,253.09
Total	**1,674.90**	**1,255.69**
Note 26 : Finance cost		
Interest expense		
- Banks and financial institutions	8,670.13	8,046.33
- Unwinding of retention money	48.71	48.70
Other borrowing costs	-	
- Amortisation of Transaction cost	78.02	78.43
- Unwinding of discount on provision of MMR	39.64	5.47
- Interest unwinding of Trade Payable- Associates	655.78	-
- Others	46.44	49.24
Total	**9,538.70**	**8,228.17**

(Amount in Millions.)

	March 31, 2022	March 31, 2021
Note 27 : Other expenses		
Rent	0.24	0.29
Rates and taxes	31.64	15.40
Insurance	1.12	11.43
Director sitting fees	1.61	1.24
Legal and professional expenses	192.64	69.25
Payment to auditor (including GST)	3.13	3.88
Corporate social responsibilities expenditure	8.00	31.40
Bank charges	5.54	3.01
Miscellaneous expenses	1.19	2.43
Fair value loss on measurement of other payable	2,161.31	-
Total	**2,406.43**	**138.32**
Payment to auditor (including GST)		
As auditors:		
- Statutory audit fees	1.23	2.19
- Limited review fees	1.70	1.12
In other capacity	-	-
- Other services (certification fees)	0.17	0.56
Reimbursement of expenses	0.04	0.02
Total	**3.13**	**3.88**

Note 28 : Commitment and Contingencies

a. Leases

Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease		(Rs in millions)
	March 31, 2022	**March 31, 2021**
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.24	0.29
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2022	**March 31, 2021**
Estimated value of contracts in capital account remaining to be executed	625.98	10,679.14

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2022	**March 31, 2021**
Guarantees given by the Group to suppliers, government bodies and performance guarantee		
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

UTL, CGTL and KGTL have filed Writ petition with Hon'ble Rajasthan High Court with prayer to commence payment of Premium to National Highways Authority of India (NHAI) six months post actual completion of the project construction work. The Hon'ble High Court prima facie agreed with the contention of these companies and had provided interim relief from payment of premium. Vide judgement order dated 25th August, 2021, the Hon'ble High Court found merit in the contention of the companies and has directed the parties to resolve the dispute under Arbitration. The said matter is currently pending under Arbitration.

Note 29 : Trade payable

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2022 based on the information received and available with the Group.

Particulars	**March 31, 2022**	**March 31, 2021**
Principal amount remaining unpaid to any supplier as at the period end	3.69	13.18
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

MSME ageing schedule as at

Particulars	**March 31, 2022**	**March 31, 2021**
MSME Undisputed Dues	-	-
Less than 1 year	3.69	13.18
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**3.69**	**13.18**

There are no disputed dues to micro and small enterprises as per MSMED Act, 2006. The amounts payable to MSME are not due for payments.

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	**March 31, 2022**	**March 31, 2021**
Undisputed Dues		
Less than 1 year	13,369.16	3,347.92
1-2 Years	3,808.21	1,639.89
2-3 Years	12.82	22.11
More than 3 years	23.32	0.56
Total dues to creditors other than micro enterprises and small enterprises as at	**17,213.50**	**5,010.48**

There are no disputed dues to creditors other than micro enterprises and small enterprises.

Note 30 : Intangble Asset under development ageing schedule

a) Intangible asset under development (Rs in millions)

Particulars	**March 31, 2022**	**March 31, 2021**
Less than 1 year	1,055.74	1,289.86
1-2 Years	59.90	1,376.22
2-3 Years	175.24	1,699.63
More than 3 years	-	318.55
Total	**1,290.89**	**4,684.26**

b) Intangible asset under development

Particulars	**March 31, 2022**	**March 31, 2021**
To be completed in		
Less than 1 year	1,290.89	4,684.26
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total	**1,290.89**	**4,684.26**

Note 31 : Fair values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount		**Fair Value**	
	March 31, 2022	**March 31, 2021**	**March 31, 2022**	**March 31, 2021**
Financial assets				
Financial assets measured at amortised cost				
Loans	-	-	-	-
Other Financial assets	1,606.92	639.27	1,606.92	639.27
Financial assets measured at fair value through statement of Profit & Loss				
Investments (Quoted)	659.54	572.50	659.54	572.50
Financial assets measured at amortised cost				
Investments (Unquoted)	-	-	-	-
Trade receivable	51.55	100.24	51.55	100.24
Cash and cash equivalents	287.23	413.49	287.23	413.49
Other Bank balances	2,469.97	1,744.35	2,469.97	1,744.35
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	17,217.19	5,023.65	17,217.19	5,023.65
Borrowings	97,279.00	93,946.18	97,279.00	93,946.18
Other financial liabilities	38,191.92	44,919.67	38,191.92	44,919.67

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 32 : Fair value hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price in active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2022:

(Rs in millions)

	As on Mar 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**659.54**	659.54	-	-
Trade Receivable	**51.55**	-	-	51.55
Cash and cash equivalents	**287.23**	-	-	287.23
Bank balance other than above	**2,469.97**	-	-	2,469.97
Loans	**-**	-	-	-
Other Financial assets	**1,606.92**	-	-	1,606.92
Liabilities				
Borrowings	**97,279.00**	-	-	97,279.00
Trade Payable	**17,217.19**	-	-	17,217.19
Other financial liabilities	**38,191.92**	-	-	38,191.92

Quantitative disclosures fair value measurement hierarchy for financial instruments as at March 31, 2021:

(Rs in millions)

	As on March 31, 2021	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Investments (Quoted)	**572.50**	572.50	-	-
Trade Receivable	**100.24**	-	-	100.24
Cash and cash equivalents	**413.49**	-	-	413.49
Bank balance other than above	**1,744.35**	-	-	1,744.35
Loans	**-**	-	-	-
Other Financial assets	**639.27**	-	-	639.27
Liabilities				
Borrowings	**93,946.18**	-	-	93,946.18
Trade Payable	**5,023.65**	-	-	5,023.65
Other financial liabilities	**44,919.67**	-	-	44,919.67

Note 33 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on financial assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances
Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at March 31, 2022

The following table provides information about the ageing of gross carrying amount of trade recievables as at :

(Rs in millions)

Gross Carrying Amount	**March 31, 2022**	**March 31, 2021**
Undisputed Trade recievables -	-	-
Less than 6 months	-	78.58
6 months - 1 year	29.37	-
1-2 Years	0.51	21.66
2-3 Years	21.66	
Total	**51.55**	**100.24**

Other financial assets
Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest rate risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity
The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

	Borrowings	**Fixed Deposits**	**Borrowings**	**Fixed Deposits**
Balance of Fixed Deposit and Borrowings	**March 31, 2022**		**March 31, 2021**	
- INR Millions	94,124.22	2,469.97	90,833.34	1,744.35
Increase in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	(470.62)	12.35	(454.17)	8.72
Decrease in basis points - INR	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax - INR Millions	470.62	(12.35)	454.17	(8.72)

Liquidity risk
Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2022	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Long term Borrowings (Gross of unamortised transaction cost)#	98,243.70	98,243.70	4,085.74	633.43	14,152.24	79,372.29
Other financial liabilities	38,191.92	38,191.92	-	3,023.13	35,168.79	-
Trade payables	17,217.19	17,217.19	-	11,218.34	5,998.85	-
Total	**1,53,652.81**	**1,53,652.81**	**219.09**	**14,874.90**	**38,387.32**	**78,216.92**

As at March 31, 2021	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	93,946.19	93,946.19	219.09	4,307.07	11,203.11	78,216.92
Other financial liabilities	44,919.67	44,919.67	-	20,198.87	24,720.80	-
Trade payables	5,023.65	5,023.64	-	2,560.23	2,463.41	-
Total	**1,43,889.52**	**1,43,889.51**	**219.09**	**27,066.17**	**38,387.32**	**78,216.92**

Note 34 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2022.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2022	March 31, 2021
Borrowings	97,279.00	93,946.18
Less: cash and cash equivalents (Note 10)	(287.23)	(413.49)
Net debt	96,991.77	93,532.69
Equity (Note 14 and 15)	77,396.04	78,018.95
Total equity	77,396.04	78,018.95
Capital and net debt	1,74,387.81	1,71,551.64
Gearing ratio (%)	55.62%	54.52%

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 35

(a) During the year ended March 31, 2022, the Group has paid/accrued Rs. 1,779.36 millions (March 31, 2021, Rs. 875.53 millions) as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share. The said treatment has been followed in case of CGTL and UTL where premium payment has commenced during the current year.

Note 36: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	-	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWTL	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	-

Note 37 : Events after reporting period

No subsequent event has been observed which may require an adjustment to the balance sheet.

Note 38: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to Consolidated Financial Statements for the year ended March 31, 2022

Note 39 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Mukeshlal Gupta, Joint Managing Director (utpo 29 December 2021) Mr. Sudhir Rao Hoshing, Joint Managing Director (utpo 29 December 2021) and Chief Executive Officer Mr. Jose Angel Tamariz Martel Goncer, Additional Non-Executive Director (wef 29 Deember 2021) Mr. Carlos Ricardo Ugarte Cruz Coke, Additional Non-Executive Director (wef 29 Deember 2021) **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	Mr. Virendra D. Mhaiskar Mr. Boon Chin Hau **Independent Directors** Mr. K.G. Krishnamurty Ms. Ranjana Paranjape	Mr. J. Samuel Joseph Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr. Swapan Kumar Bagchi Ms. Jayashree Ranade Ms. Padma Betai Ms. Sashikala Muralidharan (upto Jan 16, 2020)
Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly known as Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Limited (IRBWTL) (upto 26 February 2020) 2. Solapur Yedeshi Tollway Limited (SYTL) (upto 26 February 2020) 3. Yedeshi Aurangabad Tollway Limited (YATL) (upto 26 February 2020) 4. Kaithal Tollway Limited (KTL) (upto 26 February 2020) 5. AE Tollway Limited (AETL) (upto 26 February 2020) 6. Udaipur Tollway Limited (UTL) (upto 26 February 2020) 7. CG Tollway Limited (CGTL) (upto 26 February 2020) 8. Kishangarh Gulabpura Tollway Limited (KGTL) (upto 26 February 2020) 9. IRB Hapur Muradabad Tollway Limited (IRBHMTL) (upto 26 February 2020)		

Others

1. Ideal Road Builders Private Limited (IRBPL)
2. Mhaiskar Infrastructure Private Limited (MIPL)
3. Modern Road Makers Private Limited (MRMPL)
4. Aryan Toll Road Private Limited (ATRPL)
5. ATR Infrastructure Private Limited (ATRFL)
6. IRB Infrastructure Private Limited (IRBFL)
7. Thane Ghodbunder Toll Road Private Limited (TGTRPL)
8. Aryan Infrastructure Investments Private Limited (AIIPL)
9. IRB MP Expressway Private Limited (formerly known as NKT Road and Toll Private Limited)
10. MMK Toll Road Private Limited (MMK) (upto 26 February 2020)
11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK)
12. Aryan Hospitality Private Limited (AHPL)
13. IRB Sindhudurg Airport Private Limited (IRBSA)
14. IRB Goa Tollway Private Limited (IRB Goa)
15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS)
16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV)
17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL)
18. GE1 Expressway Private Limited (formerly known as IRB PP Project Private Limited)
19. VK1 Expressway Private Limited (VK1)
20. Modern Estate (Partnership Firm) (upto 23 November 2020)
21. Pathankot Mandi Highway Private Limited (w.e.f. 23 April 2021)
22. Chittoor Thachur Highway Private Limited (w.e.f. 13 October 2021)
23 .VM7 Expressway Private Limited (w.e.f. 14 August 2020)
24. Palshit Dhankuni Tollway Private Limited (w.e.f. 15 April 2021)
25. Meerut Budaun Expressway Private Limited (w.e.f. 5 January 2022)

C) Other Associate Companies of Sponsor / Project Manager

1. VCR Toll Services Private Limited
2. VDM Ventures Private Limited
3. DEUX Farming Films Private Limited
4. IRB Charitable Foundation

Key Managerial personnel of Project SPV Group (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end)

1. Mr. Rajendra Kumar Agarwal (upto March 30, 2018)
2. Mr. Darshan Sangurdekar
3. Mr. Omprakash Singh
4. Jitendra Sharma (upto February 28, 2022)
5. Mrs. Heena Raja (upto October 01, 2021)
6. Mr. C. S. Kaptan
7. Ms. Shilpa Todankar
8. Mrs. Ranjana Paranjape (w.e.f October 06, 2021)
9. Mr.Abhay Phatak (w.e.f. March 09, 2022)

I. Related Party Transactions (Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
1	**Contract expenses**	-	-	**629.52**	**921.31**	-	-
	Modern Road Makers Private Limited	-	-	629.52	921.31	-	-
2	**Operation & Main. Expenses**	**1,906.45**	**1,826.29**	-	-	-	-
	IRB Infrastructure Developers Limited	1,906.45	1,826.29	-	-	-	-
3	**Finance Cost -Interest unwinding on Trade payable**	-	-	**655.79**	-	-	-
	Modern Road Makers Private Limited	-	-	655.79	-	-	-
4	**Share application money received**	-	**2,603.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	2,603.81	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
5	**Allotment of Equity Share**	-	**2,603.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	2,603.81	-	-	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
6	**Expenses incurred on our behalf**	-	**5.71**	-	**6.05**	-	-
	IRB Infrastructure Developers Limited	-	5.71	-	-	-	-
	Modern Road Makers Private Limited	-	-		6.05	-	-
7	**Mobilisation advances recovered**	**743.02**	**1,672.70**	-	-	-	-
	IRB Infrastructure Developers Limited	743.02	1,672.70	-	-	-	-
8	**Material Aggregate Purchase**	-	-	**1,555.19**	**2,062.51**	-	-
	Modern Road Makers Private Limited	-	-	1,555.19	2,062.51	-	-
9	**Advance given including BG margin given**	**451.03**	**208.50**	**62.57**	**75.42**	-	-
	IRB Infrastructure Developers Limited	451.03	208.50	-	-	-	-
	Modern Road Makers Private Limited	-	-	62.57	75.42	-	-
10	**General advance recovered - EPC**	**394.25**	**183.71**	**62.48**	**75.42**	-	-
	IRB Infrastructure Developers Limited	394.25	183.71	-	-	-	-
	Modern Road Makers Private Limited	-	-	62.48	75.42	-	-
11	**Construction cost**	**8,484.71**	**13,535.60**	-	**2,194.10**	-	-
	IRB Infrastructure Developers Limited	8,484.71	13,535.60	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	2,194.10	-	-
12	**Amount held up**	-	-	**2.76**	**7.51**	-	-
	Modern Road Makers Private Limited	-	-	2.76	7.51	-	-
13	**Other payable**	-	**3.88**	-	**5.85**	-	-
	IRB Infrastructure Developers Limited		3.88	-	-	-	-
	Modern Road Makers Private Limited	-	-	-	5.85	-	-
	IRB Goa Tollway Private Limited	-	-	-	-	-	-
	Mhaiskar Infrastrcture Private Limited	-	-		-	-	-

I. Related Party Transactions (Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidaries of Project SPV Group		Key Management Personnel of Project SPV Group	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
14	**Other payable**	**-**	**-**	**48.71**	**48.71**	-	-
	IRB Infrastructure Developers Limited	-		-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	48.71	48.71	-	-
15	**Fair value loss on measurement of other payable**	**2,161.31**	**-**				
	IRB Infrastructure Developers Limited	2,161.31	-				
16	**Expenses incurred on our behalf**	**1.77**					
	IRB Infrastructure Developers Limited	1.77					
17	**Unsecured Loan received**	**4,759.00**	**3,677.76**				
	IRB Infrastructure Developers Limited	4,759.00	3,677.76				
18	**Other payable repayment**	**-**	**5,105.50**	**-**	**1.17**	-	-
	IRB Infrastructure Developers Limited	-	5,105.50	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-		1.17	-	-
19	**Unsecured Loan repaid**	**4,828.83**	**-**				
	IRB Infrastructure Developers Limited	4,828.83	-				
20	**Units Issued**	**1,946.33**	**-**	-	-	-	-
	IRB Infrastructure Developers Limited	1,946.33	-	-	-	-	-
21	**Trade payable**	**-**	-	**12.88**	-	-	-
	MMK Toll Road Private Limited	-	-	12.88	-	-	-
22	**Additional Intangible Asset**	-	-	**7,148.39**	-	-	-
	Modern Road Makers Private Limited	-	-	7,148.39	-	-	-
23	**Short - term borrowings taken (unsecured)**	-	**477.81**	-	-	-	-
	IRB Infrastructure Developers Limited	-	477.81	-	-	-	-
24	**Director sitting fees paid**	-	-	-	-	**1.65**	**1.23**
	Mr. Darshan Sangurdekar	-	-	-	-	0.23	0.17
	Mr.Omprakash Singh	-	-	-	-	0.23	0.18
	Mr. Jitendra Sharma	-	-	-	-	0.41	0.37
	Mrs. Heena Raja	-	-	-	-	0.06	0.08
	Mr. C S Kaptan	-	-	-	-	0.39	0.24
	Ms. Shilpa Todankar	-	-	-	-	0.26	0.19
	Mrs.Ranjana Paranjape	-	-	-	-	0.05	-
	Mr. Abhay Pathak	-	-	-	-	0.02	-

II. Related party balances

(Rs. in millions)

Sr. No.	Particulars	Sponsor and Project Manager		Fellow subsidiaries of Project SPV Group		Key Management Personnel of Project SPV	
		March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021	March 31, 2022	March 31, 2021
1	**Short-term borrowings**	**477.81**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	477.81	-	-	-	-	-
2	**Trade payable**	**1,189.05**	**1,119.15**	**11,968.59**	**2,925.97**	**-**	**-**
	IRB Infrastructure Developers Limited	1,189.05	1,119.15	-	-	-	-
	Modern Road Makers Private Limited	-	-	11,888.28	2,925.97	-	-
	MMK Toll Road Private Limited	-	-	80.31	-	-	-
3	**Mobilisation advances**	**435.80**	**1,522.77**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	435.80	1,522.77	-	-	-	-
4	**Advance given**	**502.86**	**102.14**	**0.03**	**1.17**	**-**	**-**
	IRB Infrastructure Developers Limited	502.86	102.14	-	-	-	-
	Modern Road Makers Private Limited	-	-	0.03	1.17	-	-
5	**Retention payable**	**-**	**-**	**256.49**	**190.35**	**-**	**-**
	Modern Road Makers Private Limited	-	-	256.49	190.35	-	-
6	**Other payable including BG margin payable**	**31,711.77**	**29,550.45**	**3,648.68**	**3,599.97**	**-**	**-**
	IRB Infrastructure Developers Limited	31,711.77	29,550.45	-	-	-	-
	Modern Road Makers Private Limited	-	-	1,800.83	1,800.83	-	-
	IRB Goa Tollway Private Limited	-	-	1,544.86	1,544.86	-	-
	Mhaiskar Infrastructure Private Limited	-	-	302.98	254.28	-	-
7	**Other payable (Exp incurred on our behalf)**	**1.77**	**-**				
	IRB Infrastructure Developers Limited	1.77	-				
8	**Unsecured Loan / other payable**	**3,607.93**	**4155.57**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,607.93	4155.57	-	-	-	-
9	**Trade Receivable**	**-**	**-**	**0.51**	**0.51**	**-**	**-**
	Modern Road Makers Private Limited	-	-	0.51	0.51	-	-
10	**BG margin money receivable**	**-**	**0.54**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	-	0.54	-	-	-	-
11	**Expense payable**	**938.23**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	938.23	-	-	-	-	-
12	**Director sitting fees Payable**	**-**	**-**	**-**	**-**	**0.43**	**0.28**
	Mr. Rajendra kumar Agarwal	-	-	-	-	0.01	-
	Mr. Darshan Sangurdekar	-	-	-	-	0.05	0.04
	Mr. Omprakash Singh	-	-	-	-	0.05	0.04
	Mr. Jitendra Sharma	-	-	-	-	0.09	0.09
	Mrs. Heena Raja	-	-	-	-	-	0.02
	Mr. C S Kaptan	-	-	-	-	0.11	0.08
	Miss Shilpa Todankar	-	-	-	-	0.09	0.01
	Mrs. Ranjana Paranjape	-	-	-	-	0.03	-

Note 40 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or expected construction completion date, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	June 30, 2022
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2044	29 years	October 15, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	September 24, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	March 29, 2019
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	November 24, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	June 01, 2021
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	August 14, 2021
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	June 30, 2022
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	June 30, 2022

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 41: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year.

The following reflects the income and share data used in the EPU computations:

(Rs in millions)

	March 31, 2022	March 31, 2021
Profit attributable to unit holders for earnings	(4,435.98)	(3,252.48)
Weighted average number of Units for EPU	84,29,14,666	78,47,08,356
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(5.26)	(4.14)

Note 42 : COVID-19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

The management has assessed and determined that considering the nature of its operations and overall revenue model, COVID-19 does not have material impact on the Group's financial position as at March 31, 2022 and its financial performance for the year then ended.

Note 43 : Other Statutory information

i) The Group have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Group does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Group.

iii) The Group do not have any transactions with companies struck off.

iv) The Group have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Group have not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Group have not advance or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Group shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Group (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vii) The Group did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

viii) The Group has not declared a wilful defaulter by any bank/ financial institution or any other lender during the year.

Note 44 : Subsequent events

IRB Infrastructure Trust ("the Trust") has successfully completed fund raising by way of Rights Issue of Units amounting to Rs. 242.50 Crores from existing unitholders. The IRB Infrastructure Developers Limited (IRBIDL) being the Sponsor and 51% unitholder of the Private InvIT, invested Rs. 123.68 Crores and GIC Affiliates holding 49% units have invested Rs. 118.82 Crores. Post the rights issue, IRBIDL will continue to hold 51% units and GIC affiliates will continue to hold 49% units in the Trust.

Further, IRBIDL being the Sponsor of the Trust, has executed necessary Agreement/ documents for implementation of Palsit Dankuni Tollway Private Limited (PDTPL) by the Trust and accordingly, the Project will be executed by the IRBIDL and the Trust.

Note 45 : Previous year comparatives

Consequent to the issuance of " Guidance Note on Division II – Ind AS Schedule III to the Companies Act, 2013" certain items of financial statements have been regouped/ reclassified.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Kaustubh Deshpande
Partner
Membership No. 121011

Place: Mumbai
Date: 06/05/2022

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : U45200MH2002PTC135512

SD/-
Virendra D. Mhaiskar
Chairman
DIN :00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.:A27833

Place : Mumbai
Date: 06/05/2022

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT
To the Unit Holders of IRB Infrastructure Trust
Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying consolidated financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust") and its subsidiaries (the Trust and its subsidiaries together referred to as "the Group"), which comprise the consolidated Balance Sheet as at 31 March 2021, the consolidated Statement of Profit and Loss including Other Comprehensive Income, the consolidated Statement of Cash Flows and the consolidated Statement of Changes in Unit Holder's Equity for the year ended 31 March 2021, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value as at 31 March 2021 and notes to the consolidated financial statements including a summary of significant accounting policies and other explanatory information (hereinafter referred to as "the consolidated financial statements").

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate financial statements and on the other financial information of the subsidiaries, the aforesaid consolidated financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI lnvlT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the consolidated state of affairs of the Group as at 31 March 2021, its consolidated Loss including other comprehensive income, its consolidated cash flows, consolidated changes in Unit holders' equity for the year ended 31 March 2021, the consolidated net assets at fair value and the consolidated total returns at fair value as at 31 March 2021.

Basis for Opinion

We conducted our audit of the consolidated financial statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the consolidated financial statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the consolidated financial statements.

Key Audit Matters

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Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current financial year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

Particulars	How they were addressed in our audit
Gain/Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Gain/Loss on fair value measurement of other payable'.	• We reviewed Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to Sponsor estimated by the valuer taking into consideration the weighted average of probabilities of realization has been validated.
Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major

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recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined a key audit matter.	components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were appropriate to the circumstances. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.
Cost Overrun We have been informed that, since April 2020, due to pandemic situation, construction of certain projects have been affected and delayed, which has resulted into additional costs to projects in relation to machinery idling, labor expenses, material prices, restoration of damaged works etc. Considering above, SPVs have been charged with such additional costs. We were further informed that SPVs intend to raise claim to NHAI in this regard and shall repay the costs as per the contract immediately upon receipt of claims. Based on nature of transactions, the same are considered to be Key Audit Matter.	• We perused the legal opinion obtained in an earlier matter in case of IRB WC over similar issue to understand the tenability of the claims to be filed with Authority. • We reviewed addendum to the Project Implementation Agreement. • We also referred to the invoices raised on the SPVs. • Tested the arithmetical accuracy of fair valuation of accounting entries and presentation in financial statements. • Obtained clarity from the management regarding repayment plans in future years.

Information Other than the consolidated Financial Statements and Auditor's Report thereon

The Board of Directors of the Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the consolidated financial statements and our report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

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In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether
the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors of Investment Manager for the Consolidated Financial Statements

The Board of Directors of Investment Manager is responsible for the preparation of these consolidated financial statements that give a true and fair view of the consolidated financial position as at 31 March 2021, consolidated financial performance including other comprehensive income, consolidated cash flows and consolidated changes in unit holder's equity for the year ended 31 March 2021, the consolidated net assets at fair value and the consolidated total returns at fair value as at 31 March 2021 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Group and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the consolidated financial statements, the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager and respective Board of Directors of the subsidiary companies included in the Group either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of the Investment Manager and the respective Board of Directors of the subsidiary companies included in the Group are also responsible for overseeing the financial reporting process.

Auditor's Responsibility for the Audit of the consolidated Ind AS Financial Statements

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Our objectives are to obtain reasonable assurance whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also**:**

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors of the Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the consolidated financial statements.

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Materiality is the magnitude of misstatements in the consolidated financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

We did not audit the financial statements of 4 subsidiaries, whose financial statements reflect total assets of Rs. 1,01,599.26 million and net assets of Rs. 38,206.58 million as at 31 March 2021, total revenues of Rs. 3,426.73 million, Loss after taxes of Rs. 4,157.14 million and net cash inflows amounting to Rs. 27.79 million for the year ended on 31 March 2021, as considered in the consolidated financial statements. These financial statements have been audited by other auditors whose reports have been furnished to us by the Investment Manager and our opinion on the consolidated financial statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries is based solely on the reports of the other auditors.

Our opinion above, on the consolidated financial statements, and our report on other legal and regulatory requirements below, are not modified in respect of the above matters with respect to our reliance on the work done by and the reports of the other auditors.

Report on Other Legal and Regulatory Requirements

Based on our audit and as required by SEBI InvIT Regulations, we report that**:**

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid consolidated financial statements.

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b. In our opinion, proper books of account as required by law relating to preparation of the aforesaid consolidated financial statements have been kept by the Trust so far as it appears from our examination of those books and the reports of the other auditors.

c. The consolidated Balance Sheet, the consolidated Statement of Profit and Loss, the consolidated Statement of Cash Flows, the consolidated Statement of Changes in Unit Holders' Equity, the consolidated Statement of Net Assets at fair value and the consolidated Statement of Total Returns at fair value are in agreement with the books of account.

d. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For
Gokhale & Sathe
Chartered Accountants
FRN: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No. 148652
UDIN: 21148652AAAAHV8814
Date: 24 May 2021.
Place: Mumbai

tel.: (22) 43 48 42 42 | fax: (22) 43 48 42 41 | office@gokhalesathe.in

IRB Infrastructure Trust
Consolidated Balance Sheet as at March 31, 2021

(Amount in Millions.)

	Note No.	As at March 31, 2021	As at March 31, 2020
ASSETS			
Non-current assets			
Property, Plant and Equipment	4	10.60	13.18
Goodwill		604.54	604.54
Other Intangible assets	4	2,11,717.65	1,99,478.98
Intangible assets under development	4	4,684.26	13,853.63
Financial assets			
i) Loans	7	2.74	0.46
ii) Others	8	0.54	0.60
Other non-current assets	10	0.14	-
		2,17,020.47	**2,13,951.39**
Current Assets			
Financial assets			
i) Investments	5	572.50	-
ii) Trade receivables	6	100.24	352.12
iii) Cash and cash equivalents	11	413.49	189.70
iv) Bank balance other than (ii) above	12	1,744.35	1,576.40
v) Loans	7	6.89	4.63
vi) Others	8	629.10	395.63
Current tax assets (net)	13	147.11	207.90
Other current assets	14	2,166.40	3,399.05
		5,780.08	**6,125.43**
Total assets		**2,22,800.55**	**2,20,076.82**
EQUITY AND LIABILITIES			
Equity			
Unit Capital	15	81,688.00	76,582.50
Other equity	16	(3,669.05)	(312.75)
Total unit holder's equity		**78,018.95**	**76,269.75**
Non-current liabilities			
Financial liabilities			
i) Borrowings	17	89,161.31	77,374.13
ii) Other financial liabilities	19	24,720.81	35,070.78
iii) Trade payables	20	2,463.41	-
Provisions	21	357.84	64.96
Deferred tax liabilities (net)	9	424.33	395.71
		1,17,127.70	**1,12,905.58**
Current liabilities			
Financial liabilities			
i) Borrowings	17	4,155.57	0.00
ii) Trade payables	18		
a) total outstanding dues of micro enterprises and small enterprises		13.18	14.36
b) total outstanding dues of creditors other than micro enterprises and small enterprises		2,547.07	2,731.74
ii) Other financial liabilities	19	20,828.17	27,992.85
Other current liabilities	22	109.78	162.54
Current tax liabilities (net)		0.14	-
		27,653.91	**30,901.49**
Total liabilities		**1,44,781.60**	**1,43,807.07**
Total equity and liabilities		**2,22,800.55**	**2,20,076.82**

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
Consolidated statement of Profit & Loss for the year ended March 31, 2021

(Amount in Millions.)

Particulars	Note No.	For the year ended March 31, 2021	For the month ended March 31, 2020
Income			
Revenue from operations	23	10,361.51	2,547.14
Other income	24	112.71	19.72
Total income		**10,474.22**	**2,566.86**
Expenses			
Cost of material consumed			-
Road work and site expenses	25	3,983.41	2,048.44
Depreciation and amortisation expenses	26	1,255.69	123.48
Finance costs	27	8,228.17	659.36
Investment Manager Fees		46.25	26.92
Other expenses	28	138.32	26.75
Total expenses		**13,651.84**	**2,884.95**
Profit before tax		**(3,177.62)**	**(318.09)**
Tax expenses			
Current tax		46.20	(6.54)
Deferred tax		369.63	1.20
MAT Credit utilisation / (Entitlement)		(340.97)	-
Total tax expenses		**74.86**	**(5.34)**
Profit/(Loss) after tax		**(3,252.48)**	**(312.75)**
Other comprehensive income			
Item that will not be reclassified to profit or loss:			
(a) Re-measurement (loss)/gain on defined benefit plans (net of taxes)			-
Other comprehensive (loss) for the year, net of tax		-	-
Total comprehensive (loss) for the year		**(3,252.48)**	**(312.75)**
Profit/(Loss) after tax		**(3,252.48)**	**(312.75)**
Attributable to:			
Owners of the Project SPV Group		(3,252.48)	(312.75)
Non-controlling interests		-	-
Attributable to:			
Unit holders of the Project SPV Group		(3,252.48)	(312.75)
The accompanying summary of significant accounting policies and other explanatory information (notes)are an integral part of Combined Financial Statements.			
Earnings per unit (of Rs 10 each)			
Basic		(4.14)	(4.14)
Diluted		(4.14)	(4.14)
Summary of significant accounting policies	3		

The accompanying notes are an integral part of the Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
Statement of Changes in unit holders equity for the year ended March 31, 2021

(Rs . In Millions)

	As at March 31, 2021	As at March 31, 2020
a. Unit Capital:		
At the beginning of the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**
B. Other equity		
i) Retained earnings		
At the beginning of the year	(312.75)	-
(loss) for the year	(3,252.48)	(312.75)
Unit issue expenses	(103.82)	
At the end of the year	**(3,669.05)**	**(312.75)**

As per our report of even date attached

For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company Secretary

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
Consolidated Cash Flow Statement for the year ended March 31, 2021

(Amount in Millions.)

Particulars	For the year ended March 31, 2021	For the year ended March 31, 2020
Cash flow from operating activities		
Profit/(Loss) before tax	**(3,177.62)**	**(318.09)**
Adjustment to reconcile profit before tax to net cash flows:		
Depreciation and amortisation	1,255.69	123.48
Resurfacing expenses	292.88	64.96
Fair value gain on mutual funds	(1.43)	0.38
Net (gain) on sale of current Investment	(13.08)	(0.09)
Finance costs	8,228.17	659.36
Interest income	(82.04)	(9.42)
Gain/(loss) on fair value measurement of other payable	(2.86)	-
Other non operative income	(13.28)	(10.59)
Operating profit before working capital changes	**6,486.41**	**509.99**
Movement in working capital:		
Increase/ (decrease) in trade payables	2,277.55	(315.42)
Increase/ (decrease) in provisions	-	(66.10)
Increase/ (decrease) in other financial liabilities	(2,516.37)	605.03
(Decrease)/ increase in other liabilities	(52.75)	(1,027.58)
Decrease / (increase) in trade receivables	251.88	(351.79)
Decrease / (increase) in inventories	-	0.50
Increase in loans	(4.53)	(0.37)
(Increase) / decrease in other financial assets	(213.15)	78.73
(Increase) / decrease in other assets	1,232.51	171.19
Cash generated from operations	**7,461.55**	**(395.82)**
Taxes paid (net)	14.70	(67.99)
Net cash flows generated from operating activities	**7,476.25**	**(463.81)**
Cash flows from investing activities		
Purchase of property, plant and equipment including CWIP, intangible assets including intangible assets under development and capital advances	(18,933.90)	(1,204.89)
Repayment of bank loan	-	(30,000.00)
Payment to Sponsor	-	(7,525.40)
Proceeds from sale/ (purchase) of current investments (net)	(557.99)	217.44
Investments/ Redemption in bank deposits (having original maturity of more than three months) (net)	(167.95)	(33.38)
Interest received	75.08	(60.74)
Net cash flows (used in) investing activities	**(19,584.76)**	**(38,606.97)**
Cash flows from financing activities		
Proceeds from non-current borrowings	9,204.86	1,440.96
Repayment of non-current borrowings	(39.62)	-
Proceeds/ (Repayment) of current borrowings (net)	4,155.57	-
Issue of Unit capital #	5,105.50	37,525.40
Unit issue expenses	(103.82)	-
Finance cost paid	(5,990.16)	27.10
Net cash flows generated from financing activities	**12,332.32**	**38,993.46**
Net increase / (decrease) in cash and cash equivalents (A+B+C)	**223.81**	**(77.32)**
Cash and cash equivalents at the beginning of the year	**189.69**	**-**
Cash and cash equivalents at the end of the year	**413.50**	**(77.32)**
Components of cash and cash equivalents		
Balances with scheduled banks:		
- Trust, retention and other escrow accounts	113.94	74.14
- Others	288.60	105.39
Cash on hand	10.96	10.17
	413.50	**189.69**
Less: On acquisition of assets	-	(267.02)
Total cash and cash equivalents	**413.50**	**(77.32)**

IRB Infrastructure Trust
Consolidated Cash Flow Statement for the year ended March 31, 2021

(Amount in Millions.)

Particulars	For the year ended March 31, 2021	For the year ended March 31, 2020
Debt reconciliation statement in accordance with Ind AS 7		
Opening balances		
Long term borrowing	78,815.63	-
Short term borrowing	-	-
Movements		
Cash Flows		
Long term borrowing	9,165.24	1,440.96
Short term borrowing	4,155.57	-
Non-cash changes		
Long term borrowing	2,852.47	77,374.67
Short term borrowing	-	-
Closing balances		
Long term borrowing	90,833.34	78,815.63
Short term borrowing	4,155.57	-

Notes :
1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The Consolidated cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows".

Summary of significant accounting policies (refer note 3)

The accompanying notes are an integral part of the Financial Statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : L65910MH1998PLC115967

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Consolidated statement of net assets at fair value

(Rs. in Millions)

	As at March 31, 2021		As at March 31, 2020	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	2,22,800.55	2,45,589.10	2,20,076.81	2,15,070.07
B. Liabilities (at book value)	1,42,318.19	1,31,113.67	1,43,807.08	1,17,991.06
C. Net Assets (A-B)	80,482.36	1,14,475.43	76,269.73	97,079.01
D. Number of units (in millions)	816.88	816.88	765.83	765.83
E. NAV (C/D) (Amount in Rs.)	**98.52**	**140.14**	**99.59**	**126.76**

Project wise break up of fair value of total assets:

Name of the project	**As at March 31, 2021**
IRB Westcoast Tollway Limited (IRBWTL)	25,099.88
Solapur Yedeshi Tollway Limited (SYTL)	20,334.01
Yedeshi Aurangabad Tollway Limited (YATL)	37,779.33
Kaithal Tollway Limited (KTL)	31,593.43
AE Tollway Limited (AETL)	28,459.34
Udaipur Tollway Limited (UTL)	23,777.90
CG Tollway Limited (CGTL)	25,131.76
Kishangarh Gulabpura Tollway Limited (KGTL)	16,827.30
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	36,478.11
Subtotal	**2,45,481.07**
Add : IRB Infrastructure Trust Current Assets	**108.03**
Total assets	**2,45,589.10**

B. Consolidated statement of total returns at fair value :

(Rs. in Millions)

Particulars	**For the year ended March 31, 2021**	**For the year ended March 31, 2020**
Total Comprehensive Income (As per the Statement of Profit and Loss)	(3252.48)	(312.75)
Add/Less: other changes in fair value (e.g., in investment property, property, plant & equipment (if cost model is followed)) not recognized in total comprehensive income	33,993.07	20,809.28
Total Return	**30,740.59**	**20,496.53**

Notes :
Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D.Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date: 24.05.2021

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

1 **Corporate Information**

The IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under the Registration Act, 1908 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Fund is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Fund is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Fund is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registraion certificate from SEBI on November 25, 2019.

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprise of nine road projects as listed below:-

Project SPV Name**	Residual Concession life*	shareholding	Nature of Investment	Status	Principal Activities	Country of incorporation
IRB Westcoast Tollway Limited (IRBWTL)	20 years 11 Months 1 days	100%	Subsidiary	Tolling and Construction	Construction and operation of road including toll collection.	India
Solapur Yedeshi Tollway Limited (SYTL)	22 years 9 Months 21 days	100%	Subsidiary	Operating		India
Yedeshi Aurangabad Tollway Limited (YATL)	20 years 2 Months 31 days	100%	Subsidiary	Operating		India
Kaithal Tollway Limited (KTL)	21 years 3 Months 14 days	100%	Subsidiary	Operating		India
AE Tollway Limited (AETL)	19 years 4 Months 2 days	100%	Subsidiary	Operating		India
Udaipur Tollway Limited (UTL)	17 years 5 Months 3 days	100%	Subsidiary	Tolling and Construction		India
CG Tollway Limited (CGTL)	16 years 7 Months 4 days	100%	Subsidiary			India
Kishangarh Gulabpura Tollway Limited (KGTL)	16 years 10 Months 21 days	100%	Subsidiary			India
IRB Hapur Moradabad Tollway Limited (IRBHMTL)	20 years 1 Months 25 days	100%	Subsidiary			India

* Represents residual concession life as at March 31, 2021 as per original concession period (without considering extension of concession period, if any).

** Of the above Project SPVs, IRBWTL, SYTL, YATL, AETL, CGTL, UTL and IRBHMTL have been converted to public companies on November 13, 2019 and KTL, KGTL and November 14, 2019 respectively.

2 **Basis of preparation**

Statement of compliance

The Consolidated Financial Statements of Project SPV Group comprises of Consolidated Balance Sheets as at March 31, 2021, Consolidated Statement of Profit and Loss, Consolidated Cash Flow Statement and Consolidated Statement of Changes in Equity for year ended March 31, 2021, and Consolidated Statement of Net Assets at Fair Value as at March 31, 2021 and the Consolidated Statement of Total Return at Fair Value for the year ended March 31, 2021, a summary of significant accounting policies, notes and other explanatory Information.

The Consolidated Financial Statements of the Project SPV Group have been prepared in accordance with Indian Accounting Standards (Ind AS) as per the Companies (Indian Accounting Standards) Rules, 2015 notified under Section 133 of the Act, read with other relevant provisions of the Act.The Consolidated Financial Statements have been prepared on a historical cost basis, except for certain assets and liabilities which have been measured at fair value.

The Consolidated Financial Statements are presented in Rs. in millions, except when otherwise indicated.

Basis of preparation of Consolidated Financial Statements

The Consolidated Financial Statements comprise the financial statements of the Project SPV Group.

Consolidated Financial Statements are prepared using uniform accounting policies for like transactions and other events in similar circumstances.

The financial statements of all Project SPVs used for the purpose of consolidation are drawn up to the same reporting date year ended on March 31.

Consolidation procedure:

(a) Combine like items of assets, liabilities, equity, income, expenses and cash flows of Project SPVs.

(b) Eliminate in full intra Project SPVs assets and liabilities, income, expenses and cash flows relating to transactions between Project SPVs of the Project SPV Group (profits or losses resulting from intra Project SPV Group transactions that are recognised in assets, such as inventory and property, plant and equipment, are eliminated in full). Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Project SPV Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

3 **Summary of significant accounting policies**

3.01 **Current versus non-current classification**

The Project SPV Group has identified twelve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Project SPV Group presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:

- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Project SPV Group classifies all other liabilities as non-current.
Deferred tax assets and liabilities are classified as non-current assets and liabilities.

3.02 **Use of estimates and judgements**

The preparation of the Project SPV Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Project SPV Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Fair value measurement of financial instruments

Employee benefits
Measurement of employee defined benefit obligations; key actuarial assumptions

Provision for major maintenance

Impairment of non financial assets

3.03 **Fair value measurement**

The Project SPV Group measures financial instruments, (refer note 33) at fair value at each balance sheet date.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

- In the principal market for the asset or liability, or
- In the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Project SPV Group.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Project SPV Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable

Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Project SPV Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

The Project SPV Group's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Project SPV Group's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Audit Committee and the Project SPV Group's independent auditors. This includes a discussion of the major assumptions used in the valuations.

For the purpose of fair value disclosures, the Project SPV Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions (note 33)

Financial instruments (including those carried at amortised cost) (note 5,6,7,8,11,12,17,18,19,33)

Quantative disclosure of fair value measurement hierarchy (note 33)

3.04 **Revenue recognition**

The Project SPV Group has applied the following accounting policy for revenue recognition:

Revenue from contracts with customers:

The Project SPV Group recognises revenue from contracts with customers based on a five step model as set out in Ind AS 115:

Step 1. Identify the contract(s) with a customer: A contract is defined as an agreement between two or more parties that creates enforceable rights and obligations and sets out the criteria for every contract that must be met.

Step 2. Identify the performance obligations in the contract: A performance obligation is a promise in a contract with a customer to transfer a good or service to the customer.

Step 3. Determine the transaction price: The transaction price is the amount of consideration to which the Company expects to be entitled in exchange for transferring promised goods or services to a customer, excluding amounts collected on behalf of third parties.

Step 4. Allocate the transaction price to the performance obligations in the contract: For a contract that has more than one performance obligation, the Company will allocate the transaction price to each performance obligation in an amount that depicts the amount of consideration to which the Company expects to be entitled in exchange for satisfying each performance obligation.

Step 5. Recognise revenue when (or as) the entity satisfies a performance obligation.

The Project SPV Group satisfies a performance obligation and recognises revenue over time, if one of the following criteria is met:

1. The customer simultaneously receives and consumes the benefits provided by the Project SPV Group's performance as the Project SPV Group performs; or
2. The Project SPV Group's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
3. The Project SPV Group's performance does not create an asset with an alternative use to the Project SPV Group and the entity has an enforceable right to payment for performance completed to date.

Contract revenue

Contract revenue associated with the utility shifting incidental to construction of road are recognized as revenue by reference to the stage of completion of the projects at the balance sheet date. The stage of completion of project is determined by the proportion that contract cost incurred for work performed up to the balance sheet date bears to the estimated total contract costs.

Project SPVs operations involve levying of GST on the construction work. Goods and Service tax is not received by the project SPVs on its own account, rather, it is tax collected on value added to the commodity by the seller on behalf of the government. Accordingly, it is excluded from revenue.

Income from the concession arrangements earned under the intangible asset model consists of the (i) fair value of contract revenue, which is deemed to be fair value of consideration transferred to acquire the asset; and (ii) payments actually received from the users. The intangible asset is amortised over its expected useful life in a way that reflects the pattern in which the asset’s economic benefits are consumed by the Project SPV Group, starting from the date when the right to operate starts to be used. Based on these principles, the intangible asset is amortised in line with the actual usage of the specific public utility facility, with a maximum of the duration of the concession.

Financial receivable is recorded at a fair value of guaranteed residual value to be received at the end of the concession period. This receivable is subsequently measured at amortised cost. In the financial assets model, the amount due from the grantor meet the identifiation of the receivable which is measured at fair value. Based on business model assessment, the Project SPV Group measures such financial assets at fair value and subsequently also classifies the same as fair value through profit and loss (“FVTPL”). Any asset carried under concession arrangements is derecognised on disposal or when no future economic benefits are expected from its future use or disposal or when the contractual rights to the financial asset expire.

Income from toll contracts

The income from Toll Contracts on BOT basis are recognised on actual collection of toll revenue (net of revenue share payable to NHAI) as per Concession Agreement. Revenue from electronic toll collection is recognised on accrual basis.

Interest income

For all financial assets measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortised cost of a financial liability. When calculating the effective interest rate, the Project SPV Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in finance income in the statement of profit and loss.

Dividends

Revenue is recognised when the Project SPV Group's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.05 **Government Grants**

Grants and subsidies from the government are recognised if the following conditions are satisfied.

There is reasonable assurance that the Project SPV Group will comply with the conditions attached to it.

Such benefits are earned and reasonable certainty exists of the collection.

Government grants are recognised in accordance with the terms of the respective grant on accrual basis considering the status of compliance of prescribed conditions and ascertainment that the grant will be received.

Grant received are considered as a part of the total outlay of the construction project and accordingly, the same is reduced from the gross value of assets.

3.06 **Taxes**

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country where the Company operates and generates taxable income.

Current income tax relating to items recognised outside profit or loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction. affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity .

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Tax benefits acquired as part of a business combination, but not satisfying the criteria for separate recognition at that date, are recognised subsequently if new information about facts and circumstances change. Acquired deferred tax benefits recognised within the measurement period reduce goodwill related to that acquisition if they result from new information obtained about facts and circumstances existing at the acquisition date. If the carrying amount of goodwill is zero, any remaining deferred tax benefits are recognised in OCI/ capital reserve depending on the principle explained for bargain purchase gains. All other acquired tax benefits realised are recognised in the consolidated statement of profit and loss. Deferred tax is recognised in consolidated statement of profit and loss on the consolidated adjustments.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Project SPV Group will pay normal income tax during the specified period. Deferred tax assets on such tax credit is recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

3.07 **Property, plant and equipment**

Property, plant and equipment are stated at cost, less accumulated depreciation and impairment losses if any. Cost comprises the purchase price and any attributable cost of bringing the asset to its working condition for its intended use.Any trade discount or rebates are deducted in arriving at the purchase price.

Depreciation is calculated on written down value method (WDV) using the useful lives as prescribed under the Schedule II to the Companies Act, 2013 or re-assessed by the Project SPV Group based on technical evaluation. The Project SPV Group has estimated the following useful lives for its tangible fixed assets:

Asset class	Useful life	As per Companies Act 2013
Building	30 years	30 years
Plant & Machinery	9 years - 15 years	9 years - 15 years
Office equipment	5 years	5 years
Computers	3 years	3 years
Servers	6 years	6 years
Vehicles	8 years	8 years
Furniture & fixtures	10 years	10 years

3.08 **Intangible assets**

The Project SPV Group exercised first time adoption under Ind AS 101 and has elected to continue with the carrying value of its "Toll Collection Rights" (Intangible Assets) including corresponding obligation, as recognised in the financial statements as at the date of transition April 1, 2016 measured as per the Previous GAAP and uses that as its deemed cost as at date of transition.

Toll collection rights are stated at cost, less accumulated amortisation , impairment losses and grant from government. Cost includes:
a) For acquired Toll Collection Rights - Upfront payments towards acquisition and incidental expenses related thereto.
b) Toll Collection Rights awarded by the grantor against construction service rendered by the Project SPV Group on BOT / DBFOT basis - Direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.
c) Toll Collection Rights in lieu of premium - Undiscounted premium obligation over the concession period.

Amortisation

Toll Collection Rights are amortised over the period of concession, using revenue based amortisation as prescribed in Ind As-36. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the assets economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets under development

Expenditure related to and incurred during implementation of project are included under "Intangible Assets under Development". The same will be transferred to the respective intangible assets on completion of project.

3.09 **Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowing to the extent regarded as an adjustment to the borrowing costs.

3.10 **Leases**

The determination of whether an arrangement is (or contains) a lease is based on the substance of the arrangement at the inception of the lease. The arrangement is, or contains, a lease if fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset or assets, even if that right is not explicitly specified in an arrangement.

Project SPV Group as a lessee

A leased asset is depreciated over the useful life of the asset. However, if there is no reasonable certainty that the Project SPV Group will obtain ownership by the end of the lease term, the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

A lease is classified at the inception date as a finance lease or an operating lease. A lease that transfers substantially all the risks and rewards incidental to ownership to the Project SPV Group is classified as a finance lease.

Operating lease payments are recognised as an expense in the consolidated statement of profit and loss on a straight-line basis over the lease term.

Ind AS 116 - Leases

Ind AS 116, Leases replaces existing lease accounting guidance i.e. Ind AS 17, Leases. It sets out principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases, except short-term leases and leases for low-value items, under a single on-balance sheet lease accounting model. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. Lessor accounting largely unchanged from the existing standard – i.e. lessors continue to classify leases as finance or operating leases.

Based on the preliminary assessment, the Company does not expect any significant impacts on transition to Ind AS 116. This assessment is based on currently available information and may be subject to changes arising from further reasonable and supportable information when the standard will be adopted.

Project SPV Group as a lessor

Leases in which the Project SPV Group does not transfer substantially all the risks and rewards of ownership of an asset are classified as operating leases. Rental income from operating lease is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income.Contingent rents are recognised as revenue in the period in which they are earned.

Leases are classified as finance leases when substantially all of the risks and rewards of ownership transfer from the Project SPV Group to the lessee. Amounts due from lessees under finance leases are recorded as receivables at the Project SPV Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the net investment outstanding in respect of the lease.

3.11 **Inventories**

Inventories are valued as follows:

Construction materials, components, stores, spares and tools

Lower of cost and net realisable value. Cost is determined on weighted average basis and includes all applicable costs in bringing goods to their present location and condition.

Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

3.12 **Provisions**

Provisions are recognised when the Project SPV Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Project SPV Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.13 **Resurfacing expenses**

As per the Concession Agreements, the Project SPV Group is obligated to carry out resurfacing of the roads under concession. The Project SPV Group estimates the likely provision required towards resurfacing and accrues the cost on a straight line basis over the period at the end of which resurfacing would be required, in the consolidated statement of profit and loss in accordance with Ind AS 37 "Provisions, Contingent Liabilities and Contingent Assets."

3.14 **Contingent Liability and Contingent assets**

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Project SPV Group or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Project SPV Group does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.15 **Retirement and other employee benefits**

i. Defined contribution plan

Retirement benefits in the form of provident fund, Pension Fund and Employees State Insurance Fund are a defined contribution scheme and the contributions are charged to the Statement of profit and loss for the period when the employee renders related services. There are no other obligations other than the contribution payable to the respective authorities.

ii. Defined benefit plan

Gratuity liability for eligible employees are defined benefit obligation and are provided for on the basis of an actuarial valuation on projected unit credit method made at the end of each financial year. Obligation is measured at the present value of estimated future cash flows using discounted rate that is determined by reference to market yields at the balance sheet date on Government Securities where the currency and terms of the Government Securities are consistent with the currency and estimated terms of the defined benefit obligation.

Remeasurements, comprising of actuarial gains and losses excluding amounts included in net interest on the net defined benefit liability are recognised immediately in the balance sheet with a corresponding debit or credit to retained earnings through OCI in the period in which they occur. Remeasurements are not reclassified to statement of profit and loss in subsequent periods.

Past service costs are recognised in statement of profit and loss on the earlier of:

- The date of the plan amendment or curtailment, and
- The date that the Project SPV Group recognises related restructuring costs

Net interest is calculated by applying the discount rate to the net defined benefit liability or asset. The Project SPV Group recognises the following changes in the net defined benefit obligation as an expense in the statement of profit and loss:

- Service costs comprising current service costs, past-service costs, gains and losses on curtailments and non-routine settlements; and
- Net interest expense or income

iii. Compensated absences

As per the leave encashment policy of the Project SPV Group, the employees have to utilise their eligible leave during the calendar year and lapses at the end of the calendar year. Accrual towards compensated absences at the end of the financial year are based on last salary drawn and outstanding leave absence at the end of the financial year.

3.16 **Financial instruments**

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement

All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through statement of profit and loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the year, the Project SPV Group changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at the amortised cost if both the following conditions are met:
- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in finance income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:
- The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
- The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the other comprehensive income (OCI). However, the Project SPV Group recognizes interest income, impairment losses and reversals and foreign exchange gain or loss in the statement of profit and loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to Statement of profit and loss.Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as at FVTOCI, is classified as at FVTPL.

In addition, the Project SPV Group may elect to designate a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). The Project SPV Group has designated certain debt instrument as at FVTPL.

Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Equity investments

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Project SPV Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Project SPV Group makes such election on an instrument-byinstrument basis. The classification is made on initial recognition and is irrevocable.

If the Project SPV Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to P&L, even on sale of investment. However, the Project SPV Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Project SPV Group of similar financial assets) is primarily derecognised (i.e. removed from the Project SPV Group's consolidated balance sheet) when:

- The rights to receive cash flows from the asset has expired, or
- The Project SPV Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Project SPV Group has transferred substantially all the risks and rewards of the asset, or (b) the Project SPV Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Project SPV Group has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Project SPV Group continues to recognise the transferred asset to the extent of the Project SPV Group's continuing involvement. In that case, the Project SPV Group also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Project SPV Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Project SPV Group could be required to repay.

Impairment of financial assets

In accordance with Ind AS 109, the Project SPV Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

-Financial assets that are debt instruments, and are measured at amortised cost e.g., loans, debt securities, deposits, trade receivables and bank balance
-Financial assets that are debt instruments and are measured as at FVTOCI
-Lease receivables under Ind AS 17
-Trade receivables or any contractual right to receive cash or another financial asset that result from transactions that are within the scope of Ind AS 18 (referred to as contractual revenue receivables' in these financial statements)

-Loan commitments which are not measured as at FVTPL
-Financial guarantee contracts which are not measured as at FVTPL

The Project SPV Group follows 'simplified approach' for recognition of impairment loss allowance on:
-Trade receivables; and
-Other receivables

The application of simplified approach does not require the Project SPV Group to track changes in credit risk. Rather, it recognises impairment loss allowance based on lifetime ECLs at each reporting date, right from its initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Project SPV Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognising impairment loss allowance based on 12-month ECL.

Lifetime ECL are the expected credit losses resulting from all possible default events over the expected life of a financial instrument. The 12-month ECL is a portion of the lifetime ECL which results from default events that are possible within 12 months after the reporting date.

ECL is the difference between all contractual cash flows that are due to the Project SPV Group in accordance with the contract and all the cash flows that the entity expects to receive (i.e., all cash shortfalls), discounted at the original EIR. When estimating the cash flows, an entity is required to consider:

-All contractual terms of the financial instrument (including prepayment, extension, call and similar options) over the expected life of the financial instrument. However, in rare cases when the expected life of the financial instrument cannot be estimated reliably, then the entity is required to use the remaining contractual term of the financial instrument. -
-Cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms
-Financial assets measured as at amortised cost, contractual revenue receivables and lease receivables: ECL is presented as an allowance, i.e., as an integral part of the measurement of those assets in the balance sheet. The allowance reduces the net carrying amount. Until the asset meets write-off criteria, the Project SPV Group does not reduce impairment allowance from the gross carrying amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through Statement of profit and loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Project SPV Group's financial liabilities include trade and other payables, loans and borrowings including bank overdrafts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through Statement of profit and loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through statement of profit and loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Project SPV Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the consolidated statement of profit and loss.

Loans and borrowings

This is the category most relevant to the Project SPV Group. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in statement of profit and loss when the liabilities are derecognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

This category generally applies to borrowings. For more information refer note 17.

Derecognition

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the consolidated statement of profit and loss.

Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.17 **Cash and cash equivalents**

Cash and cash equivalent in the balance sheet comprises of cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, as they are considered an integral part of the Project SPV Group's cash management.

3.18 **Cash dividend to unit holders of the Project SPV Group**

The Project SPV Group recognises a liability to make cash or non-cash distributions to unit holders of the parent when the distribution is authorised and the distribution is no longer at the discretion of the Project SPV Group. As per the corporate laws in India, a distribution is authorised when it is approved by the unitholders. A corresponding amount is recognised directly in equity.

3.19 **Impairment of non-financial assets**

The Project SPV Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Project SPV Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset. unless the asset does not generate cash inflows that are largely independent of those from other assets or Project SPV Group's of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples, quoted share prices for publicly traded companies or other available fair value indicators.

The Project SPV Group bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of the Project SPV Group's CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year. To estimate cash flow projections beyond periods covered by the most recent budgets/forecasts, the Project SPV Group extrapolates cash flow projections in the budget using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified. In any case, this growth rate does not exceed the long-term average growth rate for the products, industries, or country or countries in which the entity operates, or for the market in which the asset is used.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognised impairment losses no longer exist or have decreased. If such indication exists, the Project SPV Group estimates the asset's or CGU's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of profit and loss.

Goodwill is tested for impairment annually as at 31 March and when circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of each CGU (or Project SPV Group of CGUs) to which the goodwill relates. When the recoverable amount of the CGU is less than its carrying amount, an impairment loss is recognised. Impairment losses relating to goodwill cannot be reversed in future periods.

Intangible assets with indefinite useful lives are tested for impairment annually as at 31 March at the CGU level, as appropriate, and when circumstances indicate that the carrying value may be impaired.

3.20 **Segment information**

Based on "Management Approach" as defined in Ind AS 108 - Operating Segments, the Management ("the Board of Directors") evaluates the Project SPV Group's performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment Policies:

The Project SPV Group prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Project SPV Group as a whole. Common allocable costs are allocated to each segment on an appropriate basis.

3.21 **Earnings per Unit**

Basic earnings per unit are calculated by dividing the net profit or loss for the period attributable to equit by the weighted average number of equity shares outstanding during the period. For the purpose of calculating diluted earnings per share, the net profit or loss for the period attributable to equity shareholders and the weighted average number of shares outstanding during the period are adjusted for the effects of all dilutive potential equity shares.

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 4 : Property, Plant and Equipment and Intangible assets

(Amount in Millions.)

	Premises	Computer	Office Equipments	Furniture and Fixture	Total
At 31 March 2020	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Additions on acquisition	-	-	-	-	-
Disposals/ Adjustments	-	-	-	-	
At 31 March 2021	**16.09**	**0.30**	**1.40**	**0.39**	**18.18**
Depreciation					
At 31 March 2020	**3.55**	**0.26**	**0.98**	**0.21**	**5.00**
Additions	0.55	0.00	0.05	0.03	0.64
Disposals/ Adjustments	-	-	-	-	-
At 31 March 2021	**5.79**	**0.28**	**1.18**	**0.34**	**7.59**
Net Book value					
At 31 March 2021	**10.30**	**0.02**	**0.22**	**0.05**	**10.60**
At 31 March 2020	**12.54**	**0.04**	**0.42**	**0.18**	**13.18**

Net Book value	**March 31, 2021**	**March 31, 2020**
Property, Plant and Equipment	10.60	13.18

Note 4 : Intangible Assets and Intangible Assets under development

Intangible Assets	(Amount in Millions.)
	Toll Collection Rights
At 31 March 2020	**2,02,852.66**
Additions	13,491.76
Deletions	-
Adjustments	-
At 31 March 2021	**2,16,344.42**
Amortisation	
At 31 March 2020	**3,373.68**
Additions	1,253.09
Deletions	-
Adjustments	-
At 31 March 2021	**4,626.78**

Net Book value	**Amount**
At 31 March 2021	**2,11,717.65**
At 31 March 2020	1,99,478.98

Intangible assets under development

Particulars	**At 31 March 2021**
Toll Collection Rights	
At the beginning of the period	13,853.63
Add : development during the year	1,274.74
	15,128.37
Less : Transfer to Intangible Asset (Toll Collection Rights)	10,444.11
Closing balance	**4,684.26**
Total	**4,684.26**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

Particulars	March 31, 2021				March 31, 2020			
	Face Value Rs.	No of Shares / Units	Current	Non-current	Face Value Rs.	No of Shares / Units	Current	Non-current
Financial Assets								
Note 5 : Investment								
i) Investments in Mutual Funds (quoted)								
Fair Value Through Profit or Loss (FVTPL)								
IDBI Liquid Fund - Direct Plan - Growth	10		349.34	-	10		-	-
IDBI Ultra Short term Fund- Direct Growth	10		-	-	10		-	-
ABSL - Liquid Fund -Direct Plan - Growth	10		23.00					
SBI Overnight Fund - Direct Growth	10		157.16					
SBI Liquid Fund - Direct Growth	10		43.00					
			572.50	**-**			**-**	**-**
Total			**572.50**	**-**			**-**	**-**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 6 : Trade receivable				
(Unsecured, considered good)				
Others	100.24	-	352.12	-
Total	**100.24**	**-**	**352.12**	**-**

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 7 : Loans				
(Unsecured, considered good)				
Security and other deposits	6.89	2.74	4.63	0.46
Total	**6.89**	**2.74**	**4.63**	**0.46**

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 8 : Other financial assets				
(Unsecured, considered good)				
Interest accrued on fixed deposits	47.57	-	27.32	-
Interest receivable from banks	117.00	-	-	-
Retention money receivable	446.62	-	363.97	-
BG Margin receivable	-	0.54	-	0.54
Receivable from Government Authorities (NHAI)	1.44	-	1.35	0.06
Other receivable	16.47	-	2.99	-
Total	**629.10**	**0.54**	**395.63**	**0.60**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

	March 31, 2021	March 31, 2020
Note 9 : Deferred tax assets/ liabilities (net)		
Deferred tax liabilities :		
Deferred tax liabilities:		
Difference in Depreciation and other differences in block of Property, Plant and equipment and Intangible assets as per tax books & financial books	2,636.80	1,356.50
Total	**2,636.80**	**1,356.50**
Deferred tax assets:		
Depreciation	1,629.65	8.33
MAT credit entitlement	582.82	952.46
Total	**2,212.47**	**960.79**
Deferred tax Assets / liabilities (net)	**424.33**	**395.71**
Note 10 : Other non - current assets		
(Unsecured, considered good)		
Capital advances	0.14	
Total	**0.14**	**-**
Note 11 : Cash and cash equivalents		
Cash and Bank balances		
Balances with banks:		
-on current accounts	288.60	105.39
-on trust, retention and other escrow accounts*	113.94	74.14
Cash on hand	10.96	10.17
Total	**413.49**	**189.70**

Note 12 : Bank balance other than cash and cash equivalent

	March 31, 2021	March 31, 2020
Maturity more than 3 months less than 12 months		
Other deposits	76.09	126.37
Maturity more than 12 months		
Debt service reserve account with banks /earmarked balance	1,668.23	1,450.00
Other deposits	0.03	0.03
Total	**1,744.35**	**1,576.40**
Note 13 : Current tax assets (net)		
Advance income-tax (net of provision for tax)	147.11	207.90
Total	**147.11**	**207.90**
Note 14 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance with suppliers		
- Related parties	1,014.28	2,025.22
- Others	22.05	70.69
Mobilisation advances	610.61	1,170.47
Prepaid expenses	47.68	20.70
Duties and taxes receivable	471.78	111.97
Total	**2,166.40**	**3,399.05**

Note : 15 : Unit capital (Amount in Millions.)

	March 31, 2021	March 31, 2020
Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
81,68,80,000 units of Rs. 100 each (previous year 76,58,25,000 units)		
At the beginning of the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**

Note : 16 : Other equity

	March 31, 2021	March 31, 2020
Retained earnings		
At the beginning of the year	(312.75)	-
Profit for the year	(3,252.48)	(312.75)
Unit Issue expenses		
	(103.82)	-
At the end of the year	**(3,669.05)**	**(312.75)**
Total	**(3,669.05)**	**(312.75)**

(Amount in Millions.)

	March 31, 2021	March 31, 2020
Financial liabilities		
Note : 17 : Borrowings		
Non-current Borrowings		
Term loans		
Indian rupee loan from banks (secured)		
Project loans for SPVs	74,939.04	64,014.66
Less : current maturities expected to be settled within 12 month from balance sheet date	(467.24)	(250.05)
Total (a)	**74,471.80**	**63,764.61**
Indian rupee loan from financial institutions (secured)		
Project loans for SPVs	10,330.67	9,310.82
Less : current maturities expected to be settled within 12 month from balance sheet date	(99.91)	(55.26)
Total (b)	**10,230.76**	**9,255.56**
Non-convertible debentures (secured)	5,563.63	5,490.14
Less : current maturities expected to be settled within 12 month from balance sheet date	(62.15)	(21.47)
Total (c)	**5,501.48**	**5,468.67**
Less: Unamortised transaction cost **(d)**	(1,042.72)	(1,114.71)
Total non current borrowings (e = a + b + c + d)	**89,161.31**	**77,374.13**
Current Borrowings		
Short-term borrowings (secured)		
Current maturity of long term loans		
Indian rupee loan from banks (secured)	467.24	250.05
Indian rupee loan from financial institutions (secured)	99.91	55.26
Non convertible debentures (secured)	62.15	21.47
Unamortised transaction cost		
(Unsecured, repayable on demand and interest free)		
Loan from related parties	4,155.57	-
Total current borrowings (f)	**4,784.87**	**326.78**
less: Amount clubbed under "other current financial liabilities"	629.30	326.78
Net current borrowings	**4,155.57**	**0.00**
Total borrowings (e+f)	**93,946.18**	**77,700.91**
Note : 18 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises	13.18	14.36
b) Total outstanding dues of creditors other than micro and small enterprises	-	
'- Related parties	1,655.04	2,546.50
'- Others	892.03	185.24
Total	**2,560.24**	**2,746.10**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

(Amount in Millions.)

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Note 19 : Other financial liabilities				
Current maturities of non-current borrowings				
Indian rupee loan from banks	467.24	-	250.05	-
Indian rupee loan from fnancial institutions	99.91	-	55.26	-
Non-convertible debentures	62.15	-	21.47	-
Interest accrued but not due on borrowings	-	-	686.46	-
Premium obligation/ Negative grant to NHAI	-	-	78.53	-
Obligation for construction	11,204.52	-	19,392.33	6,423.69
Directors sitting fees payable	0.25	-	0.66	-
Book overdraft	-		-	-
Deposit	1.07	-	1.18	-
Retention money payable	-			
- Related parties	190.34	-	182.84	-
- Others	318.04	3.05	209.32	6.48
Revenue share payable to NHAI	51.97	-	-	-
Employee benefits payable	-	-	-	-
Other payable	-	-	-	-
- Related parties	8,432.67	24,717.75	7,114.74	28,640.61
- Others	-	-	0.01	-
Total	**20,828.17**	**24,720.81**	**27,992.85**	**35,070.78**

	March 31, 2021	**March 31, 2020**
Note : 20 : Trade payables		
a) Total outstanding dues of micro enterprises and small enterprises		
small enterprises		
'- Related parties	2463.41	-
'- Others		
	2,463.41	**-**

Note 21 : Provisions

	March 31, 2021		March 31, 2020	
	Current	**Non-current**	**Current**	**Non-current**
Major maintenance expenses		357.84	-	64.96
Total	**-**	**357.84**	**-**	**64.96**

	March 31, 2021	**March 31, 2020**
Note 22 : Other current liabilities		
Duties and taxes payable	59.05	51.53
Advance from customer- Others	50.73	111.01
Total	**109.78**	**162.54**

(Amount in Millions.)

	For the year ended March 31, 2021	For the month ended March 31, 2020
Note 23 : Revenue from operations		
Contract revenue (road construction)	1,863.70	1,980.20
Income arising out of toll collection (net)	8,549.77	566.94
Revenue share to NHAI- Fastag	(51.97)	-
Total	**10,361.51**	**2,547.14**
Note 24 : Other income		
Interest income on		
- Bank deposits	74.46	9.42
- Others	7.59	-
Profit on sale of investments	13.08	0.09
Fair value gain on mutual funds	1.43	(0.38)
Other non operating income	13.28	10.59
Gain/(loss) on fair value measurement of other payable	2.86	-
Total	**112.71**	**19.72**
Note 25 : Road work and site expenses		
Contract expenses	1,807.12	1,968.98
Operation and maintenance expenses	2,113.67	77.25
Site and other direct expenses	41.03	0.50
Sub-contracting / Security expenses	5.31	0.33
Technical consultancy and supervision charges	16.28	1.38
Total	**3,983.41**	**2,048.44**
Note 26 : Depreciation and amortisation expenses		
Depreciation on property, plant and equipment	2.59	0.31
Amortisation on intangible assets	1,253.09	123.17
Total	**1,255.69**	**123.48**
Note 27 : Finance cost		
Interest expense		
- Banks and financial institutions	8,046.33	642.93
- Unwinding of interest on loan	48.70	4.14
Other borrowing costs	-	
- Amortisation of Transaction cost	78.43	5.61
- Unwinding of discount on provision of MMR	5.47	
- Others	49.24	6.68
Total	**8,228.17**	**659.36**

(Amount in Millions.)

	For the year ended March 31, 2021	For the month ended March 31, 2020
Note 28 : Other expenses		
Power and fuel	-	(0.37)
Rent	0.29	0.01
Rates and taxes	15.40	0.54
Travelling and conveyance	-	0.01
Director sitting fees	1.24	0.86
Legal and professional expenses	69.25	0.19
Payment to auditor (including service tax/ GST)	3.88	0.49
Corporate social responsibilities expenditure	31.40	19.00
Miscellaneous expenses	2.43	4.12
Bank charges	3.01	0.25
Repairs and maintenance		
- Plant and machinery	-	0.09
Insurance	11.43	1.56
Total	**138.32**	**26.75**

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 29 : Commitment and Contingencies

a. Leases
Rent / lease payments under operating lease are recognised as an expense in the Consolidated Statement of profit and loss on a straight line basis over the lease term.

Operating lease

(Amount in millions)

	March 31, 2021	March 31, 2020
a) Future lease rental payments under non-cancellable operating lease are as follows:-		
i) Not later than one year	-	-
ii) Later than one year and not more than five year	-	-
iii) Later than five year	-	-
b) Lease payment recognised in the consolidated statement of profit and loss	0.29	0.01
c) General description of the leasing agreement		
i) Leased assets – accommodation for employees	-	-
ii) Future lease rentals are determined on agreed terms	-	-

b. Capital commitments

	March 31, 2021	March 31, 2020
Estimated value of contracts in capital account remaining to be executed	10,679.14	2,493.29

c. Contingent liabilities
Contingent liabilities not provided for

	March 31, 2021	March 31, 2020
Guarantees given by the Group to suppliers, government bodies and performance guarantee	-	-
For Service Tax, ESIC, Custom Duty, Other Finance expenses and Stamp duty matters	-	-
Total	-	-

The Hon'ble Supreme Court of India ("SC") by their order dated February 28, 2019, in the case of Surya Roshani Limited others v/s EPFO, set out the principles based on which allowances paid to the employees should be identified for inclusion in basic wages for the purposes of computation of Provident Fund contribution. Subsequently, a review petition against this decision has been filed and is pending before the SC for disposal. In view of the management, the liability for the period from date of the SC order to March 31, 2019 is not significant. Further, pending decision on the subject review petition and directions from the EPFO, the impact for the past period, if any, is not ascertainable and consequently no effect has been given in the accounts.

Note 30 : Details of dues to micro and small enterprises as per MSMED Act, 2006

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from 2 October 2006, certain disclosures are required to be made relating to Micro, Small and Medium enterprises. On the basis or the informntion and records available with the management, there are no overdue amount to the Micro and Small enterprises as defined in the Micro, Small Medium Enterprises Development Act, 2006 as set out in the following disclosures:
The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Group and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the consolidated financial statement as at March 31, 2020 based on the information received and available with the Group.

Particulars	March 31, 2021	March 31, 2020
Principal amount remaining unpaid to any supplier as at the period end	13.18	14.36
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 31 : Related party disclosures

List of Related parties of the Fund

(i)	Parties to the InvIT	IRB Infrastructure Developers Limited (Sponsor and Project Manager)
		MMK Toll Road Private Limited (Investment Manager)
		IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
(ii)	Associates, Promoters, Directors and Partners of the persons mentioned in clause (i) and (ii)	As per table below

List of associates, promoters, directors and partners of the persons mentioned in clause (i) and (ii)

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manager)**	**MMK Toll Road Private Limited (Investment Manager)**	**IDBI Trusteeship Services Limited (Trustee of IRB Infrastructure Trust)**
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Virendra D. Mhaiskar (HUF)	IRB Infrastructure Developers Limited (IRBIDL)	IDBI Bank Limited LIC Corporation Limited General Insurace Corporation
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Mukeshlal Gupta Mr. Sudhir Rao Hoshing **Independent Directors** Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mr. Sunil Tandon Mrs. Heena H. Raja	Mr. Naresh Taneja Mrs. Arati Taskar **Independent Directors** Mr. Darshan Sangurdekar Mr. Omprakash Singh	Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Ms. Sashikala Muralidharan Mr. Swapan Kumar Bagchi
Associates	**A) Holding Company of Sponsor / Project Manager** Mhaiskar Ventures Private Limited **B) Subsidiary Companies of Sponsor / Project Manager** **Project SPVs** 1. IRB Westcoast Tollway Private Limited (IRB Westcoast) 2. Solapur Yedeshi Tollway Private Limited (SYTPL) 3. Yedeshi Aurangabad Tollway Private Limited (YATPL) 4. Kaithal Tollway Private Limited (KTPL) 5. AE Tollway Private Limited (AETPL) 6. Udaipur Tollway Private Limited (UTPL) 7. CG Tollway Private Limited (CGTPL) 8. Kishangarh Gulabpura Tollway Private Limited (KGTPL) 9. IRB Hapur Muradabad Tollway Private Limited (IRBH) **Others** 1. Ideal Road Builders Private Limited (IRBPL) 2. Mhaiskar Infrastructure Private Limited (MIPL) 3. Modern Road Makers Private Limited (MRMPL) 4. Aryan Toll Road Private Limited (ATRPL) 5. ATR Infrastructure Private Limited (ATRFL) 6. IRB Infrastructure Private Limited (IRBFL) 7. Thane Ghodbunder Toll Road Private Limited (TGTRPL) 8. Aryan Infrastructure Investments Private Limited (AIIPL) 9. NKT Road and Toll Private Limited (NKT) 10. MMK Toll Road Private Limited (MMK) 11. IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) 12. Aryan Hospitality Private Limited (AHPL) 13. IRB Sindhudurg Airport Private Limited (IRBSA) 14. IRB Goa Tollway Private Limited (IRB Goa) 15. IRB PS Highway Private Limited (formerly known as MRM Highways Private Limited) (IRBPS) 16. IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) 17. MRM Mining Private Limited (Formerly "J J Patel Infrastructural and Engineering Private Limited") (Subsidiary of MRMPL) 18. IRB PP Project Private Limited (formerly known as Zozila Tunnel Project Private Limited) (IRBPP) 19. VK1 Expressway Private Limited (VK1) 20. Modern Estate (Partnership Firm)		

	C) Other Associate Companies of Sponsor / Project Manager 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel of Project SPV Group** (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end) 1. Mr. Mukeshlal Gupta 2. Mr.Ajay P. Deshmukh 3. Mr.Rajpaul S. Sharma 4. Mr.Dhananjay K. Joshi 5. Mr.Anil D. Yadav 6. Mrs. Kshama Vengsarkar 7. Mr. Rajendra Kumar Agarwal (upto March 30, 2018) 8. Mrs. Arati Taskar 9. Mr. Sudhir Rao Hoshing 10. Mr. Naresh Taneja 11. Mr. Darshan Sangurdekar 12. Mr. Omprakash Singh 13. Jitendra Sharma 14 Mrs. Heena Raja 15 Miss Shilpa Todankar

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

I. Related Party Transactions (Amount in millions)

Sr. No.	Particulars	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group
		March 31, 2021			March 31, 2020		
1	**Contract Expenses**	-	**921.31**	-	**1,695.27**	**1,452.39**	-
	IRB Infrastructure Developers Limited	-	-	-	1,695.27	-	-
	Modern Road Makers Private Limited	-	921.31	-	-	1,452.39	-
2	**Material Aggregate Purchase**	-	**2,062.51**	-	-	-	-
	Modern Road Makers Private Limited	-	2,062.51	-	-	-	-
3	**Operation & Main. Expenses**	**1,826.29**	-	-	**119.47**	-	-
	IRB Infrastructure Developers Limited	1,826.29	-	-	119.47	-	-
4	**Finance Cost -Interest unwinding on loan**	-	-	-	**44.70**	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	44.70	-	-
5	**Share application money received**	**2,603.81**	-	-	**1,182.32**	-	-
	IRB Infrastructure Developers Limited	2,603.81	-	-	1,182.32	-	-
6	**Allotment of Equity Share**	**2,603.81**	-	-	**1,648.82**	-	-
	IRB Infrastructure Developers Limited	2,603.81	-	-	1,648.82	-	-
7	**Amount Held up**	-	**7.51**	-	-	-	-
	Modern Road Makers Private Limited	-	7.51	-	-	-	-
8	**Expenses incurred on behalf of us**	**5.71**	**6.05**	-	-	-	-
	IRB Infrastructure Developers Limited	5.71	-	-	-	-	-
	Modern Road Makers Private Limited	-	6.05	-	-	-	-
9	**Sub-ordinate debts (Unsecured & interest free)**	-	-	-	**2,924.28**	-	-
	IRB Infrastructure Developers Limited	-	-	-	2,924.28	-	-
10	**Short-term borrowings taken (unsecured)**	**477.81**	-	-	**13,418.70**	-	-
	IRB Infrastructure Developers Limited	477.81	-	-	13,418.70	-	-
11	**Short-term borrowings repayment**	-	-	-	**562.49**	-	-
	IRB Infrastructure Developers Limited	-	-	-	562.49	-	-
12	**Mobilisation advances recovered**	**1,672.70**	-	-	**2,348.12**	-	-
	IRB Infrastructure Developers Limited	1,672.70	-	-	2,348.12	-	-
13	**Additional advances recovered**	-	-	-	**55.21**	-	-
	IRB Infrastructure Developers Limited	-	-	-	55.21	-	-
14	**Advance given including BG margin given**	**208.50**	**75.42**	-	**41.37**	-	-
	IRB Infrastructure Developers Limited	208.50	-	-	41.37	-	-
	Modern Road Makers Private Limited		75.42				
15	**General advance recovered - EPC**	**183.71**	**75.42**	-	**900.56**	-	-
	IRB Infrastructure Developers Limited	183.71	-	-	900.56	-	-
	Modern Road Makers Private Limited	-	75.42	-	-	-	-
16	**Construction Cost**	**13,535.60**	**2,194.10**	-	**24,920.09**	**2,080.00**	-
	IRB Infrastructure Developers Limited	13,535.60	-	-	24,920.09	-	-
	Modern Road Makers Private Limited	-	2,194.10	-	-	2,080.00	-

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

I. Related Party Transactions (Amount in millions)

Sr. No.	Particulars	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group
		March 31, 2021			March 31, 2020		
17	**BG Margin Receivable**	**-**	**-**	**-**	**36.21**	**-**	**-**
	IRB Infrastructure Developers Limited	-	-	-	36.21	-	-
18	**Other Payable**	**2,444.14**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	2,444.14	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	-	-	-	-	-
19	**Unsecured Loan payable**	**3,677.76**	**48.71**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	3,677.76	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	48.71	-	-	-	-
20	**Unsecured Loan / other payable repaid**	**5,105.50**	**1.17**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	5,105.50	-	-	-	-	-
	Mhaiskar Infrastructure Private Limited	-	1.17	-	-	-	-
21	**Other Payable**	**9.73**	**-**	**-**	**35,573.69**	**-**	**-**
	IRB Infrastructure Developers Limited	3.88	-	-	32,037.96	-	-
	Modern Road Makers Private Limited	5.85	-	-	1,785.30	-	-
	IRB Goa Tollway Private Limited	-	-	-	1,544.86	-	-
	Mhaiskar Infrastrcture Private Limited	-	-	-	205.57	-	-
22	**Director sitting fees paid**	**-**	**-**	**1.23**	**-**	**-**	**1.83**
	Mr. Mukeshlal Gupta	-	-	-	-	-	0.16
	Mr. Dhananjay K. Joshi	-	-	-	-	-	0.11
	Mr. Ajay P. Deshmukh	-	-	-	-	-	0.22
	Mr. Naresh Taneja	-	-	-	-	-	0.11
	Mrs. Arati Taskar	-	-	-	-	-	0.16
	D.S. Sangurdekar	-	-	0.17	-	-	0.19
	O. P. Singh	-	-	0.18	-	-	0.20
	Sudhir Hoshing	-	-	-	-	-	0.23
	Jitendra Sharma	-	-	0.37	-	-	0.05
	Mr Anil Yadav	-	-	-	-	-	0.12
	Kshama Vengsarkar	-	-	-	-	-	0.17
	Heena Raja	-	-	0.08	-	-	-
	C S Kaptan	-	-	0.24	-	-	-
	Mr.R.S. Sharma	-	-	-	-	-	0.11
	Shilpa Todankar	-	-	0.19	-	-	-

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

II. Related party balances

(Amount in millions)

Sr. No.	Particulars	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group	Sponsor and Project Manager	Fellow subsidaries of Project SPV Group	Key Management Personnel of Project SPV Group
		March 31, 2021			March 31, 2020		
1	**Trade payable**	**1,119.15**	**468.44**	**-**	**2,214.88**	**331.62**	**-**
	IRB Infrastructure Developers Limited	1,119.15	-	-	2,214.88	-	-
	Modern Road Makers Private Limited	-	468.44	-	-	331.62	-
2	**Trade payable (non-current)**	**-**	**2,463.41**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	2,463.41	-	-	-	-
3	**Mobilisation Advances**	**1,522.77**	**-**	**-**	**1,170.47**	**-**	**-**
	IRB Infrastructure Developers Limited	1,522.77	-	-	1,170.47	-	-
4	**Advance given**	**102.14**	**-**	**-**	**2,025.00**	**1.39**	**-**
	IRB Infrastructure Developers Limited	102.14	-	-	2,025.00	-	-
	Modern Road Makers Private Limited	-		-	-	1.39	-
5	**Retention Payable**	**-**	**190.35**	**-**	**-**	**182.85**	**-**
	Modern Road Makers Private Limited	-	190.35	-	-	182.85	-
6	**Other payable including BG margin payable**	**29,550.45**	**3,599.97**	**-**	**32,208.96**	**3,546.38**	**-**
	IRB Infrastructure Developers Limited	29,550.45	-	-	32,208.96	-	-
	Modern Road Makers Private Limited	-	1,800.83	-	-	1,795.95	-
	IRB Goa Tollway Private Limited	-	1,544.86	-	-	1,544.86	-
	Mhaiskar Infrastructure Private Limited	-	254.28	-	-	205.57	-
7	**BG Margin Money Receivable**	**0.54**	**-**	**-**	**0.54**	**-**	**-**
	IRB Infrastructure Developers Limited	0.54	-	-	0.54	-	-
8	**Unsecured Loan / other payable**	**4,155.57**	**-**	**-**	**-**	**-**	**-**
	IRB Infrastructure Developers Limited	4,155.57	-	-	-	-	-
9	**Trade Receivable**	**-**	**0.51**	**-**	**-**	**-**	**-**
	Modern Road Makers Private Limited	-	0.51	-	-	-	-
10	**Director sitting fees Payable**	**-**	**-**	**0.28**	**-**	**-**	**0.65**
	Mr. Mukeshlal Gupta	-	-	-	-	-	0.06
	Mr. Dhananjay K. Joshi	-	-	-	-	-	0.04
	Mr. Ajay P. Deshmukh	-	-	-	-	-	0.08
	Mr. Rajendra kumar Agarwal	-	-	-	-	-	0.01
	Mrs. Arati Taskar	-	-	-	-	-	0.06
	D.S. Sangurdekar	-	-	0.04	-	-	0.08
	O.P. singh	-	-	0.04	-	-	0.06
	Sudhir Hoshing	-	-		-	-	0.08
	Jitendra Sharma	-	-	0.09	-	-	0.02
	R.S. Sharma	-	-		-	-	0.04
	Kshama Vengsarkar	-	-		-	-	0.06
	Heena Raja	-	-	0.02	-	-	-
	Shilpa Todankar	-	-	0.01	-	-	-
	C S Kaptan	-	-	0.08	-	-	-
	Naresh Taneja	-	-	-	-	-	0.02
	Anil Yadav	-	-	-	-	-	0.04

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 32 : Disclosure pursuant to Appendix - A to Ind AS 11 - " Service Concession Arrangements" ('SCA')

(A) Disclosures with regard to Toll Collection Rights (Intangible Assets)

Sr. No.	Name of Concessionaire	Start of concession period under concession agreement (Appointed date)	End of concession period under concession agreement	Period of concession since the appointed date	Construction completion date or scheduled construction completion date under the concession agreement, as applicable
1	IRB Westcoast Tollway Limited	March 3, 2014	March 2, 2042	28 years	December 1, 2020
2	Solapur Yedeshi Tollway Limited	January 21, 2015	January 20, 2043	29 years	July 1, 2019
3	Yedeshi Aurangabad Tollway Limited	July 1, 2015	June 30, 2041	26 years	August 31, 2020
4	Kaithal Tollway Limited	July 15, 2015	July 14, 2042	27 years	July 9, 2018
5	AE Tollway Limited	August 1, 2016	July 31, 2040	24 years	August 31, 2020
6	Udaipur Tollway Limited	September 3, 2017	September 2, 2038	21 years from Appointed Date	August 31, 2020
7	CG Tollway Limited	November 4, 2017	November 3, 2037	20 years from Appointed Date	July 1, 2020
8	Kishangarh Gulabpura Tollway Limited	February 21, 2018	February 20, 2038	20 years from Appointed Date	October 31, 2020
9	IRB Hapur Moradabad Tollway Limited	May 28, 2019	May 26, 2041	22 years from Appointed Date	November 30, 2021

Note:

The above BOT/ DBFOT projects shall have following rights/ obligations in accordance with the Concession Agreement entered into with the Respective Government Authorities:-

a. Rights to use the Specified assets
b. Obligations to provide or rights to expect provision of services
c. Obligations to deliver or rights to receive at the end of the Concession.

Note 33 : Fair Values

The carrying values of financials instruments of the Group are reasonable and approximations of fair values.

	Carrying amount	Fair Value	Carrying amount	Fair Value
	March 31, 2021		March 31, 2020	
Financial assets				
Financial assets measured at amortised cost				
Loans	9.63	4.30	5.09	5.09
Other Financial assets	629.64	629.64	396.23	396.23
Financial assets measured at amortised				
Trade receivable	100.24	100.24	352.12	352.12
Cash and cash equivalents	413.49	413.49	189.70	189.70
Other Bank balances	1,744.35	1,744.35	1,576.40	1,576.40
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	2,560.24	2,560.24	2,746.10	2,746.10
Borrowings	93,946.18	93,946.18	77,700.92	77,700.92
Other financial liabilities	44,919.68	44,919.68	62,736.84	62,736.84
Financial liabilities				
Financial liabilities measured at FVTPL				
Trade payables	2,463.41	2,463.41	-	-

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Group has determined that market participants would take into account when pricing the investments.

Note 34 : Financial risk management objectives and policies

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities.

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework.

In performing its operating, investing and financing activities, the Group is exposed to the Credit risk, Liquidity risk and Currency risk.

Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit Risk on financial assets
Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments
Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Group's management in accordance with the Group's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the year subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances
Customer credit risk and Loans and advances is managed by each business unit subject to the Group's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances. The Group has not identifed any impairment loss as at , March 31, 2021.

Other financial assets
Credit risk from balances with banks and financial institutions is managed by the Group in accordance with the Group's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest Rate Risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate borrowings.

Interest rate sensitivity
The following table demonstrates the sensitivity to a reasonably possible change in interest rates on that portion of loans and borrowings affected, after excluding the credit exposure on fixed rate borrowing. With all other variables held constant, the Group's profit before tax is affected through the impact on floating rate borrowings, as follows:

	Borrowings	**Fixed Deposits**	**Borrowings**	**Fixed Deposits**
Balance of Fixed Deposit and Borrowings	**March 31, 2021**		**March 31, 2020**	
- INR Millions	90,833.34	1,744.35	78,815.63	1,576.39
- USD Millions	-	-	-	-
Increase in basis points				
- INR	50 bps	50 bps	50 bps	50 bps
- USD	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax				
- INR Millions	(454.17)	(8.72)	(394.08)	(7.88)
- USD Millions	-	-	-	-
Decrease in basis points				
- INR	50 bps	50 bps	50 bps	50 bps
- USD	50 bps	50 bps	50 bps	50 bps
Effect on profit before tax				
- INR Millions	454.17	8.72	394.08	7.88
- USD Millions	-	-	-	-

Liquidity risk

Liquidity risk is the risk that the Group may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Group's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Group closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

As at March 31, 2021	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	93,946.18	93,946.19	219.09	4,307.07	11,203.11	78,216.92
Other financial liabilities	44,919.68	44,919.67	-	20,198.87	24,720.80	-
Trade payables	5,023.65	5,023.65	-	2,560.23	2,463.41	-
Total	**1,43,889.51**	**1,43,889.51**	**219.09**	**27,066.16**	**38,387.32**	**78,216.92**

As at March 31, 2020	**Carrying amt**	**Total**	**On Demand**	**Less than 1 year**	**1 to 5 years**	**> 5 years**
Borrowings	77,700.92	77,700.92		326.79	19,109.50	58,264.63
Other financial liabilities	62,736.84	62,736.83		27,666.05	34,950.62	120.16
Trade payables	2,746.10	2,746.10	-	2,746.10	-	-
Total	**1,43,183.86**	**1,43,183.85**	**-**	**30,738.94**	**54,060.12**	**58,384.79**

At present, the Group does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Borrowings are considered post transaction cost.

Note 35 : COVID-19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

The management has assessed and determined that considering the nature of its operations and overall revenue model, COVID-19 does not have material impact on the Group's financial position as at March 31, 2021 and its financial performance for the year then ended.

Note 36 : Royalty Claim

The Group has received claim amount raised on National Highways Authority of India (NHAI) under Change in law on account of increase in royalty rates to the tune of Rs. 1139.28 millions during the year ended March 31, 2020. NHAI has released the claim amount subject to final decision of Nine judges bench of Hon'ble Supreme Court of India due to whcih it was not taken to income earlier. Further, Group has obtained a legal opinion and has recognised the said claim amount in the Statement of profit and loss in the month of March, 2020.

Note 37 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Project SPV Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2021.

The Group monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

	March 31, 2021	**March 31, 2020**
Borrowings	**93,946.18**	**77,700.92**
Trade payables	**5,023.65**	**2,746.10**
Other financial liabilities	**44,919.68**	**62,736.84**
Less: cash and cash equivalents	(413.49)	(189.70)
Net debt	**1,43,476.02**	**1,42,994.16**
Equity	**78,018.95**	**76,269.75**
Total equity	**78,018.95**	**76,269.75**
Capital and net debt	**2,21,494.97**	**2,19,263.91**
Gearing ratio (%)	**64.78%**	**65.22%**

In order to achieve this overall objective, the Group's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

IRB Infrastructure Trust
Notes to Consolidated Financial statement for the year ended March 31, 2021.

Note 38

(a) During the year ended March 31, 2021, the Group has paid/accrued Rs. 875.53 millions as Revenue Share to National Highways Authority of India ("NHAI") out of its toll collection in accordance with the Concession Agreements entered with NHAI. Income from Operations in the financials for the above periods is net off the above Revenue Share to NHAI.

(b) During the year ended March 31, 2017, AE Tollway Limited (AETL) has entered into a Concession agreement (CA) with NHAI for a period of 24 years. As per the terms of the CA, AETPL has agreed to pay a premium in the form of "Additional Concession Fee" equal to Rs. 810.00 millions for the first year and each subsequent year such premium shall be determined by increasing the amount of premium in the respective year by an additional 5% as compared to the immediately preceding year. Management based on the legal opinion obtained and their evaluations of the terms of the CA, believes that such premium payable is restricted to the toll collection during the year and is in the form of revenue sharing arrangement. Accordingly, the premium payable for the year is accounted for as revenue share.

Note 39: Grant from Government Authorities

As per Article 25 of the respective Concession Agreement with the National Highways Authority of India ('NHAI' or 'the Grantor'), the Concessionaires are entitled to receive Grant for meeting the part of the project cost subject to the conditions laid down in the concession agreement. The details are as under:

(Rs in millions)

Name of the Company	Eligible for Grant	Grant received in FY 2016-17	Grant received in FY 2017-18	Grant received in FY 2018-19	Grant yet to be received
SYTL	1,890.00	1,391.70	403.80	**94.50**	-
KTL	2,340.00	1,533.79	806.21	**-**	-
YATL	5,580.00	-	4,230.24	**1,349.76**	-
IRBWT	5,362.20	4,512.30	-	**849.90**	-
Total	**15,172.20**	**7,437.79**	**5,440.25**	**2,294.16**	**-**

Note 40: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 41: Earnings Per Unit (EPU)

EPU amounts are calculated by dividing the profit for the period attributable to unit holders by the weighted average number of Units outstanding during the year/period.

The following reflects the income and share data used in the EPU computations:

	March 31, 2021	March 31, 2020
Profit attributable to unit holders for earnings	(3,252.48)	(312.75)
Weighted average number of Units for EPU	78,47,08,356	7,55,33,425
Face value per unit (in Rs)	100	100
Earning per unit (in Rs.)	(4.14)	(4.14)

Information on segment reporting pursuant to Ind AS 108 - Operating Segments

Note 42: Information on segment reporting pursuant to Ind AS 108 - Operating Segments

The Project SPV Group has identified business segment in accordance with Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act 2013, read together with relevant rules issued thereunder. The Group has identified Built, Operate and Transfer ('BOT') as its single reportable segment. Moreover the Group's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 43: Earnings Per Unit (EPU)

The number of units that IRB Infrastructure Trust will issue to investors in the proposed private placement and to IRB Infrastructure Developers Limimted (referred to as 'the Sponsors') in exchange of the shareholdings in the Project SPV Group and against the loan from Sponsors is not presently ascertainable. Hence the disclosures in respect of Earnings per Unit have not been given.

Note 44 : Previous year comparatives

Consequent to the issuance of " Guidance Note on Division II – Ind AS Schedule III to the Companies Act, 2013" certain items of financial statements have been regouped/ reclassified.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI registration number: 103264W

SD/-
CA Chinmaya Deval
Partner
Membership No. 148652

Place: Mumbai
Date: 24.05.2021

For and on behalf of the Board of Directors of
MMK Toll Road Private Limited
(As Investment Manager to IRB Infrastructure Trust)
CIN : L65910MH1998PLC115967

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Financial Officer

SD/-
Kaustubh Shevade
Company secretary

Place : Mumbai
Date: 24.05.2021

B. STANDALONE FINANCIAL INFORMATION

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gokhale & sathe (regd.)
chartered accountants
304,308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

Limited Review Report

To
The Board of Directors,
MMK Toll Road Private Limited
(Investment Manager)

We have reviewed the accompanying statement of Standalone Unaudited Financial Results of **IRB Infrastructure Trust** ('the Trust') for the quarter ended 30th June 2023. This statement, prepared for the purpose of consolidation with the Unaudited Results of IRB Infrastructure Trust, is the responsibility of the Investment Manager's management and has been approved by the Board of Directors of the Investment Manager. Our responsibility is to issue a report on these Financial Statements based on our review.

We conducted our review in accordance with the Standard on Review Engagement (SRE) 2410, Review of Interim Financial Information performed by the Independent Auditor of the Entity issued by the Institute of Chartered Accountants of India. This standard requires that we plan and perform the review to obtain moderate assurance as to whether the Financial Statements are free of material misstatement. A review is limited primarily to inquiries of company personnel and analytical procedures applied to financial data and thus provide less assurance than an audit. We have not performed an audit and accordingly, we do not express an audit opinion.

Based on our review conducted as above, for the purposes of consolidation with the Unaudited Financial Results of IRB Infrastructure Trust, nothing has come to our notice that causes us to believe that the accompanying Statement of Unaudited Financial Results prepared in accordance with applicable accounting standards and other recognized accounting practices has not disclosed the information required to be disclosed in terms of Regulation 33 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, including the manner in which it is to be disclosed or that it contains any material misstatement.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration Number: 103264W

SD /-
CA Kaustubh Deshpande,
Partner
Membership No.:121011
UDIN: 23121011BGXXYX4599
Place: Mumbai
Date: July 28, 2023

tel.: (022) 43484242 | office@gokhalesahe.in

IRB Infrastructure Trust
Balance Sheet as at June 30, 2023

(Rs. in Millions)

		Note No.	June 30, 2023	March 31, 2023
			Unaudited	**Audited**
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	1		
	i) Investments	1.1	94,674.44	94,424.44
	ii) Loans	1.2	30,363.83	30,351.69
	Total non-current assets		**1,25,038.27**	**1,24,776.13**
(2)	**Current assets**			
	Financial assets	2		
	i) Investments	2.1	30.20	20.08
	ii) Cash and cash equivalents	2.2	59.58	6.56
	iii Loans	2.3	6,010.09	5,421.29
	iv Other financial assets	2.4	10,177.03	7,965.17
	Other current assets	3	32.55	4.48
	Total current assets		**16,309.45**	**13,417.58**
	TOTAL ASSETS		**1,41,347.72**	**1,38,193.71**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	4	87,929.33	87,929.33
	Other equity	5	11,927.76	9,526.42
	Total unit holder's equity		**99,857.09**	**97,455.75**
(1)	**Non-current liabilities**			
	Financial liabilities			
	i) Other financial liabilities	6	36,266.91	35,778.03
	Total non- current liabilities		**36,266.91**	**35,778.03**
(2)	**Current liabilities**			
	Financial liabilities	7		
	i) Borrowings	7.1	5,122.91	4,872.91
	ii) Trade payables	7.2		
	a) total outstanding dues of micro enterprises and small enterprises and small enterprises		0.01	0.01
	b) total outstanding dues of creditors other than micro enterprises and small enterprises		93.71	81.34
	Other liabilities	8	7.09	5.67
	Total current liabilities		**5,223.72**	**4,959.93**
	Total liabilities		**41,490.63**	**40,737.96**
	TOTAL EQUITY AND LIABILITIES		**1,41,347.72**	**1,38,193.71**

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 28/07/2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay Joshi
Chief Excecutive Officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place : Mumbai
Date : 28/07/2023

IRB Infrastructure Trust

Statement of profit and loss for the quarter ended June 30, 2023

(Rs. in Millions)

	Note No.	For the Quarter ended June 30, 2023	For the Quarter ended June 30, 2022	For the year ended March 31, 2023
		Unaudited	**Unaudited**	**Audited**
Income				
Other income	9	2,930.47	1,047.25	4,222.87
TOTAL INCOME		**2,930.47**	**1,047.25**	**4,222.87**
Expenses				
Investment Manager Fees		34.22	14.13	56.52
Trustee fees		0.41	-	2.53
Valuation fees		0.77	0.48	1.72
Other expenses	10	493.72	64.57	613.09
TOTAL EXPENSES		**529.12**	**79.18**	**673.86**
Profit before tax		**2,401.35**	**968.07**	**3,549.01**
Tax expenses				
Current tax		-	-	-
Adjustment of tax relating to earlier periods		-	-	-
Profit after tax (A)		**2,401.35**	**968.07**	**3,549.01**
Other comprehensive income / (loss) for the period / year (net of tax)				
Item that will not to be reclassified to profit or loss in subsequent period / year				
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-	-
Ind-As opening reserve		-	-	-
Mark to market gain/(loss) fair value measurement of investments		-	-	-
Other comprehensive income for the period / year (net of tax) (B)		-	-	-
Total comprehensive profit for the period / year, net of tax : (A+B)		**2,401.35**	**968.07**	**3,549.01**
Earnings per unit				
Basic		**2.73**	**1.11**	**4.04**
Diluted		**2.73**	**1.11**	**4.04**

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 28/07/2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman

SD/-
Dhananjay Joshi
Chief Excecutive Officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company Secretary
Membership No.A27833

Place: Mumbai
Date : 28/07/2023

	June 30, 2023	March 31, 2023
	Unaudited	Audited
Note 1 : Financial assets (Non-current)		
1.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palsit Dankuni Tollway Private Limited	1,212.00	1,212.00
Investments in subsidiaries (unquoted)	**22,212.01**	**22,212.01**
B) Investments at cost		
Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,727.80
IRB Hapur Moradabad Tollway Limited	10,048.52	9,798.52
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	2,495.38	2,495.38
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,338.40
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Palsit Dankuni Tollway Private Limited	1,213.00	1,213.00
Subordinated debt to related parties	**72,462.43**	**72,212.43**
Total non-current investments (A + B)	**94,674.44**	**94,424.44**
1.2 Loans		
(Unsecured, considered good, unless otherwise stated)		
- Interest bearing		
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,471.59	8,471.59
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
- Interest free		
Kaithal Tollway Limited	363.83	351.69
Total	**30,363.83**	**30,351.69**

	June 30, 2023	March 31, 2023
	Unaudited	Audited
Note 2 : Financial assets (current)		
2.1 Investments		
Investments at fair value through Profit & Loss		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted) (FVTPL)	30.20	20.08
	30.20	**20.08**
2.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	59.58	6.56
Total	**59.58**	**6.56**
2.3 Loans		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	493.89	478.89
IRB Westcoast Tollway Limited	2,465.58	2,348.08
Kaithal Tollway Limited	156.71	156.71
Solapur Yedeshi Tollway Limited	24.00	24.00
Udaipur Tollway Limited	1,627.81	1,335.31
CG Tollway Limited	722.30	558.50
Yedeshi Aurangabad Tollway Limited	519.80	519.80
Total	**6,010.09**	**5,421.29**
2.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from others	9,885.77	7,681.04
Other receivable		
- related parties	291.26	284.13
Total	**10,177.03**	**7,965.17**
Note 3 : Other current assets		
(Unsecured, considered good unless otherwise stated)		
Advance given to suppliers		
Duties and taxes receivable	3.30	3.30
Prepaid expenses	29.25	1.18
	32.55	**4.48**

IRB Infrastructure Trust
Notes to Financial Statements
Note 4 : Equity

(Rs. in Millions)

	June 30, 2023	March 31, 2023
	Unaudited	Audited
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Face value per unit Rs 100		
At the beginning of the period / year	87,929.33	85,504.33
Issued during the period / year	-	2,425.00
At the end of the period / year	**87,929.33**	**87,929.33**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	June 30, 2023		March 31, 2023	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the period / year	87,92,93,265	87,929.33	85,50,43,265	85,504.33
Issued during the period / year	-	-	2,42,50,000	2,425.00
At the end of the period / year	**87,92,93,265**	**87,929.33**	**87,92,93,265**	**87,929.33**

Note :5 Other Equity

	June 30, 2023	March 31, 2023
Retained earnings		
At the beginning of the period / year	9,526.42	5,992.74
Profit for the period / year	2,401.35	3,549.01
Unit issue expenses	-	(15.33)
Total Other Equity	**11,927.76**	**9,526.42**

	June 30, 2023	March 31, 2023
	Unaudited	Audited
Note 6 : Other financial liabilities		
Other payables		
- related parties	36,266.91	35,778.03
	36,266.91	**35,778.03**
Note 7 : Current financial liabilities		
7.1 Borrowing		
Unsecured Loan from related parties		
- Interest free	5,122.91	4,872.91
Total	**5,122.91**	**4,872.91**
7.2 Trade Payables		
a) total outstanding dues of micro enterprises and small enterprises	0.01	0.01
b) total outstanding dues of creditors other than micro and small enterprises		
- related parties	92.86	78.54
- others	0.85	2.80
Total	**93.72**	**81.35**
Note 8 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	7.09	5.67
Total	**7.09**	**5.67**

IRB Infrastructure Trust
Notes to Financial Statements

(Rs. in Millions)

	For the Quarter ended June 30, 2023	For the Quarter ended June 30, 2022	For the year ended March 31, 2023
	Unaudited	Unaudited	Audited
Note 9 : Other Income			
Interest income on			
Others	2,929.73	1,047.12	4,221.77
Gain on sale of investment	0.64	0.13	0.92
Fair value gain on investments	0.10	-	0.18
	2,930.47	**1,047.25**	**4,222.87**
Note 10 : Other expenses			
Rates & taxes	0.31	0.09	0.60
Legal and professional fees	16.45	5.97	49.94
Payment to auditor (refer note below)	0.22	0.21	1.63
Bank charges	0.00	0.01	0.03
Fair value loss on measurement of other payable	476.74	58.09	560.53
Miscellaneous expenses	-	0.20	0.36
	493.72	**64.57**	**613.09**
			-
Payment to auditor			
- Statutory audit fees	0.07	0.06	0.29
Special Audit fees			0.80
- Limited review fees	0.14	0.12	0.42
- Other services (certification fees)	-	0.02	0.42
Reimbursement of expenses	-	0.02	0.09
	0.22	**0.21**	**2.03**

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying Standalone Ind AS Financial Statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Standalone Balance Sheet as at March 31, 2023, the Standalone Statement of Profit and Loss (including Other Comprehensive Income), the Standalone Statement of Cash Flows, the Standalone Statement of Changes in Unit Holders' Equity and the Standalone Statement of Net Assets at Fair value as at March 31, 2023 and the Standalone Statement of Total Returns at Fair Value and the Standalone Statement of Net Distributable Cash Flows ('NDCFs') for the year then ended, and notes to the Standalone Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards (Ind AS) and/or any addendum thereto as defined in the rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the State of Affairs of the Trust as at March 31, 2023, its profits and total comprehensive income, movement of Unit Holders' fund and its Cash flows for the year ended March 31,2023, its Net Assets at fair value as at March 31, 2023, its total returns at Fair Value and the net distributable cash flow for the year ended on that date.

BASIS FOR OPINION

We conducted our audit of the Standalone Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Standalone Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the financial period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a

separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. <u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE STANDALONE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE STANDALONE FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Standalone Financial Statements that give a true and fair view of the Standalone financial position as at 31 March 2023, financial performance including other comprehensive income, movement of Unit Holders' fund and its Cash flows for the year ended March 31, 2023, its Net Assets at fair value as at March 31, 2023, its total returns at Fair Value and the net distributable cash flow of the trust for the year ended March 31, 2023 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified and/or any addendum thereto as defined in Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended read with the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulation 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "InvIT Regulations").

This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the Standalone financial statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Standalone Financial Statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also,

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.
- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet and the Statement of Profit and Loss including other comprehensive income, dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid standalone financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD/-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN: 23121011BGXXWA9139
Date: 12th May 2023
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2023

(Rs. in Millions)

		Note No.	As at March 31, 2023	As at March 31, 2022
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	94,424.44	90,929.80
	ii) Loans	4.2	30,351.69	30,302.98
	Total non-current assets		**1,24,776.13**	**1,21,232.78**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	20.08	20.04
	ii) Cash and cash equivalents	5.2	6.56	0.25
	iii) Loans	5.3	5,421.29	3,492.95
	iv) Other financial assets	5.4	7,965.17	5,610.67
	Other current assets	6	4.48	-
	Total current assets		**13,417.58**	**9,123.92**
	TOTAL ASSETS		**1,38,193.71**	**1,30,356.70**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	87,929.33	85,504.33
	Other equity	8	9,526.42	5,992.74
	Total unit holder's equity		**97,455.75**	**91,497.07**
(1)	**Non-current liabilities**			
	Financial liabilities			
	i) Other financial liabilities	9	35,778.03	35,168.79
	Total non- current liabilities		**35,778.03**	**35,168.79**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	4,872.91	3,607.93
	ii) Trade payables	10.2		
	small enterprises and small enterprises		0.01	-
	b) total outstanding dues of creditors other than micro enterprises and small enterprises		81.34	81.71
	Other Current liabilities	11	5.67	1.20
	Total current liabilities		**4,959.93**	**3,690.84**
	Total liabilities		**40,737.96**	**38,859.63**
	TOTAL EQUITY AND LIABILITIES		**1,38,193.71**	**1,30,356.70**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2023

(Rs. in Millions)

	Note No.	For the year ended March 31, 2023	For the year ended March 31, 2022
Income			
Other income	12	4,222.87	4,200.44
TOTAL INCOME		**4,222.87**	**4,200.44**
Expenses			
Investment Manager Fees		56.52	42.48
Other expenses	13	617.34	2,182.21
TOTAL EXPENSES		**673.86**	**2,224.69**
Profit / (Loss) before tax		**3,549.01**	**1,975.75**
Tax expenses			
Profit / (Loss) after tax (A)		**3,549.01**	**1,975.75**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		-	-
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**3,549.01**	**1,975.75**
Earnings per unit			
Basic		**4.04**	**2.34**
Diluted		**4.04**	**2.34**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place: Mumbai
Date : 12.05.2023

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust

Statement of changes in Equity for the year ended March 31, 2023

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
a. Unit Capital		
At the beginning of the year	85,504.33	81,688.00
Issued during the year	2,425.00	3,816.33
At the end of the year	**87,929.33**	**85,504.33**
b. Other Equity		
Retained earnings		
At the beginning of the year	5,992.74	4,020.25
Profit for the year	3,549.01	1,975.75
Unit issue expenses	(15.33)	(3.26)
At the end of the year	**9,526.42**	**5,992.74**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

Place : Mumbai
Date : 12.05.2023

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

-

	As at March 31, 2023		As at March 31, 2022	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,38,193.71	1,87,704.45	1,30,356.70	1,50,647.12
B. Liabilities (at book value)	40,737.96	4,959.93	38,859.63	3,690.84
C. Net Assets (A-B)	97,455.75	1,82,744.52	91,497.07	1,46,956.29
D. Number of units (in millions)	879.29	879.29	855.04	855.04
E. NAV (C/D) (Amount in Rs.)	**110.83**	**207.83**	**107.01**	**171.87**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2023**	**For the year ended March 31, 2022**
Total Comprehensive Income (As per the Statement of Profit and Loss)	3,549.01	1,975.75
Add/(less): Other Changes in Fair Value	85,288.77	55,459.22
Comprehensive Income -	**88,837.78**	**57,434.97**

Notes :

Fair value of assets as at March 31, 2023 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2023

(Rs. in Millions)

Particulars	For year ended March 31, 2023	For year ended March 31, 2022
Cash flow from operating activities		
Profit / (Loss) before tax	3,549.01	1,975.75
Adjustments to reconcile profit before tax to net cash flows:		
Fair value gain on investments	(0.18)	-
Profit on sale of investments	(0.92)	(0.40)
Fair value loss on measurement of other payable	560.53	2,161.31
Interest income on		
- Others	(4,221.77)	(4,200.00)
Operating profit/(loss) before working capital changes	**(113.33)**	**(63.33)**
Movement in working capital:		
Increase/(decrease) in trade payables	(0.36)	14.10
Increase/(decrease) in other financial liabilities	48.71	50.48
Increase/(decrease) in other current liabilities	4.48	(0.50)
(Increase)/decrease in Other current assets	(4.48)	0.03
(Increase)/decrease in loans	(1,928.34)	(1,682.67)
(Increase)/decrease in Other Financial assets	(229.72)	(0.89)
Cash generated from/(used in) operations	**(2,223.05)**	**(1,682.80)**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities (A)	**(2,223.05)**	**(1,682.80)**
Cash flows from investing activities		
Investment in subsidiaries	(1,212.00)	(615.00)
Investment in sub debt of subsidiaries	(2,282.64)	(2,264.49)
Loan given to subsidiaries Long term	(48.71)	(48.71)
Interest received from related parties	2,097.00	825.00
Purchase of units of Mutual Fund	(302.98)	(383.38)
Proceeds on sale of units of Mutual Fund	304.04	413.74
Net cash flows from/(used in) investing activities (B)	**(1,445.29)**	**(2,072.84)**
Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	2,425.00	3,816.33
Proceeds of curent borrowings	1,532.48	4,266.50
Repayment of curent borrowings	(267.50)	(4,336.33)
Unit Issue Expenses	(15.33)	(3.26)
Net cash flows from/(used in) financing activities (C)	**3,674.65**	**3,743.24**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**6.32**	**(12.40)**
Cash and cash equivalents at the beginning of the period	0.25	12.65
Cash and cash equivalents at the end of the period (refer 5.2)	**6.56**	**0.25**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	6.56	0.25
Total Cash and cash equivalents (refer note 5.2)	**6.56**	**0.25**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2023

Debt reconciliation statement in accordance with Ind AS 7		
Particulars	**For year ended March 31, 2023**	**For year ended March 31, 2022**
Opening balances		
Long term borrowings	-	-
Short term borrowings	3,607.93	3,677.76
	-	-
Movements		
Long term borrowings	-	-
Short term borrowings	(1,264.98)	69.83
	-	-
Closing balances		
Long term borrowings	-	-
Short term borrowings	4,872.91	3,607.93

Summary of significant accounting policies (refer note 3)

See accompanying notes to the financial statements.

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 “Statement of Cash Flows” as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place : Mumbai
Date : 12.05.2023

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Additional Disclosures as required by Paragraph 6 of Annexure A to SEBI Circular No. CIR/IMD/DF/127/2016:
a) Net Distributable Cash Flows as at the Standalone Trust level

(Rs. in millions)

Sr. No.	Particulars	Year ended March 31, 2023#	Year ended March 31, 2022
1	Cash flows received from Project SPVs in the form of Interest (Refer note 1)	2,097.00	825.00
2	Cash flows received from Project SPVs in the form of Dividend	-	-
3	Any other income accruing at the Trust level and not captured above, including but not limited to interest/return on surplus cash invested by the Trust	0.92	0.40
4	Cash flows received from the project SPVs towards the repayment of the debt issued to the Project SPVs by the Trust (Net) (Refer note 2)	(1,928.34)	(1,682.67)
5	**Total cash inflow at the Trust level (A)**	**169.58**	**(857.27)**
	Less:		
6	Any payment of fees, interest and expense incurred at the Trust level, including but not limited to the fees of the Investment Manager	(113.33)	(63.38)
7	Income tax (if applicable) at the Standalone Trust Level	-	-
8	Repayment of external debt	-	-
9	**Total cash outflows / retention at the Trust level (B)**	**(113.33)**	**(63.38)**
10	**Net Distributable Cash Flows (C) = (A+B)**	**56.25**	**(920.65)**

The said amount would be utilised towards Capex in ongoing projects.

Notes:

1 Excludes interest due but not received of Rs. 2,124.77 millions and Rs. 3,375 Millions for the year ended March 31, 2023 and year ended March 31, 2022.

2 Netted - off with disbursement of short-term unsecured loan to project SPV.

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2023

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012.

The Trust has been formed to invest in infrastructure assets primarily being in the road sector in India. The Trust's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Trust's portfolio comprises of ten road projects as listed below:-

The Trust had acquired the projects at Sr no 1 to 9 from the Sponsor which are road infrastructure projects developed on DBFOT basis. The SPV at Sr. no 10 has been added to portfolio from 02.04.2022.

Sr. No.	**Project SPV Name**
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)
10	Palsit Dankuni Tollway Private Limited(PDTPL) (w.e.f. 02.04.2022)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 12, 2023.

The Trust has been listed on NSE w.e.f. 03.04.2023

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Trust and all values are rounded to the nearest millions, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management’s best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Trust presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading

- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.
All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities respectively.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Trust has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Trust and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the transaction price of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Trust's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Trust operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a

legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

3.5. Goods and Services Tax (GST) paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.6. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of Trusts. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.7. Provisions

Provisions are recognised when the Trust has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Trust expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.8. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Trust or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a

liability that cannot be recognised because it cannot be measured reliably. The Trust does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.9. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Trust commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Trust. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Trust has investment in Debt oriented mutual Trust which are held for trading, are classified as at FVTPL. The Trust makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset is primarily derecognised (i.e. removed from the Trust's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Trust has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Trust has transferred substantially all the risks and rewards of the asset, or (b) the Trust has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Trust has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Trust continues to recognise the transferred asset to the extent of the Trust's continuing involvement. In that case, the Trust also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Trust has retained.

3.10. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Trust recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Trust assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Trust estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or Trust's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Trust’s financial liabilities include trade and other payables, loans and borrowings.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Trust that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Trust. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Trust's financial statements are presented in INR, which is also the Trust's functional currency. The Trust does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Trust at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Trust measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:

► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.
The principal or the most advantageous market must be accessible by the Trust.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.
A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.
The Trust uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.
All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Trust determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.
The Trust's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.
At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Trust's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.
The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.
On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Trust's independent auditors. This includes a discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Trust has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.
This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for valuation methods, significant estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 24 and 25)
- Quantitative disclosure of fair value measurement hierarchy (note 24 and 25)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Trust recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Trust's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 Segment Information

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

3.17 New pronouncements issued but not effective

Ministry of Corporate Affairs ("MCA") notifies new standards or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Amendment Rules, 2023, as below:

Ind AS 1: Disclosure of Material Accounting policy information and similar consequential amendment to Ind AS 34.

Ind AS 1: Disclosure of the judgements, apart from those involving estimations, that management has made in the process of applying the entity's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

Ind AS 8: Definition of Accounting Estimate as "Accounting estimates are monetary amounts in financial statements that are subject to measurement uncertainty". Further amendments to paragraphs delineating Changes to Accounting Estimates.

Ind AS 12: Amendments to taxable temporary difference, initial recognition of asset or liability and Deductible taxable differences.

Ind AS 12: Deferred tax related to assets and liabilities arising from Single Transaction.

Ind AS 107: Information about measurement basis (or bases) for financial instruments to be disclosed as material accounting policy.

Ind AS 109: Amendment to paragraph on reassessment of embedded derivative.

Ind AS 115: Amendments to Appendix 1 which gives there in the major differences, if any, between Indian Accounting Standard (Ind AS) 115 and the corresponding International Financial Reporting Standard (IFRS) 15, Revenue from Contracts with Customers, IFRIC 12, Service Concession Arrangements and SIC 29 Service Concession Arrangements: Disclosures, issued by the International Accounting Standards Board

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
371,500,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,715.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
121,200,000 equity shares of Palshit Dankuni Tollway Private Limited	1,212.00	-
Investments in subsidiaries (unquoted)	**22,212.01**	**21,000.01**
Other equity instruments (unquoted) (FVTOCI)		
B) Investments at cost		
B) Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,727.80
IRB Hapur Moradabad Tollway Limited	9,798.52	9,414.76
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	2,495.38	1,809.50
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,338.40
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Palshit Dankuni Tollway Private Limited	1,213.00	-
Subordinated Debt to Related parties (Interest free)	**72,212.43**	**69,929.79**
Total non-current investments (A + B)	**94,424.44**	**90,929.80**
Aggregate amount of unquoted investments	**94,424.44**	**90,929.80**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
	-	-
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,471.59	8,471.59
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Less: Current maturities of loan to related parties	-	-
- Interest free	-	-
Kaithal Tollway Limited	351.69	302.98
Total	**30,351.69**	**30,302.98**

Note 5 : Financial assets (current)

5.1 Investments

Investments at fair value through Profit & Loss

Investments in mutual fund (quoted)

Investments in Mutual Funds (quoted) (FVTPL)	20.08	20.04
(SBI Liquid Fund Direct Growth - March 31,2023 - 3333.09 units)		
	20.08	**20.04**

5.2 Cash and cash equivalent

Balances with banks:		
- In current accounts	6.56	0.25
	6.56	**0.25**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
5.3 Loans		
(Secured, considered good, unless otherwise stated)		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	478.89	478.89
IRB Hapur Moradabad Tollway Limited	-	37.26
IRB Westcoast Tollway Limited	2,348.08	1,116.98
Kaithal Tollway Limited	156.71	681.81
Solapur Yedeshi Tollway Limited	24.00	24.00
Udaipur Tollway Limited	1,335.31	214.41
CG Tollway Limited	558.50	316.30
Kishangarh Gulabpura Tollway Limited	-	106.00
Yedeshi Aurangabad Tollway Limited	519.80	517.30
	5,421.29	**3,492.95**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from others	7,681.04	5,556.27
Other receivables		
- related parties	284.13	54.40
	7,965.17	**5,610.67**
Note 6 : Other current assets		
Duties and taxes receivable	3.30	-
Prepaid expenses	1.18	-
Total	**4.48**	**-**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023
Note 7 : Equity

(Rs. in Millions)

	As at March 31 ,2023	As at March 31,2022
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	85,504.33	81,688.00
Issued during the year	2,425.00	3,816.33
At the end of the year	**87,929.33**	**85,504.33**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31 ,2023		As at March 31,2022	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	85,50,43,265	85,504.33	81,68,80,000	81,688.00
Issued during the year	2,42,50,000	2,425.00	3,81,63,265	3,816.33
At the end of the year	**87,92,93,265**	**87,929.33**	**85,50,43,265**	**85,504.33**

III. Details of Promoter

	As at March 31 ,2023		As at March 31,2022	
	No. of units	%	No. of units	%
IRB Infrastructure Developers Limited	44,84,39,840	51%	43,60,72,332	51%
Anahera Investments Pte Ltd	21,98,23,181	25%	21,37,60,685	25%
Bricklayers Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Chiswick Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Stretford End Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Dangenham Investments Pte Ltd	5,27,57,561	6%	5,13,02,562	6%
Total	**87,92,93,265**	100%	**85,50,43,265**	100%

Note :8 Other Equity

	As at March 31 ,2023	As at March 31,2022
Retained earnings		
At the beginning of the year	5,992.74	4,020.25
Profit/(loss) for the year	3,549.01	1,975.75
Unit issue expenses	(15.33)	(3.26)
Total Other Equity	**9,526.42**	**5,992.74**

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
9 Other financial liabilities		
Other Payable		
- related party	35,778.03	35,168.79
	35,778.03	**35,168.79**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
Loan from related parties		
- Interest free	4,872.91	3,607.93
Total	**4,872.91**	**3,607.93**
10.2 Trade Payables		
a) total outstanding dues of micro enterprises and small enterprises	0.01	-
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	78.54	80.31
- others	2.80	1.40
Total	**81.35**	**81.71**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	5.67	1.20
Total	**5.67**	**1.20**

(Rs. in Millions)

	For the year ended March 31, 2023	For the year ended March 31, 2022
Note 12 : Other income		
Interest income on		
Interest income from Related parties	4,221.77	4,200.00
Gain on sale of investment	0.92	0.40
Fair value gain on investments	0.18	0.04
	4,222.87	**4,200.44**
Note 13 : Other expenses		
Rates & taxes	0.60	4.73
Legal and professional fees	54.19	15.49
Payment to auditor (refer note below)	1.63	0.64
Bank charges	0.03	0.03
Miscellaneous expenses	0.36	-
Fair value loss on measurement of other payable	560.53	2,161.31
	617.34	**2,182.21**
Payment to auditor		
- Statutory audit fees	0.29	0.27
Special audit fees	0.80	-
- Limited review fees	0.42	0.36
- Other services (certification fees)	0.42	-
Reimbursement of expenses	0.09	0.01
	2.03	**0.64**

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit attributable to unit holders of the Trust for basic & diluted earnings	3,549.01	1,975.75
Weighted average number of unit for basic & diluted EPU* (in Millions)	**87,79,64,498**	**84,29,14,666**
Basic earning per unit (Amount in Rs.)	4.04	2.34
Diluted earning per unit (Amount in Rs.)	4.04	2.34

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2023. (As on 31.03.2022 Nil)

Note 16 :Contingent liabilities

The Trust has provided Corporate guarantee for the subsidiary companies i.e. SYTL and YATL in respect of the NCDs issued during the FY 2022-23.. (As on 31.03.2022 Nil)

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Trust.

(Rs. in Millions)

Particulars	As at March 31, 2023	As at March 31, 2022
Principal amount remaining unpaid to any supplier as at the period end	0.01	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2023	As at March 31, 2022
MSME disputed Dues	-	-
MSME Undisputed Dues	-	-
Less than 1 year	0.01	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**0.01**	-

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2023	As at March 31, 2022
disputed Dues		
Undisputed Dues		
Less than 1 year	50.56	35.28
1-2 Years	30.78	46.43
2-3 Years		
More than 3 years		
Total dues to creditors other than micro enterprises and small enterprises as at	**81.34**	**81.71**
b) out of the above unbilled amount	0.27	0.87

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

Note 18 : Operating segment

The Trust is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Trust's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 19 : Other Statutory Information

i) The Trust have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Trust does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the Trust.

iii) The Trust does not have any transactions with companies struck off.

iv) The Trust does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Trust did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vi) The Trust has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.

Note 20 : Loans or advances to specified persons

(Rs. in Millions)

Types of borrower	As at March 31, 2023		As at March 31, 2022	
	Amount outstanding*	% of Total ^	Amount outstanding*	% of Total ^
Promoters	-	-	-	-
Directors	-	-	-	-
KMPs	-	-	-	-
Related Parties	35,772.98	100%	33,795.94	100%
Total aggregate loans	**35,772.98**	**100%**	**33,795.94**	**100%**

* represents loan or advance in the nature of loan

^ represents percentage to the total Loans and Advances in the nature of loan

Note 21 : Particulars in respect of loans and advances in the nature of loans given to subsidiaries as required by Regulation 53(f) of the SEBI (Listing Obligation and Disclosure Requirements) Regulation, 2015

	As at March 31, 2023		As at March 31, 2022	
	Balances outstanding	Maximum balance Outstanding during the year	Balances outstanding	Maximum balance Outstanding during year
AE Tollway Limited	10,007.30	10,007.30	10,007.30	10,007.30
Kaithal Tollway Limited	8,979.99	9,456.38	9,456.38	9,456.38
Kishangarh Gulabpura Tollway Limited	-	106.00	106.00	106.00
Udaipur Tollway Limited	1,335.31	1,335.31	214.41	214.41
CG Tollway Limited	558.50	558.50	316.30	316.30
IRB Hapur Muradabad Tollway Limited	-	-	37.26	37.26
IRB Westcoast Tollway Limited	6,348.08	6,348.08	5,116.98	5,116.98
Solapur Yedeshi Tollway Limited	4,024.00	4,024.00	4,024.00	4,024.00
Yedeshi Aurangabad Tollway Limited	4,519.80	4,519.80	4,517.30	4,517.30

Note 22 : Basis of preparation of financial statements

The Trust has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of SEBI (Infrastructure Investment Trusts) Regulations, 2014.

Note 23 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs

AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited
Palsit Dankuni Tollway Private Limited

ii. Parties to the Fund *

IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

***As per Invit Regulation**

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Virendra D. Mhaiskar HUF	IRB Infrastructure Developers Limited	IDBI Bank Limited Life Insurance Corporation of India General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Jose Tamariz Martel Goncer Mr. Ravindra Dhariwal	Virendra D Mhaiskar Mr. Kunnasagaran Chinniah	Mr. Samuel Joseph Jebaraj Mr. Pradeep Kumar Jain Mrs. Jayashree Vijay Ranade Mr. Pradeep Kumar Malhotra Ms. Baljinder Kaur Mandal
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	K G Krishnamurthy Ranjana Paranjape	

Associates	**A) Holding Company of Sponsor / Project Manager** IRB Holding Private Limited (Formerly Mhaiskar Ventures Private Limited) **B) Subsidiary Companies of Sponsor /** Ideal Road Builders Private Limited (IRBPL) Mhaiskar Infrastructure Private Limited Modern Road Makers Private Limited Aryan Toll Road Private Limited (ATRPL) ATR Infrastructure Private Limited (ATRFL) IRB Infrastructure Private Limited (IRBFL) Thane Ghodbunder Toll Road Private Limited (TGTRPL) Aryan Infrastructure Investments Private Limited (AIIPL) IRB MP Expressway Private Limited MMK Toll Road Private Limited (MMK) - Entity with Joint Control IRB Kolhapur Integrated Road Development Company Private Limited (IRBK) Aryan Hospitality Private Limited (AHPL) IRB Sindhudurg Airport Private Limited (IRBSA) IRB Goa Tollway Private Limited (IRB Goa) IRB PS Highway Private Limited (IRBPS) IRB Ahmedabad Vadodara Super Express Tollway Private Limited (IRBAV) MRM Mining Private Limited (Subsidiary of MRMPL) GE1 Expressway Private Limited (Formerly known as IRB PP Project Private Limited) VK1 Expressway Private Limited (VK1) - Upto October 12, 2022 IRB Infrastructure Trust - Entity with Joint Control VM7 Expressway Private Limited Palsit Dankuni Tollway Private Limited - Upto April 1, 2022 Pathankot Mandi Highway Private Limited Chittoor Thachur Highway Private Limited Meerut Budaun Expressway Limited - Subsidiary upto October 14, 2022 and Entity with Joint Control w.e.f. October 15,2022 Samakhiyali Tollway Private Limited w.e.f 14.03.2023 **C) Other Associate Companies of Sponsor / Project Manager** 1. Virendra D. Mhaiskar (HUF) 2. VCR Toll Services Private Limited 3. VDM Ventures Private Limited 4. DEUX Farming Films Private Limited 5. IRB Charitable Foundation **Key Managerial personnel of Project SPV Group** (Only with whom Project SPV Group had transactions during the year/ there was balance outstanding at the year end) 1. Ms. Shilpa Todankar 2. Mr. Abhay Phatak (w.e.f. March 09, 2022) 3. Mr. Darshan Sangurdekar 4. Mr. Omprakash Singh 5. Mr. Chandrashekhar Kaptan 6. Mrs. Ranjana Paranjape (w.e.f October 06, 2021) 7. Mrs. Arati Taskar 8. Mr. Sudhir Rao Hoshing 9. Mr. Amitabh Murarka 10. Mr. Jitendra Sharma (upto February 28, 2022) 11. Mrs. Heena Raja (upto October 01, 2021)

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2023	Year ended March 31, 2022
1	**Equity Investment**		**1,212.00**	**615.00**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	615.00
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	-
2	**Subordinated Debt**		**2,282.64**	**2,264.49**
	CG Tollway Limited	Subsidiary	-	240.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	383.76	1,765.00
	IRB Westcoast Tollway Limited	Subsidiary	-	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	685.88	-
	Udaipur Tollway Limited	Subsidiary	-	259.19
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,213.00	-
3	**Long term loan (Interest free)**		**48.71**	**48.71**
	Kaithal Tollway Limited	Subsidiary	48.71	48.71
4	**Short Term Loan given**		**2,643.20**	**1,682.67**
	AE Tollway Limited	Subsidiary	-	231.30
	IRB Hapur Muradabad Tollway Limited	Subsidiary	46.50	33.76
	IRB Westcoast Tollway Limited	Subsidiary	1,231.10	158.00
	Kaithal Tollway Limited	Subsidiary	-	502.40
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4.00
	Udaipur Tollway Limited	Subsidiary	1,120.90	214.41
	CG Tollway Limited	Subsidiary	242.20	314.30
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	76.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2.50	148.50
5	**Short Term Loan repaid**		**525.10**	**-**
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	-
	Kaithal Tollway Limited	Subsidiary	525.10	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	-
6	**Unit Capital Issued**		**1,236.75**	**1,946.33**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,236.75	1,946.33
7	**Interest income**		**4,221.77**	**4,200.00**
	Solapur Yedeshi Tollway Limited	Subsidiary	560.00	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	581.77	560.00
	Kaithal Tollway Limited	Subsidiary	1,186.02	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	560.00	560.00
	AE Tollway Limited	Subsidiary	1,333.98	1,333.98

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

II) Related party transaction during the year

8	**Inestment Management Fees**		**56.52**	**42.48**
	MMK Toll Road Pvt Limited	Investment Manager	56.52	42.48
9	**Expenses incurred on behalf of others**		**358.05**	**0.89**
	AE Tollway Limited	Subsidiary	1.11	-
	CG Tollway Limited	Subsidiary	48.45	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	194.00	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	32.63	-
	IRB Westcoast Tollway Limited	Subsidiary	7.61	-
	Udaipur Tollway Limited	Subsidiary	16.08	0.89
	Solapur Yedeshi Tollway Limited	Subsidiary	3.78	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.69	-
	Kaithal Tollway Limited	Subsidiary	0.01	-
	Palsit Dankuni Tollway Private Limited	Subsidiary	45.60	-
	MMK Toll Road Pvt Limited	Investment Manager	0.08	-
10	**Reimbursement received on expenses incurred on behalf of others**	-	**128.32**	**-**
	AE Tollway Limited	Subsidiary	1.10	
	CG Tollway Limited	Subsidiary	1.10	
	Kishangarh Gulabpura Tollway Limited	Subsidiary	22.68	
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9.73	
	IRB Westcoast Tollway Limited	Subsidiary	7.77	
	Udaipur Tollway Limited	Subsidiary	2.95	
	Solapur Yedeshi Tollway Limited	Subsidiary	27.89	
	Yedeshi Aurangabad Tollway Limited	Subsidiary	11.02	
	Kaithal Tollway Limited	Subsidiary	0.01	
	Palsit Dankuni Tollway Private Limited	Subsidiary	44.06	
11	**Unsecured Loan received**		**1,532.48**	**4,759.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,532.48	4,759.00
12	**Unsecured Loan paid**		**267.50**	**4,828.83**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	267.50	4,828.83
13	**Expenses incurred on our behalf of (reimbursement)**		**-**	**1.77**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	1.77
14	**Other Payable**		**609.23**	**2,210.02**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	560.52	2,161.31
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	48.71
15	**Trustee Fees**		**2.53**	**0.38**
	IDBI Trusteeship Services Limited	Trustee	2.53	0.38

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2023

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2023	As on March 31,2022
1	**Equity Investment**		**22,212.01**	**21,000.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,715.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,212.00	-
2	**Subordinated Debt**		**72,212.43**	**69,929.79**
	AE Tollway Limited	Subsidiary	10,265.88	10,265.88
	CG Tollway Limited	Subsidiary	2,727.80	2,727.80
	IRB Hapur Muradabad Tollway Limited	Subsidiary	9,798.52	9,414.76
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	2,495.38	1,809.50
	Kaithal Tollway Limited	Subsidiary	4,426.04	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,338.40	8,338.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	16,319.79
	Palshit Dankuni Tollway Private Limited	Subsidiary	1,213.00	-
3	**Long term loan (Interest bearing)**		**30,000.00**	**30,000.00**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Limited	Subsidiary	8,471.59	8,471.59
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Long term loan (Interest free)**		**351.69**	**302.98**
	Kaithal Tollway Limited	Subsidiary	351.69	302.98
5	**Short Term Loan**		**5,421.29**	**3,492.95**
	AE Tollway Limited	Subsidiary	478.89	478.89
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	37.26
	IRB Westcoast Tollway Limited	Subsidiary	2,348.08	1,116.98
	Kaithal Tollway Limited	Subsidiary	156.71	681.81
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	24.00
	Udaipur Tollway Limited	Subsidiary	1,335.31	214.41
	Yedeshi Aurangabad Tollway Limited	Subsidiary	519.80	517.30
	CG Tollway Limited	Subsidiary	558.50	316.30
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	106.00
6	**Other Payable**		**35,776.26**	**35,167.02**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	32,095.57	31,535.05
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	351.69	302.98
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
7	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**-**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	1.77

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2023

8	**Other Receivable**		**284.05**	**-**
	Solapur Yedeshi Tollway Limited	Subsidiary	4.89	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	8.17	10.50
	IRB Westcoast Tollway Limited	Subsidiary	13.76	13.92
	Udaipur Tollway Limited	Subsidiary	14.11	0.99
	AE Tollway Limited	Subsidiary	0.01	-
	CG Tollway Limited	Subsidiary	47.35	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	171.32	-
	IRB Hapur Moradabad Tollway Limited	Subsidiary	22.90	-
	Kaithal Tollway Limited	Subsidiary	0.00	-
	Palshit Dankuni Tollway Private Limited	Subsidiary	1.54	-
	MMK Toll Road Private Limited	Investment Manager	0.08	
9	**Interest Receivable**		**7,681.04**	**5,556.27**
	Solapur Yedeshi Tollway Limited	Subsidiary	539.90	547.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	485.27	636.00
	Kaithal Tollway Limited	Subsidiary	2,112.74	1,693.72
	IRB Westcoast Tollway Limited	Subsidiary	1,552.00	992.00
	AE Tollway Limited	Subsidiary	2,991.13	1,687.16
10	**Trade payable**		**78.54**	**80.31**
	MMK Toll Road Pvt Limited	Investment Manager	78.54	80.31
11	**Unsecured Loan / other payable**		**4,872.91**	**3,607.93**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,872.91	3,607.93

Note 24 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the trust are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2023	As at March 31, 2023	As at March 31, 2022	As at March 31, 2022
Financial assets				
Financial assets measured at amortised cost				
Loans	35,772.98	35,772.98	33,795.94	33,795.94
Other financial assets	7,965.17	7,965.17	5,610.67	5,610.67
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual trusts	20.08	20.08	20.04	20.04
Financial assets measured at amortised cost				
Cash and cash equivalents	6.56	6.56	0.25	0.25
Other Bank balances	-	-	-	-
Financial liabilities				
Financial liabilities measured at amortised cost				
Trade payables	81.35	81.35	81.71	81.71
Borrowings	4,872.91	4,872.91	3,607.93	3,607.93
Other financial liabilities	35,778.03	35,778.03	35,168.79	35,168.79

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the trust has determined that market participants would take into account when pricing the investments.

The trust is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

Note 25 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1, Level 2 and Level 3 during the year.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2023:

(Rs. in Millions)

	As at March 31, 2023	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	35,772.98	-	-	35,772.98
Cash and cash equivalents	6.56			6.56
Other Financial assets	7,965.17	-	-	7,965.17
Investments in mutual fund (Quoted)	20.08	20.08	-	-
Liabilities				
Trade payable	81.35	-	-	81.35
Other financial liabilities	35,778.03	-	-	35,778.03
Borrowings	4,872.91			4,872.91

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2022:

(Rs. in Millions)

	As at March 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	33,795.94	-	-	33,795.94
Other Financial assets	5,610.67	-	-	5,610.67
Investments in mutual fund (Quoted)	20.04	20.04	-	-
Liabilities				
Trade payable	81.71	-	-	81.71
Other financial liabilities	35,168.79	-	-	35,168.79

Note 26 : Financial risk management objectives and policies

The trust's risk management policies are established to identify and analyse the risks faced by the trust, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the trust's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the trust's risk management framework.

In performing its operating, investing and financing activities, the trust is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans borrowings and deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The trust is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2023, the credit risk is considered low since substantial transactions of the trust are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The trust's exposure to the risk of changes in market interest rates relates primarily to the trust's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the trust may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The trust's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The trust closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2023	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		4,872.91		-	**4,872.91**
Other financial liabilities			-	35,778.03		**35,778.03**
Trade payables	-	0.01	50.56	30.78	-	**81.35**
Total	**-**	**0.01**	**4,923.47**	**35,808.80**	**-**	**40,732.29**

March 31, 2022	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,607.93		-	**3,607.93**
Other financial liabilities			-	35,168.79		**35,168.79**
Trade payables	-	-	35.28	46.43	-	**81.71**
Total	**-**	**-**	**3,643.21**	**35,215.22**	**-**	**38,858.44**

At present, the trust does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The trust manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the trust may adjust the distribution of cash flow of return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2023
The trust monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2023	As at March 31, 2022
Borrowings	4,872.91	3,607.93
Less: cash and cash equivalents	(6.56)	(0.25)
Net debt (A)	**4,866.35**	**3,607.69**
Unit capital	87,929.33	85,504.33
Other equity	9,526.42	5,992.74
Total equity (B)	**97,455.75**	**91,497.07**
Capital and net debt C = A + B	**1,02,322.10**	**95,104.76**
Gearing ratio (%) (C / A)	**4.76%**	**3.79%**

In order to achieve this overall objective, the trust's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current year.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the trust's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the actrusting disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the trust’s accounting policies, management has made the judgement, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders trusts

Under the provisions of the InvIT Regulations, trust is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of trust for each financial year. Accordingly, a portion of the unit holders’ trusts contains a contractual obligation of the trust to pay to its Unit holders cash distributions. The Unit holder's trusts could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders’ trusts have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The trust based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the trust. Such charges are reflected in the assumptions when they occur.

Fair valuation and disclosures

SEBI Circulars issued under the InvIT Regulations required is diclosures relating to net assets at fair value and total returns at fair value. In estimating the fair value of investments in subsidiaries (which constitute substantial portion of the net assets), the Trust engages independent qualified external valuers to perform the valuation. The management works closely with the valuers to establish the appropriate valuation techniques and inputs to the model. The management reports the valuation report and findings to the Board of the Investment Manager half yearly to explain the cause of fluctuations in the fair value of the road projects. The inputs to the valuation models are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required in establishing fair values. Judgements include considerations of inputs such as WACC, Tax rates, Inflation rates etc. Changes in assumptions about these factors could affect the fair value. (refer note 24 for details).

Impairment of non-financial assets

Non-financial assets of the trust primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : Investment Manager Fees

Pursuant to the terms of the Investment Management Agreement, the fees will be paid to the Investment Manager for the services provided by it ("Management Fees"). The Management Fees have been revised for the Financial Year with the approval of the Unitholders, where the votes cast by Unitholders so entitled and voting in favor of a resolution are not less than one-and-a-half times the votes cast against such resolution. Pursuant to a resolution of the Unitholders, the Management Fees for the Financial Year 2023 has been revised to Rs.47.70 millions

Note 30 : Taxes

In accordance with section 10 (23FC) of the Income Tax Act, the income of business trust in the form of interest received or receivable from Project SPV is exempt from tax. Accordingly, the trust is not required to provide any current tax liability. Further, deferred tax assets on carry forward losses is not being created since there is no virtual certainty of reversal of the same in the near future.

Note 31

On April 7, 2022, the Trust has executed arrangement with the Sponsor for implementation of Palsit Dankuni Tollway Private Limited ('SPV') by the Trust and accordingly, the project is being executed by the SPV and the Trust.

Note 32 : Events after reporting period

There is no subsequent event after the reporting period which requires adjustments to the financial statements.

Note 33 : Previous period comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm to current period's classification.

Note 34 : Subsequent Events

The Trust has been listed on NSE w.e.f. 03.04.2023

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 12.05.2023

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 12.05.2023

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

REPORT ON THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

OPINION

We have audited the accompanying standalone financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Balance Sheet as at 31 March 2022, the Statement of Profit and Loss including Other Comprehensive Income, the Statement of Cash Flows and the Statement of Changes in Unit Holders' Equity and Statement of Total Returns at fair value for the year ended 31 March 2022 ("the financial period"), the Statement of Net Assets at fair value as at 31 March 2022, and Notes to the Standalone Financial Statements including a Summary of Significant Accounting Policies and Other Explanatory Information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the State of Affairs of the Trust as at 31 March 2022, its **Profit** including other Comprehensive Income, its Cash Flows, changes in Unit holders' Equity and the Total Returns at Fair Value for the year ended 31 March 2022 and the Net Assets at fair value as at 31 March 2022.

BASIS FOR OPINION

We conducted our audit of the Standalone Financial Statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Standalone Financial Statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the financial period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

PARTICULARS	HOW THEY WERE ADDRESSED IN OUR AUDIT
1. <u>Loss on fair value measurement of other payable / deferred consideration payable to IRB Group.</u> Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Loss on fair value measurement of other payable'.	• We reviewed the Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to the Sponsor, as estimated by the valuer, taking into consideration the weighted average of probabilities of realization has been validated.
2. <u>Impairment Testing</u> The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights. Accordingly, the evaluation of impairment of toll collection rights has been determined as a Key Audit Matter.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable. • Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

INFORMATION OTHER THAN THE STANDALONE FINANCIAL STATEMENTS AND AUDITOR'S REPORT THEREON

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS OF INVESTMENT MANAGER FOR THE STANDALONE FINANCIAL STATEMENTS

The Board of Directors of Investment Manager is responsible for the preparation of these Standalone Financial Statements that give a true and fair view of the financial position as at 31 March 2022, financial performance including other comprehensive income, cash flows, changes in unit holders' equity and total returns at fair value for the year ended 31 March 2022 and the net assets at fair value as at 31 March 2022 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the Standalone Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud and error.

In preparing the Standalone Financial Statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

AUDITOR'S RESPONSIBILITY FOR THE AUDIT OF THE STANDALONE IND AS FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.

- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our

audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet, the Statement of Profit and Loss, the Statement of Cash Flows, Statement of Changes in Unit Holder's Equity, the Statement of Net Assets at fair value and the Statement of Total Returns at fair value dealt with by this Report are in agreement with the books of account of the Trust; and

c. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For Gokhale & Sathe,
Chartered Accountants
Firm Registration No.: 103264W

SD /-
CA Kaustubh Deshpande,
Partner
Membership No. 121011
UDIN:22121011AJFJMR7003
Date: 06th May 2022
Place: Mumbai

IRB Infrastructure Trust
Balance Sheet as at March 31, 2022

(Rs. in Millions)

		Note No.	As at March 31, 2022	As at March 31, 2021
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	90,929.80	88,050.31
	ii) Loans	4.2	30,302.98	30,254.28
	Total non-current assets		**1,21,232.78**	**1,18,304.59**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	20.04	50.00
	ii) Cash and cash equivalents	5.2	0.25	12.65
	iii) Loans	5.3	3,492.95	1,810.28
	iv) Other financial assets	5.4	5,610.67	2,234.78
	Other current assets	6	-	0.03
	Total current assets		**9,123.92**	**4,107.74**
	TOTAL ASSETS		**1,30,356.70**	**1,22,412.32**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	85,504.33	81,688.00
	Other equity	8	5,992.74	4,020.25
	Total unit holder's equity		**91,497.07**	**85,708.25**
(1)	**Non-current liabilities**			
	Financial liabilities	9		
	i) Other financial liabilities	9	35,168.79	24,717.75
	Total non- current liabilities		**35,168.79**	**24,717.75**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	3,607.93	3,677.76
	ii) Trade payables	10.2		
	a) total outstanding dues of creditors other than micro enterprises and small enterprises		81.71	67.61
	iii Other financial liabilities	10.3	-	8,239.25
	Other Current liabilities	11	1.20	1.70
	Total current liabilities		**3,690.84**	**11,986.32**
	Total liabilities		**38,859.63**	**36,704.08**
	TOTAL EQUITY AND LIABILITIES		**1,30,356.70**	**1,22,412.32**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place : Mumbai
Date : 06/05/2022

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2022

(Rs. in Millions)

	Note No.	For the year ended March 31, 2022	For the year ended March 31, 2021
Income			
Other income	12	4,200.44	4,203.30
TOTAL INCOME		**4,200.44**	**4,203.30**
Expenses			
Investment Manager Fees		42.48	46.25
Other expenses	13	2,182.21	5.83
TOTAL EXPENSES		**2,224.69**	**52.08**
Profit / (Loss) before tax		**1,975.75**	**4,151.21**
Tax expenses			
Current tax		-	-
Profit / (Loss) after tax (A)		**1,975.75**	**4,151.21**
Other comprehensive income / (loss) for the year (net of tax)			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		**-**	**-**
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**1,975.75**	**4,151.21**
Earnings per unit			
Basic		**2.34**	**5.29**
Diluted		**2.34**	**5.29**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place: Mumbai
Date : 06/05/2022

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust
Statement of changes in Equity for the year ended March 31, 2022

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
a. Unit Capital		
At the beginning of the year	81,688.00	76,582.50
Issued during the year	3,816.33	5,105.50
At the end of the year	**85,504.33**	**81,688.00**
b. Other Equity		
Retained earnings		
At the beginning of the year	4,020.25	(27.16)
Profit for the period	1,975.75	4,151.21
Unit issue expenses	(3.26)	(103.81)
At the end of the year	**5,992.74**	**4,020.25**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Shilpa Todankar
Chief Financial officer

Place : Mumbai
Date : 06/05/2022

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2022

(Rs. in Millions)

Particulars	For the year ended March 31, 2022	For year ended March 31, 2021
Cash flow from operating activities		
Profit / (Loss) before tax	1,975.75	4,151.21
Adjustments to reconcile profit before tax to net cash flows:		
Profit on sale of investments	(0.40)	(0.43)
Interest income on		
- Others	(4,200.00)	(4,200.00)
Operating profit/(loss) before working capital changes	**(2,224.69)**	**(49.22)**
Movement in working capital:		
Increase/(decrease) in trade payables	14.10	40.48
Increase/(decrease) in other financial liabilities	2,211.79	(2,616.69)
Increase/(decrease) in other current liabilities	(0.50)	1.68
(Increase)/decrease in Other current assets	0.03	(0.03)
(Increase)/decrease in loans	(1,682.67)	28,019.39
(Increase)/decrease in Other Financial assets	(3,375.89)	(2,234.78)
Cash generated from/(used in) operations	**(5,057.84)**	**23,160.83**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities (A)	**(5,057.84)**	**23,160.83**
Cash flows from investing activities		
Investment in subsidiaries	(615.00)	(1,205.00)
Investment in sub debt of subsidiaries	(2,264.49)	(34,724.37)
Loan given to subsidiaries Long term	(48.71)	(48.71)
Interest received from others	4,200.00	4,200.00
Gain on sale of Investment	0.44	0.43
Purchase of Investment	-	(50.00)
Sale of Investment	29.95	-
Net cash flows from/(used in) investing activities (B)	**1,302.20**	**(31,827.64)**
Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	3,816.33	5,105.50
Proceeds / Repayment of curent borrowings	(69.83)	3,677.76
Unit Issue Expenses	(3.26)	(103.81)
Net cash flows from/(used in) financing activities (C)	**3,743.24**	**8,679.45**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**(12.40)**	**12.64**
Cash and cash equivalents at the beginning of the period	12.65	0.01
Cash and cash equivalents at the end of the period (refer 5.2)	**0.25**	**12.65**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	0.25	12.65
Total Cash and cash equivalents (refer note 5.2)	**0.25**	**12.65**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2022

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Kaustubh Deshpande
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Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

Place : Mumbai
Date : 06/05/2022

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

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	As at March 31, 2022		As at March 31, 2021	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,30,356.70	1,36,296.70	1,22,412.32	1,48,712.32
B. Liabilities (at book value)	38,859.63	38,859.63	36,704.08	36,704.08
C. Net Assets (A-B)	91,497.07	97,437.07	85,708.25	1,12,008.25
D. Number of units (in millions)	855.04	855.04	816.88	816.88
E. NAV (C/D) (Amount in Rs.)	**107.01**	**113.96**	**104.92**	**137.12**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2022**	**For the year ended March 31, 2021**
Total Comprehensive Income (As per the Statement of Profit and Loss)	1,975.75	4,151.21
Add/(less): Other Changes in Fair Value	5,940.00	26,300.00
Comprehensive Income -	**7,915.75**	**30,451.21**

Notes :
Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2022

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects are listed below:-

The Fund had acquired the following projects from the Sponsor which are road infrastructure projects developed on DBFOT basis.

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 06, 2022.

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Fund and all values are rounded to the nearest lakhs, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five hundred

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management’s best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Fund presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle

- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Fund has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Fund and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Fund's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Fund operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax
Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Sales/value added tax and goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of sales/value added taxes and goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.6. Provisions

Provisions are recognised when the Fund has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Fund expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.7. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Fund or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Fund does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.8. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Fund commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Fund. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Fund has investment in Debt oriented mutual fund which are held for trading, are classified as at FVTPL. The Fund makes such election on an instrument by instrument basis. The

classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a the Fund of similar financial assets) is primarily derecognised (i.e. removed from the Fund's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Fund has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Fund has transferred substantially all the risks and rewards of the asset, or (b) the Fund has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Fund has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Fund continues to recognise the transferred asset to the extent of the Fund's continuing involvement. In that case, the Fund also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Fund has retained.

3.9. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Fund recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Fund assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Fund estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from

other assets or Fund's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Fund’s financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Fund that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Fund. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from

the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Fund's financial statements are presented in INR, which is also the Fund's functional currency. The Fund does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Fund at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Fund measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:
► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible by the Fund.
The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.
A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.
The Fund uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.
All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Fund determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.
The Fund's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.
At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Fund's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.
The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.
On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Fund's independent auditors. This includes a discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Fund has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.
This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for valuation methods, significant estimates and assumptions (note 28)
- Financial instruments (including those carried at amortised cost) (note 24 and 25)
- Quantitative disclosure of fair value measurement hierarchy (note 24 and 25)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Fund recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Fund's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

3.17 Investment

Investments, which are readily realisable and intended to be held for not more than one year from the date on which such investments are made, are classified as current investments. All other investments are classified as long-term investments.

On initial recognition, all investments are measured at cost. The cost comprises purchase price and directly attributable acquisition charges such as brokerage, fees and duties. If an investment is acquired, or partly acquired, by the issue of shares or other securities, the acquisition cost is the fair value of the securities issued.

Current investments are carried in the financial statements at lower of cost and fair value determined on an individual investment basis. Long-term investments are carried at cost. However, provision for diminution in value is made to recognise a decline other than temporary in the value of the investments.

On disposal of an investment, the difference between its carrying amount and net disposal proceeds is charged or credited to the Statement of profit and loss.

3.18 Segment Information

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
Investments in equity instruments of subsidiaries (unquoted)		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
310,000,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,715.00	3,100.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.94	1,741.94
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.57	2,157.57
Investments in subsidiaries (unquoted)	**21,000.01**	**20,385.01**
Other equity instruments (unquoted) (FVTOCI)		
B) Investments at cost		
Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	10,265.88
CG Tollway Limited	2,727.80	2,487.50
IRB Hapur Moradabad Tollway Limited	9,414.76	7,649.76
IRB Westcoast Tollway Limited	12,203.92	12,203.92
Kishangarh Gulabpura Tollway Limited	1,809.50	1,809.50
Kaithal Tollway Private Limited	4,426.04	4,426.04
Solapur Yedeshi Tollway Limited	4,423.70	4,423.70
Udaipur Tollway Limited	8,338.40	8,079.21
Yedeshi Aurangabad Tollway Limited	16,319.79	16,319.79
Subordinated debt to related parties (interest free)	**69,929.79**	**67,665.30**
Total non-current investments (A + B)	**90,929.80**	**88,050.31**
Aggregate amount of unquoted investments	**90,929.80**	**88,050.31**
4.2 Loans		
(Unsecured, considered good, unless otherwise stated)		
- Interest bearing	-	-
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,774.57	8,725.87
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Less: Current maturities of loan to related parties	-	-
- Interest bearing	-	-
- Interest free	-	-
Total	**30,302.98**	**30,254.28**

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Note 5 : Financial assets (current)		
5.1 Investments		
Investments at fair value through Profit & Loss		
Investments in mutual fund (quoted)		
Investments in Mutual Funds (quoted) (FVTPL)	20.04	50.00
(SBI Liquid Fund Direct Growth - March 31,2022 - 3333.09 units)		
	20.04	**50.00**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	0.25	12.65
	0.25	**12.65**
For the purpose of the statement of cash flows, cash and cash equivalents comprise the following:		
Balances with banks:		
-On current accounts	0.25	12.65
Total	**0.25**	**12.65**
5.3 Loans		
(Secured, considered good, unless otherwise stated)		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	478.89	247.59
IRB Hapur Moradabad Tollway Limited	37.26	3.50
IRB Westcoast Tollway Limited	1,116.98	958.98
Kaithal Tollway Limited	681.81	179.41
Solapur Yedeshi Tollway Limited	24.00	20.00
Udaipur Tollway Limited	214.41	-
CG Tollway Limited	316.30	2.00
Kishangarh Gulabpura Tollway Limited	106.00	30.00
Yedeshi Aurangabad Tollway Limited	517.30	368.80
	3,492.95	**1,810.28**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from related parties	5,556.27	2,181.27
Other receivable		
- related parties	54.40	53.51
	5,610.67	**2,234.78**
Note 6 : Other current assets		
Advance given to suppliers		
- others	-	0.03
Total	**-**	**0.03**

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022
Note 7 : Equity

(Rs. in Millions)

	As at March 31 ,2022	As at March 31,2021
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	81,688.00	76,582.50
Issued during the year	3,816.33	5,105.50
At the end of the year	**85,504.33**	**81,688.00**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31 ,2022		As at March 31,2021	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	81,68,80,000	81,688.00	76,58,25,000	76,582.50
Issued during the year	3,81,63,265	3,816.33	5,10,55,000	5,105.50
At the end of the year	**85,50,43,265**	**85,504.33**	**81,68,80,000**	**81,688.00**

III. Details of Promoter

	As at March 31 ,2022		As at March 31,2021	
	No. of units	Amount Rs. in lakhs	No. of units in lakhs	Amount Rs. in lakhs
IRB Infrastructure Developers Limited	43,60,72,332	51%	41,66,09,067	51%
Anahera Investments Pte Ltd	21,37,60,685	25%	20,42,19,865	25%
Bricklayers Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Chiswick Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Stretford End Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Dangenham Investments Pte Ltd	5,13,02,562	6%	4,90,12,767	6%
Total	**85,50,43,265**	100%	**81,68,80,000**	100%

Note :8 Other Equity

	As at March 31 ,2022	As at March 31,2021
Retained earnings		
At the beginning of the year	4,020.25	(27.16)
Profit/(loss) for the year	1,975.75	4,151.21
Unit issue expenses	(3.26)	(103.81)
Total Other Equity	**5,992.74**	**4,020.25**

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
9 Other financial liabilities		
Other Payable		
- related party	35,168.79	24,717.75
	35,168.79	**24,717.75**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
Loan from related parties		
- Interest free	3,607.93	3,677.76
Total	**3,607.93**	**3,677.76**
10.2 Trade Payables		
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	80.31	67.43
- others	1.40	0.19
Total	**81.71**	**67.61**
10.3 Other financial liabilities		
Other payables		
- related parties	-	8,239.25
	-	**8,239.25**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	1.20	1.70
Total	**1.20**	**1.70**

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

(Rs. in Millions)

	For the year ended March 31, 2022	For the year ended March 31, 2021
Note 12 : Other income		
Interest income on		
Interest income on bank deposits	-	-
Interest income from others	4,200.00	4,200.00
Gain on sale of investment	0.40	0.43
Gain/(loss) on fair value measurement of other payable	-	2.86
Fair value gain on investments	0.04	-
	4,200.44	**4,203.30**
Note 13 : Other expenses		
Rates & taxes	4.73	0.28
Legal and professional fees	15.49	4.96
Payment to auditor (refer note below)	0.64	0.56
Bank charges	0.03	0.02
Miscellaneous expenses	0.00	-
Fair value loss on measurement of other payable	2,161.31	-
	2,182.21	**5.83**
Payment to auditor		
- Statutory audit fees	0.27	0.20
- Limited review fees	0.36	0.35
- Other services (certification fees)	-	0.00
Reimbursement of expenses	0.01	0.00
	0.64	**0.56**

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2022	For the year ended March 31, 2021
Profit attributable to unit holders of the Fund for basic & diluted earnings	1,975.75	4,151.21
Weighted average number of unit for basic & diluted EPU* (in Millions)	**84,29,14,666**	**78,47,08,356**
Basic earning per unit (Amount in Rs.)	2.34	5.29
Diluted earning per unit (Amount in Rs.)	2.34	5.29

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2022

Note 16 :Contingent liabilities

There are no contingent liabilities as at March 31, 2022

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Fund.

(Rs. in Millions)

Particulars	As at March 31, 2022	As at March 31, 2021
Principal amount remaining unpaid to any supplier as at the period end	-	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

a) MSME ageing schedule as at

Particulars	As at March 31, 2022	As at March 31, 2021
MSME disputed Dues	-	-
MSME Undisputed Dues	-	-
Less than 1 year	-	-
1-2 Years	-	-
2-3 Years	-	-
More than 3 years	-	-
Total dues to micro and small enterprises as per MSMED Act, 2006	**-**	**-**

b) Ageing of creditors other than micro enterprises and small enterprises as at

Particulars	As at March 31, 2022	As at March 31, 2021
disputed Dues		
Undisputed Dues		
Less than 1 year	35.28	67.61
1-2 Years	46.43	
2-3 Years		
More than 3 years		
Total dues to creditors other than micro enterprises and small enterprises as at	**81.71**	**67.61**
b) out of the above unbilled amount	0.87	0.19

Note 18 : Operating segment

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

IRB Infrastructure Trust

Notes to financial statement for year ended March 31, 2022

Note 19 : Other Statutory Information

i) The Company have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Company does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the company.

iii) The Company does not have any transactions with companies struck off.

iv) The Company does not have any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Company has not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Company has not advanced or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the company (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vii) The Company did not have any long-term contracts including derivative contract for which there were any material foreseeable losses.

vii) The Company has not declared a wilfull defaulter by any bank / financial institution or any other lender during the year.

Note 20 : Loans or advances to specified persons

Types of borrower	As at March 31, 2022		As at March 31, 2021	
	Amount outstanding*	% of Total ^	Amount outstanding*	% of Total ^
Promoters	-	-	-	-
Directors	-	-	-	-
KMPs	-	-	-	-
Related Parties	33,795.94	100%	32,064.56	100%
Total aggregate loans	**33,795.94**	**100%**	**32,064.56**	**100%**

* represents loan or advance in the nature of loan

^ represents percentage to the total Loans and Advances in the nature of loan

Note 21 : Particulars in respect of loans and advances in the nature of loans given to subsidiaries as required by Regulation 53(f) of the SEBI (Listing Obligation and Disclosure Requirements) Regulation, 2015

	As at March 31, 2022		As at March 31, 2021	
	Balances outstanding	Maximum balance Outstanding during the year	Balances outstanding	Maximum balance Outstanding during year
AE Tollway Limited	10,007.30	10,007.30	9,776.00	9,776.00
Kaithal Tollway Limited	9,456.38	9,456.38	8,905.28	8,905.28
Kishangarh Gulabpura Tollway Limited	106.00	106.00	30.00	30.00
Udaipur Tollway Limited	214.41	214.41	-	-
CG Tollway Limited	316.30	316.30	2.00	2.00
IRB Hapur Muradabad Tollway Limited	37.26	37.26	3.50	3.50
IRB Westcoast Tollway Limited	5,116.98	5,116.98	4,958.98	4,958.98
Solapur Yedeshi Tollway Limited	4,024.00	4,024.00	4,020.00	4,020.00
Yedeshi Aurangabad Tollway Limited	4,517.30	4,517.30	4,368.80	4,368.80

Note 22 : Basis of preparation of financial statements

The Trust has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of Schedule III - of the Companies Act , 2013 including amendments thereto , effective from April 01,2021.

Note 23 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs

AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited

ii. Parties to the Fund *

IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

***As per Invit Regulation**

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Virendra D. Mhaiskar HUF	IRB Infrastructure Developers Limited	IDBI Bank Limited Life Insurance Corporation of India General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar, Chairman and Managing Director Mrs. Deepali V. Mhaiskar, Whole Time Director Mr. Mukeshlal Gupta, Joint Managing Director (utpo 29 December 2021) Mr. Sudhir Rao Hoshing, Joint Managing Director (utpo 29 December 2021) and Chief Executive Officer Mr. Jose Angel Tamariz Martel Goncer, Additional Non-Executive Director (wef 29 Deember 2021) Mr. Carlos Ricardo Ugarte Cruz Coke, Additional Non-Executive Director (wef 29 Deember 2021)	Virendra D Mhaiskar Boon Chin Hau	Mr. J. Samuel Joseph (w.e.f 26.11. 2019) Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr. Swapan Kumar Bagchi Ms Padma Betai Ms. Jayashree Ranade Ms. Sashikala Muralidharan (till 16.01. 2020)
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Ms. Priti Savla, Independent Director (wef February 10, 2022) Mrs. Heena Raja, Independent Director (utpo February 10, 2022)	K G Krishnamurthy Ranjana Paranjape	

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2022	Year ended March 31, 2021
1	**Equity Investment**		**615.00**	**1,205.00**
	Hapur Muradabad Tollway Limited	Subsidiary	615.00	1,205.00
2	**Subordinated debt**		**2,264.49**	**4,894.70**
	CG Tollway Limited	Subsidiary	240.30	270.00
	Hapur Muradabad Tollway Limited	Subsidiary	1,765.00	4,112.50
	IRB Westcoast Tollway Limited	Subsidiary	-	2.20
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	510.00
	Udaipur Tollway Limited	Subsidiary	259.19	-
3	**Long term loan**		**48.71**	**48.71**
	Kaithal Tollway Private Limited	Subsidiary	48.71	48.71
4	**Short Term Loan given**		**1,682.67**	**1,810.28**
	AE Tollway Limited	Subsidiary	231.30	247.59
	IRB Hapur Muradabad Tollway Limited	Subsidiary	33.76	3.50
	IRB Westcoast Tollway Limited	Subsidiary	158.00	958.98
	Kaithal Tollway Limited	Subsidiary	502.40	179.41
	Solapur Yedeshi Tollway Limited	Subsidiary	4.00	20.00
	Udaipur Tollway Limited	Subsidiary	214.41	-
	CG Tollway Limited	Subsidiary	314.30	2.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	76.00	30.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	148.50	368.80
5	**Short Term Loan transferred to Sub debt**		**-**	**29,829.67**
	AE Tollway Limited	Subsidiary	-	5,900.88
	IRB Hapur Muradabad Tollway Limited	Subsidiary	-	29.46
	IRB Westcoast Tollway Limited	Subsidiary	-	6,975.87
	Kaithal Tollway Limited	Subsidiary	-	1,146.04
	Solapur Yedeshi Tollway Limited	Subsidiary	-	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	9,847.36
6	**Unit Capital Issued**		**1,946.33**	**2,603.81**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1,946.33	2,603.81
7	**Unsecured Loan / other payable repaid**		**-**	**5,106.67**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	-	5,105.50
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1.17
8	**Interest income**		**4,200.00**	**4,200.00**
	Solapur Yedeshi Tollway Limited	Subsidiary	560.00	560.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	560.00	560.00
	Kaithal Tollway Limited	Subsidiary	1,186.02	1,186.02
	IRB Westcoast Tollway Limited	Subsidiary	560.00	560.00
	AE Tollway Limited	Subsidiary	1,333.98	1,333.98

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2022	Year ended March 31, 2021
9	**Trade payable**		**12.88**	**67.43**
	MMK Toll Road Pvt Limited	Investment Manager	12.88	67.43
10	**Other Receivable**		**0.89**	**53.51**
	Solapur Yedeshi Tollway Limited	Subsidiary	-	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	10.50
	IRB Westcoast Tollway Limited	Subsidiary	-	13.92
	Udaipur Tollway Limited	Subsidiary	0.89	0.09
11	**Unsecured Loan received**		**4,759.00**	**3,677.76**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,759.00	3,677.76
12	**Unsecured Loan paid**		**4,828.83**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	4,828.83	-
13	**Expenses incurred on our behalf of (reimbursement)**		**1.77**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	-
14	**Other Payable**		**2,210.02**	**2,492.85**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,161.31	2,444.14
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	48.71
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	
	IRB Goa Tollway Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2022	As on March 31,2021
1	**Equity Investment**		**21,000.01**	**20,385.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	3,715.00	3,100.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.94	1,741.94
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.57	2,157.57
2	**Subordinated debt**		**69,929.79**	**67,665.30**
	AE Tollway Limited	Subsidiary	10,265.88	10,265.88
	CG Tollway Limited	Subsidiary	2,727.80	2,487.50
	Hapur Muradabad Tollway Limited	Subsidiary	9,414.76	7,649.76
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	12,203.92
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,809.50	1,809.50
	Kaithal Tollway Private Limited	Subsidiary	4,426.04	4,426.04
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	4,423.70
	Udaipur Tollway Limited	Subsidiary	8,338.40	8,079.21
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	16,319.79
3	**Long term loan**		**30,302.98**	**30,254.28**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	8,774.57	8,725.87
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Short Term Loan**		**3,492.95**	**1,810.28**
	AE Tollway Limited	Subsidiary	478.89	247.59
	IRB Hapur Muradabad Tollway Limited	Subsidiary	37.26	3.50
	IRB Westcoast Tollway Limited	Subsidiary	1,116.98	958.98
	Kaithal Tollway Limited	Subsidiary	681.81	179.41
	Solapur Yedeshi Tollway Limited	Subsidiary	24.00	20.00
	Udaipur Tollway Limited	Subsidiary	214.41	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	517.30	368.80
	CG Tollway Limited	Subsidiary	316.30	2.00
	Kishangarh Gulabpura Tollway Limited	Subsidiary	106.00	30.00
5	**Other Payable**		**35,167.02**	**32,957.00**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	31,535.05	29,373.73
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	302.98	254.28
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,784.13
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
6	**Other payable (Reimbursement of Expenses incurred on our behalf)**		**1.77**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	1.77	-

IRB Infrastructure Trust
Notes to financial statement for year ended March 31, 2022

III) Related party outstanding balances

(Rs. in Millions)

7	**Other Receivable**		**54.40**	**53.51**
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	29.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	10.50
	IRB Westcoast Tollway Limited	Subsidiary	13.92	13.92
	Udaipur Tollway Limited	Subsidiary	0.99	0.09
8	**Interest Receivable**		**5,556.27**	**2,181.27**
	Solapur Yedeshi Tollway Limited	Subsidiary	547.40	352.40
	Yedeshi Aurangabad Tollway Limited	Subsidiary	636.00	151.00
	Kaithal Tollway Limited	Subsidiary	1,693.72	587.69
	IRB Westcoast Tollway Limited	Subsidiary	992.00	432.00
	AE Tollway Limited	Subsidiary	1,687.16	658.18
9	**Trade payable**		**80.31**	**67.43**
	MMK Toll Road Pvt Limited	Investment Manager	80.31	67.43
10	**Unsecured Loan / other payable**		**3,607.93**	**3,677.76**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	3,607.93	3,677.76

Note 24 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Fund are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2022	As at March 31, 2022	As at March 31, 2021	As at March 31, 2021
Financial assets				
Financial assets measured at amortised cost				
Loans	33,795.94	33,795.94	32,064.56	32,064.56
Other financial assets	5,610.67	5,610.67	2,234.78	2,234.78
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual funds	20.04	20.04	50.00	50.00
Financial assets measured at amortised cost				
Cash and cash equivalents	0.25	0.25	12.65	12.65
Other Bank balances	-	-	-	-
Financial liabilities				
Trade payables	81.71	81.71	67.61	67.61
Borrowings	3,607.93	3,607.93	3,677.76	3,677.76
Other financial liabilities	35,168.79	35,168.79	32,957.00	32,957.00

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the company has determined that market participants would take into account when pricing the investments.

The Fund is required to present the Statement of total assets at fair value and Statement of total returns at fair value as per SEBI Circular No. CIR/IMD/DF/114/2016 dated October 20, 2016 as a part of these financial statements - Refer Statement of Net assets at fair value and Statement of Total Returns at fair value.

Note 25 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities

Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

There were no transfers between Level 1 and Level 2 during the year. No financial assets/ liabilities that are measured at fair value were Level 3 fair value measured.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2022:

(Rs. in Millions)

	As at March 31, 2022	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	33,795.94	-	-	33,795.94
Other Financial assets	5,610.67	-	-	5,610.67
Investments in mutual funds(Quoted)	20.04	20.04	-	-
Liabilities				
Trade payable	81.71	-	-	81.71
Other financial liabilities	35,168.79	-	-	35,168.79

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of March 31, 2021:

(Rs. in Millions)

	As at March 31, 2021	Fair value measurement at end of the reporting year using		
		Level 1	Level 2	Level 3
Assets				
Loans	32,064.56	-	-	32,064.56
Other Financial assets	2,234.78	-	-	2,234.78
Investments in mutual funds(Quoted)	50.00	50.00	-	-
Liabilities				
Trade payable	67.61	-	-	67.61
Other financial liabilities	32,957.00	-	-	32,957.00

Note 26 : Financial risk management objectives and policies

The fund's risk management policies are established to identify and analyse the risks faced by the fund, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the fund's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the fund's risk management framework.

In performing its operating, investing and financing activities, the fund is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Fund is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2022, the credit risk is considered low since substantial transactions of the Fund are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The fund's exposure to the risk of changes in market interest rates relates primarily to the fund's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the Fund may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Fund's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Fund closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2022	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,607.93		-	**3,607.93**
Other financial liabilities			-	35,168.79		**35,168.79**
Trade payables	-		81.71	-	-	**81.71**
Total	**-**	**-**	**3,689.64**	**35,168.79**	**-**	**38,858.44**

March 31, 2021	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,677.76		-	**3,677.76**
Other financial liabilities			8,239.25	24,717.75		**32,957.00**
Trade payables	-	67.61	-	-	-	**67.61**
Total	**-**	**67.61**	**11,917.01**	**24,717.75**	**-**	**36,702.38**

At present, the fund does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 27 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the period ended March 31, 2022
The company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2022	As at March 31, 2021
Borrowings	3,607.93	3,677.76
Less: cash and cash equivalents (including unpaid dividend account)	(0.25)	(12.65)
Net debt (A)	**3,607.69**	**3,665.11**
Unit capital	85,504.33	81,688.00
Other equity	5,992.74	4,020.25
Total equity (B)	**91,497.07**	**85,708.25**
Capital and net debt C = A + B	**95,104.76**	**89,373.36**
Gearing ratio (%) (C / A)	**3.79%**	**4.10%**

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In order to achieve this overall objective, the fund's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 28 : Significant accounting judgement, estimates and assumptions

The preparation of the Fund's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Fund’s accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Funds

Under the provisions of the InvIT Regulations, Fund is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Fund for each financial year. Accordingly, a portion of the unit holders’ Funds contains a contractual obligation of the Fund to pay to its Unit holders cash distributions. The Unit holder's Funds could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders’ Funds have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The Fund based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Fund. Such charges are reflected in the assumptions when they occur.

Impairment of non-financial assets

Non-financial assets of the Fund primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

Note 29 : COVID 19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow. The management has assessed and deretemined that considering the nature of its operations and overall revenue model, COVID-19 does not have any material impact on the Company's financial position as at March 31, 2022 and its financial performance for the period then end.

Note 30 : Events after reporting period

There is no subsequent event after the reporting period which requires adjustments to the financial statements.

Note 31 : Previous period comparatives

Previous period's figures have been regrouped/reclassified, wherever necessary, to confirm to current period's classification.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : 06/05/2022

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Shilpa Todankar
Chief Financial officer

SD/-
Kaustubh Shevade
Company secretary
Membership No. A27833

Place: Mumbai
Date : 06/05/2022

gokhale & sathe (regd.)
chartered accountants
308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
Mahim, Mumbai 400 016

INDEPENDENT AUDITOR'S REPORT

To the Unit Holders of IRB Infrastructure Trust

Report on the Audit of the Standalone Ind AS Financial Statements

Opinion

We have audited the accompanying standalone financial statements of IRB Infrastructure Trust ("the InvIT" or "the Trust"), which comprise the Balance Sheet as at 31 March 2021, the Statement of Profit and Loss including Other Comprehensive Income, the Statement of Cash Flows and the Statement of Changes in Unit Holders' Equity for the year ended 31 March 2021 ("the financial period"), the Statement of Net Assets at fair value and the Statement of Total Returns at fair value as at 31 March 2021, and notes to the standalone financial statements including a summary of significant accounting policies and other explanatory information (hereinafter referred to as "the standalone financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid standalone financial statements give the information required by the Securities and Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time including any guidelines and circulars issued thereunder (together referred to as the "SEBI InvIT Regulations") in the manner so required and give a true and fair view in conformity with the Indian Accounting Standards prescribed under rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended ("Ind AS") and other accounting principles generally accepted in India, of the state of affairs of the Trust as at 31 March 2021, its profit including other comprehensive income, its cash flows, changes in Unit holders' equity for the financial period, the net assets and the total returns as at 31 March 2021.

Basis for Opinion

We conducted our audit of the standalone financial statements in accordance with the Standards on Auditing ("SAs") issued by the Institute of Chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Standalone Financial Statements section of this report. We are independent of the Trust in accordance with the code of ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the standalone financial statements under the provisions of the SEBI InvIT Regulations and we have fulfilled our other ethical responsibilities in accordance with these requirements and the code of ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the standalone financial statements.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the standalone financial statements of the financial period. These matters were addressed in the context of our audit of the standalone financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. We have determined the matters described below to be the key audit matters to be communicated in our report.

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Particulars	How they were addressed in our audit
Gain/Loss on fair value measurement of other payable / deferred consideration payable to IRB Group. Pursuant to settlement of IRB Infrastructure Trust by IRB Infrastructure Developers Limited (Sponsor), as a Private INVIT, the Trust has entered into Debt Novation Agreements (DNA). As per the terms of DNA, in consideration of assets taken over in 9 SPVs, Trust has issued units and agreed to transfer to the Sponsor, the claim amounts when and to the extent the same are eventually received by Project SPVs, on account of Sponsor Claims. Such Sponsor Claims shall be lodged after obtaining COD by respective SPVs. The amount realizable against claims has been estimated by the valuers appointed by the Management based on the weighted average of probabilities of realization of such claims. Based on the fair value of liability as estimated by the valuers, a resultant impact in the value of liability has been recognized under the head 'Gain/Loss on fair value measurement of other payable'.	• We reviewed Placement Memorandum filed with SEBI and the consequential legal documentation entered into by the Trust, including inter alia the Debt Novation Agreements and their reflection in the underlying SPVs. • We have reviewed the methodology adopted by the valuer in deriving the value including the assumptions made. • We assessed the estimates of Fair Value provided in the Valuation Report and realizability of claims as indicated therein. • We also reviewed the reasonableness of the variables applied in the said computation. • Based on the above, the fair value of liability to Sponsor estimated by the valuer taking into consideration the weighted average of probabilities of realization has been validated.
Impairment Testing The Group has toll collection rights as intangible assets pursuant to the concession agreement. The carrying value of these rights acquired under BOT basis is being compared to the recoverable value (which is value in use in the instant case) thereof to ascertain if there is any impairment. The process involves estimating the value in use of the asset which is determined by forecasting and discounting future cash flows. The same is sensitive to changes in discount rate, traffic growth rates, toll growth rates etc. The determination of the recoverable amount of the toll collection right involves significant judgment due to inherent uncertainty in the assumptions supporting the recoverable amount of these rights.	• We evaluated management's assessment on impairment for intangible assets under development and intangible assets – toll collection rights by testing the assumptions and methodologies used by the Management. • Referred to valuation reports and Traffic Growth Study Reports and determined reasonableness of future toll revenue. • Evaluated the potential changes in major components as compared to previous year vis-à-vis actual performance in order to evaluate whether the inputs and assumptions used in the cash flow forecasts were suitable.

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Accordingly, the evaluation of impairment of toll collection rights has been determined a key audit matter.	• Assessed the appropriateness of the weighted average cost of capital used in determining recoverable amount. • Performed sensitivity analysis of key assumptions used in valuation. • Tested the arithmetical accuracy of the model.

Information Other than the Standalone Financial Statements and Auditor's Report thereon

The Board of Directors of Investment Manager is responsible for the preparation of the other information. The other information comprises the information included in the Report of Investment Manager including annexures to Investment Manager's Report and other information as required to be given by SEBI InvIT Regulations, but does not include the standalone financial statements and our report thereon.

Our opinion on the standalone financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.
In connection with our audit of the standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the standalone financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors of Investment Manager for the Standalone Financial Statements

The Board of Directors of Investment Manager is responsible for the preparation of these standalone financial statements that give a true and fair view of the financial position as at 31 March 2021, financial performance including other comprehensive income, cash flows and changes in unit holders' equity for the year ended 31 March 2021, the net assets and the total returns as at 31 March 2021 in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended and relevant rules issued thereunder read with the SEBI InvIT Regulations. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the SEBI InvIT Regulations for safeguarding of the assets of the Trust and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and for ensuring the accuracy and completeness of accounting records, relevant to the preparation and presentation of the standalone financial statements that give a true and fair view and are free from material misstatement,

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whether due to fraud and error which have been used for the purpose of preparation of the standlone financial statements by the management of the Fund, as aforesaid.

In preparing the standalone financial statements, the Board of Directors of Investment Manager is responsible for assessing the Trust's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors of Investment Manager either intends to liquidate the Trust or to cease operations, or has no realistic alternative but to do so.

The Board of Directors of Investment Manager are also responsible for overseeing the Trust's financial reporting process.

Auditor's Responsibility for the Audit of the Standalone Ind AS Financial Statements

Our objectives are to obtain reasonable assurance whether the standalone financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the standalone financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

- Obtain an understanding of internal financial control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Board of Directors of Investment Manager.

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- Conclude on the appropriateness of use of the going concern basis of accounting by the Board of Directors of Investment Manager and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Trust to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the standalone financial statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

Based on our audit and as required by SEBI InvIT Regulations, we report that:

a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;

b. The Balance Sheet, the Statement of Profit and Loss, the Statement of Cash Flows, Statement of Changes in Unit Holder's Equity, the Statement of Net Assets at fair value and the Statement of Total Returns at fair value dealt with by this Report are in agreement with the books of account of the Trust; and

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c. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards specified under Rule 2(1)(a) of Companies (Indian Accounting Standards) Rules, 2015, as amended.

For
Gokhale & Sathe
Chartered Accountants
FRN: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No. 148652
UDIN: 21148652AAAAHU3427
Date: 24 May 2021
Place: Mumbai

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IRB Infrastructure Trust
Balance Sheet as at March 31, 2021

(Rs. in Millions)

		Note No.	March 31, 2021	March 31, 2020
I	**ASSETS**			
(1)	**Non-current assets**			
	Financial assets	4		
	i) Investments	4.1	88,050.31	52,120.94
	ii) Loans	4.2	30,254.28	30,205.57
	Total non-current assets		**1,18,304.59**	**82,326.51**
(2)	**Current assets**			
	Financial assets	5		
	i) Investments	5.1	50.00	-
	ii) Cash and cash equivalents	5.2	12.65	0.01
	iii) Loans	5.3	1,810.28	29,829.67
	iv) Other financial assets	5.4	2,234.78	-
	Other current assets	6	0.03	-
	Total current assets		**4,107.74**	**29,829.68**
	TOTAL ASSETS		**1,22,412.32**	**1,12,156.19**
II	**EQUITY AND LIABILITIES**			
	Equity			
	Unit capital	7	81,688.00	76,582.50
	Other equity	8	4,020.25	(27.16)
	Total unit holder's equity		**85,708.25**	**76,555.34**
(1)	**Non-current liabilities**			
	Financial liabilities	9		
	i) Other financial liabilities	9	24,717.75	28,458.95
	Total non- current liabilities		**24,717.75**	**28,458.95**
(2)	**Current liabilities**			
	Financial liabilities	10		
	i) Borrowings	10.1	3,677.76	-
	ii) Trade payables	10.2		
	a) total outstanding dues of creditors other than micro enterprises and small enterprises		67.61	27.14
	iii Other financial liabilities	10.3	8,239.25	7,114.74
	Other Current liabilities	11	1.70	0.02
	Total current liabilities		**11,986.32**	**7,141.90**
	Total liabilities		**36,704.08**	**35,600.85**
	TOTAL EQUITY AND LIABILITIES		**1,22,412.32**	**1,12,156.19**
	Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner

Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

SD/-
Virendra D. Mhaiskar
Chairman

DIN : 00183554

SD/-
Jitendra Sharma
Chief Finance officer

Place : Mumbai
Date : 24/05/2021

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Kaustubh Shevade
Company secretary

IRB Infrastructure Trust

Statement of Profit and Loss for the year ended March 31, 2021

(Rs. in Millions)

	Note No.	For the Year ended March 31, 2021	One month ended March 31, 2020
Income			
Other income	12	4,203.30	-
TOTAL INCOME		**4,203.30**	**-**
Expenses			
Investment Manager Fees		46.25	26.92
Other expenses	13	5.83	0.24
TOTAL EXPENSES		**52.08**	**27.16**
Profit / (Loss) before tax		**4,151.21**	**(27.16)**
Tax expenses			
Current tax		-	-
Profit / (Loss) after tax (A)		**4,151.21**	**(27.16)**
Other comprehensive income / (loss) for the year (net of tax)			
Item that will not to be reclassified to profit or loss in subsequent year			
Re-measurement gains/ (losses) on defined benefit plans (net of taxes)		**-**	**-**
Other comprehensive income/(loss) for the year (net of tax) (B)		-	-
Total comprehensive income for the year, net of tax : (A+B)		**4,151.21**	**(27.16)**
Earnings per unit			
Basic		**5.29**	**(0.36)**
Diluted		**5.29**	**(0.36)**
Summary of significant accounting policies	3		

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

IRB Infrastructure Trust
Statement of changes in Equity for the year ended March 31, 2021

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
a. Unit Capital		
At the beginning of the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**
b. Other Equity		
Retained earnings		
At the beginning of the year	(27.16)	-
Profit for the year	4,151.21	(27.16)
Unit issue expenses	(103.81)	-
At the end of the year	**4,020.25**	**(27.16)**

Summary of Significant accounting policies (refer note no.3)

See accompanying notes to the financial statements.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place : Mumbai
Date : 24/05/2021

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2021

(Rs. in Millions)

Particulars	For the Year ended March 31, 2021	For year ended March 31, 2020
Cash flow from operating activities		
Profit / (Loss) before tax	4,151.21	(27.16)
Adjustments to reconcile profit before tax to net cash flows:		
Profit on sale of investments	(0.43)	-
Interest income on		
- Others	(4,200.00)	-
Operating profit/(loss) before working capital changes	**(49.22)**	**(27.16)**
Movement in working capital:		
Increase/(decrease) in trade payables	40.48	27.14
Increase/(decrease) in other financial liabilities	(2,616.69)	
Increase/(decrease) in other current liabilities	1.68	0.02
(Increase)/decrease in Other current assets	(0.03)	-
(Increase)/decrease in loans	28,019.39	
(Increase)/decrease in Other Financial assets	(2,234.78)	-
Cash generated from/(used in) operations	**23,160.83**	**0.00**
Direct taxes paid (net of refunds)	-	-
Net cash flows from/(used in) operating activities	**23,160.83**	**0.00**
B. Cash flows from investing activities		
Investment in subsidiaries	(1,205.00)	
Investment in sub debt of subsidiaries	(34,724.37)	(869.00)
Loan given to subsidiaries Long term	(48.71)	(30,000.00)
Loan given to subsidiaries short term	-	-
Consideration paid to Sponsor		(7,525.40)
Interest received from others	4,200.00	
Gain on sale of Investment	0.43	
Purchase of Investment	(50.00)	
Net cash flows from/(used in) investing activities	**(31,827.64)**	**(38,394.40)**
C. Cash flow from financing activities		
Other Equity		
Proceeds from issuance of unit capital	5,105.50	37,525.40
Proceeds from Sponsors		869.01
Proceeds from curent borrowings	3,677.76	-
Unit Issue Expenses	(103.81)	
Dividend Paid on Equity Shares	-	-
Tax on Equity Dividend paid	-	-
Net cash flows from/(used in) financing activities	**8,679.45**	**38,394.41**
Net increase/(decrease) in cash and cash equivalents (A+B+C)	**12.64**	**0.01**
Cash and cash equivalents at the beginning of the year	0.01	-
Cash and cash equivalents at the end of the period (refer 5.2)	**12.65**	**0.01**
Components of cash and cash equivalents		
Cash on hand	-	-
Balances with scheduled banks		
- On Current Account	12.65	0.01
Total Cash and cash equivalents (refer note 5.2)	**12.65**	**0.01**

IRB Infrastructure Trust

Cash Flow statement for the year ended March 31, 2021

Notes:

1. All figures in bracket are outflow.
2. Taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. Reconciliation between opening and closing balances for liabilities arising from financing activities
4. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 “Statement of Cash Flows” as notified under section 133 of the Companies Act, 2013.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

Place : Mumbai
Date : 24/05/2021

IRB Infrastructure Trust
DISCLOSURES PURSUANT TO SEBI CIRCULARS
(SEBI Circular No. CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No. CIR/IMD/DF/127/2016 dated 29-Nov-2016

A. Statement of Net Asset at Fair Value

-

	As at March 31, 2021		As at March 31, 2020	
Particulars	**Book value**	**Fair value**	**Book value**	**Fair value**
A. Assets	1,22,412.32	1,48,712.32	1,12,156.19	1,32,679.87
B. Liabilities (at book value)	36,704.08	36,704.08	35,600.85	35,600.85
C. Net Assets (A-B)	85,708.25	1,12,008.25	76,555.34	97,079.02
D. Number of units (in millions)	816.88	816.88	765.83	765.83
E. NAV (C/D) (Amount in Rs.)	**104.92**	**137.12**	**99.96**	**126.76**

B. Statement of total returns at Fair Value

-

Particulars	**For the year ended March 31, 2021**	**For the year ended March 31, 2020**
Total Comprehensive Income (As per the Statement of Profit and Loss)	4,151.21	(27.16)
Add/(less): Other Changes in Fair Value	26,300.00	20,523.68
Comprehensive Income -	**30,451.21**	**20,496.52**

Notes :

Fair value of assets as at March 31, 2020 and other changes in fair value for the year then ended as disclosed in the above tables are derived based on the fair valuation reports issued by the independent valuer appointed under the InvIT Regulations.

As per our report of even date

For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

IRB Infrastructure Trust

Notes to financial statements for the year ended March 31, 2021

1. Trust Information and Nature of Operations

IRB Infrastructure Trust (the "Fund" / "Trust") is a trust settled pursuant to the indenture of trust dated August 27, 2019 which is registered under Indian Trust Act, 1882 and under the Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 as amended from time to time. The Trust is settled by the Sponsor, IRB Infrastructure Developers Limited ("IRB" or the "Sponsor"), an infrastructure development company in India. The Trustee to the Trust is IDBI Trusteeship Services Limited (the "Trustee"). Investment manager for the Trust is MMK Toll Road Private Limited (the "Investment Manager"). The Trust has received registration certificate from SEBI having registration number IN/InviT/19-20/0012

The Fund has been formed to invest in infrastructure assets primarily being in the road sector in India. The Fund's road projects are eligible infrastructure projects under the InvIT Regulations and held through special purpose vehicles ("Project SPVs" together as "Project SPV Group"). The Fund's portfolio comprises of nine road projects are listed below:-

The Fund had acquired the following projects from the Sponsor which are road infrastructure projects developed on DBFOT basis.

Sr. No.	Project SPV Name
1	AE Tollway Limited (AETL)
2	CG Tollway Limited (CGTL)
3	IRB Hapur Moradabad Tollway Limited (IRBHMTL)
4	IRB Westcoast Tollway Limited (IRBWTL)
5	Kishangarh Gulabpura Tollway Limited (KGTL)
6	Kaithal Tollway Limited (KTL)
7	Solapur Yedeshi Tollway Limited (SYTL)
8	Udaipur Tollway Limited (UTL)
9	Yedeshi Aurangabad Tollway Limited (YATL)

The registered office of the Investment Manager is Off No-11th Floor/1101 Hiranandani Knowledge Park, Technology Street, Hill Side Avenue, Powai Mumbai 400076.

The financial statements were authorised for issue in accordance with resolution passed by the board of directors of the Investment manager on May 24, 2021.

2. Basis of preparation

The financial statements of IRB Infrastructure Trust have been prepared in accordance with Indian Accounting Standards as defined in Rule 2(1)(a) of the Companies (Indian Accounting Standards) Rules, 2015, as amended, prescribed under Section 133 of the Companies Act, 2013 ("Ind AS") read with SEBI (Infrastructure Investment Trusts) Regulations, 2014, as amended and the circulars issued thereunder ("InvIT Regulations") and other accounting principles generally accepted in India.

The financial statements have been prepared on an accrual basis and under the historical cost convention except for certain financial assets and liabilities (refer accounting policy regarding financial instruments) which have been measured at fair value.

The financial statements are presented in Indian Rupee ('INR') which is the functional currency of the Fund and all values are rounded to the nearest lakhs, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five hundred

3. Summary of significant accounting policies

3.1. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. Although these estimates are based upon management’s best knowledge of current events and actions, actual results could differ from these estimates.

3.2. Current versus non-current classification

The Fund presents assets and liabilities in the balance sheet based on current/ non-current classification.
An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle

- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents. The Fund has identified twelve months as its operating cycle.

3.3. Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Fund and the revenue can be reliably measured, regardless of when the payment is being made. Revenue is measured at the fair value of the consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duties collected on behalf of the government.

The specific recognition criteria described below must also be met before revenue is recognised:

Interest income
Revenue is recognised on a time proportion basis taking into account the amount outstanding and the rates applicable. For all debt instruments measured either at amortised cost or at fair value through other comprehensive income, interest income is recorded using the effective interest rate (EIR).

Dividends
Revenue is recognised when the Fund's right to receive the payment is established, which is generally when shareholders approve the dividend.

3.4. Taxes

Current income tax
Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Fund operates and generates taxable income.

Current income tax relating to items recognised outside the Statement of Profit and Loss is recognised outside the Statement of Profit and Loss (either in other comprehensive income or in equity). Current tax items are recognised in correlation to the underlying

transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction affects neither the accounting profit nor taxable profit or loss

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside statement of profit and loss is recognised outside statement of profit and loss (either in other comprehensive income or in equity).

Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Sales/value added tax and goods and service tax paid on acquisition of assets or on incurring expenses

Expenses and assets are recognised net of the amount of sales/value added taxes and goods and service tax paid, except:

When the tax incurred on a purchase of assets or services is not recoverable from the tax authority, in which case, the tax paid is recognised as part of the cost of acquisition of the asset or as part of the expense item, as applicable.

When receivables and payables are stated with the amount of tax included. The net amount of tax recoverable from, or payable to, the tax authority is included as part of receivables or payables in the balance sheet.

3.5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences to the extent regarded as an adjustment to the borrowing costs.

3.6. Provisions

Provisions are recognised when the Fund has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Fund expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the Statement of Profit and Loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

3.7. Contingent liabilities and contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Fund or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Fund does not recognise a contingent liability but discloses its existence in the financial statements.
A contingent assets is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.
Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.8. Financial instrument

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through Statement of Profit and Loss, directly attributable transaction cost to the acquisition of the financial asset. Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognised on the trade date, i.e., the date that the Fund commits to purchase or sell the asset.

Subsequent measurement
For purposes of subsequent measurement, financial assets are classified in following categories;
- at amortised cost
- at fair value through profit or loss (FVTPL)
- at fair value through other comprehensive income (FVTOCI)

Financial Assets at amortised cost
A financial asset is measured at the amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Fund. All the Loans and other receivables under financial assets (except Investments) are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

After initial measurement such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The losses arising from impairment are recognised in the Statement of Profit and Loss.

Financial Assets at Fair Value through Statement of Profit and Loss/Other comprehensive income

All investments in scope of Ind AS 109 are measured at fair value. The Fund has investment in Debt oriented mutual fund which are held for trading, are classified as at FVTPL. The Fund makes such election on an instrument by instrument basis. The

classification is made on initial recognition and is irrevocable. The gain/ loss on sale of investments are recognised in the Statement of Profit and Loss.
Instruments included within the FVTPL category are measured at fair value with all changes recognized in the Statement of Profit and Loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a the Fund of similar financial assets) is primarily derecognised (i.e. removed from the Fund's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Fund has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Fund has transferred substantially all the risks and rewards of the asset, or (b) the Fund has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Fund has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all of the risks and rewards of the asset, nor transferred control of the asset, the Fund continues to recognise the transferred asset to the extent of the Fund's continuing involvement. In that case, the Fund also recognises an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Fund has retained.

3.9. Impairment of assets

Impairment of financial assets

Expected credit losses are recognized for all financial assets subsequent to initial recognition other than financial assets in FVTPL category.

For financial assets other than trade receivables, as per Ind AS 109, the Fund recognizes 12 month expected credit losses for all originated or acquired financial assets if at the reporting date the credit risk of the financial asset has not increased significantly since its initial recognition. The expected credit losses are measured as lifetime expected credit losses if the credit risk on financial assets increases significantly since its initial recognition.

The impairment losses and reversals are recognized in Statement of Profit and Loss.

Impairment of non-financial assets

The Fund assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Fund estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. Recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from

other assets or Fund's assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings, or payables, as appropriate.

All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

The Fund’s financial liabilities include trade and other payables, loans and borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Fund that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109.

Gains or losses on liabilities held for trading are recognised in the statement of profit and loss.

Loans and borrowings
This is the category most relevant to the Fund. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the EIR method. Gains and losses are recognised in profit or loss when the liabilities are de-recognised as well as through the EIR amortisation process.

Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the statement of profit and loss.

De-recognition
A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are

substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognised in the statement of profit and loss.

Offsetting of financial instruments
Financial assets and financial liabilities are offset and the net amount is reported in the standalone balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis, to realise the assets and settle the liabilities simultaneously.

3.10 Investment in subsidiaries

Investments (equity instruments as well as subordinate debt) in subsidiaries are carried at cost less accumulated impairment losses, if any. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down immediately to its recoverable amount. On disposal of investments in subsidiaries, the difference between net disposal proceeds and carrying amounts are recognised in the Statement of Profit and Loss.

3.11Foreign currencies

The Fund's financial statements are presented in INR, which is also the Fund's functional currency. The Fund does not have any foreign operation and has assessed the functional currency to be INR.

Transactions and balances
Transactions in foreign currencies are initially recorded by the Fund at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Differences arising on settlement or translation of monetary items are recognised in the statement of profit or loss.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

3.12 Fair value measurement

The Fund measures financial instruments, such as, derivatives at fair value at each balance sheet date.
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:
► In the principal market for the asset or liability, or
► In the absence of a principal market, in the most advantageous market for the asset or liability.
The principal or the most advantageous market must be accessible by the Fund.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.
A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.
The Fund uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.
All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:
► Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities
► Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
► Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable
For assets and liabilities that are recognised in the financial statements on a recurring basis, the Fund determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.
The Fund's Management determines the policies and procedures for both recurring fair value measurement, such as derivative instruments and unquoted financial assets measured at fair value, and for non-recurring measurement, such as assets held for distribution in discontinued operations.
At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Fund's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.
The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.
On an annual basis, the Management of Investment Manager presents the valuation results to the Audit Committee and the Fund's independent auditors. This includes a discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Fund has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.
This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.
- Disclosures for valuation methods, significant estimates and assumptions (note 27)
- Financial instruments (including those carried at amortised cost) (note 22 and 23)
- Quantitative disclosure of fair value measurement hierarchy (note 22 and 23)

3.13 Contributed Equity

Units are classified as equity. Incremental costs attributable to the issue of units are directly recorded in equity, net of tax.

3.14 Distribution to unit holders

The Fund recognises a liability to make cash distributions to unit holders when the distribution is authorised and a legal obligation has been created. As per the InvIT Regulations, a distribution is authorised when it is approved by the Board of Directors of the Investment Manager. A corresponding amount is recognised directly in equity.

3.15 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above, net of outstanding bank overdrafts as they are considered an integral part of the Fund's cash management.

3.16 Earnings Per Unit (EPU)

Basic earnings per unit are calculated by dividing the net profit for the year attributable to unit holders by the weighted average number of units outstanding during the year.

For the purpose of calculating diluted earnings per unit, the weighted average number of units outstanding during the period are adjusted for the effects of all dilutive potential units.

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
Note 4 : Financial assets (Non-current)		
4.1 Investments		
A) Investments at cost		
436,500,000 equity shares of AE Tollway Limited	4,365.00	4,365.00
203,500,000 equity shares of CG Tollway Limited	2,035.00	2,035.00
310,000,000 equity shares of IRB Hapur Moradabad Tollway Limited	3,100.00	1,895.00
174,194,303 equity shares of IRB Westcoast Tollway Limited	1,741.91	1,741.91
155,500,000 equity shares of Kishangarh Gulabpura Tollway Limited	1,555.00	1,555.00
328,000,000 equity shares of Kaithal Tollway Limited	3,280.00	3,280.00
98,250,000 equity shares of Solapur Yedeshi Tollway Limited	982.50	982.50
116,800,000 equity shares of Udaipur Tollway Limited	1,168.00	1,168.00
215,757,001 equity shares of Yedeshi Aurangabad Tollway Limited	2,157.60	2,157.60
Investment in equity instruments of related parties (unquoted)	**20,385.01**	**19,180.01**
Investments in sub debt of subsidiaries (unquoted)		
AE Tollway Limited	10,265.88	4,365.00
CG Tollway Limited	2,487.50	2,217.50
IRB Hapur Moradabad Tollway Limited	7,649.76	3,507.80
IRB Westcoast Tollway Limited	12,203.92	5,225.86
Kishangarh Gulabpura Tollway Limited	1,809.50	1,299.50
Kaithal Tollway Private Limited	4,426.04	3,280.00
Solapur Yedeshi Tollway Limited	4,423.70	2,947.50
Udaipur Tollway Limited	8,079.21	3,625.34
Yedeshi Aurangabad Tollway Limited	16,319.79	6,472.43
Subordinated debt to related parties (interest free)	**67,665.30**	**32,940.93**
Total non-current investments (A + B)	**88,050.31**	**52,120.94**
Aggregate amount of unquoted investments	**88,050.31**	**52,120.94**

Note : Rs 29,829.67 millions is transferred from Unsecured loan to Investment in Sub-Debt.

4.2 Loans

(Unsecured, considered good, unless otherwise stated)		
AE Tollway Limited	9,528.41	9,528.41
IRB Westcoast Tollway Limited	4,000.00	4,000.00
Kaithal Tollway Limited	8,725.87	8,677.16
Solapur Yedeshi Tollway Limited	4,000.00	4,000.00
Yedeshi Aurangabad Tollway Limited	4,000.00	4,000.00
Total	**30,254.28**	**30,205.57**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
Note 5 : Financial assets (current)		
5.1 Investments		
Investments in Mutual Funds (quoted) (FVTPL)	50.00	-
	50.00	**-**
5.2 Cash and cash equivalent		
Balances with banks:		
- In current accounts	12.65	0.01
	12.65	**0.01**
For the purpose of the statement of cash flows, cash and cash equivalents comprise the following:		
-On current accounts	12.65	0.01
5.3 Loans		
(Unsecured, considered good, unless otherwise stated)		
Loans to related parties		
AE Tollway Limited	247.59	5,912.47
IRB Hapur Moradabad Tollway Limited	3.50	29.46
IRB Westcoast Tollway Limited	958.98	6,975.87
Kaithal Tollway Limited	179.41	1,134.45
Solapur Yedeshi Tollway Limited	20.00	1,476.20
Udaipur Tollway Limited	-	4,453.87
CG Tollway Limited	2.00	
Kishangarh Gulabpura Tollway Limited	30.00	-
Yedeshi Aurangabad Tollway Limited	368.80	9,847.36
	1,810.28	**29,829.67**
5.4 Other financial assets		
(Unsecured, considered good, unless otherwise stated)		
Interest receivable from others	2,181.27	-
Other receivable		
- related parties	53.51	-
	2,234.78	**-**
Note 6 : Other current assets		
Advance given to suppliers		
- others	0.03	-
Total	**0.03**	**-**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021
Note 7 : Equity

(Rs. in Millions)

	As at March 31,2021	As at March 31,2020
I. Unit capital		
a. Issued, subscribed and fully paid up Unit Capital		
Unit capital of Rs. 100 each issued, subscribed and fully paid up		
At the beginning the year	76,582.50	-
Issued during the year	5,105.50	76,582.50
At the end of the year	**81,688.00**	**76,582.50**

II. Reconciliation of the number of units outstanding and the amount of unit capital:

	As at March 31,2021		As at March 31,2020	
	No. of units	Amount in Millions	No. of units	Amount in Millions
At the beginning of the year	76,58,25,000	76,582.50	-	-
Issued during the year	5,10,55,000	5,105.50	76,58,25,000	76,582.50
At the end of the year	**81,68,80,000**	**81,688.00**	**76,58,25,000**	**76,582.50**

Note :8 Other Equity

	As at March 31,2021	As at March 31,2020
Retained earnings		
At the beginning of the year	(27.16)	-
Profit/(loss) for the year	4,151.21	(27.16)
Unit issue expenses	(103.81)	-
Total Other Equity	**4,020.25**	**(27.16)**

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
9 Other financial liabilities		
Other Payable		
- related party	24,717.75	28,458.95
	24,717.75	**28,458.95**
Note 10 : Current financial liabilities		
10.1 Borrowing		
Unsecured loan		
- Interest free	3,677.76	-
Total	**3,677.76**	**-**
10.2 Trade Payables		
b) Total outstanding dues of creditors other than micro and small enterprises		
- related parties	67.43	-
- others	0.19	27.14
Total	**67.61**	**27.14**
10.3 Other financial liabilities		
Other payables	-	
- related parties	8,239.25	7,114.74
	8,239.25	**7,114.74**
Note 11 : Other current liabilities		
Statutory dues payable (including PF, TDS, GST & others)	1.70	0.02
Total	**1.70**	**0.02**

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

(Rs. in Millions)

	For the Year ended March 31, 2021	One month ended March 31, 2020
Note 12 : Other income		
Interest income on		
Interest income on bank deposits	-	-
Interest income from others	4,200.00	-
Gain on sale of investment	0.43	-
Gain/(loss) on fair value measurement of other payable	2.86	-
Fair value gain on investments	-	-
	4,203.30	**-**
Note 13 : Other expenses		
Rates & taxes	0.28	-
Legal and professional fees	4.96	-
Payment to auditor (refer note below)	0.56	0.24
Bank charges	0.02	0.00
Miscellaneous expenses	-	-
	5.83	**0.24**
Payment to auditor		
- Statutory audit fees	0.20	0.24
- Limited review fees	0.35	-
- Other services (certification fees)	0.00	-
Reimbursement of expenses	0.00	-
	0.56	**0.24**

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2021

Note 14 : Earnings per unit (EPU)

The following reflects the income and unit data used in the basic and diluted EPU computations:

(Rs. in Millions)

	For the year ended March 31, 2021	One month ended March 31, 2020
Profit attributable to unit holders of the Fund for basic & diluted earnings	4,151.21	(27.16)
Weighted average number of unit for basic & diluted EPU* (in Millions)	**78,47,08,356**	**7,55,33,425**
Basic earning per unit (Amount in Rs.)	5.29	(0.36)
Diluted earning per unit (Amount in Rs.)	5.29	(0.36)

Note 15 : Capital and other commitments

There are no capital and other commitments as at March 31, 2021

Note 16 :Contingent liabilities

There are no contingent liabilities as at March 31, 2021

Note 17 : Details of dues to micro and small enterprises as per MSMED Act, 2006

The following details regarding Micro and small Enterprises has been determined to the extent such parties has been identified on the basis of information available with the Fund.

(Rs. in Millions)

Particulars	As at March 31, 2021	As at March 31, 2020
Principal amount remaining unpaid to any supplier as at the period end	-	-
Interest due thereon	-	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-	-
The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-	-

Note 18 : Operating segment

The Fund is engaged in to invest in infrastructure assets primarily being in the road sector in India which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Fund's activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

Note 19 : Related party transaction

I. List of Related Parties

i. Subsidiaries/ SPVs

AE Tollway Limited
CG Tollway Limited
Hapur Muradabad Tollway Limited
IRB Westcoast Tollway Limited
Kishangarh Gulabpura Tollway Limited
Kaithal Tollway Private Limited
Solapur Yedeshi Tollway Limited
Udaipur Tollway Limited
Yedeshi Aurangabad Tollway Limited

ii. Parties to the Fund *

IRB Infrastructure Developers Limited (Sponsor and Project Manager)
MMK Toll Road Private Limited (Investment Manager)
IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)

iii. Subsidiaries Company of Sponsor and Project Manager

Mhaiskar Infrastructure Private Limited
Modern Road Makers Private Limited
IRB Goa Tollway private Limited

 # As per Invit Regulation

iii. Promoters/ Directors of the parties to the Fund specified in (ii) above

Particulars	**IRB Infrastructure Developers Limited (Sponsor and Project Manage)**	**MMK Toll Road Private Limited (Investment Manager)**	IDBI Trusteeship Services Limited (Trustee of the IRB Infrastructure Trust)
Promoters	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Virendra D. Mhaiskar HUF	IRB Infrastructure Developers Limited	IDBI Bank Limited Life Insurance Corporation of India General Insurance Corporation of India
Directors	Mr. Virendra D. Mhaiskar Mrs. Deepali V. Mhaiskar Mr. Mukeshlal Gupta Mr. Sudhir Rao Hoshing	Virendra D Mhaiskar Boon Chin Hau	Mr. J. Samuel Joseph (w.e.f 26.11. 2019) Mr. Ravishankar G. Shinde Ms. Madhuri J. Kulkarni Mr.Satyajit Tripaty (w.e.f. 15.02.2020) Ms Padma Betai (w.e.f. 19.03.2020) Mr. G.M.Yadwalkar (till 30.10.2019) Mr. Swapan Kumar Bagchi (till 30.03.2020) Mr. Saurabh Chandra (till 21.05.2019) Ms. Sashikala Muralidharan (till 16.01. 2020)
	Independent directors	**Independent directors**	
	Mr. Chandrashekhar S. Kaptan Mr. Sunil H. Talati Mr. Sandeep J. Shah Mrs. Heena Raja	K G Krishnamurthy Ranjana Paranjape	

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2021	Year ended March 31, 2020
1	**Equity Investment**		**1,205.00**	**19,180.01**
	AE Tollway Limited	Subsidiary	-	4,365.00
	CG Tollway Limited	Subsidiary	-	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	1,205.00	1,895.00
	IRB Westcoast Tollway Limited	Subsidiary	-	1,741.91
	Kishangarh Gulabpura Tollway Limited	Subsidiary	-	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	-	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	-	982.50
	Udaipur Tollway Limited	Subsidiary	-	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	2,157.60
2	**Subordinated debt**		**4,894.70**	**32,940.93**
	AE Tollway Limited	Subsidiary	-	4,365.00
	CG Tollway Limited	Subsidiary	270.00	2,217.50
	Hapur Muradabad Tollway Limited	Subsidiary	4,112.50	3,507.80
	IRB Westcoast Tollway Limited	Subsidiary	2.20	5,225.86
	Kishangarh Gulabpura Tollway Limited	Subsidiary	510.00	1,299.50
	Kaithal Tollway Private Limited	Subsidiary	-	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	-	2,947.50
	Udaipur Tollway Limited	Subsidiary	-	3,625.34
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	6,472.43
3	**Long term loan**		**48.71**	**30,205.57**
	AE Tollway Limited	Subsidiary	-	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	-	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	48.71	8,677.16
	Solapur Yedeshi Tollway Limited	Subsidiary	-	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	-	4,000.00
4	**Short Term Loan given**		**1,770.28**	**29,829.67**
	AE Tollway Limited	Subsidiary	236.00	5,912.47
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3.50	29.46
	IRB Westcoast Tollway Limited	Subsidiary	958.98	6,975.87
	Kaithal Tollway Limited	Subsidiary	151.00	1,134.45
	Solapur Yedeshi Tollway Limited	Subsidiary	20.00	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	CG Tollway Limited	Subsidiary	2.00	-
	Kishangarh Gulabpura Tollway Limited	Subsidiary	30.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	368.80	9,847.36
5	**Short Term Loan transferred to Sub debt**		**29,829.67**	**-**
	AE Tollway Limited	Subsidiary	5,900.88	-
	IRB Hapur Muradabad Tollway Limited	Subsidiary	29.46	-
	IRB Westcoast Tollway Limited	Subsidiary	6,975.87	-
	Kaithal Tollway Limited	Subsidiary	1,146.04	-
	Solapur Yedeshi Tollway Limited	Subsidiary	1,476.20	-
	Udaipur Tollway Limited	Subsidiary	4,453.87	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	9,847.36	-
6	**Unit Capital Issued**		**2,603.81**	**39,057.08**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,603.81	39,057.08
7	**Unsecured Loan / other payable repaid**		**5,106.67**	-
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	5,105.50	-
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	1.17	-

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

II) Related party transaction during the year

(Rs. in Millions)

Sr. No.	Particulars	Relation	Year ended March 31, 2021	Year ended March 31, 2020
8	**Other Receivable**		**53.51**	-
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	-
	IRB Westcoast Tollway Limited	Subsidiary	13.92	-
	Udaipur Tollway Limited	Subsidiary	0.09	-
9	**Unsecured Loan Payable**		**3,677.76**	**-**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	3,677.76	-
10	**Other Payable**		**2,492.85**	**35,573.69**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	2,444.14	32,037.96
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project Manager	48.71	205.57
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1,785.30
	IRB Goa Tollway Private Limited	Subsidiaries Company of Sponsor and Project Manager	-	1,544.86

IRB Infrastructure Trust
Notes to financial statement for the year ended March 31, 2021

III) Related party outstanding balances

(Rs. in Millions)

Sr. No.	Particulars	Relation	As on March 31,2021	As on March 31,2020
1	**Equity Investment**		**20,385.01**	**19,180.01**
	AE Tollway Limited	Subsidiary	4,365.00	4,365.00
	CG Tollway Limited	Subsidiary	2,035.00	2,035.00
	Hapur Muradabad Tollway Limited	Subsidiary	3,100.00	1,895.00
	IRB Westcoast Tollway Limited	Subsidiary	1,741.91	1,741.91
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,555.00	1,555.00
	Kaithal Tollway Private Limited	Subsidiary	3,280.00	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	982.50	982.50
	Udaipur Tollway Limited	Subsidiary	1,168.00	1,168.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	2,157.60	2,157.60
2	**Subordinated debt**		**67,665.30**	**32,940.93**
	AE Tollway Limited	Subsidiary	10,265.88	4,365.00
	CG Tollway Limited	Subsidiary	2,487.50	2,217.50
	Hapur Muradabad Tollway Limited	Subsidiary	7,649.76	3,507.80
	IRB Westcoast Tollway Limited	Subsidiary	12,203.92	5,225.86
	Kishangarh Gulabpura Tollway Limited	Subsidiary	1,809.50	1,299.50
	Kaithal Tollway Private Limited	Subsidiary	4,426.04	3,280.00
	Solapur Yedeshi Tollway Limited	Subsidiary	4,423.70	2,947.50
	Udaipur Tollway Limited	Subsidiary	8,079.21	3,625.34
	Yedeshi Aurangabad Tollway Limited	Subsidiary	16,319.79	6,472.43
3	**Long term loan**		**30,254.28**	**30,205.57**
	AE Tollway Limited	Subsidiary	9,528.41	9,528.41
	IRB Westcoast Tollway Limited	Subsidiary	4,000.00	4,000.00
	Kaithal Tollway Private Limited	Subsidiary	8,725.87	8,677.16
	Solapur Yedeshi Tollway Limited	Subsidiary	4,000.00	4,000.00
	Yedeshi Aurangabad Tollway Limited	Subsidiary	4,000.00	4,000.00
4	**Short Term Loan**		**1,810.28**	**29,829.67**
	AE Tollway Limited	Subsidiary	247.59	5,912.47
	IRB Hapur Muradabad Tollway Limited	Subsidiary	3.50	29.46
	IRB Westcoast Tollway Limited	Subsidiary	958.98	6,975.87
	Kaithal Tollway Limited	Subsidiary	179.41	1,134.45
	Solapur Yedeshi Tollway Limited	Subsidiary	20.00	1,476.20
	Udaipur Tollway Limited	Subsidiary	-	4,453.87
	Yedeshi Aurangabad Tollway Limited	Subsidiary	368.80	9,847.36
	CG Tollway Limited	Subsidiary	2.00	
	Kishangarh Gulabpura Tollway Limited	Subsidiary	30.00	-
5	**Other Payable**		**32,957.00**	**35,573.69**
	IRB Infrastructure Developers Limited	Sponsor and Project Manager	29,373.73	32,037.96
	Mhaiskar Infrastructure Private Limited	Subsidiaries Company of Sponsor and Project	254.28	205.57
	Modern Road Makers Private Limited	Subsidiaries Company of Sponsor and Project	1,784.13	1,785.30
	IRB Goa Tollway private Limited	Subsidiaries Company of Sponsor and Project Manager	1,544.86	1,544.86
6	**Other Receivable**		**53.51**	-
	Solapur Yedeshi Tollway Limited	Subsidiary	29.00	-
	Yedeshi Aurangabad Tollway Limited	Subsidiary	10.50	-
	IRB Westcoast Tollway Limited	Subsidiary	13.92	-
	Udaipur Tollway Limited	Subsidiary	0.09	-
7	**Unsecured Loan / other payable**		**3,677.76**	-
	IRB Infrastructure Developers Limited	Subsidiaries Company of Sponsor and Project Manager	3,677.76	-

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2021

Note 20 : Fair Values

Financial assets and liabilities

The carrying values of financials instruments of the Fund are reasonable and approximations of fair values.

The accounting classification of each category of financial instruments, their carrying amounts and the categories of financial assets and liabilities measured at fair value, are set out below:

(Rs. in Millions)

	Carrying amount	Fair Value	Carrying amount	Fair Value
	As at March 31, 2021	As at March 31, 2021	As at March 31, 2020	As at March 31, 2020
Financial assets				
Financial assets measured at amortised cost				
Loans	32,064.56	32,064.56	60,035.24	60,035.24
Other financial assets	2,234.78	2,234.78	-	-
Financial assets measured at fair value through statement of Profit & Loss				
Investments in mutual funds	50.00	50.00	-	-
Financial assets measured at amortised cost				
Cash and cash equivalents	12.65	12.65	0.01	0.01
Other Bank balances	-	-	-	-
Financial liabilities				
Trade payables	67.61	67.61	27.14	27.14
Other financial liabilities	32,957.00	32,957.00	35,573.69	35,573.69

The management assessed that the fair value of cash and cash equivalents, trade receivables, trade payables, bank overdrafts and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.
The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the company has determined that market participants would take into account when pricing the investments.

Note 21 : Financial risk management objectives and policies

The fund's risk management policies are established to identify and analyse the risks faced by the fund, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the fund's activities.

The Board of Directors of Investment Manager have overall responsibility for the establishment and oversight of the fund's risk management framework.

In performing its operating, investing and financing activities, the fund is exposed to the Credit risk, Liquidity risk and Market risk.

a. Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits.

Credit risk

Credit risk is the risk that a counter party will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Fund is exposed to credit risk from its investing activities including loans to subsidiaries, deposits with banks and other financial instruments. As at March 31, 2021, the credit risk is considered low since substantial transactions of the Fund are with its subsidiaries.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The fund's exposure to the risk of changes in market interest rates relates primarily to the fund's long-term debt obligations with floating interest rates.

c. Liquidity risk

Liquidity risk is the risk that the Fund may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Fund's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements.

The Fund closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt and overdraft from banks at an optimised cost.

The liquidity risk is managed on the basis of expected maturity dates of the financial liabilities. The average credit period taken to settle trade payables is about 30 to 90 days. The other payables are with short-term durations. The carrying amounts are assumed to be a reasonable approximation of fair value. The following table analyses financial liabilities by remaining contractual maturities:

(Rs. in Millions)

March 31, 2021	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Borrowings	-		3,677.76		-	**3,677.76**
Other financial liabilities			8,239.25	24,717.75		**32,957.00**
Trade payables	-	67.61	-	-	-	**67.61**
Total	**-**	**67.61**	**11,917.01**	**24,717.75**	**-**	**36,702.38**

March 31, 2020	**On demand**	**Less than 3 months**	**Less than 1 year**	**1 to 5 years**	**> 5 years**	**Total**
Other financial liabilities			7,114.74	28,458.95		**35,573.69**
Trade payables	-	27.14	-	-	-	**27.14**
Total	**-**	**27.14**	**7,114.74**	**28,458.95**	**-**	**35,600.83**

At present, the fund does expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Note 22 : Capital management

Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximise shareholder value. The company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the year ended March 31, 2021

The company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in Millions)

	As at March 31, 2021	As at March 31, 2020
Trade and other payables	67.61	27.14
Borrowings	3,677.76	-
Other financial liabilities	32,957.00	35,573.69
Less: cash and cash equivalents (including unpaid dividend account)	(12.65)	(0.01)
Net debt (A)	**36,689.73**	**35,600.82**
Unit capital	81,688.00	76,582.50
Total equity (B)	**81,688.00**	**76,582.50**
Capital and net debt C = A + B	**1,18,377.73**	**1,12,183.32**
Gearing ratio (%) (C / A)	**30.99%**	**31.73%**

In order to achieve this overall objective, the fund's capital management, amongst other things, aims to ensure that it meets financial covenants attached to the interest-bearing loans and borrowings that define capital structure requirements. Breaches in meeting the financial covenants would permit the bank to immediately call loans and borrowings. There have been no breaches in the financial covenants of any interest-bearing borrowings in the current period.

Note 23 : Significant accounting judgement, estimates and assumptions

The preparation of the Fund's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities and the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in out comes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Judgement

In the process of applying the Fund's accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the financial statements.

Classification of unit holders Funds

Under the provisions of the InvIT Regulations, Fund is required to distribute to Unit holders not less than ninety percent of the net distributable cash flows of Fund for each financial year. Accordingly, a portion of the unit holders' Funds contains a contractual obligation of the Fund to pay to its Unit holders cash distributions. The Unit holder's Funds could therefore have been classified as compound financial instrument which contain both equity and liability components in accordance with Ind AS 32-Financial Instruments: Presentation.
However, in accordance with SEBI Circulars(No.CIR/IMD/DF/114/2016 dated 20-Oct-2016 and No.CIR/IMD/DF/127/2016 dated 29-Nov-2016) issued under the InvIT Regulations, the unit holders' Funds have been classified as equity in order to comply with the mandatory requirements of Section H of Annexure A to the SEBI Circular dated 20-Oct-2016 dealing with the minimum disclosures for key financial statements. In line with the above, the income distribution payable to unit holders is recognized as liability when the same is approved by the Investment Manager.

Estimates and assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities or fair value disclosures within the next financial year, are described below. The Fund based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Fund. Such charges are reflected in the assumptions when they occur.

Impairment of non-financial assets

Non-financial assets of the Fund primarily comprise of investments in subsidiaries, Impairment exists when the carrying value of an asset or cash generating unit exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. The recordable amounts for the investments in subsidiaries are based on value in use of the underlying projects. The value in use calculation is based on a DCF model. The cash flows are derived from budgets / forecasts over the life of the projects.

IRB Infrastructure Trust

Notes to financial statement for the year ended March 31, 2021

Note 24 : COVID 19

The outbreak of Coronavirus (COVID-19) pandemic globally and in India is causing significant disturbance and slowdown of economic activity. As per the directions of the Ministry of Road Transport & Highways (MoRTH)/ National Highway Authority of India (NHAI), in order to follow MHA guidelines about commercial and private establishment in the wake of COVID-19 epidemic in the country, operations at the toll plaza of the Group were closed down w.e.f. 26th March, 2020. The toll operations were resumed from 20th April, 2020 by ensuring compliance with preventive measures in terms of guidelines/ instructions issue by Govt. of India to contain spread of Covid -19. Due to this, traffic for the toll road has been impacted. Management believes this is temporary and expects traffic will be normalised looking at the recent toll collection. In accordance with the Concession Agreement and NHAI policy no. 8.3.33/2020 and 8.4.20/2020 dated 26th May, 2020, the Group is eligible for extension of concession period with NHAI towards loss of revenue due to COVID-19 pandemic and NHAI is also extending COVID-19 loan to the Concessionaire for shortfall in cashflow.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA. Chinmaya Deval
Partner
Membership No.: 148652

Place: Mumbai
Date : 24/05/2021

For and on behalf of MMK Toll Road Private Limited
(Investment Manager of IRB Infrastructure Trust)

SD/-
Virendra D. Mhaiskar
Chairman
DIN : 00183554

SD/-
Dhananjay K. Joshi
Chief Executive officer

SD/-
Jitendra Sharma
Chief Finance officer

SD/-
Kaustubh Shevade
Company secretary

Place: Mumbai
Date : 24/05/2021

C. FINANCIAL INFORMATION OF THE TARGET SPV

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gokhale & sathe
(regd.)
chartered accountants
304,308/309, Udyog Mandir No. 1,
7-C, Bhagoji Keer Marg,
mahim, mumbai 400 016

INDEPENDENT AUDITOR'S REPORT ON INTERIM SPECIAL PURPOSE FINANCIAL STATEMENTS OF IRB GOLCONDA EXPRESSWAY PRIVATE LIMITED

To,

The Board of Directors,
IRB Golconda Expressway Private Limited,

REPORT ON INTERIM SPECIAL PURPOSE FINANCIAL STATEMENTS

Opinion

We have audited the accompanying Interim Special Purpose Financial Statements of IRB Golconda Expressway Private Limited ("the Company") prepared for the Right issue of units of the IRB Infrastructure Trust ("the Trust"), which comprise:

- the Balance Sheet as at June 30, 2023,
- the Statement of Profit and Loss (including Other Comprehensive Income) for the quarter ended June 30, 2023,
- Statement of Cash Flow for the quarter ended June 30, 2023,
- Statement of Changes in Equity for the quarter ended June 30, 2023 and
- a Summary of Significant Accounting Policies and Other Explanatory Information for the quarter ended June 30, 2023

(Together referred to as 'Interim Special Purpose Financial Statements').

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Interim Special Purpose Financial Statements give a true and fair view in accordance with the Basis of preparation as specified in note 2.a. to the Interim Special Purpose Financial Statements in case of:

a) the Interim Special Purpose Balance Sheet, of the state of affairs of the Company as at June 30, 2023;
b) the Interim Special Purpose Statement of Profit and Loss (including Other Comprehensive Income) of the Company's loss for the quarter ended June 30, 2023;
c) the Cash Flow Statement, of the cash movements of the Company for the quarter ended June 30, 2023;
d) the Statement of Changes in Equity, of changes in enquity for the quarter ended June 30, 2023;

Basis of Accounting and Restriction on Distribution and Use

Without modifying our opinion, we draw attention to note 2.a. to the Interim Special Purpose Financial Statements, which describes the basis of accounting including the approach to and purpose of preparation of these Interim Special Purpose Financial Statements.

These Financial Statements have been prepared in accordance with the Indian Accounting Standards as notified under the Companies (Indian Accounting Standards) Rules, 2015 prescribed under section 133 of the Companies Act, 2013 ('the Act'), as applicable ("Ind AS")

as more clearly specified in note 2.a.: 'Basis of preparation' of the Interim Special Purpose Financial Statements.

This report is addressed to the Board of Directors of the Company and has been prepared solely in connection with the Right issue of units of the Trust. As a result, the Financial Statements may not be suitable for other purpose.

Our report should not be used, referred to or distributed for any other purpose or to any other party without our prior written consent. Accordingly, we do not accept or assume any liability or any duty of care for any other purpose or to any other person to whom this report is shown or into whose hands it may come without our prior consent in writing.

Responsibility of the Management and Those Charged with Governance for the Interim Special Purpose Financial Statements

The Management of the Company is responsible for the preparation of these Interim Special Purpose Financial Statements that give a true and fair view of the financial position, financial performance (including Other Comprehensive Income), Statement of Changes in Equity, Cash Flow and in accordance with the Basis of preparation specified in note 2.a. to the Interim Special Purpose Financial Statements.

The respective Board of Directors of the Company are responsible for the maintenance of adequate accounting records in accordance with the provisions of the Act; for safeguarding the assets of Company and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgements and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of these Interim Special Purpose Financial Statements by the Management, as aforesaid.

Auditor's Responsibility

Our objectives are to obtain reasonable assurance about whether the Interim Special Purpose Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the Interim Special Purpose Financial Statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Interim Special Purpose Financial Statements, whether due to fraud or error.

In making those risk assessments, the auditor considers internal financial controls relevant to the Company's preparation of the Interim Special Purpose Financial Statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion whether the Company has in place an adequate internal financial controls system over financial reporting and the operating effectiveness of such controls.

An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Management, as well as evaluating the overall presentation of the financial statements.

Materiality is the magnitude of misstatement in the financial statements that, individually or in aggregate, make it probable that the economic decision of reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i)Planning the scope of our audit and in evaluating results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance and the Management of the Company regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

For Gokhale & Sathe,
Chartered Accountants,
Firm's Registration No.: 103264W

SD/-
CA. Kaustubh Deshpande,
Partner
Membership No.: 121011
UDIN: 23121011BGXXZB3406
Place: Mumbai
Date: July 28, 2023

IRB Golconda Expressway Private Limited
Interim Special Purpose Balance Sheet as at June 30, 2023

(Rs. in million)

		Note No.	June 30, 2023
I	**ASSETS**		
	Current assets		
a.	Financial assets		
	i) Cash and cash equivalents	4	0.07
b.	Other current assets	5	17.48
			17.55
	TOTAL ASSETS		**17.55**
II	**EQUITY AND LIABILITIES**		
	Equity		
a.	Equity share capital	6	0.50
b.	Other equity	7	(0.11)
			0.39
	Liabilities		
(2)	**Current liabilities**		
a.	Financial liabilities		
	i) Borrowings	8	15.78
	ii) Trade payables	9	
	a) total outstanding dues of micro enterprises and small enterprises		-
	b) total outstanding dues of creditors other than micro enterp enterprises		0.01
	iii) Other financial liabilities	10	0.06
b.	Other liabilities	11	1.31
	Total liabilities		**17.16**
	TOTAL EQUITY AND LIABILITIES		**17.55**
	Summary of significant accounting policies	3	

The accompanying notes are an integral part of these financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
IRB Golconda Expressway Private Limited
CIN :U42101MH2023PTC402917

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : July 28, 2023

SD/-
Amitabh Murarka
Director
DIN: 08099533

Place: Mumbai
Date : July 28, 2023

SD/-
Rajpaul Sharma
Director
DIN: 06866164

IRB Golconda Expressway Private Limited

Interim Special Purpose Statement of Profit and Loss for the period from May 13, 2023 to June 30, 2023

(Rs. in million)

	Note No.	For the period from May 13, 2023 to June 30, 2023
Income		
Revenue from operations		-
Other income		-
TOTAL INCOME		**-**
Expenses		
Other expenses	12	0.11
TOTAL EXPENSES		**0.11**
Profit / (loss) before tax		**(0.11)**
Tax expenses		
Current tax		-
Deferred tax		-
Total tax expenses		**-**
Profit/(loss) for the period		**(0.11)**
Other comprehensive income		
Item that will not to be reclassified to profit or loss:		
Re-measurement gains/ (losses) on defined benefit plans		-
Tax on re-measurement gains/ (losses) on defined benefit		-
Other comprehensive income/(loss) for the year (net of tax)		**-**
Total comprehensive income		**(0.11)**
Earnings per equity share (of Rs. 10 each)		
Basic	13	(2.22)
Diluted		(2.22)
Summary of significant accounting policies	3	

The accompanying notes are an integral part of these financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
IRB Golconda Expressway Private Limited
CIN :U42101MH2023PTC402917

SD/-
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Partner
Membership No.: 121011

SD/-
Amitabh Murarka
Director
DIN: 08099533

SD/-
Rajpaul Sharma
Director
DIN: 06866164

Place: Mumbai
Date : July 28, 2023

Place: Mumbai
Date : July 28, 2023

IRB Golconda Expressway Private Limited
Interim Special Purpose Statement of Cash flows for the period from May 13, 2023 to June 30, 2023

(Rs. in million)

	For the period from May 13, 2023 to June 30, 2023
Cash flow from operating activities	
Profit before tax	**(0.11)**
Adjustments :	-
Operating loss before working capital changes	**(0.11)**
Movement in working capital :	
(Increase) in other assets	(17.48)
Increase in trade payables	0.01
Increase/(Decrease) in other financial liabilities	0.06
(Decrease) in other liabilities	1.31
Cash generated from operations	**(16.21)**
Taxes paid (net)	-
Net cash flows generated from operating activities (A)	**(16.21)**
Cash flows from investing activities	-
Net cash flows (used in) investing activities (B)	**-**
Cash flow from financing activities	
Proceeds from short-term borrowings	15.78
Proceeds from issue of equity shares	0.50
Net cash flows generated from financing activities (C)	**16.28**
Net decrease in cash and cash equivalents (A+B+C)	**0.07**
Cash and cash equivalents at the beginning of the period	-
Cash and cash equivalents at the end of the period	**0.07**
Components of Cash and Cash Equivalents	
Balances with Banks	
On current accounts	0.07
On deposit accounts	-
Cash on hand	-
Total Cash and cash equivalents	**0.07**
Debt reconciliation statement in accordance with Ind AS 7	
Opening balances	
Long term borrowing	-
Short term borrowing	-
Movements	
Long term borrowing	-
Short term borrowing	15.78
Closing balances	
Long term borrowing	-
Short term borrowing	15.78

Summary of significant accounting policies (refer note 3)
The accompanying notes are an integral part of these Financial Statements.

Note :
1. All figures in bracket are outflow.
2. Direct taxes paid are treated as arising from operating activities and are not bifurcated between investing and financing activities.
3. The cash flow statement has been prepared under Indirect Method as per Ind AS 7 "Statement of Cash Flows" as as under section 133 of Companies Act, 2013.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
IRB Golconda Expressway Private Limited
CIN :U42101MH2023PTC402917

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Place: Mumbai
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Amitabh Murarka
Director
DIN: 08099533

Place: Mumbai
Date : July 28, 2023

SD/-
Rajpaul Sharma
Director
DIN: 06866164

IRB Golconda Expressway Private Limited

Interim Special Purpose Statement of changes in Equity for the period from May 13, 2023 to June 30, 2023

(Rs. in million)

		June 30, 2023
a.	**Equity Share Capital**	
	Equity shares of Rs. 10 each issued, subscribed and fully paid	
	At the beginning of the period	-
	Increase / (decrease) during the period	0.50
	At the end of the period	**0.50**

b. Other Equity

	Retained Earnings	Re-measurement of net defined benefit Plans	Total
Opening Balance	**-**	**-**	**-**
Profit / (Loss) for the period	(0.11)	-	(0.11)
Other comprehensive income for the period	**-**	**-**	**-**
Transfer to retained earnings	-	-	-
Total comprehensive income for the period	**(0.11)**	**-**	**(0.11)**
As at June 30, 2023	**(0.11)**	**-**	**(0.11)**

Summary of significant accounting policies 3

The accompanying notes are an integral part of these financial statements.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

For and on behalf of the Board of Directors of
IRB Golconda Expressway Private Limited
CIN :U42101MH2023PTC402917

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : July 28, 2023

SD/-
Amitabh Murarka
Director
DIN: 08099533

Place: Mumbai
Date : July 28, 2023

SD/-
Rajpaul Sharma
Director
DIN: 06866164

IRB Golconda Expressway Private Limited
Notes to Interim Special Purpose Financial Statements for the period from May 13, 2023 to June 30, 2023

1. Corporate Information

IRB Golconda Express Private Limited (‘the Company’) is domiciled in India. The Company has been awarded the work for development, operation, maintenance and management of Nehru Outer Ring Road (from Km 0+000 to Km 158+000) in Hyderabad on Toll Operate Transfer mode in the state of Telangana. The Company is a subsidiary of IRB Infrastructure Developers Limited ('IRBIDL'). IRBIDL being a public company, the Company has also become a public company in accordance with the provisions of the Indian Companies Act, 2013. The registered office is located at 1101, Hiranandani Knowledge Park, Technology Street, Opp Hiranapndani Hospital, Powai, Mumbai – 400 076, Maharashtra.

The Company has been incorporated on May 13, 2023 and these are the first year financials of the company and hence previous year comparatives are not possible.

2. Basis of preparation

A. Statement of compliance

The financial statements of the Company have been prepared in accordance with Indian Accounting Standards (Ind AS) notified under the Companies (Indian Accounting Standards) Rules, 2015 (as amended from time to time) and presentation requirements of Division II of Schedule III to the Companies Act, 2013. (Ind AS compliant Sch III).

These are the Interim Special Purpose Financial Statements of the Company and notes including other explanatory information.

These Interim Special Purpose Financial Statements which comprise the Interim Special Purpose Balance sheet as at June 30, 2023, the Interim Special Purpose Statement of Profit and Loss (including Other Comprehensive Income), the Interim Special Purpose Statement of Changes in Equity and the Interim Special Purpose Statement of Cash Flows for the period from May 13, 2023 to June 30, 2023 and a summary of the significant accounting policies and other explanatory information (together herein after referred to as “Interim Special Purpose Financial Statements” have been prepared in accordance with the Indian Accounting Standards (Ind AS) to comply with the Section 133 of the Companies Act, 2013 (“the Act”) and the relevant provisions and amendments, as applicable. These Interim Special Purpose Financial Statements for the period from May 13, 2023 to June 30, 2023 have been prepared solely in connection with the proposed right issue of the units of the IRB Infrastructure Trust.

The financial statements were authorised for issue by the Company's Board of Directors on July 28, 2023.

Details of the Company's accounting policies are included in Note 3. The accounting policies set out below have been applied consistently to the period presented in the financial statements.

B. Functional and presentation currency

The financial statements are presented in Indian Rupee ('INR') which is also the Company's functional currency and all values are rounded to the nearest millions, except when otherwise indicated. Wherever the amount represented '0' (zero) construes value less than Rupees five thousand.

C. Basis of measurement

The financial statements have been prepared on accrual basis following historical cost convention, except for certain financial assets and liabilities (refer accounting policies regarding financial instruments) which have been measured at fair value.

3. Summary of significant accounting policies

3.1 Current versus non-current classification

The Company has idenfied twleve months as its operating cycle. The operating cycle is the time between the acquisition of assets for processing and their realisation in cash and cash equivalents.

The Company presents assets and liabilities in the balance sheet based on current/ non-current classification. An asset is treated as current when it is:
- Expected to be realised or intended to be sold or consumed in normal operating cycle
- Held primarily for the purpose of trading
- Expected to be realised within twelve months after the reporting period, or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is current when:
- It is expected to be settled in normal operating cycle
- It is held primarily for the purpose of trading
- It is due to be settled within twelve months after the reporting period, or
- There is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period

The Company classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities.

3.2 Fair value measurement

Financial instruments are recognised when the Company becomes a party to the contractual provisions of the instrument. Fair value measurement is given.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either:
- in the principal market for the asset or liability, or
- in the absence of a principal market, in the most advantageous market for the asset or liability

The principal or the most advantageous market must be accessible by the Company.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Company uses valuation techniques that are appropriate in the circumstances and for which sufficient data is available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 - Quoted (unadjusted) market prices in active markets for identical assets or liabilities
Level 2- Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable
Level 3 -Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements, the Company determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

At each reporting date, the Management analyses the movements in the values of assets and liabilities which are required to be remeasured or re-assessed as per the Company's accounting policies. For this analysis, the Management verifies the major inputs applied in the latest valuation by agreeing the information in the valuation computation to contracts and other relevant documents.

The management also compares the change in the fair value of each asset and liability with relevant external sources to determine whether the change is reasonable.

On an annual basis, the Management presents the valuation results to the Audit Committee and the Company's independent auditors. This includes a detailed discussion of the major assumptions used in the valuations.
For the purpose of fair value disclosures, the Company has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained above.

This note summarises accounting policy for fair value. Other fair value related disclosures are given in the relevant notes.

Disclosures for valuation methods, significant estimates and assumptions
Financial instruments (including those carried at amortised cost)
Quantative disclosure of fair value measurement hierarchy

3.3 Use of estimates and judgements

The preparation of the Company's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenue, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future years.

Estimates and assumptions
Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimates are revised and future periods are affected.

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are described below. The Company based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Company. Such changes are reflected in the assumptions when they occur.
Fair value measurement of financial instruments

3.4 Taxes

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities in accordance the Income Tax Act, 1961. The taxable profits are different from profit before tax as reported in the statement of profit & loss because of income / expenses that are taxable / deductible in other years or are never taxable / deductible. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the country as per the applicable taxation laws where the Company operates and generates taxable income.

Current tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity. Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred tax

Deferred tax is recognised in respect of temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognised for all taxable temporary differences, except:
- When the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.
- In respect of taxable temporary differences associated with investments in subsidiaries, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future

Deferred tax assets are recognised for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised, except:

- When the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised. Unrecognised deferred tax assets are re-assessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax relating to items recognised outside profit or loss is recognised outside profit or loss (either in other comprehensive income or in equity). Deferred tax items are recognised in correlation to the underlying transaction either in OCI or directly in equity.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

Minimum Alternate Tax (MAT)

Minimum Alternate Tax (MAT) paid as per Indian Income Tax Act, 1961 is in the nature of unused tax credit which can be carried forward and utilised when the Company will pay normal income tax during the specified period.

Deferred tax assets on such tax credit are recognised to the extent that it is probable that the unused tax credit can be utilised in the specified future period. The net amount of tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet. At each Balance Sheet date, the carrying amount of MAT Credit Entitlement receivable is reviewed to reassure realisation.

3.5 Borrowing costs

Borrowing costs includes interest and amortisation of ancillary costs incurred in connection with the arrangement of borrowings.
Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Borrowing cost also includes exchange differences between the foreign currency borrowing and the functional currency borrowings to the extent regarded as an adjustment to the borrowing costs.

3.6 Contingent Liabilities and Contingent assets

A contingent liability is a possible obligation that arises from past events whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events beyond the control of the Company or a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation. A contingent liability also arises in extremely rare cases where there is a liability that cannot be recognised because it cannot be measured reliably. The Company does not recognise a contingent liability but discloses its existence in the financial statements.

A contingent asset is not recognised unless it becomes virtually certain that an inflow of economic benefits will arise. When an inflow of economic benefits is probable, contingent assets are disclosed in the financial statements.

Contingent liabilities and contingent assets are reviewed at each balance sheet date.

3.7 Provisions

Provisions are recognised when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimates.

3.8 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financial instruments are recognized when the company becomes a party to the contractual provisions of the instruments. Fair value measurement is given in note 15.

Financial assets

Initial recognition and measurement
All financial assets are recognised initially at fair value plus, in the case of financial assets not recorded at fair value through profit or loss, transaction costs that are attributable to the acquisition of the financial asset.

On initial recognistion, a financial asset is classified as measured of
- amortised cost
- FVOCI - Debt instruments
- FVOCI - equity instruments
- FVTPL

Financial assets are not reclassified subsequent to their initial recognition, except if and in the period, the Company changes its business model for managing financial assets.

Debt instruments at amortised cost

A 'debt instrument' is measured at its amortised cost if both the following conditions are met:
a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
b) contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

This category is the most relevant to the Company.

After initial measurement, such financial assets are subsequently measured at amortised cost using the effective interest rate (EIR) method. Amortised cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included in other income in the statement of profit and loss. The losses arising from impairment are recognised in the statement of profit and loss.

Debt instrument at FVTOCI

A 'debt instrument' is classified at FVTOCI if both of the following criteria are met:
a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and
b) The asset's contractual cash flows represent SPPI.

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value.

Fair value movements are recognized in the other comprehensive income (OCI). However, the Company recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of Profit and Loss. On derecognition of the asset, cumulative gain or loss previously recognised in OCI is reclassified from the equity to the statement of Profit and Loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Equity investment

All equity investments in scope of Ind AS 109 are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Company may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. The Company makes such election on an instrument-by-instrument basis. The classification is made on initial recognition and is irrevocable.

If the Company decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale of investment. However, the Company may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognised in the statement of profit and loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or part of a Company of similar financial assets) is primarily derecognised (i.e. removed from the Company's balance sheet) when:
The rights to receive cash flows from the asset have expired, or
The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material lay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

3.9 Cash and cash equivalents

Cash and cash equivalent in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.
For the purpose of the statement of cash flows, cash and cash equivalents consist of cash and short-term deposits, as defined above as they are considered an integral part of the Company's cash management.

3.10 Earnings per share

Basic earnings per share are calculated by dividing the net profit or loss for the period attributable to equity shareholders by the weighted average number of equity shares outstanding during the period.

For the purpose of calculating diluted earnings per share, the net profit or loss for the period attributable to equity shareholders and the weighted average number of shares outstanding during the period are adjusted for the effects of all dilutive potential equity shares.

3.11 Segment information

Based on “Management Approach” as defined in Ind AS 108 – Operative Segments, the Chief Operating Decision Maker evaluates the Company’s performance and allocates the resources based on an analysis of various performance indicators by business segments. Inter segment sales and transfers are reflected at market prices.

Unallocable items includes general corporate income and expense items which are not allocated to any business segment.

Segment Policies:
The Company prepares its segment information in conformity with the accounting policies adopted for preparing and presenting the financial statements of the Company as a whole.

The Company is engaged in “Road Infrastructure Projects” which in the context of Ind AS 108 - Operating Segments is considered as the only segment. The Company’s activities are restricted within India and hence no separate geographical segment disclosure is considered necessary.

(Rs. in million)

	June 30, 2023
Financial assets	
Note 4 : Cash and cash equivalent	
Cash on hand	-
Balances with banks:	
- In current accounts	0.07
Total	**0.07**
Note 5 : Other current assets	
Current	
(Unsecured, considered good, unless otherwise stated)	
Advance given to suppliers - others	0.03
Prepaid expenses	17.45
Total	**17.48**

Note 6 : Equity

	(Rs. in million)
	June 30, 2023
Equity share capital	
a. Authorised shares	
Equity share capital	
At the beginning of the period	-
Increase / (decrease) during the period	0.50
At the beginning and end of the period	**0.50**
(50,000 equity shares of Rs.10 each)	

b. Issued, subscribed and paid up equity share capital	
Equity share of Rs. 10 each issued, subscribed and fully paid up	**June 30, 2023**
At the beginning of the period	-
Increase / (decrease) during the period	0.50
At the beginning and end of the period	**0.50**
(50,000 equity shares of Rs.10 each)	

a. Reconciliation of shares outstanding at the beginning and at the end of the reporting period.
Equity shares of Rs. 10 each issued, subscribed and fully paid.

	June 30, 2023	
	No. of shares	**Amt in Millions**
At the beginning of the year	-	-
Increase / (decrease) during the period	50,000	500,000
At the end of the period	**50,000**	**500,000**

b. Details of promoter :
Out of equity share issued by the company, shares held by it's holding company and there subsidiaries are as below :

Promoter & promoter Group	**No. of shares**	**%**
IRB Infrastructure Developers Limited (Holding Company)	50,000	100%

As per records of the Company, including its register of shareholders / members and other declarations received from shareholders regarding beneficial interest, the above shareholding represents both legal and beneficial ownership of shares.

Note 7 : Other Equity

	June 30, 2023
A. Other reserves	
1. Retained earnings	
At the beginning of the period	-
Loss for the period	(0.11)
Total retained earnings	**(0.11)**

(Rs. in million)

	June 30, 2023

Note 8 : Borrowings

Current

Unsecured loan	
- From related parties	
- Interest free	15.78
Total	**15.78**

Note 9 : Trade Payables

Current

a) total outstanding dues of micro enterprises and small enterprises (refer note	-
b) Total outstanding dues of creditors other than micro and small enterprises	
- related parties (refer note 21)	-
- others	0.01
Total	**0.01**

Note 10 : Other financial liabilities

Current

Due to directors	0.06
Total	**0.06**

Note 11 : Other current liabilities

Current

Statutory dues payable (including PF, TDS, GST & others)	1.31
Total	**1.31**

IRB Golconda Expressway Private Limited

Notes to Interim Special Purpose Financial Statements for the period from May 13, 2023 to June 30, 2023

(Rs. in million)

	For the period from May 13, 2023 to June 30, 2023
Note 12 : Other expenses	
Rates & taxes	0.02
Directors sitting fees	0.08
Payment to auditor	0.01
Bank charges	0.00
Total	**0.11**

IRB Golconda Expressway Private Limited
Notes to Interim Special Purpose Financial Statements for the period from May 13, 2023 to June 30, 2023

Note 13 : Earnings per share (EPS)

Basic EPS amounts are calculated by dividing the profit for period attributable to equity holders by the weighted average number of Equity shares outstanding during the period.
Diluted EPS amounts are calculated by dividing the profit attributable to equity holders by the weighted average number of Equity shares outstanding during the period plus the weighted average number of Equity shares that would be issued on conversion of all the dilutive potential Equity shares into Equity shares.

The following reflects the income and share data used in the basic and diluted EPS computations:

(Rs. in million)

	June 30, 2023
Net profit/(loss) for calculation of basic EPS (profit after tax)	(0.11)
Weighted average number of equity shares in calculating basic EPS and diluted (number of shares)	50,000
Weighted average number of Equity adjusted for the effect of dilution	50,000
Face value per share	10
Basic earning per share	(2.22)
Diluted earning per share	(2.22)

Note 14 : Trade payables

a) Details of dues to Micro and Small Enterprises as per Micro, Small and Medium Enterprises Development Act, 2006

Under the Micro, Small and Medium Enterprises Development Act, 2006 ('MSMED') which came into force from October 2, 2006, certain disclosures are required to be made relating to Micro and Small enterprises. On the basis or the information and records available with the management, there are no outstanding dues to the Micro and Small enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006 except as set out in the following disclosures.

The disclosure in respect of the amount payable to enterprises which have provided goods and services to the Company and which qualify under the definition of micro and small enterprises, as defined under Micro, Small and Medium Enterprises Development Act, 2006 has been made in the Interim Special Purpose Financial Statement for period from May 13, 2023 to June 30, 2023.

(Rs. in million)

Particulars	June 30, 2023
Principal amount remaining unpaid to any supplier as at the period end	-
Interest due thereon	-
Amount of interest paid by the Company in terms of section 16 of the MSMED, along with the amount of the payment made to the supplier beyond the appointed day during the accounting period.	-
Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the period) but without adding the interest specified under the MSMED, 2006	-
Amount of interest accrued and remaining unpaid at the end of the accounting period	-
The amount of further interest remaining due and payable even in the succeeding periods, until such date when the interest dues as above are actually paid to the small enterprise for the purpose of disallowance as a deductible expenditure under the MSMED Act, 2006	-

MSME ageing schedule as at

(Rs. in million)

Particulars	June 30, 2023
MSME Undisputed Dues	
Not Due	
Less than 1 year	-
1-2 Years	-
2-3 Years	-
More than 3 years	-
Total	-

b) Ageing of creditors other than micro enterprises and small enterprises as at

(Rs. in million)

Particulars	June 30, 2023
Others Undisputed Dues	
Not Due	
Less than 1 year	0.01
1-2 Years	-
2-3 Years	-
More than 3 years	-
Accrued expenses	-
Total	0.01

Note 15 : Fair Value Measurements

The carrying values of financials instruments of the Company are reasonable and approximations of fair values.

(Rs. in million)

	Carrying amount	Fair Value
	June 30, 2023	June 30, 2023
Financial assets		
Financial assets measured at amortised cost		
Cash and cash equivalents	0.07	0.07
Financial liabilities		
Financial liabilities measured at amortised cost		
Borrowings	15.78	15.78
Trade payables	0.01	0.01
Other financial liabilities	0.06	0.06

The management assessed that cash and cash equivalents, bank balance, trade payables, borrowings, and other financial liabilities approximate their carrying amounts largely due to the short term maturities of these instruments.

The fair value of the financial assets and liabilities is included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

The discount for lack of marketability represents the amounts that the Company has determined that market participants would take into account when pricing the investments.

Note 16 : Fair Value Hierarchy

All financial instruments for which fair value is recognised or disclosed are categorised within the fair value hierarchy described as follows, based on the lowest level input that is significant to the fair value measurement as a whole.

Level 1: Quoted (unadjusted) price is active market for identical assets or liabilities.
Level 2: Valuation technique for which the lowest level input that has a significant effect on the fair value measurement are observed, either directly or indirectly.

Level 3: Valuation technique for which the lowest level input has a significant effect on the fair value measurement is not based on observable market data.

The following table presents fair value hierarchy of assets and liabilities measured at fair value on a recurring basis as of June 30, 2023 :

(Rs. in million)

Particulars	June 30, 2023	Fair value measurement at end of the reporting period using		
		Level 1	Level 2	Level 3
Assets				
Cash and cash equivalents	0.07	-		0.07
Financials liabilities				
Borrowings	15.78	-	-	15.78
Trade payables	0.01	-	-	0.01
Other financial liabilities	0.06	-	-	0.06

Note 17 : Financial risk management objectives and policies

The Company's risk management policies are established to identify and analyse the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company's activities.

The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework.
In performing its operating, investing and financing activities, the Company is exposed to the Credit risk, Liquidity risk and Market risk.

Market Risk

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk and commodity risk. Financial instruments affected by market risk include loans and borrowings, deposits, FVTOCI investments and derivative financial instruments.

Credit risk on Financial Assets

Credit risk is the risk that counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Company is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions, foreign exchange transactions and other financial instruments.

Financial instruments

Credit risk from balances with banks, trade receivables, loans and advances and financial institutions is managed by the Company top management in accordance with the Company's policy. Investments of surplus funds are made only with approved counterparties and within credit limits assigned to each counterparty. Counterparty credit limits are reviewed by the top management on an annual basis, and may be updated throughout the period subject to approval of the Company's board of directors. The limits are set to minimise the concentration of risks and therefore mitigate financial loss through counterparty's potential failure to make payments.

Trade receivables and Loans and Advances

Customer credit risk and Loans and advances is managed by each business unit subject to the Company's established policy, procedures and control relating to customer credit risk management. An impairment analysis is performed at each reporting date on an individual basis for major trade receivables and loan and advances which is pertains to receivable from subisidairy companies. The Company has not identified any impairment loss as at June 30, 2023.

Other financial assets

Credit risk from balances with banks and financial institutions is managed by the Company in accordance with the Company's policy. Investments of surplus funds are made only in highly marketable debt instruments with appropriate maturities to optimise the cash return on instruments while ensuring sufficient liquidity to meet its liabilities.

Interest Rate Risk
Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company's exposure to the risk of changes in market interest rates relates primarily to the Company's long-term debt obligations with floating interest rates.

The Company manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings.

Liquidity risk
Liquidity risk is the risk that the Company may not be able to meet its present and future cash and collateral obligations without incurring unacceptable losses. The Company's objective is to, at all times maintain optimum levels of liquidity to meet its cash and collateral requirements. The Company closely monitors its liquidity position and deploys a robust cash management system. It maintains adequate sources of financing including debt from banks at an optimised cost (refer note 8).

The table below summaries the maturity profile of the Company's financial liabilities based on contractual undiscounted payments:

(Rs. in million)

As at June 30, 2023	Carrying amount	Total	Less than 1 period	1-5 periods	More than 5 periods
Borrowings	15.78	15.78	15.78	-	-
Trade payables	0.01	0.01	0.01	-	-
Other financial liabilities	0.06	0.06	0.06	-	-
Total	**15.85**	**15.85**	**15.85**	**-**	**-**

At present, the Company expects to repay all liabilities at their contractual maturity. In order to meet such cash commitments, the operating activity is expected to generate sufficient cash inflows.

Currency Risk
The Company conducts all the transactions in Indian Rupees which is also the functional currency of the Company. Hence, the sensitivity analysis is not required.

Commodity price risk
The company requires for implementation (construction, operation and maintenance) of the projects, such as cement, bitumen, steel and other construction materials. For which, the company entered the fixed price contract with the EPC contractor and O&M Contractor so as to manage its exposure to price increases in raw materials. Hence, the sensitivity analysis is not required.

Note 18 : Capital management

a) Risk management
Capital includes equity attributable to the equity holders to ensure that it maintains an efficient capital structure and healthy capital ratios in order to support its business and maximize shareholder value. The Company manages its capital structure and makes adjustments to it, in light of changes in economic conditions or its business requirements. To maintain or adjust the capital structure, the Company may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. No changes were made in the objectives, policies or processes during the period from May 13, 2023 to June 30, 2023 .

The Company monitors capital using a gearing ratio, which is net debt divided by total capital plus net debt. Net debt is calculated as loans and borrowings less cash and cash equivalents.

(Rs. in million)

	June 30, 2023
Borrowings	15.78
Less: cash and cash equivalents	(0.13)
Net debt (A)	**15.65**
Equity	0.50
Total sponsor capital	**0.50**
Capital and Net debt (B)	**16.15**
Gearing ratio (%) (A/B)	**96.90**

This is a first year for managing capital during the period from May 13, 2023 to June 30, 2023.

Note 19 : Segment information

The Company has identified one business segment in accordance with the Indian Accounting Standard 108 "Operating Segment" notified under section 133 of the Companies Act, 2013 read together with relevant ruled issued thereunder.

Note 20 : Other Statutory Information

i) The Company have not traded or invested in Crypto currency or Virtual Currency during the financial year.

ii) The Company does not hold benami property and no proceedings under Benami transaction (Prohibition) Act 1988 have been initiated against the company.

iii) The Company do not have any transactions with companies struck off.

iv) The Company have not any such transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961 (such as, search or survey or any other relevant provisions of the Income Tax Act, 1961.

v) The Company have not received any fund from any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

vi) The Company have not advance or loaned or invested (either from borrowed fund or share premium or any other source or kind of fund) by the company to or in any person(s) or entity(ies), including foreign entities (Funding Party) with the understanding (whether recorded in writing or otherwise) that the Company shall:

(a) directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the company (Ultimate Beneficiaries) or

(b) provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

The reporting requirements required as per Schedule-III amendments to the Companies Act, 2013 wherever not reported in the financial statements are not applicable to the Company.

IRB Golconda Expressway Private Limited
Notes to Interim Special Purpose Financial Statements for the period from May 13, 2023 to June 30, 2023

Note 21 : Related Party Disclosures

A Names of the related parties

i) Where control exists
Holding company - IRB Infrastructure Developers Limited

ii) Associates (Only with whom there have been transactions during the year/ there was balance outstanding at the year end)
IRB Infrastructure Trust

iii) Key Management Personnel
Mr. Rajpaul Sharma, Director
Mr. Amitabh Murarka, Director
Mrs. Arati Taskar, Director

Related party transactions for the period ended June 30, 2023

(Rs. in million)

Sr. No.	Particular	For the period from May 13, 2023 to June 30, 2023		
		Holding Company	Associates	Key Management Person
1	**Short-term loan received**			
	IRB Infrastructure Developers Limited	15.78	-	-
	Total	**15.78**	**-**	**-**
2	**Expenses Incurred on our behalf**			
	IRB Infrastructure Developers Limited	0.00	-	-
	IRB Infrastructure Trust	-	0.02	-
	Total	**0.00**	**0.02**	**-**
3	**Director sitting fees paid (excluding taxes)**			
	Mrs. Arati Taskar	-	-	0.01
	Mr. Rajpaul Sharma	-	-	0.03
	Mr. Amitabh Murarka	-	-	0.03
	Total	**-**	**-**	**0.07**

Related party outstanding balances as at June 30, 2023

Sr. No.	Particular	June 30, 2023		
		Holding Company	Associates	Key Management Person
1	**Short-term unsecured loan received**			
	(maturity within one year and interest free)			
	IRB Infrastructure Developers Limited	15.78	-	-
	Total	**15.78**	**-**	**-**
2	**Director sitting fees payable**			
	Mrs. Arati Taskar	-	-	0.00
	Mr. Rajpaul Sharma	-	-	0.03
	Mr. Amitabh Murarka	-	-	0.03
	Total	**-**	**-**	**0.06**
	("0.00 denotes less than Rs. 5,000)			
3	**Other payable**			
	IRB Infrastructure Developers Limited	0.00	-	-
	Total	**0.00**	**-**	**-**
	("0.00 denotes less than Rs. 5,000)			

Note 22 :
The Company has presented these standalone financial information (for all the periods presented there in) in accordance with the requirement of Schedule III - of the Companies Act , 2013 including amendments thereto.

Note 23 : Events after reporting date

Where events occurring after the balance sheet date provide evidence of conditions that existed at the end of the reporting period, the impact of such events is adjusted with the standalone financial statements. Otherwise, events after the balance sheet date of material size or nature are only disclosed.

As per our report of even date
For Gokhale & Sathe
Chartered Accountants
ICAI Firm Registration Number: 103264W

SD/-
CA Kaustubh Deshpande
Partner
Membership No.: 121011

Place: Mumbai
Date : July 28, 2023

For and on behalf of the Board of Directors of
IRB Golconda Expressway Private Limited
CIN :U42101MH2023PTC402917

SD/-
Amitabh Murarka
Director
DIN: 08099533

Place: Mumbai
Date : July 28, 2023

SD/-
Rajpaul Sharma
Director
DIN: 06866164

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Investors should read the following discussion and analysis of the Trust's financial condition and results of operations together with the sections "Summary Financial Information" and "Financial Statements" on pages 42 and 280, respectively. This discussion contains forward-looking statements and involves numerous risks and uncertainties, including, but not limited to, those described in the section "Risk Factors" on page 15. Actual results could differ materially from those contained in any forward-looking statements and for further details regarding forward-looking statements, refer to "Forward-Looking Statements" on page 13.

This Letter of Offer includes (i) limited review consolidated financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; (ii) audited consolidated financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021; (iii) limited review standalone financial information of the Trust and the Project SPVs as of and for the quarters ended June 30, 2023 and June 30, 2022; and (iv) audited standalone financial information of the Trust and the Project SPVs as of and for the Financial Years 2023, 2022 and 2021.

The Project SPVs (except PDTPL) were transferred to the Trust on February 25, 2020 by the Sponsor pursuant to the Formation Transactions undertaken as part of the initial offer through private placement of Units. PDTPL was acquired by the Trust on April 2, 2022.

The following discussion includes a discussion and analysis of the financial condition and results of operations of the Trust and the Project SPVs on a consolidated basis as of and for the quarters ended June 30, 2023 and June 30, 2022, based on the limited review report issued by the auditors for such period, and the Financial Years ended March 31, 2023, March 31, 2022 and March 31, 2021, based on the audited consolidated financial information of the Trust for such periods. Ind AS differs in certain material respects from Indian GAAP, IFRS and U.S. GAAP. Accordingly, the degree to which our financial statements will provide meaningful information to a prospective investor in countries other than India is entirely dependent on the reader's level of familiarity with Ind AS.

IRB GEPL, the Target SPV proposed to be acquired by the Trust, was incorporated on May 13, 2023. Accordingly, this Letter of Offer includes audited financial information of IRB GEPL as of and for the period from May 13, 2023 to June 30, 2023.

The Project SPVs' and the Target SPV's financial year ends on March 31 of each year. Accordingly, all references to a particular financial year are to the 12-month period ended March 31 of such year.

References herein to the "Current Portfolio" are to the pre-IRB GEPL Acquisition portfolio of the Trust and to the "Expanded Portfolio" are to the post-IRB GEPL Acquisition portfolio of the Trust.

Overview

The Trust is a registered infrastructure investment trust under the InvIT Regulations. The Current Portfolio of the Trust comprises 10 toll-road assets in the states of West Bengal, Haryana, Uttar Pradesh, Rajasthan, Gujarat, Goa, Maharashtra and Karnataka in India. These toll roads are operated and maintained pursuant to concessions awarded by the NHAI.

The Trust has acquired the Current Portfolio comprised of the Project SPVs from the Sponsor and in the case of PDTPL, holds the Project SPV together with the Sponsor. Each of the Project SPVs is an eligible infrastructure project as defined under the InvIT Regulations. As of June 30, 2023, the Project SPVs owned the following toll road assets comprising 6,275 Lane Kilometers of highway:

- The Agra - Etawah NH-2 Project: A 124.52 km section of NH-2 between Agra and Etawah Bypass in Uttar Pradesh which is held by AETL;

- The Gulabpura - Chittorgarh NH-79 Project: A 124.87 km section of NH-79 between Gulabpura and Chittorgarh Bypass in Rajasthan which is held by CGTL;

- The Hapur - Moradabad NH-9 Project: A 99.867 km section of NH-9 between Hapur and Moradabad in Uttar Pradesh which is held by IRB HMTL;

- The Goa - Kundapur NH-17Project: A 187.28 km section of NH-17 between Goa/Karnataka border and Kundapur in Karnataka which is held by IRB WTL;

- The Kishangarh - Gulabpura NH-79/79A Project: A 90.00 km section of NH-79/79A between Kishangarh and Gulabpura in Rajasthan which is held by KGTL;

- The Kaithal - Rajasthan Border NH-152/65 Project: A 166.259 km section of NH-152/65 between Kaithal and Rajasthan Border in Haryana which is held by KTL;

- The Solapur - Yedeshi NH-211 Project: A 98.717 km section of NH-211 between Solapur and Yedeshi in Maharashtra which is held by SYTL;

- The Udaipur - Rajasthan Border NH-8 Project: A 113.80 km section of NH-8 between Udaipur and Rajasthan Border in Rajasthan and Gujarat which is held by UTL;

- The Yedeshi - Aurangabad NH-211 Project: A 189.09 km section of NH-211 between Yedeshi and Aurangabad in Maharashtra which is held by YATL; and

- The Palsit – Dankuni NH-19 Project: A 63.83 km section of NH-19 between Palsit and Dankuni in West Bengal which is held by PDTPL.

The map set out below depicts the location of the Current Portfolio:



The Sponsor of the Trust is IRB Infrastructure Developers Limited, one of the largest infrastructure development and construction companies in India in terms of net worth in the roads and highways sector according to the NHAI's annual prequalification for public private partnerships in national highway projects report for 2016. The Sponsor has been listed on the Stock Exchanges since 2008. As at June 30, 2023, the Sponsor had eights road projects of which two were operational and six were under-construction or awaiting appointed date. The Sponsor also acts as the Project Manager. For further details, see "*The Sponsor and Project Manager*" on page 263.

The Investment Manager of the Trust is MMK Toll Road Private Limited. The Investment Manager has experience in operating a road project for a period of 13 years. 51% of the equity share capital in the Investment Manager is held by the Sponsor and 49% of the equity share capital of the Investment Manager is held by Croxley. For further details, see "*The Investment Manager*" and "*Corporate Governance*" on pages 266 and 139, respectively.

The Trustee of the Trust is IDBI Trusteeship Services Limited. The Trustee is registered with the SEBI as a debenture trustee under the Debenture Trustees Regulations. For further details, see "*The Trustee*" on page 273.

IRB GEPL is currently a wholly-owned subsidiary of the Sponsor. IRB GEPL has entered into a concession agreement with the HMDA, HGCL and the Sponsor for the development, operation, maintenance and management of Nehru Outer Ring Road of km 0+000 to km 158+000, in Hyderabad, Telangana on toll operate transfer basis. The Trust proposes to acquire IRB GEPL by subscribing to 99.99% of the equity share capital of IRB GEPL, with the Sponsor (and its nominee shareholders) holding the remaining equity share capital in IRB GEPL. For further details, see "*Objects of the Issue*" and "*Background and Structure of the Trust*" on pages 62 and 82, respectively.

Factors affecting Results of Operations

Our business and results of operations have been affected and will continue to be affected in future by a number of important factors, including:

The terms of the concession agreements and traffic volumes

BOT, TOT and DBFOT projects restrict the Project SPVs' operational and financial flexibility. Toll fees are typically pre-determined with the relevant government entity and cannot be modified to reflect prevailing circumstances, other than annual adjustments to account for inflation as specified in the concession agreements. Accordingly, a Project SPV's or the Target SPV's profitability is largely a function of how effectively it manages costs during the concession period. Significant costs during the concession period include construction costs and operating and maintenance expenses such as periodic maintenance, which is required to be performed as specified in the concession agreement. Periodic maintenance involves the repair of wear and tear of the roads and highways, including overlaying the surface of the roads and highways, if required. The Project Manager has agreed to provide the remaining portion of construction works for the Project SPVs. The Project Manager has also agreed to provide for operations and maintenance works for all the Project SPVs for an initial period of 10 years on a fixed-fee basis.

The Project SPVs and the Target SPV are substantially dependent on the accuracy of the traffic volume forecasts for their respective projects. Projects undertaken on a BOT, TOT or DBFOT basis involve concession agreements that are long-term in nature, usually between 15 to 30 years. The agreed consideration for each of the Project SPVs' and the Target SPV's projects was based on forecasts of traffic volumes and expected revenues over the concession period. Any material shortfall between the actual traffic volume and the forecast traffic volume or revenue for a project could have a material adverse effect on their cash flows, results of operations and financial condition.

The Project SPVs' projects and the Target SPV's projects involve agreements that are long-term in nature. All long-term projects have inherent risks associated with them and involve variables that may not necessarily be within the Project SPVs' or the Target SPV's control. Accordingly, we may be exposed to a variety of construction, operation and maintenance and other risks, including unanticipated cost increases and overruns, inability to negotiate satisfactory arrangements with service providers and disagreements with service providers. In addition, the long-term nature of the Project SPVs' and the Target SPV's contracts may expose them to increased risk of unforeseen business and industry changes and developments which could have a material adverse effect on their business, financial condition and results of operations.

General economic and political conditions in India and the level of investment and activity in the infrastructure development sector

The Project SPVs and the Target SPV derive their revenue from their toll-road operations. Demand for toll roads is primarily dependent on sustained economic development in the regions that they operate in and government policies relating to infrastructure development. It is also significantly dependent on budgetary allocations made by the Government of India and the State Governments for the roads and highways sector, as well as funding provided by international and multilateral development finance institutions for infrastructure projects. Investment by the private sector in infrastructure projects is dependent on the potential returns from such projects and is, therefore, linked to Government and State Government policies relating to private sector participation and sharing of risks and returns from such projects.

We believe that the Government's and State Governments' focus on, and sustained increases in budgetary allocation for, infrastructure, and the development of comprehensive infrastructure policies that encourage greater private sector participation and funding for infrastructure projects should further result in large infrastructure projects in India. We believe that we are likely to benefit from the Government and State Governments making infrastructure development a policy priority, which may lead to corresponding significant investment in the roads and highways sector. Since the Project SPVs and the Target SPV focus on the roads and highways sector, macroeconomic factors in India relating to this sector will have a significant impact on their prospects and results of operations. As the roads and highways sector is driven by increases in agriculture and manufacturing, any slowdown or perceived slowdown in the Indian economy, or in specific sectors of the Indian economy, could materially and adversely impact the Project SPVs' and the Target SPV's business and financial performance.

The Project SPVs or the Target SPV may be unable to collect tolls due to political protests or other agitations relating to tolling. For instance, due to a protest against certain agricultural laws in India, tolling for the Kaithal – Rajasthan project operated by KTL was halted from December 5, 2020 and resumed on December 16, 2021. The Project SPV has informed NHAI of this event and expects to receive compensation under the *force majeure* clause of the relevant Concession Agreement, which provides for the receipt of 50% of the O&M and interest costs as reimbursement in cash and an extension in concession period to compensate for revenue loss during the toll suspension period.

Further, in relation to COVID-19, the NHAI has offered an extension of concession period by three to six months to compensate for reduced revenue due to the COVID-19 lockdown. Certain Project SPVs have applied to the NHAI for appropriate relief (including extension of the concession period) and compensation as per the respective concession agreements for the time period during which the relevant projects have been impacted by COVID-19.

Competition

The Trust, the Project SPVs and the Target SPV operate in a competitive environment. The competition for toll road and other infrastructure projects varies depending on the size, nature and complexity of the project and on the geographical region in which the project is to be executed. Some of their competitors may have greater financial resources, economies of scale and operating efficiencies than the Trust, the Project SPVs or the Target SPV do. There can be no assurance that they can effectively compete with their competitors in the future, and this failure to compete effectively may have a material adverse effect on the Trust's financial condition and results of operations.

Significant Accounting Policies

The preparation of financial statements in conformity with Ind AS, applicable accounting standards and the Companies Act requires our management to make judgments, estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the results of operations during the reporting period end. By their nature, these judgments are subject to a degree of uncertainty. Although these estimates are based upon management's best knowledge of current events and actions, actual results could differ from these estimates.

While all aspects of the Project SPVs Consolidated Financial Information should be read and understood in assessing their current and expected financial condition and results, we believe that the following critical accounting policies warrant particular attention:

Intangible assets

As permitted under Ind AS, the group has elected to continue with the carrying value of its toll collection rights (which form part of its intangible assets), as recognised in the financial statements as at the date of transition to Ind AS and measured as per the previous GAAP.

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation and accumulated impairment losses. Internally generated intangibles, excluding capitalised development costs, are not capitalised and the related expenditure is reflected in statement of profit or loss in the period in which the expenditure is incurred.

Toll Collection Rights

Toll collection rights are stated at cost, net of accumulated amortisation and impairment losses. Cost includes toll collection rights awarded by the grantor against construction service rendered by the Project SPV on a DBFOT basis - direct and indirect expenses on construction of roads, bridges, culverts, infrastructure and other assets at the toll plazas.

Toll collection rights are amortised over the period of the concession, using revenue based amortisation as prescribed under Ind AS 38. Under this method, the carrying value of the rights is amortised in the proportion of actual toll revenue for the year to projected revenue for the balance toll period, to reflect the pattern in which the asset's economic benefits will be consumed. At each balance sheet date, the projected revenue for the balance toll period is reviewed by the management. If there is any change in the projected revenue from previous estimates, the amortisation of toll collection rights is changed prospectively to reflect any changes in the estimates.

Intangible assets are assessed for impairment whenever there is an indication that the intangible asset may be impaired.

Amortisation of toll equipments

Toll equipments are amortized on a straight line basis over the estimated useful economic life not exceeding seven years.

Provisions

Provisions are recognised when the group has a present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When the Group expects some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognised as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the statement of profit and loss net of any reimbursement.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

Principal components of Income and Expenses

Income

Our total income comprises (i) revenue from operations and (ii) other income.

Revenue from operations

Revenue from operations comprises (i) contract revenue (road construction); (ii) income arising out of toll collection (net); (iii) adjustments due to revenue share to NHAI on account of Fastag; and (iv) other operating revenue.

During the construction period of a project, the NHAI may ask the Project SPVs to carry out utility shifting work (which is incidental to the construction of the toll road and typically involves the shifting of utilities that are located at the construction site) or may award the Project SPVs additional scope of work, which is separately paid by the NHAI. Revenue from such utility shifting or change in scope contract, among others, also forms part of the Project SPVs' contract revenue. Note that contract revenue is typically incurred during the initial construction period of a project and is not recurring in nature.

The following table provides a breakdown of revenue from operations for the periods indicated:

Revenue from Operations	Quarter ended June 30, 2023		Quarter ended June 30, 2022		Financial Year 2023		Financial Year 2022		Financial Year 2021	
	Amount (in ₹ million)	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*	*Amount (in ₹ million)*	*% of Total Revenue from Operations*
Contract revenue (road construction)	3,346.71	45.95	4,789.32	57.91	1 1,672.04	43.37	1,054.48	8.50	1,863.70	17.99
Income arising out of toll collection (net)	3,979.24	54.64	3,536.91	42.76	15, 425.76	57.32	10,598.07	85.43	8,549.77	82.51
Revenue share to NHAI - FASTag	(43.07)	(0.59)	(55.34)	(0.67)	(185.44)	(0.69)	(212.87)	(1.72)	(51.97)	(0.50)
Other operating revenue	-	-	-	-	0.23	0.00	965.16	7.78	-	-
Total	**7,282.88**	**100.00**	**8,270.89**	**100.00**	**26,912.59**	**100.00**	**12,404.84**	**100.00**	**10,361.51**	**100.00**

Note: The information for the quarters ended June 30, 2023 and June 30, 2022 is based on the limited review report and has been presented in this table together with the audited financial information for the Financial Years 2023, 2022 and 2021 for presentation purposes only.

Other income

The key components of other income are interest income on bank deposits, profit on sale of investments, fair value gain on mutual funds and other non-operating income.

The following table provides a breakdown of other income for the periods indicated:

Other income	Quarter ended June 30, 2023	Quarter ended June 30, 2022	Financial Year 2023	Financial Year 2022	Financial Year 2021
	Amount (in ₹ million				
Interest income on					
- Bank deposits	78.88	22.03	178.88	73.64	74.46
- Others	-	2.74	7.17	8.05	7.59
Profit on sale of investments	17.64	6.42	62.95	13.93	13.08
Dividend income on other investments	0.03	-	-	-	-
Fair value gain on mutual funds	3.48	2.42	11.35	0.78	1.43
Other non-operating income	1.39	0.36	2.73	3.73	13.28
Gain/(loss) on fair value measurement of other payable	-	-	-	-	2.86
Total	**101.43**	**33.97**	**263.08**	**100.13**	**112.71**

Note: The information for the quarters ended June 30, 2023 and June 30, 2022 is based on the limited review report and has been presented in this table together with the audited financial information for the Financial Years 2023, 2022 and 2021 for presentation purposes only.

Expenses

Our expenses primarily consist of the following:

- cost of material consumed, which comprise material consumed to carry out utility shifting work;
- road work and site expenses, which comprise contract expenses in relation to utility shifting or change in scope contracts, site and other direct expenses, sub-contracting/security expenses and technical consultancy and supervision charges;
- employee benefits expenses, which comprise salaries, wages and bonus, contribution to provident and other funds, leave encashment, gratuity expenses and staff welfare expenses;
- depreciation and amortization expenses, which comprise depreciation on property, plant and equipment and amortization on intangible assets;
- finance costs, which primarily comprise interest expenses on loans availed from banks/financial institutions and other borrowing costs which include amortization of transaction costs;
- Investment Manager fees; and
- other expenses, which comprise various administration costs such as power and fuel costs, rent, rates and taxes, water charges, repairs and maintenance, travel and conveyance expenses, vehicle expenses, printing and stationery expenses, sitting fees for directors, legal and professional expenses, payments to the auditors, bank charges, insurance and other miscellaneous expenses.

Results of Operations

The financial information for the Financial Years 2023, 2022 and 2021 has been prepared on a consolidated basis. The Consolidated Financial Information has been prepared in accordance with Ind AS and the provisions of the InvIT Regulations.

Consolidated Financial Information

This section discusses our results of operations for the quarters ended June 30, 2023 and June 30, 2022 and the Financial Years 2023, 2022 and 2021 on the basis of our Consolidated Financial Information.

The historical results presented below are not necessarily indicative of the results that may be expected for any future period. For additional information, see "*Financial Statements*" on page 280.

Quarter ended June 30, 2023 and quarter ended June 30, 2022

The table below sets forth certain data from the Consolidated Financial Information for the quarter ended June 30, 2023 and the quarter ended June 30, 2022.

Particulars	Quarter ended June 30, 2023	Quarter ended June 30, 2022
	Amount (in ₹ million)	*Amount (in ₹ million)*
Income		
Revenue from operations	7,282.88	8,270.89
Other income	101.43	33.97
Total income	**7,384.31**	**8304.86**
Expenses		
Road work and site expenses (including project management fees)	4,436.89	5,581.29
Depreciation and amortization expenses	823.80	589.68
Finance costs	2,768.86	2,532.71
Investment Manager Fees	34.22	14.13
Other expenses	542.38	93.04
Total expenses	8,606.15	8,810.85
Profit before tax	**(1,221.84)**	**(505.99)**
Tax expenses		
Current tax	3.22	149.92
Deferred tax	(76.65)	(16.92)
Total tax expenses	**(73.43)**	**133.00**
Profit after tax	**(1,148.42)**	**(638.99)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period/year, net of tax	**-**	**-**
Total comprehensive income for the period/year	**(1,148.42)**	**(638.99)**

Total income

The total income of the Project SPVs decreased to ₹7,384.31 million during the quarter ended June 30, 2023 from ₹8,304.86 million in quarter ended June 30, 2022. This decrease in total income was primarily due to commencement of premium payments for KGTL and IRB HMTL from January 2023 and decrease in contract revenue.

Revenue from operations

The revenue from operations of the Project SPVs decreased to ₹7,282.88 million during the quarter ended June 30, 2023 from ₹8,270.89 million in quarter ended June 30, 2022, primarily due to the commencement of premium payments for KGTL and IRB HMTL from January 2023.

The contract revenue (road construction) decreased to ₹3,346.71 million during the quarter ended June 30, 2023 from ₹4,789.32 million in quarter ended June 30, 2022 due to higher utility shifting income in quarter ended June 30, 2022 as against quarter ended June 30, 2023. The income arising out of toll collection (net) increased to ₹3,979.24 million during the quarter ended June 30, 2023 from ₹ 3,536.91 million during the quarter ended June 30, 2022 primarily on account of receipt of completion certificates for IRB HMTL and KGTL in July 2022, receipt of provisional commercial operations date in March 2023 in case of IRB WTL and a completion certificate in case of IRB HMTL in April 2023 basis which these projects received tariff hikes. The revenue from operations of the Project SPVs were reduced on account of revenue sharing with the NHAI for FASTag by ₹ 43.07 million during the quarter ended June 20, 2023, compared to a reduction of ₹55.34 million in quarter ended June 30, 2022.

Other income

The other income of the Project SPVs increased to ₹101.43 million during the quarter ended June 30, 2023 from ₹33.97 million in quarter ended June 30, 2022. This increase was primarily due to an increase in interest income on bank deposits upon creation of debt service reserve accounts by KGTL and HMTL.

Total expenses

The total expenses of the Project SPVs decreased to ₹8,606.15 million during the quarter ended June 30, 2023 from ₹8,810.85 million in quarter ended June 30, 2022. This decrease was primarily due to decrease in road work and site expenses.

Road work and site expenses

Road work and site expenses (including project management fees) decreased to ₹4,436.89 million during the quarter ended June 30, 2023 from ₹5,581.29 million in the quarter ended June 30, 2022. This decrease was primarily due to decrease in contract expenses. Contract expenses decreased to ₹3,263.83 million during the quarter ended June 30, 2023 from ₹4,635.28 million in the quarter ended June 30, 2022 due to lower utility shifting activities carried out during the quarter being non-recurring in nature. Operation and maintenance expenses increased to ₹429.86 million during the quarter ended June 30, 2023 from ₹272.64 million in the quarter ended June 30, 2022 due to provision of resurfacing expenses upon receipt of completion certificates of IRB HMTL and KGTL, and maintenance related expenses in IRB WTL. Technical consultancy and supervision charges amounting to ₹11.64 million were paid during the quarter ended June 30, 2023 as against ₹13.67 million paid during the quarter ended June 30, 2022.

Depreciation and amortization expenses

Depreciation and amortization expenses increased to ₹823.80 million during the quarter ended June 30, 23 from ₹589.68 million in the quarter ended June 30, 2022. Amortization expenses are directly proportionate to toll revenue. Increase in amortization expenses during the quarter ended June 30, 2023, was primarily attributable to increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022 and July 20, 2022, respectively and the receipt of commercial operations dates for additional stretches in case of IRB WTL and IRB HMTL, which lead to a hike in tariff for these projects.

Finance costs

Finance costs increased to ₹2,768.86 million during the quarter ended June 30, 2023 from ₹2,532.71 million in the quarter ended June 30, 2022. This increase was primarily due to loan disbursements from banks/financial institutions for projects under construction.

Investment Manager fees

Investment Manager fees stood at ₹34.22 million during the quarter ended June 30, 2023 as against ₹14.13 million in the quarter ended June 30, 2022.

Other expenses

Other expenses increased to ₹542.38 million in quarter ended June 30, 2023 from ₹93.04 million in quarter ended June 30, 2022. Other expenses during quarter ended June 30, 2023 primarily comprised of fair valuation of claim receivable from the NHAI, on the basis of which liability towards 'Payable – IRB' is determined in the Trust's

financial statements. During the quarter ended June 30, 2023, fair valuation loss stood at ₹476.74 million as against ₹58.09 million during the corresponding period.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax increased to ₹(1,221.84) million in quarter ended June 30, 2023 from loss of ₹(505.99) million in quarter ended June 30, 2022.

Tax expenses

The Trust Group recorded current tax of ₹3.22 million in quarter ended June 30, 2023 compared to ₹149.92 million in quarter ended June 30, 2022.The Trust Group recorded deferred tax of ₹(76.65) million in quarter ended June 30, 2023 compared to ₹(16.92) million in quarter ended June 30, 2022. Accordingly, the total tax expenses of the Trust Group decreased to ₹(73.43) million in quarter ended June 30, 2023 from ₹133.00 million in quarter ended June 30, 2022.

Profit/(loss) after tax

The loss after tax of the Trust Group increased to ₹(1,148.42) million in quarter ended June 30, 2023 as compared to (loss) of ₹(638.99) million in quarter ended June 30, 2022. This increase was primarily due to an increase in the amortisation and finance cost.

Total comprehensive income/(loss) for the period

The total comprehensive loss decreased to ₹(1,148.42) million in quarter ended June 30, 2023 from ₹(638.99) million in quarter ended June 30, 2022.

Financial Year 2023 compared to Financial Year 2022

The table below sets forth certain data from the Consolidated Financial Information for the Financial Years 2023 and 2022.

Particulars	**Financial Year 2023**	**Financial Year 2022**
	Amount (in ₹ million)	***Amount (in ₹ million)***
Income		
Revenue from operations	26,912.59	12,404.84
Other income	263.08	100.13
Total income	**27,175.67**	**12,504.97**
Expenses		
Road work and site expenses (including project management fees)	15,513.22	3,989.80
Depreciation and amortization expenses	2,810.42	1,674.90
Finance costs	10,254.69	9,538.70
Investment Manager Fees	56.52	42.48
Other expenses	845.29	2,406.43
Total expenses	**29,480.14**	**17,652.31**
Profit before tax	**(2,304.47)**	**(5,147.34)**
Tax expenses		
Current tax	435.25	8.87
Deferred tax	(468.13)	(720.23)
Total tax expenses	**(32.88)**	**(711.36)**
Profit after tax	**(2,271.59)**	**(4,435.98)**
Other comprehensive income		

Particulars	Financial Year 2023 *Amount (in ₹ million)*	Financial Year 2022 *Amount (in ₹ million)*
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period/year, net of tax	-	-
Total comprehensive income for the period/year	**(2,271.59)**	**(4,435.98)**

Total income

The total income of the Project SPVs increased to ₹27,175.67 million in the Financial Year 2023 from ₹12,504.97 million in the Financial Year 2022. This increase in total income was primarily due to an increase in contract revenue from road construction and toll revenue.

Revenue from operations

The revenue from operations of the Project SPVs increased to ₹26,912.59 million in the Financial Year 2023 from ₹12,404.84 million in the Financial Year 2022, primarily due to an increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022 and July 20, 2022, respectively, which lead to a hike in tariff for these projects. Further, PDTPL was acquired by the Trust on April 2, 2022 and became a Project SPV from such date onwards.

The contract revenue (road construction) increased to ₹11,672.04 million in the Financial Year 2023 from ₹1,054.48 million in the Financial Year 2022 due to commencement of construction activities by PDTPL. The income arising out of toll collection (net) increased to ₹15,425.76 million in the Financial Year 2023 from ₹10,598.07 million in the Financial Year 2022. Other operating revenue decreased to ₹0.23 million in the Financial Year 2023 from ₹965.16 million in the Financial Year 2022, primarily due to the receipt of claim amounts by KTL and AETL from the NHAI during the Financial Year 2022 as compensation for inability to collect toll because of protests against the farm laws on their project highways, while such amounts were not received during the Financial Year 2023. The revenue from operations of the Project SPVs were reduced on account of revenue sharing with the NHAI for FASTag by ₹ 185.44 million in the Financial Year 2023, compared to a reduction of ₹212.87 million in the Financial Year 2022.

Other income

The other income of the Project SPVs increased to ₹263.08 million in the Financial Year 2023 from ₹100.13 million in the Financial Year 2022. This increase was primarily due to an increase in interest income on bank deposits upon creation of debt service reserve accounts by KGTL and HMTL.

Total expenses

The total expenses of the Project SPVs increased to ₹29,480.14 million in the Financial Year 2023 from ₹17,652.31 million in the Financial Year 2022. This increase was primarily due to an increase in road work and site expenses, depreciation and amortization expenses, finance costs and investment manager fees.

Road work and site expenses

Road work and site expenses (including project management fees) increased to ₹15,513.22 million in the Financial Year 2023 from ₹3,989.80 million in the Financial Year 2022. This increase was primarily due to an increase in contract expenses. Contract expenses increased to ₹11,330.91 million in the Financial Year 2023 from ₹1,036.47 million in the Financial Year 2022 due to the commencement of construction activities by PDTPL. Operation and maintenance expenses increased to ₹1,471.41 million in the Financial Year 2023 from ₹939.15 million in the Financial Year 2022 due to resurfacing expenses upon receipt of completion certificates of IRB HMTL and KGTL, and maintenance related expenses in IRB WTL. Technical consultancy and supervision charges amounting to

₹62.84 million were paid during the Financial Year 2023 as against ₹53.20 million paid during the Financial Year 2022. The Project SPVs did not incur any site and other direct expenses during the Financial year 2023 and Financial Year 2022. Sub-contracting/security expenses decreased to ₹0.35 million in the Financial Year 2023 from ₹0.72 million in the Financial Year 2022.

Depreciation and amortization expenses

Depreciation and amortization expenses increased to ₹2,810.42 million in the Financial Year 2023 from ₹1,674.90 million in the Financial Year 2022. Amortization expenses are directly proportionate to toll revenue. Increase in amortization expenses during the Financial Year 2022 was primarily attributable to increase in toll collection upon issuance of completion certificates for IRB HMTL and KGTL on July 1, 2022 and July 20, 2022, respectively, which lead to a hike in tariff for these projects. Further, PDTPL was acquired by the Trust on April 2, 2022.

Finance costs

Finance costs increased to ₹10,254.69 million in the Financial Year 2023 from ₹9,538.70 million in the Financial Year 2022. This increase was primarily due to loan disbursements from banks/financial institutions for projects under construction.

Investment Manager fees

Investment Manager fees stood at ₹56.52 million in the Financial Year 2023 as against ₹42.48 million during the Financial Year 2022.

Other expenses

Other expenses decreased to ₹845.29 million in the Financial Year 2023 from ₹2,406.43 million in Financial Year 2022. Other expenses for the Financial Year 2022 primarily comprised fair valuation of claim receivable from the NHAI, on the basis of which liability towards 'Payable – IRB' is determined in the Trust's financial statements. During the Financial Year 2022, the Trust Group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss of ₹2,161.31 million. During the Financial Year 2023, the fair value loss stood at ₹560.53 million, leading to a decrease in other expenses.

Profit/(loss) before tax

As a result of the factors discussed above, the loss before tax decreased to ₹(2,304.47) million in the Financial Year 2023 from loss of ₹(5,147.34) million in the Financial Year 2022.

Tax expenses

The Trust Group recorded deferred tax of ₹(468.13) million in the Financial Year 2023 compared to ₹(720.23) million in the Financial Year 2022. Accordingly, the total tax expenses of the Trust Group decreased to ₹(32.88) million in the Financial Year 2023 from ₹(711.36) million in the Financial Year 2022.

Profit/(loss) after tax

The loss after tax of the Group decreased to ₹(2,271.59) million in the Financial Year 2023 as compared to (loss) of ₹(4,435.98) million in the Financial Year 2022. This increase was primarily due to an increase in the contract revenue (road construction) and income arising out of toll collection (net).

Total comprehensive income/(loss) for the period

The total comprehensive loss decreased to ₹(2,271.59) million in the Financial Year 2023 from ₹(4,435.98) million in the Financial Year 2022.

Financial Year 2022 compared to Financial Year 2021

The table below sets forth certain data from the Consolidated Financial Information for the Financial Years 2022 and 2021.

Particulars	Financial Year 2022 *Amount (in ₹ million)*	Financial Year 2021 *Amount (in ₹ million)*
Income		
Revenue from operations	12,404.84	10,361.51
Other income	100.13	112.71
Total income	**12,504.97**	**10,474.22**
Expenses		
Road work and site expenses	3,989.80	3,983.41
Depreciation and amortization expenses	1,674.90	1,255.69
Finance costs	9,538.70	8,228.17
Investment Manager Fees	42.48	46.25
Other expenses	2,406.43	138.32
Total expenses	**17,652.31**	**13,651.84**
Profit/(loss) before tax	**(5,147.34)**	**(3,177.62)**
Tax expenses		
Current tax	8.87	46.20
Deferred tax	(720.23)	369.63
MAT Credit utilisation / (Entitlement)	-	(340.97)
Total tax expenses	**(711.36)**	**74.86**
Profit/(loss) after tax	**(4,435.98)**	**(3,252.48)**
Other comprehensive income		
Item that will not be reclassified to profit or loss: (a) re-measurement (loss)/gain on defined benefit plans (net of taxes)	-	-
Other comprehensive (loss) for the period/year, net of tax	**-**	**-**
Total comprehensive income for the period/year	**(4,435.98)**	**(3,252.48)**

Total income

Our total income increased to ₹12,504.97 million in the Financial Year 2022 from ₹10,474.22 million in the Financial Year 2021. Our revenue from operations increased to ₹12,404.84 million in the Financial Year 2022 from ₹10,361.51 million in the Financial Year 2021. Contract revenue (road construction) decreased to ₹1,054.48 million in Financial Year 2022 from ₹1,863.70 million in the Financial Year 2021, primarily due to decrease in utility shifting works . Our income arising out of toll collection (net) increased to ₹10,385.20 million in the Financial Year 2022 from ₹8,497.81 million in Financial Year 2021, primarily due to increase in toll collection upon receipt of completion certificates for UTL and CGTL on May 31, 2021 and August 14, 2021, respectively, which lead to hike in tariff for these projects.

Expenses

Our total expenses increased to ₹17,652.31 million in Financial Year 2022 from ₹13,651.84 million in Financial Year 2021, primarily due to increase in depreciation and amortisation expenses, finance cost and other expenses.

Finance costs

Finance costs increased to ₹9,538.70 million in Financial Year 2022 from ₹8,228.17 million in Financial Year 2021 due to loans availed from banks and financial institutions for projects under construction.

Road work and site expenses

Road work and site expenses were ₹3,989.80 million in the Financial Year 2022, compared to ₹3,983.41 million in the Financial Year 2021.

Depreciation and amortization expenses

Depreciation and amortization expenses increased to ₹1,674.90 million in the Financial Year 2022 from ₹1,255.69 million in the Financial Year 2021, primarily due to increase in toll collection upon issuance of completion certificates for UTL and CGTL on May 31, 2021 and August 14, 2021, respectively, which lead to hike in tariff for these projects.

Investment manager fees

Investment Manager fees stood at ₹42.48 million in the Financial Year 2022 as against ₹46.25 million in the Financial Year 2021.

Other expenses

Other expenses increased to ₹2,406.43 million in the Financial Year 2022 from ₹138.32 million in the Financial Year 2021. The increase was on account of fair valuation of claim receivable from the NHAI, on the basis of which liability towards 'Payable – IRB' is determined in the Trust's financial statements. During the nine-month period ended December 31, 2021, the Trust group had filed claims in relation to a project with the NHAI. On actualization of claims in fair valuation working, there was a fair value loss ₹2,161.31 million.

Profit/(loss) before tax

As a result of the factors discussed above, the profit/(loss) before tax decreased to ₹(5,147.34) million in the Financial Year 2022 from ₹(3,177.62) million in the Financial Year 2021.

Tax expenses

The Trust Group recorded deferred tax of ₹(720.23) million in the Financial Year 2022 compared to deferred tax expenses of ₹369.63 million in the Financial Year 2021. Accordingly, the total tax expenses of the Trust Group decreased to ₹(711.36) million in the Financial Year 2022 compared to ₹74.86 million in the Financial Year 2021.

Profit/ (loss) after tax

The profit/(loss) after tax decreased to ₹(4,435.98) million in the Financial Year 2022 as compared to a loss of ₹(3,252.48) million in the Financial Year 2021. The decrease was primarily due to an increase in the finance costs, amortization expenses and other expenses, which includes loss on account of fair valuation of claim lodged with the NHAI.

Total comprehensive income/(loss) for the period

The total comprehensive income/(loss) decreased to ₹(4,435.98) million in the Financial Year 2022 from ₹(3,252.48) million in the Financial Year 2021.

Liquidity and Capital Resources

The Project SPVs operate in a capital-intensive industry and their principal liquidity requirements have been to finance their capital expenditures. To fund these costs, the Project SPVs have historically relied on equity contributions, short term and long-term borrowings and cash from operating activities.

The Project SPVs' funding and treasury activities are conducted consistent with corporate policies designed to enhance investment returns while maintaining appropriate liquidity for their requirements. Their short-term liquidity requirements relate to servicing debt and funding working capital requirements. Sources of short-term liquidity include cash balances and receipts from operations. Their long-term liquidity requirements include partial funding of investments in new projects, funding equity contributions in Project SPVs and repayment of long-term debt under credit facilities. Sources of funding for long-term liquidity requirements include loans, equity issuances or debt issues. The principal liquidity requirements have been, and are expected to continue to be, construction, development, implementation and maintenance costs of the BOT projects.

The Investment Manager believes that after taking into account the expected cash to be generated from our business and operations, we have sufficient funds for both our present and anticipated future requirements for

working capital for 12 months following the date of Allotment.

Cash Flows

The following table sets forth certain information relating to the Project SPVs cash flows for the periods indicated:

(₹ in million)

Particulars	Financial Year 2023	Financial Year 2022	Financial Year 2021
Net cash flows generated from operating activities	13,513.70	19,882.59	7,489.54
Net cash flows (used in) investing activities	(13,801.66)	(18,311.44)	(19,598.04)
Net cash flows generated from financing activities	731.91	(1,697.41)	12,332.32
Net increase/ (decrease) in cash and cash equivalents	443.95	(126.26)	223.81

Cash flows from operating activities

Financial Year 2023

In the Financial Year 2023, the Project SPVs' net cash flow from operating activities was ₹13,513.70 million and the loss before tax was ₹2,304.47 million, which was adjusted for non-cash and other items amounting to ₹14,836.70 million and change in working capital amounting to ₹1,327.31 million, primarily on account of increase in trade payables amounting to ₹1,178.92 million, increase in other financial liabilities amounting to ₹435.72 million and increase in other assets amounting to ₹(343.36) million. The cash generated from operations was ₹13,859.54 million and net taxes paid were ₹(345.84) million in the Financial Year 2023.

Financial Year 2022

In the Financial Year 2022, the Project SPVs' net cash flow from operating activities was ₹19,882.59 million and the loss before tax was ₹5,147.34 million, which was adjusted for non-cash and other items amounting to ₹14,271.25 million and change in working capital amounting to ₹10,726.60 million, primarily on account of increase in trade payables amounting to ₹11,498.13 million and increase in other financial assets amounting to ₹ 989.59 million. The cash generated from operations was ₹19,850.51 million and net taxes paid were ₹32.09 million in the year ended March 31, 2022.

Financial Year 2021

In the Financial Year 2021, the Project SPVs' net cash flow from operating activities was ₹7,489.54 million and the loss before tax was ₹3,177.62 million, which was adjusted for non-cash and other items in a net amount of ₹9,677.32 million and changes in working capital and other provisions, such as increase in trade payables of ₹2277.55 million due to construction work execution, decrease in trade receivable of ₹251.88 million due to increase in utility shifting works and decrease in other liabilities of ₹52.75 million due to increase in advance from customer. The cash generated from operations was ₹7,474.83 million and net taxes paid were ₹14.70 million in the year ended March 31, 2021.

Cash used in investing activities

Financial Year 2023

The Project SPVs' net cash used in investing activities in the Financial Year 2023 was ₹(13,801.66) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2022

The Project SPVs' net cash used in investing activities in the year ended March 31, 2022 was ₹(18,311.44) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Financial Year 2021

The Project SPVs' net cash used in investing activities in the year ended March 31, 2021 was ₹(19,598.04) million, primarily attributable to addition towards construction for projects (classified as toll collection rights under intangible assets).

Cash flows generated from financing activities

Financial Year 2023

Net cash generated from financing activities in the Financial Year was ₹731.91 million, primarily consisting of borrowings from banks/financial institutions and proceeds from issue of equity share capital.

Financial Year 2022

Net cash generated from financing activities in the Financial Year 2022 was ₹(1,697.41) million, primarily consisting of finance cost.

Financial Year 2021

Net cash generated from financing activities in the Financial Year 2021 was ₹12,332.32 million, primarily consisting of borrowings from banks/financial institutions and issue of equity share capital and subordinated debt.

Indebtedness

The table below provides the types and amounts of our outstanding indebtedness as at June 30, 2023.

(₹ in million)

	As at June 30, 2023
Non-current Borrowings	
Term loans	
Indian rupee loan from banks (secured)	
Project loans for SPVs	62,210.18
Less : current maturities expected to be settled within 12 month from balance sheet date	(780.69)
Total (a)	**61,429.49**
Indian rupee loan from financial institutions (secured)	
Project loans for SPVs	9,065.13
Less : current maturities expected to be settled within 12 month from balance sheet date	(16.65)
Total (b)	**9,048.48**
Non-convertible debentures (secured)	33,397.26
Less : current maturities expected to be settled within 12 month from balance sheet date	(145.47)
Total (c)	**33,251.79**
Less: Unamortised transaction cost **(d)**	(1,609.91)
Total non current borrowings (e = a + b + c + d + e)	**1,02,119.86**
Current Borrowings	
Short-term borrowings (secured)	
Current maturity of long term loans	
Indian rupee loan from banks (secured)	780.69

	As at June 30, 2023
Indian rupee loan from financial institutions (secured)	16.65
Non convertible debentures (secured)	145.47
Interest accrued but not due on borrowings	3.93
(Unsecured, repayable on demand and interest free)	
Loan from related parties	5600.72
Total current borrowings (g)	**6,547.46**
less: Amount clubbed under "other current financial liabilities"	-
Net current borrowings	**6,547.46**
Total borrowings (f+g)	**1,08,667.32**
Aggregate secured loans	1,03,062.66
Aggregate unsecured loans	5,600.72

As at June 30, 2023, the Project SPVs had total borrowings aggregating to ₹1,08,667.32 million (comprising secured loans) on a consolidated basis. The Project SPVs' secured financing arrangements are secured by their movable and immovable assets, including a charge on equipment as well as on their intangible assets relating to toll collection rights under the various projects. Also see "*Financial Indebtedness*" on page 610.

Contractual Obligations and Commitments

The following table sets forth certain information relating to future payments due under contractual commitments as of March 31, 2023, aggregated by type of contractual obligation:

(₹ in million)

Particulars	Total	On Demand	Less than 1 year	1 to 5 years	> 5 years
Borrowings (Gross of unamortised transaction cost)	106,725.97	5,350.72	784.93	17,853.83	82,736.49
Other financial liabilities	38,330.17	-	2,549.37	35,780.80	-
Trade payables	19,471.20	-	15,305.48	4,165.72	-
Total	164,527.34	5,350.72	18,639.78	57,800.35	82,736.49

Contingent Liabilities and other Off-Balance Sheet Arrangements

Contingent liabilities not provided for

As of March 31, 2023, there are no contingent liabilities which are not provided for in the Consolidated Financial Information for the Trust and the Project SPVs.

There are no off-balance sheet arrangements that have or are reasonably likely to have an adverse effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that the Investment Manager believe are material to investors.

Transactions with Related Parties

The Project SPVs have in the course of their business entered into various transactions with related parties. These transactions include operation and maintenance charges paid for operation and maintenance activities sub-contracted, loans and advances, certain road work expenses for work road work contracted to various Sponsor entities in similar businesses. Further, the Trust has also provided Shareholder Loans to the Project SPVs. The acquisition of PDTPL was also a related party transaction. The IRB GEPL Acquisition will also be a related party transaction.

For further information, see "*Related Party Transactions"* on page 245 and "*Financial Statements*" on page 280.

Material Developments since the date of the last balance sheet

Except as disclosed above and in this Letter of Offer, the Investment Manager is not aware of any circumstances that have arisen since June 30, 2023, that materially and adversely affect, or are likely to affect, the Trust's or the Project SPVs' or the Target SPV's operations or profitability, the value of the Trust's or the Project SPVs' or the Target SPV's respective assets, or the Trust's or the Project SPVs' or the Target SPV's ability to pay their respective material liabilities within the next 12 months.

Quantitative and Qualitative Disclosure about Market Risk

Interest rate risk

As the infrastructure development and construction business is capital intensive, the Project SPVs are exposed to interest rate risk. Interest rates for borrowings have been volatile in India in recent periods. The Project SPVs infrastructure development and construction projects were funded to a large extent by debt and increases in interest expense could have an adverse effect on their results of operations and financial condition. The Project SPVs current debt facilities carry interest at variable rates as well as fixed rates with the provision for periodic reset of interest rates. As of June 30, 2023, the majority of the Project SPVs' total indebtedness was subject to variable rates. Although from time to time we may engage in interest rate hedging transactions or exercise any rights available to us under these financing arrangements to terminate the existing debt financing arrangement on the respective reset dates and enter into new financing arrangements, there can be no assurance that we will be able to do so on commercially reasonable terms, that our counterparties will perform their obligations, or that these agreements, if entered into, will protect us adequately against interest rate risks.

Inflation Risk

In recent years, India has experienced relatively high rates of inflation. While we believe inflation has not had any material impact on our business and results of our operations, inflation generally impacts the overall economy and business environment and could affect us.

Quality of income

The majority of our income on a consolidated basis is from the collection of toll. This is based on actual receipts by each of the Project SPVs. There are no management estimates or judgement involved in the recognition of our revenues. For further information see " *– Factors affecting Results of Operations*", " *– Significant Accounting Policies*" and " *– Components of Income and Expenses*".

Unusual or Infrequent Events or Transactions

Except as described in this Letter of Offer, there have been no events or transactions to our knowledge which may be described as "unusual" or "infrequent".

Known Trends or Uncertainties

Except as described in "*Risk Factors*" on page 15 and elsewhere in this Letter of Offer, to our knowledge, there are no known trends or uncertainties that have had or are expected to have a material adverse impact on our revenues.

Future Relationships between Costs and Income

Except as discussed in "*Risk Factors*" and elsewhere in this Letter of Offer, there are no known factors that will have a material adverse impact on our operations or finances.

Competitive Conditions

Please see "*Risk Factors*" and "- *Factors affecting Results of Operations*" on pages 15 and 593, respectively.

Significant Economic Changes that Materially Affected or are Likely to Affect Income from Continuing Operations

Our business has been subject, and we expect it to continue to be subject, to significant economic changes that materially affect or are likely to affect our income from continuing operations identified above in " – *Factors affecting Results of Operations*" and the uncertainties described in "*Risk Factors*" on pages 593 and 15, respectively.

FINANCIAL INDEBTEDNESS

The following is a summary of the indebtedness of the Project SPVs and the Target SPV, together with a brief description of certain material covenants of the relevant financing agreements. Applicants should also refer to "Background and Structure of the Trust" and "Financial Statements" on pages 82 and 280, respectively.

The Project SPVs and the Target SPV have primarily availed loans, for financing, in part, the project costs in relation to the construction and development of their respective underlying road infrastructure asset. Certain Project SPVs have availed further financing, as necessary, for refinancing existing loans or with respect to the repayment obligations under previously availed loans.

Set forth below is a brief summary of the aggregate borrowings of the Project SPVs and the Target SPV as at June 30, 2023.

Category of Borrowing*	Aggregate Amount (₹ in Millions)	Outstanding amount as at June 30, 2023 (₹ in Millions)
AETL		
Term Loans		
Secured	16,500.00	7,204.22
Unsecured	-	10,022.30
Total		**17,226.52**
CGTL		
Term Loans		
Secured	14,000.00	13,958.60
Unsecured	-	722.30
Total		**14,680.90**
IRB HMTL		
Term Loans		
Secured	15,410.00	14,650.82
Unsecured	-	-
Total		**14,650.82**
IRB WTL		
Term Loans		
Secured	14,060.00	10,141.81
Unsecured	-	6,465.58
Total		**16,607.39**
KGTL		
Term Loans		
Secured	10,200.00	10,058.63
Unsecured	-	-
Total		**10,058.63**
KTL		
Term Loans		
Secured	-	-
Unsecured	-	8,992.13
Debentures	5,500.00	5,345.62
Total		**14,337.75**
SYTL		
Term Loans		
Secured	-	-
Unsecured	-	4,114.82
Debentures	5,910.00	5,910.00
Total		**10,024.82**
UTL		
Term Loans		
Secured	7,609.00	8,301.16

Category of Borrowing*	Aggregate Amount (₹ in Millions)	Outstanding amount as at June 30, 2023 (₹ in Millions)
Unsecured	-	1,846.90
Debentures	7,000.00	6,991.64
Total		**17,139.70**
YATL		
Term Loans		
Secured	-	-
Unsecured	-	4,687.70
Debentures	15,150.00	15,150.00
Total		**19,837.70**
PDTPL		
Term Loans		
Secured	16,500.00	6,960.08
Unsecured	-	-
Total		**6,960.08**
IRB GEPL		
Term Loans		
Secured	-	-
Unsecured	-	15.78
Total		**15.78**

* *Excludes Interest accrued but not due.*

Principal Terms of the Borrowings availed by the Project SPVs

1. **Interest and commissions:** In terms of the loans availed by the Project SPVs, the interest rate is a base rate specified by the lender plus applicable spread, if any, per annum. The applicable spread varies among different loans. The rate of interest upon non-convertible debentures is at a fixed rate per annum for the next two to seven years.

2. **Maturity and Repayment:** The final maturity period of the loans availed by the Project SPVs ranges from August 2033 to March 2037. These loans are repayable in accordance with the repayment schedule specified in the relevant financing agreements, which typically prescribe monthly instalments for rupee loans (except for PDTPL, which prescribes quarterly instalments) and monthly instalments with respect to the non-convertible debentures.

3. **Security:** In terms of borrowings where security needs to be created, the Project SPVs are typically required to create:

    a. A first charge by way of hypothecation of all the Project SPV's movables, including moveable plant and machinery, machinery spares, tools and accessories, furniture, fixtures, vehicles and all other movable assets, present and future, excluding the project assets;

    b. A first ranking charge over all accounts of the Project SPV, including, *inter alia*, the escrow account, trust and retention account, DSR account and the sub-accounts that may be opened in accordance with the facility agreement/debenture trust deed and the supplementary escrow agreement, or any of the other project agreements and all funds from time to time deposited therein, the receivables and authorised investments or other securities for the purpose of being applied to the extent of the waterfall of priority specified in the concession agreement;

    c. A first charge on the Project SPV's intangibles, including but not limited to goodwill and uncalled capital, present and future, excluding the project assets;

    d. A first ranking *pari passu* charge over all of the Project SPV's immovable assets, both present and future, if any;

e. A substitution agreement, as may be executed between the NHAI, the Project SPV and its respective lenders, whereby the NHAI may substitute the Project SPV by a selectee of its respective lenders, for the purpose of securing the payment of lender dues;

f. A pledge of a certain specified percentage of the equity shares of the Project SPVs that are held by the Sponsor (directly or indirectly);

g. An irrevocable and unconditional corporate guarantee from the Sponsor/Trust and/or certain other members of the Sponsor group to meet shortfall between outstanding amount of obligations and termination payments received from NHAI in case of termination of the concession agreements;

h. Assignment on *pari passu* basis by way of hypothecation of all toll receivables, cash flows and revenue and other project documents;

i. The right, title and interest of the Project SPV by way of first charge in, to and under all the applicable permits, insurance policies and uncalled capital of the Project SPV; and

j. The right, title and interest of the Project SPV by way of first charge in, to and under (a) the project documents/project agreements and (b) the guarantees, other performance warranties, indemnities and security that may be furnished in favor of the Project SPV by various contractors.

4. **Covenants:** Borrowing arrangements entered into by the Project SPVs contain certain restrictive conditions and covenants restricting certain corporate actions and the respective Project SPV is required to take the prior approval of the lender/trustee before carrying out such activities. Each of the Project SPVs are also required to adhere to certain financial covenants, which include but are not limited to, maintaining a prescribed debt to equity ratio during the currency of the loan and maintaining a minimum debt service coverage ratio during certain periods.

   A Project SPV is required to intimate and/or obtain prior written permission of its lenders, *inter alia*, in the following instances:

   a. Effecting any change in the nature or scope of the project or any change in the financing plan;

   b. Effecting any change in capital structure (including shareholding pattern);

   c. Raising any equity or preference share capital;

   d. Making any capital expenditure other than permitted investments;

   e. Making any dividend payments to the Trust or making any other restricted payments (including redemption of any shares of any class, prepayment in relation to any indebtedness, payment of interest on unsecured loans, investment in any entity) except as permitted under the financing agreements;

   f. Creation of any security interest in any of the secured property;

   g. Incurrence of any other indebtedness, including the issue of debentures other than permitted indebtedness;

   h. Entering into any partnership, profit-sharing or royalty agreement;

   i. Removal of any person exercising substantial powers of management over the affairs of the Project SPVs in case of an event of default;

   j. Amending the constitutional documents of the Project SPVs;

   k. Undertaking of any new project or making of any investment or taking any assets on lease;

   l. Providing guarantees, indemnities or similar assurances in respect of indebtedness of any other person, (other than in the ordinary course of business);

m. Repay or prepay any subordinated loan or loans brought in as equity taken by the Project SPVs from the Sponsor;

n. Create any subsidiary or permit the Project SPV to become a subsidiary;

o. Undertake or permit any scheme of arrangement or compromise with its creditors or shareholders; and

p. Change in the composition of the board of directors of the Project SPV.

Certain lenders have the ability to opt for a put/call option after a minimum period of five years from the scheduled commercial operation date or a refinance option after a block of five years as per their internal guidelines.

Additionally, if a Project SPV receives funds in respect of the following then the monies received to be utilized to prepay the loans, upon request from the lenders, on a *pro rata* basis to all the lenders without any prepayment premium: (a) any liquidated damages/ penalties received; (b) any proceeds arising in connection with a breach of warranty or guarantee; (c) any insurance proceeds; (d) any proceeds arising in relation to the expropriation or other taking by any government entity of the project assets; (e) any proceeds arising from any termination payments/ buy-out payments received; and (f) any proceeds resulting from an arbitral or judicial award received. The lenders of certain Project SPVs have the right to accelerate the repayment of the unamortized portion of the loans at any time, in the event the cash flows of such Project SPV are adequate for such acceleration.

In relation to outstanding debentures, the relevant Project SPV is required to undertake mandatory redemption on a *pro-rata* basis to all the debenture holders from the proceeds of any amount received by and on behalf of the issuer from any such event if the event involves receipt of, *inter-alia*: (a) insurance proceeds; (b) proceeds from a breach of warranty or guarantee; (c) payments received on account of buy-out events; (d) liquidated damages or penalties paid under project agreement; or (e) proceeds from expropriation or takeover event.

5. **Events of Default:** Borrowing arrangements entered into by the Project SPVs contain standard events of default, including:

a. Non-payment of principal amount by the Project SPV;

b. Non-payment of interest, additional interest, liquidated damages, free or other amount by the Project SPV;

c. Default by the borrower in creation of security interest to the satisfaction of the lenders within the period stipulated;

d. Default or breach in the performance of any covenants and/or covenants under the agreement by the Project SPV;

e. Misrepresentation made by the Project SPV under the agreement or any financing document provided in connection with the loan;

f. Sale, disposal or creation of any charge or encumbrance on any of the land, building, structures or plant and machinery of the Project SPVs in breach of any of the provisions of the relevant project agreements, without prior written approval of the relevant lenders;

g. Undertaking any action for reorganization of the Project SPV without the approval of the relevant lenders;

h. Default in performance or observance of any covenant, condition, warranty or provision contained in any other financing agreement entered into by the Project SPV;

i. Failure on the part of the Project SPV to maintain adequate insurances in accordance with the terms of the transaction documents;

j. The Project SPV ceasing or threatening to cease to carry on its business or giving notice of its intention to do so;

k. The Project SPV abandoning its project;

l. Violation or breach of any environmental, health and safety standards requirement; and

m. The Project SPV ceasing or threatening to cease to carry on its business or giving notice of its intention to do so or it becoming unlawful for the borrower to carry on its business.

The descriptions above are indicative, and there may be additional terms and conditions with respect to security, financial or other covenants and events of default under the various borrowing arrangements entered into by the Project SPVs. The Project SPVs are required to ensure that the aforementioned events of default and other events of default, as specified under the various documents and agreements entered into by such Project SPV for the purpose of availing of loans, are not triggered.

As of the date of this Letter of Offer, the Target SPV does not have any outstanding borrowings.

SECTION VIII – LEGAL AND OTHER INFORMATION

MATERIAL LITIGATION AND REGULATORY ACTION

Except as stated below, there is no outstanding material litigation or regulatory action (i) involving the Project SPVs or the Target SPV; (ii) against the Trust or its Associates; (iii) against the Investment Manager or its Associates; (iv) against the Sponsor/Project Manager or its Associates; and (v) against the Trustee.

*For purposes of this section, details of all regulatory actions and criminal matters that are currently outstanding involving the Project SPVs, the Target SPV or against the Trust, the Investment Manager, the Sponsor/Project Manager and their respective Associates have been disclosed. Notices received by any of the above entities (collectively, the "**Relevant Parties**") from third parties (excluding notices from statutory, regulatory or tax authorities or notices threatening criminal action) shall not be evaluated for materiality until the Relevant Parties are impleaded as defendants in proceedings before any judicial forum.*

Outstanding litigation against any of the Project SPVs or the Target SPV before any judicial forum involving a claim amount exceeding ₹135.88 million, being 0.5% of the income of the Project SPVs for the last completed Financial Year (i.e., the Financial Year 2023), in accordance with the Consolidated Financial Information shall be considered material. In relation to outstanding litigation where the monetary liability is not quantifiable, such litigation shall be considered material in the event that the outcome of such litigation would have a material adverse effect on the position of the Project SPVs or the Target SPV.

Outstanding litigation against the Sponsor/Project Manager, the Investment Manager and their respective Associates (excluding the Project SPVs) before any judicial forum involving a claim amount exceeding ₹335.17 million, being 0.5% of the income of the Sponsor for the last completed Financial Year (i.e., the Financial Year 2023), in accordance with its audited consolidated financial statements for the Financial Year 2023 shall be considered material. In relation to outstanding litigation where the monetary liability is not quantifiable, such litigation shall be considered material in the event that the outcome of such litigation would have a material adverse effect on the position of the Sponsor or the Investment Manager, as applicable, or the Trust.

Further, due to the nature and extent of their operations, the Sponsor/Project Manager and the Project Entities (including the Project SPVs and the Target SPV) are and may be routinely required to file complaints and/or register first information reports against various persons, on account of such persons, inter-alia, refusing to pay toll, causing injury to the employees or contract labour of such entities and damage to the properties of such entities, which have been not been disclosed. Additionally, there have been various criminal complaints, compensation claims and first information reports filed against the employees and contract labour of the Sponsor/Project Manager and the Project Entities (including the Project SPVs and the Target SPV), in which such entities are not impleaded, which have not been disclosed.

With respect to the Trustee, details of all regulatory actions and criminal matters that are currently outstanding against the Trustee have been disclosed. Outstanding litigation against the Trustee that the Trustee has determined to be material has been disclosed.

Taxation proceedings against the Relevant Parties (and, in case of the Project SPVs and the Target SPV, involving the Project SPVs or the Target SPV) have been disclosed in a consolidated manner.

It is clarified that the above policy on materiality is solely for preparing disclosures for purposes of the Issue, in accordance with the requirements prescribed under the InvIT Regulations.

I. Material Litigation and Regulatory Action against the Trust and its Associates

Material Litigation and Regulatory Action against the Trust

As at the date of this Letter of Offer, there is no outstanding material litigation or regulatory action against the Trust. For details in relation to outstanding material litigation and regulatory action against the Associates of the Trust, please see below.

II. Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager

Material Litigation and Regulatory Action against the Sponsor/Project Manager

As at the date of this Letter of Offer, there is no outstanding criminal litigation against the Sponsor/Project Manager. Other than as disclosed below, there is no outstanding material civil litigation, regulatory action or other material litigation against the Sponsor/Project Manager.

Outstanding Material Civil Litigation

1. Hakim Singh Yadav and others (the "**Petitioners**") have filed a writ petition before the High Court of Allahabad against the Sponsor and others (the "**Respondents**") in relation to the road asset operated by AETL, seeking to quash the contract order for the construction of the drainage system and directing the relevant authority concern to revaluate the technical measures adopted in drainage work. The Petitioners have alleged, *inter-alia*, that faulty construction and design of the drainage system have resulted in the flooding of a nearby area. The matter is currently pending.

2. Mr. Shaikh Rafiq and others have filed a writ petition against the Sponsor, Modern Road Makers Private Limited (an Associate of the Sponsor), YATL and others before the High Court of Bombay, Aurangabad (the "**BHC Aurangabad**") bench in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. For details, see "*– Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV – YATL*" on page 627.

3. Mr. Panditrao Digambarrao Shete Chausalkar and another have filed a writ petition against the Sponsor, YATL and others before the BHC Aurangabad in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. For details, see "*– Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV– YATL*" on page 627.

4. Mr. Pruthviraj Shahane (the "**Petitioner**") has filed a civil suit against the Sponsor, YATL and others before the Civil Judge (Senior Division), Beed. For details, see "*– Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV– YATL*" on page 627.

5. Kishore Mukherjee has filed a writ petition in the High Court of Calcutta against the Sponsor and others praying that the tender for the Palsit to Dankuni project should be halted, an environment impact assessment should be obtained and pending the disposal of the matter, the respondents (including the Sponsor) should be directed not to uproot any trees from Panagarh to Dankuni on NH 19. The matter is currently pending.

6. Kanugula Mahesh Kumar ("**Petitioner**") has filed a public interest litigation before the High Court of Telangana (the "**High Court**") against the State of Hyderabad, the HMDA, the HGCL, the Sponsor and IRB GEPL. For details, see "*– Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV – IRB GEPL (Target SPV)*" on page 628.

Outstanding Regulatory Action

NHAI issued a notice to the Sponsor asking to pay damages of ₹30,485 in relation to the toll plaza Krishnavaram. The Sponsor has replied in its letter. As on date, no legal proceedings have been initiated in relation to the aforesaid notice.

Other Material Litigation

1. The Sponsor had initiated arbitration proceedings against Hyderabad Growth Corridor Limited (the "**Respondent**") in connection with a road project in Hyderabad. The Sponsor has claimed an amount of ₹982.69 million for losses suffered by the Sponsor due to a failure by the respondent to provide a toll management system. The Respondent has denied the allegations of the Sponsor and stated that it was not required to provide a toll management system under the terms of the contract between the parties. The Sponsor has received an arbitral award in its favor, but as of the date of this Letter of Offer, the Respondent has not made the payments as directed in the award. Further, the Sponsor has filed an appeal

before the XXIV Additional Chief Judge cum Commercial Court, City Civil Court, Hyderabad against the arbitral award stating the arbitral tribunal has without any reason and in complete disregard of settled principles of law, diallowed part of the compensation claimed by the Sponsor against the Respondent despite finding that the Respondent had failed to fulfil its contractual obligations resulting into drastic reduction in the toll revenue. Further, the Respondent had filed a petition before the Commercial Courts cum Hon'ble XIII District Judge, Ranga Reddy District ("**Court**"), praying to set aside the award for part of the claim under the arbitration award and award the cost of arbitration including the fees paid by the Respondent. The Sponsor had filed its reply in the matter. The Court disposed off the petition with leave to the petitioner to file the petition before the appropriate court. Hyderabad Growth Corridor Limited has filed such petition before the District Judge, Commercial Disputes, Hyderabad. The matter is currently pending.

Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager

For details in relation to outstanding material litigation and regulatory action against the Project SPVs, see "– *Litigation and Regulatory Action involving the Project SPVs and Target SPV*" on page 624. Details of outstanding material litigation and regulatory action against the other Associates of the Sponsor/Project Manager are set out below.

I. *Aryan Hospitality Private Limited ("AHPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against AHPL. Other than as disclosed below, there is no outstanding material civil litigation against AHPL.

Jaykumar Govindrao Nikam and others (the "**Petitioners**") have filed a suit before the Civil Judge, Junior Division at Kolhapur alleging that AHPL has encroached the land owned by the Petitioners. The suit pertains to the plot leased for the IRDP Kolhapur project. The concession agreement in relation to the project was entered into between the Maharashtra State Road Development Corporation (the "**MSRDC**"), IRB Kolhapur Integrated Road Company Private Limited ("**IRB Kolhapur**"), and the Kolhapur Municipal Corporation (the "**KMC**"). Under the concession agreement, land owned by the KMC was leased to IRB Kolhapur for the project pursuant to a lease deed between KMC, MSRDC and IRB Kolhapur. The land was then sub-leased by IRB Kolhapur to AHPL. The IRDP Kolhapur project has been bought back by the government. AHPL has cancelled the sub-lease deed and the possession of the land as well as the structure thereon has been given back to IRB Kolhapur on an "*as is where is*" basis, free from encumbrances. AHPL no longer has any interest in the property. The matter is currently pending.

II. *Aryan Toll Road Private Limited ("ATRPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against ATRPL.

III. *Aryan Infrastructure Investments Private Limited ("AIIPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against AIIPL.

IV. *ATR Infrastructure Private Limited ("ATRIPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against ATRIPL. Other than as disclosed below, there is no outstanding material civil litigation against ATRIPL.

Outstanding Material Civil Litigation

Kishore Dyanoba Shevkari (the "**Petitioner**") has filed a writ petition before the High Court of Bombay against the State of Maharashtra and ATRIPL, among others. The petition relates to the choking of the Hume Pipe Culvert because of garbage dumping. The Petitioner has alleged that the choking of the Hume Pipe Culvert has resulted in waterlogging and that has affected his land. The matter is currently pending.

V. *IRB Ahmedabad Vadodara Super Express Tollway Private Limited ("IRB AVSETPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IRB AVSETPL. Other than as disclosed below, there is no outstanding material civil litigation or other material litigation against IRB AVSETPL.

Outstanding Material Civil Litigation

1. Shabbirbhai Noormohmmadbhai, the owner of Pragati Hotel, Bareja, Ahmedabad (the "**Petitioner**") has filed a suit before the Additional Civil Court Judge, Ahmedabad against the Director, IRB, Jetalpur, Ahmedabad, the Deputy Engineer, R&B, Ahmedabad, the District Collector, Ahmedabad, and the State Public Works Department, Gandhinagar seeking a permanent stay order on closing his access to the main carriage way. The suit relates to compensation for land acquisition. The matter is currently pending.

2. Jitendra Chandulal Amin, the owner of Rishi Petrol Pump, Nadiad has filed a suit before the Additional Civil Court Judge, Nadiad agaisnt IRB AVSETPL and others seeking a permanent stay order on closing his access to the main carriage way. The suit relates to compensation for land acquisition. The matter is currently pending.

Other Material Litigation

IRB AVSETPL invoked arbitration in relation to a competing road. The NHAI suggested that the matter be brought before the Conciliation Committee of Industrial Experts (the "**CCIE**"). IRB AVSETPL filed a writ petition in the High Court of Bombay, which directed the parties to immediately refer the matter to arbitration. IRB AVSETPL was also granted a waiver with respect to the payment of premium for three months subject to the submission of an undertaking. The CCIE, pursuant to order dated May 29, 2019 concluded that the conciliation had failed. IRB AVSETPL then invoked arbitration and appointed an arbitrator. The NHAI did not appoint an arbitrator. IRB AVSETPL then filed a writ petition in the High Court of Delhi, pursuant to which the NHAI was directed to form a tribunal. The interim relief granted by the High Court of Bombay was also extended. The NHAI had challenged the order of the High Court of Bombay in a special leave petition before the Supreme Court of India, but the petition was dismissed.

Subsequently, the High Court of Delhi nominated a presiding arbitrator. However, the NHAI filed a special leave petition before the Supreme Court of India challenging such nomination. The Supreme Court of India passed an order appointing a different presiding arbitrator and the arbitral tribunal was constituted. IRB AVSETPL has filed an application for interim relief and a statement of claims on March 1, 2021 requesting the arbitral tribunal to, *inter-alia*, (a) declare that the NHAI is in breach of its obligations and representations under the concession agreement; (b) direct the NHAI to pay compensation of ₹12.64 billion for the period between December 4, 2015 until December 31, 2020 with an interest at 15% per annum until payment or realization from January 1, 2021 until the subsistence of the breach; and (c) pass an order of mandatory injunction directing the NHAI to cure the breach with respect to the competing road. The NHAI has responded to the application for interim relief filed by IRB AVSETPL. The respondent has filed a counter-claim for an amount of (i) ₹562.2 million (until June 30, 2021) towards premium deferment; (ii) ₹5,026.1 million (until May 2021) and unpaid premium during the pendency of the proceedings as well as future premium; and (iii) ₹312.1 million towards interest (as on June 30, 2021) as per the provisions of the supplementary agreement. The parties filed written submissions and the arbitral tribunal framed preliminary issues and conducted hearings. In this regard, the arbitral tribunal passed an interim award dated October 14, 2021 in favour of the claimant. The arbitral tribunal subsequently formulated further issues to be settled pursuant to hearings. The NHAI also filed an application seeking to implead the Government of Gujarat as a party in the proceedings. The NHAI challenged the interim award dated October 14, 2021 before the High Court of Delhi, which was dismissed pursuant to an order dated July 4, 2022. Thereafter, the NHAI filed an appeal against such dismissal. The arbitral tribunal also dismissed the NHAI's application to implead the Government of Gujarat, which was further challenged by NHAI. IRB AVSETPL has filed an affidavit of evidence before the arbitral tribunal and updated the previously claimed amount to ₹21,232.70 million, including interest until September 30, 2022 of ₹91.90 million on margin money and commission paid towards procurement of bank guarantees for ₹210.00 million. The matter is currently pending.

The NHAI has challenged the interim award dated October 14, 2021 under Section 34 before the Delhi High Court and the matter is currently pending.

VI. *IRB Goa Tollway Private Limited ("IGTPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IGTPL.

Other than as disclosed below, there is no outstanding material litigation involving IGTPL.

IGTPL had initiated arbitration proceedings against the NHAI for wrongful termination of contract by the NHAI with respect to the Goa/Karnataka to Panaji-Goa section of NH-4A in the State of Goa. The arbitral tribunal had passed an award in favor of IGTPL which allowed the following claims: (i) approximately ₹1,963.80 million towards 50% of the adjusted equity of ₹1,309.20 million arising out of the termination of contract by the NHAI; (ii) an amount of ₹47.10 million for damages on account of a delay in the fulfilment of the conditions of the contract; and (iii) interest on the amounts mentioned above. The aggregate amount involved is ₹3,039.80 million. The NHAI had filed a petition before the High Court of Delhi ("**Court**") for setting aside the award passed by the arbitral tribunal and a stay on the operations of the award. The stay on the Award was not allowed by the Court. IGTPL availed 75% of the arbitral award amount from the NHAI against bank guarantees amounting to ₹2,279.80 million with the NHAI. Further, the Court also directed NHAI to deposit the balance amount with the Court, pending disposal of the case. Accordingly, NHAI has deposited an amount of ₹103.50 million with the Court. Pursuant to an order dated February 21, 2022, the Court upheld the arbitral award in relation to (i) above and corresponding interest, but set aside the claim in relation to (ii) above. Subsequently, both the parties appealed against the order of the Delhi High Court, which were both dismissed. IGTPL has filed an application for withdrawal as well as an application for execution of the arbitral award under Section 36 of the Arbitration and Conciliation Act, 1996. The matter is currently pending.

VII. *IRB Infrastructure Private Limited ("IRBIPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IRBIPL.

VIII. *Ideal Road Builders Private Limited ("Ideal Road Builders")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against Ideal Road Builders. Other than as disclosed below, there is no outstanding material civil litigation against Ideal Road Builders.

Outstanding Material Civil Litigation

1. Shamsuddin Miyalal Mushrif has filed a pulic interest litigation before the High Court of Bombay against the Union of India, Ideal Road Builders and others, to declare that the National Highways Act, 1956 and Rule 3 of National Highways (Collection of Fees by any Person for the Use of Section of National Highways/Permanent Bridge/Temporary/Bridge on National Highway) Rules, 1997 are contrary to and violate of the provisions of the Constitution of India, 1950. The petition also seeks the declaration of Section 7 of the National Highways Act, 1956 and Rules 7 and 11 of the National Highways (Fees for the use of National Highway Section and Permanent Bridge-Public Funded Projects) Rules, 1997 and the MoRTH Notifications dated March 4, 2005 and May 5, 2015 illegal, *ultra vires* and invalid, and to stop collection of toll. This is relation to the Ideal Road Builders Khambatki Ghat project. The project has been completed and handed back to the government. The matter is currently pending.

2. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking the following: (i) to comply with the provisions of the manual of specifications; (ii) to take traffic census on NH 4 and expressway by electronic census system; (iii) to appoint independent agency to monitor traffic; (iv) to remove advertisements and hoardings; (v) to deposit the toll amount with government; and (vi) discount to local public. The matter relates to the Ideal Road Builders Mumbai-Pune project. The project has been completed and handed back to the government. The matter is currently pending.

3. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking to quash and set aside a notification dated August 9, 2004 (no. PSP 2000/CR-106(1I) Road-8) and a notification dated September 5, 2006. The following prayers have also been made: (i) to comply with the manual of specifications; (ii) to take traffic census by electronic traffic census system; (iii) to deposit toll amount in separate account of government; (iv) to appoint an independent agency to monitor traffic; and (v) to install advance traffic mentoring system. The matter relates to the Ideal Road Builders Mumbai-Pune project. The project has been completed and handed back to the government. The matter is currently pending.

4. Shrinivas Anant Ghanekar (the "**Petitioner**") has filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders and others, seeking to quash the toll notification and declare the concession agreement illegal and *ultra vires*. The matter relates to the Ideal Road Builders Thane-Ghodbunder project. The suit has been filed based on erronous information provided to the Petitioner's Right to Information Application by the Maharashtra State Road Transport Corporation, as has been admitted in the reply to the petition. The matter is currently pending.

Other Material Litigation

Ideal Road Builders Private Limited and others (the "**Petitioners**") have filed a writ petition before the High Court of Bombay against the State of Maharshtra to set aside a notification issued by the Government of Maharashtra exempting LMVs and buses of the Maharashtra State Road Transport Corporation from payment of toll taxes at the Thane Ghodbunder project. Compensation is being paid by the Government of Maharashtra to the the entity which operates the Thane Ghodbunder project. The matter is currently pending.

IX. *IRB Kolhapur Integrated Road Development Company Private Limited ("IRB Kolhapur")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against IRB Kolhapur. Other than as disclosed below, there is no outstanding material civil litigation against IRB Kolhapur.

Outstanding Material Civil Litigation

1. Jairaj Velyan (the "**Petitioner**") has filed a suit before the Civil Judge, Senior Division, Kolhapur, against the State of Maharashtra and others alleging that road construction has resulted in encroachment . The Petitioner has prayed that the encroachment should be removed and the road should be made available for use of the members of the society. IRB Kolhapur has constructed the project as per the concession agreement on land made available by the Kolhapur Municipal Corporation and the project has been bought back by the government. The matter is currently pending.

X. *IRB MP Expressway Private Limited ("IRB MP") (earlier known as NKT Road and Toll Private Limited)*

Other than as disclosed below, there is no outstanding criminal litigation, material civil litigation or regulatory action against IRB MP.

Outstanding Material Civil Litigation

1. Pravin Wategaonkar and others (the "**Petitioners**") have filed a public interest litigation ("**PIL**") before the High Court of Bombay against Maharashtra State Road Development Corporation ("**MSRDC**"), Comptroller and Auditor General of India ("**CAG**"), Mumbai Pune Expressway Limited ("**MPEL**"), State of Maharashtra and IRB MP seeking an order from the High Court of Bombay, *inter-alia*, to (i) exempt the light motor vehicles from payment of toll on the Mumbai Pune Expressway ("**Expressway**"); (ii) stay the tender process which is underway for the toll collection rights for next ten (10) years on the Expressway; and (iii) declare the toll collection as illegal and restrain MPEL / MSRDC from collecting such toll on the Expressway. The Petitioners have filed civil application in the PIL and prayed that the Honorable High Court to examine the legality and validy of the documents of MSRDC, to register case against the officers of MSRDC involving in preparing the document and direct the toll contractor to deposit in the court entire toll revenue collected on Mumbai Pune Expressway. The matter is currently pending.

2. Milind Ashok Achyut and others have filed a public interest litigation before the High Court of Bombay against the Ministry of Road Transport amd Highways, IRB MP and others seeking an order from the High Court of Bombay, *inter-alia*, to (i) declare the establishment of the Somatane toll plaza (the "**Toll Plaza**") on NH-48 belonging to IRB MP as *ultra vires* the National Highways Fee (Determination of Rates and Collection) Rules, 2008 and arbitrary and illegal; (ii) restrain IRB MP from collecting toll on the Toll Plaza on NH-48 until applicable discounts are displayed and changes made in the FASTag mechanism; (iii) direct IRB MP to deposit the toll fees in an escrow account; and (iv) shift the Toll Plaza in the direction of Pune City. The matter is currently pending.

3. Anil Bhangare and others have filed a public interest litigation before the High Court of Bombay against

IRB MP and others seeking an order from the High Court of Bombay to, *inter-alia*, (i) set up a special investigation team to conduct an enquiry into the circumstances under which the Somatane toll plaza (the "**Toll Plaza**") was set up; (ii) remove the Toll Plaza and relocate it; (iii) to make separate lanes for locals and exempt them from toll fees; and (iv) grant a temporary injunction restraining IRB MP from the recovery of toll fees at the Toll Plaza. The matter is currently pending.

Outstanding Criminal Litigation

Anil Bhangare and others (the "**Petitioners**") have filed an original petition against IRB MP and others before the Judicial Magistrate First Class, Vadgaon Maval ("**JMFC**"), stating that the toll receipts at the Somatane toll plaza specify the place of tolling as Dehu Road, which is located at a different location from the Somatane toll plaza. It has been submitted that the toll collected by IRB MP is illegal. The proceedings were stayed by the JMFC due to the pendency of a separate public interest litigation before the High Court of Bombay. The Petitioners have filed an appeal before the Sessions Court, Vadgaon Maval praying, *inter-alia*, that the order passed by the JMFC be set aside and to direct the JMFC to try the matter in accordance with the Code of Criminal Procedure, 1973. The matter is currently pending.

Outstanding Regulatory Action

The Collector of Stamps, Solapur has raised a demand for a deficit in stamp duty of ₹323,000 and a penalty, on the agreement dated November 28, 2001. In its letter dated July 3, 2015, IRB MP informed the Collector of Stamps that such stamp duty is not applicable to the agreement as the section referred to by the Collector of Stamps was not in existence at the time of execution of the agreement. There has been no further response from the Collector of Stamps.

XI. *IRB Sindhudurg Airport Private Limited ("IRB Sindhudurg")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB Sindhudurg. Other than as disclosed below, there is no outstanding material civil litigation against IRB Sindhudurg.

Vijay Krishnaji Rane (the "**Petitioner**") has filed a suit before the Civil Court, Oras, Sindhudurg against IRB Sindhudurg and others (the "**Respondents**") praying for the following reliefs: (i) that the Respondents be prevented from creating obstacles on the suit property; and (ii) that the Respondents be prevented from cutting trees and fruits in the suit property. The Petitioner has also prayed that in the event that it is found that the Respondents are encroaching on the suit property, then the possession of the suit property should be given to him.

XII. *Mhaiskar Infrastructure Private Limited ("MIPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation against MIPL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action against MIPL.

Outstanding Material Civil Litigation

1. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, MIPL, Ideal Road Builders, and others, seeking compliance with certain specifications. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor – Ideal Road Builders Private Limited*" on page 619.

2. Nitin Sardesai and others have filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, MIPL, Ideal Road Builders Private Limited, and others seeking to quash certain notifications. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders Private Limited*" on page 619.

3. The Shree Ganesh Cooperative Housing Society, through Mr. Shrikrishna Parshuram Joshi and others (the "**Petitioner**") has filed a suit before the Court of the Civil Judge, Senior Division, Pune against MIPL and others challenging the encroachment removal notice issued by Maharashtra State Road

Development Corporation on the basis of a survey conducted by MIPL. The 15 year concession period in relation to the project has been completed and the project has been handed back to the government. The matter is currently pending.

4. Pravin Wategaonkar and others have filed a public interest litigation before the High Court of Bombay against the Maharashtra State Road Development Corporation and others allegeing that MIPL is collecting excess toll on the Mumbai-Pune Expressway. The 15 year concession period in relation to the project has been completed and the project has been handed back to the government. The matter is currently pending.

5. The Depurty Inspector General of Registration and Deputy Controller of Stamps and Collector of Stamps, Mumbai Division, Mumbai ("**Authority**"), passed an order dated March 12, 2008 (the "**Order**") against MIPL demanding a payment of ₹275.40 million as deficit stamp duty and a penalty of ₹49.57 million in relation to an the agreement dated August 4, 2004 executed among MSRDC, Ideal Road Builders and MIPL for construction on the Mumbai-Pune Expressway. MIPL filed a writ petition before the High Court of Bombay challenging the Order. Pursuant to an order dated April 28, 2008, the High Court of Bombay provided interim relief to MIPL and directed it to deposit 50% of the claimed amount. MIPL subsequently deposited ₹137.70 million with the Authority. The matter is currently pending.

Outstanding Regulatory Action

The Collector of Stamps, Andheri, Maharashtra sent a notice to MIPL demanding that stamp duty of ₹1,500,000 a penalty of ₹5,340,000 be paid on the agreement dated August 4, 2004 for the Mumbai Pune project. MIPL has replied to the notice, and has not received any response from the Collector of Stamps.

XIII. *IRB Holding Private Limited ("IHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IHPL.

XIV. *MRM Mining Private Limited ("MRMMPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action involving MRMMPL.

XV. *Modern Road Makers Private Limited ("MRM")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against MRM. Other than as disclosed below, there is no outstanding material civil litigation against MRM.

1. Arjun Rama Ghatal has filed complaint before the office of the Tahasildar and the Executive Magistrate, Palghar against MRM and others regarding the payment of land cess and seeking compensation for possession of land and damage to crops caused by the installation of a tar plant machine. The matter is currently pending.

2. Mr. V Sachhidananda Shetty (the "**Petitioner**") filed a petition against the NHAI, MRM and others (the "**Respondents**") before the Civil Judge at Kundapura alleging that he was not given permission to cut teakwood trees by one of the Respondents. The Petitioner has stated that he entered into an agreement with the NHAI for taking away the salvage in the form of timber and fire wood of felled trees from k.m. 93.700 to k.m. 283.300 of NH 66. The Petitioner has also alleged that the Respondents have colluded with each other to cut and remove the teakwood trees in violation of the agreement. The Petitioner has requested the court to grant a permanent injunction restraining the Respondents from cutting and transporting the teakwood trees. The matter is currently pending.

XVI. *Thane Ghodbunder Toll Road Private Limited ("TGRPL")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against TGRPL. Other than as disclosed below, there is no material civil litigation against or other material litigation involving TGRPL.

Outstanding Material Civil Litigation

Shrinivas Anant Ghanekar has filed a public interest litigation before the High Court of Bombay against the State of Maharashtra, Ideal Road Builders Private Limited, TGRPL, and others. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders*" on page 619.

Other Material Litigation

Ideal Road Builders Private Limited, TGRPL and others have filed a writ petition before the High Court of Bombay against the State of Maharashtra. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Ideal Road Builders – Other Material Litigation*" on page 620.

XVII. *VCR Toll Services Private Limited ("VCR")*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action against VCR. As at the date of this Letter of Offer, there is no outstanding material civil litigation against VCR. Other than as disclosed below, there is no material litigation against VCR.

Other Material Litigation

VCR has filed a writ petition before the High Court of Bombay against the Executive Engineer, Public Works Department, and others, challenging an action of the Government which has prevented them from collecting the toll based on an allegation that they have not carried out repairs to the project road. The matter is currently pending.

XVIII. *Pathankot Mandi Highway Private Limited ("PMHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against PMHPL.

XIX. *Meerut Budaun Expressway Limited ("MBEL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against MBEL.

XX. *VM7 Expressway Limited ("VM7")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VM7.

XXI. *GE1 Expressway Private Limited ("GE1")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against GE1.

XXII. *Chittoor Thachur Highway Private Limited ("CTHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against CTHPL.

XXIII. *IRB PS Highway Private Limited ("IPHPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IPHPL.

XXIV. *Samakhiyali Tollway Private Limited ("STPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against STPL.

XXV. *VDM Ventures Private Limited ("VVPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against VVPL.

XXVI. *Deux Farming Films Private Limited ("DFFPL")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against DFFPL.

XXVII. *IRB Charitable Foundation ("IRBCF")*

As at the date of this Letter of Offer, there is no outstanding civil or criminal litigation or regulatory action against IRBCF.

Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV

A. *AETL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory litigation involving AETL. Other than as disclosed below, there is no outstanding material civil litigation involving AETL.

Outstanding Material Civil Litigation

1. Hakim Singh Yadav and others (the "**Petitioners**") have filed a writ petition before the High Court of Allahabad against the Sponsor and others (the "**Respondents**") in relation to the drainage system for the road asset operated by AETL. For details, see "*– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager - Material Litigation and Regulatory Action against the Sponsor/Project Manager - Outstanding Material Civil Litigation*" on page 616.

2. AETL has filed for settlement through conciliation with the NHAI in relation to a dispute with respect to the payment of premium with proportionate reduction of revenue losses on account of COVID-19 and delay in completion of construction. The amounts under dispute are excess payment of premium of ₹128.4 million and outstanding payment of premium including interest of ₹553.4 million as of June 7, 2021. AETL and the NHAI did not reach any settlement, and accordingly, AETL invoked arbitration proceedings against the NHAI under the terms of its concession agreement and submitted claims for amounts aggregating to ₹13,179.8 million and sought extension of the concession period by 351.41 days. The matter is currently pending.

B. *CGTL*

As at the date of this Letter of Offer, there is no outstanding regulatory action involving CGTL. Other than as disclosed below, there is no outstanding material civil litigation or criminal litigation involving CGTL.

Outstanding Material Civil Litigation

CGTL, KGTL and UTL have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI challenging certain notifications and seeking interim relief from the High Court of Rajasthan, Jaipur Bench. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV – UTL – Outstanding Material Civil Litigation*" on page 626.

Outstanding Criminal Litigation

1. Mr. Waman Rathod, deputy general toll manager at a toll plaza located on the road asset operated by CGTL, has filed two first information reports at the Police Station, Gangrar, Chittorgarh, Rajasthan in relation to (i) the misbehaviour of certain individuals when asked to pay toll; and (ii) the theft of ₹0.62 million from the

cash room at the toll plaza. The matters are currently pending.

2. Mr. Rohit Sharma, a supervisor at at a toll plaza located on the road asset operated by CGTL, has filed a first information report at the Raila Police Station, Bhilwara, Rajasthan against the driver of a truck-trailer in relation to a collision with the toll booth and injuries caused to the supervisor. The matter is currently pending.

C. *IRB HMTL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation, regulatory action or other material litigation involving IRB HMTL.

D. *IRB WTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB WTL. Other than as disclosed below, there is no outstanding material civil litigation involving IRB WTL.

1. Mr. Laxman Neelakantha Desai (the "**Petitioner**") has filed a petition against IRB WTL (the "**Respondent**") before the court of Civil Judge Karwar alleging that the blasting of rocks done by the Respondent has caused damage to the property of the Petitioner. The Petitioner has requested a permanent injunction restraining the Respondent from undertaking such activity. The court had passed an order granting a temporary injunction against the Respondent. Subsequently, the parties entered into a mediation agreement, pursuant to which the court passed an order dated April 28, 2017, vacating the earlier injunction. The matter is currently pending.

2. Mr. V Sachhidananda Shetty (the "**Petitioner**") filed a petition against the NHAI, MRM and others (the "**Respondents**") before the Civil Judge at Kundapura alleging that he was not given permission to cut teakwood trees by one of the Respondents. For details, see " *– Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the Sponsor/Project Manager – Material Litigation and Regulatory Action against the Associates of the Sponsor/Project Manager – Modern Road Makers Private Limited*" on page 622.

3. Mr. Vithobha Ganesh Naik (the "**Petitioner**") has filed a suit against IRB WTL before the Principal Judge at Karwar, alleging that IRB WTL is encroaching upon the Petitioner's land to construct the highway. IRB WTL has received summons from the court. The matter is currently pending.

E. *KGTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving KGTL. Other than as disclosed below, there is no outstanding material civil litigation involving KGTL.

CGTL, KGTL and UTL have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI challenging certain notifications and seeking interim relief from the High Court of Rajasthan, Jaipur Bench. For details, see " *– Material Litigation and Regulatory Action involving the Project SPVs and the Target SPV – UTL – Outstanding Material Civil Litigation*" on page 626.

F. *KTL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation involving KTL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action involving KTL.

Outstanding Material Civil Litigation

1. KTL has invoked arbitration against the NHAI under the terms of its concession agreement in relation to a claim submitted by KTL for an aggregate amount of approximately INR 2,880.7 million and an extension of its concession period by 582.77 days in connection with the toll stoppage due to the farmer protests in 2020-2021 and other construction related claims. The matter is currently pending.

Outstanding Regulatory Action

The District Town Planner, Jind (exercising the power of Director, Town and Country Planning, Haryana) (the "**District Town Planner**") issued a notice under the Punjab Scheduled Roads and Controlled Area Restriction of Unregulated Development Act, 1963 ("**Punjab Act**") to the general manager of the toll plaza located at village Badowal, Tehsil Narwama, District Jind, stating that the construction of the toll plaza and other commercial and official building on NH-52 Narwana to Uklana was unauthorized since the construction was on land which has been notified as a controlled area under the Punjab Act. The notice also, *inter-alia*, directed the stoppage of any further construction on the land. KTL responded to the notice requesting the District Town Planner to withdraw the notice, stating that the collection of toll and the construction of the toll plaza were in accordance with the concession agreement, toll notifications and specifications approved by an independent engineer on land acquired by the NHAI. The matter is currently pending.

G. *SYTL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation or criminal litigation involving SYTL. Other than as disclosed below, there is no outstanding regulatory action involving SYTL.

Outstanding Regulatory Action

SYTL approached the NHAI for amicable settlement of claims in relation to delays attributable to the NHAI during the construction of the project. The claims were for an amount of approximately ₹7,905.3 million and an extension of the concession period by 647.43 days. Since the parties were unable to reach a settlement, SYTL has invoked arbitration under its concession agreement. The matter is currently pending.

H. *UTL*

As at the date of this Letter of Offer, there is no regulatory action involving UTL. Other than as disclosed below, there is no outstanding material civil litigation and outstanding criminal litigation involving UTL.

Outstanding Material Civil Litigation

CGTL, KGTL and UTL (the "**Petitioners**") have filed a writ petition before the High Court of Rajasthan, Jaipur Bench against Union of India and NHAI (the "**Respondents**") stating that on account of COVID-19 and the subsequent national lockdown, the Petitioners submitted claim for reimbursement of losses and consequent extension of the concession period which shall be computed every month until the toll collection stabilizes to more than 90% of the average daily fee as defined under the concession agreements. Further, under the terms of the concession agreements, the Petitioners are obligated to start premium payment to the NHAI upon the third anniversary of appointed date whereas the schedule completion date was contracted as two and a half year after the appointed date. Hence, once the construction is completed in two and a half year, toll rates would have been revised and only after six months of such revision of toll rates would the Petitioners have to start the premium payment. The Petitioners have stated the scheduled completion date was revised by the NHAI, primarily due to reasons attributable to them and the revised date of completion was revised to November 30, 2020, January 31, 2021 and September 9, 2021 applicable to the Petitioners. However, NHAI addressed a letter to UTL instructing them to commence the premium payment as per the scheduled stipulated under the concession agreements.

Hence, the Petitioners have challenged, *inter-alia*, (i) sub-rule (9) of rule 4, *i.e.*, "Base rate of fee" of the National Highways Fee (Determination of Rates and Collection) Rules, 2008 as it limits the rate of fee applicable for a section of a four lane highway under upgradation to six laning during the construction period; and (ii) office memorandum dated May 18, 2020 issued by the Central Government and consequent policy guidelines / BOT (Toll) / 2020 dated May 26, 2020 issued by the NHAI and sought an interim relief to maintain the same time gap of six months between the date of revised completion date / toll tariff revision and date of commencement of payment of premium, under the respective concession agreements and issue an appropriate writ directing the NHAI (i) to not take coercive action against the Petitioners; (ii) to grant compensation to the Petitioners due to losses on account of COVID-19; and (iii) to grant an extension to the concession period. Pursuant to an interim order dated September 18, 2020, the High Court of Rajasthan, Jaipur bench, ordered a stay on the operation of Clause 26.2.1 of the model concession agreement.

The judgment along with the rectification order was pronounced by the High Court of Rajasthan on August 25, 2021 and August 26, 2021 respectively. As per direction of the said judgment, CGTL, KGTL and UTL filed undertakings on August 31, 2021. As interim relief, the High Court of Rajasthan gave interim protection to the Petitioners against payment of premium for a period of three months and directed the parties to go for arbitration.

Subsequently, CGTL, KGTL and UTL filed petitions before the Delhi High Court praying for extension of relief granted by the High Court of Rajasthan. The order in relation to appointment of the arbitrator passed on November 28, 2021 by the Delhi High Court was challenged by CGTL, KGTL and UTL through a Special Leave Petition filed in the Supreme Court. The Supreme Court has appointed a presiding arbitrator pursuant to an order dated February 7, 2022.

The Delhi High Court passed an order dated November 9, 2021 in relation to interim relief and CGTL, KGTL and UTL filed an appeal against this order before the division bench of the Delhi High Court. The division bench disposed of the appeal in favour of CGTL, KGTL and UTL with the direction that the Delhi High Court holds the sole jurisdiction to hear the petition on interim relief and accordingly, hearings may be commenced before the Delhi High Court. The Delhi High Court has directed that the orders dated August 25, 2021 and August 26, 2021 passed by the Rajasthan High Court, will remain in operation. Pursuant to a judgement dated March 16, 2022, the Delhi High Court has held that the interim order will continue until an application under Section 17 of the Arbitration and Conciliation Act, 1996 is filed by the parties before the arbitral tribunal and taken up for hearing. The arbitral tribunal has been constituted. CGTL, KGTL and UTL filed claims for an amount of approximately ₹5,021.2 million, ₹8,689.6 million and ₹9,060.8 million, respectively and an extension of the concession period by 241.37 days, 387.18 days and 214.99 days, respectively. The matter is currently pending.

Outstanding Criminal Action

Hiteshkumar Ramanlal Gandhi, a shift in-charge working at the Kherwara-Khandi Obri toll plaza, filed a first information report at the Kherwara police station, Udaipur against Bhairulal Salvi, a bus driver who refused the pay toll at the toll plaza. When the people working at the toll plaza tried to stop him, the bus driver along with others misbehaved with the workers and destroyed equipment at the toll plaza resulting in the loss of about ₹0.80 million to ₹1.00 million. The matter is currently pending.

I. *YATL*

As at the date of this Letter of Offer, there is no outstanding criminal litigation involving YATL. Other than as disclosed below, there is no outstanding material civil litigation or regulatory action involving YATL.

Outstanding Material Civil Litigation

1. Mr. Shaikh Rafiq and others (the "**Petitioners**") filed a writ petition against the Sponsor, Modern Road Makers Private Limited and others (the "**Respondents**") before the BHC Aurangaba**d** in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, *i.e.*, NH 211. The Petitioners alleged that certain of the Respondents tried to change the alignment of the land already acquired for the project to include additional land in order to protect interest of one of the Respondent which is illegal. The Sponsor filed its response to the petition filed by the Petitioners and *inter-alia* stated that (i) the correct party to be impleaded in the petition is YATL and not itself as YATL is responsible for the operations under the concession agreement and therefore the petition should be dismissed on account of misjoinder and non joinder of necessary parties; and (ii) acquisition of land is the responsibility of the NHAI and hence, no cause of action lies against itself. The matter is currently pending.

2. Mr. Panditrao Digambarrao Shete Chausalkar and another (the "**Petitioners**") filed a writ petition against the Sponsor and others (the "**Respondents**") before the BHC Aurangabad in relation to acquisition of land for the four laning of Yedshi – Aurangabad road that forms a part of the Solapur – Aurangabad highway, i.e., NH 211. The Petitioners have alleged that an award was passed acquiring land of the Petitioners without following the due procedure of law and the acquisition of the land of the Petitioners is illegal. The Petitioners requested the BHC Aurangabad to set aside the award for acquisition of the lands of the Petitioner and that the Respondents should be restrained from acquiring such land. The matter is currently pending.

3. Mr. Pruthviraj Shahane (the "**Petitioner**") filed a civil suit against the Sponsor and others (the "**Respondents**") before the Civil Judge (Senior Division), Beed, alleging that the Respondents encroached upon its land by erecting electric polls over them instead of erecting them over land which has been acquired for the project. The Petitioner has, *inter-alia*, requested the court to grant a decree of perpetual and mandatory injunction against the Respondents. The matter is currently pending.

Outstanding Regulatory Action

1. YATL approached the NHAI for amicable settlement of claims in relation to delays attributable to the NHAI during the construction of the project. The claims were for an amount of approximately ₹17,508.0 million and an extension of the concession period by 869.41 days. Since the parties were unable to reach a settlement, YATL has invoked arbitration under its concession agreement. The matter is currently pending.

J. *PDTPL*

As at the date of this Letter of Offer, there is no outstanding material civil litigation, criminal litigation or regulatory action involving PDTPL.

K. *IRB GEPL (Target SPV)*

As at the date of this Letter of Offer, there is no outstanding criminal litigation or regulatory action involving IRB GEPL. Other than as disclosed below, there is no outstanding material civil litigation involving IRB GEPL.

Material civil litigation

Kanugula Mahesh Kumar ("**Petitioner**") has filed a petition for a public interest litigation before the High Court of Telangana (the "**High Court**") against the State of Hyderabad, the HMDA, the HGCL, the Sponsor and IRB GEPL, seeking to aside the award of the Toll, Operate and Transfer ("**TOT**") tender for the Nehru Outer Ring Road project (the "**Target Project**") to the Sponsor and IRB GEPL, alleging, *inter-alia*, failure to disclose the initial estimated concession value for the project and diversion of funds from the concessioning authority. The Petitioner has also sought quashing or setting aside of the concession agreement and all other agreements entered into by the State of Telangana, the HMDA and the HGCL with the Sponsor and IRB GEPL in relation to the Target Project. The Petitioner has also sought an order directing the Sponsor and IRB GEPL not to transfer the bid concession fee of ₹7,380 Crores to the HMDA or alternatively, not to transfer any funds from the bid concession fee of ₹7,380 Crores to the State of Telangana. The matter is currently pending.

III. Material Litigation and Regulatory Action against the Investment Manager and Associates of the Investment Manager

Material Litigation and Regulatory Action against the Investment Manager

As at the date of this Letter of Offer, there is no outstanding material civil litigation or criminal litigation against the Investment Manager. Other than as disclosed below, there is no outstanding regulatory action against or other material litigation involving the Investment Manager.

Outstanding Regulatory Action

The Collector of Stamps, Solapur sent a demand notice dated April 24, 2015 to the Investment Manager demanding a sum of ₹152,000 as deficit stamp duty and a penalty of ₹3,040 on the agreement dated May 29, 2002 executed between the Maharashtra State Road Development Corporation, Ideal Road Builders and the Investment Manager. The Investment Manager filed a reply denying the payment of deficit stamp duty on the grounds that (a) the demand of deficit amount of stamp duty was made payable by citing the provisions included in Section 63 of the Bombay Stamp Act, 1958 inserted vide amendment 12 of 2006 (effective from May 1, 2006) whereas the agreement was already executed prior to the amendment; and (b) Section 63 of the Bombay Stamp Act, 1958 does not have a retrospective effect. In its letter dated July 7, 2015, the Collector of Stamps issued a direction that the Investment Manager and Ideal Road Builders must pay the deficit stamp duty and the penalty within seven days, failing which recovery action for the said amount would be initiated as per the Maharashtra Land Revenue Code, 1966 and the toll would be sealed. No further communication has been received from the Collector of Stamps Solapur in this regard.

Material Litigation and Regulatory Action against the Associates of the Investment Manager

For details of material litigation and regulatory action against the associates of the Investment Manager, see " – *Material Litigation and Regulatory Action against the Sponsor/Project Manager and Associates of the*

Sponsor/Project Manager" on page 615.

IV. Material Litigation and Regulatory Action against the Trustee

Outstanding Material Litigation

1. **SBI Cap Trustee** (the "**Plaintiff**") had filed a suit before the City Civil Court, Bangalore against the Trustee and others (the "**Defendants**") requiring sale of pledged shares for a particular price by SREI Fund/Investors, for whom the Trustee was acting as the share pledge trustee. India Competitive Global Fund (ICGC) acting through the SREI Investment Manager had a First & Exclusive Charge over the Pledged shares. At the instructions of the ICGC & SREI Investment Manager had transferred the Pledged shares to their demat account as they has First & Exclusive right over the shares. We as Share Pledge Trustee has acted on the instructions of the Lenders/Investors. ICGC/SREI sold the shares and appropriated the amounts towards their dues and transferred the surplus amount to the Plaintiff. The Plaintiff is acting for a consortium of lenders and has residual interest. The Plaintiff's case is that the ICGC/SREI has appropriated more amount than their dues. The aggregate claim amount is Rs. 1,550.3 million. The Branch Manager of SBI along with their counsel submitted to the Court that they are willing to explore settlement. The Court referred the matter for pre-conciliation efforts. In the afternoon session, our Advocate appeared before the Conciliator. Advocate briefly explained the dispute to the Conciliator. The Plaintiff informed the Conciliator that if Trinity provides the details of the loan transaction and a statement of accounts in relation to the same, this information would help them resolve the dispute quickly. The case was listed on September 30, 2021 for further conciliation. As no representative was present on behalf of the Company, the Court has recorded that there is no settlement between the parties. The case was adjourned to October 27, 2021 for the parties to proceed with the litigation. The case is now revolving around the proving of the dues by ICGC/SREI and appropriation of amounts. We as ITSL had no role in sale of shares, maintenance of books of accounts and appropriation of amounts and transfer of surplus amount. The matter was adjourned to November 16, 2021 for framing of Issues, November 23, 2021 for filing of list of witnesses ICGC, SREI & ITSL, for filing of affidavit of evidence by SBI, December 7, 2021 for cross examination of witnesses of SBI, December 14, 2021 for filing of affidavit of evidence by ICGC/SREI /Trinity/ITSL and December 21, 2021 for cross examination of witnesses of Trinity and ITSL and January 7, 2022 for further orders. We as ITSL has filed an application under Order 1 Rule 10(2) read with Section 151 of the Code of Civil Procedure, 1908 for unsuiting ITSL from the suit and for deleting the name of ITSL from the array of the parties. The matter is now listed on June 30, 2022 for arguments on the application of ITSL for deleting the name of ITSL from the array of the parties. ITSL has no role in sale of shares & appropriation of sale proceeds. The Plaintiff appeared and filed the amended plaint and copies of the documents in two volumes (volume I consisting of 410 pages and volume II consisting of 598 pages). The Learned Judge upon examining the volumes observed that the Plaintiff had not filed the statement of truth. Therefore, the Learned Judge adjourned the matter for filing the statement of truth and additional written statement, if any. ITSL has filed it's additional Written Statement on August 12, 2022. The matter adjourned to January 25, 2023 for the reply arguments by the Defendants 2 & 3. The main contention taken by the Plaintiff Advocate while arguing on IA is that they are entitled for complete residual dues which Defendant No 2 & 3 have received while selling the pledged shares. Now the matter is posted on July 15, 2023 for orders on IAs.

2. **Balmer Lawrie and Company Limited** and another (the "**Plaintiffs**") had filed a petition before the Calcutta High Court against the Trustee and certain others (the "**Defendants**") challenging the validity of the sale transaction of 1,48,20,000 shares in Transafe Services Limited by the Defendant to the Plaintiff. The Plaintiffs have inter alia sought (a) the recovery of consideration received by the Defendants for the allegedly void contract being ₹ 237.12 million and (b) interest at the rate of 18% per annum on the decretal amount. The success of the Petitioner against the Trustee in the instant petition being agitated is remote. The matter is currently pending.

3. **Future Corporate Resources Limited** (FCRL) In the matter of FCRL ESOP Trust, SEBI Adjudicating Officer has passed an order dated the February 3, 2021, on the ground of insider trading against eight persons including FCRL Employees Trust of which ITSL is a trustee. FCRL along with FCRL Employee Welfare Trust has been jointly and severally directed to disgorge an amount of ₹ 2, 75, 68,650/-. ITSL has submitted that ITSL as a trustee has acted on the instructions of the committee and not liable for insider trading and has not gained or received any amount. ITSL and FCRL Employee Welfare Trust are separate. All the said persons have filed an appeal before SAT against the said SEBI Order dated the February 3, 2021. SAT has given the next date of hearing on April 18, 2023. The matter was part heard

on April 18, 2023 and adjourned to April 19, 2023. On April 19, 2023, SAT has reserved it's order and directed parties to file Written Submissions within 10 days. Written Submissions filed. The Orders awaited. The case is against FCRL Employees Trust and not against ITSL. The matter is sub-judice.

4. **Muthoot Finance Ltd.Vs. Trustees Association of India(TAI),** ITSL, Axis Trustee & SBICAP Trustee) – (Case No.29 of 2021) before Competition Commission of India(CCI).

On September 10, 2021, the Competition Commission of India (CCI) received an information from Muthoot Finance Limited (Informant) against Trustees Association of India (TAI) and three of its members, i.e., IDBI Trusteeship Services Limited, Axis Trustee Services Limited, and SBI CAP Trustee Company Limited (collectively referred to as 'OPs') for alleged contravention of Sections 3(3) and 4 of the Competition Act, 2002 (Competition Act) (hereinafter referred to as the 'Information'). I .e. for entering into anti-competitive agreement and formation of Cartel. CCI.

The CCI has passed an order dated December 23, 2021 under Section 26(1) of the Competition Act, 2002 (Competition Act) directing the Director General to investigate the conduct of Trustees' Association of India's (TAI), IDBI Trusteeship Services Limited (IDBI), Axis Trustee Services Limited and SBICAP Trustee Company (together referred to as the 'OPs') and its office bearers for *prima facie* violating Section 3(1) read with Section 3(3) of the Competition Act (Prima Facie Order) dealing with anti-competitive horizontal agreement (including cartel).

TAI, ITSL, Axis Trustee & SBICAP Trustee filed Civil Writ Petition Nos. 3781 of 2022, 3791 of 2022, 3842 of 2022 and 3847 of 2022 respectively before Bombay High Court challenging the jurisdiction of CCI as the SEBI as Sectoral Regulator has Jurisdiction to decide the matter. The matter has been adjourned to February 15, 2023 for hearing on Application by CCI for vacation of Stay.

At the hearing held on February 21, 2023, the Bombay High Court directed CCI to first decide the jurisdictional issue, leaving all other contentions open. Matter to go before CCI.

ITSL has filed detailed application on March 21, 2023 before CCI to decide upon jurisdiction and as opined by SEBI test laid down in the case of Bharti Airtel is not satisfied, therefore, recall the Prima Facie Order and forthwith close the proceedings against TAI (including Respondent DTs).

5. R.K. Mohata Family Trust Vs. ITSL & Ors.

One Mr .R.K.Mohata Family Trust has filed Commercial Suit (lodging) No. 27568 of 2021 before Bombay High Court against ITSL & RHFL praying for holding of meeting of debenture holders of RHFL as also damages of Rs.1,05,50,902 against ITSL towards his investment. Hon'ble Bombay High Court vide their orders dated the March 31, 2022 read with the Order dated April 6, 2022 and the order dated the May 10, 2022 directed ITSL to hold the meeting of debenture holders. ITSL convened a meeting of the debenture holders on May 13, 2022 and as directed by Hon'ble Bombay High Court and the Results of the voting of meeting have been placed before the Hon'ble Bombay High Court in sealed cover. The matter is *sub-judice* before the Hon'ble Bombay High Court. Authum (AIIL) filed an appeal before the Hon'ble Supreme Court against the order of BHC. The matter was listed for hearing on January 31, 2023. The matter was part heard and thereafter adjourned.

Arising out of SLP(C) No. 411 of 2023 filed by Authum Investments & Infrastructure Ltd.(AIIL) Vs. R.K.Mohtta Family Trust & Ors, Supreme Court vide their Order dated the March 3, 2023 allowed the Resolution Plan filed by AIIL and directed AIIL to make the payments prior to March 31, 2023. AIIL has made the payment.

6. SCR 109885 – 1/394/14 - J Patel & 68 Others (All investors of Dynamic India Fund III) Vs. Dynamic India Fund III, International Financial Services, ICICI Venture Funds Management Company Limited, ICICI Bank and ITSL , before Supreme Court of Mauritius.

Suit is filed by investors seeking compensation and damages of Rs. USD 103, 699, 976 for the loss of their investments in Dynamic India Fund III from Dynamic India Fund III, International Financial Services, ICICI Venture Funds Management Company Limited, ICICI Bank and ITSL.

All the Defendants including ICICI Venture have raised preliminary objections to the Suit.

DIF III has raised five preliminary objections to the Suit viz. (i) Plaintiffs have been wrongly styled; (ii) Suit is a disguised derivative action and the appropriate court to hear it is the Commercial Court and not the Civil Court; (iii) there is a connected Stay Application filed before the Commercial Court by DIF III that the Suit has to be stayed as the Suit is a Class Action suit and hence the Commercial Court and not the Civil Court has the jurisdiction to hear the Suit; (iv) the Plaintiffs should have put the other shareholders of DIF III into cause; and (v) the Plaintiffs have to provide Security for costs to all the Defendants.

The other Defendants have raised preliminary objections with respect to privity of contract and jurisdiction of Mauritius Courts.

Nearly 6 years after the Suit was filed in 2014 in Mauritius, on January 28, 2020, the court heard arguments on only two of the preliminary objections raised by ICICI Bank and ICICI Venture viz. (a) Mauritius court lacks jurisdiction to hear disputes between non-Mauritians (both the Plaintiffs and the Defendants No. 3 and 4 i.e. ICICI Bank and ICICI Venture are not Mauritius residents); and (b) Mauritius court is not the convenient forum to hear the disputes raised.

The arguments relied, amongst others, related to the facts that (a) alleged conduct of ICICI Bank and ICICI Venture did not admittedly happen in Mauritius and offences, if any, happened in India; (b) investments were in real estate projects in India; (c) investments were in a real estate fund in India; and (d) Indian law governs the contractual relationship between the parties.

By an order dated June 9, 2020 the Supreme Court of Mauritius stayed the proceedings as against ICICI Bank and ICICI Venture on the grounds that none of the allegations made against ICICI Bank and ICICI Venture occurred in Mauritius and hence the courts in Mauritius lack jurisdiction to adjudicate such allegations. In the subsequent hearing on July 1, 2020, the Plaintiffs informed the Court of their decision not to appeal against the order staying the proceedings as against ICICI Venture and ICICI Bank. The proceedings would continue against the other Defendants viz. DIF III, IFS and the Trustee.

The Supreme Court of Mauritius vide its order dated the June 3, 2022 have deleted ICICI Bank and ICICI Venture Fund Management Company Ltd. from the array of the parties allowed to continue the case against Dynamic India Fund III, SANE Mauritius and the WITECO now ITSL.

The Plaintiffs have filed an appeal against the said Judgement dated the June 3,2022 passed by The Supreme Court of Mauritius.

ICICI Venture Fund Management Company Ltd. is taking care of the matter on behalf of ITSL as a Trustee and also appointed Counsels to defend ITSL. ITSL has taken up the matter with the ICICI Venture stating that WITECO now ITSL is also not a Mauritius resident and Mauritius court is not the convenient forum to hear the disputes raised and hence lacks the jurisdiction. Further, ITSL is acting only as a trustee and there cannot be any claim against ITSL at all as ICICI Venture Fund Management Company Ltd. was Investment Manager of the Fund who has managed all affairs of the Fund.

This matter has been put sine die i.e. adjourned with no appointed date for resumption, pending the outcome of the appeal filed by plaintiffs.

7. Pawan Kapoor & Anr. Vs. SEBI & Ors.(Karvy Data Management Services Ltd) -

In the case of Karvy Data Management Services Ltd ; one Pawan Kapoor & Amri Resorts Pvt. Ltd. the Debenture Holders have filed Writ Petition before Delhi High Court, inter alia against ITSL alleging various non compliances by ITSL and for not initiating action against Karvy Data Management Services Ltd. for defaults in payment of interest & Principal. The matter was listed before Hon'ble Delhi High Court on December 19, 2022. The Hon'ble Delhi High Court has directed Ministry of Corporate affairs to investigate in the complaint and provide report. The matter has been listed on September 25, 2023.

8. Varsha Vikram Modi Vs. ITSL, RHFL & SEBI. (Writ Petition No.348 of 2023) before Bombay High Court.

One Ms. Varsha Modi, Debenture Holder of RHFL has filed captioned Writ Petition against ITSL impleading RHFL & SEBI praying for the following reliefs:-

1. Issuance of Writ of Certiorari or any other writ under Article 226 of the Constitution of India to quash or cancel the Registration Certificate of ITSL the Respondent No.1, issued by SEBI the Respondent No.3.
2. Issuance of Writ of Certiorari or any other writ under Article 226 of the Constitution of India to direct the SEBI the Respondent No.3 to take action & conduct enquiry on the basis of complaint dated the 28th May,2022 lodged by the Petitioner with SEBI.
3. Issuance of Writ of Certiorari or any other writ under Article 226 of the Constitution of India to direct RHFL to pay the amount of Rs.4.5 crore to the petitioner with respect to the NCDs issued by RHFL
4. Issuance of Writ of Certiorari or any other writ under Article 226 of the Constitution of India to direct ITSL to deposit a sum of Rs.4.5 crores with Prothonotary and Senior Master of the Court.
5. Payment of costs & any other relief as may be deemed fit & proper.

Arising out of SLP(C) No. 411 of 2023 filed by Authum Investments & Infrastructure Ltd.(AIIL) Vs. R.K.Mohtta Family Trust & Ors, Supreme Court vide their Order dated March 3, 2023 allowed the Resolution Plan filed by AIIL and directed AIIL to make the payments prior to March 31, 2023.

Details of the Payment made to her are as follows, Her original holdings were 39*500000 = 19500000.

Her payment amount is under 27.71%

SRNO	CLIENT_REF	BENEF_DESC	CLIENT_ACC_NO	UTR_NMBR	INST_AMNT	INST_DATE	BENEF_ACC_NO	BENEF_IFSC_CODE	PRODUCT_CODE
122	INE217K07AY8	VARSHA VIKRAM MODI	000412500002272 9	IBKLR6202303310160425 9	54,02,628.31	31/03/2023	914020028858647	UTIB0000741	RTGS

V. Taxation Proceedings

Details of all outstanding direct tax and indirect tax proceedings (i) against the Trust, the Sponsor/Project Manager, the Investment Manager, their respective Associates and the Trustee and (ii) involving the Project SPVs and the Target SPV, as at the date of this Letter of Offer are disclosed below:

Nature of Proceedings	Number of Proceedings	Amount involved (in ₹ million)
Direct Tax*		
Trust	Nil	Nil
Sponsor/Project Manager	Nil	Nil
Associates of the Sponsor/Project Manager	4	95.12
Project SPVs	4	84.79
Target SPV	Nil	Nil
Investment Manager	Nil	Nil
*Associates of the Investment Manager***	Nil	Nil
Trustee	Nil	Nil***
Indirect Tax*		
Trust	Nil	Nil
Sponsor/Project Manager	Nil	Nil
Associates of the Sponsor/Project Manager	4	95.12
Project SPVs	Nil	Nil
Target SPV	Nil	Nil
Investment Manager	Nil	Nil
*Associates of the Investment Manager***	Nil	Nil

Nature of Proceedings	Number of Proceedings	Amount involved (in ₹ million)
Trustee	Nil	Nil

**Such amount excludes any interest or penalty in relation to such direct and indirect tax proceedings.*
*** Excludes Associates of the Sponsor/Project Manager.*
**** For AY 2016-17 disputed tax liabilities is ₹37.90 million. NIL proceedings held.*

VI. Certain other matters

1. Ravindra Dhariwal, a non-executive director on the board of directors of the Sponsor, resigned from the position of independent director of Future Retail Limited (FRL) with effect from July 23, 2022, due to FRL being referred to insolvency / initiation of corporate insolvency resolution process and his power/role as Independent Director of FRL being suspended as per the provisions of the Insolvency and Bankruptcy Code, 2016. Further, SEBI has initiated an investigation into the affairs of FRL to determine if there was any violation under the provisions of SEBI Regulations/ Rules/ Directives. These matters are currently pending.

2. The Trustee received a show cause notice dated May 9, 2023 from the SEBI, in connection with an issuance of non-convertible debentures ("**NCDs**") by a company with respect to delay in listing and creation of security in connection with such NCD issuance. An adjudication order dated July 27, 2023 was passed by the SEBI. The order does not impose any monetary penalty on the Trustee.

GOVERNMENT AND OTHER APPROVALS

On the basis of the list of material approvals, consents, licenses and permissions provided below, the Trust can undertake the Issue and the Trust, the Project SPVs and the Target SPV can undertake each of their respective current business activities and other than as stated below, no further material approval, consent, license or permission from any regulatory authority is required to undertake the Issue or continue such business activities. Unless otherwise stated, these approvals are valid as of the date of this Letter of Offer. For details in connection with the regulatory and legal framework within which we operate, see "Regulations and Policies" on page 231.

Certain licenses and/or approvals may expire/elapse periodically, in the ordinary course of business, and applications to the appropriate authorities for the renewal of such licenses and/or approvals are/will be submitted in accordance with applicable requirements and procedures.

A. Approvals in Relation to the Issue

1. Resolutions dated July 18, 2023, July 24, 2023, July 27, 2023 and August 2, 2023 of the board of directors of the Investment Manager in relation to the Issue and other related matters.

2. In-principle approval of the NSE dated July 31, 2023 for the listing of the Units to be issued pursuant to the Issue.

3. Letter dated July 26, 2023 issued by the SEBI granting certain exemptions to the Trust in relation to undertaking a fast-track rights issue.

B. Registration of the Trust

1. The SEBI has issued a certificate dated November 25, 2019 for registration of the Trust as an infrastructure investment trust (registration number IN/InvIT/19-20/0012).

   The registration certificate has been granted subject to the following conditions, *inter-alia*, as specified in Regulation 7 of the InvIT Regulations:

   (i) the Trust shall abide by the provisions of the SEBI Act and the InvIT Regulations;
   (ii) the Trust shall forthwith inform the SEBI in writing, if any information or particulars previously submitted to the SEBI are found to be false or misleading in any material particular or if there is any material change in the information already submitted;
   (iii) the Trust and the parties to the Trust shall satisfy with the conditions specified in Regulation 4 of the InvIT Regulations at all times;
   (iv) the Trust and the parties to the Trust shall comply, at all times, with the code of conduct as specified in Schedule VI of the InvIT Regulations, wherever applicable.

   The certificate also states:

   (i) that the investment conditions and other restrictions will apply to all investments, distributions etc. made;
   (ii) that for issuance and listing of Units issued in terms of Chapter VIA of the InvIT Regulations, the Trust shall fulfill the conditions as may be prescribed by the SEBI from time to time;
   (iii) that the transaction for transfer of the underlying assets/shares or interest in SPVs to the Trust and the corresponding issue of the Trust's Units to the transferor entity shall happen only after the closure of the initial offer;
   (iv) the minimum investment and lot size for an InvIT for a public issue or a private placement;
   (v) that the Trust shall keep and maintain the books of accounts, records and such other documents as may be required by the SEBI under the InvIT Regulations from time to time;
   (vi) that the Trust shall ensure compliance with the guidelines/directives/instructions/circulars etc. as may be issued from time to time by the SEBI or the Government of India relating to the activities carried on by the Trust;
   (vii) that the Trust shall not make use of its status as a SEBI registered InvIT in furtherance of unrelated activities or any other purpose which is not permitted under the InvIT Regulations;
   (viii) that the Trust's actions shall be governed by the SEBI Act and the InvIT Regulations in respect of activities carried on as an InvIT;

(ix) that any material change in the information on the basis of which registration is granted must be communicated to SEBI immediately; and

(x) that the registration has been granted on the basis of information available with the SEBI at the relevant point of time and does not preclude the SEBI from cancelling the registration later if anything adverse is found against the Trust or in case of a conviction.

Pursuant to a letter dated January 30, 2020, the SEBI has, *inter-alia*, taken on record the rights and provided to the investors in the Trust.

2. Approval dated January 3, 2020 issued by the NHAI for establishing the Trust and the transfer of the Project SPVs subject to, *inter-alia*, the following conditions:

(i) submission of no-objection certificates from the lenders of all the Project SPVs;

(ii) the concessionaire/developer is required to comply with all the provisions of the concession agreements including 51% holding in the Trust until two years after completion / provisional COD of the projects;

(iii) the incoming investor will comply to all relevant contractual obligations of the concession agreements;

(iv) the proposal submitted pursuant to the letter dated September 16, 2019 for establishing the Trust, transfer of the Project SPVs to the Trust and the transfer of 49% in the Trust shall not have the effect of jeopardizing the interests of the NHAI in any manner; and

(v) an undertaking that all statutory compliances as required by the SEBI guidelines shall be adhered to.

C. Approvals in Relation to the Project SPVs and the Target SPV

Completion Certificates

1. Completion certificate dated March 29, 2019, with respect to 167.04 km stretch of KTL's Kaithal-Rajasthan border section of NH 152/65 project.

2. Completion certificate dated November 25, 2019, effective from October 15, 2019, with respect to the four-laning of the Solapur to Yedeshi section km. 0.000 to km. 100.000 (design length 98.717 km) of NH 211 project.

3. Provisional completion certificate dated January 31, 2020 with respect to 141.00 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66). The aforesaid provisional completion certificate was issued along with a punch list containing certain items to be completed within 90 days from the date of issuance thereof, including, *inter alia*, (a) laying of earthwork, GSB, WMM, DBM, SDBC, RCC drain, and footpath in the service road; (b) laying of earthwork, GSB, DLC, PQC, toll plaza tunnel on RHS and kerb in the toll plaza on RHS at km 182+850; (c) slope dressing; (d) chute drain stetches; (e) slope protection which includes pithcing on structures and slope protection on high embankment slope; (f) avenue plantation; (g) structural numbering and construction of appron; (h) static weigh bridge construction; (i) construction of truck bay, bus shelter, and boundary stones; (j) cleaaning of waterway of structure and providing cut drain as per standards; and (k) surveying with network survey vehicle from Ch 93.70 to Ch 280.94.

4. (i) Provisional completion certificate dated February 28, 2022 with respect to 20.050 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66), in addition to earlier accorded 141.00 km i.e. total of 161.05 km; and (ii) provisional completion certificate dated March 24, 2023 with respect to 170.98 km stretch of IRB WTL's Goa-Karnataka Border – Kundapur section of NH-17 (now NH-66).

5. Completion certificate dated September 24, 2020 with respect to 189.02 km stretch of YATL's Yedeshi-Aurangabad section of NH 211 project.

6. Completion certificate dated November 24, 2020 with respect to the six-laning of AETL's Agra-Etawah bypass section of NH-2 (km 199.660 to km 232.525).

7. Completion certificate dated May 31, 2021 with respect to the six-laning of UTL's section of NH-8

(now NH-48), effective from June 1, 2021.

8. Completion certificate dated August 14, 2021 with respect to the six-laning of CGTL effective from August 14, 2021.

9. Completion certificate dated July 1, 2022 with respect to 78.532 km stretch of the six-laning of IRB HMTL effective from July 1, 2022. Completion Certificate (COD-II) dated April 7, 2023 with respect to additional length of 9.75 km of the six-laning of IRB HMTL.

10. Completion certificate dated July 20, 2022 with respect to the six-laning of KGTL effective from July 20, 2022.

Approvals for Continuing Commercial Operations

The Project SPVs and the Target SPV are required to obtain and maintain certain permits, registrations, approvals and licenses during the commercial operations phase of their respective projects, as disclosed below:

1. Certificate of registration of establishment under the Maharashtra Shops and Establishment (Regulation of Employment and Condition of Service) Act, 2017.

2. Registrations under various tax laws, including but not limited to, permanent account number, professional tax and goods and services tax.

3. Registration under the Legal Metrology Act, 2009 and respective state government rules for weigh-in-motion and road weigh bridge.

4. Registrations under applicable labour laws including, but not limited to, registrations under the Employees' Provident Funds and Miscellaneous Act, 1952, the Employees' State Insurance Act, 1948 and the Contract Labour (Regulation and Abolition) Act, 1970.

5. No-objection certificates and authroization from the relevant state pollution control board for consent to operate under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.

IRB GEPL has obtained the relevant approvals under the concession agreement for investment by the Trust.

The Project SPVs and the Target SPV have obtained the necessary permits, registrations, approvals and licenses from the appropriate regulatory and governing authorities that are required to operate their respective businesses. Certain approvals may have lapsed in their normal course and the respective Project SPVs or the Target SPV have either made applications to the appropriate authorities for renewal of such licenses and/or approvals or are in the process of making such applications.

D. Approvals applied for, but not yet received

As at the date of this Letter of Offer, there are no approvals required to be obtained by the Trust, the Project SPVs or the Target SPV, for which applications have been made, but approvals have not been received.

E. Approvals for which applications are yet to be made

As at the date of this Letter of Offer, there are no material approvals required to be obtained by the Trust, the Project SPVs or the Target SPV for which applications are yet to be made.

F. Intellectual Property

The Project SPVs, the Target SPV, the Investment Manager and the Trustee have entered into a name licensing agreement with the Sponsor. For details, see "*Related Party Transactions*" on page 245.

OTHER REGULATORY DISCLOSURES

Eligibility for this Issue

A resolution dated July 18, 2023 has been passed by the Board of the Investment Manager approving the Issue. Resolutions dated July 24, 2023, July 27, 2023 and August 2, 2023 have been passed by the Board of the Investment Manager approving the Record Date, the Issue Price, certain other terms of the Issue and this Letter of Offer.

Units of the same class which are proposed to be allotted are already listed on the NSE.

The NSE, through its letter dated July 31, 2023 has granted in-principle approval for the listing of the Units proposed to be issued pursuant to the Issue.

The Trust is in compliance with the continuous listing and disclosure requirements under the InvIT Regulations and circulars issued thereunder.

The Trust holds not less than 80% of its assets in eligible infrastructure projects.

The Issue is a fast-track rights issue and the conditions prescribed under paragraph 9.11 of Chapter 9 of the Master Circular are complied with, or where applicable, exemptions have been obtained from the SEBI pursuant to its letter dated July 26, 2023, with respect to the Issue. Also see "*Material Litigation and Regulatory Action – Certain other matters*" on page 633.

Prohibition by SEBI or RBI

None of the Trust, the Sponsor, the Investment Manager, the Project Manager and the Trustee, or the respective promoters or directors of any of the Sponsor, the Investment Manager, the Project Manager or the Trustee (i) is debarred from accessing the securities market by SEBI; (ii) is a promoter, director or person in control of any other company or a sponsor, investment manager or trustee of any other infrastructure investment trust which is debarred from accessing the capital market under any order or direction made by SEBI; or (iii) is in the list of wilful defaulters published by the RBI.

None of the respective promoters or directors of the Sponsor or Investment Manager or the Trustee (i) has been declared a fugitive economic offender under Section 12 of the Fugitive Economic Offenders Act, 2018; (ii) have direct or indirect relations with any infrastructure investment trusts or companies, their sponsors, promoters, trustees, investment managers and whole-time directors, which are compulsorily delisted by any recognized stock exchange; or (iii) has been a promoter or whole-time director of any company which has been compulsorily delisted in terms of the Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009 or the Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2021, as applicable, during the last 10 years.

Filing

The Investment Manager, through the Lead Manager, has filed this Letter of Offer dated August 2, 2023 with the SEBI. The Lead Manager has also submitted a due diligence certificate (in the form prescribed under the SEBI Master Circular) dated August 2, 2023 to the SEBI along with this Letter of Offer.

Disclaimer clause of NSE

"As required, a copy of this letter of offer has been submitted to National Stock Exchange of India Limited (hereinafter referred to as NSE). NSE has given vide its letter Ref. No. NSE/LIST/0799 dated July 31, 2023 permission to the Issuer to use the Exchange's name in this letter of offer as one of the stock exchanges on which this Issuer's units are proposed to be listed. The Exchange has scrutinized this letter of offer for its limited internal purpose of deciding on the matter of granting the aforesaid permission to this Issuer.

It is to be distinctly understood that the aforesaid permission given by NSE should not in any way be deemed or construed that the letter of offer has been cleared or approved by NSE; nor does it in any manner warrant, certify or endorse the correctness or completeness of any of the contents of this letter of offer; nor does it warrant that this Issuer's units will be listed or will continue to be listed on the Exchange; nor does it take any responsibility

for the financial or other soundness of this Issuer, its promoters, its management or any scheme or project of this Issuer.

Every person who desires to apply for or otherwise acquire any units of this Issuer may do so pursuant to independent inquiry, investigation and analysis and shall not have any claim against the Exchange whatsoever by reason of any loss which may be suffered by such person consequent to or in connection with such subscription /acquisition whether by reason of anything stated or omitted to be stated herein or any other reason whatsoever."

Listing

The Units issued through this Letter of Offer are proposed to be listed on the NSE. Applications will be made to the NSE for obtaining permission for listing and trading of the Units.

Minimum Allotment

The minimum allotment and trading lot of Units issued pursuant to the Issue to any investor shall be equivalent to the minimum allotment and trading lot applicable to the Units of the same class. For details, see "*The Issue*" on page 57.

Minimum Subscription

The minimum subscription for purposes of the Issue shall be 90% of the total Issue size through this Letter of Offer (the "**Minimum Subscription**"). If the Minimum Subscription for the Issue is not received, the Application Amounts shall be refunded to the Applicants forthwith and not later than 15 days from the Issue Closing Date. Also see "*Issue Procedure*" on page 640.

Disclaimer clauses from the Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager

The Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager accept no responsibility for statements made otherwise than in this Letter of Offer or in any advertisement or other material issued by the Investment Manager, the Trustee or the Sponsor/Project Manager or by any other persons at the instance of the Investment Manager, the Trustee or the Sponsor/Project Manager and anyone placing reliance on any other source of information would be doing so at his own risk.

Eligible Unitholders who invest in the Issue will be deemed to have represented to the Investment Manager, the Trustee, the Sponsor/Project Manager and the Lead Manager and their respective directors, officers, agents, affiliates and representatives that they are eligible under all applicable laws, rules, regulations, guidelines and approvals to acquire Units in the Issue, and are relying on independent advice / evaluation as to their ability and quantum of investment in the Issue.

The Lead Manager and their respective affiliates may engage in transactions with and perform services for the Trust, the Project SPVs, the Target SPV, the Investment Manager, the Trustee, the Sponsor/Project Manager or their respective affiliates in the ordinary course of business and have engaged, or may in the future engage, in transactions with such parties, for which they have received and may in the future receive, compensation.

Disclaimer with respect to jurisdiction

This Letter of Offer has been prepared under the provisions of Indian laws and the applicable rules and regulations thereunder. Any disputes arising out of the Issue will be subject to the jurisdiction of the appropriate courts in Mumbai, India only.

Prohibition on Offer of Incentives

No person connected with this Issue, including any person connected with the distribution of this Issue, shall offer any incentive, whether direct or indirect, in any manner, whether in cash or kind or services or otherwise to any person for making an application for Allotment of the Units.

Restriction on Further Capital Issues

The Trust shall not make any further issue of Units in any manner during the period between the date of filing this Letter of Offer with the SEBI and the date of listing of the Units to be issued pursuant to the Issue on the NSE or the refund of Application Amounts, as applicable.

Participation by the Sponsor

The Sponsor has undertaken to mandatorily subscribe to its rights entitlement and not renounce such rights, except for purposes of compliance with minimum public unitholding norms as prescribed under the InvIT Regulations, to the extent applicable. Further, the Sponsor proposes to subscribe to additional Units in the Issue in excess of its rights entitlement such that its post-Issue unitholding is a maximum of 521,239,840 Units (constituting approximately 51.02% of the total number of Units on a post-Issue basis), subject to availability of additional Units and compliance with minimum public unitholding requirements.

Undertakings by the Investment Manager

The Investment Manager (on behalf of the Trust) undertakes the following:

- at any given time, there shall be only one denomination for the Units;
- the Units to be issued pursuant to this Issue shall rank *pari passu* with the existing Units of the Trust in all respects;
- the Rights Entitlements shall be credited to the demat account of the Unitholders before the date of opening of this Issue for renunciation;
- the Trust shall not withdraw this Issue after announcement of the Record Date; and
- it shall comply with such disclosure and accounting norms specified by SEBI from time to time.

The Units have not been and will not be registered, listed or otherwise qualified in any other jurisdiction outside India and may not be offered or sold, and Applications may not be made by persons in any such jurisdiction, except in compliance with the applicable laws of such jurisdiction.

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER THE LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

SECTION IX – ISSUE PROCEDURE

This section is for the information of the Applicants proposing to apply in the Issue. Investors should carefully read the provisions contained in this Letter of Offer, the Rights Entitlement Letter and the Application Form, before submitting the Application Form. The Trustee, the Sponsor, the Investment Manager and the Lead Manager are not liable for any amendments or modifications or changes in applicable laws or regulations, which may occur after the date of this Letter of Offer. Applicants are advised to make their independent investigation (for which the Investment Manager, the Sponsor, the Trust and the Lead Manager take no responsibility or liability) and ensure that the Application Form is correctly filled up.

I. Overview

The Issue and the Units issued pursuant to the Issue, are subject to the terms and conditions contained in the Letter of Offer, the Rights Entitlements Letter, the Application Form, the InvIT Regulations, and the circulars, clarifications, guidelines and notifications issued by the SEBI, the Government of India and other governmental, statutory and regulatory authorities from time to time, including approvals, from RBI or other regulatory authorities, and the terms and conditions as stipulated in the Allotment Advice. The Issue shall be undertaken in accordance with the InvIT Regulations, the SEBI Master Circular and other applicable law.

II. Dipatch and Availability of Issue Material

The Investment Manager and the Lead Manager will dispatch the Letter of Offer, Application Form, the Rights Entitlement Letter and other Issue materials only to Eligible Unitholders holding Units as of the Record Date (i) who have provided an address in India or (ii) who are foreign corporate or institutional Unitholders in jurisdictions where it is not illegal to make an offer or invitation to Offer or such an invitation or offer or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India) (such jurisdictions, the "**Identified Jurisdictions**").

No action has been or will be taken to permit the Issue in any jurisdiction where action would be required for that purpose, except that this Letter of Offer has been filed with the SEBI and the Stock Exchange. Accordingly, the Rights Entitlements or Units may not be offered or sold, directly or indirectly, and this Letter of Offer or any offering materials or advertisements in connection with the Issue may not be distributed, in whole or in part, in any jurisdiction other than India and to foreign corporate or institutional Unitholders in Identified Jurisdictions, except in accordance with legal requirements applicable in such jurisdiction. Receipt of this any Issue material will not constitute an invitation or offer in those jurisdictions in which it would be illegal to make such an invitation or offer or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India) and, in those circumstances, this Letter of Offer and other Issue material must be treated as sent for information only and should not be acted upon for subscription to the Units and should not be copied or redistributed. Accordingly, persons receiving a copy of this Letter of Offer, the Application Form and any other Issue material should not, in connection with the issue of the Units or the Rights Entitlements, distribute or send such material in or into any jurisdiction where to do so, would or might contravene local securities laws or regulations or would subject the Trust, the Parties to the Trust, the Lead Manager and their respective affiliates to any filing or registration requirement (other than in India). If this Letter of Offer, the Application Form or other Issue material is received by any person in any such jurisdiction, or by their agent or nominee, they must not seek to subscribe to the Units or the Rights Entitlements.

This Letter of Offer and the Application Form will be sent only to the e-mail addresses of Eligible Unitholders who have provided their e-mail addresses to the Investment Manager.

The Investment Manager, the Registrar and the Lead Manager shall make arrangements for distribution of the Application Form along with this Letter of Offer to all Eligible Unitholders prior to the Issue Opening Date.

NO OFFER IN THE UNITED STATES

THE RIGHTS ENTITLEMENTS AND THE UNITS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT, OR ANY U.S. STATE SECURITIES LAWS AND MAY NOT BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED WITHIN THE UNITED STATES, EXCEPT IN A TRANSACTION EXEMPT FROM THE REGISTRATION REQUIREMENTS OF THE U.S. SECURITIES ACT. THE UNITS AND RIGHTS ENTITLEMENTS REFERRED TO IN THIS LETTER OF

OFFER ARE BEING OFFERED AND SOLD IN OFFSHORE TRANSACTIONS OUTSIDE THE UNITED STATES IN COMPLIANCE WITH REGULATION S TO UNITHOLDERS LOCATED IN JURISDICTIONS WHERE SUCH OFFER AND SALE OF THE UNITS ARE PERMITTED UNDER LAWS OF SUCH JURISDICTIONS. THE OFFERING TO WHICH THIS LETTER OF OFFER RELATES IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSTRUED AS, AN OFFERING OF ANY UNITS OR RIGHTS ENTITLEMENTS FOR SALE IN THE UNITED STATES OR AS A SOLICITATION THEREIN OF AN OFFER TO BUY ANY OF THE SAID SECURITIES.

Neither the Trust, nor any person acting on behalf of the Trust, will accept a subscription or renunciation from any person, or the agent of any person, who appears to be, or who the Trust, or any person acting on behalf of the Trust, has reason to believe is, in the United States when the buy order is made. No Application Form should be postmarked in the United States, electronically transmitted from the United States or otherwise dispatched from the United States or from any other jurisdiction where it would be illegal to make an offer of securities under the Letter of Offer.

Please note that none of the Investment Manager, the Sponsor, the Lead Manager or the Registrar will be liable for non-dispatch of physical copies of the Issue materials, including the Letter of Offer, the Rights Entitlement Letter and the Application Form, or delay in the receipt of the Letter of Offer, the Rights Entitlement Letter or the Application Form attributable to non-availability of the e-mail addresses of Eligible Unitholders or electronic transmission delays or failures (including corruption of the document being transmitted electronically), or if the Application Forms or the Rights Entitlement Letters are delayed or misplaced in transit. To update the respective email addresses or mobile numbers in the records maintained by the Registrar or Investment Manager, Eligible Unitholders should visit https://rights.kfintech.com or www.irbinfratrust.co.in.

The distribution of the Issue Materials and the issue of Units on a rights basis to persons in certain jurisdictions outside India is restricted by legal requirements prevailing in those jurisdictions.

Receipt of the Issue materials (including by way of electronic means) will not constitute an offer, invitation to or solicitation by anyone in any jurisdiction or in any circumstances in which such an offer, invitation or solicitation is unlawful or not authorized or to any person to whom it is unlawful to make such an offer, invitation or solicitation. In those circumstances, the Issue materials must be treated as sent for information only and should not be acted upon for making an Application and should not be copied or re-distributed.

Any person who makes an application to acquire Rights Entitlements and the Units offered in the Issue will be deemed to have declared, represented and warranted that such person is authorized to acquire the Rights Entitlements and the Units in compliance with all applicable laws and regulations prevailing in such person's jurisdiction and India, without requirement for the Trust, Parties to the Trust, the Lead Manager or their respective affiliates to make any filing or registration (other than in India).

III. Credit of Rights Entitlements in Demat Accounts of Eligible Unitholders

In accordance with InvIT Regulations read with the SEBI Master Circular, the credit of Rights Entitlements and Allotment of Units shall be made in the dematerialized form only. Prior to the Issue Opening Date, the Investment Manager and the Lead Manager shall ensure credit of the Rights Entitlements to (i) the demat accounts of the Eligible Unitholders holding the Units in dematerialised form (other than fractional entitlement); and (ii) a demat suspense escrow account opened by the Investment Manager, for the Eligible Unitholders which would comprise Rights Entitlements relating to (a) the Units held in a demat suspense account; or (b) the demat accounts of the Eligible Unitholder which are frozen or details of which are unavailable with the Investment Manager or with the Registrar on the Record Date; or (d) credit of the Rights Entitlements returned/reversed/failed; or (f) the ownership of the Units under dispute, including any court proceedings, as applicable.

Renouncees

All rights and obligations of the Eligible Unitholders in relation to Applications and refunds pertaining to the Issue shall apply to the Renouncees as well.

Basis for the Issue

The Units will be offered for subscription for cash to the Eligible Unitholders whose names appear as unitholders as per the list to be furnished by the Depositories in respect of the Units held in dematerialized form on the Record Date.

Rights Entitlements

As your name appears as a unitholder in respect of the Units held in dematerialized form as on the Record Date, you may be entitled to subscribe to the number of Units as set out in the Rights Entitlement Letter.

Eligible Unitholders can also obtain the details of their respective Rights Entitlements from the website of the Registrar (https://rights.kfintech.com) by entering their DP ID and Client ID. The link for details of Rights Entitlements will also be available on the website of the Trust (www.irbinfratrust.co.in).

Rights Entitlements shall be credited to the respective demat accounts of Eligible Unitholders before the Issue Opening Date only in dematerialized form.

IV. Terms of the Issue

Issue Price

Each Unit is being offered at a price of ₹200.98* per Unit in the Issue. The Issue Price for the Units has been arrived at by the Investment Manager in consultation with the Lead Manager.

**The Issue Price is ₹200.979634. For presentation purposes only, the Issue Price has been presented as rounded-off to two decimal places.*

Rights Entitlements Ratio

The Units are being offered on a rights basis to the Eligible Unitholders in the ratio of one Unit for every 6.17* Units held by the Eligible Unitholders as on the Record Date.

**The Rights Entitlement Ratio is one Unit for every 6.174812 Units held by Eligible Unitholders on the Record Date. For presentation purposes only, the Rights Entitlement Ratio has been presented as rounded-off to two decimal places.*

Renunciation of Rights Entitlements

The Issue includes a right exercisable by Eligible Unitholders to renounce the Rights Entitlements credited to their respective demat account either in full or in part. The renunciation from non-resident Eligible Unitholders to resident Eligible Unitholders and vice versa shall be subject to provisions of the FEMA Rules and other circulars, directions, or guidelines issued by RBI or the Ministry of Finance from time to time. However, the facility of renunciation shall not be available to or operate in favor of an Eligible Unitholder being an erstwhile OCB except is in compliance with the FEMA Rules and other circulars, directions, or guidelines issued by RBI or the Ministry of Finance.

The renunciation of Rights Entitlements credited in your demat account can be made either by sale of such Rights Entitlements using the secondary market platform of the Stock Exchange or through an off-market transfer. For details, see " – *Procedure for Renunciation of Rights Entitlements*" on page 646.

In this regard, the Investment Manager will make necessary arrangements with NSDL and CDSL for the crediting of the Rights Entitlements to the demat accounts of the Eligible Unitholders in a dematerialized form. A separate ISIN for the Rights Entitlements has also been generated which is INE0C8K20042. Such ISIN shall remain frozen (for debit) until the Issue Opening Date.

The said ISIN shall be suspended for transfer by the Depositories post the Issue Closing Date.

Eligible Unitholders are requested to provide relevant details (such as copies of self-attested PAN and details confirming the legal and beneficial ownership of their respective Units) to the Investment Manager or the Registrar not later than two Working Days prior to the Issue Closing Date, to enable the credit of their Rights Entitlements by way of transfer from the demat suspense escrow account to their demat account at least one day before the

Issue Closing Date, to enable such Eligible Unitholders to make an application in the Issue, and such communication shall serve as an intimation to such Eligible Unitholders in this regard. Such Eligible Unitholders are also requested to ensure that their demat account, details of which have been provided to Investment Manager or the Registrar, is active to facilitate such transfer.

Additionally, the Investment Manager will submit the details of the total Rights Entitlements credited to the demat accounts of the Eligible Unitholders and the demat suspense escrow account to the Stock Exchange after completing the corporate action. The details of the Rights Entitlements with respect to each Eligible Unitholders can be accessed by such respective Eligible Unitholders on the website of the Registrar after keying in their respective details along with other security control measures implemented thereat.

Trading of the Rights Entitlements

Prior to the Issue Opening Date, the Investment Manager will obtain the approval from the Stock Exchange for trading of Rights Entitlements. Applicants shall be able to trade their Rights Entitlements either through on-market renunciation or through off-market renunciation. The trades through on-market renunciation and off-market renunciation will be settled by transferring the Rights Entitlements through the depository mechanism.

On-market renunciation shall take place electronically on the secondary market platform of the Stock Exchange in accordance with the settlement rules of the Stock Exchange. The transactions will be settled on trade-for-trade basis. The Rights Entitlements shall be tradable in dematerialized form only.

On-market renunciation shall take place only on August 3, 2023 (the renunciation period for on-market renunciation). No assurance can be given regarding the active or sustained on-market renunciation or the price at which the Rights Entitlements will trade. Eligible Unitholders are requested to ensure that renunciation through off-market transfer is completed in such a manner that the Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date. For details, see "*—Procedure for Renunciation of Rights Entitlements–On Market Renunciation*" and "*—Procedure for Renunciation of Rights Entitlements–Off Market Renunciation*" on page 647. Once the Rights Entitlements are credited to the demat account of the Renouncees, application in the Issue can be made until the Issue Closing Date. For details, please see the section entitled "*—Procedure for Application*" on page 646.

Please note that the Rights Entitlements which are neither renounced nor subscribed by the Applicants on or before the Issue Closing Date shall lapse and shall be extinguished after the Issue Closing Date.

No Units for such lapsed Rights Entitlements will be credited, even if such Rights Entitlements were purchased from market. Persons who are credited the Rights Entitlements are required to make an application to apply for Units offered under the Issue for subscribing to the Units offered pursuant to the Issue.

Terms of Payment

Full amount of ₹200.98* per Unit shall be payable on Application.

**Actual Issue Price is ₹200.979634. The Issue Price has been rounded-off to the nearest two-digit decimal, i.e., ₹200.98, for presentation purposes only*.

Fractional Entitlements

Fractional entitlements will not be credited to the Eligible Unitholders' demat accounts. However, such Unitholders would be given preference for the allotment of one additional Unit if they apply for it, as per the procedure mentioned in the section entitled "*—Basis of Allotment*" on page 649.

The Units are being offered on a rights basis to existing Eligible Unitholders in the ratio of one Unit for every 6.174812 Units held as on the Record Date. Fractional entitlements of the Rights Entitlement will be credited to a suspense account. Accordingly, if the Unitholding of any of the Eligible Unitholders is less than 6.174812 Units or is not in the multiple of 6.174812 Units, the fractional entitlements of such Eligible Unitholders shall be ignored. However, the Eligible Unitholders whose fractional entitlements are being ignored, will be given preferential consideration for the Allotment of one additional lot if they apply for additional Units in the Issue over and above their Rights Entitlements, if any, subject to availability of lots in the Issue post allocation towards Rights Entitlements applied for.

Illustration in relation to Fractional Entitlements

For example, if an Eligible Unitholder holds seven Units, such Unitholder will be entitled to one Unit and will also be given a preferential consideration for the Allotment of one lot if such Eligible Unitholder has applied for additional Units in the Issue, over and above his/her/its Rights Entitlements, subject to availability of lots in the Issue post allocation towards Rights Entitlements applied for. Further, Eligible Unitholders holding less than 6.174812 Units shall have 'zero' entitlement. Such Eligible Unitholders are entitled to apply for additional Units in the Issue and will be given preference in the Allotment of one lot, if such Eligible Unitholders apply for additional lots in the Issue, subject to availability of lots in the Issue post-allocation.

Ranking

The Units to be issued and allotted pursuant to the Issue shall be subject to the provisions of the Letter of Offer, the Rights Entitlement Letter, the Application Form, the InvIT Regulations, and the guidelines, notifications and regulations issued by SEBI, the Government of India and other governmental, statutory and regulatory authorities from time to time, including approvals, from RBI or other regulatory authorities, and the terms and conditions as stipulated in the Allotment advice. The Units to be issued and Allotted under the Issue shall rank *pari passu* with the existing Units, in all respects including distributions.

Listing and trading of the Units to be issued pursuant to the Issue

Subject to receipt of the listing and trading approvals, the Units proposed to be issued on a rights basis shall be listed and admitted for trading on the Stock Exchange. Unless otherwise permitted by the InvIT Regulations, the Units Allotted pursuant to the Issue will be listed as soon as practicable and all steps for completion of necessary formalities for listing and commencement of trading in the Units will be taken within such period prescribed under the InvIT Regulations. The Investment Manager has received in-principle approval from NSE pursuant to a letter dated July 31, 2023. The Investment Manager will apply to NSE for final approvals for the listing and trading of the Units subsequent to their Allotment. No assurance can be given regarding the active or sustained trading in the Units or the price at which the Units offered under the Issue will trade after the listing thereof.

The existing Units are listed and traded on NSE (Scrip Symbol: IRBIT) under the ISIN: INE0C8K23012. The Units shall be credited to a temporary ISIN which will be frozen until the receipt of the final listing and trading approvals from the Stock Exchange. Upon receipt of such listing and trading approvals from the Stock Exchange, the Units shall be debited from the temporary ISIN and credited shall to the new ISIN for the Units issued pursuant to the Issue and shall be available for trading. Accordingly, the temporary ISIN shall be permanently deactivated in the depository system of CDSL and NSDL.

The listing and trading of the Units issued pursuant to the Issue shall be based on the current regulatory framework then applicable. Accordingly, any change in the regulatory regime would affect the listing and trading schedule.

In case the Investment Manager fails to obtain listing or trading permission from the Stock Exchange, we shall refund through verifiable means/unblock the respective ASBA Accounts, the entire monies received/blocked within the timelines prescribed under applicable law.

Market Lot

The Units of the Trust shall be tradable only in dematerialized form. The trading lot for Units in dematerialized mode is 200,000 Units.

Arrangements for Disposal of Odd Lots

The Units issued pursuant to the Issue shall be traded in dematerialised form only and shall be issued in the applicable trading lot. Accordingly, no arrangement for disposal of odd lots are required for the Units issued pursuant to the Issue.

Notices

The Investment Manager and the Lead Manager will dispatch the Letter of Offer, Application Form, the Rights Entitlement Letter and other Issue materials only to Eligible Unitholders holding Units as of the Record Date (i)

who have provided an address in India or (ii) who are foreign corporate or institutional Unitholders in Identified Jurisdictions. The Issue materials will be provided, only through e-mail, by the Registrar on behalf of the Investment Manager or the Lead Manager to Eligible Unitholders.

The Letter of Offer and the Application Form shall also be submitted with the Stock Exchange for making the same available on its website.

V. Procedure for Application

Application Form

The Application Form can be used by the Applicants, Eligible Unitholders as well as the Renouncees, to make Applications in the Issue basis the Rights Entitlements credited in their respective demat accounts or demat suspense escrow account, as applicable. Please note that one single Application Form shall be used by the Applicants to make Applications for all Rights Entitlements available in a particular demat account and applying in the Issue. In case of multiple demat accounts, the Applicants are required to submit a separate Application Form for each demat account.

Applicants will be required, *inter-alia*, to indicate the following in the Application Form:

- name of the Applicant to whom the Units are to be Allotted;
- number of Units held as on the Record Date;
- number of Units entitled to;
- number of Units applied for within the Rights Entitlements;
- number of additional Units applied for, if any;
- total number of Units applied for;
- the details of the Application Amount deposited by the Applicant into the Designated Account;
- details of the demat account to which the Units should be credited;
- the details of the Applicant's bank account along with fund transfer details, in case of any refund;
- that it is permitted to acquire the Units under the laws of any applicable jurisdiction and that it has necessary capacity and authority, and has obtained all necessary consents and authorizations to enable it to commit to this participation in the Issue and to perform its obligations in relation thereto (including, without limitation, on behalf of any person) and honor such obligations;
- it is eligible to invest in India and in the Units under applicable law, including the SEBI Master Circular and the FEMA Rules, and has not been prohibited by the SEBI or any regulatory authority from buying, selling or dealing in units or securities; and
- any other information which may be relevant to the Application.

Please note that Applications without depository account details shall be treated as incomplete and shall be rejected.

Each Applicant shall be required to make payment of the entire Application Amount for the Units at the Issue Price, only through electronic transfer to the Designated Account during the Issue Period, along with the Application Form.

Options available to the Eligible Unitholders

The Rights Entitlement Letter will clearly indicate the number of Units that the Eligible Unitholder is entitled to.

If an Eligible Unitholder applies in the Issue, then such Eligible Unitholder can:

(i) apply for its Units to the full extent of its Rights Entitlements; or
(ii) apply for its Units to the extent of part of its Rights Entitlements (without renouncing the other part); or
(iii) apply for Units to the extent of part of its Rights Entitlements and renounce the other part of its Rights Entitlements; or
(iv) apply for its Units to the full extent of its Rights Entitlements and apply for additional Units in the Issue; or
(v) renounce its Rights Entitlements in full.

Procedure for Application

Applicants may note that forms not filled completely or correctly as per instructions provided in this Letter of Offer and the Application Form are liable to be rejected. The Applications should adhere to the following:

(i) Applications must be made only in the prescribed Application Form;

(ii) Application Form must be completed in full, in BLOCK LETTERS in ENGLISH and in accordance with the instructions contained herein and in the Application Form. Incomplete Application Forms are liable to be rejected. Applicants must provide details of valid and active DP ID, Client ID and PAN clearly and without error. Invalid accounts, suspended accounts or where such account is classified as invalid or suspended shall not be considered for Allotment. Applicants should note that the Registrar, the Lead Manager and the Investment Manager will not be liable for errors in data entry due to incomplete or illegible Application Forms; and

(iii) Applicants are required to sign the Application Form. Applicants should ensure that the thumb impressions and signatures other than in the languages specified in the Eighth Schedule to the Constitution of India, are attested by a Magistrate or a Notary Public or a Special Executive Magistrate under official seal.

Submission of Application Form and Mode of Payment

All Application Forms are required to be duly completed with information including the name of the Applicant, the number of the Units applied for and the Application Amount deposited in the Designated Account, and include details of the bank account from which payment of amount was made as well as a confirmation of funds transfer.

The Application Form is required to be submitted to the Investment Manager and the Registrar electronically at the following addresses:

MMK Toll Road Private Limited
Attention: Mr. Kaustubh Shevade
Email: kaustubh.shevade@irb.co.in

KFin Technologies Limited
Attention: Mr. Williams R/Mr. M Murali Krishna
Email: williams.r@kfintech.com/murali.m@kfintech.com

The Investment Manager and the Registrar are not required to provide any written acknowledgement of the Application Form.

Additional Units

Applicants are eligible to apply for additional Units in the Issue, over and above their Rights Entitlements, provided that they are eligible to apply for Units under applicable law and they have applied for all the Units forming part of their Rights Entitlements without renouncing them in whole or in part. Where the number of additional Units applied for exceeds the number available for Allotment, the Allotment would be made as per the Basis of Allotment finalized in consultation with the Designated Stock Exchange. Applications for additional Units in the Issue, shall be considered and Allotment shall be made in accordance with the InvIT Regulations and in the manner prescribed under the section "*— Basis of Allotment*" on page 649.

Eligible Unitholders who renounce their Rights Entitlements cannot apply for additional Units in the Issue. Non-resident Renouncees, who are not Eligible Unitholders, cannot apply for additional Units in the Issue.

Also see "*Other Regulatory Disclosures – Participation by the Sponsor*" on page 639.

Procedure for Renunciation of Rights Entitlements

The Applicants may renounce the Rights Entitlements, credited to their respective demat accounts, either in full or in part, (a) by using the secondary market platform of the Stock Exchange; or (b) through an off-market transfer, during the Renunciation Period. The Applicants should have the demat Rights Entitlements credited/lying in his/her own demat account prior to the renunciation.

Applicants may be subject to adverse foreign, state or local tax or legal consequences as a result of trading in the Rights Entitlements. Applicants who intend to trade in the Rights Entitlements should consult their tax advisors or stock brokers regarding any cost, applicable taxes, charges and expenses (including brokerage) that may be levied for trading in Rights Entitlements.

The Trust, the Parties to the Trust, the Lead Manager and their respective affiliates accept no responsibility to bear or pay any cost, applicable taxes, charges and expenses (including brokerage), and such costs will be incurred solely by the Applicants.

On Market Renunciation

The Applicants may renounce the Rights Entitlements, credited to their respective demat accounts by trading/selling them on the secondary market platform of the Stock Exchange through a registered stock broker in the same manner as the existing Units of the Trust.

In this regard, the Rights Entitlements credited to the respective demat accounts of the Eligible Unitholders shall be admitted for trading on the Stock Exchange under ISIN INE0C8K20042 subject to requisite approvals. The details for trading in Rights Entitlements will be as specified by the Stock Exchange from time to time.

The Rights Entitlements are tradable in dematerialized form only.

The On Market Renunciation shall take place only during the Renunciation Period for On Market Renunciation, i.e., on August 3, 2023.

The Applicants holding the Rights Entitlements who desire to sell their Rights Entitlements will have to do so through their registered stock brokers by quoting the ISIN and indicating the details of the Rights Entitlements they intend to sell. The Applicants can place order for sale of Rights Entitlements only to the extent of Rights Entitlements available in their demat account.

The On Market Renunciation shall take place electronically on secondary market platform of NSE under automatic order matching mechanism in accordance with the settlement rules of the Stock Exchange. The transactions will be settled on trade-for-trade basis. Upon execution of the order, the stock broker will issue a contract note in accordance with the requirements of the Stock Exchange and SEBI.

Off Market Renunciation

The Eligible Unitholders may renounce the Rights Entitlements credited to their respective demat accounts by way of an offmarket transfer through a depository participant. The Rights Entitlements can be transferred in dematerialised form only.

Eligible Unitholders are requested to ensure that renunciation through off-market transfer is completed in such a manner that the Rights Entitlements are credited to the demat account of the Renouncees on or prior to the Issue Closing Date.

The Applicants holding the Rights Entitlements who desire to transfer their Rights Entitlements will have to do so through their depository participant by issuing a delivery instruction slip, the details of the buyer and the details of the Rights Entitlements they intend to transfer. The buyer of the Rights Entitlements (unless already having given a standing receipt instruction) has to issue a receipt instruction slip to their depository participant. The Applicants can transfer Rights Entitlements only to the extent of Rights Entitlements available in their demat account.

The instructions for transfer of Rights Entitlements can be issued during the working hours of the depository participants and only during the Renunciation Period. The detailed rules for transfer of Rights Entitlements through off-market transfer shall be as specified by the NSDL and CDSL from time to time.

In cases where multiple Application Forms are submitted for Applications pertaining to Rights Entitlements credited to the same demat account, such Applications shall be liable to be rejected.

Applicants are requested to strictly adhere to these instructions. Failure to do so could result in an Application being rejected, with the Trust, the Sponsor, the Investment Manager, the Trustee, the Lead Manager and the

Registrar not having any liability to the Applicant.

Allotment of the Units in Dematerialized Form

Please note that the Units applied for in the Issue can be allotted only in dematerialized form and to the same depository account in which the Units are held by such investor on the Record Date.

Grounds for Technical Rejection

Applications made in the Issue are liable to be rejected on the following grounds:

(a) DP ID and Client ID mentioned in Application not matching with the DP ID and Client ID records available with the Registrar.
(b) Account holder not signing the Application or declaration mentioned therein.
(c) Submission of more than one application for Rights Entitlements available in a particular demat account.
(d) Submitting the GIR number instead of the PAN (except for Applications on behalf of the Central or State Government, the residents of Sikkim, the officials appointed by the courts and persons exempt from holding a PAN under applicable law).
(e) Applications by persons not competent to contract under the Indian Contract Act, 1872, except Applications by minors having valid demat accounts as per the demographic details provided by the Depositories.
(f) Application Forms which are not submitted by the Applicants within the time periods prescribed in the Application Form and the Letter of Offer.
(g) Physical Application Forms not duly signed by the sole or joint Applicants.
(h) Application Forms accompanied by stock invest, outstation cheques, post-dated cheques, money order, postal order or outstation demand drafts.
(i) If an Applicant is debarred by SEBI.
(j) Applications which: (i) appears to the Investment Manager or its agents to have been executed in, electronically transmitted from or dispatched from the United States or other jurisdictions where the offer and sale of the Units is not permitted under laws of such jurisdictions; (ii) does not include the relevant certifications set out in the Application Form, including to the effect that the person submitting and/or renouncing the Application Form is not in the United States and eligible to subscribe for the Units under applicable securities laws or; or (iii) where the Investment Manager believes acceptance of such Application Form may infringe applicable legal or regulatory requirements; and the Investment Manager shall not be bound to issue or allot any Units in respect of any such Application Form.
(k) Multiple application forms.

Depository account and bank details for Applicants holding Units in demat accounts and applying in the Issue

INVESTORS MUST ENSURE THAT THE NAME GIVEN IN THE APPLICATION FORM IS EXACTLY THE SAME AS THE NAME IN WHICH THE DEPOSITORY ACCOUNT IS HELD. IN CASE THE APPLICATION FORM IS SUBMITTED IN JOINT NAMES, IT SHOULD BE ENSURED THAT THE DEPOSITORY ACCOUNT IS ALSO HELD IN THE SAME JOINT NAMES AND ARE IN THE SAME SEQUENCE IN WHICH THEY APPEAR IN THE APPLICATION FORM.

Applicants applying under the Issue should note that on the basis of name of the Applicants, Depository Participant's name and identification number and beneficiary account number provided by them in the Application Form, the Registrar will obtain Demographic Details from the Depository. Hence, Applicants applying under the Issue should carefully fill in their Depository Account details in the Application.

These Demographic Details would be used for all correspondence with such Applicants including mailing of the letters intimating unblocking of bank account of the respective Applicant and/or refund. The Demographic Details given by the Applicants in the Application Form would not be used for any other purposes by the Registrar. Hence, Applicants are advised to update their Demographic Details as provided to their Depository Participants.

By signing the Application Forms, the Applicants would be deemed to have authorised the Depositories to provide, upon request, to the Registrar, the required Demographic Details as available on its records.

In case no corresponding record is available with the Depositories that match three parameters, (a) names of the Applicants, (b) the DP ID, and (c) the beneficiary account number, then such Application Forms are liable to be rejected.

Last date for Application

The last date for submission of the duly filled in the Application Form is August 8, 2023, being the Issue Closing Date. The Investment Manager will have the right to extend the Issue Period as it may determine from time to time, provided that the Issue will not remain open for a period longer than 15 Working Days.

Please ensure that the Application Form and necessary details are filled in. In place of Application number, Applicants can mention the reference number of the e-mail received from Registrar informing about their Rights Entitlement or last eight digits of the demat account.

Withdrawal of Application

No Applicant shall withdraw their Application post the Issue Closing Date.

Issue Schedule

Last date for credit of Rights Entitlements	August 2, 2023
Issue Opening Date	August 3, 2023
Last date for On-Market Renunciation of Rights Entitlements*	August 3, 2023
Issue Closing Date#	August 8, 2023
Finalization of Basis of Allotment	On or about August 9, 2023
Date of Allotment	On or about August 9, 2023
Date of Credit of Units	On or about August 10, 2023
Date of Listing	On or about August 10, 2023

** Eligible Unitholders are requested to ensure that any renunciation is completed in such a manner that Rights Entitlements are credited to the demat accounts of the Renouncees on or prior to the Issue Closing Date.*

 # The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will open for a period of at least three Working Days and will not remain open for a period longer than 15 Working Days.

VI. Basis of Allotment

Subject to the provisions contained in this Letter of Offer, the Rights Entitlement Letter, the Application Form, the Indenture of Trust and the approval of the Designated Stock Exchange, the Investment Manager will proceed to Allot the Units in the following order of priority:

(a) Full allotment to those Eligible Unitholders who have applied for their Rights Entitlement either in full or in part and also to the renouncee(s), who has/have applied for the Units renounced in their favour, in full or in part, as adjusted for fractional entitlement;

(b) Allotment to Eligible Unitholders who having applied for the Units in full to the extent of their Rights Entitlement and have also applied for additional Units shall be made as far as possible on an equitable basis, having due regard to the number of Units held by them on the record date, provided there is an undersubscribed portion after making allotment in (a) above;

(c) Allotment to the Renouncees, who having applied for the Units renounced in their favour and also applied for additional Units, provided there is an undersubscribed portion after making full allotment specified in (a) and (b) above. The allotment of such additional Units may be made on a proportionate basis;

(d) Allotment to the Sponsor and its associates who are Eligible Unitholders and who have disclosed their intent to subscribe to additional Units, if there is an unsubscribed portion after making full allotment specified in (a), (b) and (c) above (in this regard see "*Other Regulatory Disclosures – Participation by the Sponsor*" on page 639); and

(e) Allotment to the underwriter appointed for the Issue, if any, at the discretion of the board of directors of the Investment Manager, subject to disclosure in the Letter of Offer.

The Units allotted in the manner specified above shall be listed within six Working Days from the Issue Closing Date, or such other timeline as may be prescribed under Applicable Law.

VII. Allotment Advice or Refund

The Investment Manager will email Allotment Advice, refund intimations or demat credit of securities and/or letters of regret, along with crediting the Allotted Units to the respective beneficiary accounts (only in dematerialised mode), if any, within a period of 15 days from the Issue Closing Date. In case of failure to do so, the Investment Manager and the Trustee shall pay interest at such rate as specified under applicable law.

The Rights Entitlements will be credited in the dematerialized form using electronic credit under the depository system and the Allotment Advice shall be sent, through email, to the email address provided to the Investment Manager or at the address recorded with the Depository.

In the case of non-resident Applicants who remit their Application Amount from funds held in the NRE or the FCNR Accounts, refunds and/or payment of interest or dividend and other disbursements, if any, shall be credited to such accounts.

Payment of Refund

The payment of refund, if any, including in the event of oversubscription or failure to list or otherwise would be done through electronic mode or such other modes as may be permitted under applicable law.

Dematerialized Credit of Units

The demat credit of Units to the respective beneficiary accounts will be credited within the timelines required under applicable laws.

Applicants shall be Allotted the Units in dematerialized (electronic) form. The Investment Manager and the Registrar have entered into:

- Agreement dated January 14, 2020 with NSDL; and
- Agreement dated January 16, 2020 with CDSL.

The Investment Manager shall file an allotment report with the SEBI providing details of the Allottees and the Allotment made within 15 days of the Issue Closing Date.

INVESTORS MAY PLEASE NOTE THAT THE UNITS CAN BE TRADED ON THE STOCK EXCHANGE ONLY IN DEMATERIALIZED FORM.

IMPORTANT

1. Please read the Letter of Offer carefully before taking any action. The instructions contained in the Application Form and the Rights Entitlement Letter are an integral part of the conditions of the Letter of Offer and must be carefully followed; otherwise the Application is liable to be rejected.

2. All enquiries in connection with the Letter of Offer, the Rights Entitlement Letter or Application Form must be addressed (quoting the Registered Folio Number or the DP ID and Client ID number, the Application Form number and the name of the first Eligible Unitholder as mentioned on the Application Form and postmarked in India or in the e-mail) to the Registrar at the following address:

   KFin Technologies Limited
   B, Plot No. 31 &32 Gachibowli Financial District, Nanakramguda
   Hyderabad 500 032, Telangana
   Attention: M. Murali Krishna
   E-mail: einward.ris@kfintech.com

The Investment Manager will have the right to modify the Issue Period as it may determine from time to time, provided that the Issue will remain open for at least three Working Days and will not remain open for a period longer than 15 Working Days.

SECTION X – OTHER INFORMATION

MATERIAL CONTRACTS AND DOCUMENTS FOR INSPECTION

The following contracts, which are or may be deemed material have been entered into among the relevant parties. These contracts and also the documents for inspection referred to hereunder, may be inspected by Eligible Unitholders at the office of the Trust at New Delhi, from 10:00 A.M. to 5:00 P.M., from the date of this Letter of Offer until the Issue Closing Date, on Working Days.

A. Material Contracts

1. Amended and restated issue agreement dated August 2, 2023 among the Trustee (on behalf of the Trust), the Investment Manager and the Lead Manager;

2. Amended and restated registrar agreement dated August 2, 2023 among the Trustee (on behalf of the Trust), the Investment Manager and the Registrar to the Issue;

3. Cash escrow agreement dated August 2, 2023 among the Trustee (on behalf of the Trust), the Investment Manager, the Lead Manager and the Escrow Collection Bank;

4. The Framework Agreement, among the Sponsor, the Investment Manager, Bricklayers Investment Pte. Ltd, Chiswick Investments Pte. Ltd, Dangenham Investment Pte. Ltd, Anahera Investment Pte. Ltd and Stretford End Investment Pte. Ltd., dated August 6, 2019, as amended;

5. The Indenture of Trust, between the Sponsor and the Trustee, dated August 27, 2019, as amended;

6. The Investment Management Agreement, among the Trustee and the Investment Manager, dated August 27, 2019, as amended;

7. The name licensing agreement among the Sponsor, the Trustee (on behalf of the Trust), the Investment Manager and each of the Project SPVs dated February 13, 2020, as amended.

8. Shareholders' agreement dated August 6, 2019, as amended, among the Sponsor, Croxley and the Investment Manager, as amended;

9. The concession agreement between AETL and NHAI dated September 1, 2015, together with any amendments or supplements thereto;

10. The concession agreement between CGTL and NHAI dated December 9, 2016, together with any amendments or supplements thereto;

11. The concession agreement between IRB HMTL and NHAI dated May 29, 2018, together with any amendments or supplements thereto;

12. The concession agreement between IRB WTL and NHAI dated March 25, 2013, together with any amendments or supplements thereto;

13. The concession agreement between KGTL and NHAI dated February 22, 2018, together with any amendments or supplements thereto;

14. The concession agreement between KTL and NHAI dated June 23, 2014, together with any amendements or supplements thereto;

15. The concession agreement between SYTL and NHAI dated March 3, 2014, together with any amendements or supplements thereto;

16. The concession agreement between UTL and NHAI dated December 9, 2016, together with any amendements or supplements thereto;

17. The concession agreement between YATL and NHAI dated May 30, 2014, together with any

amendements or supplements thereto;

18. The concession agreement between PDTPL and NHAI dated June 14, 2021, together with any amendements or supplements thereto;

19. The Project Implementation Agreements, each dated February 3, 2020, among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and each of the Project SPVs (except PDTPL), as amended, and the project implementation agreement dated May 19, 2022 among the Trustee (on behalf of the Trust), the Investment Manager, the Project Manager and PDTPL;

20. The Debt Novation Agreements dated February 19, 2020, as amended;

21. The Project SPV Shareholder Loan Agreements dated February 19, 2020 (for all Project SPVs except PDTPL) and April 7, 2022 (for PDTPL);

22. The concession agreement among IRB GEPL, HMDA, HGCL and the Sponsor dated May 26, 2023, together with any amendments or supplements thereto;

23. The IRB GEPL Share Subscription Agreement;

24. The IRB GEPL Shareholder Loan Agreement; and

25. The IRB GEPL Project Implementation Agreement.

B. Material Documents

1. Certificate of registration of the Trust as an infrastructure investment trust dated November 25, 2019 issued by the SEBI and letter dated January 30, 2020 issued by the SEBI;

2. The resolutions of the board of directors of the Investment Manager dated July 18, 2023, July 24, 2023, July 27, 2023 and August 2, 2023 in connection with the Issue;

3. Consent of the Auditor in relation to the statement of tax benefits dated July 29, 2023, the reports on the Consolidated Financial Information, the reports on the Standalone Financial Information and the report on the audited financial information of IRB GEPL as of and for the period from May 13, 2023 to June 30, 2023 included in this Letter of Offer;

4. Consent of the Lead Manager, Registrar, Traffic Consultant, Escrow Collection Bank, legal counsel and the Compliance Officer;

5. Consent of the Valuer in relation to the Target Valuation Report included in this Letter of Offer;

6. The letter from the NHAI dated January 3, 2020 in connection with the transfer of the Project SPVs to the Trust and other matters;

7. Tripartite Agreement dated January 14, 2020, among the Investment Manager (on behalf of the Trust), NSDL and the Registrar and Unit Transfer Agent;

8. Tripartite Agreement dated January 16, 2020, among the Investment Manager (on behalf of the Trust), CDSL and the Registrar and the Unit Transfer Agent;

9. Letter dated July 26, 2023 issued by the SEBI; and

10. In-principle listing approval dated July 31, 2023 issued by the NSE.

Any of the contracts or documents mentioned in this Letter of Offer may be amended or modified at any time if so required in the interest of the Trust or if required by the other parties, without reference to the Unitholders, subject to compliance with applicable law.

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Virendra D. Mhaiskar
Non-independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Kunnasagaran Chinniah
Non-independent Director
Date: August 2, 2023
Place: Singapore

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Boon Chin Hau
Additional Non-independent Director
Date: August 2, 2023
Place: Phuket

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Aryan Mhaiskar
Additional Non-independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. K G Krishnamurthy
Independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mrs. Ranjana Paranjape
Independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Nagendraa Parakh
Additional Independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Investment Manager hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Investment Manager further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **MMK Toll Road Private Limited**

Mr. Amyn Jassani
Additional Independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Trustee (on behalf of the Trust) hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Trustee (on behalf of the Trust) further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

SIGNED BY THE TRUSTEE (ON BEHALF OF THE TRUST)

For **IDBI Trusteeship Services Limited**
Authorized Signatory
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Virendra D. Mhaiskar
Chairman and Managing Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mrs. Deepali V. Mhaiskar
Whole-time Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Jose Tamariz Martel Goncer
Non-Executive Director
Date: August 2, 2023
Place: Madrid, Spain

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Ravindra Dhariwal
Non-Executive Director
Date: August 2, 2023
Place: New Delhi

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Sunil Talati
Independent Director
Date: August 2, 2023
Place: Ahmedabad

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Chandrashekhar S. Kaptan
Independent Director
Date: August 2, 2023
Place: Nagpur

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Mr. Sandeep J. Shah
Independent Director
Date: August 2, 2023
Place: Mumbai

DECLARATION

The Sponsor hereby declares and certifies that all relevant provisions of the InvIT Regulations, including Chapter 9 of the SEBI Master Circular, issued by the SEBI have been complied with and no statement made in this Letter of Offer is contrary to the provisions of Chapter 9 of the SEBI Master Circular, the InvIT Regulations, the SCRA, the SEBI Act, or rules, regulations, and guidelines issued thereunder (as the case may be). The Sponsor further certifies that all the statements and disclosures in this Letter of Offer are material, true, correct, not misleading and are adequate in order to enable the investors to make an informed decision.

For **IRB Infrastructure Developers Limited**

Ms. Priti Savla
Independent Director
Date: August 2, 2023
Place: Mumbai

ANNEXURE A

TRAFFIC REPORTS

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AGRA TO ETAWAH (KM 199.660 TO KM 323.525) SECTION OF NH-2 IN THE STATE OF UTTAR PRADESH.



APRIL 2023

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD Consultants

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AGRA TO ETAWAH (KM 199.660 TO KM 323.525)

SECTION OF NH-2 IN THE STATE OF

UTTAR PRADESH.

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, **Agra** to **Etawah** section of NH-2 from km 199.660 to km 323.525is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s AE Tollway. Ltd*. (Concessionaire) has been awarded the Project for a concession period of 24 years starting from 1st August 2016. The Project has been commissioned and is currently in the operation / maintenance phase. Six Laning of project has also been completed in Nov 2020.

Length of project road is 123.865 Kms. The project road is section of NH-2, which starts from Delhi and ends at Kolkata and is a part of the Golden Quadrilateral Project. The project road section passes through the districts of Agra, Firozabad and Etawah.

Project road alignment passes through the towns/ built-up areas of Tundla, Firozabad, Shikohabad, Sirsaganj, & Jaswantnagar. Following figure shows alignment of project road section from Agra to Etawah.

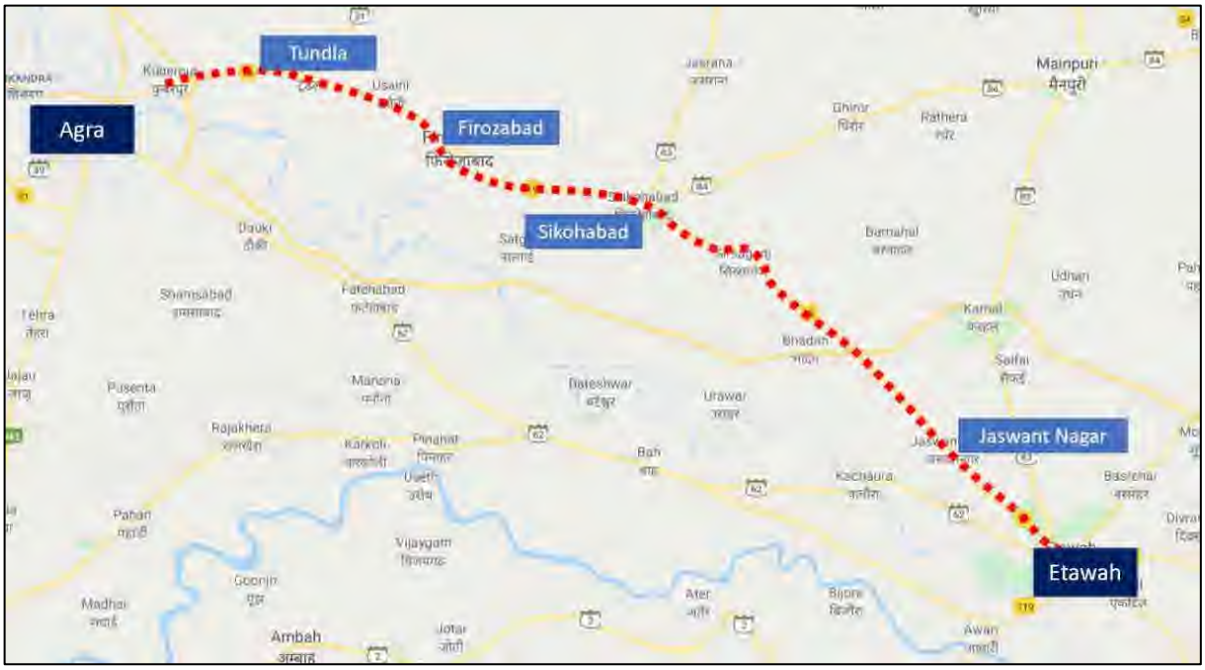


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 2 (NH 2) which is now renumbered as NH-19 is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of historical grand truck road.

It connects the national capital Delhi to the Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral project undertaken by National Highways Authority of India (NHAI).

The project road is a link between Agra and Kanpur in the state of Uttar Pradesh. The main project influence area of the project road consists of the three districts through which the project road passes. In addition, the project influence area includes the districts of Kanpur, Mathura and Aligarh also.

2.2 Project Stretch Description

Section of NH-2 from Agra to Etawah is part of major transportation link in the area connecting industrial cities of Agra- Kanpur and Lucknow. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Firozabad has famous glass work industry. Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are two operative toll plazas at project stretch. First is at Tundla at Km 224.950 and second at Gurau at Km 285.200. Following figure show project alignment and toll plaza locations.



Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. Following photographs illustrate project section along the corridor.





Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza locations on Agra- Etawah section of NH-2 for year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22 and traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 224.950 Toll Plaza at Tundla	AADT for Year 2017-18, 2018-19, 2019-20,2020-21 ,2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21, 2021-22 & 2022-2023
2	Km 285.200 Toll Plaza at Gurau	AADT for Year 2017-18, 2018-19, 2019-20,2020-21 ,2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21,2021-22 & 2022-2023	For Year 2017-18, 2018-19, 2019-20, 2020-21 ,2021-22 & 2022-2023

Toll plaza no. 1 & 2 are located in Uttar Pradesh.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for year 2019-20 ,2020-21, 2021-22 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Gurau Toll Plaza at Km 285.200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23
1	CAR	2071	3535	5268	3371
2	LCV	1097	1286	919	748
3	BUS	494	492	635	530
4	Truck	891	1100	1351	1410
5	3-Axle	901	909	882	839
6	Multi Axle	1426	1760	2138	2386
7	Oversize Vehicle	11	8	4	10
	Total	**6892**	**9090**	**11197**	**9292**

Table 3-4 : Traffic Data at Tundla Toll Plaza at Km 224.950

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23
1	CAR	8324	5849	7347	8954
2	LCV	1917	1514	1012	1082
3	BUS	1148	777	856	1181
4	Truck	1309	1272	1506	1775
5	3-Axle	955	948	924	887
6	Multi Axle	1255	1725	2179	2372
7	Oversize Vehicle	10	11	8	10

	Total	**14918**	**12096**	**13832**	**16260**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July - 21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed due to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-5**.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Gurau Km 285.200	6892	17043	2.47
	Tundla Km 224.950	14918	27128	1.82
2020-2021	Gurau Km 285.200	9090	20922	2.30
	Tundla Km 224.950	12096	24923	2.06
2021-2022	Gurau Km 285.200	11197	24889	2.22
	Tundla Km 224.950	13832	28565	2.07
2022-2023	Gurau Km 285.200	9292	23606	2.54

	Tundla Km 224.950	16260	32820	2.02

It can be observed from above that project traffic has PCU index close to 2.5 at Guarau which is an indicator of high proportion of commercial traffic in traffic mix. At Tundla the index is ore toward passenger traffic due to urban impact. Following figure illustrates variation of PCU index at two toll plaza locations.

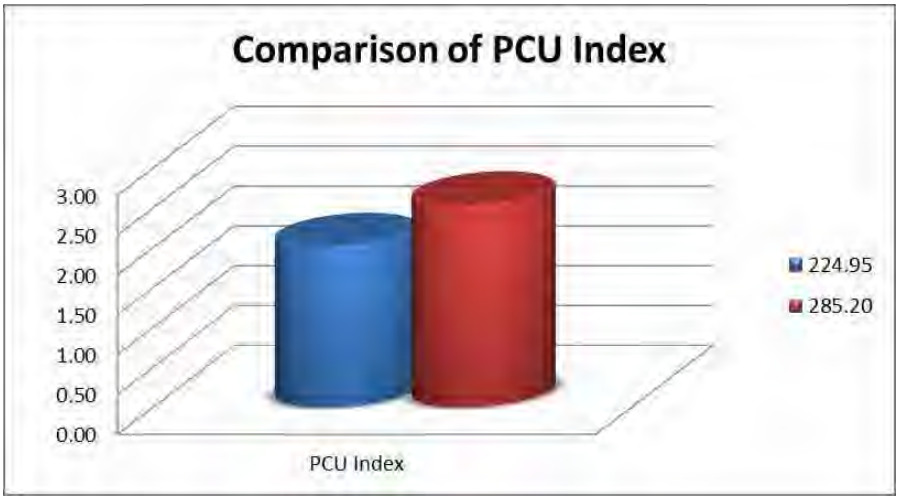


Figure 3-1: Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

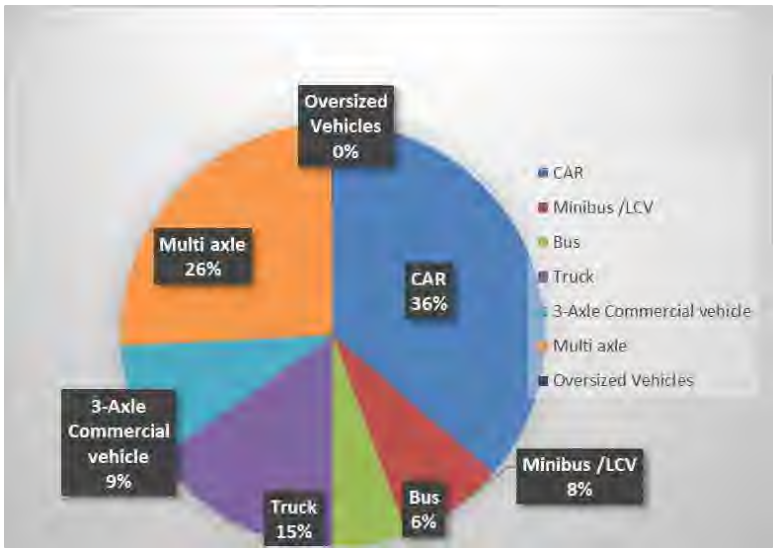


Figure 3-2 :Model Split of Tollable Vehicle-Km 285.200

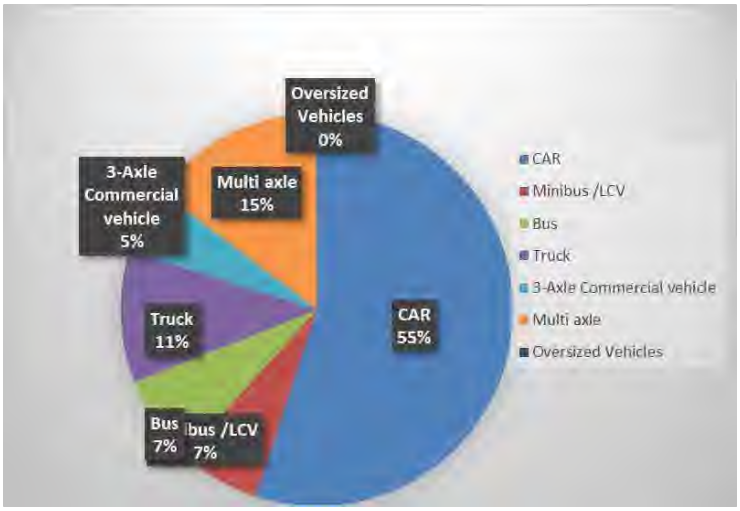


Figure 3-3 :Model Split of Tollable Vehicle-Km 224.950

It is observed that car traffic forms about 36% of total traffic at Gurau toll plaza location while multi axle commercial vehicles and trucks are about 64% of total traffic.

While at Tundla toll plaza car share rises to 55% and commercial vehicles multi axle and trucks share about 45%. This is due presence of strong urban impact of Tundla.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23

Table 3-7 : Journey Type Bifurcation of Traffic at Gurau Toll Plaza KM 285.200

Sr. No	Type	Traffic Volume (Nos.)
		2022-23
1	Single Journey	6354
2	Return Journey	2894
3	Local Commercial Single Journey	24

4	Monthly Pass Local	8
5	Monthly Pass	12

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 69%. Return journey component is 31%. The number of monthly pass is 0% at Gurau toll plaza. This indicates higher share of long traffic.

Following tables give the detail of journey distribution at Tundla toll plaza at Km 224.950.

Table 3-8 : Journey Type Bifurcation of Traffic at Tundla Toll Plaza KM 224.950

Sr. No	Type	Traffic Volume (Nos.)
		2022-23
1	Single Journey	8021
2	Return Journey	7992
3	Local Commercial Single Journey	85
4	Monthly Pass Local	140
5	Monthly Pass	22

At Tundla toll plaza single journey share drops to 49% while return share is 49% respectively. Monthly pass is 0% and Local 2%.

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, for analysis point of view there can be one alternate route using Agra Lucknow Expressway at local level.

At regional level, this route connects Delhi to Kanpur and then goes towards Pryagraj and West Bengal. Most obvious alternate route is through Lucknow – Agra Expressway again.

Following maps show these routes in relation to project stretch at both local and regional level.



Figure 4-1: Alternate route at regional level



Figure 4-2: Alternate route at local level

It can be observed that project highway forms the one of the main spines of the corridor between Agra and Etawah. Agra – Lucknow Expressway is a faster connectivity for obvious regions. It's in operation for last few years and most of the traffic which had potential of diversion had done it so. Traffic on project road is now settled and it can be assumed as

dedicated traffic on project road for logistic obligations. With six laning now complete, project stretch has become slightly more attractive due to improved level of service.

At regional level also the difference between two alignment is only of Agra- Lucknow Expressway. Hence there too, regional level traffic is expected to have settled.

Following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Delhi to Kanpur Via Agra-Lucknow Expressway	Alternate Route	474	70	6 Hr 40 Min	Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Delhi to Kanpur Via Project Road (NH-19)	Project Road	470	65	7 Hr 10 Min	
Local Level						
2	Agra to Etawah Via Agra-Lucknow Expressway	Alternate Route	123	65	1 Hr. 52 Min	Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Agra to tawah Via Project Road (NH-19)	Project Road	129	50	2 Hr. 30 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that during its construction phase project road had many bottlenecks like Firozabad bypass etc. Due to this part of traffic preferred Agra Lucknow expressway over project road despite higher toll tariff at Agra – Lucknow Expressway. Now as these bottlenecks are removed it is expected that some part of traffic would return to Project Corridor due to improved level of service and low toll fee as compared to Agra – Lucknow Expressway.

CHAPTER 5
GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Surat- Dahisar section of NH-8has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Uttar. Toll plazas at Tunda and Gurau are in the state of Uttar Pradesh. Project corridor has certain impact of traffic from Delhi,

and Haryana also. For elasticity calculations, working data from these states has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Uttar Pradesh State.

Table 5-1 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	32002	1108100	4.51	6.04		
2013	32908	1205374	4.52	6.08	3%	
2014	34044	1423020	4.53	6.15	3%	
2015	34583	1572217	4.54	6.20	2%	
2016	36973	1746117	4.57	6.24	7%	
2017	40641	2027972	4.61	6.31	10%	4.94%

Regression analysis of same is given in figure below

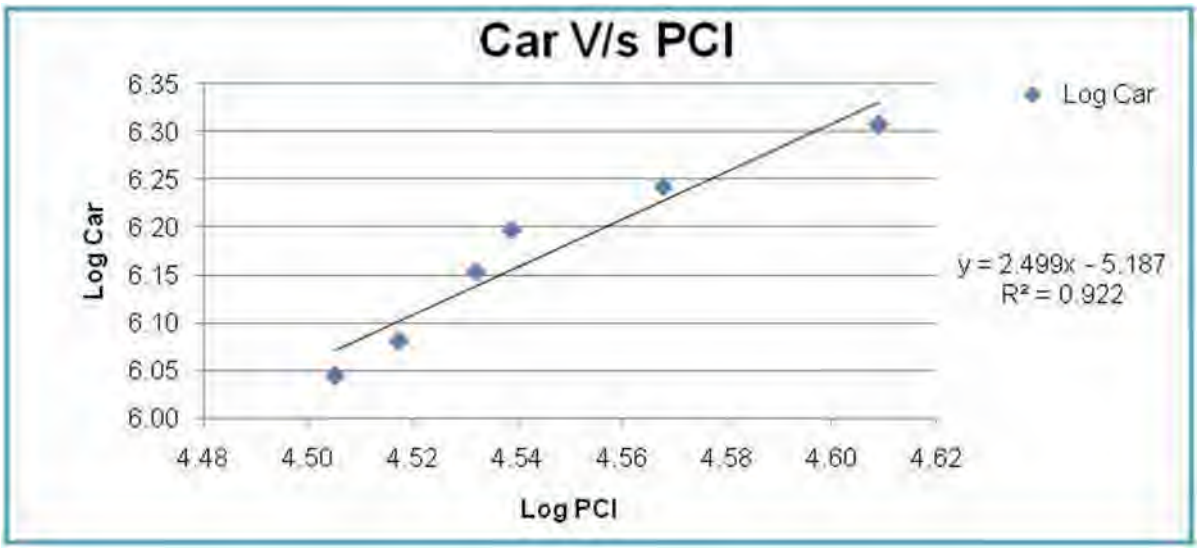


Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Uttar Pradesh

Table 5-2 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	199812341	57901	8.30	4.76		
2013	203382046	64147	8.31	4.81	2%	
2014	206942855	74389	8.32	4.87	2%	
2015	210493544	80460	8.32	4.91	2%	
2016	214032922	89127	8.33	4.95	2%	
2017	217559836	112020	8.34	5.05	2%	1.72%

Regression analysis of same is given in figure below

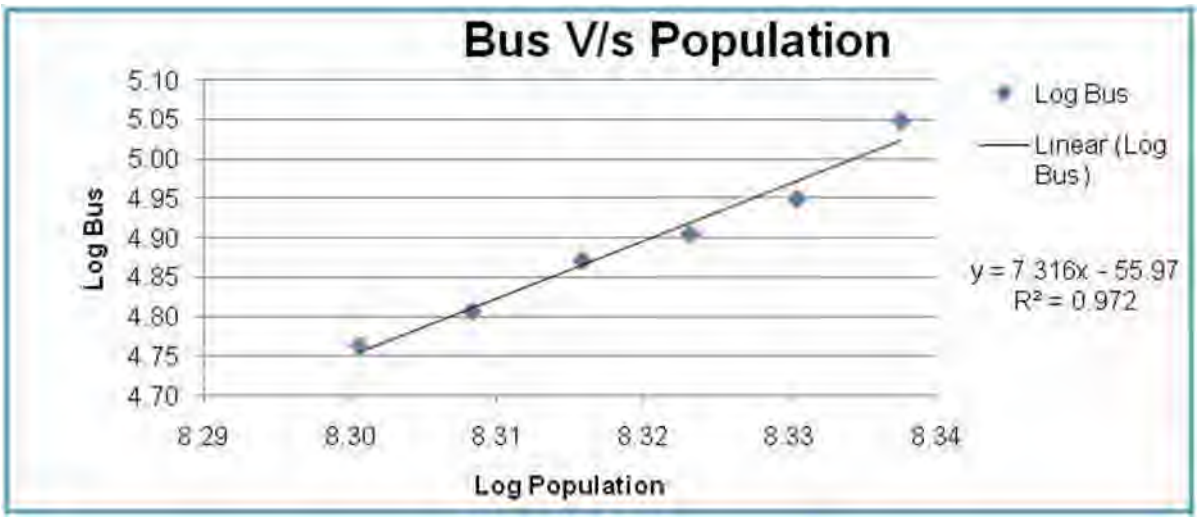


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	176164	5.81	5.25		
2013	673552	213657	5.83	5.33	4%	
2014	707469	265025	5.85	5.42	5%	
2015	729686	294022	5.86	5.47	3%	
2016	792049	316815	5.90	5.50	9%	5.28%

Following figure depict regression analysis and extrapolation.

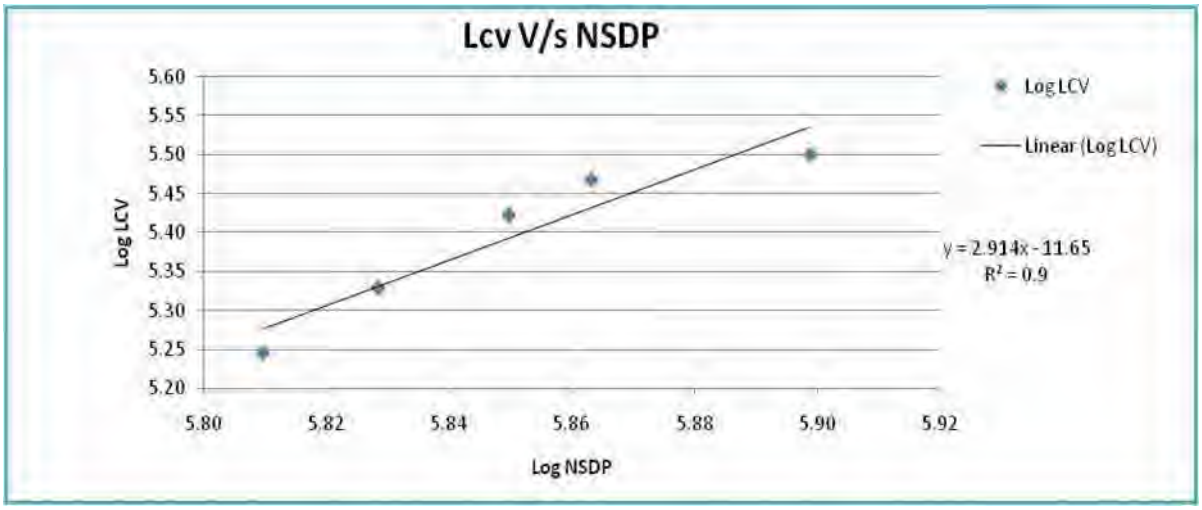


Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Uttar Pradesh

Table 5-4 : Truck Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	162813	5.81	5.21		
2013	673552	186404	5.83	5.27	4%	
2014	707469	202761	5.85	5.31	5%	
2015	729686	217609	5.86	5.34	3%	
2016	792049	245688	5.90	5.39	9%	
2017	883962	265167	5.95	5.42	12%	6.55%

Following figure depict regression analysis and extrapolation.

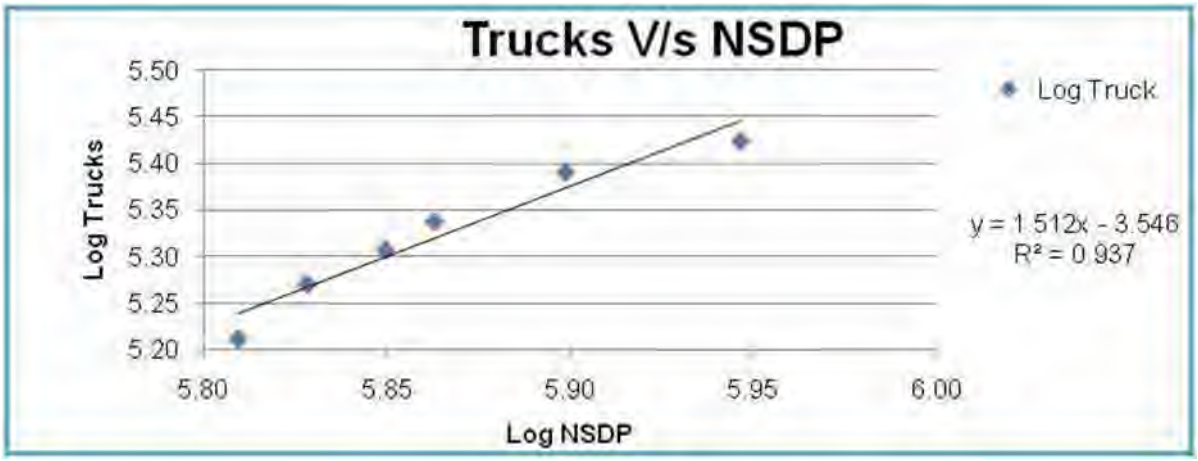


Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Uttar Pradesh

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 2.499x + -5.1874	R^2 = 0.922	2.4990	4.94%	12.34%	Good Regression
	Bus	Population	y = 7.3167x - -55.9791	R^2 = 0.9726	7.3167	1.72%	12.56%	Good Regression
	LCV	NSDP	y = 2.9149x - -11.6585	R^2 = 0.9	2.9149	5.28%	15.40%	Good Regression
	Truck	NSDP	y = 1.5121x - -3.5463	R^2 = 0.9373	1.5121	6.55%	9.90%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-6 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	185361	2172069	5.27	6.34		
2013	193175	2416974	5.29	6.38	4%	
2014	202216	2568380	5.31	6.41	5%	
2015	215726	2730071	5.33	6.44	7%	
2016	235737	2986579	5.37	6.48	9%	
2017	247255	3061817	5.39	6.49	5%	5.95%

Regression analysis of same is given in figure below

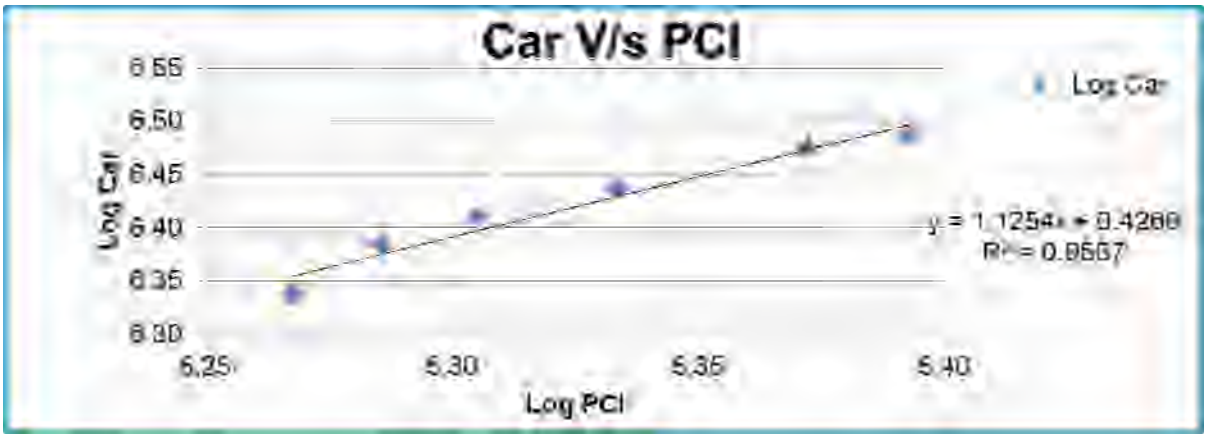


Figure 5-5: Regression and Elasticity PCI vs. Car–Extrapolation Delhi

Table 5-7 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	16787941	109790	7.22	5.04		
2013	17071599	19917	7.23	4.30	2%	
2014	17354281	19595	7.24	4.29	2%	
2015	17635897	19700	7.25	4.29	2%	
2016	17916359	43723	7.25	4.64	2%	
2017	18195583	41686	7.26	4.62	2%	1.62%

Regression analysis of same is given in figure below

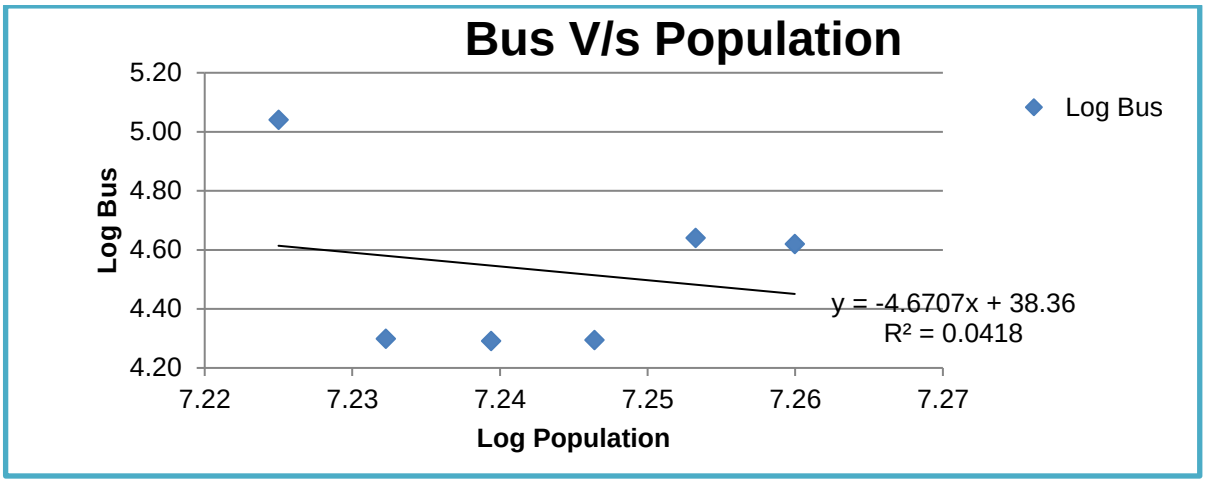


Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Delhi

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Delhi

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	314650	124547	5.50	5.10		
2013	334193	126539	5.52	5.10	6%	
2014	356528	136110	5.55	5.13	7%	
2015	387639	145903	5.59	5.16	9%	
2016	431730	183486	5.64	5.26	11%	
2017	461476	221068	5.66	5.34	7%	7.98%

Following figure depict regression analysis and extrapolation.

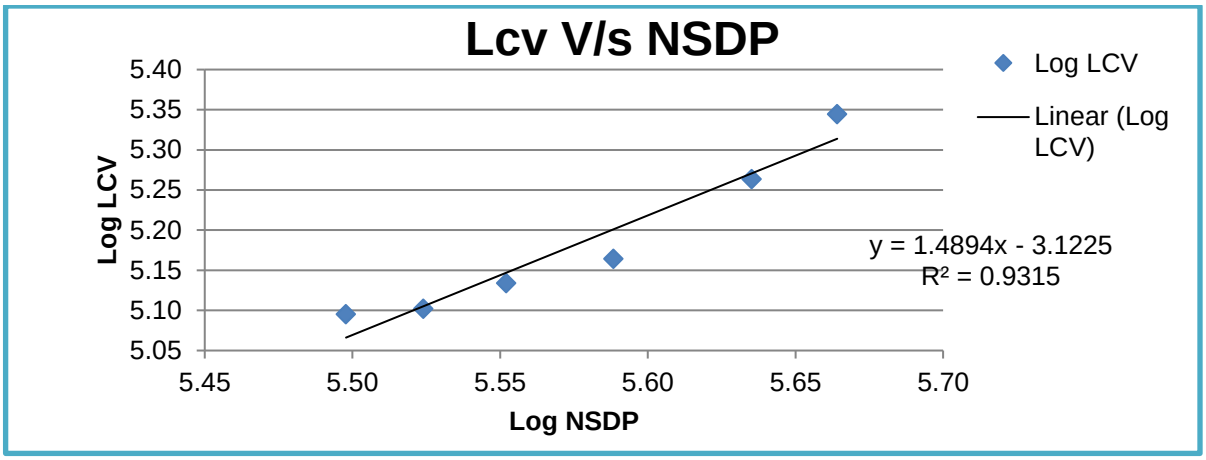


Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Delhi

Table 5-9 : Truck Traffic Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	314650	4792	5.50	3.68		
2013	334193	5176	5.52	3.71	6%	
2014	356528	6093	5.55	3.78	7%	
2015	387639	7503	5.59	3.88	9%	
2016	431730	8703	5.64	3.94	11%	
2017	461476	10440	5.66	4.02	7%	7.98%

Following figure depict regression analysis and extrapolation.

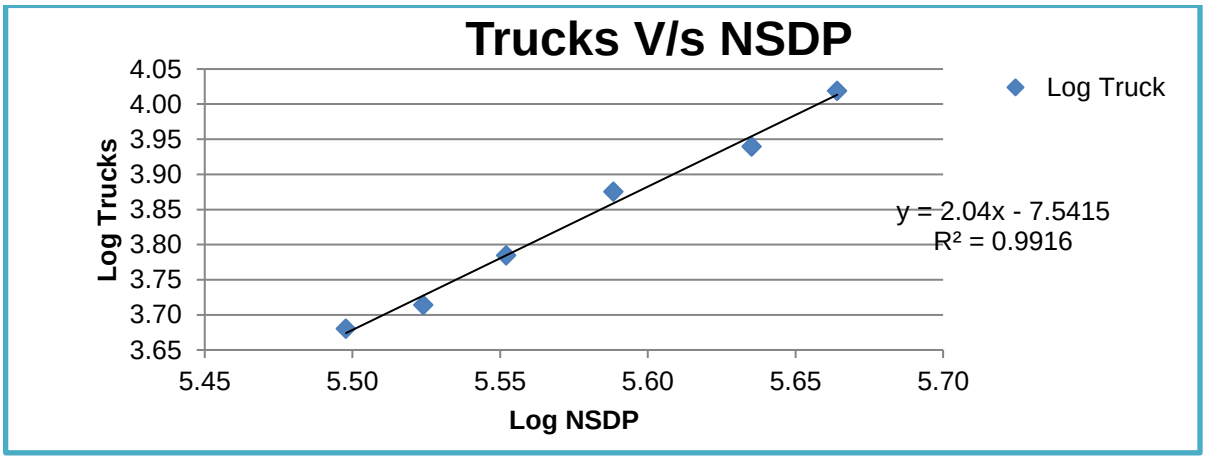


Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Delhi

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Delhi	Car/Jeep	PCI	y = 1.1254x + 0.4266	R² = 0.9567	1.1254	5.95%	6.69%	Good Regression
	Bus	Population	y = -4.6707x - 38.36	R² = 0.0418	-4.6707	1.62%	-7.58%	Poor Regression
	LCV	NSDP	y = 1.4894x - -3.1225	R² = 0.9315	1.4894	7.98%	11.88%	Good Regression
	Truck	NSDP	y = 2.04x - -7.5415	R² = 0.9916	2.0400	7.98%	16.27%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-11 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	989519	5.03	6.00		
2013	111780	1134616	5.05	6.05	5%	
2014	119791	1278272	5.08	6.11	7%	
2015	125032	1420621	5.10	6.15	4%	
2016	137818	1711692	5.14	6.23	10%	
2017	150241	1851788	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below

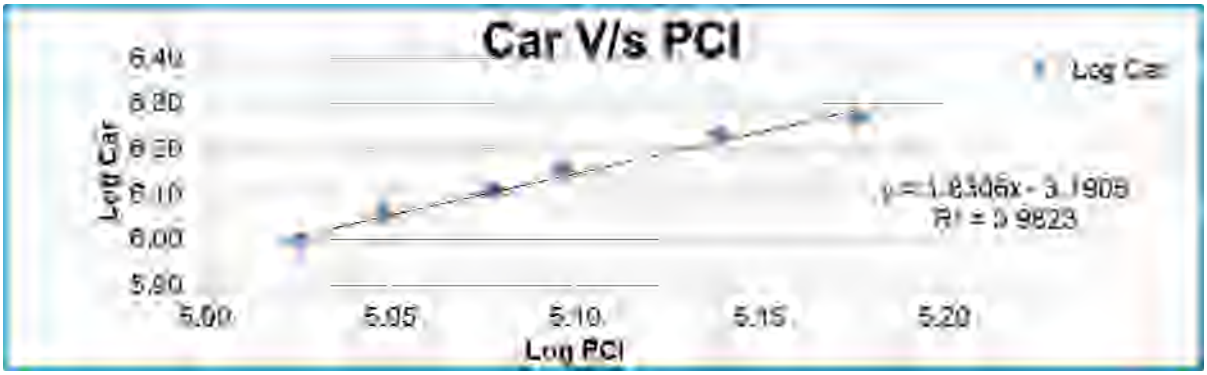


Figure 5-9: Regression and Elasticity PCI vs. Car–Extrapolation Haryana

Table 5-12 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below

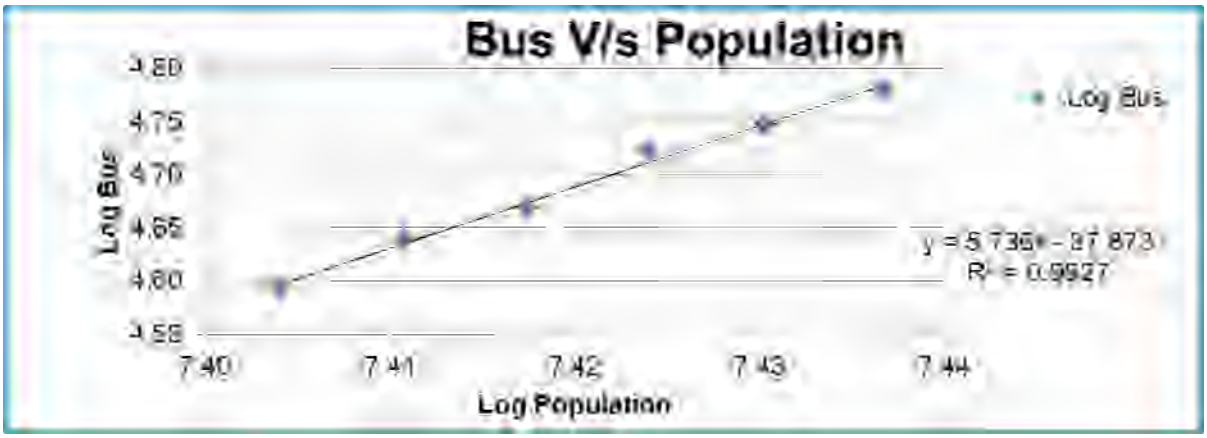


Figure 5-10: Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-13 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	

Following figure depict regression analysis and extrapolation.

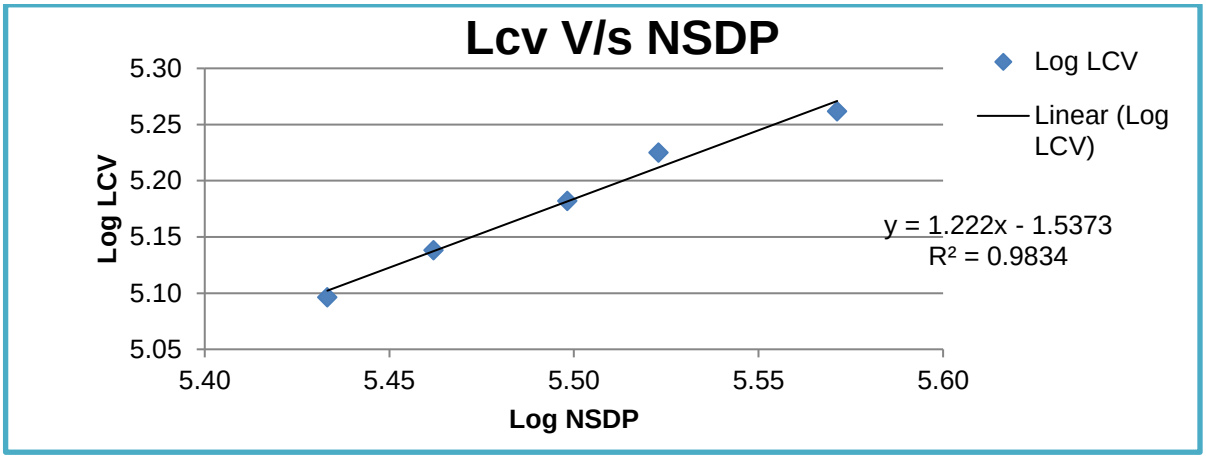


Figure 5-11: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Haryana

Table 5-14 : Truck Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation.

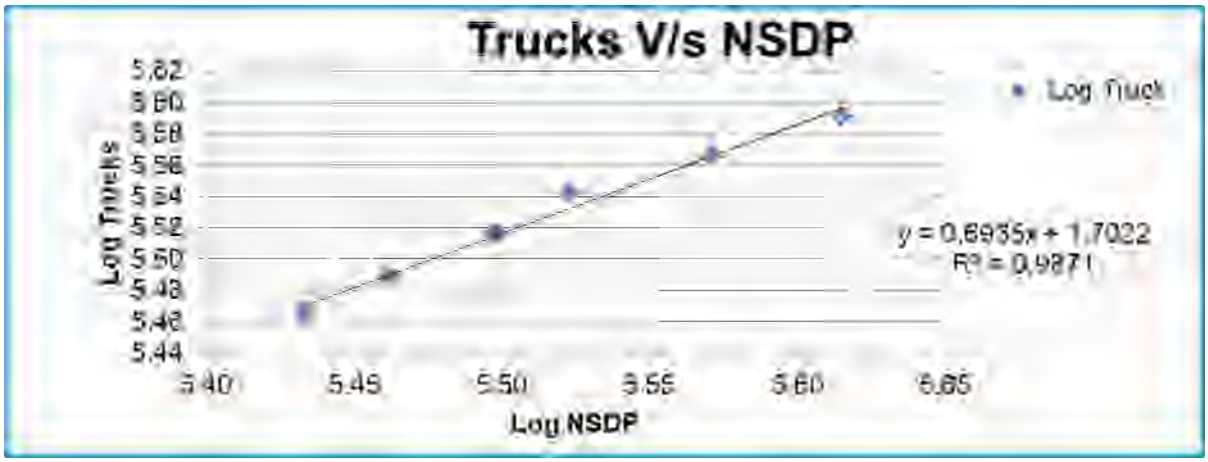


Figure 5-12: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Haryana

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-15 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Haryana	Car/Jeep	PCI	y = 1.8306x + -3.1905	R^2 = 0.9823	1.8306	7.23%	13.24%	Good Regression
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%	Good Regression
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%	Good Regression
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Agra to Etawah has recently been commissioned and is under tolling operation since 2016-17. As traffic data available with the project concessionaire of three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. Moreover part two years traffic is affected by COVID-19 impact. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

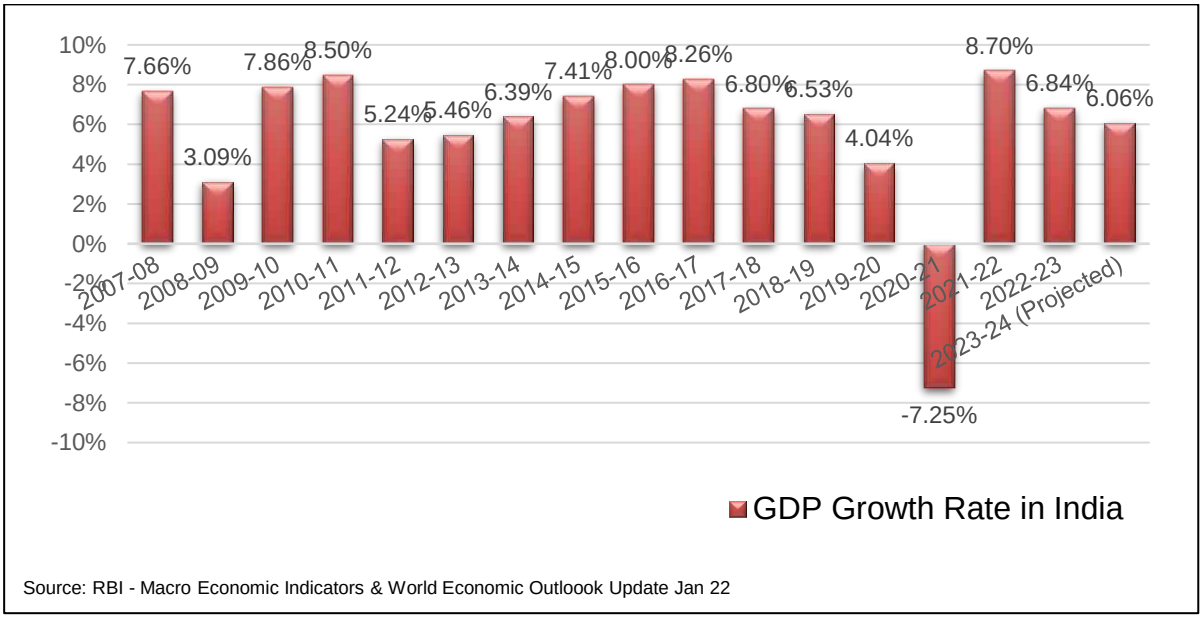


Figure 5-13 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to

the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Though growth of Delhi has been consistently below the national average economic growth, it is the largest state in terms of population and consumption driven demand for goods and services will remain significantly high. The rate of growth of NSDP also seems to be catching up with the national average over the years. Other regions in the influence area states namely Delhi, Haryana and Uttarakhand are all growing significantly faster than the national average. Considering the scenario, it may be assumed that the traffic growth on project highway would remain high and there are minimal risks in terms of growth.

Table 5-16 : GDP of India, UP and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53
Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.6.1 Industrial Units along Project Corridor

There are number of big and small industrial units along project corridor. Following figure show some of these along corridor.



Figure 5-14 : Industrial Units along project corridor

Following is the list of industrial units along project corridor

1. Leather Park, **Agra**
2. Export Promotional Industrial Park (EPIP)
3. Foundry Nagar (BK Casting, Agricultural Industries, Paint Industries, Plastic Industries, Metal

Industries), **Agra**

4. Industrial Estate, **Agra**
5. Agarbatti Industry

6. Glass Industries, **Firozabad**
7. Pipe Industries, Glass Bulb Industries
8. Agro Industries, Glass Industries, Cold Storage
9. Food Processing Industries
10. PVC Pipe Industries
11. Rural Industrial Estate, **Jaswant Nagar**
12. **Etawah**(Caplock Industries Private Limited, Rice Mills)

Such industries along project corridor and urban development around major cities of Firozabad, Tundla, Shikohabad, Jaswantnagar and Wtawah provide impetus to project traffic on corridor.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Hence growth rates have been suitably stepped down in future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-17 : Recommended Growth Rates Optimistic

Category / Year	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.96%	8.75%	8.71%	7.42%	6.23%	5.15%
Bus	4.86%	4.70%	4.68%	3.29%	2.58%	1.95%
LCV	5.91%	5.71%	5.65%	4.63%	3.71%	3.16%
2- Axle	6.25%	6.07%	6.01%	5.06%	4.20%	3.42%
3 - Axle	6.59%	6.39%	6.33%	5.32%	4.41%	3.59%
4 to 6 Axle	6.93%	6.72%	6.64%	5.58%	4.62%	3.76%
7 and Above Axle	6.93%	6.72%	6.64%	5.58%	4.62%	3.76%

Table 5-18 : Recommended Growth Rates Pessimistic

Category / Year	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.46%	8.25%	8.21%	6.92%	5.73%	4.65%
Bus	4.36%	4.20%	4.18%	2.79%	2.08%	1.45%
LCV	5.41%	5.21%	5.15%	4.13%	3.21%	2.66%
2- Axle	5.75%	5.57%	5.51%	4.56%	3.70%	2.92%
3 - Axle	6.09%	5.89%	5.83%	4.82%	3.91%	3.09%
4 to 6 Axle	6.43%	6.22%	6.14%	5.08%	4.12%	3.26%
7 and Above Axle	6.43%	6.22%	6.14%	5.08%	4.12%	3.26%

Table 5-19 : Recommended Growth Rates Most Likely

Category / Year	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.71%	8.50%	8.46%	7.17%	5.98%	4.90%
Bus	4.61%	4.45%	4.43%	3.04%	2.33%	1.70%
LCV	5.66%	5.46%	5.40%	4.38%	3.46%	2.91%
2- Axle	6.00%	5.82%	5.76%	4.81%	3.95%	3.17%
3 - Axle	6.34%	6.14%	6.08%	5.07%	4.16%	3.34%
4 to 6 Axle	6.68%	6.47%	6.39%	5.33%	4.37%	3.51%
7 and Above Axle	6.68%	6.47%	6.39%	5.33%	4.37%	3.51%

With completion of project corridor and removal of bottlenecks as discussed in previous chapter, certain part of traffic would return to project road which had started using Agra - Lucknow Expressway as preferred route. This also has been considered while estimating future traffic and revenue on project road.

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 224.95 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	9756	1147	1238	1886	945	2536	10	17518	35141
2024-25	10631	1214	1297	2004	1007	2711	10	18874	37621
2025-26	11561	1283	1357	2125	1071	2892	10	20299	40204
2026-27	12572	1356	1420	2253	1139	3086	10	21836	42974
2027-28	13673	1433	1486	2389	1212	3294	10	23497	45952
2028-29	14870	1515	1555	2533	1289	3515	10	25287	49136
2029-30	16172	1601	1627	2686	1371	3751	10	27218	52550
2030-31	17580	1690	1703	2847	1458	4000	10	29288	56184
2031-32	19111	1785	1783	3017	1550	4265	10	31521	60076
2032-33	20776	1885	1866	3198	1648	4548	10	33931	64251
2033-34	22586	1991	1953	3390	1752	4849	10	36531	68723
2034-35	24553	2103	2044	3593	1862	5171	10	39336	73519
2035-36	26375	2200	2110	3774	1961	5459	10	41889	77821
2036-37	28330	2301	2179	3964	2065	5764	10	44613	82389
2037-38	30433	2407	2250	4165	2175	6086	10	47526	87246
2038-39	32692	2518	2324	4375	2290	6426	10	50635	92398
2039-40	35118	2635	2400	4596	2411	6785	10	53955	97869
2040-41	37308	2732	2462	4789	2517	7098	10	56916	102696
2041-42	39634	2833	2525	4990	2627	7426	10	60045	107772
2042-43	42105	2937	2590	5199	2742	7769	10	63352	113109
2043-44	44731	3045	2656	5417	2862	8128	10	66849	118725
2044-45	47519	3158	2725	5644	2988	8504	10	70548	124640
2045-46	49967	3258	2778	5837	3096	8823	10	73769	129736

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 285.20 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3673	792	555	1498	895	2551	10	9974	25230
2024-25	4002	839	582	1591	954	2727	10	10705	26958
2025-26	4353	887	610	1687	1015	2910	10	11472	28760
2026-27	4734	937	638	1789	1080	3105	10	12293	30678
2027-28	5148	990	667	1898	1149	3313	10	13175	32729
2028-29	5598	1047	698	2013	1222	3535	10	14123	34920
2029-30	6087	1106	730	2135	1300	3773	10	15141	37265
2030-31	6617	1168	764	2264	1382	4024	10	16229	39752
2031-32	7193	1234	800	2400	1469	4291	10	17397	42406
2032-33	7818	1304	838	2544	1561	4576	10	18651	45240
2033-34	8499	1378	877	2697	1660	4880	10	20001	48273
2034-35	9240	1456	918	2858	1765	5204	10	21451	51510
2035-36	9925	1523	949	3003	1858	5495	10	22763	54412
2036-37	10662	1593	980	3155	1957	5801	10	24158	57477
2037-38	11453	1667	1012	3314	2061	6125	10	25642	60722
2038-39	12303	1744	1045	3481	2171	6467	10	27221	64157
2039-40	13215	1824	1080	3657	2287	6828	10	28901	67794
2040-41	14039	1891	1108	3810	2388	7144	10	30390	70987
2041-42	14913	1961	1136	3970	2494	7474	10	31958	74333
2042-43	15842	2033	1165	4136	2604	7819	10	33609	77837
2043-44	16829	2108	1194	4309	2719	8180	10	35349	81512
2044-45	17878	2186	1225	4490	2839	8558	10	37186	85375
2045-46	18798	2255	1249	4643	2941	8880	10	38776	88685

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Chainage 224.95 KM
(Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	9712	1141	1232	1877	940	2524	10	17436	34974
2024-25	10534	1202	1285	1984	997	2686	10	18698	37267
2025-26	11403	1265	1338	2094	1055	2853	10	20018	39645
2026-27	12344	1331	1394	2210	1117	3031	10	21437	42188
2027-28	13363	1400	1452	2333	1183	3219	10	22960	44898
2028-29	14465	1473	1512	2463	1252	3419	10	24594	47786
2029-30	15658	1549	1575	2599	1325	3631	10	26347	50863
2030-31	16944	1628	1640	2742	1402	3854	10	28220	54126
2031-32	18335	1711	1708	2893	1484	4090	10	30231	57607
2032-33	19839	1799	1779	3052	1571	4341	10	32391	61323
2033-34	21468	1891	1853	3220	1663	4607	10	34712	65289
2034-35	23230	1988	1930	3397	1760	4890	10	37205	69523
2035-36	24839	2070	1983	3552	1844	5138	10	39436	73247
2036-37	26558	2155	2038	3713	1933	5398	10	41805	77179

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2037-38	28396	2243	2095	3882	2026	5673	10	44325	81343
2038-39	30360	2335	2153	4059	2124	5961	10	47002	85740
2039-40	32461	2430	2212	4244	2226	6263	10	49846	90381
2040-41	34323	2508	2258	4400	2313	6521	10	52333	94388
2041-42	36290	2588	2305	4563	2403	6790	10	54949	98585
2042-43	38371	2671	2353	4731	2497	7070	10	57703	102981
2043-44	40572	2756	2401	4906	2595	7362	10	60602	107586
2044-45	42898	2844	2451	5087	2697	7666	10	63653	112411
2045-46	44894	2920	2486	5235	2780	7916	10	66241	116444

Table 6-4 : Total Tollable Traffic @ Toll Plaza 2- Chainage 285.20KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3656	788	552	1491	890	2539	10	9926	25108
2024-25	3965	831	576	1576	944	2702	10	10604	26704
2025-26	4292	874	600	1664	1000	2870	10	11310	28355
2026-27	4647	919	625	1756	1059	3049	10	12065	30111
2027-28	5030	967	651	1854	1121	3238	10	12871	31975
2028-29	5445	1017	679	1957	1187	3439	10	13734	33960
2029-30	5894	1070	707	2066	1257	3653	10	14657	36073
2030-31	6377	1124	736	2179	1330	3878	10	15634	38294
2031-32	6900	1182	767	2299	1408	4116	10	16682	40662
2032-33	7466	1243	799	2425	1490	4369	10	17802	43178
2033-34	8079	1306	832	2558	1577	4637	10	18999	45851
2034-35	8743	1373	867	2699	1668	4922	10	20282	48699
2035-36	9348	1430	891	2822	1748	5172	10	21421	51195
2036-37	9996	1489	916	2950	1832	5435	10	22628	53826
2037-38	10688	1550	941	3084	1920	5711	10	23904	56593
2038-39	11427	1613	967	3224	2012	6001	10	25254	59505
2039-40	12218	1679	994	3371	2109	6306	10	26687	62581
2040-41	12919	1733	1015	3496	2191	6566	10	27930	65217
2041-42	13660	1789	1036	3626	2277	6837	10	29235	67972
2042-43	14444	1846	1057	3760	2366	7119	10	30602	70843
2043-44	15273	1905	1079	3899	2458	7412	10	32036	73838
2044-45	16149	1966	1101	4043	2554	7717	10	33540	76964
2045-46	16900	2018	1116	4161	2633	7968	10	34806	79558

Traffic projections for Most Likely scenario are given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1-Tundla- Chainage 224.95 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	9735	1144	1235	1881	943	2530	10	17478	35058
2024-25	10583	1208	1292	1993	1002	2698	10	18786	37442
2025-26	11483	1274	1349	2108	1063	2872	10	20159	39923
2026-27	12459	1343	1408	2230	1128	3058	10	21636	42578
2027-28	13518	1416	1471	2359	1197	3256	10	23227	45420
2028-29	14667	1492	1536	2496	1270	3466	10	24937	48453
2029-30	15915	1573	1604	2641	1348	3690	10	26781	51704
2030-31	17261	1658	1674	2793	1430	3925	10	28751	55147
2031-32	18722	1747	1748	2953	1517	4176	10	30873	58834
2032-33	20306	1841	1825	3122	1609	4442	10	33155	62770
2033-34	22023	1939	1906	3302	1707	4725	10	35612	66984
2034-35	23885	2043	1990	3492	1810	5026	10	38256	71488
2035-36	25598	2132	2050	3660	1902	5294	10	40646	75500
2036-37	27434	2224	2112	3836	1999	5576	10	43191	79748
2037-38	29402	2321	2176	4020	2101	5874	10	45904	84253
2038-39	31510	2422	2241	4213	2208	6187	10	48791	89016
2039-40	33769	2527	2309	4415	2320	6517	10	51867	94063
2040-41	35790	2615	2362	4589	2417	6801	10	54584	98466
2041-42	37932	2706	2416	4770	2517	7099	10	57450	103091
2042-43	40202	2800	2473	4958	2621	7409	10	60473	107944
2043-44	42607	2897	2531	5154	2730	7733	10	63662	113041
2044-45	45157	2997	2590	5357	2843	8071	10	67025	118387
2045-46	47370	3084	2634	5526	2937	8354	10	69915	122925

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Gurau - Chainage 285.20 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3664	791	554	1494	892	2545	10	9950	25168
2024-25	3983	835	579	1584	949	2714	10	10654	26830
2025-26	4322	880	604	1676	1007	2889	10	11388	28549
2026-27	4689	928	631	1773	1068	3076	10	12175	30384
2027-28	5088	978	659	1876	1134	3275	10	13020	32345
2028-29	5520	1031	688	1985	1203	3487	10	13924	34431
2029-30	5989	1087	719	2101	1276	3713	10	14895	36661
2030-31	6495	1145	751	2221	1354	3950	10	15926	39011
2031-32	7045	1207	784	2348	1436	4202	10	17032	41514
2032-33	7640	1272	819	2483	1523	4471	10	18218	44188
2033-34	8286	1340	855	2626	1615	4756	10	19488	47031
2034-35	8987	1412	893	2777	1713	5060	10	20852	50069
2035-36	9631	1474	920	2910	1800	5330	10	22075	52762
2036-37	10322	1539	948	3050	1891	5614	10	23374	55606
2037-38	11062	1606	977	3196	1987	5913	10	24751	58605
2038-39	11855	1676	1006	3350	2087	6228	10	26212	61769
2039-40	12705	1750	1037	3511	2193	6560	10	27766	65118

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2040-41	13466	1811	1061	3650	2284	6846	10	29128	68020
2041-42	14272	1873	1086	3794	2379	7145	10	30559	71056
2042-43	15126	1938	1111	3944	2478	7457	10	32064	74234
2043-44	16030	2005	1137	4099	2581	7782	10	33644	77553
2044-45	16989	2075	1163	4260	2688	8122	10	35307	81029
2045-46	17822	2136	1183	4395	2778	8407	10	36731	83971

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Agra-Etawah project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2025

Target Traffic - 52995 PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 5 years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	34284	-35%	53%	20%	24	4.8

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	34532	-35%	52%	20%	24	4.8

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2025	52995	34045	-36%	54%	20%	24	4.8

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat-Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee at 2/3rd Rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van -Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza). Additionally, local commercial vehicles are charged at 50% rate of single journey.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2021-22. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. Following graph provides projection of rate of inflation (WPI) in India. Data has been taken from Office of Economic Advisor web site (www.eaindustry.nic.in). WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

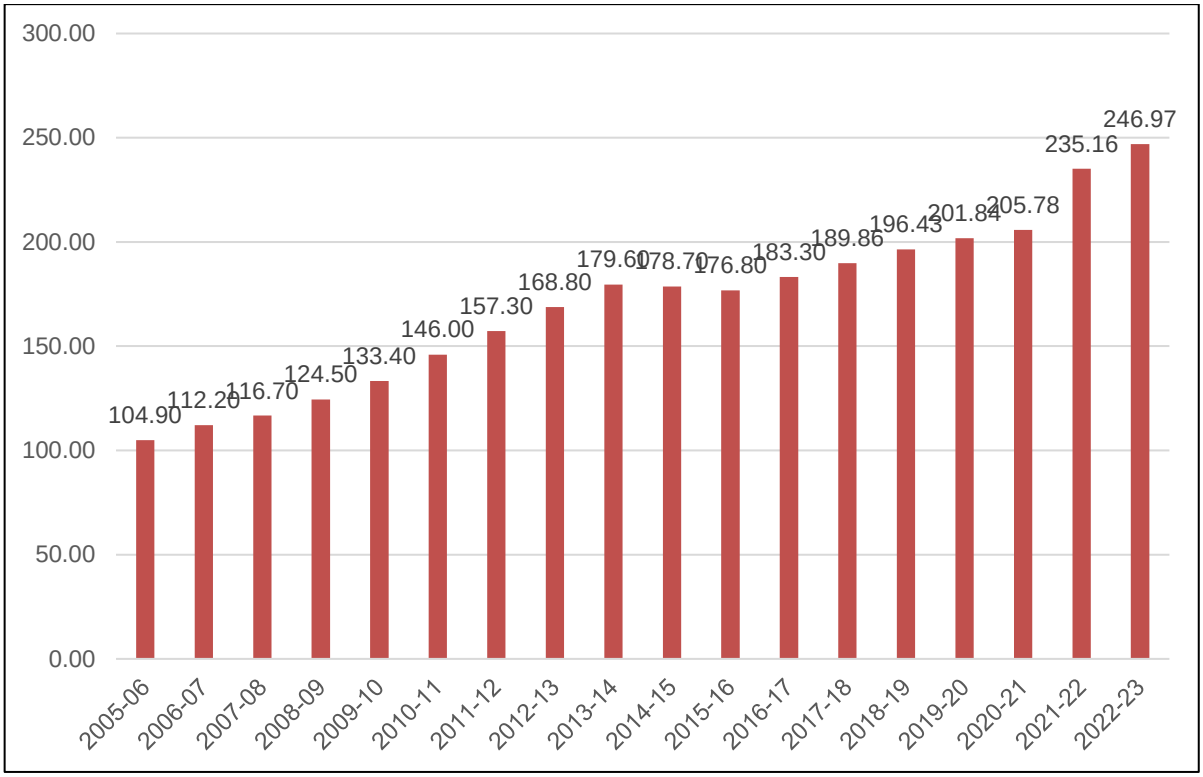


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey@ Km 224.95

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	105	170	355	355	385
2024-25	110	180	370	370	405
2025-26	115	185	390	390	425
2026-27	120	195	410	410	450
2027-28	125	205	430	430	470
2028-29	135	215	450	450	495
2029-30	140	225	475	475	515
2030-31	145	235	495	495	540
2031-32	155	250	520	520	570
2032-33	160	260	545	545	595
2033-34	170	275	570	570	625
2034-35	175	285	600	600	655
2035-36	185	300	630	630	685
2036-37	195	315	660	660	720
2037-38	205	330	695	695	755
2038-39	215	345	725	725	795
2039-40	225	365	765	765	835
2040-41	235	380	800	800	875
2041-42	250	400	840	840	920
2042-43	260	420	885	885	965
2043-44	275	445	925	925	1010

2044-45	290	465	975	975	1060
2045-46	300	490	1025	1025	1115

Table 7-3 : Toll Rates for Single Journey @ Km 285.20

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	115	180	380	380	415
2024-25	120	190	400	400	440
2025-26	125	200	420	420	460
2026-27	130	210	445	445	485
2027-28	135	220	465	465	505
2028-29	145	235	485	485	530
2029-30	150	245	510	510	555
2030-31	160	255	535	535	585
2031-32	165	270	560	560	610
2032-33	175	280	590	590	640
2033-34	180	295	615	615	675
2034-35	190	310	645	645	705
2035-36	200	325	680	680	740
2036-37	210	340	715	715	775
2037-38	220	355	750	750	815
2038-39	230	375	785	785	855
2039-40	245	395	825	825	900
2040-41	255	415	865	865	945
2041-42	270	435	905	905	990
2042-43	280	455	955	955	1040
2043-44	295	475	1000	1000	1090
2044-45	310	500	1050	1050	1145
2045-46	325	525	1105	1105	1205

Table 7-4 : Toll Rates for Return Journey @ Km 224.95

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	155	255	530	530	580
2024-25	165	265	560	560	610
2025-26	175	280	585	585	640
2026-27	180	295	615	615	675
2027-28	190	310	645	645	705
2028-29	200	325	675	675	740
2029-30	210	340	710	710	775
2030-31	220	355	745	745	810
2031-32	230	375	780	780	850
2032-33	240	390	820	820	895

2033-34	255	410	860	860	935
2034-35	265	430	900	900	980
2035-36	280	450	945	945	1030
2036-37	295	475	990	990	1080
2037-38	305	495	1040	1040	1135
2038-39	320	520	1090	1090	1190
2039-40	340	545	1145	1145	1250
2040-41	355	575	1200	1200	1310
2041-42	375	600	1260	1260	1375
2042-43	390	630	1325	1325	1445
2043-44	410	665	1390	1390	1515
2044-45	430	695	1460	1460	1595
2045-46	455	730	1535	1535	1675

Table 7-5 : Toll Rates for Return Journey @ Km 285.20

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	170	275	575	575	625
2024-25	180	285	600	600	655
2025-26	185	300	635	635	690
2026-27	195	315	665	665	725
2027-28	205	335	695	695	760
2028-29	215	350	730	730	795
2029-30	225	365	765	765	835
2030-31	235	385	805	805	875
2031-32	250	400	840	840	920
2032-33	260	420	885	885	965
2033-34	275	440	925	925	1010
2034-35	285	465	970	970	1060
2035-36	300	485	1020	1020	1110
2036-37	315	510	1070	1070	1165
2037-38	330	535	1120	1120	1225
2038-39	350	560	1175	1175	1285
2039-40	365	590	1235	1235	1345
2040-41	385	620	1295	1295	1415
2041-42	400	650	1360	1360	1485
2042-43	420	680	1430	1430	1560
2043-44	445	715	1500	1500	1635
2044-45	465	750	1575	1575	1720
2045-46	490	790	1655	1655	1805

Table 7-6 : Toll Rates for Monthly pass Local @ 224.95

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	865	865
2044-45	905	905
2045-46	955	955

Table 7-7 : Toll Rates for Monthly pass Local @ 285.20

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745

2041-42	785	785
2042-43	825	825
2043-44	865	865
2044-45	905	905
2045-46	955	955

Table 7-8 : Toll Rates for Monthly Pass @ Km 224.95

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3490	5635	11810	11810	12880
2024-25	3665	5920	12405	12405	13535
2025-26	3850	6225	13040	13040	14225
2026-27	4050	6540	13705	13705	14950
2027-28	4245	6855	14360	14360	15670
2028-29	4450	7185	15055	15055	16420
2029-30	4660	7530	15780	15780	17215
2030-31	4890	7895	16545	16545	18045
2031-32	5125	8280	17345	17345	18925
2032-33	5375	8680	18190	18190	19840
2033-34	5635	9105	19075	19075	20810
2034-35	5910	9550	20005	20005	21825
2035-36	6200	10015	20985	20985	22895
2036-37	6505	10510	22020	22020	24020
2037-38	6825	11025	23105	23105	25205
2038-39	7165	11570	24245	24245	26450
2039-40	7520	12145	25445	25445	27760
2040-41	7890	12745	26710	26710	29135
2041-42	8285	13380	28040	28040	30590
2042-43	8700	14050	29440	29440	32115
2043-44	9135	14755	30910	30910	33720
2044-45	9590	15495	32465	32465	35415
2045-46	10075	16275	34095	34095	37195

Table 7-9 : Toll Rates for Monthly Pass @ Km 285.20

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3765	6080	12740	12740	13895
2024-25	3955	6390	13385	13385	14600
2025-26	4155	6715	14065	14065	15345
2026-27	4370	7055	14785	14785	16125
2027-28	4580	7395	15495	15495	16900
2028-29	4800	7750	16240	16240	17715
2029-30	5030	8125	17025	17025	18570
2030-31	5275	8520	17845	17845	19470
2031-32	5530	8930	18710	18710	20415
2032-33	5795	9365	19620	19620	21405
2033-34	6080	9820	20575	20575	22450
2034-35	6375	10300	21585	21585	23545
2035-36	6690	10805	22640	22640	24700
2036-37	7020	11335	23750	23750	25910
2037-38	7365	11895	24920	24920	27190
2038-39	7725	12480	26155	26155	28530
2039-40	8110	13100	27450	27450	29945
2040-41	8515	13750	28810	28810	31430
2041-42	8935	14435	30245	30245	32995
2042-43	9385	15155	31755	31755	34645
2043-44	9850	15915	33345	33345	36380
2044-45	10345	16715	35020	35020	38205
2045-46	10865	17555	36780	36780	40125

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 years starting from the year 2023-24 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	112.02	134.95	**246.96**
2024-25	125.49	151.58	**277.07**
2025-26	140.17	170.10	**310.27**
2026-27	157.34	190.27	**347.61**
2027-28	176.19	213.62	**389.81**
2028-29	196.72	239.66	**436.38**
2029-30	219.55	267.99	**487.54**
2030-31	246.00	299.83	**545.83**
2031-32	275.32	337.39	**612.71**
2032-33	307.67	375.90	**683.57**
2033-34	343.53	422.39	**765.93**
2034-35	383.75	471.95	**855.70**
2035-36	426.85	525.99	**952.84**
2036-37	471.20	583.11	**1054.31**
2037-38	521.98	645.93	**1167.91**
2038-39	578.88	716.83	**1295.72**
2039-40	644.26	800.32	**1444.58**
2040-41	705.73	876.34	**1582.07**
2041-42	775.35	968.05	**1743.40**
2042-43	851.48	1063.00	**1914.49**
2043-44	938.64	1174.63	**2113.26**
2044-45	1029.16	1290.33	**2319.49**
2045-46	1122.27	1410.07	**2532.34**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	111.48	134.28	**245.76**
2024-25	124.32	150.11	**274.44**
2025-26	138.23	167.68	**305.91**
2026-27	154.49	186.70	**341.18**
2027-28	172.18	208.65	**380.83**
2028-29	191.37	233.03	**424.40**
2029-30	212.63	259.34	**471.97**
2030-31	237.13	288.81	**525.94**
2031-32	264.16	323.47	**587.63**
2032-33	293.83	358.69	**652.52**
2033-34	326.55	401.23	**727.78**
2034-35	363.06	446.16	**809.23**
2035-36	401.88	494.93	**896.82**
2036-37	441.50	546.09	**987.59**
2037-38	486.68	602.02	**1088.71**
2038-39	537.14	664.92	**1202.07**
2039-40	595.03	738.79	**1333.82**
2040-41	648.70	805.08	**1453.78**
2041-42	709.38	885.21	**1594.59**

Year	TP-1	TP2	Total
2042-43	775.35	967.42	**1742.76**
2043-44	850.76	1063.93	**1914.69**
2044-45	928.26	1163.30	**2091.56**
2045-46	1007.27	1265.13	**2272.40**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	111.74	134.58	**246.33**
2024-25	124.84	150.80	**275.64**
2025-26	139.13	168.86	**307.99**
2026-27	155.82	188.44	**344.26**
2027-28	174.06	211.15	**385.21**
2028-29	193.92	236.36	**430.28**
2029-30	215.91	263.70	**479.61**
2030-31	241.35	294.36	**535.71**
2031-32	269.44	330.47	**599.91**
2032-33	300.41	367.32	**667.73**
2033-34	334.62	411.81	**746.44**
2034-35	372.91	458.98	**831.89**
2035-36	413.84	510.40	**924.24**
2036-37	455.76	564.57	**1020.34**
2037-38	503.68	623.90	**1127.58**
2038-39	557.27	690.71	**1247.98**
2039-40	618.69	769.36	**1388.05**
2040-41	676.16	840.38	**1516.54**
2041-42	741.13	926.19	**1667.32**
2042-43	811.94	1014.54	**1826.48**
2043-44	892.91	1118.39	**2011.30**
2044-45	976.58	1225.61	**2202.19**
2045-46	1062.45	1336.08	**2398.54**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Agra to Etawah section of NH-2 in state of Delhi from km 199.660 to km 323.525 is currently six lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the most busy and prominent national highway NH-2 which connects political and cultural capitals of India. This is one of the most important trunk road which spreads across many states. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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GULABPURA TO CHITTORGARH SECTION OF NH 79 (KM 90.000 TO KM 214.870) IN THE STATE OF RAJASTHAN







TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Gulabpura** to **Chittorgarh** section of NH-79 from km 90.000 to km 214.870is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s CG Tollway Ltd.* (Concessionaire) has been awarded the Project for a concession period of 20 years starting from 4th November 2017. The Project has been commissioned and is currently in the operation / maintenance phase for four laning. Six laning of project has also been completed in August 2021.

Length ofprojectroadis124.870Kms. The project road is section of NH-79, which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through district of Bhiwara and Chittorgarh. Project road connects to Udaipur via NH-76.

Project road alignment passes through the towns/ built-up areas Fakirabad, Bhilwara, Gulabpura, & Chittorgarh. Following figure shows alignment of project road section from Gulabpura to Chittorgarh



Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2
PROJECT DETAILS

2.1 Project Corridor

National Highway 79 (NH 79) is important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south.

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

2.2 Project Stretch Description

Section of NH-79 from Gulabpura to Chittorgarh is part of major transportation link in the area connecting industrial / tourist cities of Jaipur, Bhilwara, Chitttorgar and Udaipur. Important cities of Firozabad, Shikohabad, and Jaswant Nagar fall on project alignment. Major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on project corridor section.

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are two operative toll plazas at project stretch. First is at Lambia Kalan at Km 121.020 and second at Jojro ka Khera at Km 184.020. Following figure show project alignment and toll plaza locations.



Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and soon would be completed. Following photographs illustrate project section along the corridor.

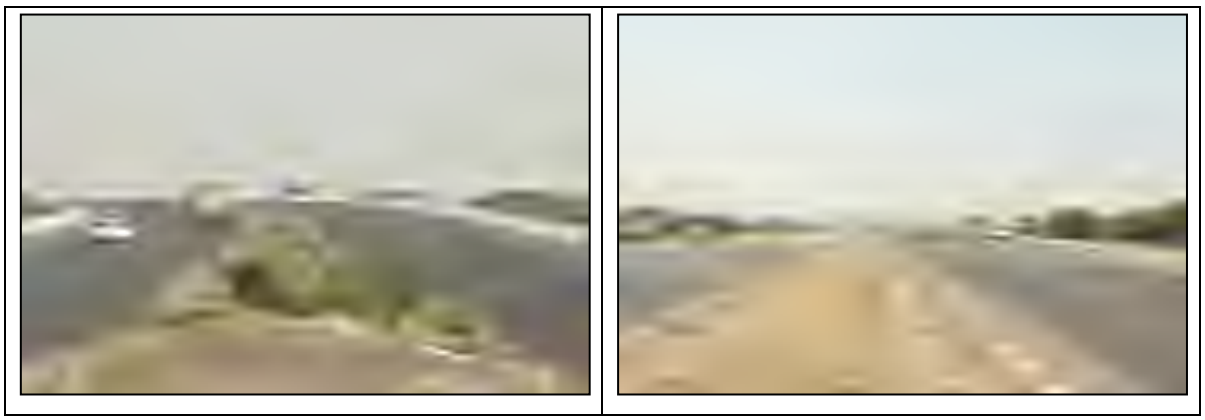






Figure 2-2: Photographs showing Project Corridor

CHAPTER 3
TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza locations on Gulabpura-Chittorgarh section of NH-79 for year 2018-19, 2019-20, 2020-21, 2021-22 and traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	**Km 121.020 Toll Plaza at Lambia Kalan**	AADT for Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23
2	**Km 184.020 Toll Plaza at Jojro ka Khera**	AADT for Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-20, 2020-21, 2021-22 & 2022-23

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus

	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for year 2019-20,2020-21, 2021-22 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Lambial Kalan Toll Plaza at Km 121.020

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23
1	CAR	3563	3366	4812	6301
2	Minibus /LCV	1266	933	585	768
3	Bus	428	270	376	446
4	Truck	1587	1321	1788	2455
5	3-Axle Commercial vehicle	2139	1591	1771	2006
6	Multi axle	4606	4011	4587	5086
7	Oversized Vehicle	23	19	30	11
Total		**13612**	**11511**	**13949**	**17072**

Table 3-4 : Traffic Data at Jojro ka Khera Toll Plaza at Km 184.0200

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23
1	CAR	3042	3077	4440	5603
2	Minibus /LCV	1081	824	549	716
3	Bus	423	265	347	408
4	Truck	1285	1164	1634	2306
5	3-Axle Commercial vehicle	1568	1344	1666	1950

6	Multi axle	4360	4201	4934	5536
7	Oversized Vehicle	21	21	21	14
Total		**11781**	**10896**	**13592**	**16532**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July - 21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed du to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-5**.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0

LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under.

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Lambia Kalan Km 121.020	13612	38754	2.85
	Jojro ka Khera Km 184.020	11781	34208	2.90
2020-2021	Lambia Kalan Km 121.020	11511	32446	2.82
	Jojro ka Khera Km 184.020	10896	31630	2.90
2021-2022	Lambia Kalan Km 121.020	13949	38721	2.74
	Jojro ka Khera Km 184.020	13592	38503	2.83
2022-23	Lambia Kalan Km 121.020	17072	45107	2.64
	Jojro ka Khera Km 184.020	16532	45642	2.76

It can be observed from above that project traffic has PCU index close to 3 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at four toll plaza locations.

It can be observed that PCU index is consistent at both toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

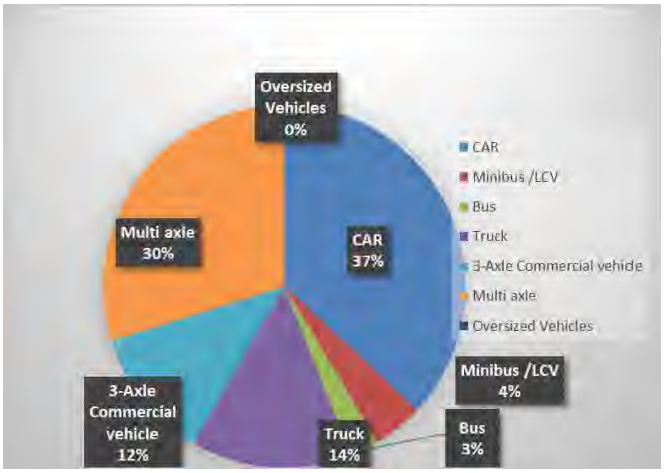


Figure 3-1 :Model Split of Tollable Vehicle-Km 121.020

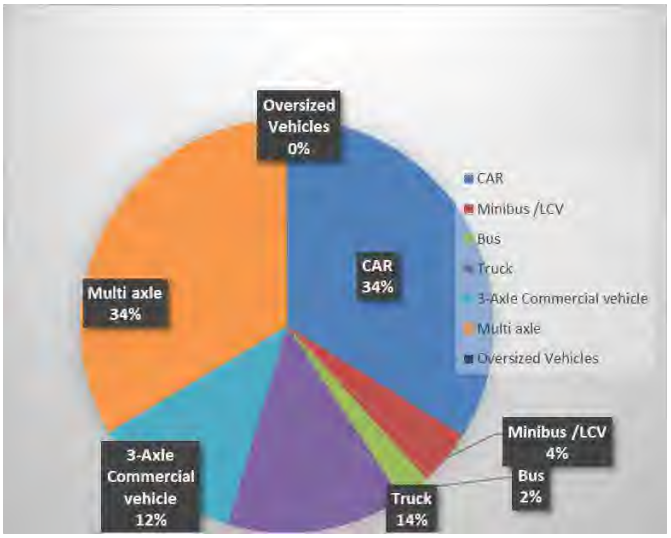


Figure 3-2 :Model Split of Tollable Vehicle- Km 184.020

It is observed that car traffic forms about 37% & 34% of total traffic at toll plaza locations while multi axle commercial vehicles are about 42% & 46% of total traffic. Truck / Bus and LCV share about 14% and 7 % of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category for year 2022-23

Table 3-7 : Journey Type Bifurcation of Traffic at Lambia Kalan TP KM121.020

Sr. No	Type	Traffic Volume (Nos.)
		2022-2023
1	Single Journey	12110
2	Return Journey	4664
3	Local Commercial Single Journey	260
4	Monthly Pass Local	35
5	Monthly Pass	12

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is as high as 71%. Return journey component is 27%. The number of monthly pass Local is 0% and Local commercial Single Journey 2% at Lambia Kalan toll plaza.

The following tables give the detail of journey distribution at Jojro ka Khera toll plaza at Km 184.020.

Table 3-8 : Journey Type Bifurcation of Traffic at Jojro ka KheraTPKm 184.020

Sr. No	Type	Traffic Volume (Nos.)
		2022-2023
1	Single Journey	11440
2	Return Journey	4774
3	Local Commercial Single Journey	280
4	Monthly Pass Local	30
5	Monthly Pass	13

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth

d) Per Capita Income growth

e) Industrial Growth

f) Special Industry Potential

g) Regional and National development vision / plan

h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, for analysis point of view there can be two alternate routes at local level. One using Ajmer road to go from Kishangarh to Chittorgarh and other on east side via Shapur.

At regional level, there can be two alternates for Udaipur traffic after Kishangarh. One via project road (Kishangarh – Bhiwara- Chittorgarh- Udaipur)

Following maps show these routes in relation to project stretch at both local and regional level.



Figure 4-1: Alternate route at regional level



Figure 4-2: Alternate route at local level

It can be observed that project highway forms the one of the main spines of the corridor between Kishangarh / Jaipurand Chittorgarh. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

At regional level for Udaipur traffic alternate route is faster and traffic is already using this alternate.

With six laning now nearing completion, project stretch would become slightly more attractive due to improved level of service. In such case further diversion of traffic from project road is not envisaged.

Following table provides summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Kishangarh – Ajmer-Udaipur	Alternate Route	299	58	5 Hr 8 Min	Alternate route has clear advantage for this pair of destination. Traffic Settled. No further diversion expected
	Kishangarh- Chittorgarh-Udaipur	Project Road	330	51	6 Hr 127 Min	
Local Level						
2	Kishangarh – Ajmer-Chittorgarh (West)	Alternate Route	278	50	5 Hr. 28 Min	Project Road has advantage. Alternate route running for years after toll on project road. Traffic Settled. No further diversion expected
	Kishangarh – Shahpur-Chittorgarh (East)	Alternate Route	283	51	5 Hr. 28 Min	
	Kishangarh – Bhilwara-Chittorgarh	Project Road	220	50	4 Hr. 29 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place.

CHAPTER 5
GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projectionsof other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Gulabpur- Chittorgarh section of NH-79has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Rajasthan. Toll plazas at Lambia Kalan and Jojro ka Khera are in the state of Rajasthan. For elasticity calculations, working

data from Rajasthan has been analyzed. Additionally, data of Gujarat is also analyzed as project corridor has close transportation link with Gujarat also.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below

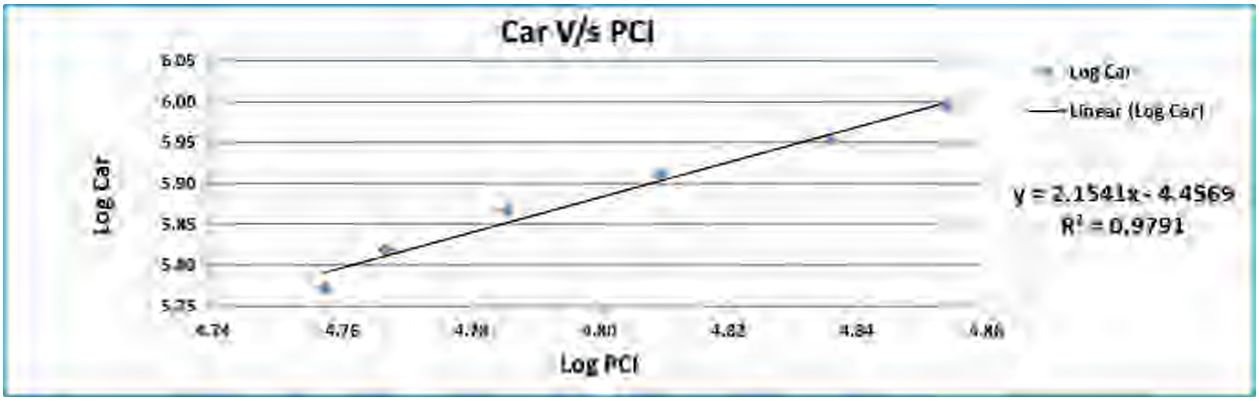


Figure 5-1: Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below

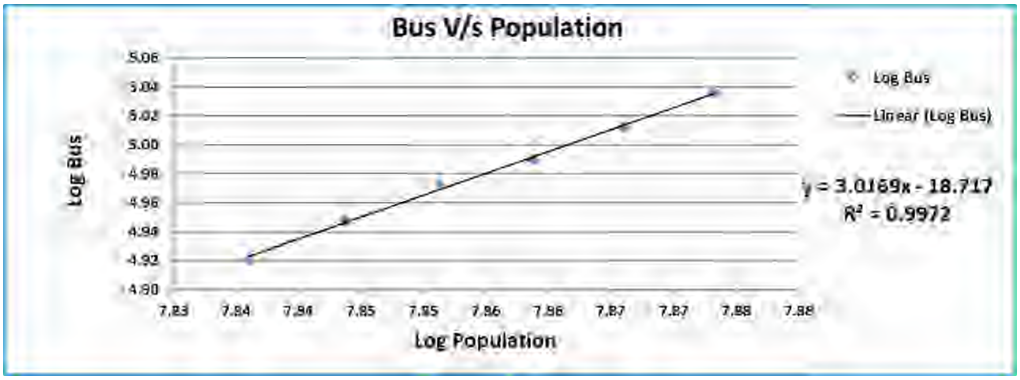


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

Following figure depict regression analysis and extrapolation.

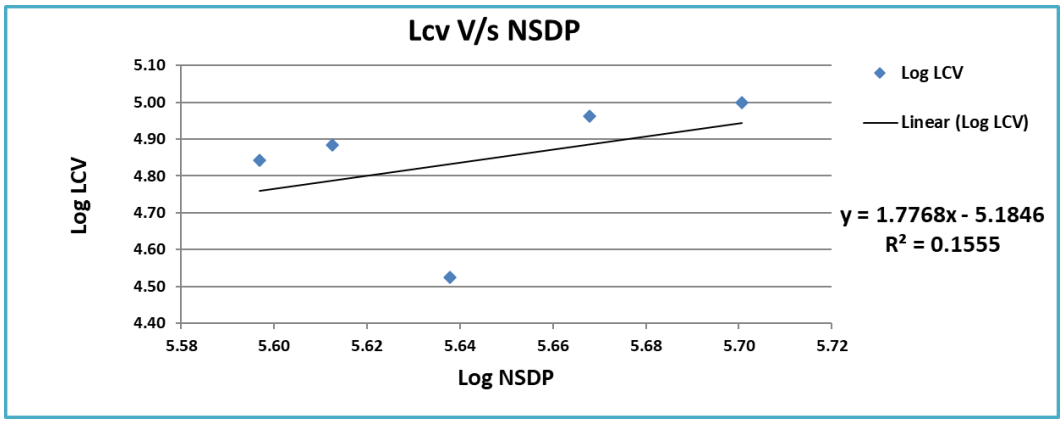


Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan

Following figure depict regression analysis and extrapolation.

Table 5-4 : Truck Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

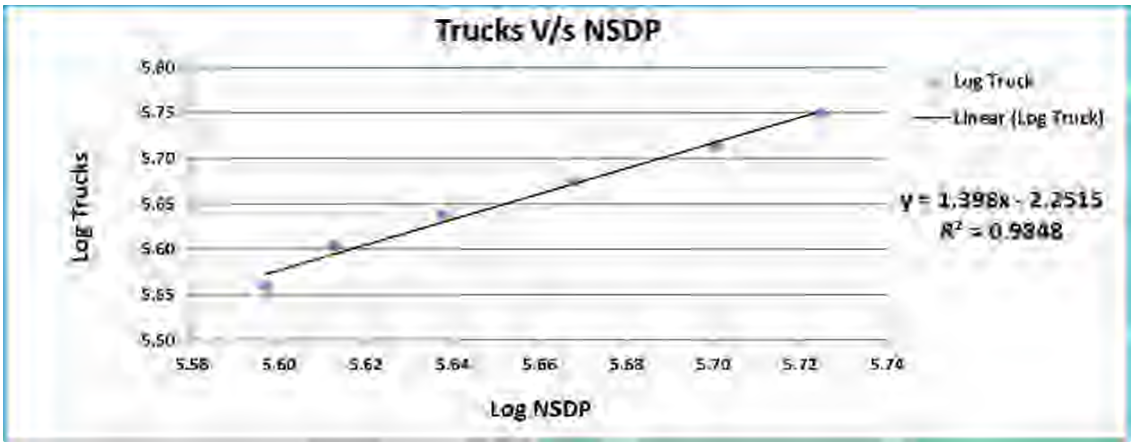


Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Rajasthan

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below

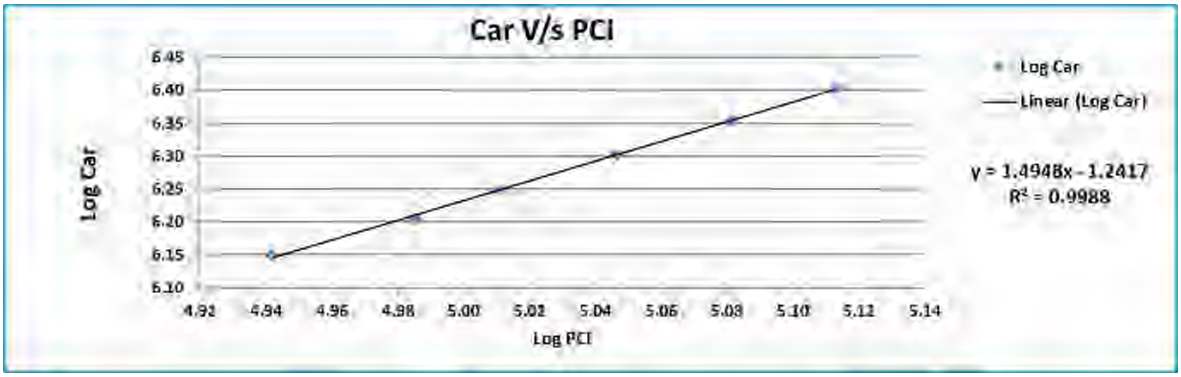


Figure 5-5: Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below

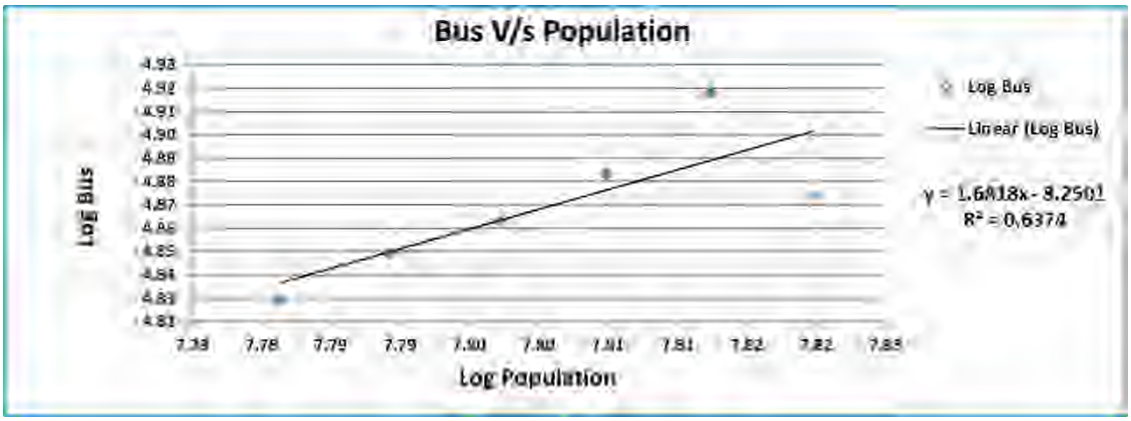


Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

Following figure depict regression analysis and extrapolation.

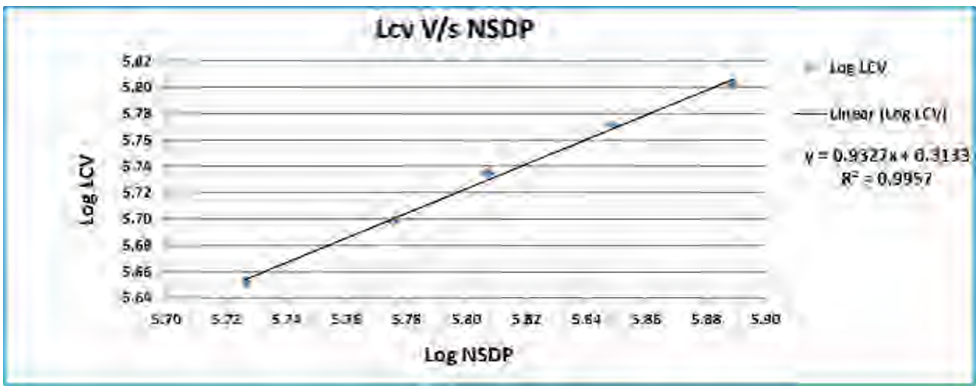


Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat

Following figure depict regression analysis and extrapolation.

Table 5-9 : Truck Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

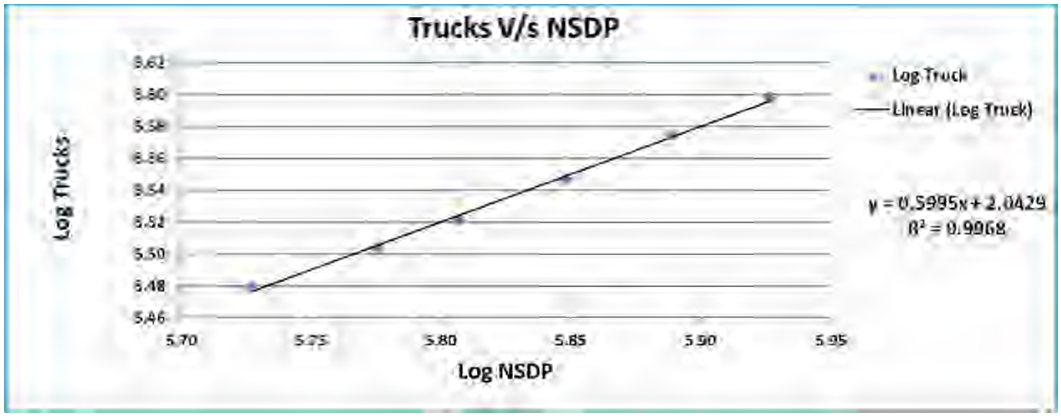


Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Gujarat

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Gulabpura to Chittorgarh is under tolling operation with current concessionaire and has two year of tolling history from 2018-19. As traffic data available with the project concessionaire is of year two years and that too affected by COVI-19, hence we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economic, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-

19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

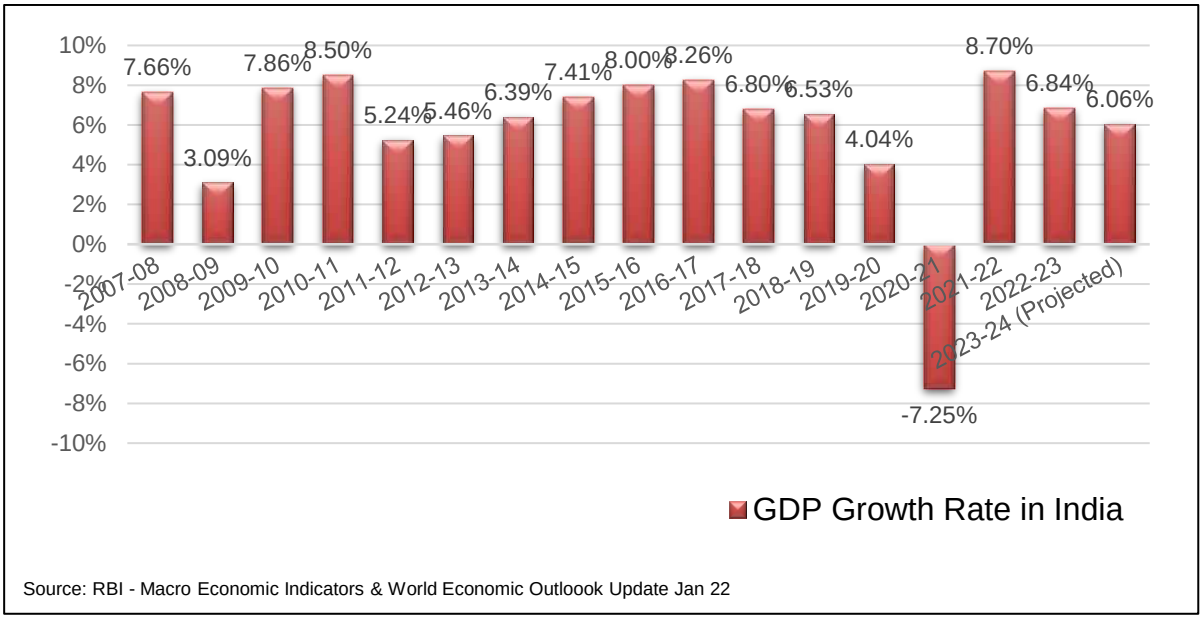


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

This Asset primarily serves traffic travelling between Delhi, Rajasthan, Gujarat and Maharashtra. It is observed that the vehicle distribution to be dominated by heavy

vehicles. We further noticed several textile industries and marble/granite industries bordering the Asset. Udaipur serves as a big tourism hub as well as a consumption centre which also result in traffic feeding into the demand being generated.

In addition, Chittorgarh has 4 major cement plants located in Chanderiya and Nimbahera villages. There is a regular movement of Cement bulkers to and from these locations along asset. Chanderiya Lead-Zinc Smelter, is the one of the largest zinc-lead smelting complexes in the world, is also located in Chittorgarh. Bhilwara is home to textiles industry and only centre in the country producing insulation bricks. Mining is another major sector for large scale mining of sandstone, soapstone feldspar, quartz, mica China clay and granite. Also, Iron Ore, Led, and Zinc is mined and processed in Bhilwara

Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past few years. Moreover, Rajasthan is also major tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on project highway would remain high and there are minimal risks in terms of growth.

5.6.1 Industrial Units along Project Corridor

Bhilwara district occupies and important place in the mineral map of Rajasthan. The main minerals are lead Zinc, Soap Stone, China Clay, Feldspar, Quartz, Mica, Asbestos and Garnet.

Besides being a major tourist attraction in India Chittorgarh has a very rich profile in industrial mineral extraction. Lime stone (Cement Grade), Red Occur, Silica sand, China Clay and Quartz are major minerals which are in abundance. There are large number of cement plants in area. Chanderiya Lead-Zinc Smelter is one of the largest zinc-lead smelting complexes in the world.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down fro future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2021-2022	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.51%	8.61%	8.31%	7.01%	6.58%	6.33%	6.09%
Bus	5.71%	4.93%	4.73%	3.77%	3.56%	3.41%	3.26%
LCV	5.19%	5.19%	4.89%	3.83%	3.34%	3.08%	2.83%
2- Axle	5.68%	5.68%	5.38%	4.55%	4.05%	3.78%	3.53%
3 – Axle	6.02%	6.02%	5.71%	4.55%	4.05%	3.78%	3.53%
4 to 6 Axle	6.71%	6.37%	6.03%	4.55%	4.05%	3.78%	3.53%
7 and Above Axle	6.71%	6.02%	5.71%	4.55%	4.05%	3.78%	3.53%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2021-2022	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.01%	8.11%	7.81%	6.51%	6.08%	5.83%	5.59%
Bus	5.21%	4.43%	4.23%	3.27%	3.06%	2.91%	2.76%
LCV	4.69%	4.69%	4.39%	3.33%	2.84%	2.58%	2.33%
2- Axle	5.18%	5.18%	4.88%	4.05%	3.55%	3.28%	3.03%
3 – Axle	5.52%	5.52%	5.21%	4.05%	3.55%	3.28%	3.03%
4 to 6 Axle	6.21%	5.87%	5.53%	4.05%	3.55%	3.28%	3.03%
7 and Above Axle	6.21%	5.52%	5.21%	4.05%	3.55%	3.28%	3.03%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2021-2022	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.26%	8.36%	8.06%	6.76%	6.33%	6.08%	5.84%
Bus	5.46%	4.68%	4.48%	3.52%	3.31%	3.16%	3.01%
LCV	4.94%	4.94%	4.64%	3.58%	3.09%	2.83%	2.58%
2- Axle	5.43%	5.43%	5.13%	4.30%	3.80%	3.53%	3.28%
3 - Axle	5.77%	5.77%	5.46%	4.30%	3.80%	3.53%	3.28%
4 to 6 Axle	6.46%	6.12%	5.78%	4.30%	3.80%	3.53%	3.28%
7 and Above Axle	6.46%	5.77%	5.46%	4.30%	3.80%	3.53%	3.28%

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID Impact

All All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

Taking recommended traffic growth and additional factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6725	830	410	2627	2114	5386	11	18103	47710
2024-25	7393	848	487	2740	2251	5745	11	19475	51001
2025-26	7877	913	449	2921	2367	6068	11	20606	53813
2026-27	8629	930	530	3040	2511	6451	11	22102	57346
2027-28	9205	1001	490	3239	2642	6814	11	23402	60532
2028-29	10076	1020	575	3374	2801	7242	11	25099	64495
2029-30	10761	1097	534	3594	2948	7652	11	26597	68118
2030-31	11628	1107	620	3716	3091	8019	11	28192	71705
2031-32	12287	1179	573	3926	3220	8357	11	29553	74869
2032-33	13269	1192	663	4062	3375	8757	11	31329	78813
2033-34	14032	1267	615	4290	3515	9128	11	32858	82318
2034-35	15145	1282	709	4440	3684	9564	11	34835	86655
2035-36	15964	1356	658	4664	3821	9923	11	36397	90130
2036-37	17155	1367	756	4806	3985	10347	11	38427	94458
2037-38	18095	1444	703	5047	4134	10736	11	40170	98275
2038-39	19436	1457	805	5202	4310	11193	11	42414	102991
2039-40	20514	1538	752	5461	4472	11616	11	44364	107198
2040-41	21973	1550	859	5616	4650	12079	11	46738	112078
2041-42	23152	1632	803	5879	4813	12505	11	48795	116407

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Jojro ka Khera184.020 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6085	752	429	2437	2068	5888	14	17673	48574
2024-25	6608	790	449	2575	2192	6262	14	18890	51683
2025-26	7156	828	469	2713	2317	6639	14	20136	54834
2026-27	7751	867	490	2859	2448	7040	14	21469	58186
2027-28	8396	908	513	3012	2586	7465	14	22894	61747
2028-29	9094	953	537	3174	2733	7914	14	24419	65532
2029-30	9848	999	562	3344	2888	8391	14	26046	69551
2030-31	10537	1036	583	3495	3019	8772	14	27456	72919
2031-32	11274	1074	604	3654	3155	9170	14	28945	76452
2032-33	12064	1114	625	3820	3297	9587	14	30521	80166
2033-34	12909	1156	648	3993	3447	10022	14	32189	84069
2034-35	13813	1200	673	4174	3603	10478	14	33955	88177
2035-36	14721	1239	697	4343	3749	10902	14	35665	92069
2036-37	15687	1279	722	4518	3901	11342	14	37463	96131
2037-38	16718	1321	747	4700	4058	11802	14	39360	100387
2038-39	17817	1365	773	4890	4222	12279	14	41360	104838
2039-40	18988	1410	799	5087	4392	12775	14	43465	109488
2040-41	20190	1452	825	5279	4558	13258	14	45576	114078
2041-42	21469	1496	853	5478	4729	13759	14	47798	118872

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM
(Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6692	826	407	2614	2105	5362	11	18017	47488
2024-25	7326	841	481	2714	2231	5693	11	19297	50534
2025-26	7769	899	440	2881	2335	5984	11	20319	53063
2026-27	8476	913	518	2985	2466	6333	11	21702	56301
2027-28	8997	976	476	3167	2582	6658	11	22867	59147
2028-29	9807	993	559	3282	2725	7045	11	24422	62747
2029-30	10423	1060	515	3480	2855	7408	11	25752	65949
2030-31	11216	1069	596	3580	2979	7727	11	27178	69106
2031-32	11792	1130	547	3765	3089	8015	11	28349	71807
2032-33	12681	1140	631	3874	3223	8359	11	29919	75240
2033-34	13343	1204	581	4074	3342	8672	11	31227	78214
2034-35	14340	1215	669	4193	3485	9043	11	32956	81947
2035-36	15039	1277	617	4386	3598	9338	11	34266	84828
2036-37	16092	1284	707	4494	3733	9690	11	36011	88475
2037-38	16887	1348	654	4700	3855	10007	11	37462	91617

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2038-39	18062	1356	747	4818	3999	10383	11	39376	95561
2039-40	18966	1424	693	5037	4131	10724	11	40986	98993
2040-41	20228	1429	788	5151	4273	11098	11	42978	102998
2041-42	21204	1497	733	5370	4405	11435	11	44655	106481

Table 6-4 : Total Tollable Traffic @Toll Plaza 2- Jojro ka Khera184.020 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6058	749	427	2425	2058	5859	14	17590	48340
2024-25	6548	783	446	2549	2171	6203	14	18714	51197
2025-26	7059	817	465	2672	2283	6546	14	19856	54065
2026-27	7609	852	485	2801	2401	6908	14	21070	57097
2027-28	8203	889	505	2937	2526	7290	14	22364	60309
2028-29	8842	927	526	3080	2657	7693	14	23739	63703
2029-30	9532	966	547	3229	2794	8119	14	25201	67290
2030-31	10151	998	566	3358	2906	8446	14	26439	70208
2031-32	10811	1031	585	3493	3023	8788	14	27745	73270
2032-33	11514	1065	604	3633	3146	9144	14	29120	76472
2033-34	12262	1100	624	3779	3273	9514	14	30566	79816
2034-35	13059	1136	644	3931	3405	9899	14	32088	83312
2035-36	13853	1168	664	4069	3525	10250	14	33543	86567
2036-37	14695	1201	684	4213	3650	10613	14	35070	89959
2037-38	15587	1235	704	4361	3779	10989	14	36669	93485
2038-39	16533	1269	725	4515	3912	11378	14	38346	97157
2039-40	17538	1305	746	4674	4049	11781	14	40107	100980
2040-41	18560	1338	767	4826	4181	12167	14	41853	104704
2041-42	19643	1372	788	4984	4317	12567	14	43685	108583

Traffic projections for Most Likely scenario are given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Lambia Kalan121.020 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6709	828	408	2621	2110	5373	11	18060	47596
2024-25	7359	844	484	2728	2241	5718	11	19385	50765
2025-26	7821	905	445	2903	2351	6023	11	20459	53429
2026-27	8550	921	525	3014	2489	6389	11	21899	56816
2027-28	9098	988	484	3205	2612	6733	11	23131	59831
2028-29	9939	1006	568	3329	2764	7140	11	24757	63611
2029-30	10588	1078	526	3539	2902	7526	11	26170	67023
2030-31	11419	1088	610	3650	3037	7867	11	27682	70393
2031-32	12036	1154	563	3848	3156	8181	11	28949	73332
2032-33	12971	1165	650	3969	3301	8551	11	30618	77008
2033-34	13681	1235	602	4183	3431	8894	11	32037	80254
2034-35	14735	1248	693	4318	3587	9295	11	33887	84278
2035-36	15491	1316	642	4526	3711	9623	11	35320	87455
2036-37	16613	1325	735	4651	3862	10008	11	37205	91430
2037-38	17477	1396	683	4875	3996	10362	11	38800	94912
2038-39	18731	1406	780	5011	4156	10775	11	40870	99218
2039-40	19719	1480	727	5250	4302	11158	11	42647	103037
2040-41	21076	1488	827	5385	4463	11572	11	44822	107457
2041-42	22150	1563	771	5626	4609	11955	11	46685	111360

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Jojro ka Khera184.020 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	6071	750	427	2431	2063	5875	14	17631	48460
2024-25	6577	786	447	2562	2182	6233	14	18801	51441
2025-26	7106	822	467	2693	2301	6593	14	19996	54454
2026-27	7679	859	487	2830	2426	6974	14	21269	57643
2027-28	8297	897	508	2974	2557	7377	14	22624	61019
2028-29	8965	937	529	3125	2695	7803	14	24068	64594
2029-30	9687	979	553	3284	2842	8254	14	25613	68399
2030-31	10341	1013	573	3424	2963	8609	14	26937	71544
2031-32	11038	1049	593	3570	3090	8979	14	28333	74839
2032-33	11783	1086	613	3722	3222	9365	14	29805	78289
2033-34	12579	1124	634	3881	3359	9767	14	31358	81902
2034-35	13429	1163	655	4047	3502	10187	14	32997	85690
2035-36	14278	1199	676	4200	3634	10573	14	34574	89248
2036-37	15181	1236	697	4359	3771	10974	14	36232	92962
2037-38	16141	1273	720	4524	3913	11391	14	37976	96844
2038-39	17162	1311	743	4695	4061	11823	14	39809	100892

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2039-40	18247	1350	768	4873	4215	12271	14	41738	105123
2040-41	19357	1388	792	5044	4364	12705	14	43664	109275
2041-42	20534	1426	817	5222	4518	13153	14	45684	113596

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Gulabpura-Chittorgarh project, the Target Date and Target Traffic are defined as under:

Target Date - 1stJune 2026

Target Traffic - 76316 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 3-4 years Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	57198	-25%	38%	20%	20	4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	57743	-24%	37%	20%	20	4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76316	56663	-26%	39%	20%	20	4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Gulabpura-Chittorgarh section of NH-19 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips in month at 2/3d rate. Additionally, concessionaire has announced special monthly passes for local commercial cars at Rs. 670.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per
    b) Local LCV - Rs. 1200 per trip
    c) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

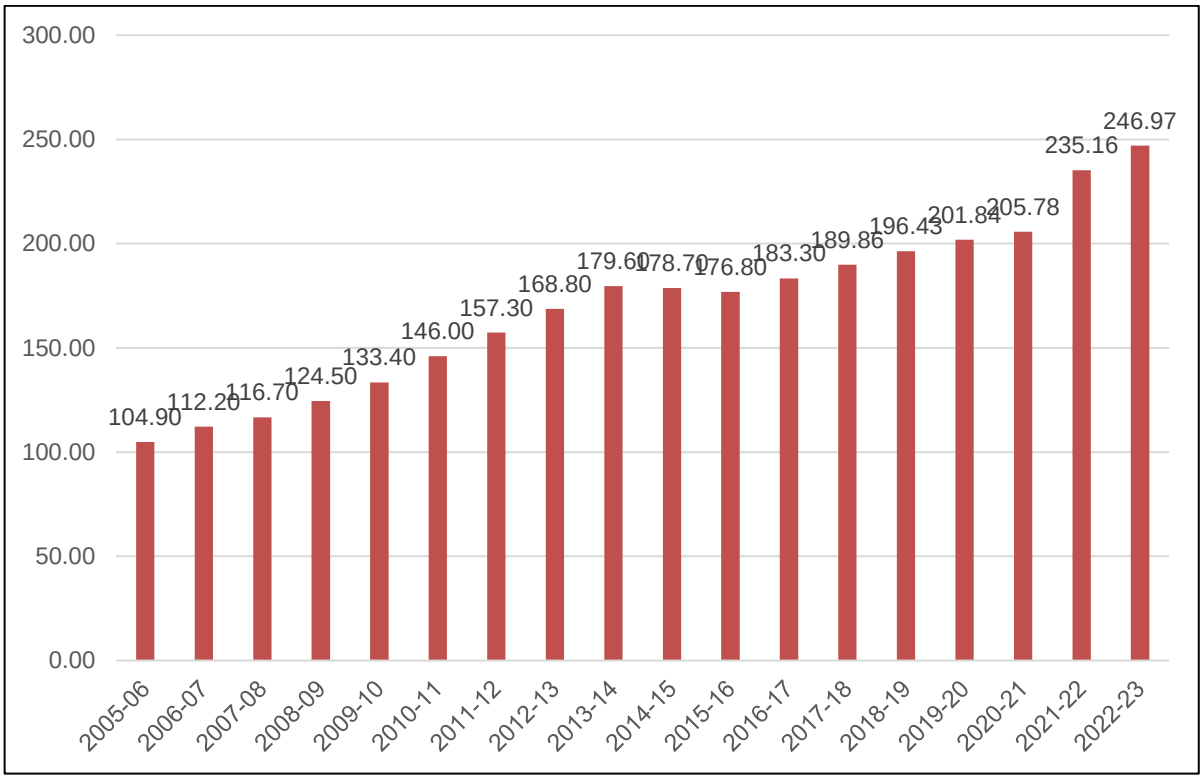


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey@ Km 121.020

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	95	155	325	325	355
2024-25	100	165	340	340	375
2025-26	105	170	360	360	390
2026-27	110	180	375	375	410
2027-28	115	190	395	395	430
2028-29	120	200	415	415	450
2029-30	130	205	435	435	475
2030-31	135	215	455	455	495
2031-32	140	230	480	480	520
2032-33	150	240	500	500	545
2033-34	155	250	525	525	575
2034-35	165	265	550	550	600

2035-36	170	275	580	580	630
2036-37	180	290	605	605	660
2037-38	190	305	635	635	695
2038-39	195	320	665	665	730
2039-40	205	335	700	700	765
2040-41	215	350	735	735	800
2041-42	230	370	770	770	840

Table 7-3 : Toll Rates for Single Journey @ Km 184.020

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	100	160	335	335	370
2024-25	105	170	355	355	385
2025-26	110	180	370	370	405
2026-27	115	185	390	390	425
2027-28	120	195	410	410	445
2028-29	125	205	430	430	470
2029-30	135	215	450	450	490
2030-31	140	225	470	470	515
2031-32	145	235	495	495	540
2032-33	155	250	520	520	565
2033-34	160	260	545	545	595
2034-35	170	275	570	570	625
2035-36	175	285	600	600	655
2036-37	185	300	630	630	685
2037-38	195	315	660	660	720
2038-39	205	330	690	690	755
2039-40	215	345	725	725	795
2040-41	225	365	765	765	830
2041-42	235	380	800	800	875

Table 7-4 : Toll Rates for Return Journey @ Km 121.02

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	145	235	490	490	530
2024-25	150	245	510	510	560
2025-26	160	255	540	540	585
2026-27	165	270	565	565	615
2027-28	175	285	595	595	645
2028-29	185	295	620	620	680
2029-30	195	310	650	650	710
2030-31	200	325	685	685	745
2031-32	210	340	715	715	780
2032-33	220	360	750	750	820

2033-34	235	375	790	790	860
2034-35	245	395	825	825	900
2035-36	255	415	865	865	945
2036-37	270	435	910	910	990
2037-38	280	455	955	955	1040
2038-39	295	480	1000	1000	1090
2039-40	310	500	1050	1050	1145
2040-41	325	525	1105	1105	1205
2041-42	340	555	1160	1160	1265

Table 7-5 : Toll Rates for Return Journey @ Km 184.020

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	150	240	505	505	550
2024-25	155	255	530	530	580
2025-26	165	265	560	560	610
2026-27	175	280	585	585	640
2027-28	180	295	615	615	670
2028-29	190	310	645	645	705
2029-30	200	325	675	675	735
2030-31	210	340	710	710	775
2031-32	220	355	745	745	810
2032-33	230	370	780	780	850
2033-34	240	390	815	815	890
2034-35	255	410	855	855	935
2035-36	265	430	900	900	980
2036-37	280	450	945	945	1030
2037-38	290	470	990	990	1080
2038-39	305	495	1040	1040	1135
2039-40	320	520	1090	1090	1190
2040-41	340	545	1145	1145	1250
2041-42	355	575	1200	1200	1310

Table 7-6 : Toll Rates for Monthly Pass Local @ Km 121.020

Year	Car	Mini Bus /LCV
2023-24	330	1470
2024-25	345	1545
2025-26	365	1620
2026-27	385	1700
2027-28	400	1775
2028-29	420	1855

2029-30	440	1940
2030-31	460	2025
2031-32	485	2115
2032-33	510	2210
2033-34	535	2310
2034-35	560	2415
2035-36	585	2525
2036-37	615	2640
2037-38	645	2760
2038-39	680	2885
2039-40	710	3015
2040-41	745	3150
2041-42	785	3290

Table 7-7 : Toll Rates for Monthly Pass Local @ Km 184.020

Year	Car	Mini Bus /LCV
2023-24	330	1165
2024-25	345	1225
2025-26	365	1285
2026-27	385	1350
2027-28	400	1410
2028-29	420	1475
2029-30	440	1540
2030-31	460	1610
2031-32	485	1680
2032-33	510	1755
2033-34	535	1835
2034-35	560	1920
2035-36	585	2005
2036-37	615	2095
2037-38	645	2190
2038-39	680	2290
2039-40	710	2395
2040-41	745	2505
2041-42	785	2620

Table 7-8 : Toll Rates for Monthly Pass @ Km 121.020

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3200	5170	10835	10835	11820
2024-25	3365	5435	11385	11385	12420
2025-26	3535	5710	11965	11965	13055
2026-27	3715	6000	12575	12575	13720

2027-28	3895	6290	13180	13180	14380
2028-29	4080	6595	13815	13815	15070
2029-30	4280	6910	14480	14480	15800
2030-31	4485	7245	15180	15180	16560
2031-32	4705	7595	15920	15920	17365
2032-33	4930	7965	16690	16690	18210
2033-34	5170	8355	17505	17505	19095
2034-35	5425	8765	18360	18360	20030
2035-36	5690	9190	19260	19260	21010
2036-37	5970	9645	20205	20205	22045
2037-38	6265	10120	21200	21200	23130
2038-39	6575	10620	22250	22250	24270
2039-40	6900	11145	23350	23350	25475
2040-41	7240	11700	24510	24510	26740
2041-42	7600	12280	25730	25730	28070

Table 7-9 : Toll Rates for Monthly Pass @ Km 184.020

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3320	5365	11240	11240	12260
2024-25	3490	5635	11805	11805	12880
2025-26	3665	5920	12410	12410	13535
2026-27	3855	6225	13040	13040	14225
2027-28	4040	6525	13670	13670	14910
2028-29	4235	6840	14325	14325	15630
2029-30	4435	7170	15020	15020	16385
2030-31	4650	7515	15745	15745	17175
2031-32	4875	7880	16510	16510	18010
2032-33	5115	8260	17310	17310	18885
2033-34	5365	8665	18155	18155	19805
2034-35	5625	9090	19040	19040	20770
2035-36	5900	9535	19975	19975	21790
2036-37	6190	10000	20955	20955	22860
2037-38	6495	10495	21985	21985	23985
2038-39	6815	11010	23075	23075	25170
2039-40	7155	11555	24215	24215	26415
2040-41	7510	12130	25420	25420	27730
2041-42	7885	12735	26685	26685	29110

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under most likely scenario at each of the toll plaza up to 2041- 42 starting from the year 2023-24are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	188.31	197.34	**385.66**
2024-25	209.65	219.46	**429.11**
2025-26	234.19	244.68	**478.88**
2026-27	259.78	272.72	**532.50**
2027-28	290.41	303.93	**594.34**
2028-29	322.15	337.16	**659.31**
2029-30	358.99	374.64	**733.63**
2030-31	394.00	411.45	**805.45**
2031-32	434.63	453.12	**887.74**
2032-33	476.46	497.54	**974.00**
2033-34	524.69	546.45	**1071.14**
2034-35	577.01	601.29	**1178.30**
2035-36	632.13	659.33	**1291.46**
2036-37	690.97	719.79	**1410.77**
2037-38	756.53	788.24	**1544.77**
2038-39	827.69	862.74	**1690.43**
2039-40	911.00	948.38	**1859.38**
2040-41	992.75	1033.57	**2026.31**
2041-42	1086.14	1129.31	**2215.45**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	187.43	196.40	**383.83**
2024-25	207.67	217.48	**425.15**
2025-26	230.90	241.37	**472.27**
2026-27	254.92	267.82	**522.74**
2027-28	283.65	297.06	**580.71**
2028-29	313.09	327.97	**641.07**
2029-30	347.25	362.71	**709.97**
2030-31	379.35	396.48	**775.84**
2031-32	416.45	434.62	**851.07**
2032-33	454.30	475.01	**929.31**
2033-34	497.88	519.15	**1017.03**
2034-35	544.84	568.50	**1113.33**
2035-36	594.06	620.34	**1214.40**
2036-37	646.20	674.01	**1320.22**

Year	TP-1	TP2	Total
2037-38	704.04	734.55	**1438.59**
2038-39	766.57	800.06	**1566.63**
2039-40	839.71	875.28	**1714.99**
2040-41	910.69	949.32	**1860.01**
2041-42	991.52	1032.20	**2023.72**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	187.85	196.89	**384.73**
2024-25	208.66	218.47	**427.13**
2025-26	232.55	243.00	**475.55**
2026-27	257.35	270.21	**527.56**
2027-28	286.99	300.34	**587.33**
2028-29	317.57	332.39	**649.96**
2029-30	353.13	368.42	**721.55**
2030-31	386.66	403.72	**790.39**
2031-32	425.49	443.51	**869.00**
2032-33	465.22	485.85	**951.07**
2033-34	511.13	532.31	**1043.44**
2034-35	560.72	584.27	**1144.99**
2035-36	612.75	639.06	**1251.81**
2036-37	668.18	696.01	**1364.18**
2037-38	729.83	760.35	**1490.18**
2038-39	796.62	830.29	**1626.91**
2039-40	874.70	910.53	**1785.24**
2040-41	950.95	990.08	**1941.03**
2041-42	1037.80	1079.09	**2116.89**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Gulabpura to Chittrorgarh section of NH-79 in state of Rajasthan from km 90.000 to km 214.870 nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-79 which connects Kishangarh to Udaipur via Bhiwala and Chittorgarh. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future post COVID-19 due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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HAPUR TO MORADABAD SECTION OF NH-9 IN THE STATE OF UTTAR PRADESH (KM 50.000 TO KM148.277)



TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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HAPUR TO MORADABAD SECTION OF NH-9 IN THE STATE OF UTTAR PRADESH (KM 50.000 TO KM148.277)

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023



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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Hapur Bypass** to **Moradabad** section of NH-9 from km 50.000 to km 148.277is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s IRB Hapur Moradabad Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 22 years starting from 28th May 2019. The Project is under capacity augmentation to six lane. Tolling operation under current concession started in May 2019.COD-2 has been received in April 2023.

Project stretch from Hapur to Moradabad is part of new NH-9 which starts from Fazilka in Punjab and terminates in Uttarakhand at Pithoragarh. Previously this section was part of old NH-24 which is still popularly known and Delhi – Lucknow road. New NH-9 takes off towards Pithoragarh from Rampur. A number of sections along project road from Hapur to Moradabad have witnessed urban development along highway. Places like Pilakhua, Babugarh, Brijghat, Gajrola and Joya are fast upcoming urban centers. Close proximity to Delhi and this being main connectivity of region to NCR is main region for this ribbon development along highway. Following figure shows the project road alignment.

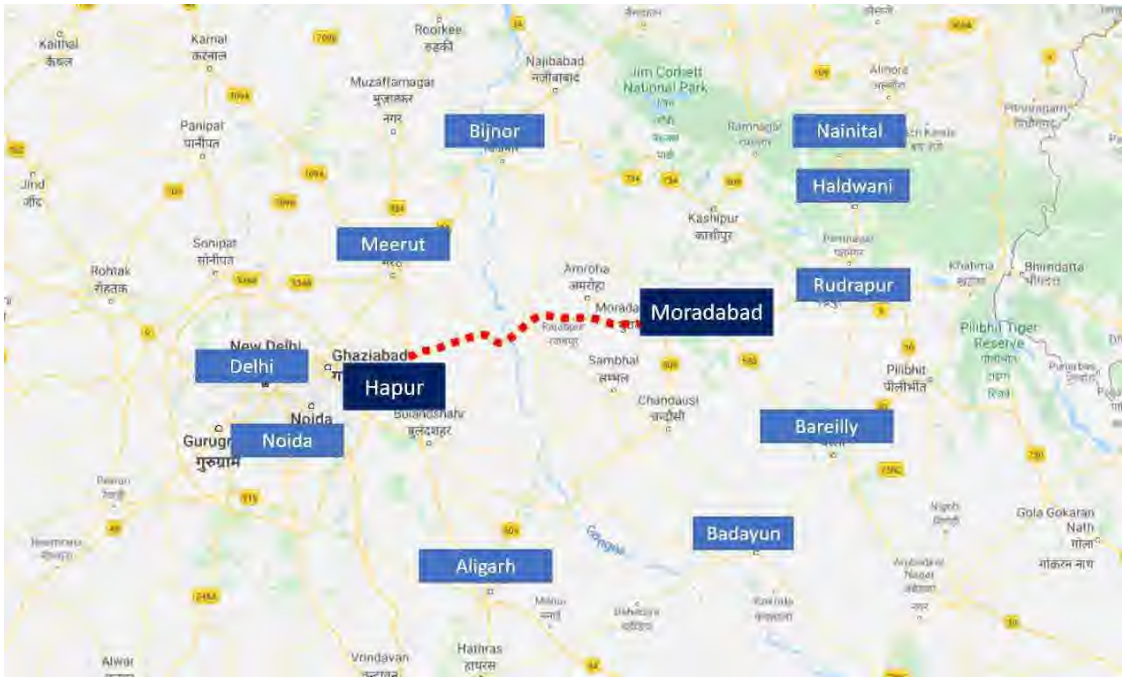


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project road is the section of the former NH-24 which has now been re-designated as NH-9 connecting Fazilka in Punjab to Pithoragarh in Uttarakhand. On the way it connects several important cities in five states in North India (from west towards east): Malout, Sirsa, Hisar, Rohtak, Bahadurgarh, Delhi, Ghaziabad, Hapur, Moradabad, Rampur, Rudrapur, Sitarganj, Khatima, Pithoragarh. The total length of the highway is 811 Km. After renumbering of all national highways by National Highway Authority of India in2010, the current NH 9 was formed by merging five differently numbered national highways in 2010, including Old NH 10 (Fazilka-Delhi section), Old NH 24 (Delhi-Rampur section), Old NH 87 (Rampur-Rudrapur section), Old NH 74 (Rudrapur-Sitarganj-Khatima section) and Old NH 125 (Tanakpur-Pithoragarh section)

2.2 Project Stretch Description

The Project section starts from Hapur Bypass (Km50.000) and ends in Moradabad (Km148.277). The total design length of project road section is about 100 Kms. The existing road is four lane divided carriageway, which is proposed to be six laned.The road passes through the districts of Hapur, Amrohaand Moradabad; all in Uttar Pradesh.

Project road alignment passes through the small towns/built-up areas of Pakwara, Joya and Babugarh. Simbhaoli, one of the largest integrated sugar refinery complexes is right on the project road

Hapur – Moradabad section of NH-9 was previously known as Delhi road locally. This forms main connectivity of areas like Moradabad, Rampur, Bareilly and important destination in Uttarakhand like Rudrapur, Kashipur, Ranikhet, Pithoragarh etc to national capital of Delhi.

There are two operative toll plazas at project stretch. First is at Garh at Km 90.661 and second at Joya at Km 123.875. Following figure show project alignment and toll plaza locations.

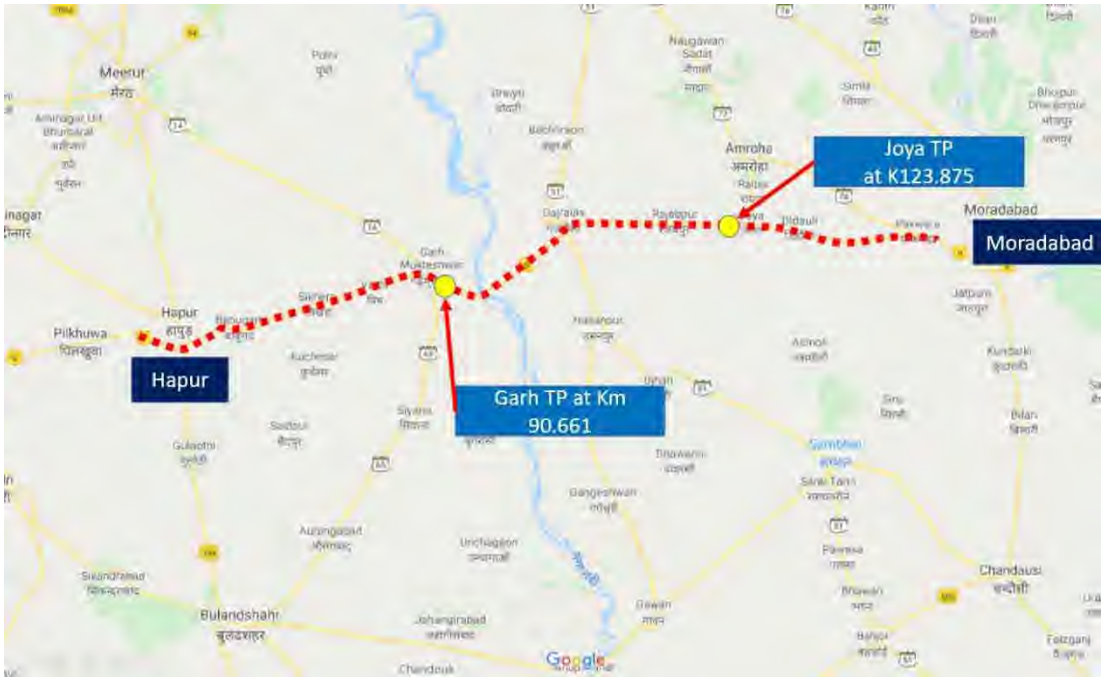


Figure 2-2: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and would be competed soon. Following photographs illustrate project section along the corridor.





Figure 2-3: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza locations on Hapur- Moradabad section of NH-9 for period from May 2019 to March 2020, 2020-21, 2021-2022 and Traffic Data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

ic details have been collected.

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass

1	Km 90.661 Toll Plaza at Garh	AADT for Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023
2	Km 123.875 Toll Plaza at Zoro ka Khera	AADT for Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023	For Period from 2019 to 2020, 2020 to 2021, 2021 to 2022 and 2022 to 2023

3.5 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below

Table 3-2 : Vehicle Classification System

Vehicle Type

Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.6 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.6.1 Traffic Data

Project concessionaire has provided Traffic data for base year 2019-20,2020-21, 2021-22 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Garh Toll Plaza at Km 90.661

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	14878	15865	21889	24088
2	Minibus/LCV	3704	3119	1995	1730
3	Bus	2033	1573	1862	2069
4	Truck	1289	1354	1674	1972
5	3-Axle	1318	1105	1112	1070
6	Multi Axle	1753	1635	1745	1962
7	Oversized Vehicle	2	6	6	9
	Total	**24977**	**24657**	**30283**	**32899**

Table 3-4 : Traffic Data at Zoya Toll Plaza at Km 123.875

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	10298	10526	13695	16037
2	Minibus/LCV	2595	2259	1335	1181
3	Bus	1062	1303	1485	1768
4	Truck	1532	1040	1184	1436

5	3-Axle	1128	1064	1081	1008
6	Multi Axle	1365	1370	1458	1765
7	Oversize Vehicle	2	8	8	9
	Total	**17982**	**17570**	**20246**	**23203**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July - 21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed du to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc category. Same is discussed in detail in following section.

3.7 Data Analysis

3.7.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-5.

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2022-23

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
Garh Km 90.661	2019-2020	24977	42251	1.69
	2020-2021	24657	40024	1.62
	2021-2022	30283	46705	1.54
	2022-2023	32899	50882	1.55
Joya Km 123.875	2019-2020	17982	31508	1.75
	2020-2021	17570	30337	1.73

	2021-2022	20246	33545	1.66
	2022-2023	23203	38427	1.66

It can be observed from above that project traffic has PCU index in range of 1.5 to 1.7 which is an indicator of high proportion of Passenger traffic in traffic mix in project corridor. Following figure illustrates variation of PCU index at four toll plaza locations.

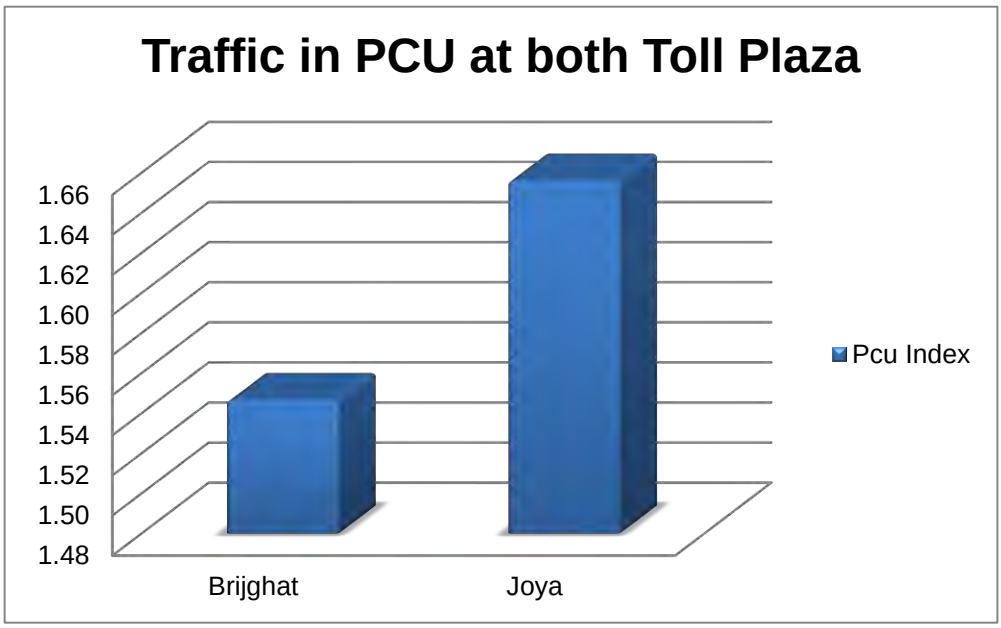


Figure 3-1: Comparison of PCU Index

It can be observed that PCU index is consistent at both toll plaza locations.

3.7.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

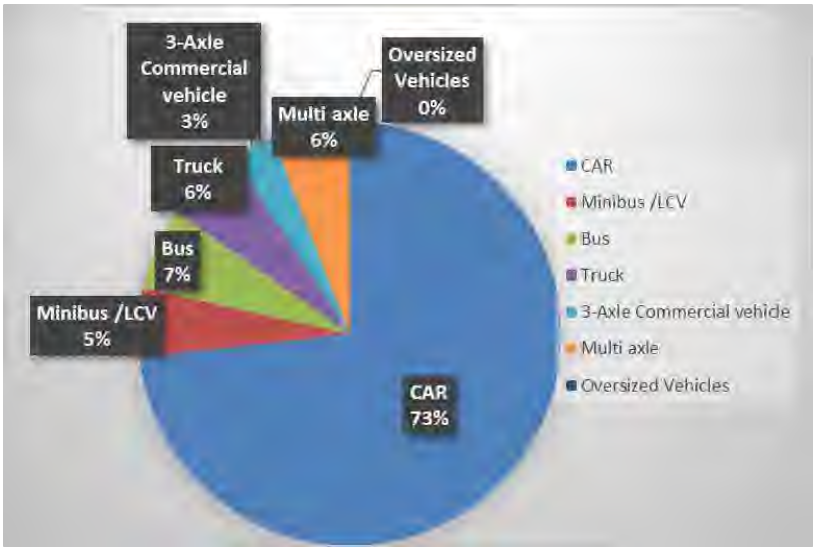


Figure 3-2 : Model Split of Tollable Vehicle @TP-1

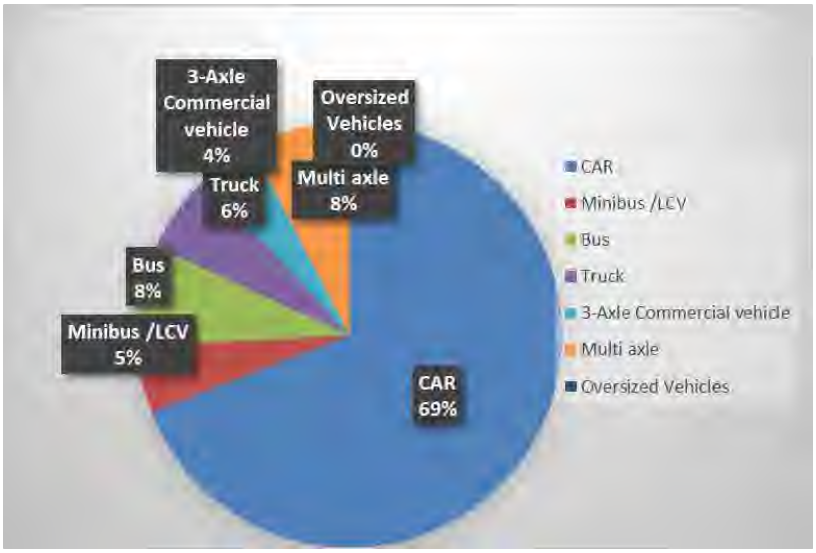


Figure 3-3 : Model Split of Tollable Vehicle @TP-2

It is observed that car traffic forms about 73%- 69% of total traffic at toll plaza locations while multi axle commercial vehicles are about 9% -12% of total traffic. Truck / Bus and LCV share about 13%-14% and 5% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23

Table 3-7 : Journey Type Bifurcation of Traffic at GarhTP-1KM 90.661

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	14920
2	Return Journey	17940
3	Local Commercial Single Journey	9
4	Monthly Pass Local	22
5	Monthly Pass	8

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 45%. Return journey component is 55%. The number of monthly pass local and Local Commercial Journey is 0% and 0% at Brijghat.

Following tables give the detail of journey distribution at Joya toll plaza at Km 123.875.

Table 3-8 : Journey Type Bifurcation of Traffic at Zoro ka Khera TPKM 121.020

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	12357
2	Return Journey	10822
3	Local Commercial Single Journey	11
4	Monthly Pass Local	5
5	Monthly Pass	8

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.8 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. However, for analysis point of view there can be few alternate routes at local level. Garh toll plaza is very near to major river Ganga over which major bridge about 1 km in length is constructed. Due to this there is no locals alternative route to toll plaza at Garh. There can be one alternative route which can bypass toll plaza at Joya. From Atrasi one can take left and bypass Toll Plaza at Joya and join back to NH-9 at Moradabad. This route quite long and passes through congested areas of Amroha. Further the road alignment of these district road is very poor with little chance of improvement.

Following maps show these routes in relation to project stretch at local level.



Figure 4-1: Alternate route at regional level

At regional level if we take Hisar and Rudrapur two origin destination representing Delhi/ Haryana and Uttarakhand region, there can be one alternate via Bulandshahar – Sambhal Road. One can take Bulaandshahar road after getting down from Peripheral Expressway at after Ghaziabad. This road bypasses NH-9 between Ghaziabad and Moradabad. This route is also quite long as compared to NH-9 and also road between Bulandshahar – Sambhal and Moradabad is poor and mostly of two lane specifications. Hence in such case it has very little potential of any further traffic diversion from project road.



Figure 4-2: Alternate route at local level

It can be observed that project highway forms the one of the main spine of the corridor between Delhi / Ghaziabad/ Hapurand Moradabad / Rudrapur/ Haldwani. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

With six laning now nearing completion, project stretch would become slightly more attractive due to improved level of service. In such case any diversion of traffic from project road is not envisaged.

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Hisar-Delhi-Bulandshahar- Sambhal-Moradabad - Rudrapur	Alternate Route	462	53	8Hr 43 Min	Alternate route is longer and has poor geometrics and specifications. Traffic diversion not envisaged
	Hisar-Delhi- Hapur-Gajrola- Moradabad - Rudrapur	Project Road	427	57	7 Hr 27 Min	
Local Level						
2	Atrasi- Amroha- Pakbara-Moradabad (bypassing Joya Toll)	Alternate Route	36	51	1 Hr.	Alternate route is unlikely to attract project traffic due to very poor geometrics and high congestion
	Atrasi- Joya- Palkbara-Moradabad	Project Road	220	50	28 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projectionsof other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Hapur–Moradabad section of NH-9has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth.Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Rajasthan. Toll plazas at Garh and Joya are in the state of Uttar Pradesh. For elasticity calculations, working data from Uttar Pradesh, Delhi and Haryana has been analyzed since Delhi and Haryana have substantial impact on project traffic.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	32002	1108100	4.51	6.04		
2013	32908	1205374	4.52	6.08	3%	
2014	34044	1423020	4.53	6.15	3%	
2015	34583	1572217	4.54	6.20	2%	
2016	36973	1746117	4.57	6.24	7%	
2017	40641	2027972	4.61	6.31	10%	4.94%

Regression analysis of same is given in figure below

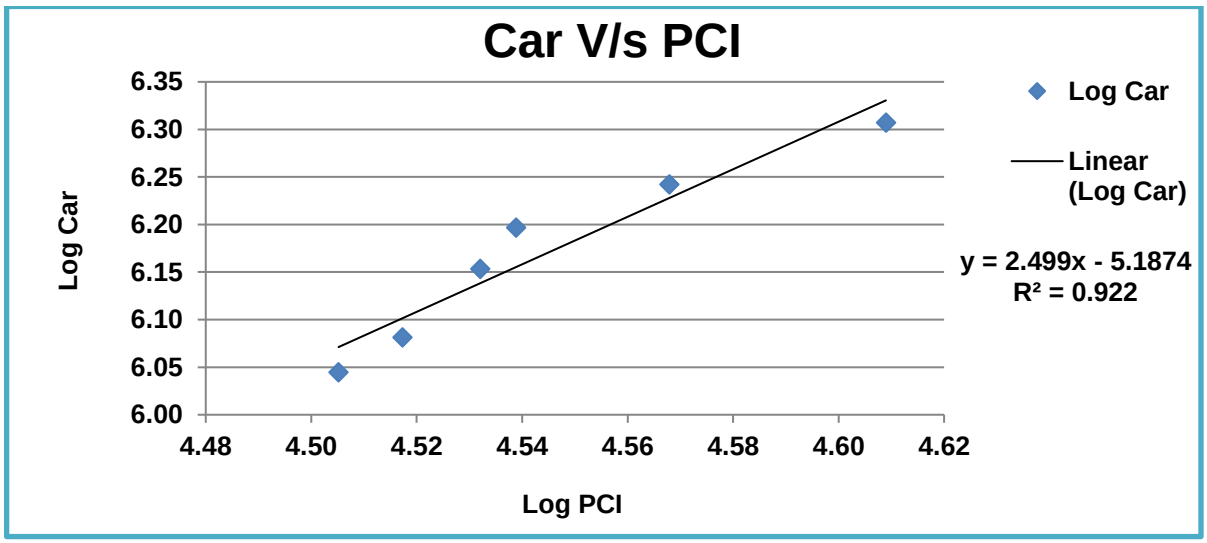


Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Uttar Pradesh

Table 5-2 : Population Vs Bus Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	199812341	57901	8.30	4.76		
2013	203382046	64147	8.31	4.81	2%	
2014	206942855	74389	8.32	4.87	2%	
2015	210493544	80460	8.32	4.91	2%	
2016	214032922	89127	8.33	4.95	2%	
2017	217559836	112020	8.34	5.05	2%	1.72%

Regression analysis of same is given in figure below

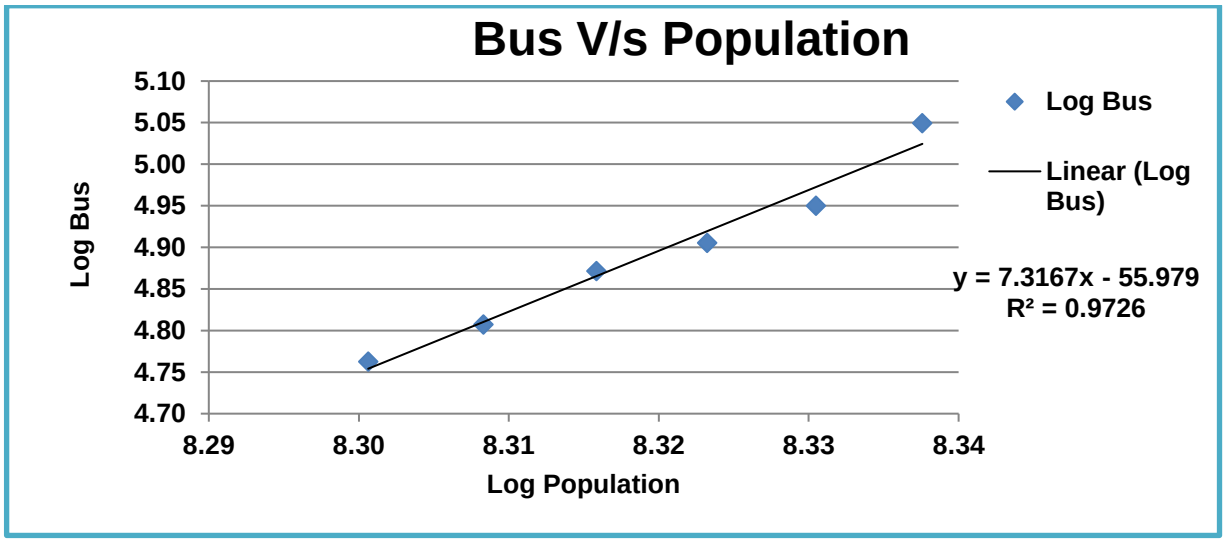


Figure 5-2: Regression and Elasticity Population vs. Bus – Extrapolation Uttar Pradesh

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Uttar Pradesh

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	645132	176164	5.81	5.25		
2013	673552	213657	5.83	5.33	4%	
2014	707469	265025	5.85	5.42	5%	
2015	729686	294022	5.86	5.47	3%	
2016	792049	316815	5.90	5.50	9%	5.28%

Following figure depict regression analysis and extrapolation.

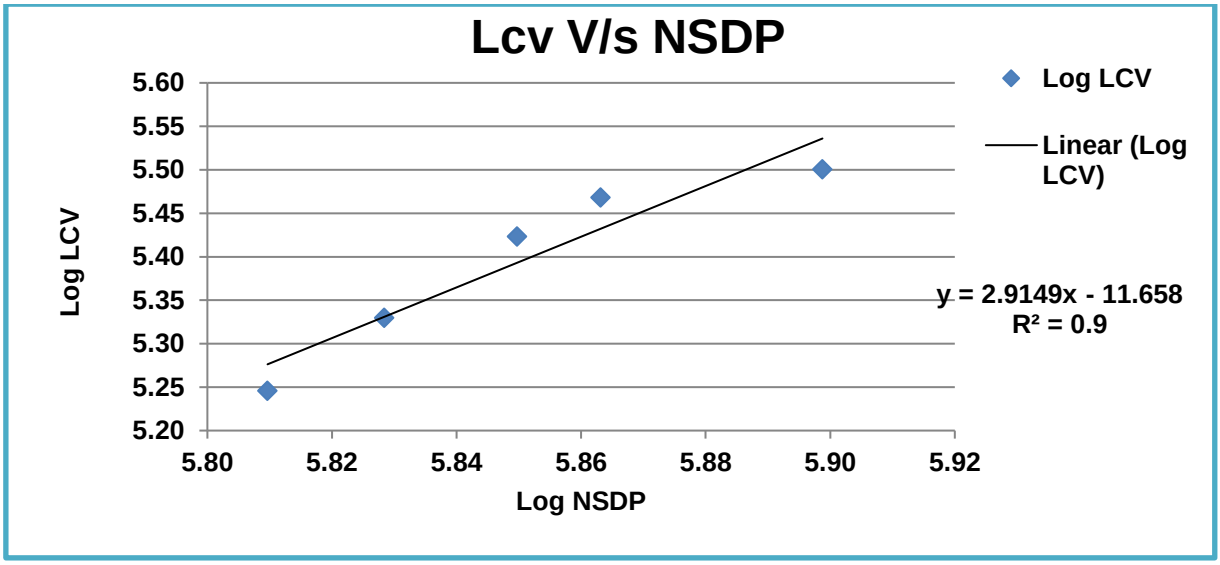


Figure 5-3: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Uttar Pradesh

Table 5-4: Trucks Traffic Vs NSDP Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	645132	162813	5.81	5.21		
2013	673552	186404	5.83	5.27	4%	
2014	707469	202761	5.85	5.31	5%	
2015	729686	217609	5.86	5.34	3%	

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2016	792049	245688	5.90	5.39	9%	
2017	883962	265167	5.95	5.42	12%	6.55%

Following figure depict regression analysis and extrapolation.

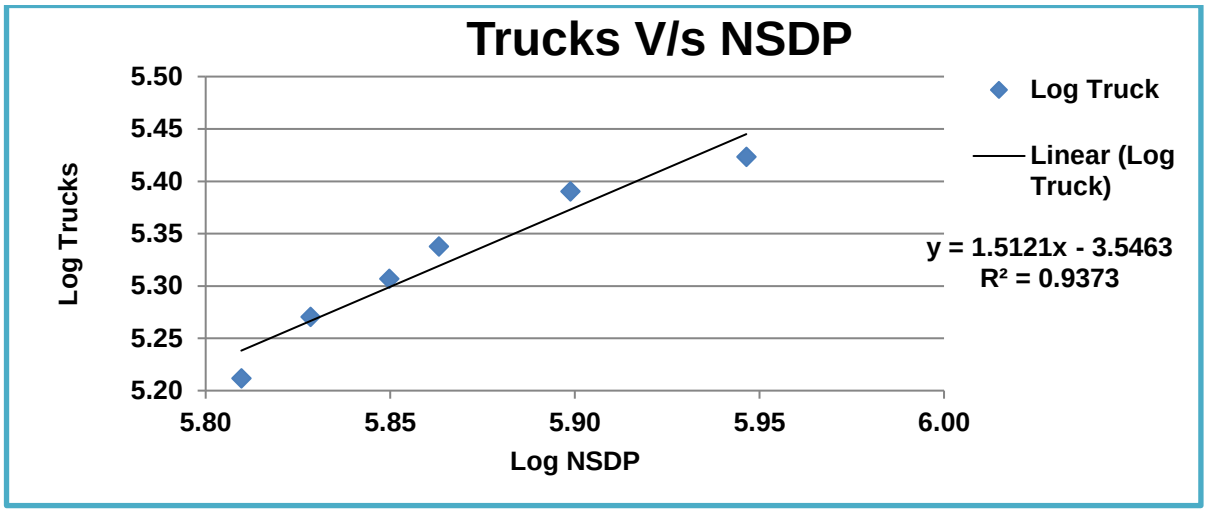


Figure 5-4: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Uttar Pradesh

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-4 : Summary Regression Analysis Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Uttar Pradesh	Car/Jeep	PCI	y = 2.499x + -5.1874	R^2 = 0.922	2.4990	4.94%	12.34%
	Bus	Population	y = 7.3167x - -55.9791	R^2 = 0.9726	7.3167	1.72%	12.56%
	LCV	NSDP	y = 2.9149x - -11.6585	R^2 = 0.9	2.9149	5.28%	15.40%
	Truck	NSDP	y = 1.5121x - -3.5463	R^2 = 0.9373	1.5121	6.55%	9.90%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Delhi State.

Table 5-5 : Per Capita Income Vs Car Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	185361	2172069	5.27	6.34		
2013	193175	2416974	5.29	6.38	4%	
2014	202216	2568380	5.31	6.41	5%	
2015	215726	2730071	5.33	6.44	7%	
2016	235737	2986579	5.37	6.48	9%	
2017	247255	3061817	5.39	6.49	5%	5.95%

Regression analysis of same is given in figure below

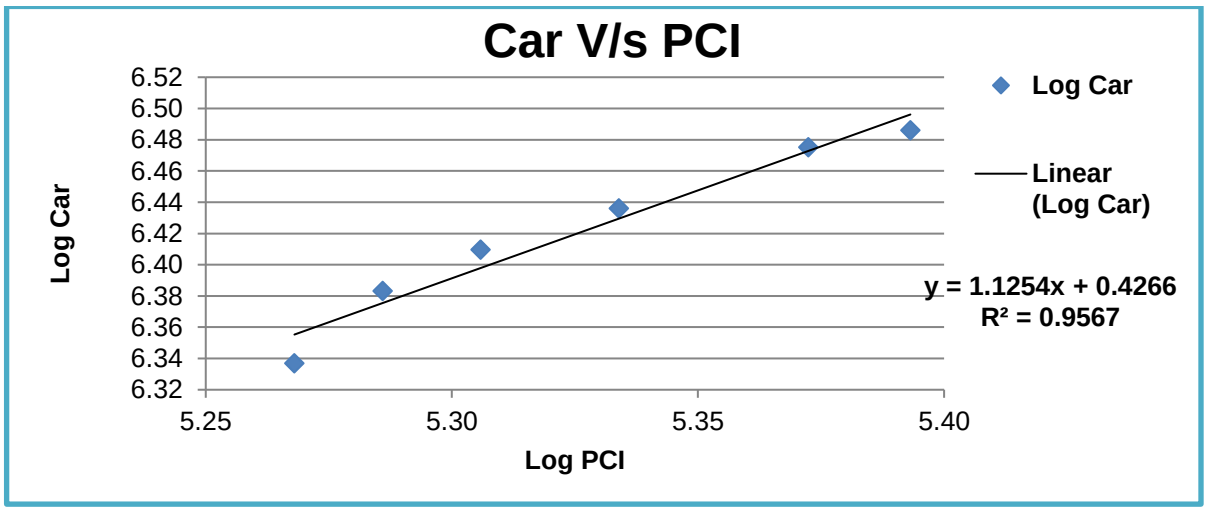


Figure 5-5: Regression and Elasticity PCI vs. Car–Extrapolation Delhi

Table 5-6 : Population Vs Bus Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	16787941	109790	7.22	5.04		
2013	17071599	19917	7.23	4.30	2%	
2014	17354281	19595	7.24	4.29	2%	
2015	17635897	19700	7.25	4.29	2%	
2016	17916359	43723	7.25	4.64	2%	
2017	18195583	41686	7.26	4.62	2%	1.62%

Regression analysis of same is given in figure below

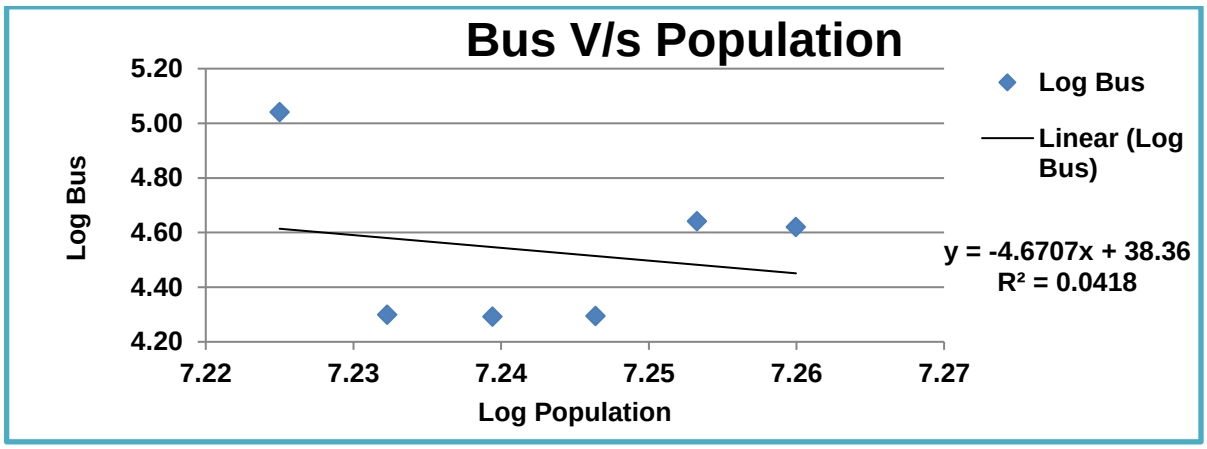


Figure 5-6: Regression and Elasticity Population vs. Bus – Extrapolation Delhi

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-7 : LCV Traffic Vs NSDP Delhi

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	314650	124547	5.50	5.10		
2013	334193	126539	5.52	5.10	6%	
2014	356528	136110	5.55	5.13	7%	
2015	387639	145903	5.59	5.16	9%	
2016	431730	183486	5.64	5.26	11%	
2017	461476	221068	5.66	5.34	7%	7.98%

Following figure depict regression analysis and extrapolation.

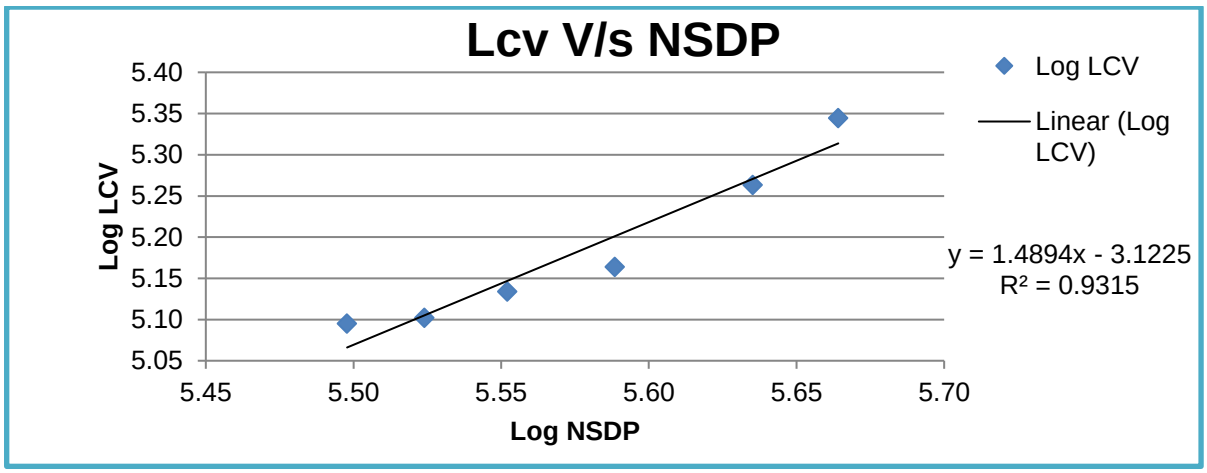


Figure 5-7: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Delhi

Table 5-4: Trucks Traffic Vs NSDP Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	314650	4792	5.50	3.68		
2013	334193	5176	5.52	3.71	6%	
2014	356528	6093	5.55	3.78	7%	
2015	387639	7503	5.59	3.88	9%	
2016	431730	8703	5.64	3.94	11%	
2017	461476	10440	5.66	4.02	7%	7.98%

Following figure depict regression analysis and extrapolation.

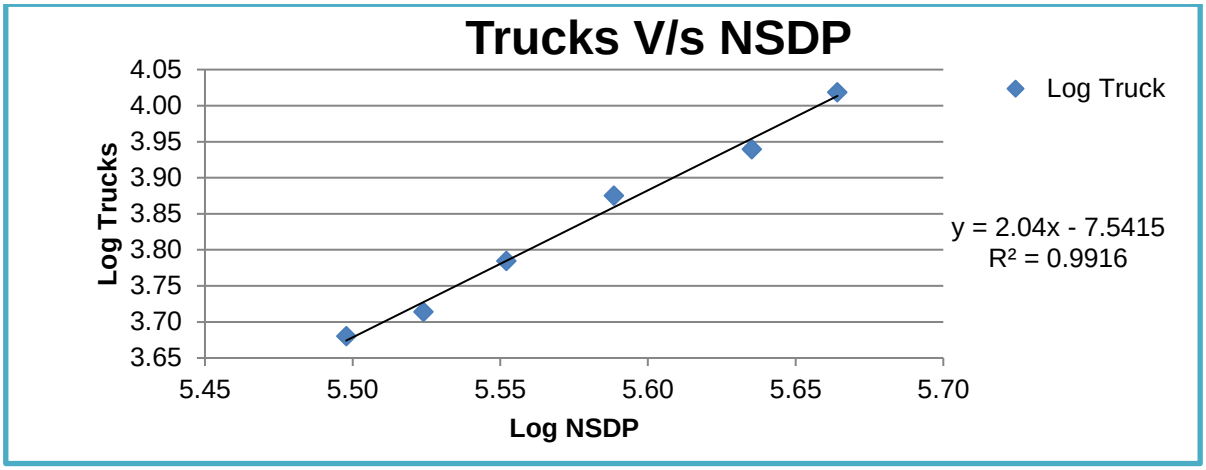


Figure 5-8: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Delhi

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-8 : Summary Regression Analysis Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Delhi	Car/Jeep	PCI	y = 1.1254x + 0.4266	R² = 0.9567	1.1254	5.95%	6.69%
	Bus	Population	y = -4.6707x - 38.36	R² = 0.0418	-4.6707	1.62%	-7.58%
	LCV	NSDP	y = 1.4894x - -3.1225	R² = 0.9315	1.4894	7.98%	11.88%
	Truck	NSDP	y = 2.04x - - 7.5415	R² = 0.9916	2.0400	7.98%	16.27%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-9 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	1134514	5.03	6.05		
2013	111780	1293065	5.05	6.11	5%	
2014	119791	1454182	5.08	6.16	7%	
2015	125032	1609544	5.10	6.21	4%	
2016	137818	1764448	5.14	6.25	10%	
2017	150241	1879587	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below

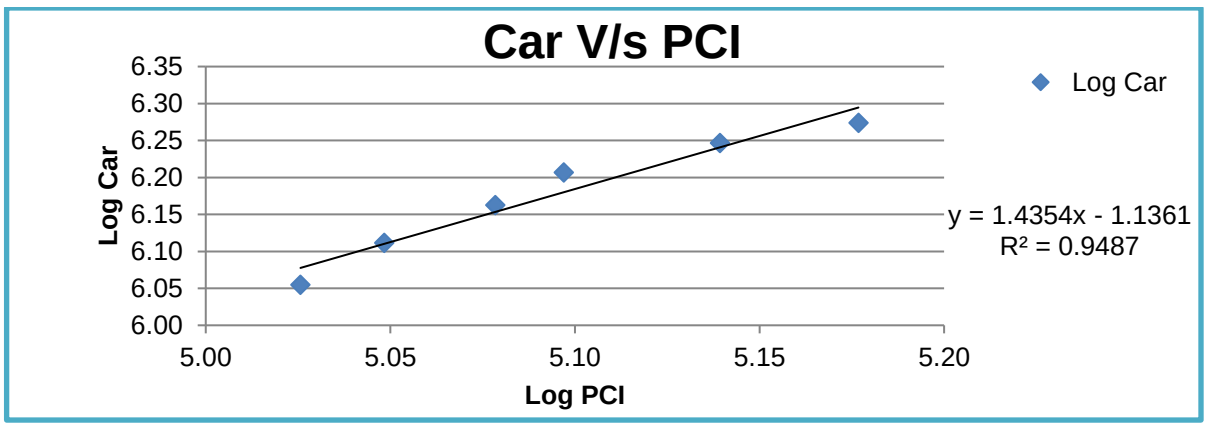


Figure 5-9: Regression and Elasticity PCI vs. Car–Extrapolation Harya

Table 5-10 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below

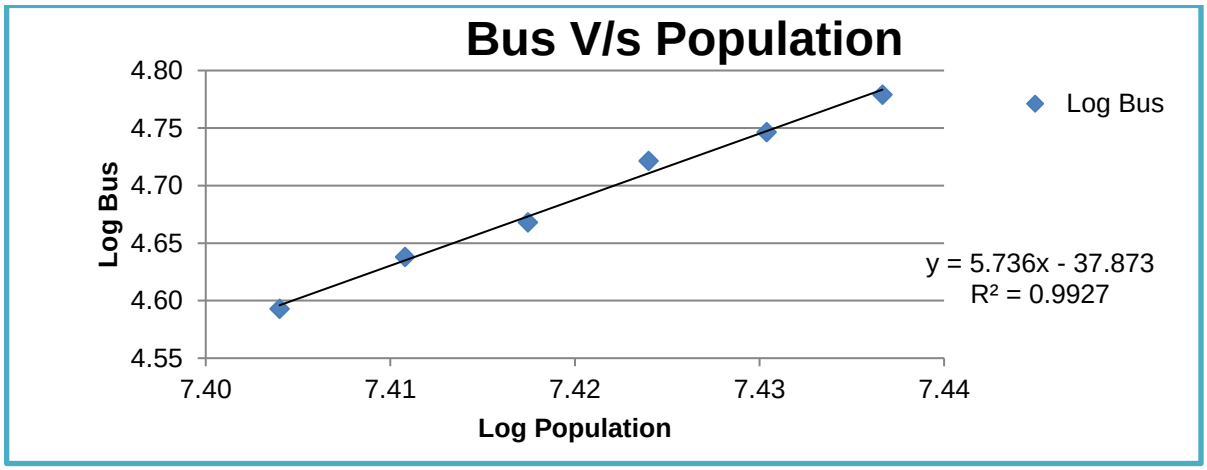


Figure 5-10: Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-11 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	

2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

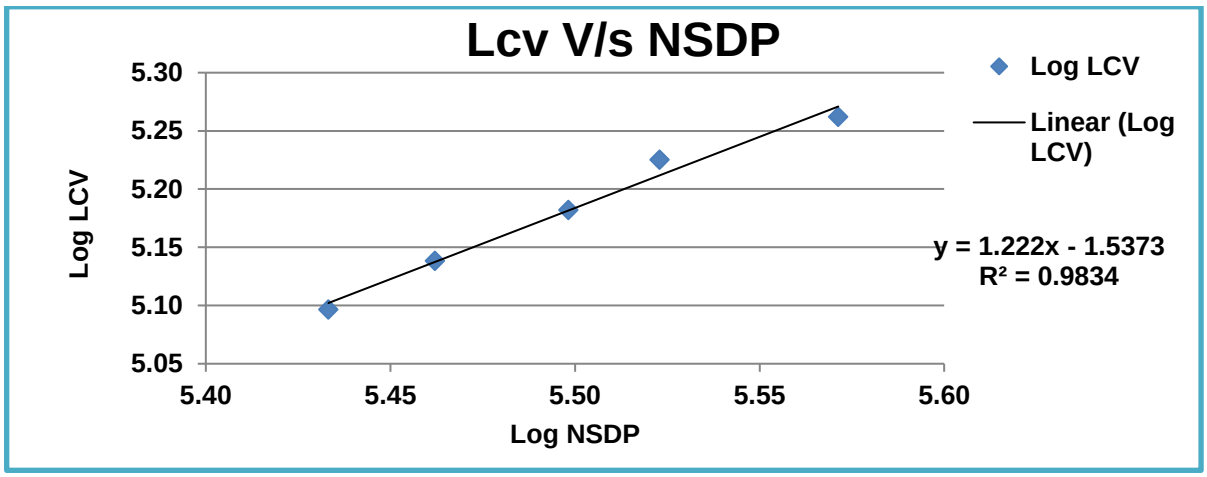


Figure 5-11: Regression and Elasticity NSDP vs. LCV Traffic – extrapolation Haryana

Table 5-4 : Trucks Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation.

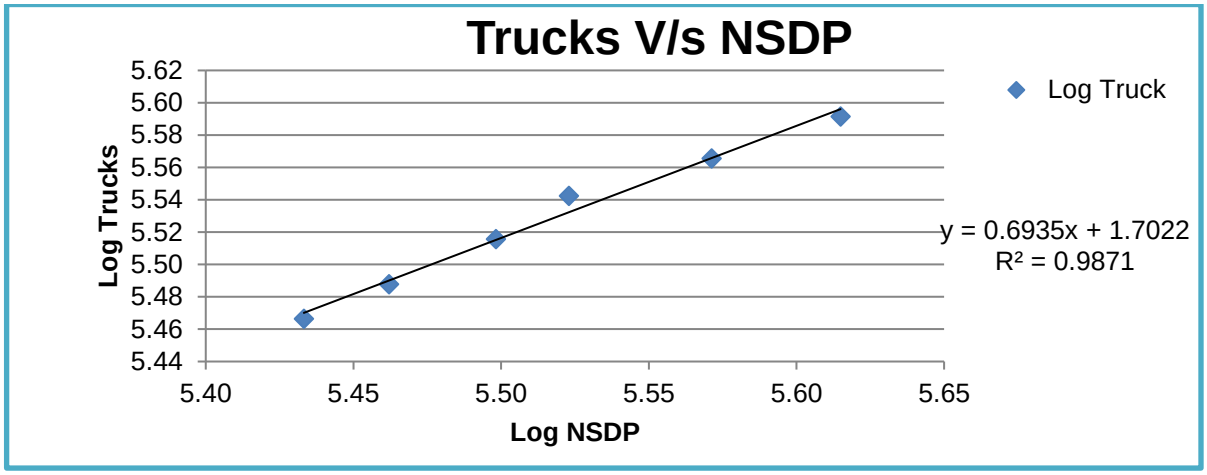


Figure 5-12: Regression and Elasticity NSDP vs. Truck Traffic – extrapolation Haryana

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-12 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Haryana	Car/Jeep	PCI	y = 1.4354x - -1.1361	R² = 0.9487	1.4354	7.23%	10.38%
	Bus	Population	y = 5.736x - -37.8732	R² = 0.9927	5.7360	1.52%	8.69%
	LCV	NSDP	y = 1.222x - -1.5373	R² = 0.9834	1.2220	8.30%	10.14%
	Truck	NSDP	y = 0.6935x - 1.7022	R² = 0.9871	0.6935	8.75%	6.07%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Hapur to Moradabad is under tolling operation with current concessionaire and has less than a year of tolling history from May 2019. Traffic data for last two years is affected by COVID-19 impact. Hence sufficient data points are not available to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

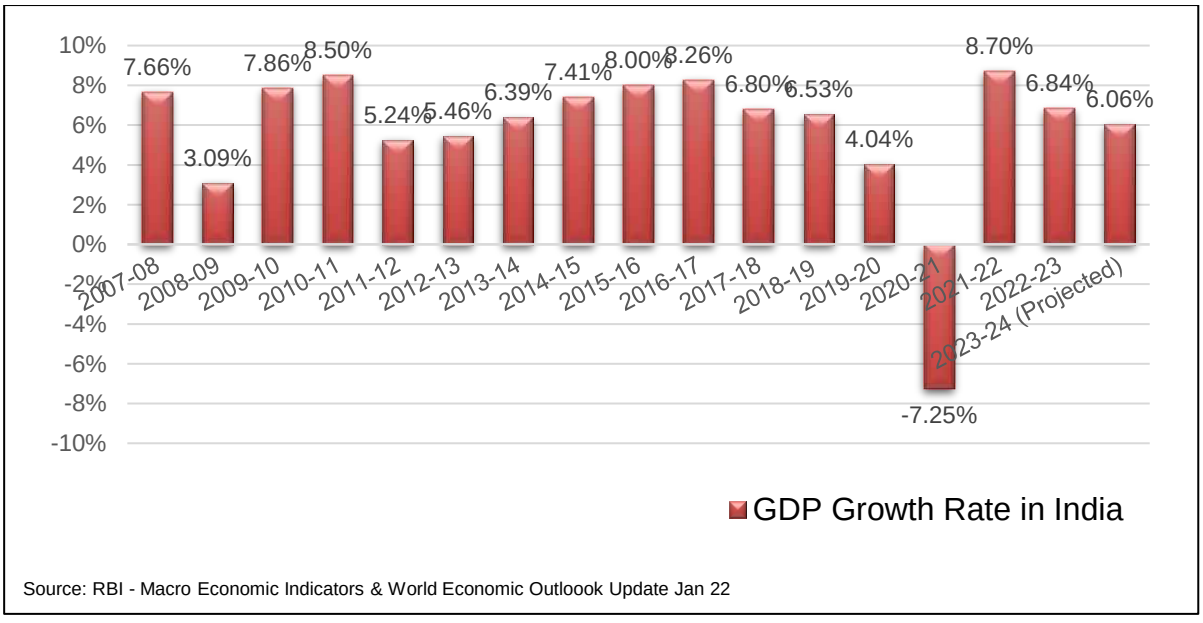


Figure 0-13 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of

6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Though growth of Uttar Pradesh has been consistently below the national average economic growth, it is the largest state in terms of population and consumption driven demand for goods and services will remain significantly high. The rate of growth of NSDP also seems to be catching up with the national average over the years. Other regions in the influence area states namely Delhi, Haryana and Uttarakhand are all growing significantly faster than the national average. Considering the scenario, it may be assumed that the traffic growth on project highway would remain high and there are minimal risks in terms of growth.

The corridor passes through heavily cultivated Gangetic plains and also connects the fertile Doaba regions of the Uttarakhand plains. Simbaoli, one of the largest and modern sugar refinery complexes falls right on the project corridor. Sugar refineries like this link agriculture, distillery, clean fuel technologies, green energy generation including cogeneration etc. which is a positive influence on this agriculturally right region. Other parts of the capital region of Delhi are also experiencing rapid urbanization fueled by industrialization and growth. Thus induced traffic from these developments around the project corridor and due to the improved facility will be a positive contributing factor to the traffic growth on the project corridor

5.6.1 Industrial Units along Project Corridor

This project section of the NH-24 (newNH-9) crosses three districts of Uttar Pradesh (Hapur, Amroha and Moradabad). There are about 1000 significant industrial units in these districts out of which there are 40 large Scale and 11 Medium Scale industries. The major industrial base is dependent on agriculture and timber in the surrounding region. Being a sugarcane growing region, there are a number of sugar mills in the project catchment. Simbhawli Sugarmill is one of the largest integrated refinery producing gsugar, ethanol and other related products. Following map shows some of major industrial establishments along and in influence area of project stretch.

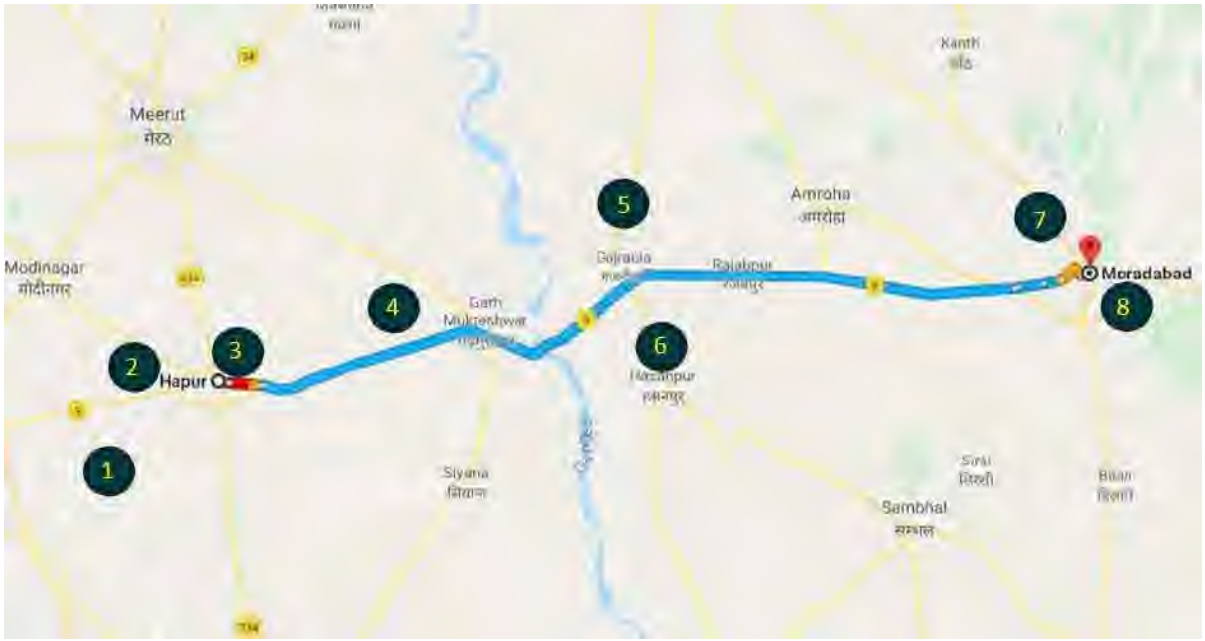


Figure 0-14 : Industrial Units along project corridor

Industries shown in above map are listed as below.

1. **Dhaolana** (Chetak enterprises, Spooner Industries Pvt. Ltd., Astech build product India Pvt. ltd.,
2. **Jindal Nagar, Hapur** (Marino Industries Jindal Nagar Hapur)– Large Scale Industry of Laminated Furnitures.
3. Medium Scale Industries in **Shakti Nagar, Hapur**
4. Sugar Mills (**Simbhawali** Sugar mills)
5. **GajraulaIndustrialArea1&2**(Paper & Sugar Mills, Food Products, Organic food Products)
6. Trivani Engineering & Industries Ltd.,**Hasanpur** (Engineering Goods)
7. **Agwanpur** (Industries of Milk Powder, Ghee, Acrylic Fibre, Crystal Sugar, Craft Paper)
8. **Dalpatpur** (Moradabad Dugdh Utpadan Sahakari Sangh– Milk & Milk Products)

Rapid expansion of NCR and NOIDA has triggered growth along project corridor as well. Large number of residential projects can be seen coming up along project road

near Hapur, Gajraula and Moradabad. In fact there is a new city "New Moradabad" has come up near Pakbara on Delhi road.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long It is established practice to stepdown future growth rates at suitable interval of years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-13 : Recommended Growth Rates Optimistic

Category / Year	2021-2022	2022-2023	2023-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	10.04%	7.18%	6.23%	6.01%	5.78%	4.36%	4.17%
LCV	5.47%	3.81%	3.26%	3.06%	2.47%	1.76%	1.57%
BUS	5.64%	3.84%	3.33%	3.20%	3.44%	2.73%	2.62%
2- Axle	5.80%	4.47%	3.81%	3.61%	3.17%	1.76%	1.57%
3 - Axle	6.13%	4.47%	3.81%	3.61%	3.17%	1.76%	1.57%
4 to6 Axle	7.12%	4.81%	4.14%	3.92%	3.43%	1.89%	1.68%
7 and Above Axle	7.12%	4.81%	4.14%	3.92%	3.43%	1.89%	1.68%

Table 5-14 : Recommended Growth Rates Pessimistic

Category / Year	2021-2022	2022-2023	2023-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	9.54%	6.68%	5.73%	5.51%	5.28%	3.86%	3.67%
LCV	4.97%	3.31%	2.76%	2.56%	1.97%	1.26%	1.07%
BUS	5.14%	3.34%	2.83%	2.70%	2.94%	2.23%	2.12%
2- Axle	5.30%	3.97%	3.31%	3.11%	2.67%	1.26%	1.07%
3 - Axle	5.63%	3.97%	3.31%	3.11%	2.67%	1.26%	1.07%
4 to6 Axle	6.62%	4.31%	3.64%	3.42%	2.93%	1.39%	1.18%
7 and Above Axle	6.62%	4.31%	3.64%	3.42%	2.93%	1.39%	1.18%

Table 5-15 : Recommended Growth Rates Most Likely

Category / Year	2021-2022	2022-2023	2023-2026	2026-2031	2031-2036	2036-2041	2041-2046
Car/Jeep/Van	9.79%	6.93%	5.98%	5.76%	5.53%	4.11%	3.92%
LCV	5.22%	3.56%	3.01%	2.81%	2.22%	1.51%	1.32%
BUS	5.39%	3.59%	3.08%	2.95%	3.19%	2.48%	2.37%
2- Axle	5.55%	4.22%	3.56%	3.36%	2.92%	1.51%	1.32%
3 - Axle	5.88%	4.22%	3.56%	3.36%	2.92%	1.51%	1.32%
4 to6 Axle	6.87%	4.56%	3.89%	3.67%	3.18%	1.64%	1.43%
7 and Above Axle	6.87%	4.56%	3.89%	3.67%	3.18%	1.64%	1.43%

Traffic and revenue have been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

Taking recommended traffic growth and factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Garh @90.661 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	25588	1787	2138	2048	1111	2044	9	34725	53398
2024-25	27181	1845	2209	2126	1153	2128	9	36651	56029
2025-26	28815	1902	2279	2202	1194	2211	9	38612	58683
2026-27	30548	1960	2351	2281	1237	2298	9	40684	61477
2027-28	32385	2020	2426	2364	1282	2388	9	42874	64418
2028-29	34332	2082	2504	2449	1328	2482	9	45186	67508
2029-30	36396	2146	2584	2537	1375	2579	9	47626	70749
2030-31	38499	2199	2673	2618	1419	2667	9	50084	73970
2031-32	40724	2253	2765	2701	1464	2758	9	52674	77345
2032-33	43077	2308	2860	2787	1510	2853	9	55404	80889
2033-34	45567	2365	2958	2875	1557	2951	9	58282	84605
2034-35	48201	2423	3060	2966	1606	3052	9	61317	88506
2035-36	50304	2466	3144	3018	1634	3109	9	63684	91422
2036-37	52499	2509	3230	3071	1662	3168	9	66148	94448
2037-38	54790	2553	3318	3125	1691	3228	9	68714	97588
2038-39	57181	2598	3408	3180	1721	3289	9	71386	100846
2039-40	59676	2644	3501	3236	1752	3351	9	74169	104229
2040-41	62166	2685	3593	3287	1780	3407	9	76927	107546
2041-42	64759	2727	3687	3339	1808	3464	9	79793	110980
2042-43	67461	2770	3783	3391	1836	3522	9	82772	114536
2043-44	70276	2813	3882	3444	1865	3581	9	85870	118224
2044-45	73209	2857	3984	3498	1894	3641	9	89092	122048
2045-46	76127	2896	4084	3546	1921	3695	9	92278	125792

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	17035	1220	1827	1491	1046	1838	9	24466	40269
2024-25	18094	1259	1887	1548	1085	1914	9	25796	42196
2025-26	19182	1298	1947	1603	1124	1989	9	27152	44142
2026-27	20335	1337	2010	1661	1165	2067	9	28584	46191
2027-28	21557	1378	2074	1721	1207	2148	9	30094	48337
2028-29	22853	1420	2140	1783	1250	2232	9	31687	50587
2029-30	24227	1463	2209	1847	1294	2320	9	33369	52952
2030-31	25626	1499	2285	1905	1335	2400	9	35059	55290
2031-32	27106	1536	2363	1965	1377	2482	9	36838	57735
2032-33	28672	1574	2444	2028	1420	2567	9	38714	60301
2033-34	30329	1613	2528	2092	1464	2655	9	40690	62989
2034-35	32082	1652	2615	2158	1511	2747	9	42774	65814
2035-36	33481	1681	2686	2196	1538	2799	9	44390	67899
2036-37	34942	1711	2760	2235	1565	2851	9	46073	70059
2037-38	36466	1741	2836	2274	1593	2905	9	47824	72300
2038-39	38057	1771	2913	2314	1621	2960	9	49645	74618
2039-40	39717	1802	2993	2355	1649	3016	9	51541	77024
2040-41	41374	1830	3071	2392	1674	3067	9	53417	79372
2041-42	43100	1859	3152	2430	1701	3118	9	55369	81809
2042-43	44898	1888	3234	2468	1728	3170	9	57395	84326
2043-44	46771	1918	3318	2507	1755	3224	9	59502	86937
2044-45	48722	1948	3405	2546	1783	3278	9	61691	89638
2045-46	50663	1975	3491	2581	1807	3326	9	63852	92270

Table 6-3 : Total Tollable Traffic @ Toll Plaza 1- Garh @ 90.661 KM
(Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	25467	1778	2128	2037	1106	2033	9	34558	53136
2024-25	26925	1826	2188	2104	1143	2107	9	36302	55491
2025-26	28409	1872	2247	2169	1179	2179	9	38064	57848
2026-27	29975	1920	2308	2236	1216	2254	9	39918	60319
2027-28	31627	1969	2370	2305	1253	2331	9	41864	62895
2028-29	33370	2019	2433	2377	1292	2410	9	43910	65590
2029-30	35210	2071	2499	2451	1332	2492	9	46064	68417
2030-31	37070	2112	2572	2516	1368	2565	9	48212	71189
2031-32	39028	2153	2648	2583	1404	2640	9	50465	74083
2032-33	41089	2196	2726	2652	1441	2718	9	52831	77112
2033-34	43258	2239	2806	2723	1479	2798	9	55312	80272
2034-35	45542	2283	2889	2795	1519	2880	9	57917	83576
2035-36	47302	2312	2953	2830	1538	2920	9	59864	85914
2036-37	49130	2341	3019	2866	1557	2961	9	61883	88333
2037-38	51029	2371	3087	2902	1576	3002	9	63976	90830
2038-39	53001	2401	3156	2938	1596	3044	9	66145	93411

2039-40	55049	2431	3226	2976	1616	3086	9	68393	96077
2040-41	57071	2457	3294	3008	1634	3123	9	70596	98659
2041-42	59167	2484	3364	3041	1652	3160	9	72877	101325
2042-43	61340	2511	3435	3074	1670	3197	9	75236	104071
2043-44	63592	2538	3507	3107	1688	3235	9	77676	106903
2044-45	65928	2565	3582	3140	1706	3273	9	80203	109829
2045-46	68226	2588	3654	3168	1721	3304	9	82670	112646

Table 6-4 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM

(Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	16954	1213	1818	1483	1041	1829	9	24347	40071
2024-25	17924	1247	1870	1532	1075	1896	9	25553	41798
2025-26	18912	1279	1921	1579	1108	1961	9	26769	43520
2026-27	19954	1311	1973	1628	1142	2028	9	28045	45316
2027-28	21054	1345	2026	1678	1177	2097	9	29386	47192
2028-29	22215	1379	2080	1730	1214	2169	9	30796	49157
2029-30	23439	1414	2136	1783	1252	2243	9	32276	51207
2030-31	24675	1442	2199	1830	1285	2308	9	33748	53207
2031-32	25977	1470	2264	1879	1319	2376	9	35294	55301
2032-33	27348	1499	2330	1929	1354	2445	9	36914	57479
2033-34	28791	1529	2399	1981	1390	2517	9	38616	59762
2034-35	30310	1559	2469	2034	1427	2590	9	40398	62134
2035-36	31481	1579	2524	2059	1445	2625	9	41722	63787
2036-37	32696	1599	2581	2085	1463	2662	9	43095	65501
2037-38	33959	1619	2639	2112	1482	2699	9	44519	67273
2038-39	35270	1639	2698	2139	1501	2737	9	45993	69100
2039-40	36633	1660	2758	2166	1520	2775	9	47521	70983
2040-41	37978	1678	2816	2189	1536	2808	9	49014	72795
2041-42	39372	1696	2875	2213	1552	2841	9	50558	74661
2042-43	40818	1714	2936	2237	1569	2875	9	52158	76593
2043-44	42317	1732	2999	2261	1586	2909	9	53813	78584
2044-45	43871	1750	3063	2285	1603	2943	9	55524	80633
2045-46	45399	1766	3125	2305	1617	2972	9	57193	82604

Traffic projections for Most Likely scenario are given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Garh @ 90.661 KM
(Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	25528	1782	2132	2042	1108	2038	9	34639	53259
2024-25	27053	1835	2198	2115	1148	2117	9	36475	55756
2025-26	28612	1886	2262	2186	1186	2195	9	38336	58261
2026-27	30260	1939	2329	2260	1226	2275	9	40298	60892
2027-28	32004	1993	2398	2336	1267	2358	9	42365	63648
2028-29	33848	2048	2468	2414	1309	2444	9	44540	66532
2029-30	35799	2105	2540	2495	1353	2534	9	46835	69564
2030-31	37778	2151	2621	2568	1393	2614	9	49134	72554
2031-32	39867	2199	2705	2642	1434	2697	9	51553	75686
2032-33	42071	2247	2791	2719	1476	2783	9	54096	78964
2033-34	44398	2297	2880	2798	1519	2872	9	56773	82399
2034-35	46853	2348	2972	2879	1564	2963	9	59588	85994
2035-36	48781	2383	3045	2922	1587	3012	9	61739	88612
2036-37	50788	2419	3121	2967	1611	3061	9	63976	91329
2037-38	52877	2455	3199	3012	1635	3111	9	66298	94138
2038-39	55052	2492	3278	3057	1659	3162	9	68709	97042
2039-40	57317	2529	3359	3103	1684	3214	9	71215	100052
2040-41	59566	2563	3438	3144	1706	3260	9	73686	102985
2041-42	61902	2597	3519	3185	1729	3306	9	76247	106014
2042-43	64330	2631	3603	3227	1752	3354	9	78906	109156
2043-44	66854	2666	3689	3270	1775	3402	9	81665	112405
2044-45	69476	2701	3776	3313	1798	3451	9	84524	115759
2045-46	72071	2731	3861	3351	1818	3493	9	87334	119017

Table 6-6 : Total Tollable Traffic @ Toll Plaza 2- Joya @123.875 KM
(Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	16994	1217	1822	1488	1044	1834	9	24408	40175
2024-25	18009	1253	1878	1541	1081	1906	9	25677	42006
2025-26	19047	1288	1933	1593	1118	1975	9	26963	43839
2026-27	20144	1324	1990	1646	1156	2047	9	28316	45758
2027-28	21305	1361	2049	1701	1195	2122	9	29742	47771
2028-29	22532	1399	2109	1758	1235	2199	9	31241	49873
2029-30	23830	1438	2171	1817	1277	2280	9	32822	52083
2030-31	25147	1470	2240	1870	1314	2353	9	34403	54253
2031-32	26537	1502	2311	1925	1352	2428	9	36064	56521
2032-33	28004	1536	2385	1981	1391	2505	9	37811	58892
2033-34	29552	1570	2461	2039	1432	2585	9	39648	61376
2034-35	31186	1604	2539	2099	1474	2667	9	41578	63970
2035-36	32468	1629	2602	2130	1497	2710	9	43045	65834
2036-37	33803	1654	2667	2162	1520	2754	9	44569	67765
2037-38	35193	1679	2733	2195	1543	2799	9	46151	69761
2038-39	36640	1704	2801	2228	1566	2845	9	47793	71824
2039-40	38147	1729	2871	2261	1590	2892	9	49499	73961

2040-41	39643	1752	2939	2291	1611	2934	9	51179	76038
2041-42	41198	1775	3009	2321	1633	2976	9	52921	78182
2042-43	42813	1798	3080	2352	1655	3019	9	54726	80397
2043-44	44492	1821	3152	2383	1677	3062	9	56596	82679
2044-45	46237	1845	3227	2414	1699	3106	9	58537	85042
2045-46	47963	1866	3299	2442	1718	3144	9	60441	87328

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Hapur-Moradabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2028

Target Traffic - 67413 in PCU

It was observed that as per traffic projections, average traffic volume is in excess of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 2 years. Traffic forecast and revenue projections has been kept up to concession period in report till actual finalization of modification.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	58245	-14%	20%	20%	22	4.4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	59092	-12%	19%	19%	22	4.1

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2028	67413	57409	-15%	22%	20%	22	4.4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

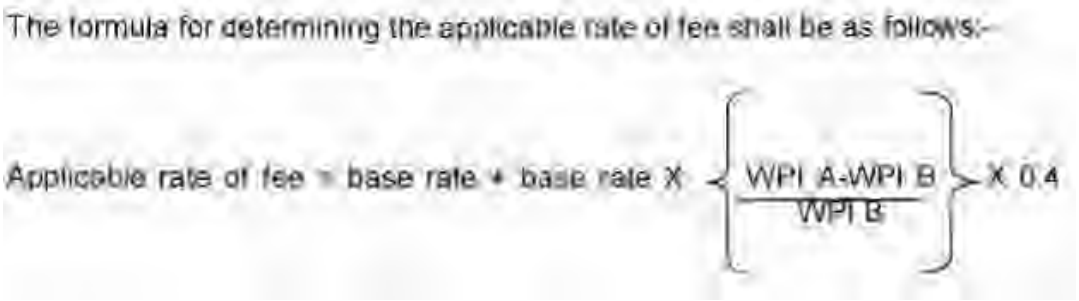
This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Hapur-Moradabad section of NH-9 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued for 50 trips in month at 2/3d rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 265 per month
    b) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.



Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

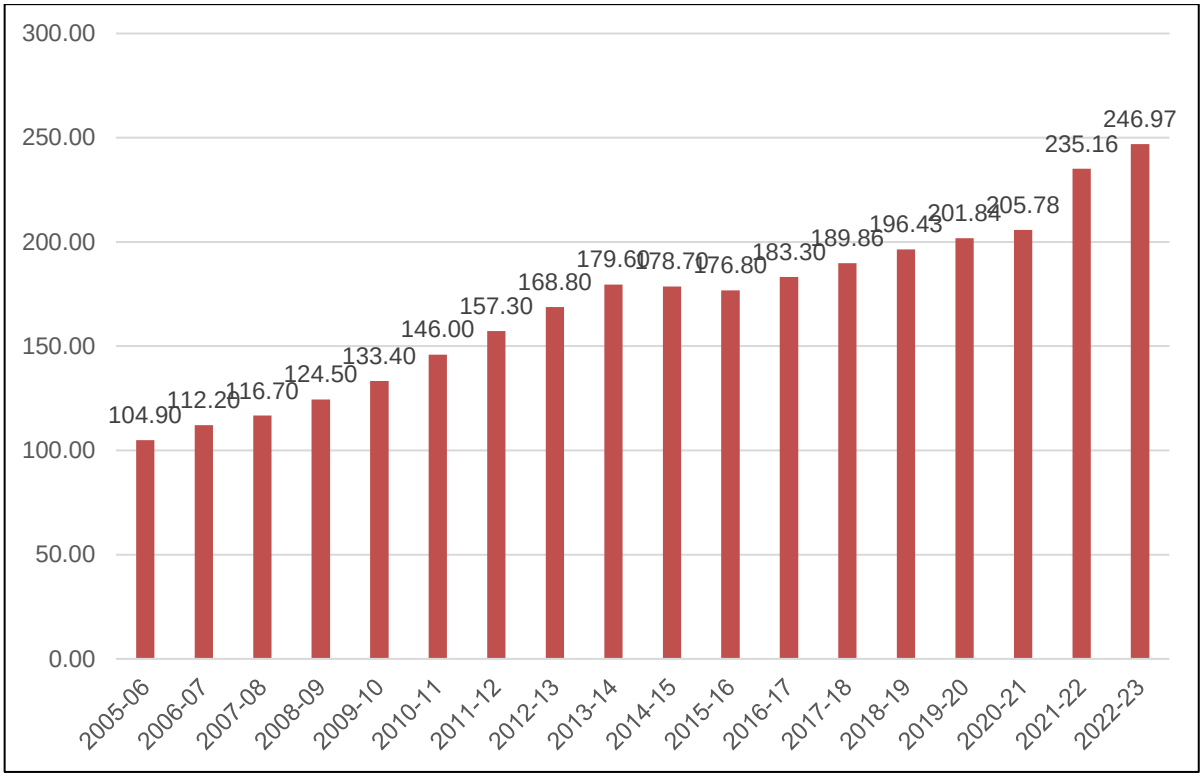


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey@ Km 90.661

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	105	170	360	360	390
2024-25	115	185	385	385	420
2025-26	120	190	400	400	440
2026-27	125	200	425	425	460
2027-28	130	210	445	445	485
2028-29	140	220	465	465	510
2029-30	145	235	490	490	535
2030-31	150	245	510	510	560
2031-32	160	255	535	535	585
2032-33	165	270	565	565	615
2033-34	175	280	590	590	645
2034-35	185	295	620	620	675
2035-36	190	310	650	650	710
2036-37	200	325	680	680	745
2037-38	210	340	715	715	780
2038-39	220	360	750	750	820
2039-40	230	375	785	785	860

2040-41	245	395	825	825	900
2041-42	255	415	865	865	945
2042-43	270	435	910	910	990
2043-44	280	455	955	955	1040
2044-45	295	480	1005	1005	1095
2045-46	310	505	1055	1055	1150
2046-47	325	530	1105	1105	1205

Table 7 3 : Toll Rates for Single Journey @ Km 123.875

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	70	110	230	230	250
2024-25	70	115	240	240	265
2025-26	75	120	255	255	280
2026-27	80	130	270	270	290
2027-28	85	135	280	280	305
2028-29	85	140	295	295	320
2029-30	90	145	310	310	335
2030-31	95	155	325	325	350
2031-32	100	160	340	340	370
2032-33	105	170	355	355	390
2033-34	110	180	375	375	405
2034-35	115	185	390	390	425
2035-36	120	195	410	410	445
2036-37	125	205	430	430	470
2037-38	135	215	450	450	490
2038-39	140	225	475	475	515
2039-40	145	235	495	495	540
2040-41	155	250	520	520	570
2041-42	160	260	550	550	595
2042-43	170	275	575	575	630
2043-44	180	290	610	610	665
2044-45	190	305	640	640	700
2045-46	200	325	675	675	740
2046-47	210	340	715	715	780

Table 7-3 : Toll Rates for Return Journey @ Km 90.661

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	160	255	540	540	590
2024-25	170	275	575	575	625
2025-26	180	290	605	605	660
2026-27	185	305	635	635	690
2027-28	195	320	665	665	725
2028-29	205	335	700	700	760
2029-30	215	350	735	735	800
2030-31	225	365	770	770	840
2031-32	240	385	805	805	880
2032-33	250	405	845	845	920
2033-34	260	420	885	885	965
2034-35	275	445	930	930	1015
2035-36	290	465	975	975	1060
2036-37	300	485	1020	1020	1115
2037-38	315	510	1070	1070	1170
2038-39	330	535	1125	1125	1225
2039-40	350	565	1180	1180	1285
2040-41	365	590	1240	1240	1350
2041-42	385	620	1300	1300	1420
2042-43	405	650	1365	1365	1490
2043-44	425	685	1430	1430	1565
2044-45	445	720	1505	1505	1640
2045-46	465	755	1580	1580	1725
2046-47	490	790	1660	1660	1810

Table 7-4 : Toll Rates for Return Journey @ Km 123.875

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	100	165	345	345	375
2024-25	105	175	365	365	395
2025-26	115	180	380	380	415
2026-27	120	190	400	400	440
2027-28	125	200	420	420	460
2028-29	130	210	440	440	480
2029-30	135	220	460	460	505
2030-31	145	230	485	485	530
2031-32	150	245	510	510	555
2032-33	155	255	535	535	580
2033-34	165	265	560	560	610
2034-35	175	280	585	585	640
2035-36	180	295	615	615	670
2036-37	190	310	645	645	705
2037-38	200	325	675	675	740

2038-39	210	340	710	710	775
2039-40	220	355	745	745	815
2040-41	230	375	780	780	855
2041-42	245	390	820	820	895
2042-43	255	415	865	865	945
2043-44	270	435	910	910	995
2044-45	285	460	960	960	1050
2045-46	300	485	1015	1015	1105
2046-47	315	510	1070	1070	1165

Table 7-5 : Toll Rates for Monthly Pass Local @ Km 90.661

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	330	330
2025-26	345	345
2026-27	365	365
2027-28	385	385
2028-29	400	400
2029-30	420	420
2030-31	440	440
2031-32	460	460
2032-33	485	485
2033-34	510	510
2034-35	535	535
2035-36	560	560
2036-37	585	585
2037-38	615	615
2038-39	645	645
2039-40	680	680
2040-41	710	710
2041-42	745	745
2042-43	785	785
2043-44	825	825
2044-45	865	865
2045-46	905	905
2046-47	955	955

Table 7-7 : Toll Rates for Monthly Pass Local @ Km 123.87

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345

2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	870	870
2044-45	920	920
2045-46	970	970
2046-47	1020	1020

Table 7-8 : Toll Rates for Monthly Pass @ Km 90.661

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3540	5720	11985	11985	13070
2024-25	3775	6095	12770	12770	13930
2025-26	3965	6405	13415	13415	14635
2026-27	4165	6730	14100	14100	15380
2027-28	4380	7070	14820	14820	16165
2028-29	4590	7410	15530	15530	16940
2029-30	4810	7770	16280	16280	17760
2030-31	5040	8145	17065	17065	18615
2031-32	5285	8540	17890	17890	19515
2032-33	5540	8950	18755	18755	20460
2033-34	5810	9385	19670	19670	21455
2034-35	6095	9845	20625	20625	22500
2035-36	6390	10325	21635	21635	23600
2036-37	6705	10830	22695	22695	24755
2037-38	7035	11365	23810	23810	25975
2038-39	7380	11925	24980	24980	27255
2039-40	7745	12510	26215	26215	28600
2040-41	8130	13130	27515	27515	30015
2041-42	8535	13785	28880	28880	31505
2042-43	8960	14470	30320	30320	33075
2043-44	9405	15195	31830	31830	34725
2044-45	9875	15955	33425	33425	36465

2045-46	10370	16755	35105	35105	38295
2046-47	10895	17595	36870	36870	40220

Table 7-9 : Toll Rates for Monthly Pass @ Km 123.875

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	2270	3670	7685	7685	8385
2024-25	2385	3855	8075	8075	8810
2025-26	2510	4050	8490	8490	9260
2026-27	2635	4260	8920	8920	9735
2027-28	2765	4465	9350	9350	10200
2028-29	2895	4675	9800	9800	10690
2029-30	3035	4905	10275	10275	11205
2030-31	3180	5140	10770	10770	11750
2031-32	3335	5390	11290	11290	12320
2032-33	3500	5650	11840	11840	12920
2033-34	3670	5925	12420	12420	13545
2034-35	3850	6215	13025	13025	14210
2035-36	4035	6520	13665	13665	14905
2036-37	4235	6840	14335	14335	15640
2037-38	4445	7180	15040	15040	16410
2038-39	4665	7535	15785	15785	17220
2039-40	4895	7905	16565	16565	18070
2040-41	5135	8300	17390	17390	18970
2041-42	5395	8710	18255	18255	19915
2042-43	5685	9180	19235	19235	20985
2043-44	5990	9675	20275	20275	22120
2044-45	6315	10200	21375	21375	23320
2045-46	6660	10755	22540	22540	24590
2046-47	7025	11345	23770	23770	25930

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenario at each of the toll plaza up to 2045-46 starting from the year 2023-24 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	202.45	97.57	**300.02**
2024-25	229.76	106.04	**335.79**
2025-26	251.28	117.79	**369.08**
2026-27	275.49	129.83	**405.32**
2027-28	305.48	142.88	**448.36**
2028-29	333.81	154.15	**487.96**
2029-30	364.92	169.27	**534.19**
2030-31	402.33	186.11	**588.44**
2031-32	439.91	203.98	**643.90**
2032-33	480.76	222.08	**702.85**
2033-34	529.26	243.82	**773.08**
2034-35	577.94	266.96	**844.90**
2035-36	625.26	288.07	**913.33**
2036-37	675.19	310.37	**985.56**
2037-38	730.91	338.34	**1069.26**
2038-39	793.00	365.19	**1158.18**
2039-40	863.51	394.18	**1257.69**
2040-41	930.68	426.89	**1357.57**
2041-42	1009.86	460.54	**1470.39**
2042-43	1089.33	499.41	**1588.74**
2043-44	1183.60	545.12	**1728.72**
2044-45	1276.20	590.25	**1866.46**
2045-46	1380.24	639.86	**2020.11**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	201.47	97.12	**298.59**
2024-25	227.59	105.07	**332.66**

2025-26	247.77	116.20	**363.97**
2026-27	270.36	127.45	**397.81**
2027-28	298.35	139.57	**437.93**
2028-29	324.48	149.87	**474.35**
2029-30	353.04	163.80	**516.84**
2030-31	387.40	179.26	**566.67**
2031-32	421.58	195.56	**617.14**
2032-33	458.51	211.88	**670.39**
2033-34	502.42	231.48	**733.90**
2034-35	546.07	252.22	**798.29**
2035-36	587.84	270.81	**858.65**
2036-37	631.72	290.36	**922.09**
2037-38	680.56	315.00	**995.56**
2038-39	734.86	338.36	**1073.22**
2039-40	796.36	363.43	**1159.79**
2040-41	854.21	391.69	**1245.90**
2041-42	922.38	420.52	**1342.89**
2042-43	990.13	453.82	**1443.95**
2043-44	1070.63	492.97	**1563.59**
2044-45	1148.87	531.16	**1680.03**
2045-46	1236.45	573.02	**1809.46**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	Total
2023-24	201.96	97.35	**299.31**
2024-25	228.68	105.56	**334.25**
2025-26	249.50	116.99	**366.49**
2026-27	272.88	128.65	**401.53**
2027-28	301.82	141.23	**443.05**
2028-29	329.00	151.99	**480.99**
2029-30	358.83	166.50	**525.33**
2030-31	394.63	182.69	**577.32**
2031-32	430.47	199.76	**630.23**
2032-33	469.28	216.96	**686.24**
2033-34	515.44	237.61	**753.05**
2034-35	561.59	259.53	**821.11**
2035-36	606.06	279.35	**885.41**
2036-37	652.92	300.23	**953.15**
2037-38	705.15	326.47	**1031.62**
2038-39	763.18	351.52	**1114.70**
2039-40	829.08	378.47	**1207.56**
2040-41	891.40	408.90	**1300.30**
2041-42	964.82	440.05	**1404.87**
2042-43	1038.24	476.09	**1514.33**
2043-44	1125.39	518.39	**1643.78**
2044-45	1210.56	559.96	**1770.53**
2045-46	1306.11	605.52	**1911.63**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Hapur to Moradabad section of NH-9 in state of Uttar Pradesh from km 50.000 to km 148.277is currently four lane and would be augmented to six lane in current concession. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-9which is main link for traffic from Punjab, Haryana, Delhi to Moradabad, Rampur and eastern part of Uttarakhand. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually Post COVID-19 in near future due to various development in area and overall development of economy

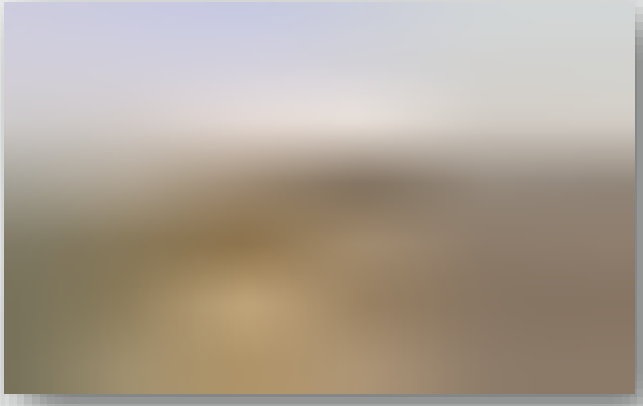
c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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KISHANGARH TO GULABPURA SECTION OF NH-79 &NH-79A IN THE STATE OF RAJASTHAN (LENGTH 90 KM)







TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of **Kishangarh** to **Gulabpura** section of NH-79A & NH-79 (length 90.00km) is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Kishangarh Gulabpura Tollway Ltd.* (Concessionaire) has been awarded the Project for a concession period of 20 years starting from 21st February 2018. The Project has been commissioned and is currently in the operation / maintenance phase. Six laning of project has also been completed in July 2022.

Length of project road is 90.00 Kms. The project road is section of NH-79A & 79 A, which connects Ajmer to Ghat Bilod. Project section of NH-79 passes through district of Bhiwara and Ajmer.

Project road alignment passes through the small towns of Shreenagar, Nasirabad, Jharwasa, Bandanwara and Bijainagar (Vijay Nagar). Following figure shows alignment of project road section from Kishangarh to Gulabpura.



Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 79 (NH 79) is important link for traffic connecting Delhi, Jaipur to Udaipur, Chittorgarh and down south. The project road is the section of the former NH-79A &NH-79 which has now been re-designated as NH-48. The project road section takes off at Kishangarh and ends at Gulabpura, both in the state of Rajasthan. The NH-79A was the section from Kishangarh to Nasirabad and part of NH-79 (Ajmer to Ghata Billod) was the remaining section from Nasirabad to Gulabpura

It is one of the major north-south road connectivity for the traffic from northern states of Haryana, Punjab and Delhi to Industrial and tourist areas of Rajasthan like Jaipur, Chittorgarh, Udaipur and then to Dahod, Ratlam and other parts of Madhya Pradesh.

After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India. It has a total length of 2807 km (1744 miles)

2.2 Project Stretch Description

Section of NH-79 from Kishangarh to Gulabpura is part of major transportation link in the area connecting industrial / tourist cities of Jaipur- , Bhilwara, Chittorgarh and Udaipur. Project stretch would be faster connectivity to Udaipur from Jaipur once six laning is complete.

Major mining industries of marble, Zink, felspar, quarts of Udaipur and textile industry of Bhiwara provide are major contributor of commercial traffic on project corridor. Additionally Jaipur, Ajmer, Udaipur, Chittorgarh and Bhilwara major tourist centers of India. This adds substantial value for passenger traffic on project corridor section.

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are one operative toll plaza at project stretch at Bandanwara at km 61.020. Following figure show project alignment and toll plaza locations.

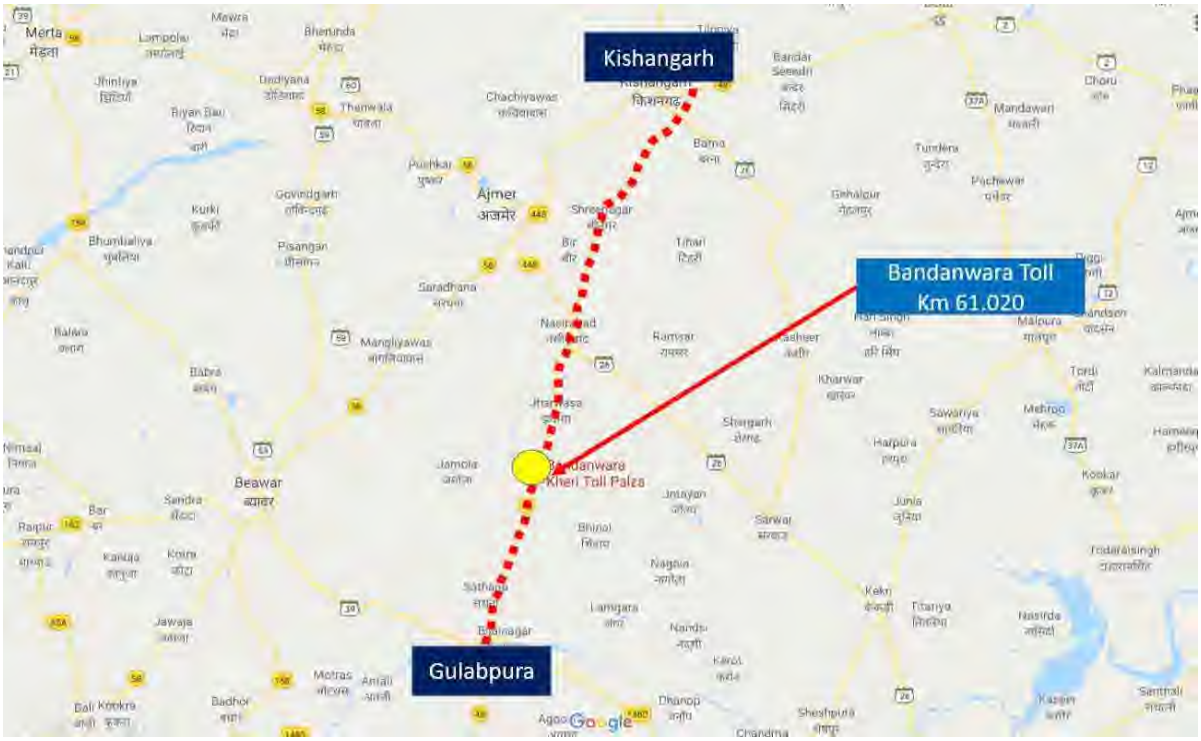


Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is in progress and would be completed soon. Following photographs illustrate project section along the corridor.









Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza location on Kishangarh – Gulabpura section of NH-79 for year 2018-19 (part), 2019-20, 2020-21, 2021-22 & traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 61.020 Toll Plaza at Bandanwara	AADT for Year 2018-19, 2019-2020 ,2020-2021, 2021-2022 & 2022-23	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022 & 2022-23	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022 & 2022-23	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022 & 2022-23	For Year 2018-19, 2019-2020 ,2020-2021, 2021-2022 & 2022-23

3.2 Classified traffic volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)

Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base year 2019-20, 2020-21, 2021-2022 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Bandanwara Toll Plaza at Km 61.020

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	2572	448	3827	5400
2	Minibus /LCV	1009	326	522	736
3	Bus	376	38	337	486
4	Truck	1511	264	1756	2375
5	3-Axle Commercial vehicle	2095	318	1805	2045
6	Multi axle	4421	748	4141	4709

7	Oversized Vehicle	19	70	319	296
Total		**12003**	**2212**	**12707**	**16046**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July - 21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed due to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-4.***

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2019-20, 2020-21, 2021-22 & 2022-23

Toll Plaza Location (Km)	Year	Traffic No	PCU	PCU Index
Bandanwara 61.020	2019-20	12003	36011	3.00
	2020-21	2212	6478	2.93
	2021-22	12707	36374	2.86
	2022-23	16046	43739	2.73

It can be observed from above that project traffic has PCU index 3 which is an indicator of very high proportion of commercial traffic in traffic mix in project corridor. Following figure illustrates variation of PCU index at four toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

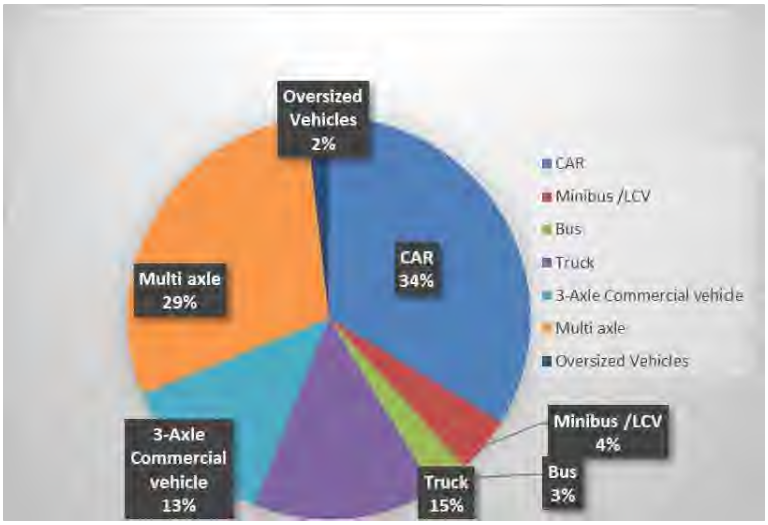


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 34% of total traffic at toll plaza locations while multi axle commercial vehicles are about 44% of total traffic. Truck / Bus and LCV share about 18% and 4 % of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23.

Table 3-6 : Journey Type Bifurcation of Traffic at Bandanwara TP KM 61.020

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	12301
2	Return Journey	3312
3	Local Commercial Single Journey	413
4	Monthly Pass Local	5
5	Monthly Pass	15

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 77%. Return journey component is 21%. The number of Local Commercial Single Journey is 2% and Monthly Pass Local 0% at Bandanwara toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic at stretch which is typical of major national highways with high component of long distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch has toll application history from last few years, and it can be assumed that project traffic is settled. At local level there is no potential competing route bypassing toll plaza between.

At regional level, there can be two alternates for Udaipur traffic after Kishangarh. One via project road (Kishangarh – Bhiwara- Chittorgarh- Udaipur) and one via Ajmer, Beawer and Rajsamand.

Following maps show these routes in relation to project stretch at regional level.



Figure 4-1 : Alternate route at regional level

It can be observed that project highway forms the one of the main spine of the corridor between Kishangarh / Jaipur and Chittorgarh. Traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

At regional level for Udaipur traffic alternate route is faster and traffic is already using this alternate.

With six laning now nearing completion, project stretch would become slightly more attractive due to improved level of service. In such case further diversion of traffic from project road is not envisaged.

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Jaipur – Ajmer- Udaipur	Alternate Route	395	61	6 Hr 23 Min	At present alternate route via Ajmer is a bit faster but after completion of six laning level of service would increase at project road as well
	Jaipur- Bhilwara - Chittorgarh- Udaipur	Project Road	398	51	6 Hr 58 Min	

It may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic traversing the project corridor already factors in traffic diversion (if any) that may have taken place. Further after completion of six laning, level of service would improve on project corridor and this would create favorable conditions for traffic. Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. It is expected that there would be some additional traffic on project corridor once six lane is completed due to improvement in level of service.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Kishangarh to Gulabpur section of NH-79 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Rajasthan. Toll plaza at Bandanwara is in the state of Rajasthan but it has influence of Gujarat also. For elasticity calculations, working data from Rajasthan and Gujarat has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below

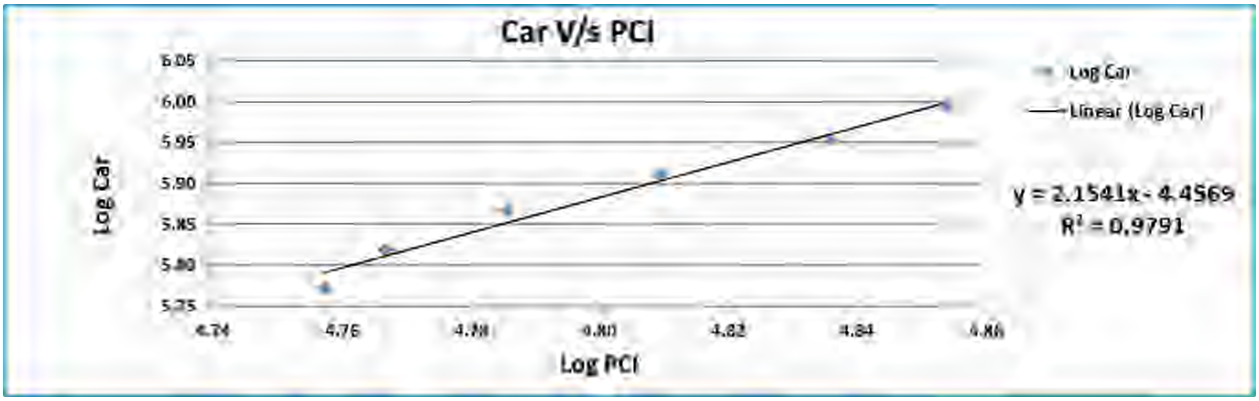


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below

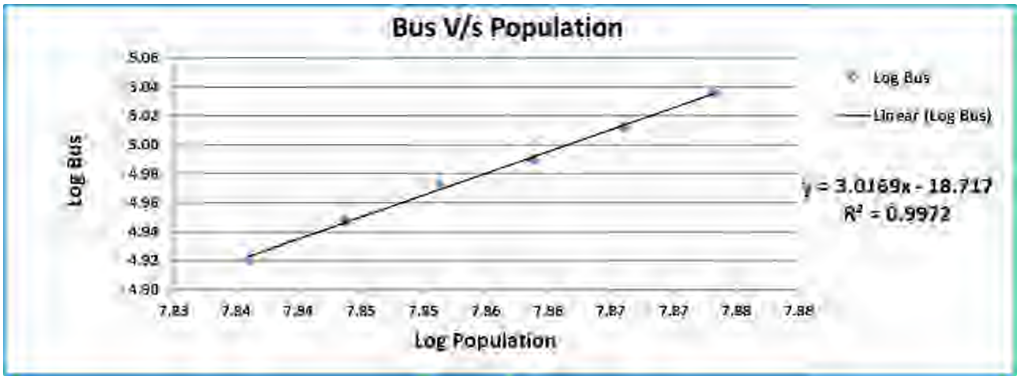


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

Following figure depict regression analysis and extrapolation.

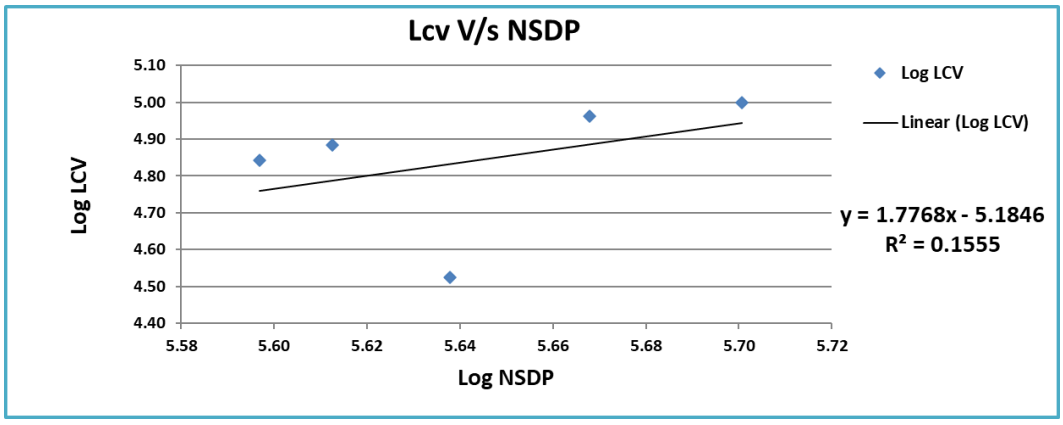


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan

Following figure depict regression analysis and extrapolation.

Table 5-4 : Goods Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

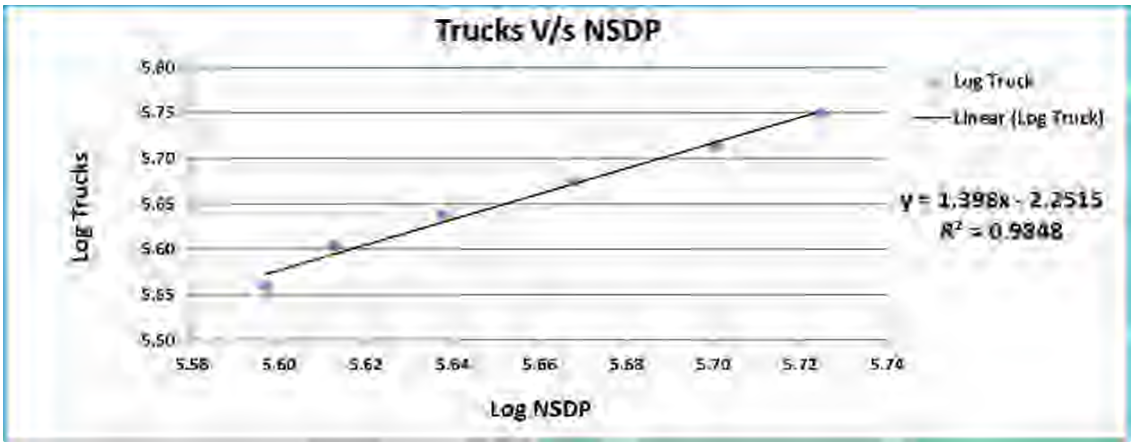


Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below

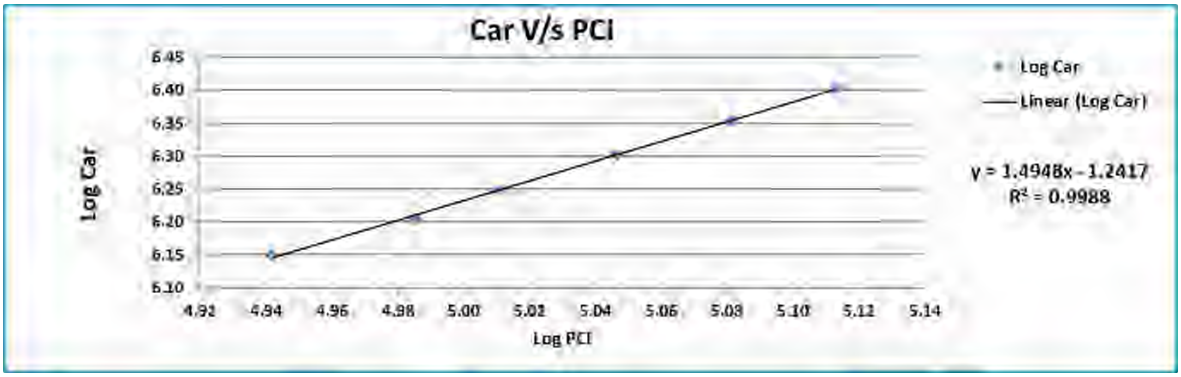


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	

2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below

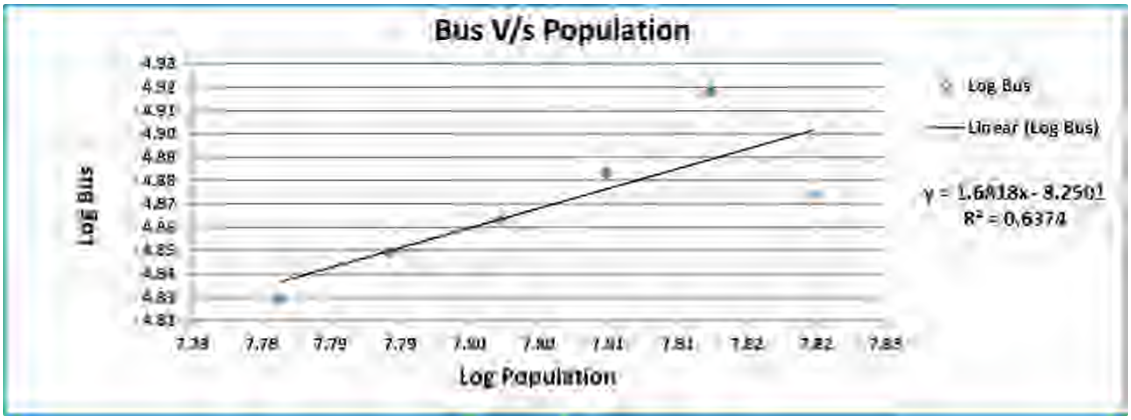


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

Following figure depict regression analysis and extrapolation.

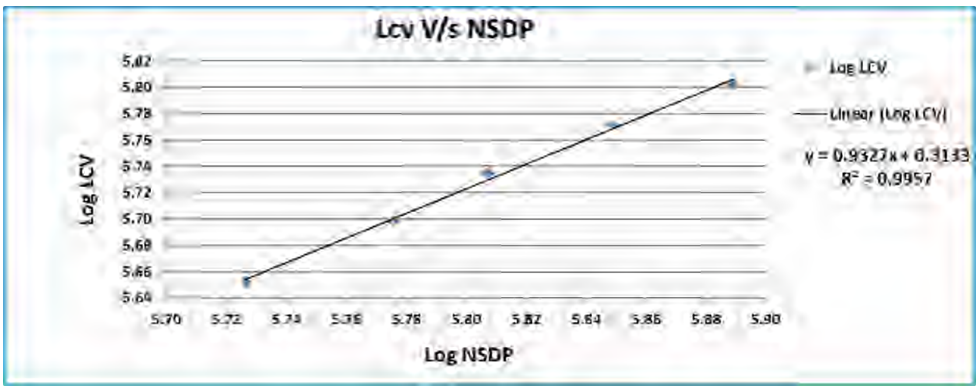


Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat

Following figure depict regression analysis and extrapolation.

Table 5-9 : Goods Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

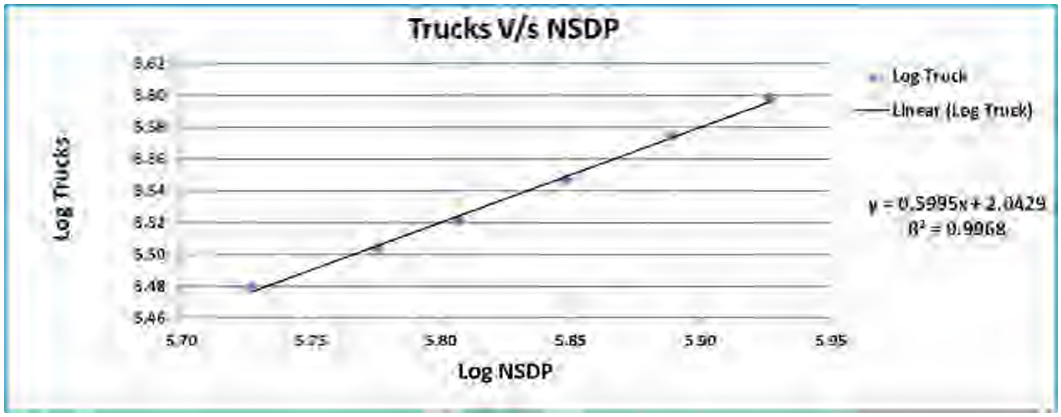


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Gujarat

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kishangarh to Gulabpura is under tolling operation with current concessionaire and has two year of tolling history from 2018-19. As traffic data available with the project concessionaire of year two years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-

19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

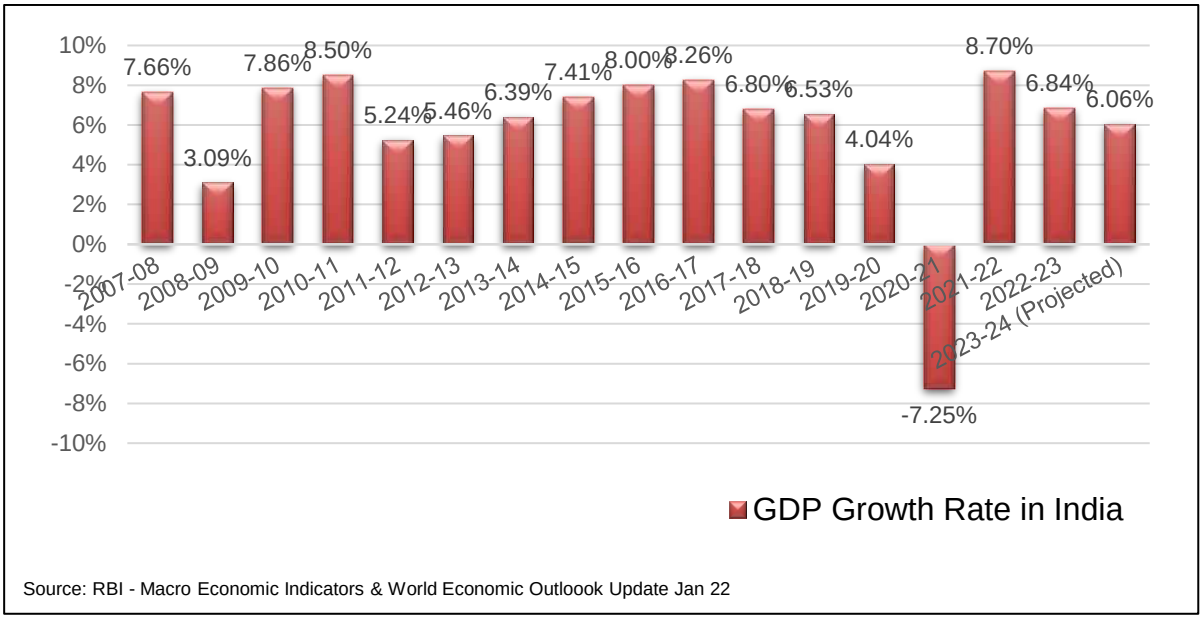


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

This Highway passes through Ajmer district of Rajasthan, having Industrial Areas of RIICO Kishangarh and Silora. There are Large Scale Industries of Cement, Marble & Granite and Medium Scale Industries of engineering and instrumentation in this area Asset primarily serves traffic travelling between Delhi, Rajasthan, Gujarat and Maharashtra. It is observed that the vehicle distribution to be dominated by heavy vehicles. We further noticed several textile industries and marble/granite industries bordering the Asset. Udaipur serves as a big tourism hub as well as a consumption centre which also result in traffic feeding into the demand being generated.

In addition, Chittorgarh has 4 major cement plants located in Chanderiya and Nimbahera villages. There is a regular movement of Cement bulkers to and from these locations along asset. Chanderiya Lead-Zinc Smelter, is the one of the largest zinc-lead smelting complexes in the world, is also located in Chittorgarh. Bhilwara is home to textiles industry and only centre in the country producing insulation bricks. Mining is another major sector for large scale mining of sandstone, soap stone feldspar, quartz, mica China clay and granite. Also, Iron Ore, Led, and Zinc is mined and processed in Bhilwara

growth of Rajasthan has been comparable to the national average economic growth. Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past the few years. Moreover, Rajasthan is also a relevant tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on project highway would remain high and there are minimal risks in terms of growth.

Table 5-11 : GDP of India, UP and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486

1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53
Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.6.1 Industrial Units along Project Corridor

There are number of medium and big size industrial establishments along project corridor. Following figure show spread of these industries along project road.



Figure 5-10 : Industrial Units along project corridor

1. RIICO Industrial Area **Kishangarh** (Marbel & Cement Manufacturing Industries)
2. RIICO **Silora** (Wire Product, Ice Factory)
3. Welding Wire & Plastic Manufacturing Industries
4. Industrial Process Measurement & Control Instruments
5. FMCG & Quartz Manufacturers
6. Brick Manufacturers
7. **Bijainnagar** (Cattle Feed Products Manufacturer – Kapila)

Presence of these units promotes sustainable traffic on project corridor.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2021-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.26%	8.70%	8.16%	7.62%	7.58%	7.03%
Bus	4.38%	4.12%	3.88%	3.64%	3.57%	3.33%
LCV	3.56%	3.74%	3.92%	4.10%	4.27%	4.44%
2- Axle	4.39%	3.95%	3.52%	3.09%	2.86%	2.41%
3 - Axle	5.43%	4.88%	4.33%	3.80%	3.67%	3.08%
4 to6 Axle	6.46%	5.80%	5.15%	4.50%	4.27%	3.58%
7 and Above Axle	6.46%	5.80%	5.15%	4.50%	4.27%	3.58%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2021-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.76%	8.20%	7.66%	7.12%	7.08%	6.53%
Bus	3.88%	3.62%	3.38%	3.14%	3.07%	2.83%
LCV	3.06%	3.24%	3.42%	3.60%	3.77%	3.94%
2- Axle	3.89%	3.45%	3.02%	2.59%	2.36%	1.91%
3 - Axle	4.93%	4.38%	3.83%	3.30%	3.17%	2.58%
4 to6 Axle	5.96%	5.30%	4.65%	4.00%	3.77%	3.08%
7 and Above Axle	5.96%	5.30%	4.65%	4.00%	3.77%	3.08%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2021-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.01%	8.45%	7.91%	7.37%	7.33%	6.78%
Bus	4.13%	3.87%	3.63%	3.39%	3.32%	3.08%
LCV	3.31%	3.49%	3.67%	3.85%	4.02%	4.19%
2- Axle	4.14%	3.70%	3.27%	2.84%	2.61%	2.16%
3 - Axle	5.18%	4.63%	4.08%	3.55%	3.42%	2.83%
4 to6 Axle	6.21%	5.55%	4.90%	4.25%	4.02%	3.33%
7 and Above Axle	6.21%	5.55%	4.90%	4.25%	4.02%	3.33%

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic

was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

Taking recommended traffic growth and additional factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter.

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza Chainage KM 61.02

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6195	876	583	2852	2479	5764	362	19112	52820
2024-25	6769	908	608	2978	2614	6136	384	20397	56071
2025-26	7358	942	634	3095	2741	6492	406	21668	59222
2026-27	7999	978	660	3218	2875	6868	430	23028	62566
2027-28	8695	1015	687	3345	3015	7267	455	24479	66108
2028-29	9452	1053	716	3477	3162	7689	481	26030	69862
2029-30	10275	1092	745	3614	3316	8135	509	27686	73836
2030-31	11113	1135	774	3741	3459	8554	535	29311	77638
2031-32	12019	1179	805	3873	3609	8995	562	31042	81655
2032-33	12999	1225	836	4009	3765	9458	591	32883	85887
2033-34	14059	1273	869	4150	3928	9944	621	34844	90352
2034-35	15206	1323	903	4296	4098	10456	653	36935	95072
2035-36	16364	1377	936	4429	4253	10927	682	38968	99524
2036-37	17610	1433	970	4565	4415	11419	712	41124	104199
2037-38	18952	1491	1005	4706	4582	11933	744	43413	109114
2038-39	20396	1552	1041	4851	4755	12470	777	45842	114277
2039-40	21950	1615	1079	5001	4935	13031	812	48423	119711
2040-41	23613	1683	1117	5144	5116	13587	846	51106	125217
2041-42	25272	1758	1155	5268	5273	14073	876	53675	130268
2042-43	27048	1836	1193	5395	5436	14576	907	56391	135548

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage KM 61.02 (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6167	872	580	2838	2469	5737	361	19024	52578
2024-25	6707	899	601	2949	2590	6080	381	20207	55550
2025-26	7257	929	622	3051	2703	6402	401	21365	58392
2026-27	7851	960	644	3156	2822	6741	422	22596	61391
2027-28	8494	991	667	3265	2946	7098	444	23905	64554
2028-29	9189	1023	690	3378	3075	7474	467	25296	67887
2029-30	9941	1056	715	3494	3210	7870	492	26778	71411
2030-31	10701	1092	738	3599	3333	8236	515	28214	74729
2031-32	11520	1129	763	3707	3461	8619	539	29738	78218
2032-33	12401	1167	788	3819	3594	9020	564	31353	81883
2033-34	13349	1206	814	3934	3732	9440	590	33065	85733
2034-35	14370	1248	841	4052	3875	9878	617	34881	89774
2035-36	15393	1293	867	4157	4002	10273	642	36627	93528
2036-37	16489	1339	894	4264	4134	10685	668	38473	97462
2037-38	17662	1387	922	4374	4270	11112	695	40422	101572
2038-39	18919	1437	950	4487	4411	11557	723	42484	105879
2039-40	20265	1488	980	4603	4556	12020	752	44664	110388
2040-41	21699	1544	1010	4712	4700	12473	780	46918	114920
2041-42	23115	1605	1038	4802	4821	12857	804	49042	118980
2042-43	24623	1668	1067	4894	4945	13252	829	51278	123208

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage KM 61.02 (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6181	874	581	2844	2474	5751	362	19067	52698
2024-25	6739	904	604	2962	2602	6108	383	20302	55809
2025-26	7309	936	628	3071	2723	6447	404	21518	58809
2026-27	7927	969	652	3185	2849	6805	426	22813	61978
2027-28	8597	1003	678	3303	2981	7183	450	24195	65336
2028-29	9324	1039	704	3426	3119	7582	475	25669	68886
2029-30	10112	1076	731	3553	3263	8003	501	27239	72635
2030-31	10911	1115	758	3669	3397	8395	525	28770	76196
2031-32	11774	1156	786	3788	3536	8806	551	30397	79945
2032-33	12705	1199	815	3912	3680	9238	578	32127	83897
2033-34	13708	1243	844	4039	3830	9691	606	33961	88048
2034-35	14791	1288	875	4171	3986	10165	635	35911	92419
2035-36	15881	1337	904	4289	4127	10598	662	37798	96517
2036-37	17051	1388	935	4411	4274	11049	690	39798	100819
2037-38	18307	1442	966	4536	4426	11519	719	41915	105325
2038-39	19656	1497	999	4664	4583	12009	749	44157	110051
2039-40	21105	1554	1033	4796	4746	12520	781	46535	115016
2040-41	22652	1616	1067	4921	4909	13023	812	49000	120025
2041-42	24188	1683	1100	5027	5048	13456	839	51341	124565
2042-43	25827	1753	1134	5136	5190	13903	867	53810	129302

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Gulabpura - Chittorgarh project, the Target Date and Target Traffic are defined as under:

Target Date - 1st May 2026

Target Traffic - 76236 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about three years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	62041	-19%	28%	20%	20	4.0

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	62632	-18%	27%	20%	20	4.0

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	76236	61445	-19%	29%	20%	20	4.0

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Kishangarh- Gulabpura section of NH-79 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued for 50 trips in month at 2/3d rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per
    b) Local Commercial Vehicles at 50% rate for single journey

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

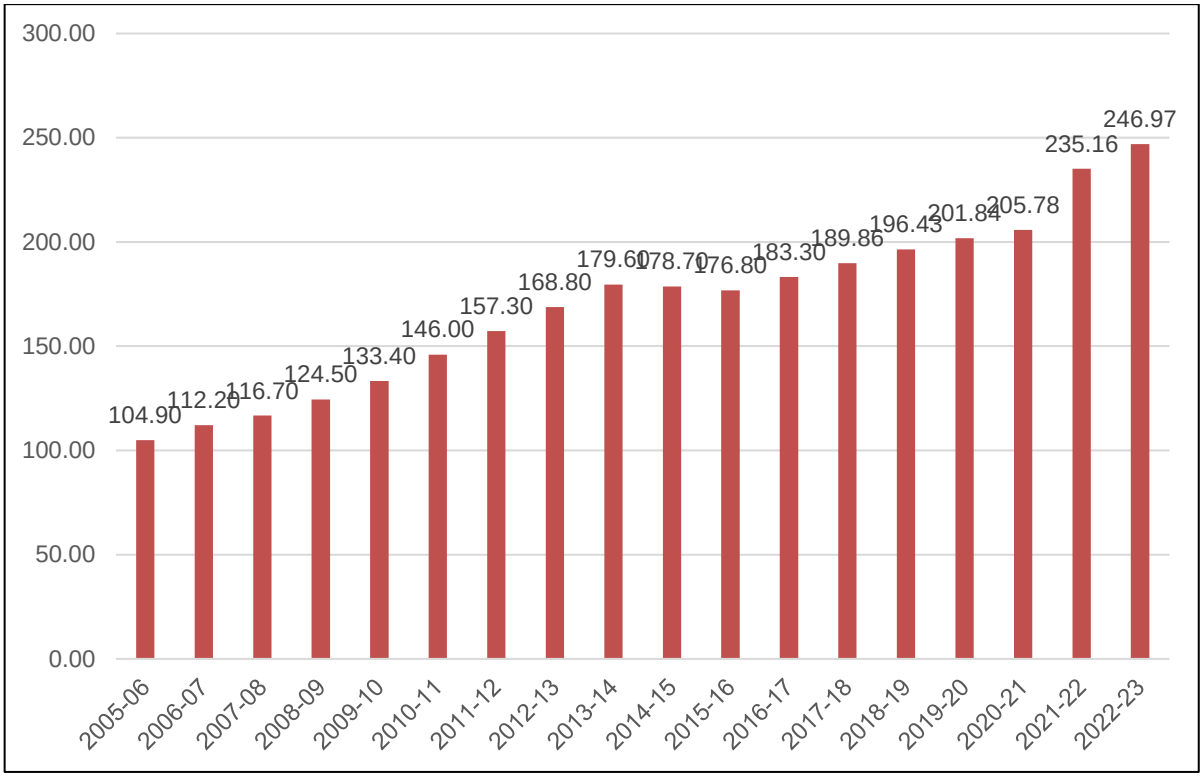


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Chainage KM 61.02

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2023-24	140	225	475	475	515	745	905
2024-25	145	240	500	500	545	780	950
2025-26	155	250	525	525	570	820	1000
2026-27	165	265	550	550	600	865	1050
2027-28	170	275	575	575	630	905	1100
2028-29	180	290	605	605	660	950	1155
2029-30	185	300	635	635	690	995	1210
2030-31	195	315	665	665	725	1040	1270
2031-32	205	330	695	695	760	1090	1330
2032-33	215	350	730	730	795	1145	1395
2033-34	225	365	765	765	835	1200	1460
2034-35	235	385	805	805	875	1260	1535
2035-36	250	400	845	845	920	1320	1610
2036-37	260	420	885	885	965	1385	1690
2037-38	275	445	930	930	1010	1455	1770
2038-39	290	465	975	975	1060	1525	1860
2039-40	300	490	1020	1020	1115	1600	1950
2040-41	315	510	1070	1070	1170	1680	2045
2041-42	335	535	1125	1125	1230	1765	2150
2042-43	350	565	1180	1180	1290	1855	2255

Table 7-3 : Toll Rates for Return Journey @ Chainage KM 61.02

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles
2023-24	210	340	710	710	775	1115	1360
2024-25	220	355	745	745	815	1170	1425
2025-26	230	375	785	785	855	1230	1500
2026-27	245	395	825	825	900	1295	1575
2027-28	255	415	865	865	945	1355	1650
2028-29	270	435	905	905	990	1420	1730
2029-30	280	455	950	950	1035	1490	1815
2030-31	295	475	995	995	1085	1560	1900
2031-32	310	500	1045	1045	1140	1640	1995
2032-33	325	525	1095	1095	1195	1720	2090
2033-34	340	550	1150	1150	1255	1800	2195
2034-35	355	575	1205	1205	1315	1890	2300
2035-36	375	605	1265	1265	1380	1980	2415
2036-37	390	635	1325	1325	1445	2080	2530
2037-38	410	665	1390	1390	1520	2180	2655
2038-39	430	695	1460	1460	1595	2290	2790
2039-40	455	730	1530	1530	1670	2405	2925
2040-41	475	770	1610	1610	1755	2525	3070
2041-42	500	805	1690	1690	1840	2650	3225
2042-43	525	845	1775	1775	1935	2780	3385

Table 7-4 : Toll Rates for Monthly Pass Local@ Chainage KM 61.02

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645

2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825

Table 7-5 : Toll Rates for Monthly Pass @ Chainage KM 61.02

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	4670	7545	15805	15805	17240	24785	30170
2024-25	4905	7925	16605	16605	18115	26040	31700
2025-26	5155	8330	17450	17450	19035	27365	33315
2026-27	5420	8755	18340	18340	20010	28760	35015
2027-28	5680	9175	19220	19220	20970	30145	36695
2028-29	5955	9615	20150	20150	21980	31595	38465
2029-30	6240	10080	21120	21120	23040	33120	40320
2030-31	6540	10565	22140	22140	24155	34720	42270
2031-32	6860	11080	23215	23215	25325	36405	44320
2032-33	7190	11620	24345	24345	26555	38175	46475
2033-34	7545	12185	25530	25530	27850	40035	48740
2034-35	7910	12780	26775	26775	29210	41990	51120
2035-36	8300	13405	28090	28090	30640	44050	53625
2036-37	8705	14065	29470	29470	32150	46210	56260
2037-38	9135	14755	30920	30920	33730	48490	59030
2038-39	9585	15485	32450	32450	35395	50885	61945
2039-40	10060	16255	34055	34055	37150	53405	65015
2040-41	10560	17060	35745	35745	38995	56055	68240
2041-42	11085	17910	37525	37525	40935	58845	71640
2042-43	11640	18805	39400	39400	42980	61785	75215

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2042-43 starting from the year 2023-24 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1
2023-24	296.74
2024-25	329.47
2025-26	365.55
2026-27	406.81
2027-28	450.26
2028-29	498.17
2029-30	550.11
2030-31	605.51
2031-32	668.82
2032-33	735.73
2033-34	810.51
2034-35	894.09
2035-36	984.76
2036-37	1076.22
2037-38	1183.06
2038-39	1298.76
2039-40	1428.49
2040-41	1562.12
2041-42	1707.82
2042-43	1863.18

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1
2023-24	295.37
2024-25	326.37
2025-26	360.39
2026-27	399.17
2027-28	439.66
2028-29	484.16
2029-30	532.09
2030-31	582.90
2031-32	640.84
2032-33	701.58
2033-34	769.20
2034-35	844.46
2035-36	925.61
2036-37	1006.85
2037-38	1101.49
2038-39	1203.53
2039-40	1317.45
2040-41	1433.91
2041-42	1560.23
2042-43	1693.97

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1
2023-24	296.02
2024-25	327.88
2025-26	362.96
2026-27	403.01
2027-28	444.96
2028-29	491.11
2029-30	541.06
2030-31	594.11
2031-32	654.66
2032-33	718.48
2033-34	789.68
2034-35	869.01
2035-36	954.90
2036-37	1041.17
2037-38	1141.77
2038-39	1250.46
2039-40	1372.12
2040-41	1496.85
2041-42	1632.46
2042-43	1776.79

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kishangarh to Gulabpura section of NH-79 in state of Rajasthan is nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-79 which connects Kishangarh to Udaipur via Bhiwala and Chittorgarh. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 7-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

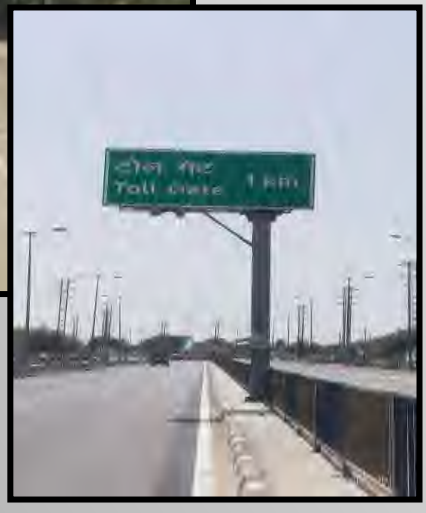
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KAITHAL TO RAJASTHAN SECTION OF NH 152/65 (KM 33.250 TO KM 241.580) IN THE STATE OF HARYANA









TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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(KM 33.250 TO 241.580)

IN THE STATE OF HARYANA

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, Four Laning of **Kaithal** to **Rajasthan** section of NH-152/65 from km 33.250 to km 241.580 in the state of Haryana is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Kaithal Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 27 years starting from appointed date of 15th July 2015. COD was achieved for part length of project in September 2017 and Tolling Operation on Project started. Final COD for full length was achieved on 29th March-2019

Project road section from Kaithal to Rajasthan border is part of important corridor which connects part of Haryana, Punjab, Himachal Pradesh, J&K and certain part of Uttarakhand to Rajasthan, Gujarat and Costal parts of Maharashtra and then to down to south.

Project road section form Kaithal to Rajasthan border passes through three districts of Haryana namely Kaithal, Hisar and Bhiwani. Project road also passes through important towns and development areas of Narwana, Hisar and Siwani in addition to Kaithal

Following figure shows the project road alignment.



Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth

b) Toll Rate Growth

c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

The project road forms part of important connectivity between Northern states like Haryana,Punjab,Himachal Pradesh,J&K and states like Maharashtra,Gujarat (Kandla and Mundra),and parts of Rajasthan. It is the shortest route between Punjab / J&K, Gujarat, Rajasthan, Maharashtra, Goa, Kerala and becomes good alternate route to NH-1 and NH-8 for Gujarat, Rajasthan, Maharashtra Goa and Kerala bound traffic from Haryana, Punjab, J&K Himachal Pradesh.

Project road also caters to local intrastate traffic between districts of Ambala, Chandigarh, Kaithal, Jind, Hisar, Bhiwani in Haryana and Churu, Sikar, Nagaur and Jodhpur in Rajasthan.

2.2 Project Stretch Description

The Project Project highway from Kaithal to Rajasthan border from Km 33.250 to km 241.580 has been widened to four lanes as per schedules. The project has following bypasses which are part of project road.

Table 2-1 : Bypass Details

Sr. No	Bypass Name	Length	Toll Plaza
1	Kalyat	3.450	125.790
2	Dhanaudha	3.800	
3	Narwana	1.900	
4	Barwala	7.850	171.580
5	Hisar+Talwandi Rana		
6	Barwa	3.300	212.400
7	Siwani	6.150	

Full COD for project is achived on 29th March 2019.

Project road forms part of very important transportation corridor which connects Northern states like Haryana, Punjab, J&K, Himachal etc to Southern states and development centers especially on west coast line of India. In previous years project road from Ambala to onwards was in bad shape. There were large number of congestion points along the route in form of narrow roads inside towns, level crossings and bad riding quality. Project road from Kaithal to Rajasthan Border is almost complete which has taken up bypasses and ROBs. Also the road from Ambala to Kaithal is under four laning construction as of now. The project is awarded to M/s

Sadbhav Engineering Limited and is expected to complete in current year. This would improve the flow of traffic on project corridor to great extent

Following figure show project alignment and toll plaza locations.



Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. Following photographs illustrate project section along the corridor.









Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at three toll plaza locations on Kaithal-Rajasthan Border section of NH-152/65 for Year 2018-19,2019-20, 2020-21, 2021-22 & traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 125 Toll Plaza at Narwana	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23
2	Km 171 Toll Plaza at Badopatti	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23
3	Km 212 Toll Plaza at Chaudhariwas	AADT for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23

3.2 Classified traffic volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base year 2019-20, 2020-21, 2021-22 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Narwana Toll Plaza at Km 125

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	2952	2657	4351	4094
2	Minibus/LCV	633	569	381	325
3	Bus	310	279	315	289
4	Truck	320	287	529	462
5	3-Axle	314	283	416	345
6	Multi Axle	771	694	1347	1343
7	Oversized Vehicles	5	5	20	47
	Total	**5305**	**4774**	**7357**	**6905**

Table 3-4 : Traffic Data at Badopatti Toll Plaza at Km 171

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	5387	4850	4915	4591
2	Minibus/LCV	630	567	374	331
3	Bus	431	387	395	384
4	Truck	327	295	577	503
5	3-Axle	376	339	505	400
6	Multi Axle	923	831	1522	1326
7	Oversized Vehicles	3	3	16	46
	Total	**8077**	**7272**	**8303**	**7581**

Table 3-5 : Traffic Data at Chaudhariwas Toll Plaza at Km 212

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)-2019-20	Annual Average Daily Traffic (Nos.)-2020-21	Annual Average Daily Traffic (Nos.)-2021-22	Annual Average Daily Traffic (Nos.)-2022-23
1	CAR	2947	2652	4371	4076
2	Minibus/LCV	592	532	335	335
3	Bus	162	147	181	159
4	Truck	367	331	629	522
5	3-Axle	470	423	630	537
6	Multi Axle	1395	1257	2121	1812
7	Oversized Vehicles	6	5	29	65
	Total	**5939**	**5347**	**8295**	**7506**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July -21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed due to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-

1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-6.***

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Mini Bus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Narwana Km 125.79	5305	10226	1.93
	Badopatti Km 171.58	8077	13901	1.72
	Chaudhariwas Km 212.400	5939	13136	2.21
2020-21	Narwana Km 125.79	4774	9203	1.93
	Badopatti Km 171.58	7272	12516	1.72
	Chaudhariwas Km 212.400	5347	11832	2.21
2021-22	Narwana Km 125.79	7357	14849	2.02

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
	Badopatti Km 171.58	8303	16824	2.03
	Chaudhariwas Km 212.400	8295	18866	2.27
2022-23	Narwana Km 125.79	6905	14124	2.05
	Badopatti Km 171.58	7581	15122	1.99
	Chaudhariwas Km 212.400	7506	16679	2.22

It can be observed from above that project traffic has PCU index ranging from 2.0 to 2.3 which is an indicator of good proportion of commercial traffic in traffic mix in project corridor. Following figure illustrates variation of PCU index at three toll plaza locations.

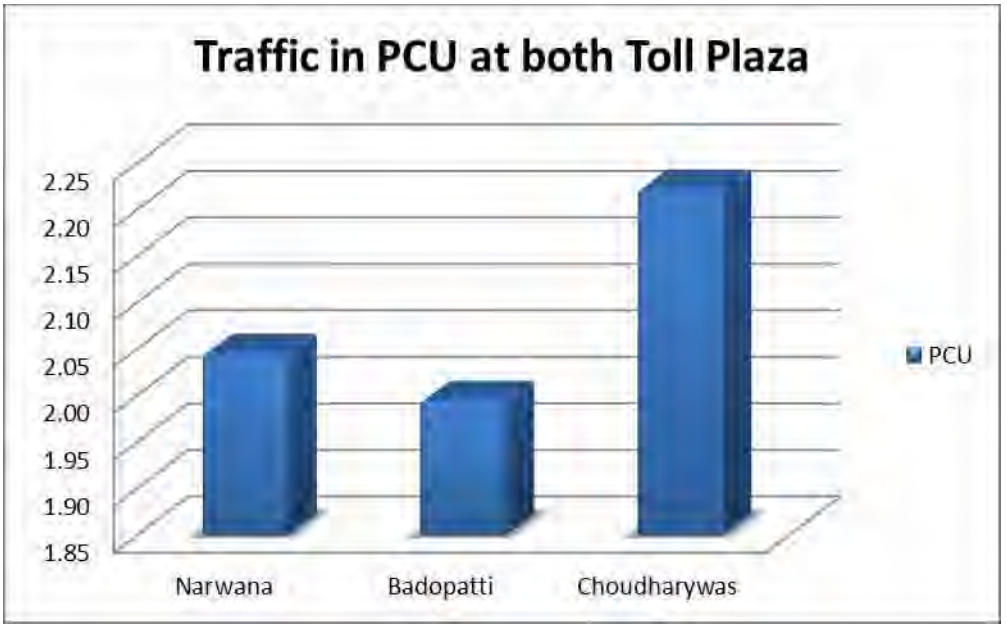


Figure 3-1 : Comparison of PCU Index

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

It is observed that car traffic forms about 50%- 60% of total traffic at toll plaza locations while multi axle commercial vehicles are about 20% -35% of total traffic. Truck / Bus and LCV share about 12% and 5 % of traffic volume respectively.

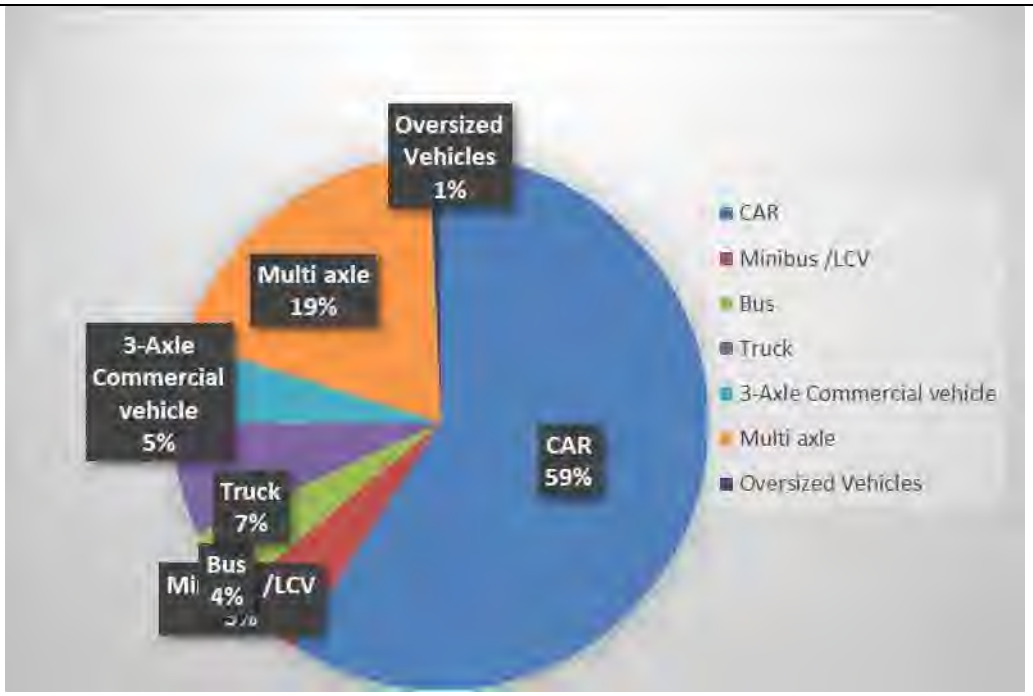


Figure 3-2 :Model Split of Tollable Vehicle-Km 125.790

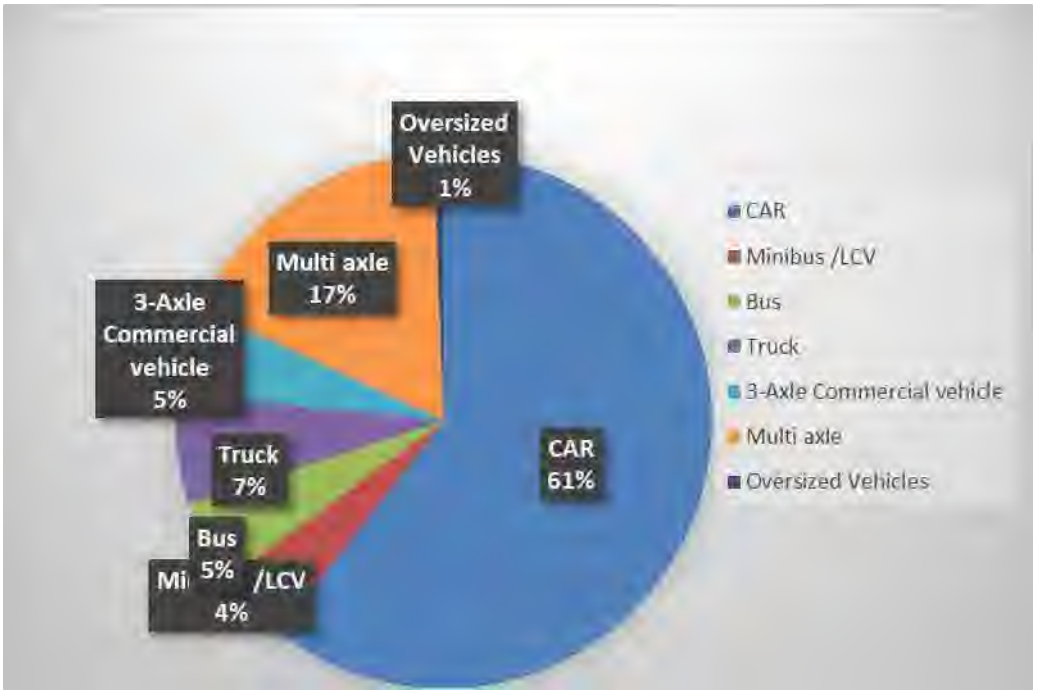


Figure 3-3 :Model Split of Tollable Vehicle-Km 171.58

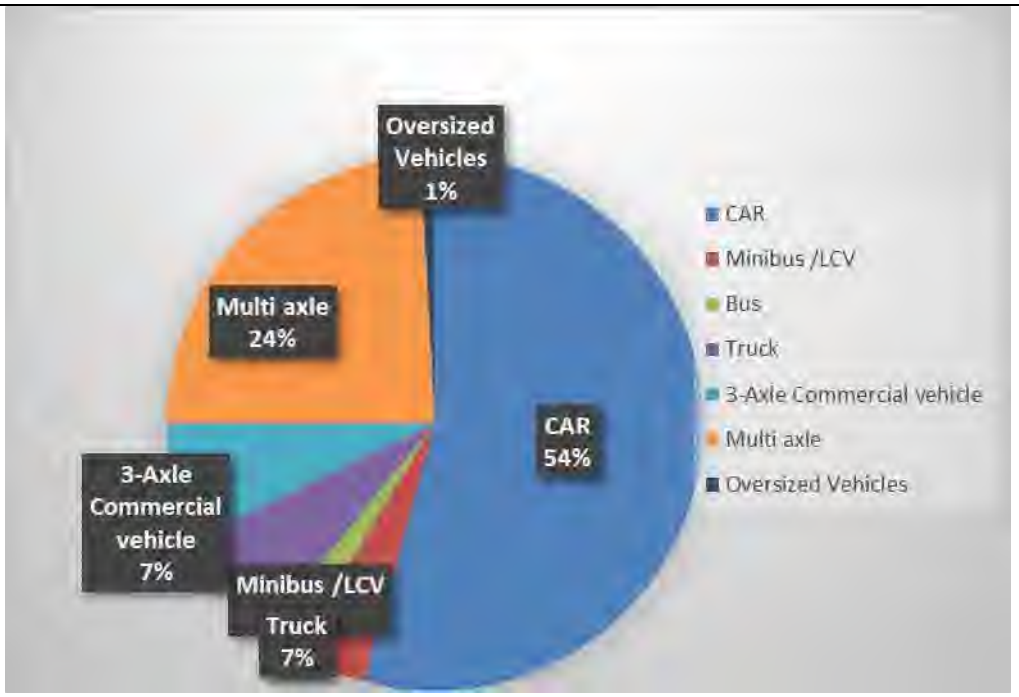


Figure 3-4 :Model Split of Tollable Vehicle-Km 212.400

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23.

Table 3-8 : Journey Type Bifurcation of Traffic at Narwana TP-1 KM 125

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	3944
2	Return Journey	2878
3	Local Commercial Single Journey	56
4	Monthly Pass Local	27
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 57%. Return journey component is 42%. The number of monthly pass local is 0% and local commercial single Journey also 1% at Narwana toll plaza.

Following tables give the detail of journey distribution at Badopatti and Chaudhariwas toll plaza.

Table 3-9 : Journey Type Bifurcation of Traffic at Badopatti TP KM 171

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	4089
2	Return Journey	3174
3	Local Commercial Single Journey	206
4	Monthly Pass Local	112
5	Monthly Pass	0

Table 3-10 : Journey Type Bifurcation of Traffic at Chaudhariwas TP KM 212

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	4637
2	Return Journey	2728
3	Local Commercial Single Journey	106
4	Monthly Pass Local	35
5	Monthly Pass	0

Monthly local pass are very high in proportion at Badopatti toll plaza. At Other toll plazas single journey is dominating pattern of trip.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Though project road has started collecting toll form mid of year 2017-18 but it was for partial completion of project stretch. Some critical location bypasses and ROBs were pending at beginning of toll. Also stretch from Ambala to Kaithal which is just before project stretch is under four laning. In this case project traffic can be considered as under settlement. Shifting of traffic depends on factors such as road length, type, geometry, riding quality and capacity. Competing road analysis was done at two levels. First at regional level and second at local level.

Project road forms an optimal route for the traffic between following zones.

Zone-1- J&K, Punjab (Ludhiana, Amritsar parts), Haryana, Himachal, Part of Uttarakhand
Zone-2 – Rajasthan, Gujarat (Kandla, Mundra), Maharashtra (Coastal), Southern States (Coastal).

As alternate routes converge at Ajmer, the Project Influence Area (PIA) is considered between Ambala and Ajmer only.

Following figures show the layout of competing routes between both these Zones

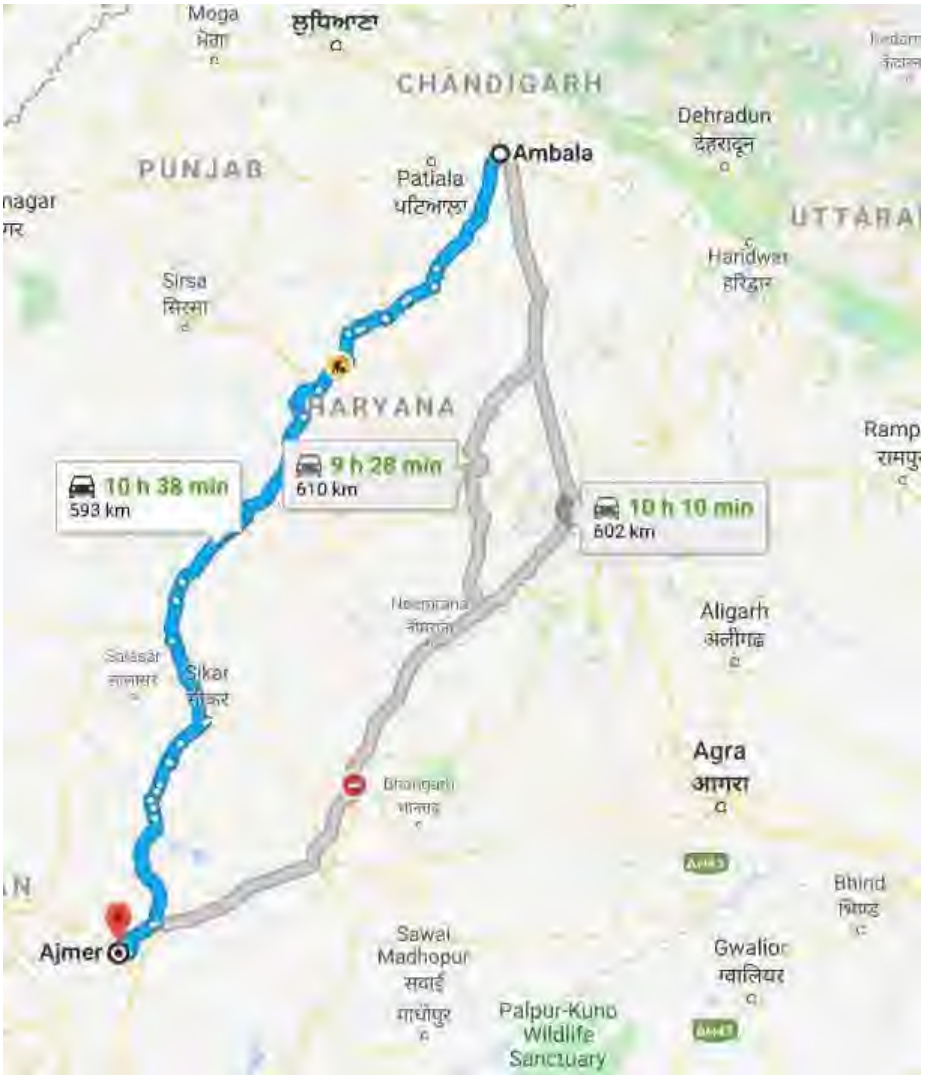


Figure 4-1 : Alternate route at regional level between Zones

Above figure depicts alternate route between Ambala and Ajmer. Following figure shows alternate routes between Ludhiana and Ajmer

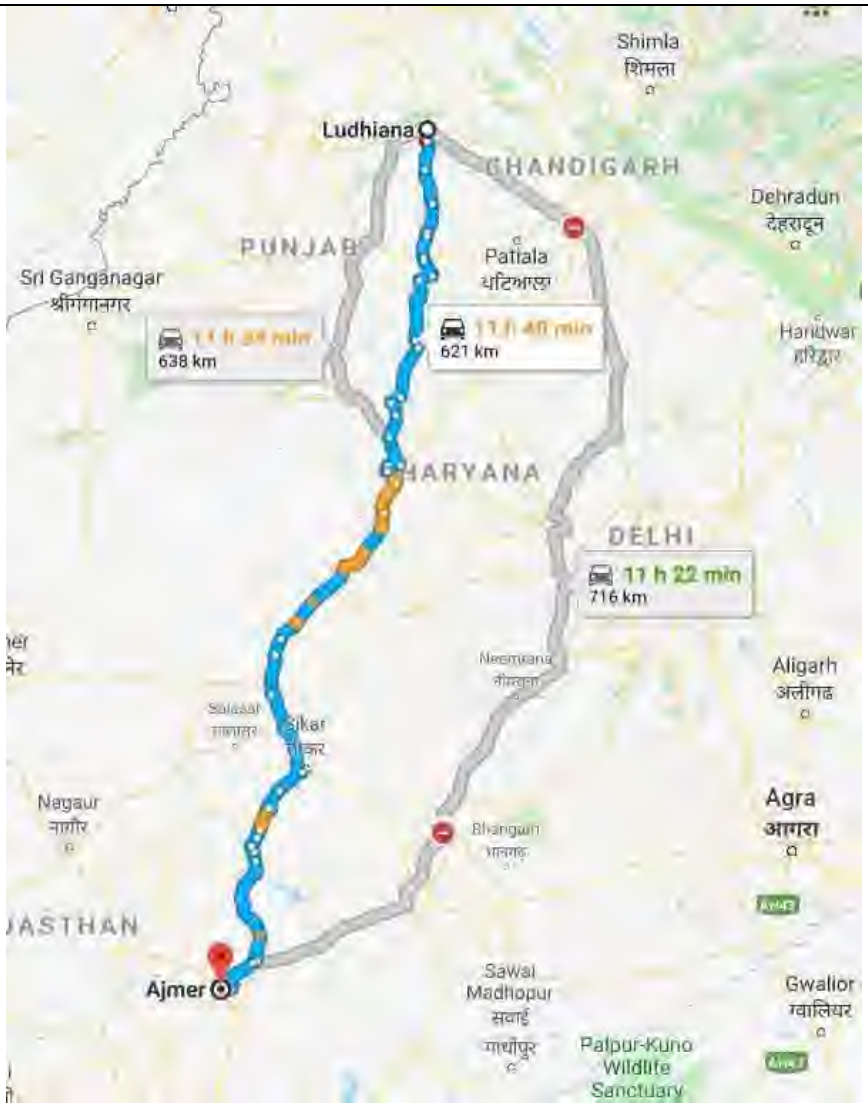


Figure 4-2 : Alternate route at regional level between Ludhiana & Ajmer

From above figures it can be seen that the route containing project alignment has least distance between these origin and destination zones.

Following facts improve probability of target traffic getting attracted to project road.

- Project corridor between Ambala to Rajasthan Border is expected to complete four laning with all bypasses and ROBs.
- Road from Ludhiana to Hisar is part of Bharatmala project and will be converted to four lanes. Currently road from Hisar to Fatehabad only in four lanes.

- Project Corridor is part of ambitious project of Bharatmala which will improve entire length of corridor in terms of capacity and traffic flow. The Government of India has identified the Ludhiana – Ajmer corridor as an optimal route which shall provide time and cost savings to traffic moving from western India to northern India. This will also allow traffic to avoid heavy traffic jams around New Delhi which it is facing on the present route.
- NH-1 and NH-8 which are currently major corridor for traffic between Zone1 and Zone2 will face capacity constraints in coming years. NH-1 for example is four lane road between Ambala and Panipat and runs about 80,000 PCU which is already above its capacity

At local level it was observed that there is no formidable local alternate route to bypass toll plaza. There can a combination of village roads to form alternate loop around toll plazas, but these are too long as compared to project road between said nodes. Thus no local diversion of traffic from project road is anticipated

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Summary Network analysis

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Ambala-Panipat-Karnal-Rohtak-Ajmer	Alternate Route	610	64	9 Hr 28 Min	Alternate route is longer but has shorter travel time. With completion of Ambala - Kaithal four laning of Road induced traffic is expected onto project stretch
	Ambala-Kaithal-Hisar-Ajmer	Project Road	593	55	10 Hr 38 Min	
2	Ludhiana-Chandigarh Panipat-Karnal-Ajmer	Alternate Route	716	63	11 Hr 22 Min	Alternate route is longer but has shorted travel time. With completion of Ambala - Kaithal

	Ludhiana - Ambala- Kaithal- Hisar- Ajmer	Project Road	621	53	11 Hr 40 Min	four laning of Road induced traffic is expected onto project stretch

Table 4-2 : Competing Roads Details

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Kaithal – Rajasthan Border section of NH-152/65 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on number of economic parameters. Most important and direct

parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Haryana. Toll plazas at Narwana, Badopatti and Choudhariwas are in the state of Haryana, but project stretch is under

impact of Rajasthan state as well. In such circumstances for elasticity calculations, working data from above two states has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-1 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	989519	5.03	6.00		
2013	111780	1134616	5.05	6.05	5%	
2014	119791	1278272	5.08	6.11	7%	
2015	125032	1420621	5.10	6.15	4%	
2016	137818	1711692	5.14	6.23	10%	
2017	150241	1851788	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below

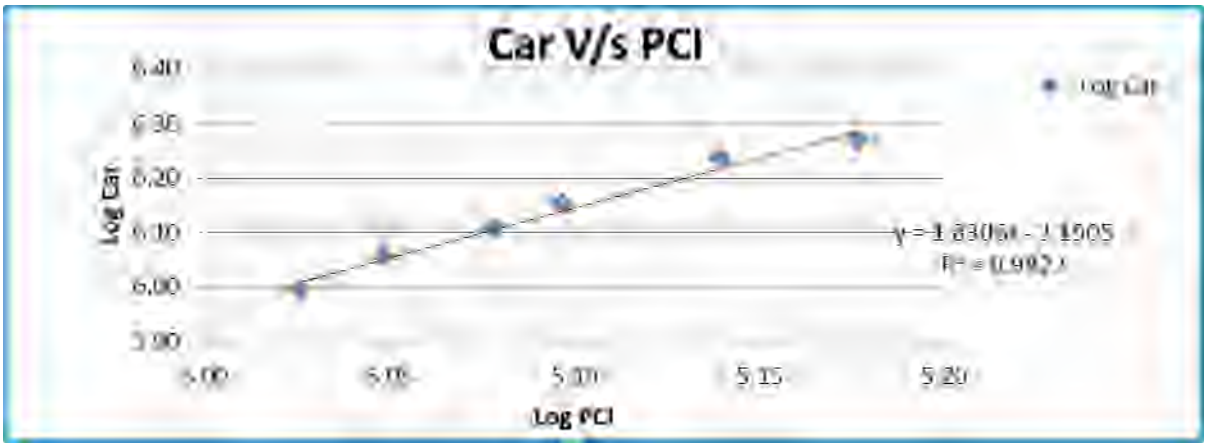


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-2 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below

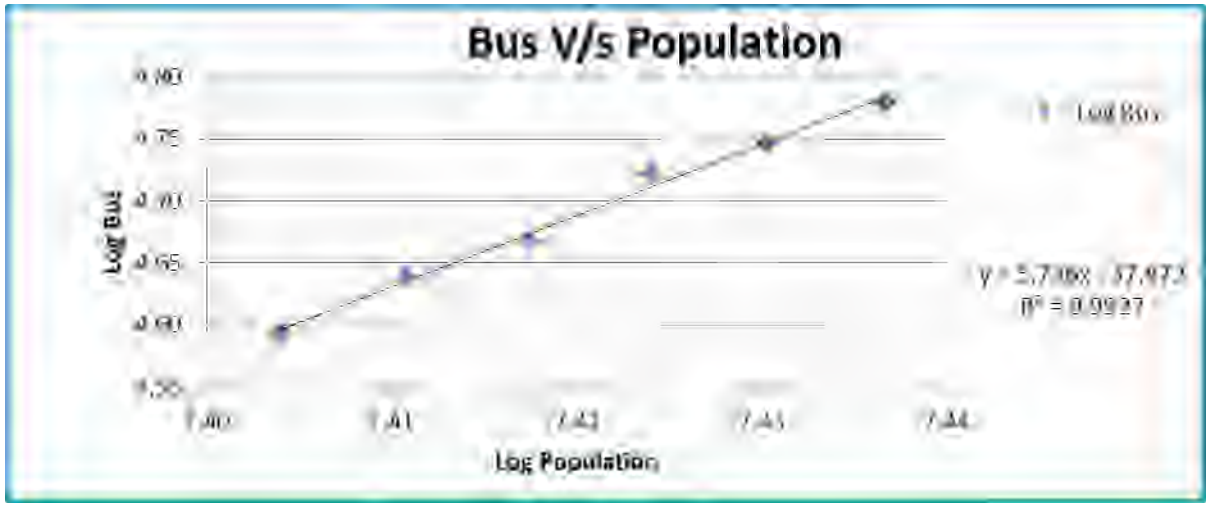


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

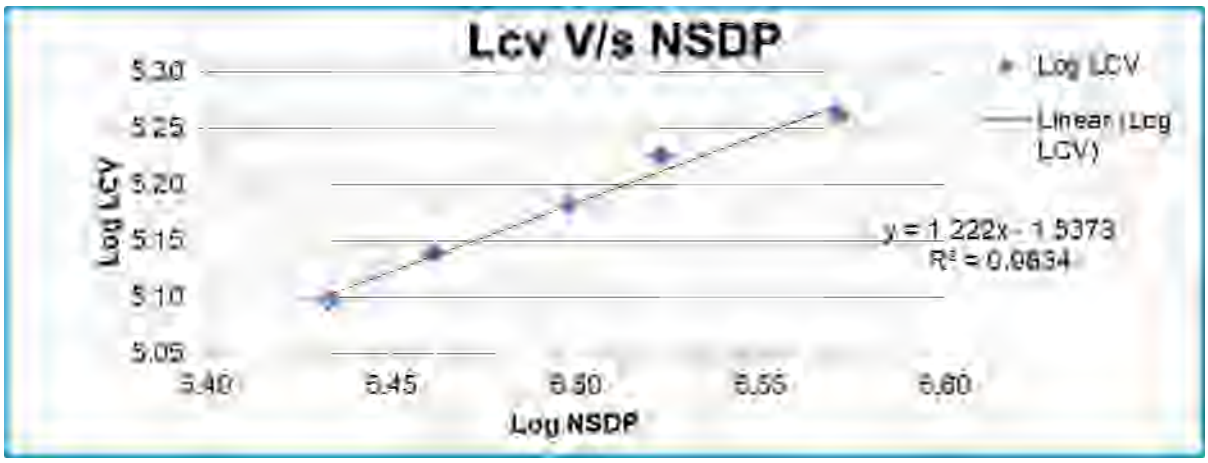


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Haryana

Table 5-4 : Goods Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation.

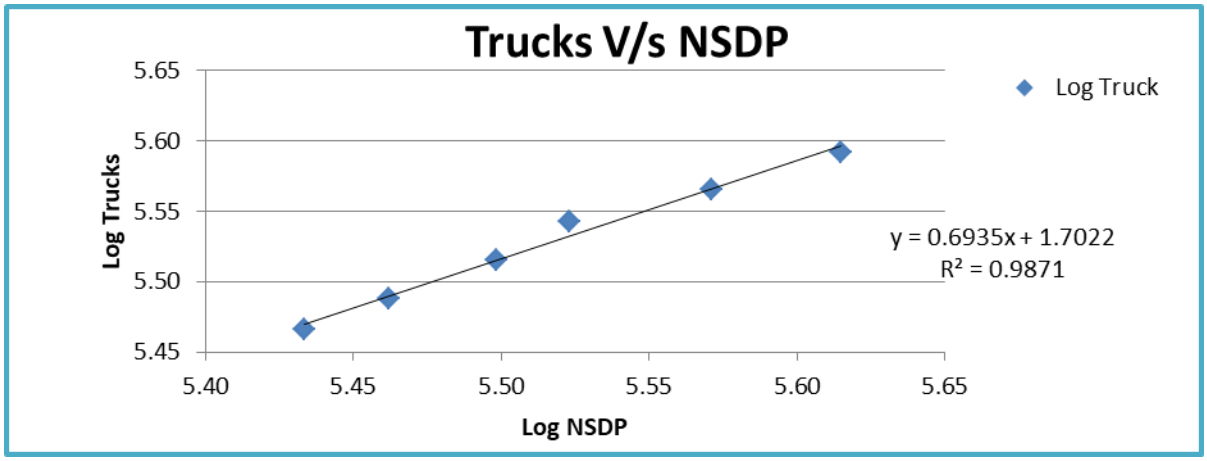


Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Haryana

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Haryana	Car/Jeep	PCI	y = 1.8306x + -3.1905	R^2 = 0.9823	1.8306	7.23%	13.24%	Good Regression
	Bus	Population	y = 5.736x - -37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%	Good Regression
	LCV	NSDP	y = 1.222x - -1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%	Good Regression
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-6 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below

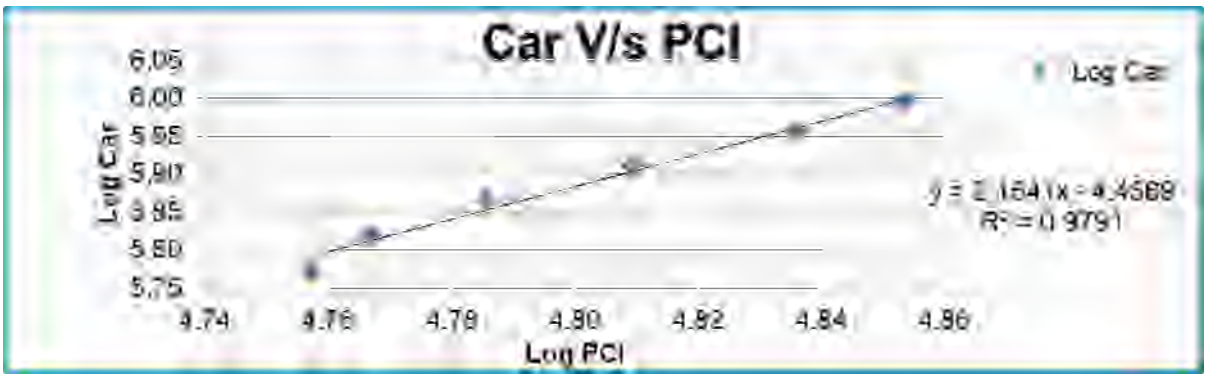


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-7 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below

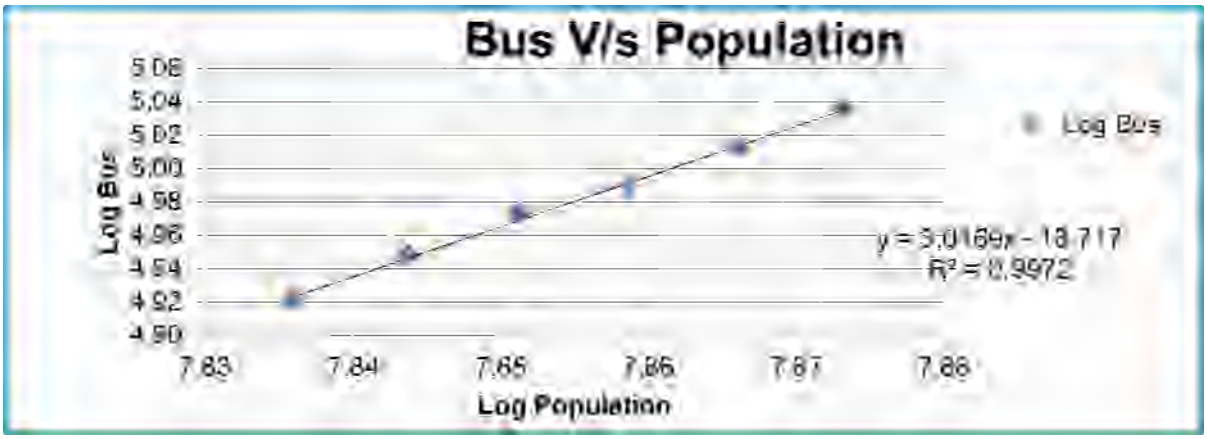


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

Following figure depict regression analysis and extrapolation.

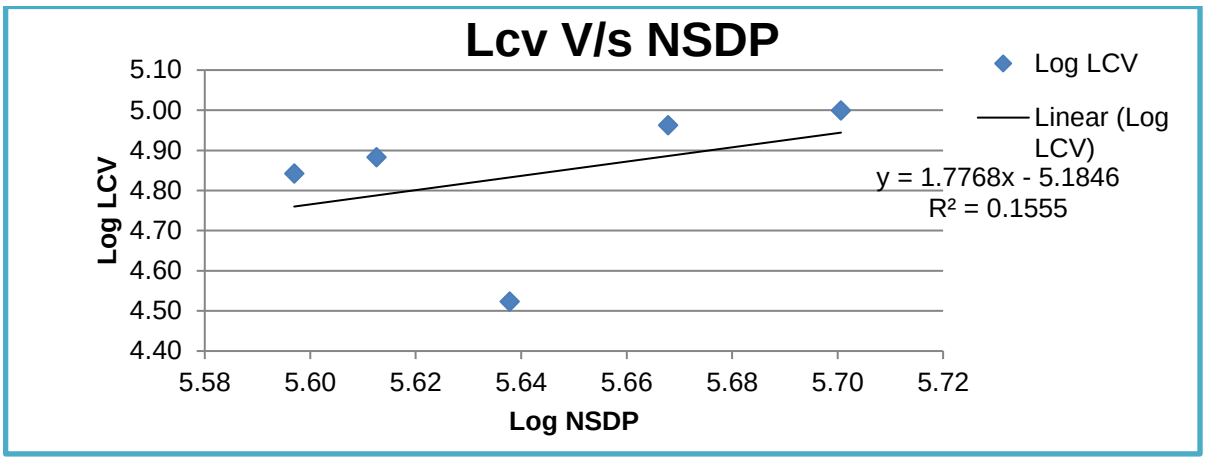


Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan

Table 5-9 : Goods Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

Following figure depict regression analysis and extrapolation.

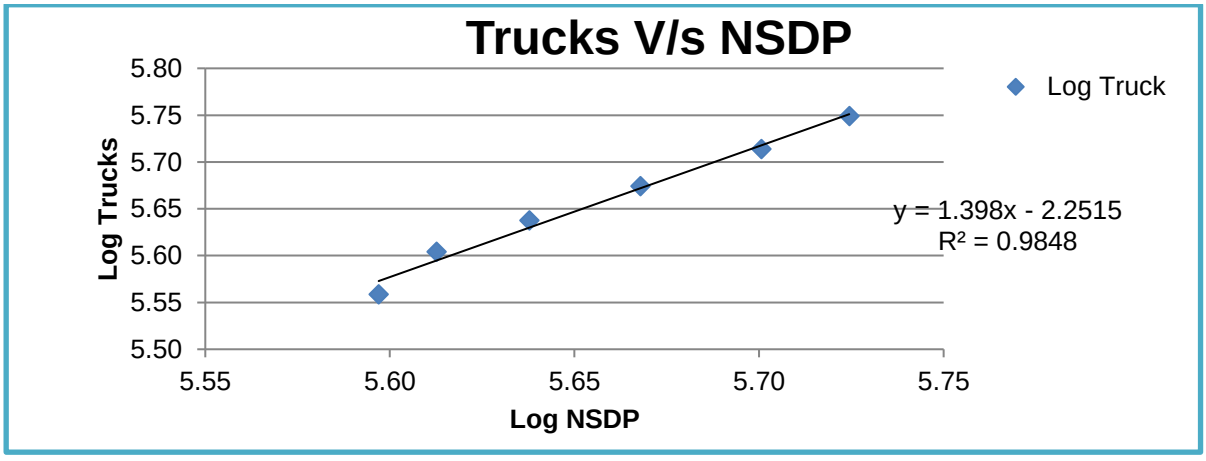


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity

coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R² = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R² = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R² = 0.1555	1.7768	6.16%	10.95%	Good Regression
	Truck	NSDP	y = 1.398x - -2.2515	R² = 0.9848	1.3980	6.06%	8.46%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kaithal to Rajasthan Border is under tolling operation with current concessionaire and has only two years of tolling history from 2018-19. After that traffic was affected due to COVID-19 pandemic. Thus, sufficient data points to be able to establish a reliable past trend of traffic growth are not available. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

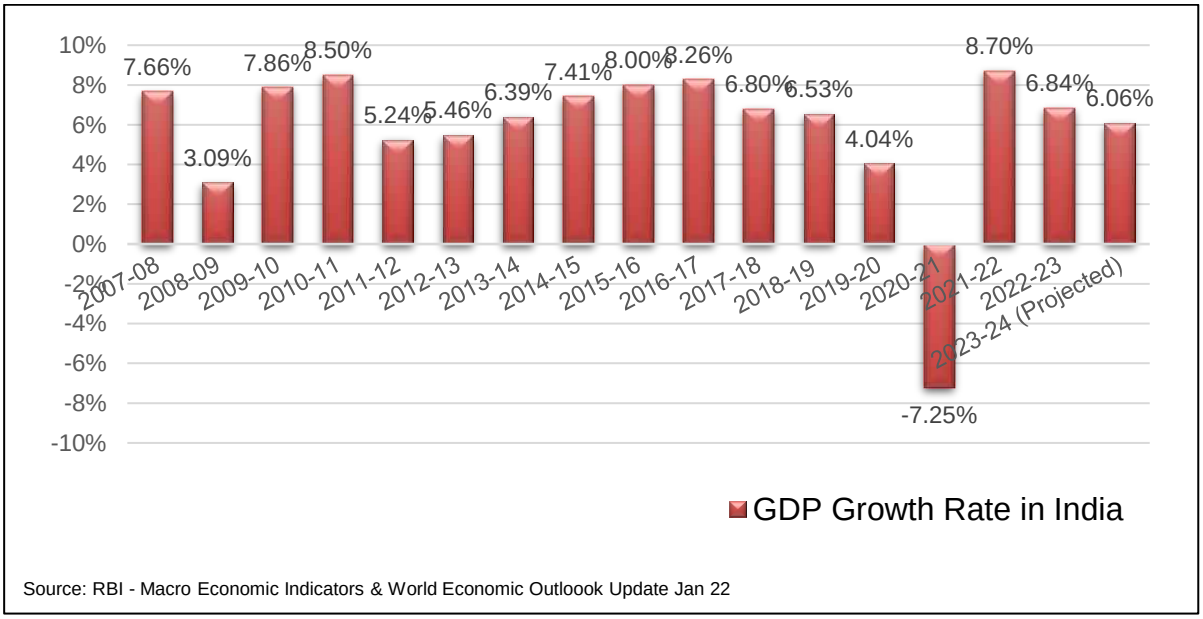


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and

recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch falls in region of good development potential. The same is discussed as under.

Haryana is the largest recipient of investment per capita since 2000 in India, and among one of the wealthiest and most economically developed regions in South Asia. Haryana has the sixth highest per capita income among Indian states and union territories. Haryana is also boosted by 30 SEZs (mainly along DMIC, ADKIC and DWPE in NCR), 7% national agricultural exports, 60% of national Basmati rice export, 67% cars, 60% motorbikes, 50% tractors and 50% refrigerators produced in India. In services. Since Haryana surrounds the country's capital Delhi on three sides (north, west and south), consequently a large area of Haryana is included in the economically-important National Capital Region for the purposes of planning and development.

Major Cities of Haryana state & their characteristics are as below.

Faridabad is one of the biggest industrial cities of Haryana as well as North India. Faridabad has been described as eighth fastest growing city in the world and third most in India by City Mayors Foundation survey. Faridabad is home to large-scale companies like Escorts Limited, India Yamaha Motor Pvt. Ltd., Havells India Limited, JCB India Limited, Indian Oil (R&D), Larsen & Toubro (L&T), Whirlpool India Ltd., ABB Group, Goodyear India Ltd., Bata India Ltd and Eicher Tractor Ltd. and Beebay Kidswear. Eyewear e-tailer Lenskart and healthcare startup Lybrate have their headquarters in Faridabad. More than
5,000 units of auto parts producers are based in Faridabad.

Many directorates of different union government ministries are headquartered in Faridabad including Central Ground Water Board, Department of Plant Quarantine and Central Insecticide Lab and Union Government Offices from Haryana including the Commissioner of Central Excise within Department of Revenue, Government of India, Department of Explosives, and Department of Labour. The Apex Central Training Institute of the Department of Revenue, Government of India, National Academy of Customs Excise & Narcotics is

located at Sector 29. The National Power Training Institute, an autonomous body under Ministry of Power, Government of India has a corporate office in Faridabad. The city also hosts the National Institute of Financial Management, which serves as training academy for accounting and financial services. Also

headquartered here is NHPC Limited which is a Central PSU under Ministry of Power, Government of India and the largest Hydro-power Company in India.

Hisar, city has been identified as a counter-magnet city for the National Capital Region to attract migrants and develop as an alternative center of growth to Delhi. With upcoming integrated industrial aerocity and aero MRO hub at Hisar Airport, it is a fast-developing city.

The city has a large steel industry and is known as the 'city of steel'. Hisar is India's largest manufacturer of galvanized iron. The Jindal Group is based in Hisar. Jindal Stainless Steel is also the world's largest producer of Stainless Steel strips for razor blades and India's largest producer of coin blanks. Textile and automobile industry is also a major contributor to the economy of the city. It also has a large number of livestock farms with the Central Livestock Farm, established in 1809 being one of the Asia's largest cattle farms.

Panipat city is famous in India by the name of "City of Weavers" and "Textile City". It is also known as the "cast-off capital" due to being "the global centre for recycling textiles. It is known for its woven modhas or round stools. Panipat has heavy industry, including a refinery operated by the Indian Oil Corporation, a urea manufacturing plant operated by National Fertilizers Limited and a National Thermal Power Corporation power plant. The IOCL refinery in Panipat is one of the major Industry in area which contributes to growth.

Gurugram : Witnessing rapid urbanisation, Gurgaon has become a leading financial and industrial hub with the third-highest per capita income in India. Gurgaon ranks number 1 in India in IT growth rate and existing technology infrastructure, and number 2 in startup ecosystem, innovation and livability.

The city's economic growth story started when the leading Indian automobile manufacturer Maruti Suzuki India Limited established a manufacturing plant in Gurgaon in the 1970s. Today, Gurgaon has local offices for more than 250 Fortune 500 companies. Various international companies, including Coca-Cola, Pepsi, BMW, Agilent Technologies, Hyundai have chosen Gurugram to be their Indian corporate headquarters.

IMT Minesar, Dundahera and Sohna are industrial and logistics hub, that also has National Security Guards, Indian Institute of Corporate Affairs, National Brain Research Centre and National Bomb Data Centre. Retail is an important industry in Gurgaon, with the presence of 26 shopping malls

Ambala is connected to all the other major cities of north India including Delhi, Panipat, Chandigarh, Ludhiana, Amritsar and Shimla. It is a big interchange for various commuters for all neighboring states. The Ambala Cantt bus stand witnesses roughly 50,000 commuters daily.

National highway NH 1 popularly known as GT road passes through Ambala and connects it to National capital Delhi, Panipat, Ludhiana and Amritsar. NH 22 connects it to state capital Chandigarh and Shimla. National Highway 52 (new NH-165) connects it to Kaithal, Narwana and Hisar.

Being located in the Indo-Gangetic Plain, the land is generally fertile and conducive to agriculture.

Small scale industries form the bulk of the industrial landscape in the district. It is one of the largest producers of scientific and surgical instruments in the country and home to a large number of scientific instrument manufacturers. It produces microscopes and other instruments used in chemistry laboratories. Manufacture of submersible pumps and mixers and grinders is another industry that has traditionally flourished.

Ambala is also an important textile trading centre, besides Delhi and Ludhiana and has a well-known cloth market, which is famous in the region especially for those seeking bridal wear. It also produces rugs, known locally as Durries, and houses many suppliers to Indian defence forces

Punjab state is one of the most fertile regions in India. The region is ideal for wheat-growing. Rice, sugar cane, fruits and vegetables are also grown. Punjab is called the "Granary of India" or "India's bread-basket". It produces 10.26% of India's cotton, 19.5% of India's wheat, and 11% of India's rice. The Firozpur and Fazilka Districts are the largest producers of wheat and rice in the state. In worldwide terms, Indian Punjab produces 2% of the world's cotton, 2% of its wheat and 1% of its rice. The largest cultivated crop is wheat. Other important crops are rice, cotton, sugarcane, pearl millet, maize, barley and fruit.

Ludhiana is one of the City in India with best business environment. The riches are brought mostly by small-scale industrial units, which produce industrial goods,

machine parts, auto parts, household appliances, hosiery, apparel, and garments. Ludhiana is Asia's largest hub for bicycle manufacturing and produces more than 50% of India's bicycle consumption of more than 10 million each year. Ludhiana produces 60% of India's tractor parts and a large portion of auto and two-wheeler parts. Many parts used in German cars are Mercedes and BMW exclusively produced in Ludhiana to satisfy the world requirement. It is one of the largest manufacturer of domestic sewing machines. Hand tools and industrial equipment are other specialties. The apparel industry of Ludhiana is famous all over India for its woollen sweaters and cotton T-shirts; most of the top Indian woollen apparel brands are based in Ludhiana. Ludhiana also has a growing IT sector with multiple software services and product companies having development centers in the city

Chandigarh has been rated as one of the "Wealthiest Towns" of India. The Reserve Bank of India ranked Chandigarh as the Third largest deposit centre and seventh largest credit centre nationwide.

Chandigarh is ranked 4th in the top 50 cities identified globally as "emerging outsourcing and IT services destinations" ahead of cities like Beijing. Chandigarh IT Park (also known as Rajiv Gandhi Chandigarh Technology Park) is the city's attempt to break into the information technology world. Major Indian firms and multinational corporations like Quark, Infosys, EVRY, Dell, IBM, TechMahindra, Airtel, Amadeus IT Group, DLF have set up base in the city and its suburbs.

Additionally, the government is a major employer in Chandigarh with three governments having their base here i.e. Chandigarh Administration, Punjab government and Haryana government.

Ordnance Cable Factory of the Ordnance Factories Board has been set up by the Government of India. There are about 15 medium to large industries including two in the Public sector. In addition Chandigarh has over 2500 units registered under small-scale sector. The important industries are paper manufacturing, basic metals and alloys and machinery. Other industries are relating to food products, sanitary ware, auto parts, machine tools, pharmaceuticals and electrical appliances.

Rajasthan state is a fast developing state. Last year Rajasthan was the leading investment destination in India after Maharashtra and Gujarat because of peaceful environment, relatively better law and order situation, excellent infrastructure, and investment friendly climate. Rajasthan is pre-eminent in quarrying and mining in India. The state is the second largest source of cement. It has rich salt deposits at Sambhar, copper mines at Khetri and zinc mines at Dariba and Zawar. Jaipur is the capital and largest city of Rajasthan. It is also

known as Pink City of India and a famous travel destination.
There is large amount of information available on open platform including internet regarding this. Relevant information is compiled as under.

Delhi Mumbai Industrial Corridor (DMIC)

Rajasthan is strategically located along the Delhi-Mumbai section of the Golden Quadrilateral highway project, the proposed Dedicated Freight Corridor (DFC) and the Delhi Mumbai Industrial Corridor (DMIC).

Rajasthan has access to 46% of DMIC. It falls within major districts of Jaipur, Alwar, Kota and Bhilwara. Over 58% area of the state falls within the influence area of DMIC. The DMIC will provide high quality environment with state of the art infrastructure for new investors.

The state of Rajasthan has a rich agricultural and mineral base. Key industrial sectors in the state include Cement, Building Stones, Gypsum, Gems & Jewellery, Chemical, Food processing and Textiles. The emerging sectors include IT/ITES, Auto Component and Knowledge Hubs. Based on the strengths of specific regions across the state, five development nodes are identified in the influence area of DMIC. It includes two investment regions and three industrial areas.

Project road would act as feeder road for traffic destined for DMIC logistic hubs from northern states.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2021-2022	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.91%	5.67%	5.45%	5.22%	5.00%	4.78%	4.56%
Bus	5.11%	3.21%	3.09%	2.72%	2.61%	2.50%	2.40%
LCV	4.82%	3.38%	3.17%	2.72%	2.53%	2.35%	2.17%
2- Axle	6.37%	3.96%	3.74%	3.23%	3.04%	2.86%	2.67%
3 - Axle	6.72%	3.96%	3.74%	3.23%	3.04%	2.86%	2.67%
4 to 6 Axle	7.07%	3.96%	3.74%	3.53%	3.32%	3.12%	2.91%
7 and Above Axle	7.07%	3.96%	3.74%	3.53%	3.32%	3.12%	2.91%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2021-2022	2022-2026	2026-2031	2031-2036	2036-2040	2041-2046	2046-2051
Car/Jeep/Van	9.41%	5.17%	4.95%	4.72%	4.50%	4.28%	4.06%
Bus	4.61%	2.71%	2.59%	2.22%	2.11%	2.00%	1.90%
LCV	4.32%	2.88%	2.67%	2.22%	2.03%	1.85%	1.67%
2- Axle	5.87%	3.46%	3.24%	2.73%	2.54%	2.36%	2.17%
3 - Axle	6.22%	3.46%	3.24%	2.73%	2.54%	2.36%	2.17%
4 to 6 Axle	6.57%	3.46%	3.24%	3.03%	2.82%	2.62%	2.41%
7 and Above Axle	6.57%	3.46%	3.24%	3.03%	2.82%	2.62%	2.41%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2021-2026	2022-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.66%	5.42%	5.20%	4.97%	4.75%	4.53%	4.31%
Bus	4.86%	2.96%	2.84%	2.47%	2.36%	2.25%	2.15%
LCV	4.57%	3.13%	2.92%	2.47%	2.28%	2.10%	1.92%
2- Axle	6.12%	3.71%	3.49%	2.98%	2.79%	2.61%	2.42%
3 - Axle	6.47%	3.71%	3.49%	2.98%	2.79%	2.61%	2.42%
4 to 6 Axle	6.82%	3.71%	3.49%	3.28%	3.07%	2.87%	2.66%
7 and Above Axle	6.82%	3.71%	3.49%	3.28%	3.07%	2.87%	2.66%

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Narwana 125.00 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4325	335	298	481	359	1396	49	7243	14744
2024-25	4570	346	307	500	373	1451	51	7598	15388
2025-26	4818	356	316	519	387	1505	53	7954	16029
2026-27	5080	367	325	538	401	1561	55	8327	16695
2027-28	5356	378	334	558	416	1620	57	8719	17394
2028-29	5646	390	344	578	431	1680	59	9128	18116
2029-30	5953	402	354	600	447	1743	61	9560	18877
2030-31	6264	412	363	619	461	1804	63	9986	19613
2031-32	6591	423	372	639	476	1868	65	10434	20385
2032-33	6935	434	382	659	491	1934	67	10902	21187
2033-34	7297	446	392	681	507	2002	69	11394	22026
2034-35	7678	458	402	703	523	2072	71	11907	22893
2035-36	8061	469	412	725	539	2141	73	12420	23756
2036-37	8464	481	422	747	555	2212	75	12956	24649
2037-38	8887	493	432	770	571	2286	77	13516	25579
2038-39	9331	505	443	793	588	2362	79	14101	26545
2039-40	9797	517	454	817	606	2441	82	14714	27557
2040-41	10265	529	465	840	623	2517	84	15323	28547
2041-42	10755	541	476	864	641	2596	87	15960	29583
2042-43	11269	553	487	889	660	2677	90	16625	30658
2043-44	11807	565	499	915	679	2761	93	17319	31777
2044-45	12371	578	511	941	699	2847	96	18043	32935
2045-46	12936	590	523	966	718	2930	99	18762	34073
2046-47	13526	602	535	992	737	3015	102	19509	35248
2047-48	14143	615	547	1018	757	3103	105	20288	36468
2048-49	14788	628	559	1045	777	3193	108	21098	37728

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Badopatti 171.00 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4851	343	397	523	415	1379	48	7956	15792
2024-25	5127	355	410	543	431	1434	50	8350	16490
2025-26	5407	367	423	563	447	1488	52	8747	17187
2026-27	5701	379	437	584	463	1544	54	9162	17913
2027-28	6011	391	451	605	480	1602	56	9596	18667
2028-29	6339	404	465	627	497	1662	58	10052	19452
2029-30	6684	417	479	650	515	1725	60	10530	20274
2030-31	7032	429	492	671	531	1786	62	11003	21074
2031-32	7400	441	506	692	548	1849	64	11500	21908
2032-33	7787	453	520	714	565	1914	66	12019	22774
2033-34	8194	465	534	736	583	1981	68	12561	23671
2034-35	8622	478	549	759	601	2051	70	13130	24611
2035-36	9053	490	563	781	619	2119	72	13697	25537
2036-37	9506	503	578	804	637	2189	74	14291	26501
2037-38	9981	516	593	829	656	2262	76	14913	27510
2038-39	10481	529	608	854	675	2337	78	15562	28553
2039-40	11004	542	624	880	696	2414	80	16240	29640
2040-41	11531	555	639	905	715	2489	82	16916	30710
2041-42	12082	568	655	931	736	2566	84	17622	31825
2042-43	12660	581	671	957	757	2646	87	18359	32985
2043-44	13265	594	688	984	779	2728	90	19128	34190
2044-45	13899	608	706	1012	802	2813	93	19933	35448
2045-46	14533	621	723	1039	824	2894	96	20730	36678
2046-47	15197	634	741	1066	846	2978	99	21561	37954
2047-48	15891	647	759	1094	869	3065	102	22427	39279
2048-49	16616	661	777	1122	892	3154	105	23327	40646

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4307	348	164	543	559	1883	67	7871	17402
2024-25	4552	360	169	565	581	1958	70	8255	18163
2025-26	4800	372	174	586	603	2031	73	8639	18915
2026-27	5062	384	179	608	626	2107	76	9042	19701
2027-28	5338	396	184	631	650	2186	79	9464	20520
2028-29	5629	408	190	654	674	2267	82	9904	21366
2029-30	5936	420	196	678	699	2352	85	10366	22252
2030-31	6246	432	201	700	722	2435	88	10824	23117
2031-32	6572	444	206	723	745	2521	91	11302	24014
2032-33	6915	456	211	746	769	2610	94	11801	24945
2033-34	7277	468	217	770	794	2702	97	12325	25918
2034-35	7657	480	223	795	820	2798	100	12873	26932
2035-36	8040	492	229	819	845	2890	103	13418	27926
2036-37	8442	504	235	844	871	2986	106	13988	28962
2037-38	8864	516	241	869	897	3085	109	14581	30032
2038-39	9307	529	247	895	924	3187	113	15202	31149
2039-40	9772	542	253	923	952	3293	117	15852	32314
2040-41	10239	554	259	949	979	3395	121	16496	33453
2041-42	10728	567	265	977	1007	3501	125	17170	34643
2042-43	11241	580	271	1005	1035	3610	129	17871	35870
2043-44	11779	593	277	1034	1064	3722	133	18602	37141
2044-45	12342	606	284	1064	1094	3838	137	19365	38465
2045-46	12905	619	290	1093	1123	3949	141	20120	39757
2046-47	13494	632	297	1122	1153	4064	145	20907	41099
2047-48	14109	645	304	1152	1183	4182	149	21724	42483
2048-49	14753	658	311	1183	1214	4303	153	22575	43916

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 125.000 KM

(Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4305	334	297	478	357	1389	49	7209	14673
2024-25	4528	343	305	494	369	1437	51	7527	15243
2025-26	4751	352	313	510	381	1483	53	7843	15803
2026-27	4986	361	321	526	393	1531	55	8173	16385
2027-28	5232	370	329	543	406	1581	57	8518	16992
2028-29	5490	379	337	560	419	1632	59	8876	17616
2029-30	5761	389	345	579	433	1685	61	9253	18273
2030-31	6033	398	352	595	445	1736	63	9622	18902
2031-32	6317	407	360	611	457	1789	65	10006	19555
2032-33	6615	416	368	628	470	1843	67	10407	20232
2033-34	6928	425	376	645	483	1899	69	10825	20934
2034-35	7255	434	384	662	496	1957	71	11259	21658
2035-36	7581	443	392	679	509	2012	73	11689	22368
2036-37	7923	452	400	696	522	2068	75	12136	23099

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2037-38	8279	461	408	713	535	2127	77	12600	23857
2038-39	8651	470	416	732	549	2187	79	13084	24644
2039-40	9040	479	424	751	563	2248	81	13586	25453
2040-41	9427	488	432	768	576	2307	83	14081	26242
2041-42	9830	497	440	787	589	2367	85	14595	27058
2042-43	10251	506	448	806	603	2428	87	15129	27899
2043-44	10689	515	457	825	617	2492	89	15684	28773
2044-45	11145	524	466	844	631	2557	91	16258	29670
2045-46	11597	533	475	863	645	2618	93	16824	30545
2046-47	12067	542	484	882	659	2681	95	17410	31447
2047-48	12557	551	493	901	673	2746	97	18018	32378
2048-49	13067	560	502	921	687	2812	99	18648	33337

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 171.00 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4829	340	395	520	414	1372	47	7917	15712
2024-25	5078	349	406	537	428	1419	49	8266	16321
2025-26	5328	358	417	554	442	1465	50	8614	16922
2026-27	5592	367	428	571	456	1513	52	8979	17550
2027-28	5869	376	439	589	470	1562	54	9359	18199
2028-29	6159	385	450	608	485	1613	56	9756	18876
2029-30	6463	394	462	628	500	1666	58	10171	19582
2030-31	6768	402	473	645	513	1717	60	10578	20261
2031-32	7087	411	484	662	527	1770	62	11003	20967
2032-33	7422	420	495	679	541	1824	64	11445	21693
2033-34	7772	429	506	697	556	1879	66	11905	22445
2034-35	8140	438	517	716	571	1936	68	12386	23227
2035-36	8506	447	528	734	585	1991	70	12861	23992
2036-37	8889	456	539	752	600	2047	72	13355	24782
2037-38	9289	465	550	771	615	2105	74	13869	25600
2038-39	9707	474	561	791	630	2164	76	14403	26444
2039-40	10143	483	573	811	646	2226	78	14960	27326
2040-41	10576	492	584	830	661	2284	80	15507	28177
2041-42	11029	501	596	850	676	2343	82	16077	29059
2042-43	11502	510	608	870	692	2405	84	16671	29978
2043-44	11995	519	620	890	708	2468	86	17286	30921
2044-45	12509	528	632	911	724	2533	88	17925	31897
2045-46	13017	537	644	931	739	2595	90	18553	32847
2046-47	13546	546	656	951	755	2658	92	19204	33826
2047-48	14096	555	668	972	771	2722	94	19878	34834
2048-49	14670	564	681	993	787	2788	96	20579	35877

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4286	345	163	540	555	1874	67	7830	17312
2024-25	4508	355	167	558	574	1939	69	8170	17974
2025-26	4732	364	171	576	592	2001	71	8507	18619
2026-27	4966	374	175	594	611	2066	73	8859	19293
2027-28	5212	384	180	614	630	2133	75	9228	19996
2028-29	5470	394	185	634	651	2202	77	9613	20727
2029-30	5741	404	190	655	672	2273	79	10014	21482
2030-31	6012	413	194	672	690	2342	81	10404	22203
2031-32	6295	422	198	690	708	2413	83	10809	22948
2032-33	6592	431	202	708	727	2486	85	11231	23719
2033-34	6903	441	207	728	746	2562	87	11674	24528
2034-35	7228	451	212	748	767	2640	90	12136	25371
2035-36	7553	460	217	767	786	2715	92	12590	26185
2036-37	7892	469	222	787	805	2792	95	13062	27029
2037-38	8247	479	227	807	825	2871	98	13554	27903
2038-39	8618	489	232	828	846	2952	101	14066	28808
2039-40	9006	499	237	849	868	3035	104	14598	29742
2040-41	9391	508	242	869	889	3114	107	15120	30648
2041-42	9793	517	247	890	910	3195	110	15662	31582
2042-43	10212	527	252	911	932	3278	113	16225	32547
2043-44	10649	537	257	933	954	3364	116	16810	33547
2044-45	11105	547	262	955	977	3452	119	17417	34577
2045-46	11557	556	267	976	999	3535	122	18012	35574
2046-47	12027	565	272	997	1021	3621	125	18628	36602
2047-48	12515	574	277	1019	1043	3709	128	19265	37660
2048-49	13024	584	282	1041	1066	3798	131	19926	38748

Traffic projections for Most Likely scenario are given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 125.000 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4315	335	297	479	358	1393	49	7226	14709
2024-25	4548	345	305	496	371	1444	51	7560	15309
2025-26	4783	354	313	513	384	1494	53	7894	15906
2026-27	5031	364	321	530	397	1546	55	8244	16526
2027-28	5292	374	330	549	411	1600	57	8613	17180
2028-29	5566	384	339	568	425	1656	59	8997	17856
2029-30	5854	395	348	588	440	1714	61	9400	18562
2030-31	6144	404	356	605	453	1770	63	9795	19241
2031-32	6448	413	364	623	466	1828	65	10207	19945
2032-33	6769	423	373	642	480	1888	67	10642	20686
2033-34	7105	433	382	661	494	1949	69	11093	21447
2034-35	7459	443	391	681	509	2013	71	11567	22245
2035-36	7813	453	400	700	523	2074	73	12036	23023

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2036-37	8184	463	409	720	537	2138	75	12526	23835
2037-38	8573	473	418	740	552	2203	77	13036	24673
2038-39	8980	483	427	760	567	2271	79	13567	25542
2039-40	9406	493	437	782	582	2341	81	14122	26448
2040-41	9832	503	446	802	597	2408	83	14671	27331
2041-42	10277	513	456	822	612	2477	85	15242	28246
2042-43	10742	523	466	844	628	2548	87	15838	29198
2043-44	11228	533	476	866	644	2621	89	16457	30181
2044-45	11735	543	486	889	660	2696	91	17100	31196
2045-46	12240	553	496	911	676	2767	93	17736	32189
2046-47	12768	563	506	933	692	2841	95	18398	33218
2047-48	13319	573	516	956	708	2916	97	19085	34277
2048-49	13894	583	527	979	725	2994	100	19802	35385

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 171.00 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4840	341	395	521	414	1375	48	7934	15745
2024-25	5102	352	407	540	429	1427	50	8307	16405
2025-26	5367	362	418	559	444	1478	52	8680	17058
2026-27	5647	373	430	578	459	1530	54	9071	17736
2027-28	5941	384	443	598	475	1584	56	9481	18445
2028-29	6249	395	456	619	491	1639	58	9907	19176
2029-30	6573	406	469	640	508	1696	60	10352	19935
2030-31	6899	415	480	659	523	1752	62	10790	20671
2031-32	7241	425	492	679	538	1809	64	11248	21434
2032-33	7602	435	505	699	554	1868	66	11729	22232
2033-34	7980	446	518	720	570	1930	68	12232	23064
2034-35	8376	457	531	741	587	1994	70	12756	23927
2035-36	8773	467	544	761	603	2056	72	13276	24774
2036-37	9190	478	557	782	619	2119	74	13819	25650
2037-38	9626	489	571	803	636	2184	76	14385	26560
2038-39	10084	500	585	825	653	2251	78	14976	27504
2039-40	10562	511	599	847	671	2320	80	15590	28480
2040-41	11040	522	613	869	688	2386	82	16200	29439
2041-42	11540	533	627	891	706	2454	84	16835	30433
2042-43	12062	544	641	914	724	2524	86	17495	31460
2043-44	12608	555	655	938	742	2597	88	18183	32528
2044-45	13180	566	670	963	761	2672	90	18902	33640
2045-46	13749	577	684	986	779	2743	92	19610	34719
2046-47	14342	588	699	1010	797	2816	94	20346	35837
2047-48	14960	599	714	1035	816	2891	96	21111	36995
2048-49	15604	610	729	1060	835	2968	98	21904	38188

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 212.00 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	4298	346	164	542	557	1879	67	7853	17363
2024-25	4531	357	169	562	578	1948	69	8214	18070
2025-26	4767	368	174	582	599	2016	71	8577	18776
2026-27	5014	379	179	603	620	2086	73	8954	19504
2027-28	5274	390	184	624	642	2158	75	9347	20258
2028-29	5548	402	189	646	665	2234	78	9762	21055
2029-30	5836	414	194	668	688	2312	81	10193	21876
2030-31	6126	425	199	688	709	2388	84	10619	22676
2031-32	6431	436	204	709	730	2466	87	11063	23503
2032-33	6750	447	209	730	752	2547	90	11525	24360
2033-34	7085	458	214	752	775	2630	93	12007	25249
2034-35	7437	469	219	774	798	2716	96	12509	26168
2035-36	7790	480	224	796	820	2799	99	13008	27071
2036-37	8161	491	229	818	843	2885	102	13529	28009
2037-38	8548	502	234	841	867	2974	105	14071	28983
2038-39	8954	514	239	864	891	3065	108	14635	29986
2039-40	9379	526	244	888	916	3160	111	15224	31032
2040-41	9804	537	249	911	940	3250	114	15805	32048
2041-42	10248	548	254	934	964	3343	117	16408	33096
2042-43	10712	560	260	958	989	3439	120	17038	34189
2043-44	11196	572	266	983	1015	3538	123	17693	35321
2044-45	11703	584	272	1008	1041	3639	126	18373	36485
2045-46	12208	595	278	1032	1066	3736	129	19044	37621
2046-47	12735	606	284	1057	1092	3835	132	19741	38795
2047-48	13285	618	290	1082	1118	3937	135	20465	40006
2048-49	13858	630	296	1109	1145	4042	139	21219	41268

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Kaithal – Rajasthan Border project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2023

Target Traffic - 21919 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 5 years.

Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	15947	-27%	41%	20%	27	5.4

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	15989	-27%	41%	20%	27	5.4

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	21919	15907	-27%	41%	20%	27	5.4

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule - R) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee 50 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza) and local commercial and 50% rate of single trip.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price

Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

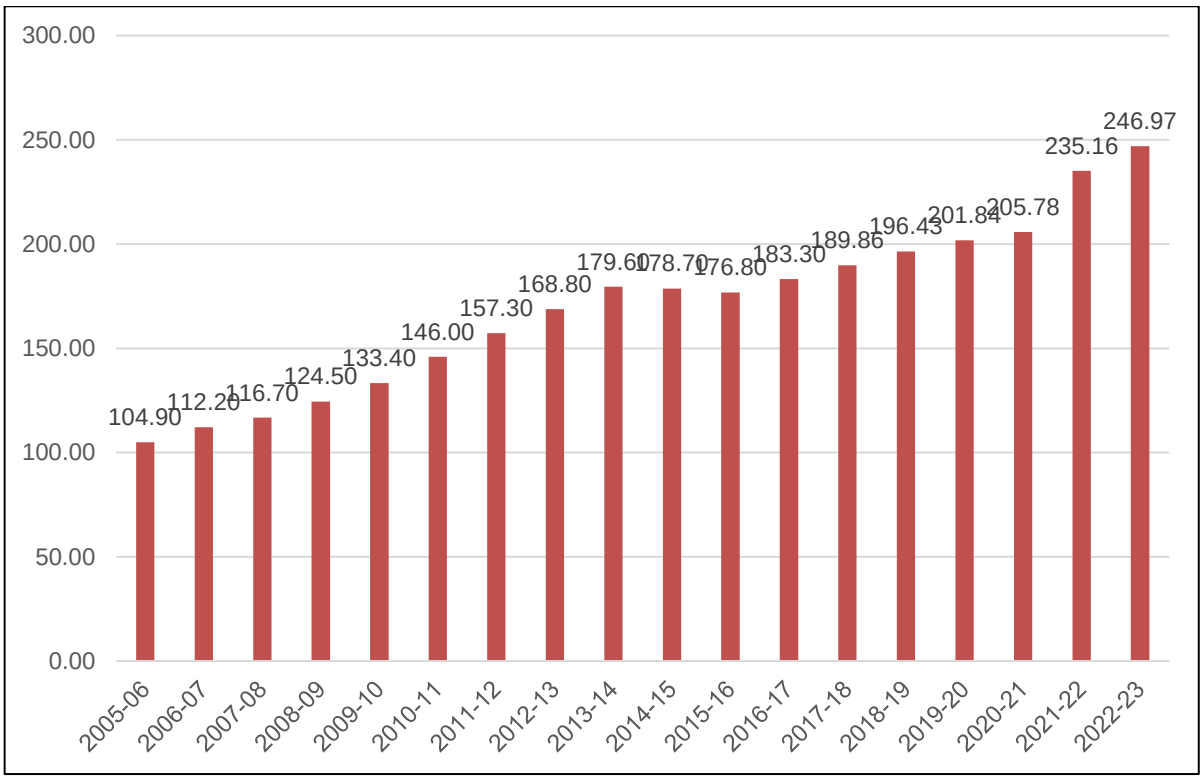


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05

Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km 125.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	90	140	295	295	325
2024-25	90	150	310	310	340
2025-26	95	155	330	330	360
2026-27	100	165	345	345	375
2027-28	105	170	360	360	395
2028-29	110	180	380	380	415
2029-30	115	190	395	395	435
2030-31	125	200	415	415	455
2031-32	130	210	435	435	475
2032-33	135	220	460	460	500
2033-34	140	230	480	480	525
2034-35	150	240	505	505	550
2035-36	155	250	530	530	575
2036-37	165	265	555	555	605
2037-38	170	275	580	580	635
2038-39	180	290	610	610	665
2039-40	190	305	640	640	700
2040-41	200	320	670	670	735
2041-42	210	335	705	705	770
2042-43	220	355	740	740	810
2043-44	230	370	780	780	850
2044-45	240	390	815	815	890
2045-46	255	410	860	860	935
2046-47	265	430	900	900	985
2047-48	280	450	945	945	1035
2048-49	295	475	995	995	1085

Table 7-3 : Toll Rates for Single Journey @ Km 171.00

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	120	190	400	400	440
2024-25	125	200	420	420	460
2025-26	130	210	445	445	485
2026-27	140	220	465	465	510
2027-28	145	235	490	490	535
2028-29	150	245	510	510	560
2029-30	160	255	535	535	585
2030-31	165	270	565	565	615
2031-32	175	280	590	590	645
2032-33	185	295	620	620	675
2033-34	190	310	650	650	710
2034-35	200	325	680	680	740
2035-36	210	340	715	715	780
2036-37	220	355	750	750	815
2037-38	230	375	785	785	855
2038-39	245	395	825	825	900
2039-40	255	415	865	865	945
2040-41	270	435	910	910	990
2041-42	280	455	955	955	1040
2042-43	295	480	1000	1000	1090
2043-44	310	500	1050	1050	1145
2044-45	325	525	1105	1105	1205
2045-46	345	555	1160	1160	1265
2046-47	360	580	1220	1220	1330
2047-48	380	610	1280	1280	1395
2048-49	395	640	1345	1345	1465

Table 7-4 : Toll Rates for Single Journey @ Km 212.00

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	70	110	235	235	255
2024-25	70	115	245	245	265
2025-26	75	125	255	255	280
2026-27	80	130	270	270	295
2027-28	85	135	285	285	310
2028-29	90	140	295	295	325
2029-30	90	150	310	310	340
2030-31	95	155	325	325	355
2031-32	100	165	340	340	375
2032-33	105	170	360	360	390
2033-34	110	180	375	375	410
2034-35	115	190	395	395	430
2035-36	120	195	415	415	450
2036-37	130	205	435	435	475
2037-38	135	215	455	455	495
2038-39	140	230	480	480	520
2039-40	150	240	500	500	545

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2040-41	155	250	525	525	575
2041-42	165	265	555	555	605
2042-43	170	275	580	580	635
2043-44	180	290	610	610	665
2044-45	190	305	640	640	700
2045-46	200	320	670	670	735
2046-47	210	335	705	705	770
2047-48	220	355	740	740	810
2048-49	230	370	780	780	850

Table 7-5 : Toll Rates for Return Journey @ Km 125.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	130	215	445	445	485
2024-25	140	225	470	470	510
2025-26	145	235	490	490	535
2026-27	155	245	515	515	565
2027-28	160	260	540	540	590
2028-29	170	270	570	570	620
2029-30	175	285	595	595	650
2030-31	185	300	625	625	680
2031-32	195	310	655	655	715
2032-33	205	330	685	685	750
2033-34	215	345	720	720	785
2034-35	225	360	755	755	825
2035-36	235	380	790	790	865
2036-37	245	395	830	830	905
2037-38	260	415	870	870	950
2038-39	270	435	915	915	1000
2039-40	285	460	960	960	1050
2040-41	300	480	1010	1010	1100
2041-42	315	505	1060	1060	1155
2042-43	330	530	1110	1110	1210
2043-44	345	555	1165	1165	1275
2044-45	360	585	1225	1225	1335
2045-46	380	615	1285	1285	1405
2046-47	400	645	1350	1350	1475
2047-48	420	680	1420	1420	1550
2048-49	440	710	1490	1490	1625

Table 7-6 : Toll Rates for Return Journey @ Km 171.00

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	180	290	600	600	655
2024-25	185	300	635	635	690
2025-26	195	315	665	665	725
2026-27	205	335	700	700	765
2027-28	215	350	735	735	800
2028-29	225	365	770	770	840
2029-30	240	385	805	805	880
2030-31	250	405	845	845	920
2031-32	260	420	885	885	965
2032-33	275	445	930	930	1010
2033-34	290	465	975	975	1060
2034-35	300	485	1020	1020	1115
2035-36	315	510	1070	1070	1170
2036-37	330	535	1125	1125	1225
2037-38	350	565	1180	1180	1285
2038-39	365	590	1235	1235	1350
2039-40	385	620	1300	1300	1415
2040-41	405	650	1365	1365	1485
2041-42	425	685	1430	1430	1560
2042-43	445	715	1500	1500	1640
2043-44	465	755	1575	1575	1720
2044-45	490	790	1655	1655	1805
2045-46	515	830	1740	1740	1900
2046-47	540	870	1825	1825	1995
2047-48	565	915	1920	1920	2095
2048-49	595	965	2015	2015	2200

Table 7-7 : Toll Rates for Return Journey @ Km 212.00

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	105	165	350	350	380
2024-25	110	175	365	365	400
2025-26	115	185	385	385	420
2026-27	120	195	405	405	440
2027-28	125	205	425	425	465
2028-29	130	210	445	445	485
2029-30	140	225	465	465	510
2030-31	145	235	490	490	535
2031-32	150	245	515	515	560
2032-33	160	255	540	540	585
2033-34	165	270	565	565	615
2034-35	175	280	590	590	645
2035-36	185	295	620	620	675
2036-37	190	310	650	650	710
2037-38	200	325	685	685	745

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2038-39	210	340	715	715	780
2039-40	220	360	750	750	820
2040-41	235	375	790	790	860
2041-42	245	395	830	830	905
2042-43	255	415	870	870	950
2043-44	270	435	915	915	995
2044-45	285	460	960	960	1045
2045-46	300	480	1010	1010	1100
2046-47	315	505	1060	1060	1155
2047-48	330	530	1110	1110	1215
2048-49	345	560	1170	1170	1275

Table 7-8 : Toll Rates for Monthly Pass Local @ Km125.000

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	865	865
2044-45	905	905
2045-46	955	955
2046-47	1000	1000
2047-48	1050	1050
2048-49	1105	1105

Table 7-9 : Toll Rates for Monthly Pass Local @ Km171.000

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	865	865
2044-45	905	905
2045-46	955	955
2046-47	1000	1000
2047-48	1050	1050
2048-49	1105	1105

Table 7-10 : Toll Rates for Monthly Pass Local @ Km212.000

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615

Year	Car	Mini Bus /LCV
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	865	865
2044-45	905	905
2045-46	955	955
2046-47	1000	1000
2047-48	1050	1050
2048-49	1105	1105

Table 7-11 : Toll Rates for Monthly Pass @ Km125.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	2925	4725	9900	9900	10805
2024-25	3075	4965	10405	10405	11350
2025-26	3230	5220	10935	10935	11930
2026-27	3395	5485	11490	11490	12535
2027-28	3560	5750	12045	12045	13140
2028-29	3730	6025	12625	12625	13770
2029-30	3910	6315	13235	13235	14435
2030-31	4100	6620	13875	13875	15135
2031-32	4300	6940	14545	14545	15870
2032-33	4505	7280	15255	15255	16640
2033-34	4725	7635	15995	15995	17450
2034-35	4955	8010	16780	16780	18305
2035-36	5200	8400	17600	17600	19200
2036-37	5455	8815	18465	18465	20145
2037-38	5725	9245	19375	19375	21135
2038-39	6005	9705	20330	20330	22180
2039-40	6305	10185	21340	21340	23280
2040-41	6620	10690	22400	22400	24435
2041-42	6945	11220	23515	23515	25650
2042-43	7295	11785	24685	24685	26930
2043-44	7660	12370	25925	25925	28280
2044-45	8045	12995	27225	27225	29700
2045-46	8450	13645	28595	28595	31195
2046-47	8875	14335	30035	30035	32765
2047-48	9325	15060	31555	31555	34420
2048-49	9795	15820	33150	33150	36165

Table 7-12 : Toll Rates for Monthly Pass @ Km 171.00

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3955	6390	13390	13390	14605
2024-25	4155	6715	14065	14065	15345
2025-26	4365	7055	14780	14780	16125
2026-27	4590	7415	15535	15535	16950
2027-28	4810	7770	16285	16285	17765
2028-29	5045	8145	17065	17065	18620
2029-30	5285	8540	17890	17890	19515
2030-31	5540	8950	18755	18755	20460
2031-32	5810	9385	19665	19665	21455
2032-33	6095	9840	20620	20620	22495
2033-34	6390	10320	21625	21625	23590
2034-35	6700	10825	22685	22685	24745
2035-36	7030	11355	23795	23795	25955
2036-37	7375	11915	24965	24965	27235
2037-38	7740	12500	26195	26195	28575
2038-39	8120	13120	27485	27485	29985
2039-40	8525	13770	28850	28850	31470
2040-41	8945	14450	30280	30280	33035
2041-42	9390	15170	31790	31790	34680
2042-43	9860	15930	33375	33375	36410
2043-44	10355	16725	35045	35045	38230
2044-45	10875	17565	36805	36805	40150
2045-46	11420	18450	38655	38655	42170
2046-47	11995	19380	40605	40605	44295
2047-48	12605	20360	42660	42660	46535
2048-49	13240	21390	44820	44820	48895

Table 7-13 : Toll Rates for Monthly Pass @ Km 212.00

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	2290	3705	7760	7760	8465
2024-25	2410	3890	8150	8150	8890
2025-26	2530	4090	8565	8565	9345
2026-27	2660	4295	9005	9005	9820
2027-28	2790	4505	9435	9435	10295
2028-29	2920	4720	9890	9890	10790
2029-30	3065	4950	10370	10370	11310
2030-31	3210	5190	10870	10870	11855
2031-32	3365	5440	11395	11395	12430
2032-33	3530	5705	11950	11950	13035
2033-34	3705	5980	12530	12530	13670
2034-35	3885	6275	13145	13145	14340
2035-36	4075	6580	13790	13790	15040
2036-37	4275	6905	14465	14465	15780

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2037-38	4485	7245	15180	15180	16560
2038-39	4705	7600	15930	15930	17375
2039-40	4940	7980	16715	16715	18235
2040-41	5185	8375	17550	17550	19145
2041-42	5445	8790	18420	18420	20095
2042-43	5715	9230	19340	19340	21100
2043-44	6000	9695	20310	20310	22155
2044-45	6300	10180	21330	21330	23265
2045-46	6620	10690	22400	22400	24440
2046-47	6950	11230	23530	23530	25670
2047-48	7305	11800	24720	24720	26970
2048-49	7675	12395	25975	25975	28335

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenario at each of the toll plaza up to 2048-49 starting from the year 2022-23 are shown in tables below.

Table 7-14 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	48.52	69.85	46.77	**165.14**
2024-25	52.90	75.97	50.83	**179.70**
2025-26	57.83	83.20	55.74	**196.76**
2026-27	63.31	91.29	61.01	**215.61**
2027-28	69.12	99.89	66.81	**235.82**
2028-29	75.55	108.60	72.48	**256.62**
2029-30	82.24	118.87	79.08	**280.19**
2030-31	90.11	129.14	85.68	**304.93**
2031-32	98.18	141.12	93.48	**332.79**
2032-33	106.70	153.69	101.57	**361.96**
2033-34	116.00	166.92	110.58	**393.50**
2034-35	126.61	181.43	120.68	**428.71**
2035-36	137.67	198.21	131.43	**467.31**
2036-37	149.60	214.83	142.59	**507.03**
2037-38	162.19	233.79	154.90	**550.88**
2038-39	176.64	255.04	168.31	**599.99**
2039-40	193.42	277.89	183.63	**654.94**
2040-41	209.83	301.79	199.09	**710.71**

Year	TP-1	TP2	TP3	Total
2041-42	227.94	327.18	216.49	**771.62**
2042-43	247.64	355.66	234.47	**837.77**
2043-44	269.81	387.64	255.93	**913.38**
2044-45	291.82	420.51	278.01	**990.34**
2045-46	317.84	457.72	301.63	**1077.20**
2046-47	344.65	496.15	326.75	**1167.55**
2047-48	375.50	538.79	304.28	**1218.56**
2048-49	406.75	584.72	330.37	**1321.84**

Table 7-15 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	48.28	69.51	46.55	**164.33**
2024-25	52.37	75.24	50.33	**177.94**
2025-26	56.99	82.00	54.90	**193.89**
2026-27	62.08	89.59	59.79	**211.46**
2027-28	67.47	97.54	65.14	**230.15**
2028-29	73.42	105.51	70.34	**249.27**
2029-30	79.61	114.92	76.39	**270.92**
2030-31	86.82	124.27	82.35	**293.44**
2031-32	94.15	135.19	89.45	**318.79**
2032-33	101.82	146.53	96.73	**345.09**
2033-34	110.21	158.44	104.81	**373.47**
2034-35	119.78	171.40	113.85	**405.02**
2035-36	129.66	186.41	123.42	**439.49**
2036-37	140.24	201.12	133.27	**474.63**
2037-38	151.33	217.83	144.12	**513.28**
2038-39	164.03	236.60	155.85	**556.48**
2039-40	178.68	256.69	169.23	**604.60**
2040-41	192.89	277.54	182.59	**653.02**
2041-42	208.49	299.53	197.58	**705.59**
2042-43	225.37	324.05	212.90	**762.32**
2043-44	244.35	351.40	231.23	**826.97**
2044-45	262.95	379.31	249.93	**892.20**
2045-46	285.05	410.90	269.84	**965.78**
2046-47	307.56	443.26	290.88	**1041.69**
2047-48	333.53	478.98	269.58	**1082.09**
2048-49	359.58	517.35	291.27	**1168.20**

Table 7-16 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	48.43	69.66	46.65	**164.74**
2024-25	52.67	75.58	50.55	**178.81**
2025-26	57.46	82.58	55.28	**195.33**
2026-27	62.76	90.39	60.36	**213.51**
2027-28	68.36	98.64	65.92	**232.92**
2028-29	74.59	106.96	71.39	**252.94**
2029-30	81.04	116.83	77.71	**275.59**
2030-31	88.63	126.60	84.01	**299.25**
2031-32	96.33	138.03	91.47	**325.83**
2032-33	104.46	149.99	99.14	**353.60**
2033-34	113.27	162.62	107.67	**383.57**
2034-35	123.38	176.42	117.17	**416.97**
2035-36	133.84	192.35	127.32	**453.51**
2036-37	145.08	208.03	137.78	**490.88**
2037-38	156.93	225.85	149.33	**532.11**
2038-39	170.44	245.87	161.85	**578.16**
2039-40	186.09	267.33	176.18	**629.60**
2040-41	201.37	289.69	190.54	**681.60**
2041-42	218.11	313.38	206.67	**738.16**
2042-43	236.33	339.77	223.22	**799.33**
2043-44	256.81	369.30	243.04	**869.15**
2044-45	277.04	399.52	263.30	**939.85**
2045-46	301.01	433.78	284.90	**1019.69**
2046-47	325.56	468.92	307.83	**1102.32**
2047-48	353.83	507.78	285.95	**1147.56**
2048-49	382.45	549.61	309.73	**1241.80**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Kaithal to Rajasthan Border section of NH-152/65 in state of Haryana from km 33.250 to km 241.580 has been widened to four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor has potential to develop as main link for traffic from Punjab, Haryana, and parts of Himachal to Rajasthan and south. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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PALSIT TO DANKUNI SECTION OF NH 19 IN THE STATE OF WEST BENGAL (KM 588.870 TO KM 652.700)









TTRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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PALSIT TO DANKUNI SECTION OF NH 19 IN THE STATE OF WEST BENGAL (KM 588.870 TO KM 652.700)

TRAFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, **Palsit** to **Dankuni** section of NH-19 from km 588.870 to km 652.700 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Palsit Dankuni Tollway. Ltd*. (Concessionaire) has been awarded the Project for a concession period of 17 years starting from 2nd April 2022. The Project has been commissioned and is currently under construction for six laning. Six laning of project is underway and expected to complete soon.

Project stretch from Palsit to Dankuni is part of new NH-19 Which was previously referred as Delhi -Kolkata. During renumbering of National Highway, Delhi to Agra route was numbered as NH-44 and Agra to Kolkata has been assigned as NH-19. From transportation point of view it is Delhi – Kolkata corridor.

New NH-19 connects industrial cities like Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Durgapur, Bardhman and terminates at Dankuni near Kolkata. Close proximity to Kolkata and Howrah has given impetus to industrial development around project highway at various locations.

Old Delhi road (GT Road) lies on east of project highway from Palsit onwards. Project stretch is developed at new alignment between Palsit and Dankuni and is known as Durgapur Expressway. Following figure shows the alignment of project stretch.

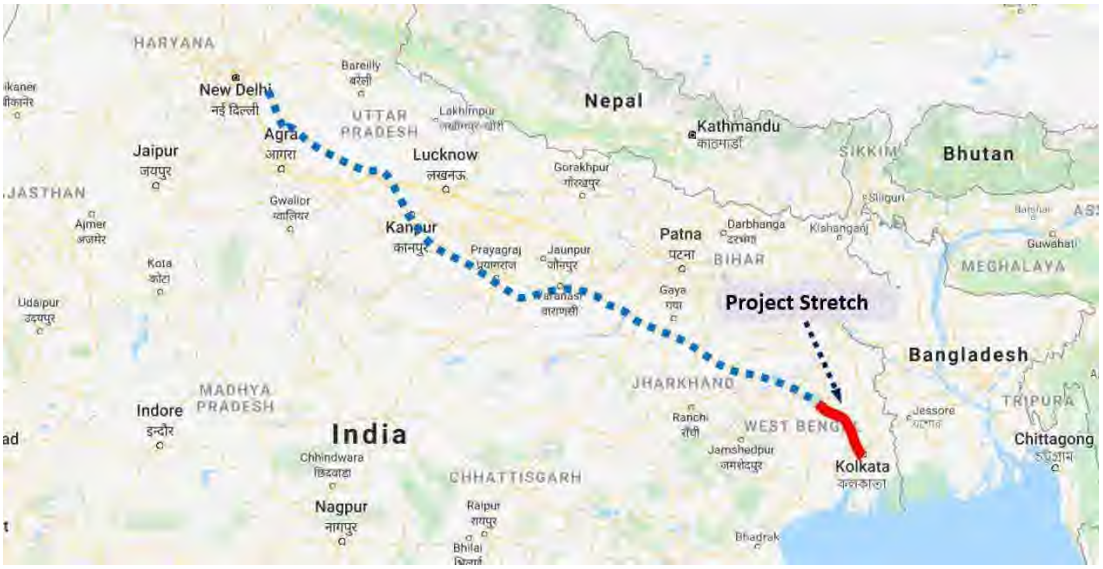


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project stretch.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 2 (NH 2) which is now renumbered as NH-19 is oldest highway in India and connects state of Delhi, Haryana, Uttar Pradesh, Bihar, Jharkhand and West Bengal. It constitutes a major portion of historical grand truck road.

It connects the national capital Delhi to the Kolkata, as well as important cities Mathura, Agra, Kanpur, Allahabad, Varanasi, Dhanbad, Asansol, Durgapur and Bardhman. The highway is part of the Golden Quadrilateral project undertaken by National Highways Authority of India (NHAI).

The project road is final link on Kolkata side between Palsit and Dankuni in the state of West Bengal. Dankuni is just out the outskirt of Kolkata on northern side. The main project influence area of the project road consists of Dhanbad, Durgapur and Kolkata.

2.2 Project Stretch Description

Section of NH-19 from Palsit to Dankuni is part of major transportation link in the area connecting industrial cities of Dhanbad, Asansol, Durgapur and Kolkata. Project stretch is basically and gateway link to Kolkata from northern India. Being just on outskirt of major metro city Kolkata large number of ware houses and logistic hubs are established on project road. This also contributes to sustainable traffic and growth on project highway.

There is one operative toll plaza at project stretch which is at Dankuni at km 646.005. Following figure show project alignment and toll plaza location.



Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Four lane project is under operation. Six laning has commenced on corridor. Following photographs illustrate project section along the corridor.







Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza location on Palsit - Dankuni section of NH-19 for Yr.2022-23.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass

1	Toll Plaza Dankuni at km 646.005	AADT for Yr.2022-23	AADT for Yr.2022-23	AADT for Yr.2022-23	AADT for Yr.2022-23	AADT for Yr.2022-23

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base Year 2022-23 as under for toll plaza–

Table 3-3 : Traffic Data at Dankuni Toll Plaza at Km 646.005

Sr. No	Type of Vehicle	Annual Average Daily Traffic Fy-2022-23
1	CAR	10514
2	LCV	1398
3	BUS	789
4	Truck	3707
5	3-Axle	3061
6	Multi Axle	8974
7	Oversize Vehicle	8
	Total	**28451**

Pandemic of COVID-19 (Corona Virus) has impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later.

Traffic on project corridor is recovering at good rate but still traffic numbers had effect of Pandemic. There after India was hit by Covid-19 second and third wave in February 21 to July -21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed due to second and third wave of Covid-19. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-4**.**

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5

Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2022-2023	Dankuni Km 646.005	28451	75699	2.66

It can be observed from above that project traffic has PCU index More than 2.5 at Dankuni which is an indicator of high proportion of commercial traffic in traffic mix.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

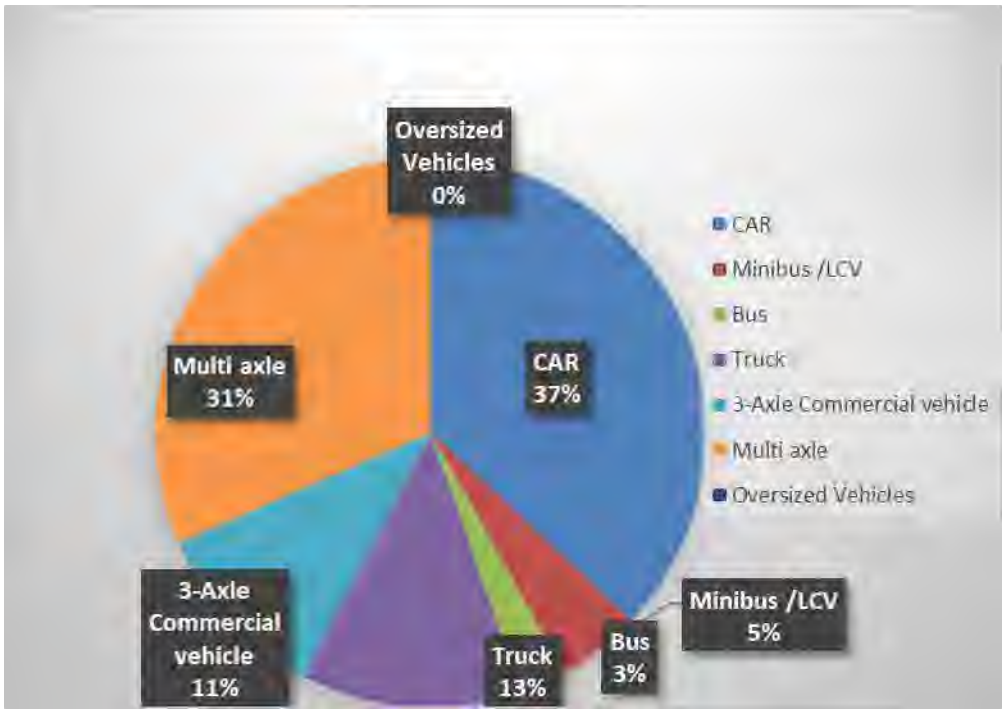


Figure 3-1 :Model Split of Tollable Vehicle-Dankuni Km 646.005

It is observed that car traffic forms about 37% of total traffic at Dankuni toll plaza location while multi axle commercial vehicles and trucks are about 63% of total traffic.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23

Table 3-6 : Journey Type Bifurcation of Traffic at Dankuni Toll Plaza KM 646.005

Sr. No	Type	Traffic Volume (Nos.)
		2022-23
1	Single Journey	14201
2	Return Journey	14238
3	Local Commercial Single Journey	0
4	Monthly Pass Local	7
5	Monthly Pass	5

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 50%. Return journey component is 50%. The number of monthly pass is 0% at Dankuni toll plaza. This indicates higher share of long traffic.

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch from Palsit to Dankuni is part of Golden Quadrilateral connecting four metros of India which has been widened to four lane in year 2005. Part of stretch, from Palsit to Dankuni, known as Durgapur Expressway, was constructed at different alignment to the east of old NH-2. Old NH-2, still known as GT road passes through congested built up areas like Memari, Boinchi, Saptagram etc. It has number of level rail crossings as well. Thus, traffic at project stretch is settled and as such has not much scope of diversion.

There are few alternate routes to project stretch. These are discussed in subsequent sections including their potential impact on project traffic.

Old NH-2 (GT Road)

Between Palsit and Dankuni old NH-2 is an available alternate route to project stretch (Durgapur Expressway). Following figure show both Durgapur Expressway and GT road.



Figure 4-1 Project stretch and alternate GT Road

GT road passes through congested locations and is two lane currently in most of the stretch.

Following figure shows typical condition of GT road as compared to project stretch.



Figure 4-2 Project stretch and alternate GT Road Condition

There are as many as 5 level crossings on GT road which cause traffic congestion. Following figure show one such typical crossing.



Figure 4-3 Railway level crossing at GT road

Following table shows comparison of length and travel time via both project stretch and old GT road between Bardhman and Dankuni.

Table 4-1 Project Road and GT road comparison

Route	Distance (Km)	Time (Min)	Remarks
Bardhman -Kolkata Via Old NH-2 GT Road	102	141	Road is two lane in most places and passes through congested built up areas (Alikhoja, Memari, Boinchi, Saptagram) and 7 level crossings.
Bardhman -Kolkata Via Project Road	**84**	**79**	**Preferred Route**

Project road is quite short and saves lot of time. It such case any material shift of traffic from project stretch to old GT road is not envisaged.

B. Toll Plaza Local Leakage Roads

As such leakage roads are not there at toll plazas but there can be a longer detour to avoid toll plaza. Following figure show location and alignment of these roads at Dankuni Toll plaza.



Figure 4-4 Local roads bypassing toll plaza

At **Dankuni Toll Plaza,** there can be one alternate route via Singur- Baidyavati (Tarkeshwar) – Dankuni. Link from Singur to old Delhi road is intermediate/ two lane. It's quite congested and geometrically very poor. Moreover, this road is used by pilgrims to reach famous Tarkeshwar temple of Lord Shiva. Almost all through the year people walk in large groups on the way to Tarkeshwar. Major concentration of this Yatra is in month of February to March and July- August. Following figure show typical condition of this link.



Old GT Road from Tarkeshwar to Dankuni in under widening to four lane. There is one ROB under construction. Toll plaza is also under construction at GT Road. Following figures show under construction ROB and Toll Plaza at GT Road.



Figure 4-5 ROB & Toll Plaza under construction

Following table provides comparison between project road and this alternate route around Dankuni toll plaza.

Table 4-2 Length time comparison of alternate route at Dankuni Toll

Route	Distance (Km)	Time (Min)	Remarks
Via Singur - Delhi Road (Old NH02)	27	41	From Singur to NH-2 road is intermediate lane and congested. Delhi road under four laning. Toll plaza under construction

Via Project road (Dankuni)	**21.4**	**24**	**Preferred Route**

Between Singur and Kolkata- Road from Singur to Old NH-2 is two lane and quite congested. Currently part of NH-2 is under 4 laning and there is no toll as of now. Already passenger vehicles are using. Heavy commercial traffic is not allowed on existing bridge. Hence when ROB will be opened to traffic, certain amount of commercial traffic may divert to alternate route of Singur- NH-2.

Part of alternate route is congested and there is habitation on both sides. Progress on ROB at GT road has been very slow which is further impacted by pandemic COVI-19. As the route is existing since long and traffic is settled on both project stretch and GT road, it is unlikely that any further diversion of passenger traffic would take place. After completion of six laning of project stretch some passenger traffic may also divert to project stretch due to better traffic conditions at project stretch. However same is ignored for current analysis and projections.

At present heavy commercial traffic is not allowed on existing ROB on NH-2 however light commercial traffic is using the same. Hence some part of above diversion has already taken place.

Geometrics and condition of road from Singur to GT road is not good but still some amount of commercial traffic may divert to old GT road after ROB at GT road is competed. Following table shows potential diversion of traffic commercial traffic is taken into consideration for projection of traffic. Considering the above facts following diversion of commercial traffic has been assumed for traffic projections in 2025-26.

- Optimistic Case- 5%
- Most Likely Case- 10%
- Pessimistic Case- 15%

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Surat- Dahisar section of NH-8has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

As observed in OD analysis, project stretch has share of traffic from mainly three states of West Bengal, Jharkhand and Bihar and some traffic from Uttar Pradesh and

Delhi. Hence regression of dependent variable and traffic has been done for these three states. Following tables and graphs present summary of elasticity model of growth for project corridor.

Table 5-1 : Per Capita Income Vs. Car- West Bengal

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	31314	610218	4.50	5.79		
2012	32164	695463	4.51	5.84	3%	
2013	34177	791069	4.53	5.90	6%	
2014	36293	829478	4.56	5.92	6%	
2015	38624	916475	4.59	5.96	6%	5.40%

Regression analysis of above is given in following figure

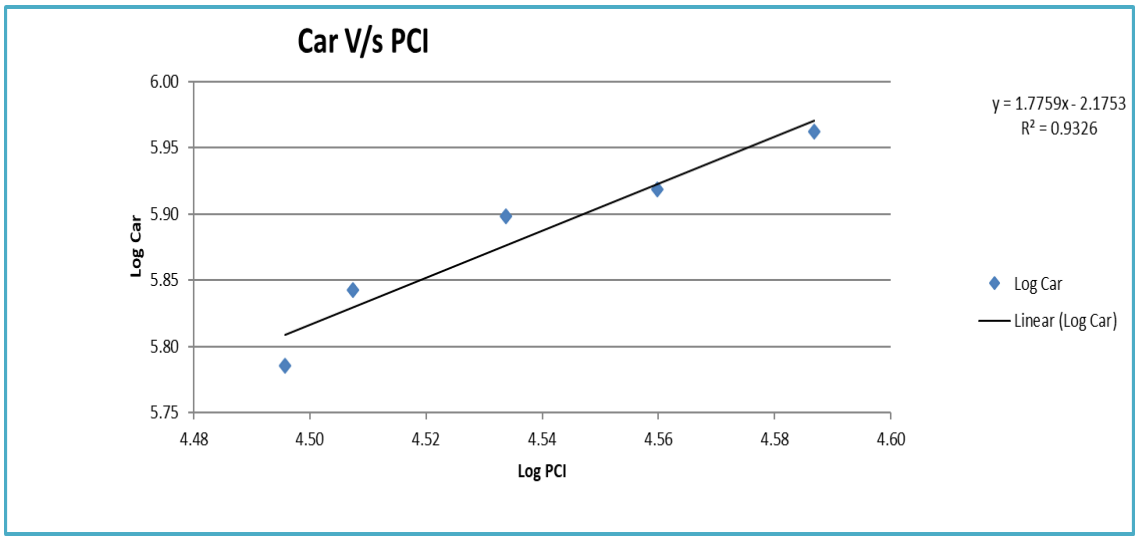


Figure 5-1 : Regression Analysis Car Vs. PCI West Bengal

Table 5-2 : NSDP Vs. Truck- West Bengal

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	27919100	285733	7.45	5.46		
2012	28943200	318573	7.46	5.50	4%	
2013	31033800	344816	7.49	5.54	7%	
2014	33242500	350565	7.52	5.54	7%	
2015	35684500	377636	7.55	5.58	7%	6.34%

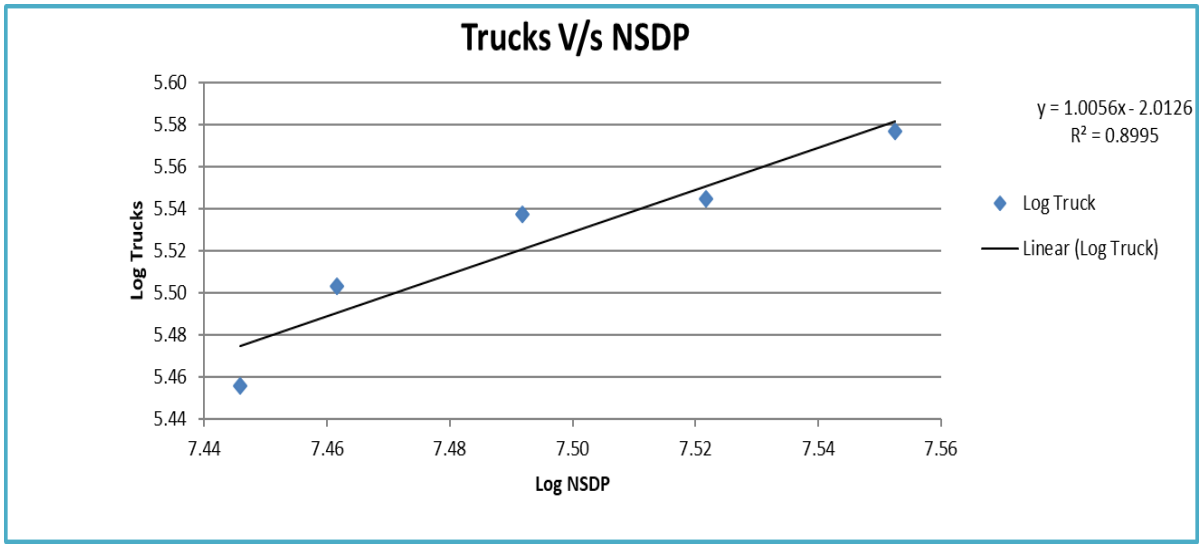


Figure 5-2 : Regression Analysis NSDP Vs. Truck West Bengal

Summary of regression analysis for elasticity and growth estimation for West Bengal are given in following table

Table 5-3 : Summary Regression Analysis- West Bengal

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
West Bengal	Car/Jeep	PCI	y = 1.7759x - - 2.1753	R^2 = 0.9326	1.7759	5.40%	9.58%	Good Regression
	Bus	Population	y = 0.5092x - 0.5636	R^2 = 0.0364	0.5092	0.89%	0.46%	Poor Regression
	Truck	NSDP	y = 1.0056x - - 2.0126	R^2 = 0.8995	1.0056	6.34%	6.37%	Good Regression

Similarly, regression tables and graphs of economic model for Jharkhand are given as under.

Table 5-4 : Per Capita Income Vs. Car- Jharkhand

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	24330	317931	4.39	5.50		
2012	25265	360662	4.40	5.56	4%	
2013	27010	408016	4.43	5.61	7%	
2014	28882	461587	4.46	5.66	7%	
2015	30950	522192	4.49	5.72	7%	6.2%

Regression analysis of above is given in following figure

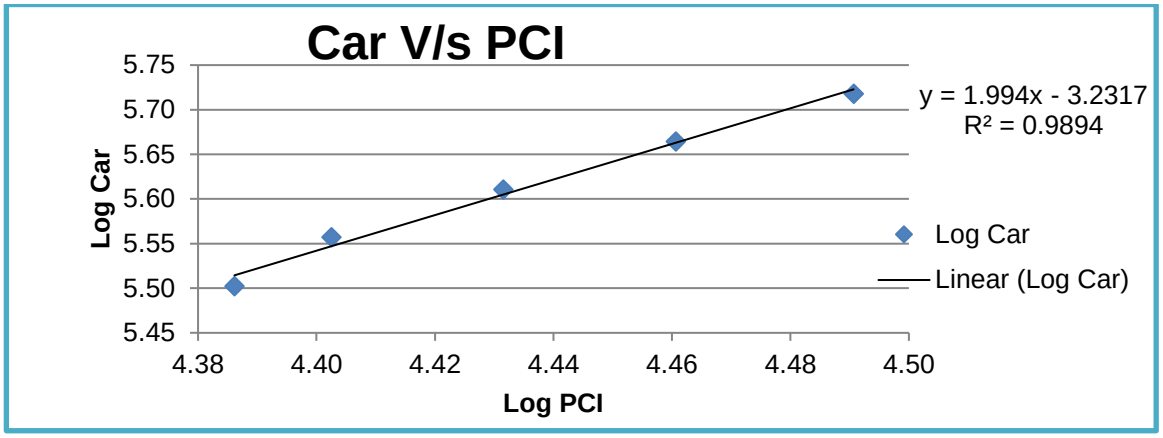


Figure 5-3 : Regression Analysis Car Vs. PCI Jharkhand

Table 5-5 : Population Vs. Bus- Jharkhand

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	31292000	12847	7.50	4.11		
2012	31726000	13561	7.50	4.13	1%	
2013	32159000	14189	7.51	4.15	1%	
2014	32588000	14846	7.51	4.17	1%	
2015	33020000	15534	7.52	4.19	1%	1.35%

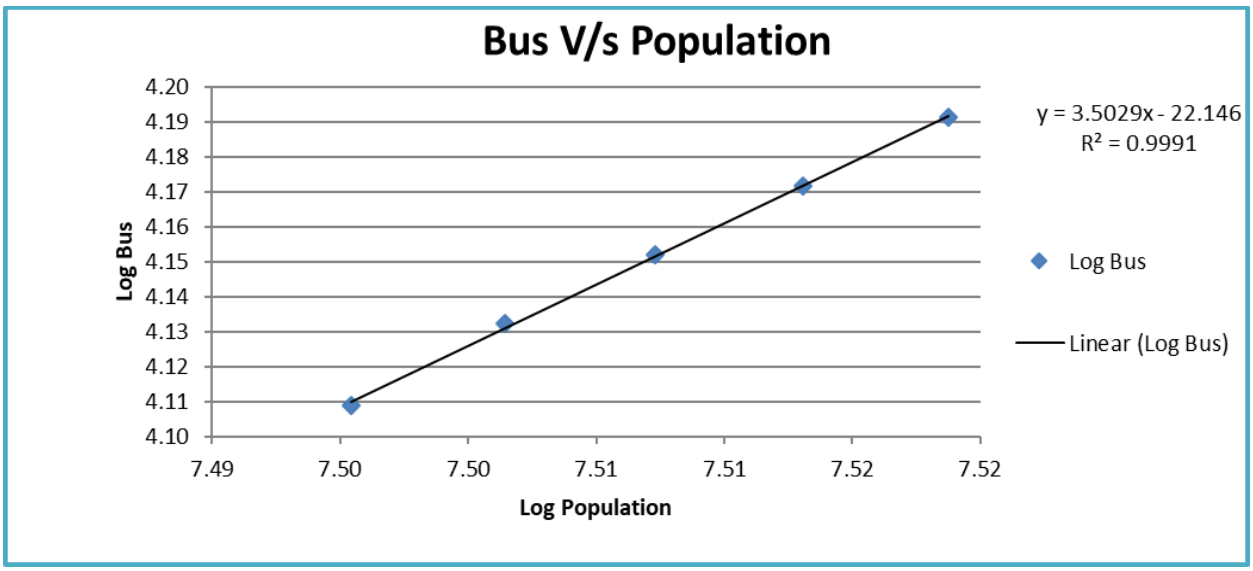


Figure 5-4 : Regression Analysis Population Vs. Bus Jharkhand

Table 5-6 : NSDP Vs. Truck- Jharkhand

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	76134	100257	4.88	5.00		
2012	80157	107769	4.90	5.03	5%	
2013	86861	114903	4.94	5.06	8%	
2014	94121	121031	4.97	5.08	8%	
2015	102196	127374	5.01	5.11	9%	7.65%

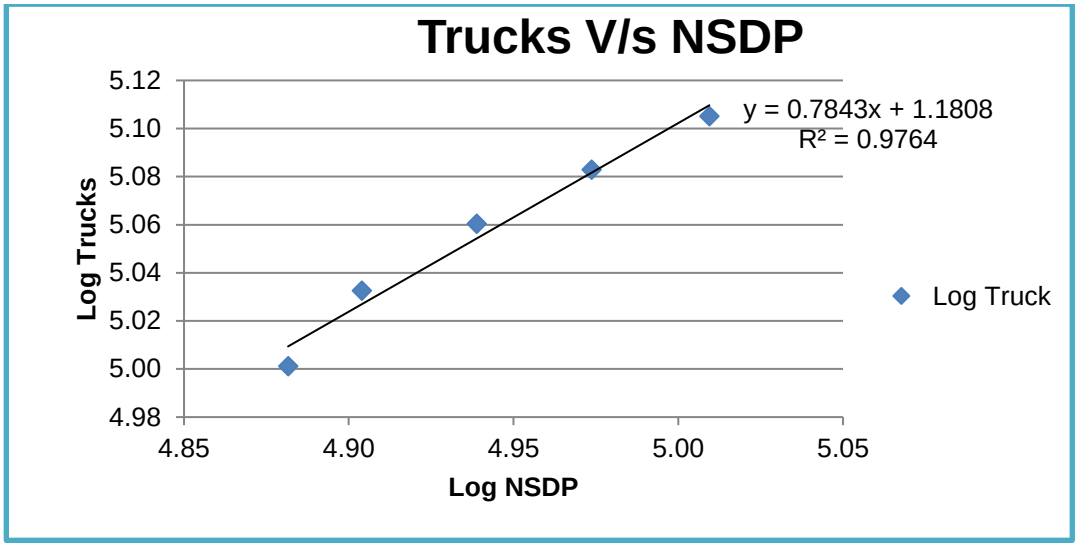


Figure 5-5 : Regression Analysis NSDP Vs. Jharkhand

Summary of regression analysis for elasticity and growth estimation for Jharkhand are given in following table

Table 5-7 : Summary Regression Analysis- Jharkhand

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
JHARKHAND	Car/Jeep	PCI	y = 1.994x - -3.2317	R^2 = 0.9894	1.9940	6.21%	12.38%	Good Regression
	Bus	Population	y = 3.5029x - - 22.1461	R^2 = 0.9991	3.5029	1.35%	4.74%	Good Regression
	Truck	NSDP	y = 0.7843x - 1.1808	R^2 = 0.9764	0.7843	7.65%	6.00%	Good Regression

Similar analysis for state of Bihar is presented in table and regression graphs given below.

Table 5-8 : Per Capita Income Vs. Car- Bihar

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	12090	136845	4.08	5.14		
2012	13149	160340	4.12	5.21	9%	
2013	14356	184792	4.16	5.27	9%	
2014	15506	208205	4.19	5.32	8%	
2015	16801	235762	4.23	5.37	8%	8.6%

Regression analysis of above is given in following figure

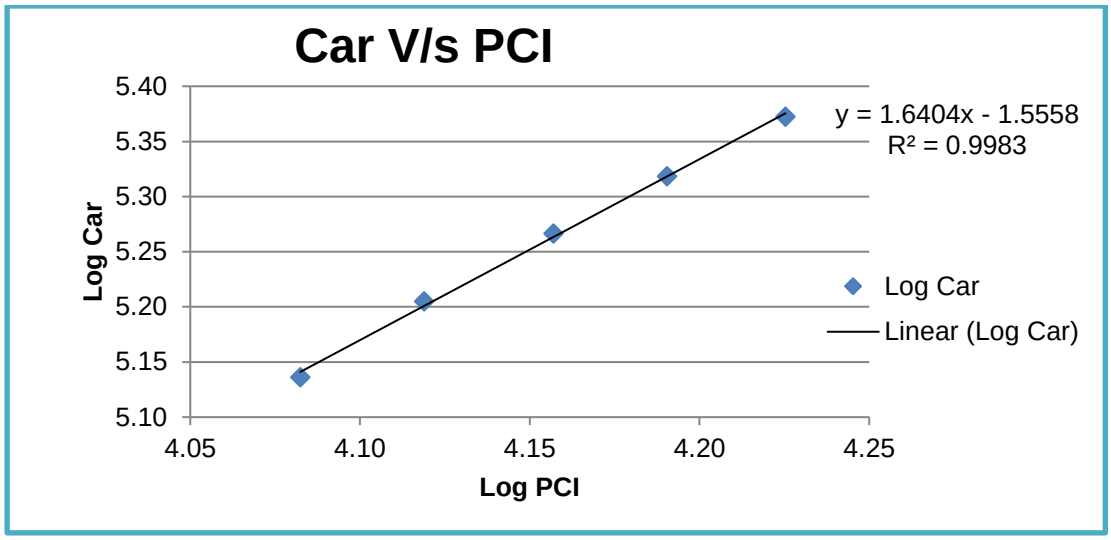


Figure 5-6 : Regression Analysis Car Vs. PCI Bihar

Table 5-9 : Population Vs. Bus- Bihar

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	104099452	22703	8.02	4.36		
2012	106763632	24097	8.03	4.38	3%	
2013	109441349	25992	8.04	4.41	3%	
2014	112131327	27638	8.05	4.44	2%	
2015	114832300	29384	8.06	4.47	2%	2%

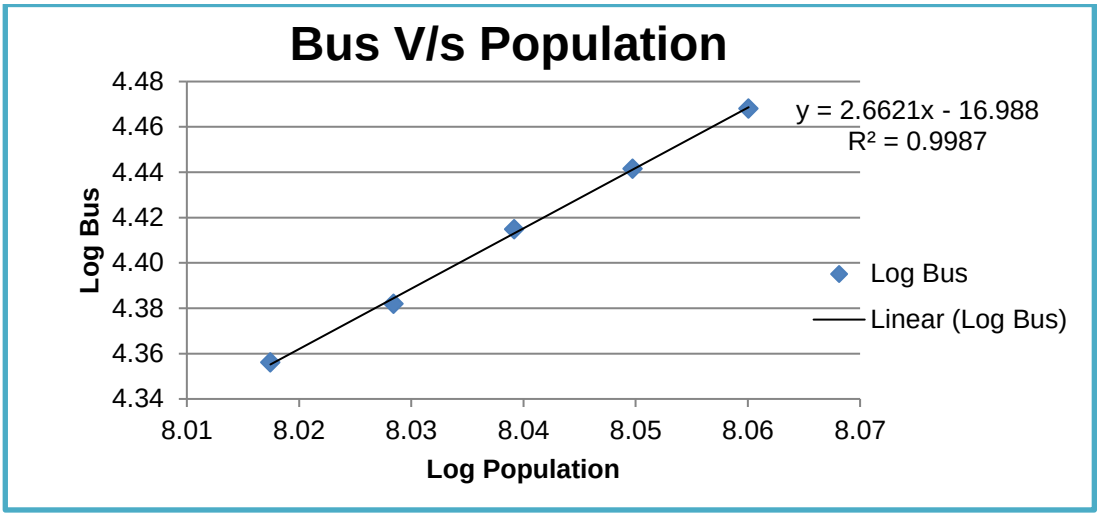


Figure 5-7 : Regression Analysis Population Vs. Bus Bihar

Table 5-10 : NSDP Vs. Truck- Bihar

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	11750314	73472	7.07	4.87		
2012	12952142	83191	7.11	4.92	10%	
2013	14324962	103211	7.16	5.01	11%	
2014	15667055	109010	7.19	5.04	9%	
2015	17180244	123744	7.24	5.09	10%	10%

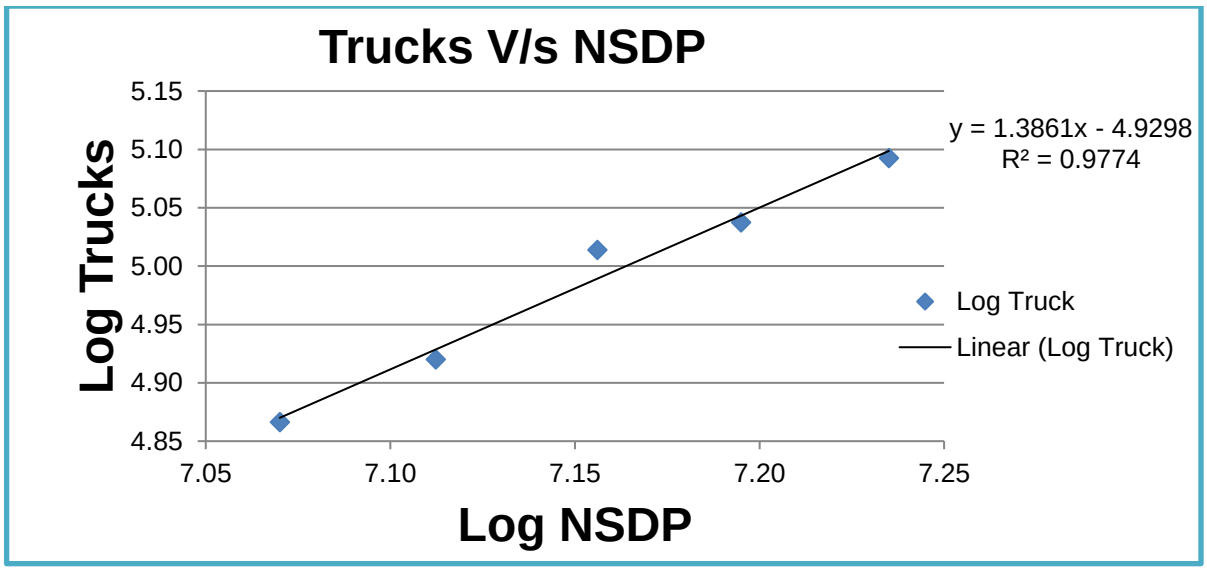


Figure 5-8 : Regression Analysis NSDP Vs. Truck Bihar

Summary of regression analysis for elasticity and growth estimation for Biharis given in following table

Table 5-11 : Summary Regression Analysis- Bihar

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
BIHAR	Car/Jeep	PCI	y = 1.6404x - - 1.5558	R^2 = 0.9983	1.6404	8.58%	14.07%	Good Regression
	Bus	Population	y = 2.6621x - - 16.988	R^2 = 0.9987	2.6621	2.48%	6.61%	Good Regression
	Truck	NSDP	y = 1.3861x - - 4.9298	R^2 = 0.9774	1.3861	9.96%	13.81%	Good Regression

Table 5-12 : Per Capita Income Vs. Car- Uttar Pradesh

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	17388	984937	4.24	5.99		
2012	18014	1108100	4.26	6.04	4%	
2013	18635	1205374	4.27	6.08	3%	
2014	19233	1423020	4.28	6.15	3%	
2015	20057	1572217	4.30	6.20	4%	4%

Regression analysis of above is given in following figure

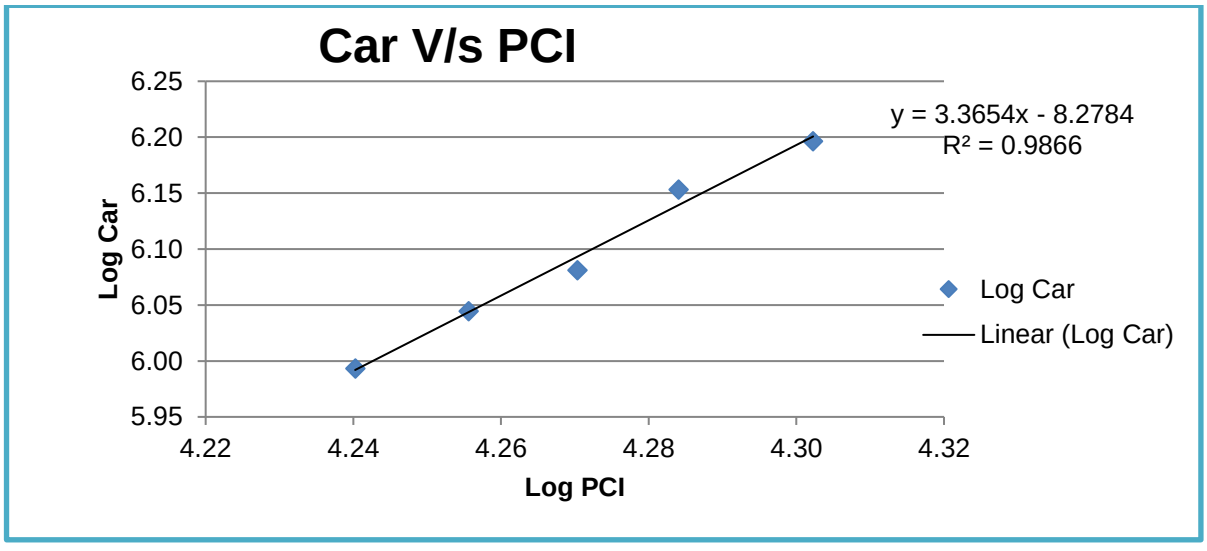


Figure 5-9 : Regression Analysis Car Vs. PCI Uttar Pradesh

Table 5-13 : Population Vs. Bus- Uttar Pradesh

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	199812341	31922	8.30	4.50		
2012	203382046	34428	8.31	4.54	2%	
2013	206942855	40501	8.32	4.61	2%	
2014	210493544	45607	8.32	4.66	2%	
2015	214032922	51866	8.33	4.71	2%	2%

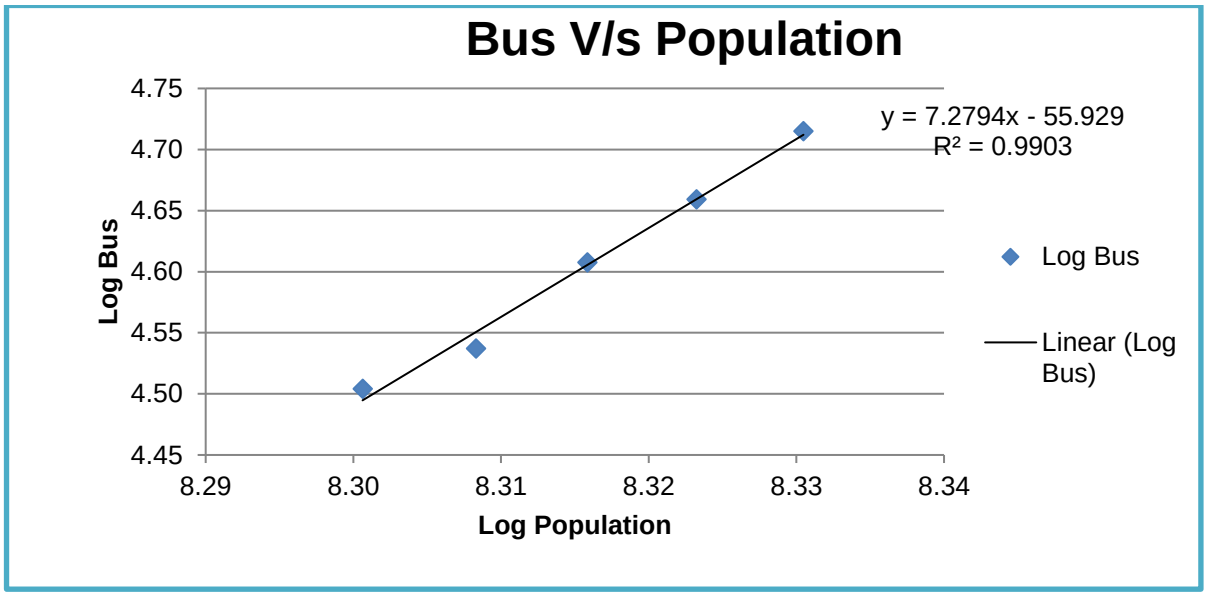


Figure 5-10 : Regression Analysis Population Vs. Bus Uttar Pradesh

Table 5-14 : NSDP Vs. Truck- Uttar Pradesh

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	34662085	307058	7.54	5.49		
2012	36537453	338977	7.56	5.53	5%	
2013	38445814	400061	7.58	5.60	5%	
2014	40350882	467786	7.61	5.67	5%	
2015	42775892	511631	7.63	5.71	6%	5%

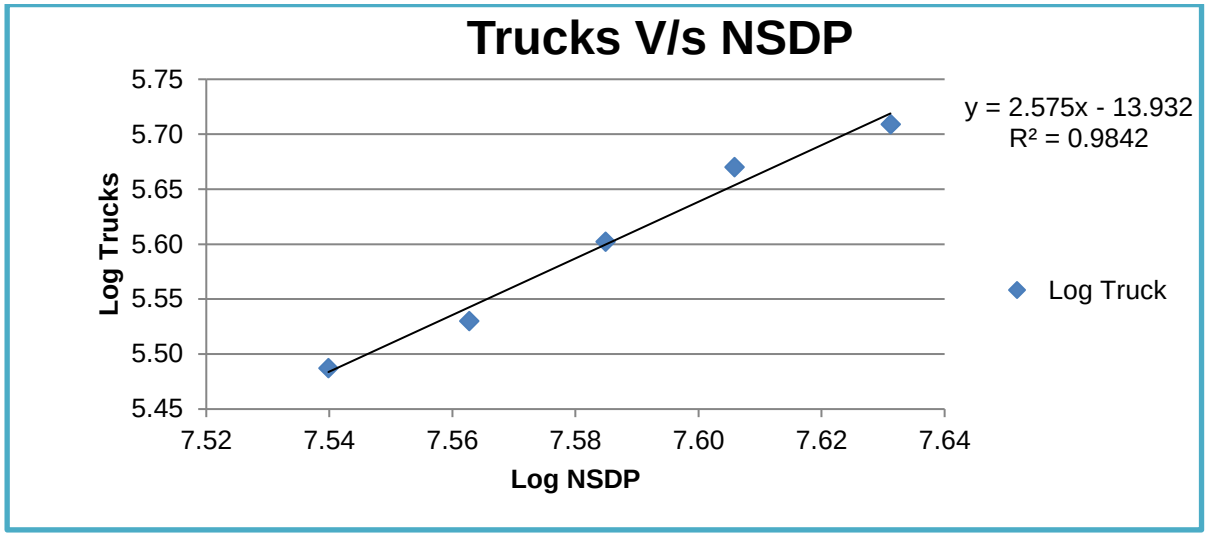


Figure 5-11 : Regression Analysis NSDP Vs. Truck Uttar Pradesh

Summary of regression analysis for elasticity and growth estimation for Uttar Pradesh are given in following table

Table 5-15 : Summary Regression Analysis- Uttar Pradesh

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Uttar Pradesh	Car/Jeep	PCI	y = 3.3654x - -8.2784	R² = 0.9866	3.3654	3.64%	12.23%	Good Regression
	Bus	Population	y = 7.2794x - -55.9289	R² = 0.9903	7.2794	1.73%	12.62%	Good Regression
	Truck	NSDP	y = 2.575x - -13.9315	R² = 0.9842	2.5750	5.40%	13.90%	Good Regression

Table 5-16 : Per Capita Income Vs. Car- Delhi

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2011	103619	2258434	5.02	6.35		
2012	106677	2303052	5.03	6.36	3%	
2013	112441	2497167	5.05	6.40	5%	
2014	118411	2691282	5.07	6.43	5%	
2015	124698	2859620	5.10	6.46	5%	5%

Regression analysis of above is given in following figure

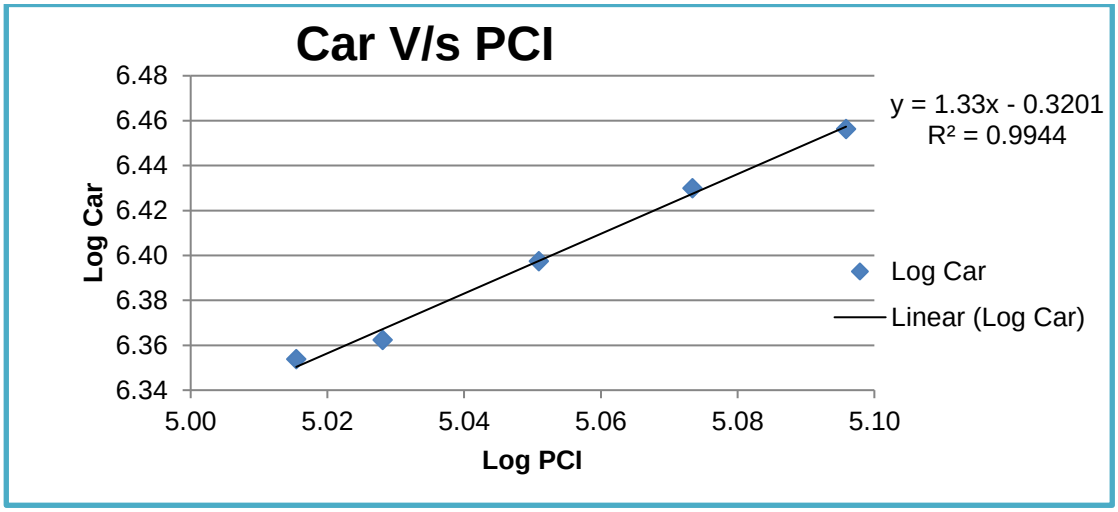


Figure 5-12 : Regression Analysis Car Vs. PCI Delhi

Table 5-17 : Population Vs. Bus- Delhi

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2011	16622000	135125	7.22	5.13		
2012	16941000	137310	7.23	5.14	2%	
2013	17266000	139495	7.24	5.14	2%	
2014	17597000	141680	7.25	5.15	2%	
2015	17934000	143865	7.25	5.16	2%	1.92%

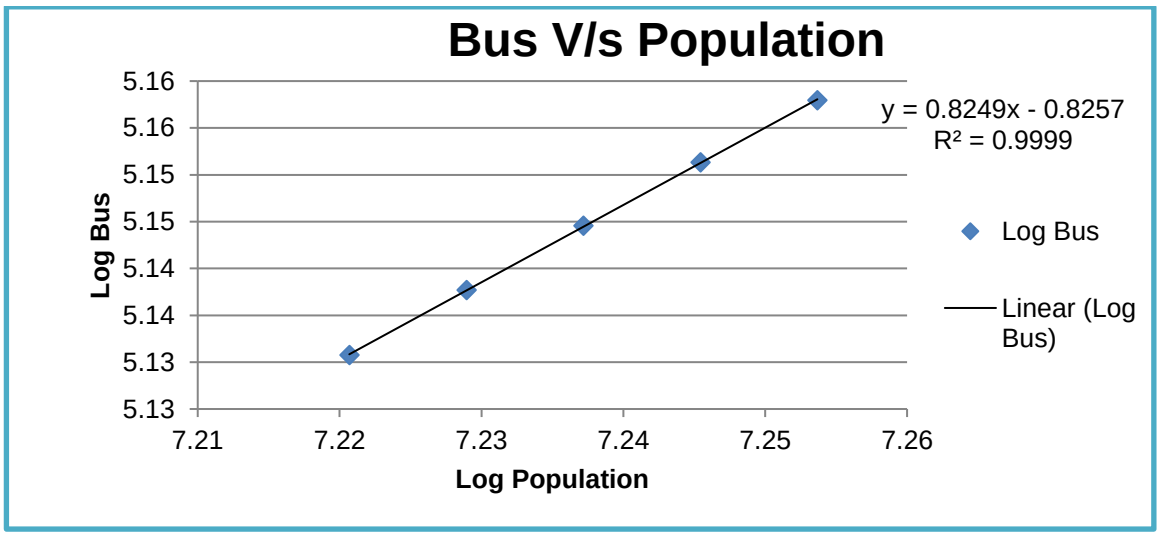


Figure 5-13 : Regression Analysis Population Vs. Bus Delhi

Table 5-18 : NSDP Vs. Truck- Delhi

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2011	17223524	86301	7.24	4.94		
2012	18072223	87166	7.26	4.94	5%	
2013	19414032	88031	7.29	4.94	7%	
2014	20836819	88896	7.32	4.95	7%	
2015	22562961	89761	7.35	4.95	8%	7%

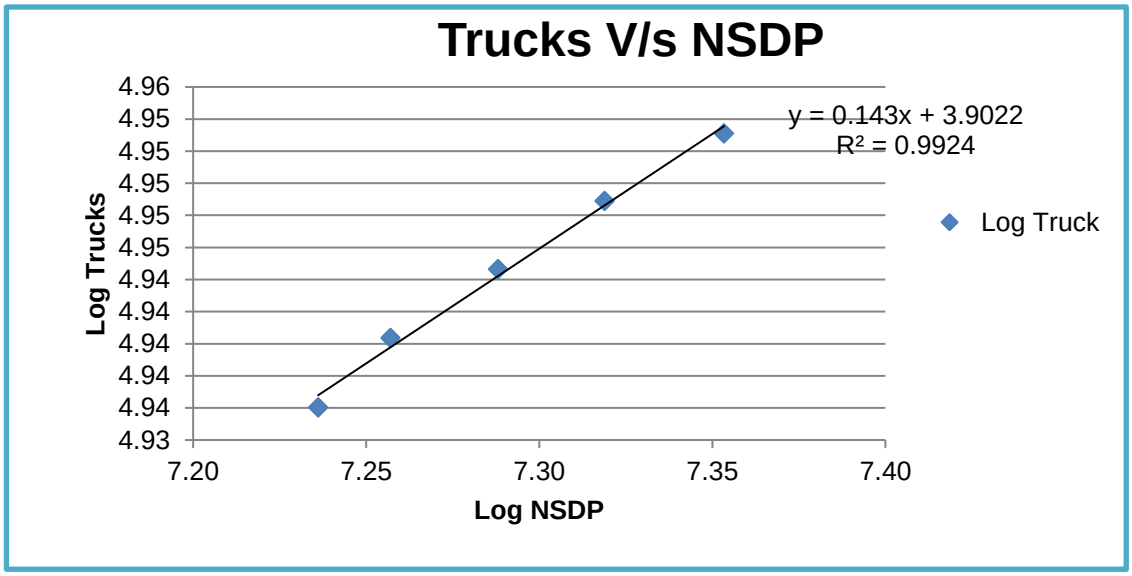


Figure 5-14 : Regression Analysis NSDP Vs. Truck Delhi

Summary of regression analysis for elasticity and growth estimation for Delhi are given in following table.

Table 5-19 : Summary Regression Analysis- Delhi

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Delhi	Car/Jeep	PCI	y = 1.33x - -0.3201	R^2 = 0.9944	1.3300	4.74%	6.31%	Good Regression
	Bus	Population	y = 0.8249x - -0.8257	R^2 = 0.9999	0.8249	1.92%	1.58%	Good Regression
	Truck	NSDP	y = 0.143x - 3.9022	R^2 = 0.9924	0.1430	6.99%	1.00%	Good Regression

Since most of the passenger traffic is from West Bengal and Jharkhand only hence growth from economical model is considered only from these states.

For commercial traffic weighted impact of these states in ratio of their respective share is considered

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Agra to Etawah has recently been commissioned and is under tolling operation since 2022 with concessionaire. Hence, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. Moreover, part two years traffic is affected by COVID-19 impact. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economic, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

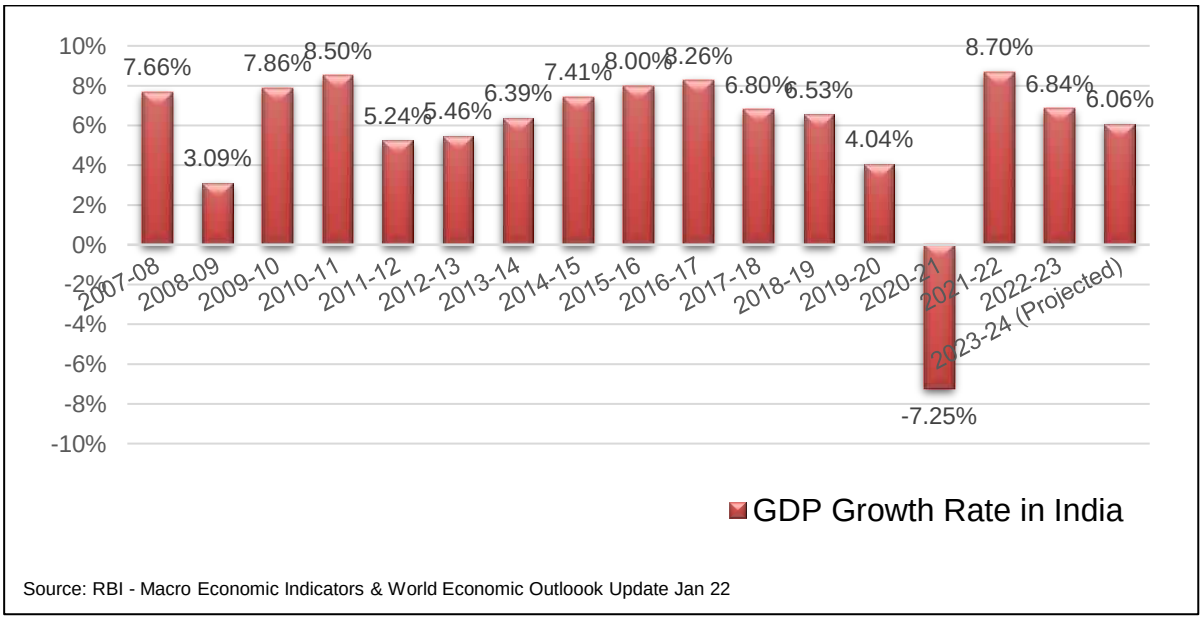


Figure 5-15 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in next year 2022-23

5.6 Developments along and around the Project Corridor & State

Project stretch falls in one of the most mineral rich area of India. Major Industries are developed for extraction of minerals and related manufacturing. Following are some major industrial establishments and areas in PIA

Howrah - Often termed as Sheffield of the East, Howrah is known as an engineering hub, mainly in the area of light engineering industry. In 1823, Bishop Reginald Heber described Howrah as the place "chiefly inhabited by shipbuilders". There are small engineering firms all over Howrah, particularly around Belilios Road area near Howrah station. There are many foundries in Liluah area.



Burn Standard Company, a major company in heavy engineering industry, has its oldest manufacturing unit located in Howrah. The Howrah plant of Shalimar Paints (established in 1902) was the first large-scale paint manufacturing plant to be set up not only in India but in entire South East Asia. The jute industry suffered during the Partition of Bengal (1947), when the larger jute production area became part of East Pakistan (now Bangladesh). The foundry

industry saw a decline in demand due to growth in steel industry. Still Howrah us major industrial hub in area and Howrah being major terminal on Delhi – Kolkata rail attracts lot of goods movement.

Bardhman - Burdwan was one of the premier districts in India in terms of minerals. The Raniganj coalfield was the birthplace of the Indian coal industry. Besides coal, important minerals found in the district are iron ores, calcium carbonate, abrasives, silica bricks and molding sands, glass sands, building materials, manganese, bauxite, laterite etc. Chittaranjan Locomotives, Bengal Iron Works, IISCO- India Iron and Steel Co are some of major industrial establishments in district.

Dhanbad - Dhanbad have one of the oldest markets of region and is also a hotbed of large-scale industries. It is famous for its coal mines and industrial establishments; the city is surrounded by about 112 coal mines with a total production of 27.5 million tonnes and an annual income of 7000 million rupees through coal business. There are a number of coal washeries present there. BCCL have it headquarter in Dhanbad and SAIL, Tata Steel and Eastern Coalfields (at Mugma) also operates their mines. Om Besco Rail Products.Ltd, a public limited rail wagon manufacturing company at Mugma, Hindustan Zinc Ltd (now Vendanta Resources) had a lead smelting pilot plant at Tundu, MaithonPower.Ltda J.V of Tata Power & DVC (first PPP project of India), HindusthanMalleables& Forgings Ltd, etc. are also operational in and around Dhanbad. Fertilizers Corporation of India (closed), Projects & Development IndiaLtd and ACC.Ltd at Sindri are also available and being one of the 5 divisions of South Eastern Railway zone, Indian Railways is also a big employer in Dhanbad. Also, Kandra Industrial Area at Gobindpur houses some small & middle scale industries



Durgapur- Durgapur is one of the biggest industrial hubs of India and was planned as an integrated industrial town. It lays on the banks of DamodarRiver and coalfields of Raniganj. Durgapur was a dream of former prime minister of India, Jawaharlal Nehru and chief minister of West Bengal, Bidhan Chandra Roy. The first project in Durgapur was Damodar Valley Corporation's Durgapur Barrage which attracted many public sector units. Durgapur Steel Plant was the first PSU established in the region in 1955 with the help of U.K which was later undertook by SAIL.

Durgapur Steel plant

Durgapur Steel Plant set up in late fifties is a leading producer of long products &only producer of Forged Railway Wheels & Axles in the country. Plant started production with an initial crude steel capacity of 1 MPTA (million ton per annum) in 1959, which has been progressively increased to 1.8 MTPA during the modernization in nineties and further to 2.2 MTPA during recently completed Modernization & Expansion Plan (MEP). The present Plant capacity is about 2.12 MTPA saleable steel.

Durgapur is also an emerging I.T and real estate hub has many proposed residential areas like DLF's Durgapur Township.

Kolkata - is the capital of the Indian state of West Bengal. According to the 2011 Indian census, it is the seventh most populous city in India; the city had a population of 4.5 million, while the suburb population brought the total to 14.1 million, making it the third-most populous metropolitan area in India. Kolkata Megalopolis is the area surrounding Kolkata Metropolitan city with additional population. Located on the east bank of the Hooghly River approximately 80 kilometres west of the border with Bangladesh, it is the principal commercial, cultural, and educational centre of East India, while the Port of Kolkata is India's oldest operating port and its sole major riverine port. The city nicknamed the "City of Joy" is widely regarded as the "cultural capital" of India and as of 2019, six Nobel Laureates have been associated with the city. Recent estimates of Kolkata Metropolitan Area's economy have ranged from $60 to $150 billion (GDP adjusted for purchasing power parity) making it the third most-productive metropolitan area in India, after Mumbai and Delhi. One end of project stretch at Dankuni is major gate to city from northern part of India.

Logistics and Warehousing–It is observed that as project stretch is the main connectivity between Kolkata and rest of India (specially north), there are large number of logistic and warehousing establishments on project stretch between Dankuni and Bardhman. Most computer companies have warehouses in Dankuni. As per a recent report an investment of Rs.4300 cr is expected in West Bengal by 2020 (May be delayed now due to COVID-19.)

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of

vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-20 : Recommended Growth Rates Optimistic

Category / Year	2020-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	9.39%	8.58%	5.99%	6.35%	5.18%	4.05%
Bus	5.69%	5.26%	4.81%	4.53%	4.21%	3.93%
Minibus	5.69%	5.26%	4.81%	4.53%	4.21%	3.93%
LCV	2.32%	2.11%	1.71%	1.32%	0.93%	0.55%
2- Axle	3.69%	3.34%	2.68%	2.03%	1.38%	0.75%
3 - Axle	5.41%	4.89%	3.89%	2.91%	1.95%	0.99%
4 to 6 Axle	6.45%	5.82%	4.62%	3.45%	2.29%	1.14%
7 and Above Axle	6.45%	5.82%	4.62%	3.45%	2.29%	1.14%

Table 5-21 : Recommended Growth Rates Pessimistic

Category / Year	2020-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	8.89%	8.08%	5.49%	5.85%	4.68%	3.55%
Bus	5.19%	4.76%	4.31%	4.03%	3.71%	3.43%
Minibus	5.19%	4.76%	4.31%	4.03%	3.71%	3.43%
LCV	1.82%	1.61%	1.21%	0.82%	0.43%	0.05%
2- Axle	3.19%	2.84%	2.18%	1.53%	0.88%	0.25%
3 - Axle	4.91%	4.39%	3.39%	2.41%	1.45%	0.49%
4 to 6 Axle	5.95%	5.32%	4.12%	2.95%	1.79%	0.64%

7 and Above Axle	5.95%	5.32%	4.12%	2.95%	1.79%	0.64%

Table 5-22 : Recommended Growth Rates Most Likely

Category / Year	2020-2025	2025-2030	2030-2035	2035-2040	2039-2044	2044-2049
Car/Jeep/Van	9.14%	8.33%	5.74%	6.10%	4.93%	3.80%
Bus	5.44%	5.01%	4.56%	4.28%	3.96%	3.68%
Minibus	5.44%	5.01%	4.56%	4.28%	3.96%	3.68%
LCV	2.07%	1.86%	1.46%	1.07%	0.68%	0.30%
2- Axle	3.44%	3.09%	2.43%	1.78%	1.13%	0.50%
3 - Axle	5.16%	4.64%	3.64%	2.66%	1.70%	0.74%
4 to 6 Axle	6.20%	5.57%	4.37%	3.20%	2.04%	0.89%
7 and Above Axle	6.20%	5.57%	4.37%	3.20%	2.04%	0.89%

Traffic and revenue have been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	11501	1430	833	3844	3227	9552	8	30395	80378
2024-25	12582	1463	880	3687	3146	9405	7	31171	80273
2025-26	13661	1494	926	3810	3300	9953	8	33152	84835
2026-27	14833	1525	974	3937	3462	10533	8	35272	89674
2027-28	16105	1557	1025	4069	3631	11146	8	37541	94809
2028-29	17486	1590	1079	4205	3808	11794	8	39970	100256
2029-30	18986	1623	1136	4346	3994	12480	8	42573	106045
2030-31	20123	1650	1190	4462	4149	13057	8	44639	110794
2031-32	21329	1679	1247	4582	4311	13661	8	46817	115778
2032-33	22607	1708	1307	4705	4479	14293	8	49107	120997
2033-34	23961	1737	1370	4831	4653	14954	8	51514	126458
2034-35	25397	1766	1435	4961	4834	15645	8	54046	132175
2035-36	27010	1789	1500	5061	4974	16184	8	56526	137163
2036-37	28725	1813	1568	5163	5119	16742	8	59138	142370

Table 6-2 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	11449	1423	830	3825	3212	9507	8	30254	80002
2024-25	12468	1449	873	3651	3116	9318	7	30882	79525
2025-26	13475	1472	915	3755	3253	9813	8	32691	83647
2026-27	14564	1496	958	3862	3396	10335	8	34619	88000
2027-28	15741	1520	1004	3972	3545	10885	8	36675	92603
2028-29	17012	1544	1052	4085	3700	11464	8	38865	97463
2029-30	18386	1569	1102	4201	3863	12074	8	41203	102607
2030-31	19396	1587	1149	4292	3994	12572	8	42998	106692
2031-32	20461	1607	1198	4385	4129	13091	8	44879	110953
2032-33	21585	1627	1250	4481	4269	13631	8	46851	115401
2033-34	22770	1647	1304	4579	4414	14193	8	48915	120036
2034-35	24020	1667	1360	4679	4563	14778	8	51075	124864
2035-36	25426	1680	1414	4750	4674	15213	8	53165	128955
2036-37	26913	1694	1471	4823	4786	15662	8	55357	133209

Traffic projections for Most Likely scenario are given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza Dankuni- Chainage 646.005 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	11476	1427	832	3835	3219	9530	8	30327	80196
2024-25	12525	1456	878	3669	3131	9362	7	31029	79907
2025-26	13569	1483	922	3783	3277	9884	8	32926	84254
2026-27	14699	1510	968	3900	3429	10435	8	34949	88849
2027-28	15923	1538	1016	4021	3588	11016	8	37110	93713
2028-29	17249	1567	1067	4146	3754	11630	8	39421	98872
2029-30	18685	1596	1120	4274	3928	12278	8	41889	104332
2030-31	19757	1619	1171	4378	4071	12815	8	43819	108749
2031-32	20891	1643	1224	4485	4219	13375	8	45845	113363
2032-33	22090	1667	1280	4594	4373	13960	8	47972	118188
2033-34	23358	1691	1338	4706	4533	14570	8	50204	123227
2034-35	24699	1716	1399	4820	4698	15207	8	52547	128492
2035-36	26205	1734	1458	4906	4823	15693	8	54827	133022
2036-37	27803	1752	1520	4993	4951	16194	8	57221	137732

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Palsit - Dankuni project three target traffic have been defined in Article 29.

Target Date - 1st May 2026 Target Traffic 65830

Target Date - 1st May 2031 Target Traffic 100822

Target Date - 1st May 2036 Target Traffic 130452

It was observed that as per traffic projections, average traffic volume exceeds target traffic in first two target points. Probable shortening of concession period is estimated according to Article 29 of concession agreement for all cases which comes to about 3 years.

Pessimistic

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	83647	-20.00%	-944	**-2.7**
2	01-May-31	100822	106692	-0.82%	-24	
3	01-May-36	130452	128955	0.00%	0	

Optimistic

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	84835	-20.00%	-944	**-3.0**
2	01-May-31	100822	110794	-4.89%	-141	
3	01-May-36	135758	137163	0.00%	0	

Most Likely

Sr. No	Target Date	Target Traffic	Actual Traffic	Variation in CP as per CA %	Change in CP (Days	Total Variation in CP Years
1	01-May-26	65830	84254	-20.00%	-944	**-2.8**
2	01-May-31	100822	108749	-2.86%	-83	
3	01-May-36	133090	133022	0.00%	0	

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories, and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat-Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule -G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued at fee 50 time the single journey fee at 2/3rd Rate.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: Local Car Jeep Van -Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza). Additionally, local commercial vehicles are charged at 50% rate of single journey.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2021-22. A moderate growth in Wholesale Price

Index (WPI) has been assumed after that. Following graph provides projection of rate of inflation (WPI) in India. Data has been taken from Office of Economic Advisor web site (www.eaindustry.nic.in). WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

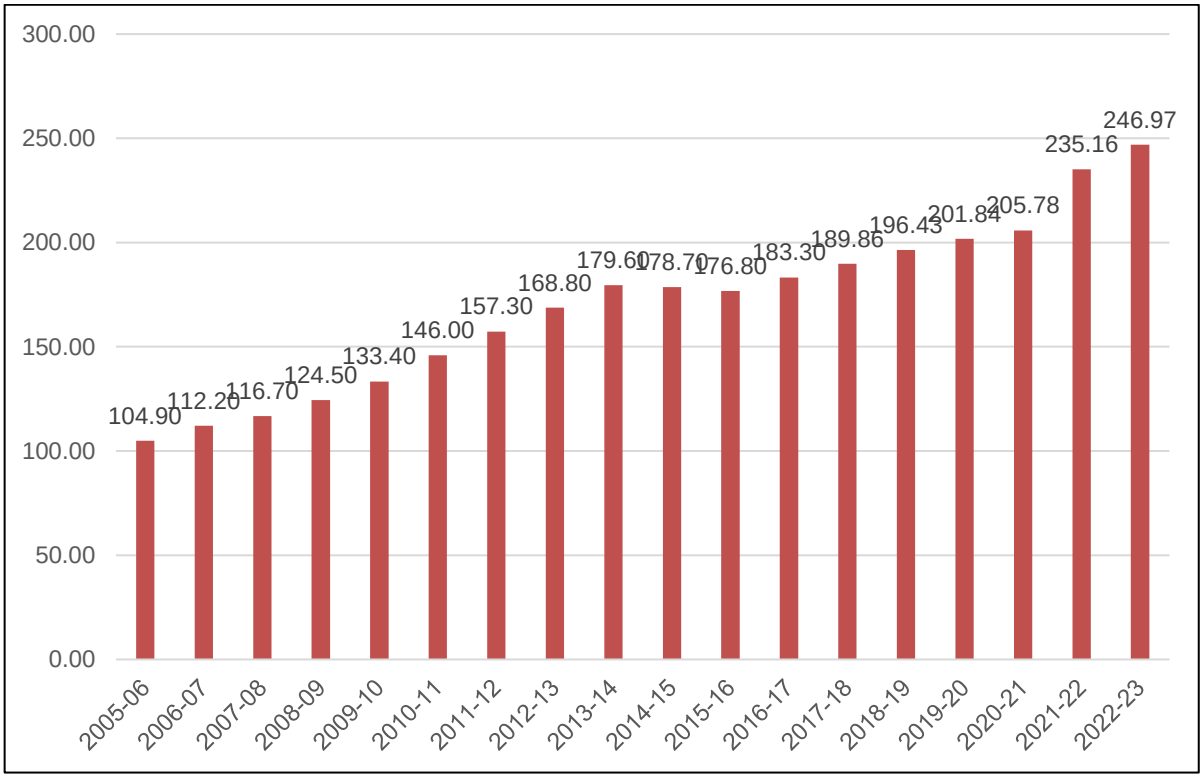


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey Dankuni @ Km 646.005

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	75	120	250	250	270	390	475
2024-25	75	120	250	250	270	390	475
2024-25	115	190	390	390	430	615	745
2025-26	120	190	395	395	430	615	750
2026-27	125	200	415	415	450	645	785
2027-28	130	210	435	435	475	680	825
2028-29	140	220	455	455	495	710	865
2029-30	145	230	475	475	520	745	905
2030-31	150	240	500	500	545	780	950
2031-32	160	255	525	525	570	820	995
2032-33	165	265	550	550	600	855	1045
2033-34	175	280	575	575	625	900	1095
2034-35	180	290	605	605	660	945	1145
2035-36	190	305	635	635	690	990	1200
2036-37	200	320	665	665	725	1035	1260

Table 7-3: Toll Rates for Return Journey Dankuni @ Km 646.005

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	110	175	370	370	405	585	710
2024-25	110	175	370	370	405	585	710
2024-25	175	285	590	590	640	920	1120
2025-26	180	285	590	590	645	925	1125
2026-27	190	300	620	620	675	970	1180
2027-28	200	315	650	650	710	1015	1235
2028-29	205	330	680	680	745	1065	1295
2029-30	215	345	715	715	780	1115	1360
2030-31	225	360	750	750	815	1170	1425
2031-32	240	380	785	785	855	1225	1490
2032-33	250	395	825	825	895	1285	1565
2033-34	260	415	865	865	940	1350	1640
2034-35	275	435	905	905	985	1415	1720
2035-36	285	460	950	950	1035	1485	1805
2036-37	300	480	995	995	1085	1555	1890

Table 7-4: Toll Rates for Monthly pass Local Dankuni @ Km 646.005

Year	Car	Mini Bus /LCV
2023-24	315	315
2024-25	315	315
2024-25	345	345
2025-26	345	345
2026-27	365	365
2027-28	380	380
2028-29	400	400
2029-30	420	420
2030-31	440	440
2031-32	460	460
2032-33	485	485
2033-34	505	505
2034-35	530	530
2035-36	555	555
2036-37	585	585

Table 7-5: Toll Rates for Monthly Pass Dankuni @ Km 646.005

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	2440	3945	8265	8265	9015	12960	15775
2024-25	2440	3945	8265	8265	9015	12960	15775

2024-25	3915	6280	13070	13070	14250	20455	24885
2025-26	3990	6355	13145	13145	14330	20530	24960
2026-27	4190	6675	13810	13810	15055	21570	26225
2027-28	4390	6990	14470	14470	15770	22600	27480
2028-29	4595	7325	15160	15160	16525	23685	28795
2029-30	4815	7670	15890	15890	17315	24820	30175
2030-31	5045	8040	16650	16650	18150	26010	31630
2031-32	5285	8425	17450	17450	19020	27265	33155
2032-33	5535	8830	18295	18295	19940	28585	34755
2033-34	5800	9255	19180	19180	20905	29965	36440
2034-35	6080	9700	20110	20110	21920	31425	38210
2035-36	6375	10170	21090	21090	22985	32955	40075
2036-37	6685	10665	22115	22115	24110	34565	42030

7.3 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.4 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza starting from the year 2023-24 are shown in tables below.

Table 7-3 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	219.65	**219.65**
2024-25	287.83	**287.83**
2025-26	373.48	**373.48**
2026-27	413.83	**413.83**
2027-28	460.56	**460.56**
2028-29	507.85	**507.85**
2029-30	562.20	**562.20**
2030-31	614.77	**614.77**
2031-32	677.33	**677.33**
2032-33	737.34	**737.34**
2033-34	808.69	**808.69**
2034-35	886.15	**886.15**
2035-36	965.42	**965.42**
2036-37	1046.12	**1046.12**

Table 7-4 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	218.62	**218.62**
2024-25	285.14	**285.14**
2025-26	368.27	**368.27**
2026-27	406.10	**406.10**
2027-28	449.83	**449.83**
2028-29	493.68	**493.68**
2029-30	544.01	**544.01**
2030-31	592.06	**592.06**
2031-32	649.18	**649.18**
2032-33	703.35	**703.35**
2033-34	767.73	**767.73**
2034-35	837.19	**837.19**
2035-36	907.68	**907.68**
2036-37	978.80	**978.80**

Table 7-5 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	219.15	**219.15**
2024-25	286.52	**286.52**
2025-26	370.94	**370.94**
2026-27	410.06	**410.06**
2027-28	455.28	**455.28**
2028-29	500.90	**500.90**
2029-30	553.22	**553.22**
2030-31	603.56	**603.56**
2031-32	663.35	**663.35**
2032-33	720.41	**720.41**
2033-34	788.27	**788.27**
2034-35	861.68	**861.68**
2035-36	936.49	**936.49**
2036-37	1012.29	**1012.29**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Palsit to Dankuni section of NH-19 from km 588.870 to km 652.700 in state of West Bengal is currently four lane road and being upgraded to six lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the most busy and prominent national highway NH-19 which connects political and cultural capitals of India. This is one of the most important trunk road which spreads across many states. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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SOLAPUR TO YEDISHI SECTION OF NH 211 IN THE STATE OF MAHARASHTRA (KM 0.000 TO KM 100.000)









TTRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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(KM 0.000 TO KM 100.000)

IN THE STATE OF MAHARASHTRA.

TRAFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, Four Laning of **Solapur** to **Yedeshi** section of NH-211 from km 0.000 to km 100.000 in the state of Maharashtrais one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Solapur Yedeshi Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 29 years starting from appointed date of 21st January2015.COD was achieved for part length of project in 15th October 2019 and Tolling Operation on Project started for full length.

Project road section from Solapur to Yedeshi is part of important north-south connectivity. It connects Karnataka, southern parts of Maharashtra and other southern states to Solapur, Aurangabad, Dhule and then northern parts of India.

Following figure shows the project road alignment.

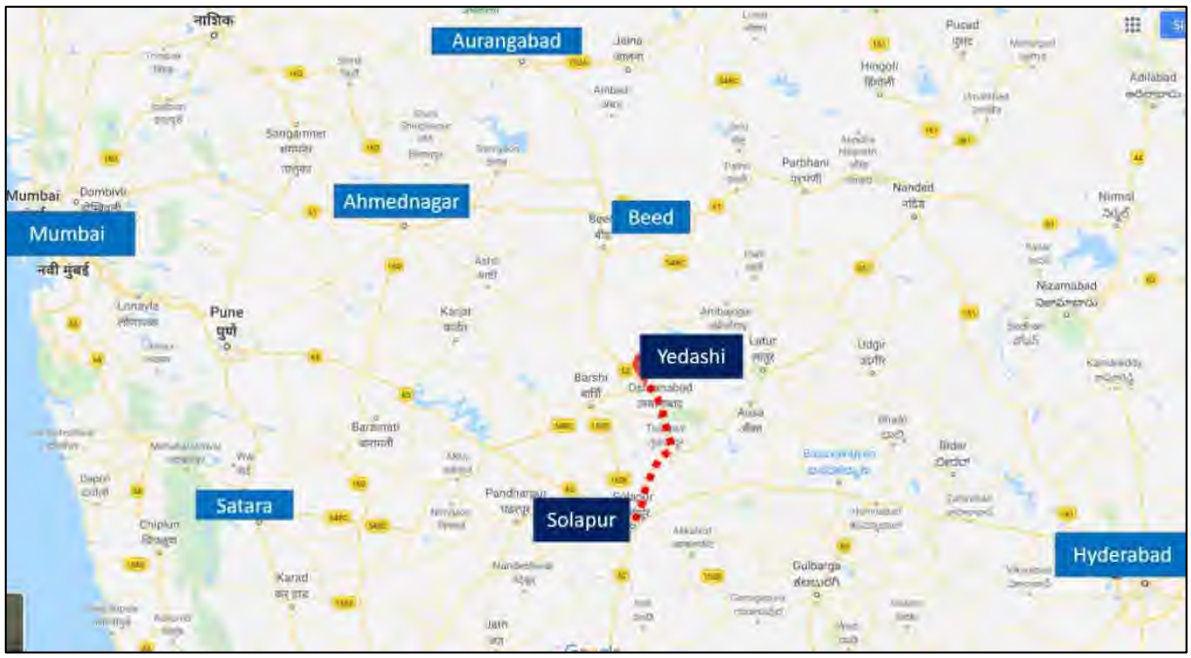


Figure 1-1: Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study &*Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

NH-211 is important national highway of Maharashtra. It connects northern Karnataka to Marathwada region of Maharashtra.

Solapur, the textile and sugar belt of Maharashtra, Jalna, India's first dry port, Aurangabad fall in project corridor. Bidkin, Shendre areas which are coming up with mega green field Industrial smart city of 10000 acre at Bidkin and Shendra in Maharashtra also fall in influence zone of project corridor.

2.2 Project Stretch Description

The Project highway from Solapur to Yedeshi border from Km 0.000 to km 100.00 has been widened to four lanes as per schedules.

Project road forms part of very important transportation corridor which works as gateway to Karnataka and rest of south India for Marathwada region of Maharashtra. Though it connects Solapur – Dhule but forms important transportation link for traffic from Vijapur, Hubli and other parts of north Karnataka to Aurangabad, Jalna, Beed and other places in Marathwada region. Project has two toll plaza at Tamamwadi and Yedeshi.

Following figure show project alignment and toll plaza locations.

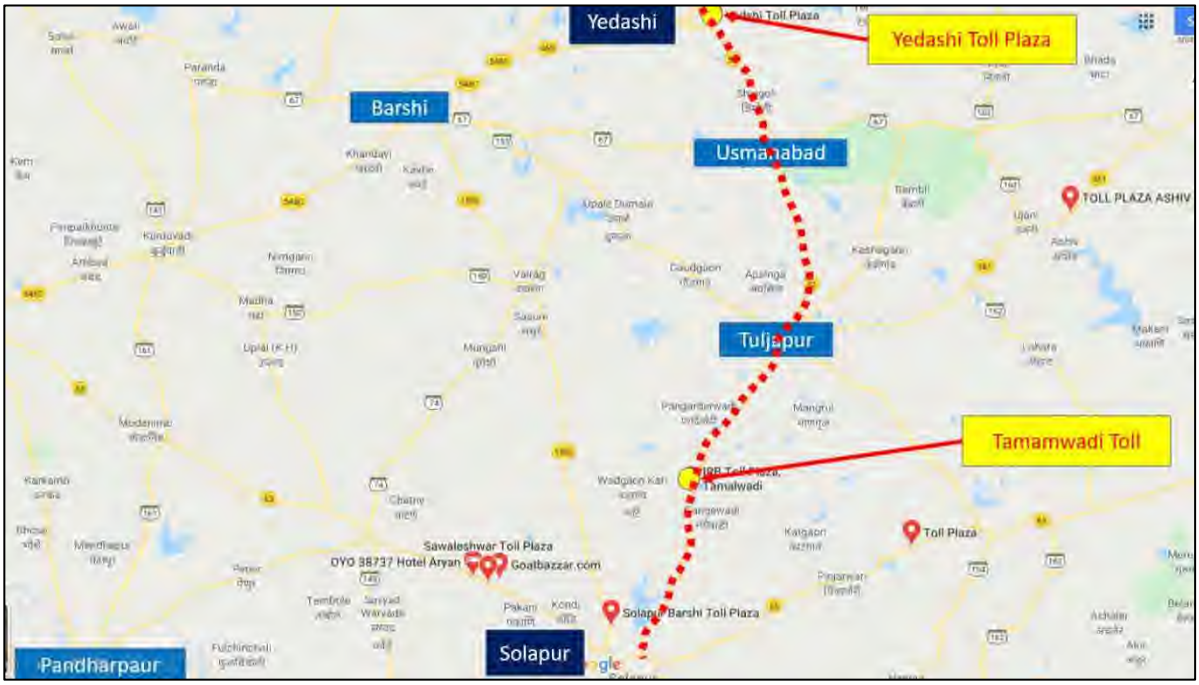


Figure 2-1: Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Four laning of project stretch is complete. Following photographs illustrate project section along the corridor.







Figure 2-2: Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at two toll plaza locations on Solapur-Yedeshi section of NH-211 for Year 2018-19, 2019-20, 2020-21, 2021-22 & traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 19.300 Toll Plaza at Immamwadi	AADT for Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 &2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23
2	Km 77.400 Toll Plaza at Yedeshi	AADT for Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Period for Year 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus

	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck
- 3-Axle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for year 2019-20,2020-21, 2021-22 & from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Immamwadi Toll Plaza at Km 19.300

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	4964	3564	6308	7840
2	Minibus/LCV	1068	782	362	442
3	Bus	675	304	343	678
4	Truck	907	835	946	1149
5	3-Axle	861	783	823	953
6	Multi Axle	934	1074	1286	1889
7	Oversized Vehicles	4	1	1	6
Total		**9413**	**7343**	**10070**	**12958**

Table 3-4 : Traffic Data at Yedeshi Toll Plaza at Km 77.400

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	2840	2132	3308	3647
2	Minibus/LCV	613	514	263	283
3	Bus	233	118	127	238
4	Truck	674	682	783	951
5	3-Axle	807	826	870	986
6	Multi Axle	1101	1343	1615	2132
7	Oversized Vehicles	0	1	1	6

Total	**6269**	**5616**	**6967**	**8245**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July -21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed du to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Adjacent road to project stretches Ahmednagar – Karmala road was in poor condition and due to which there is some additional traffic on project road in current period. Hence as correction factor is applied to average traffic of year 2022-23 to arrive at realistic yearly average traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-5**.**

Table 3-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0

LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-6 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Tamalwadi Km 19.300	9413	18116	1.92
	Yedeshi Km 77.400	6269	13859	2.21
2020-21	Tamalwadi Km 19.300	7343	15339	2.09
	Yedeshi Km 77.400	5616	13829	2.46
2021-22	Tamalwadi Km 19.300	10070	18981	1.88
	Yedeshi Km 77.400	6967	16316	2.34
2022-23	Tamalwadi Km 19.300	12958	25377	1.96
	Yedeshi Km 77.400	8245	20222	2.45

It can be observed from above that project traffic has PCU index more than 2 which is an indicator of high proportion of commercial traffic in traffic mix in project

corridor. Following figure illustrates variation of PCU index at two toll plaza locations.

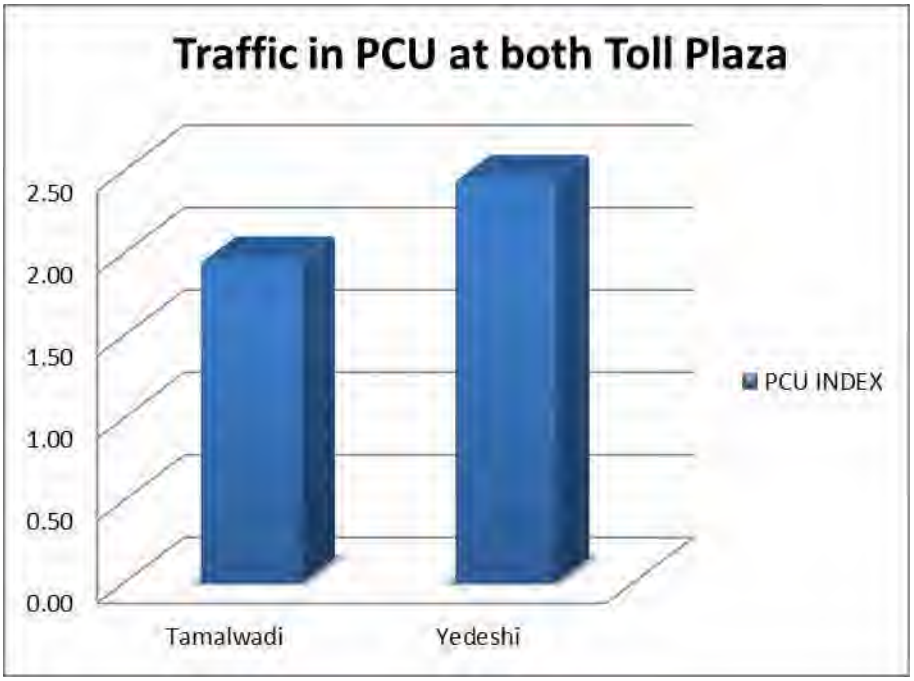


Figure 3-1: Comparison of PCU Index

It can be observed that PCU index is consistent at two toll plaza locations with commercial traffic slightly higher at Yedeshi toll plaza..

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

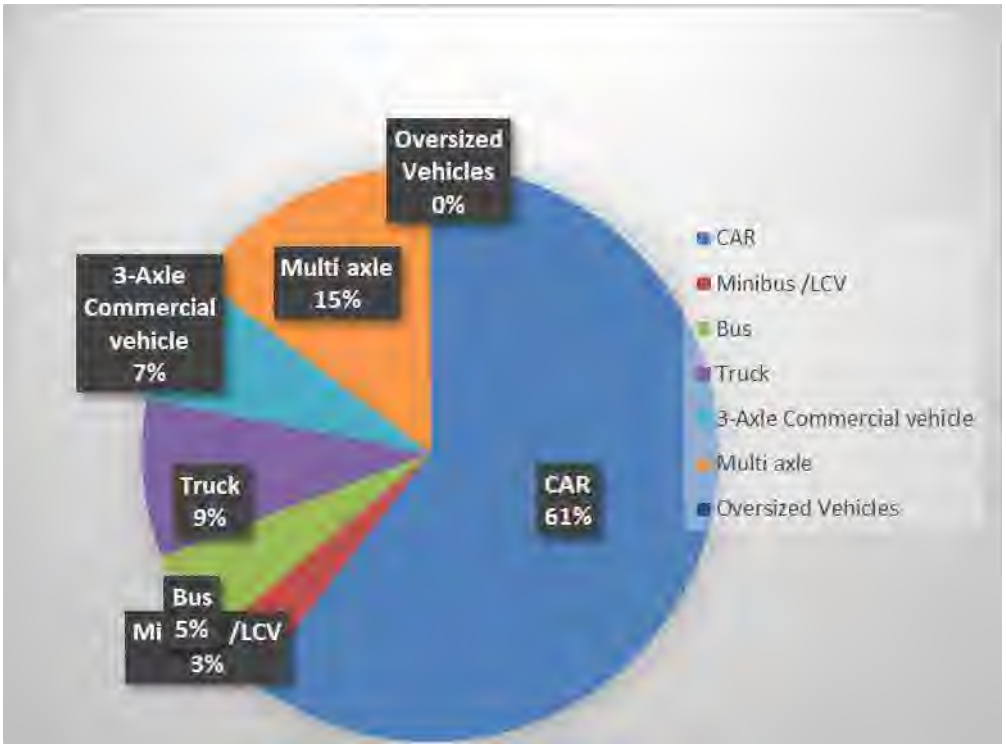


Figure 3-2 : Model Split of Tollable Vehicle @TP-1

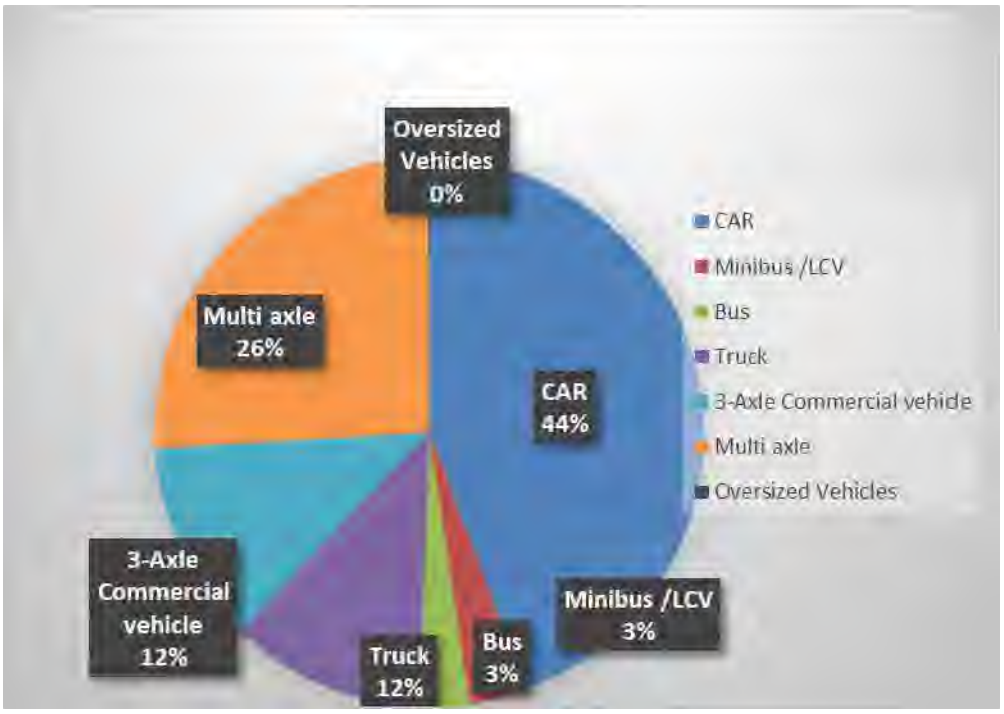


Figure 3-3 : Model Split of Tollable Vehicle @TP-2

It is observed that car traffic forms about 44%- 61% of total traffic at toll plaza locations while multi axle commercial vehicles are about 22% -38% of total traffic. Truck / Bus and LCV share about 14%-15% and 3% of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23.

Table 3-7 : Journey Type Bifurcation of Traffic atTamalwadiTP-1 KM 19.300

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	6980
2	Return Journey	5715
3	Local Commercial Single Journey	236
4	Monthly Pass Local	8
5	Monthly Pass	11
6	Local Monthly Pass Commercial	9

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 54%. Return journey component is 44%. The number of monthly pass local is 0% and Local commercial Single Journey 2% at Imamwadi toll plaza.

Following tables give the detail of journey distribution at Yedeshi toll plaza at Km 77.400.

Table 3-8 : Journey Type Bifurcation of Traffic at Yedashi TP-2 KM 77.400

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	5865
2	Return Journey	2168
3	Local Commercial Single Journey	174
4	Monthly Pass Local	14
5	Monthly Pass	14
6	Local Monthly Pass Commercial	11

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP

b) NSDP

c) Population Growth

d) Per Capita Income growth

e) Industrial Growth

f) Special Industry Potential

g) Regional and National development vision / plan

h) Any other relevant data

3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project road from Solapur to Yedashi is important transportation link between Solapur and Aurangabad. It can be observed that between Solapur and Yedashi all other roads cross or meet project road alignment radially. There is no important parallel road network which can be a competing link for project road traffic. At local level there is no competing road. Moreover, after completion of four laning project road is under toll operation for last two years since 2018. In such case local diversion, if any, would have settled by now.

At regional level also project road (NH-211) is preferred route for Solapur – Aurangabad traffic. Though there could be one alternate route via Ahmednager for Solapur- Aurangabad pair origin and destination.

Following figures show the layout of competingroutes between both these Zones



Figure 4-1: Alternate route at Regional level

For this alternate route also traffic would have settled since project road is under toll operation for last two years under toll. With completion of Aurangabad – Yedashi stretch four laning last year project route has become more attractive for candidate traffic. Following table provides summary of analysis of competing or alternate routes.

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Solapur-Ahmednagar-Aurangabad	Alternate Route	346	64	6 Hr 50 Min	Alternate route is longer and has higher travel time. Project road has clear advantage
	Solapur-Yedeshi-Aurangabad	Project Road	310	55	5 Hr 27 Min	

Table 4-1 : Competing Roads Details

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Solapur–Yedeshi section of NH-211has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth.Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor is entirely in stat of Maharashtra but being at border of Karnataka there is certain of Karnataka on project traffic. In such circumstances for elasticity calculations, working data from above Maharashtra and Karnataka states has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

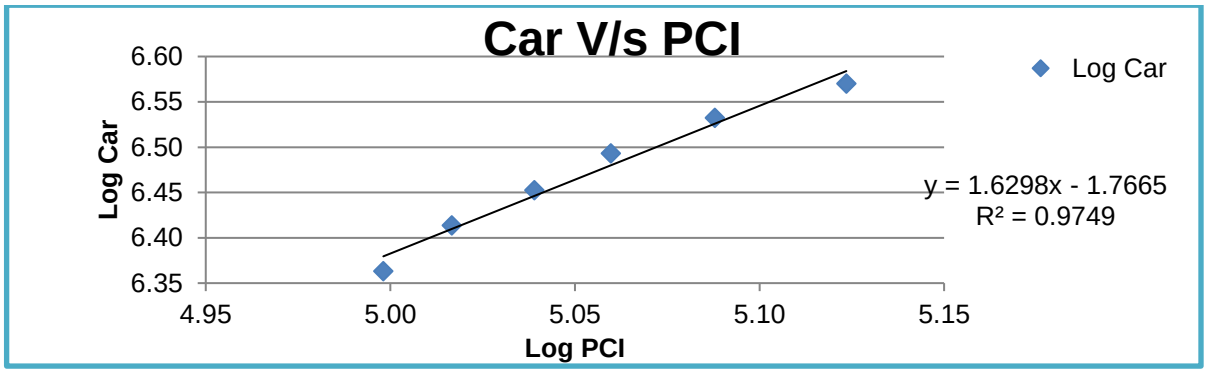


Figure 5-1: Regression and Elasticity PCI vs. Car–Extrapolation Maharashtra

Table 5-2 : Population Vs BusMaharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

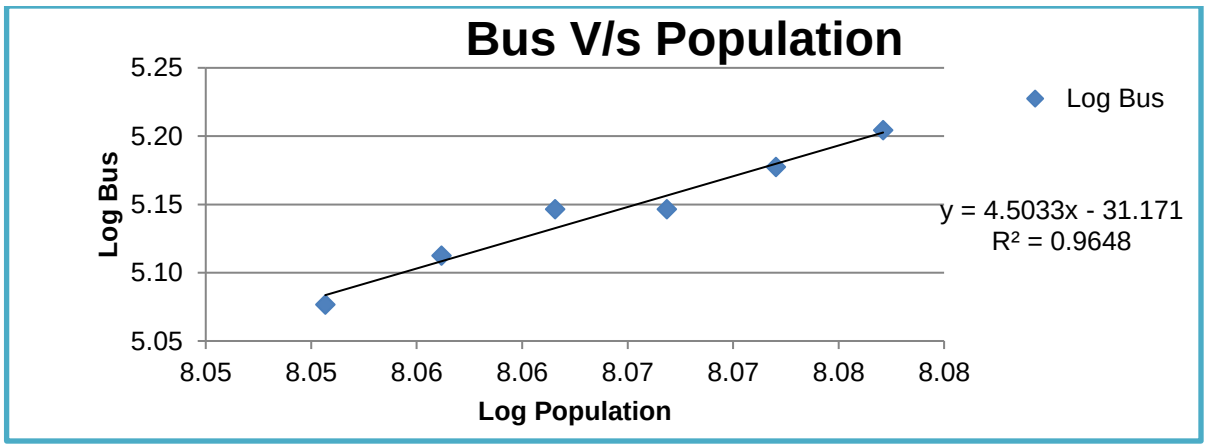


Figure 5-2: Regression and Elasticity Population vs. Bus – ExtrapolationMaharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDPMaharashtra

Year	NSDP	LCV	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

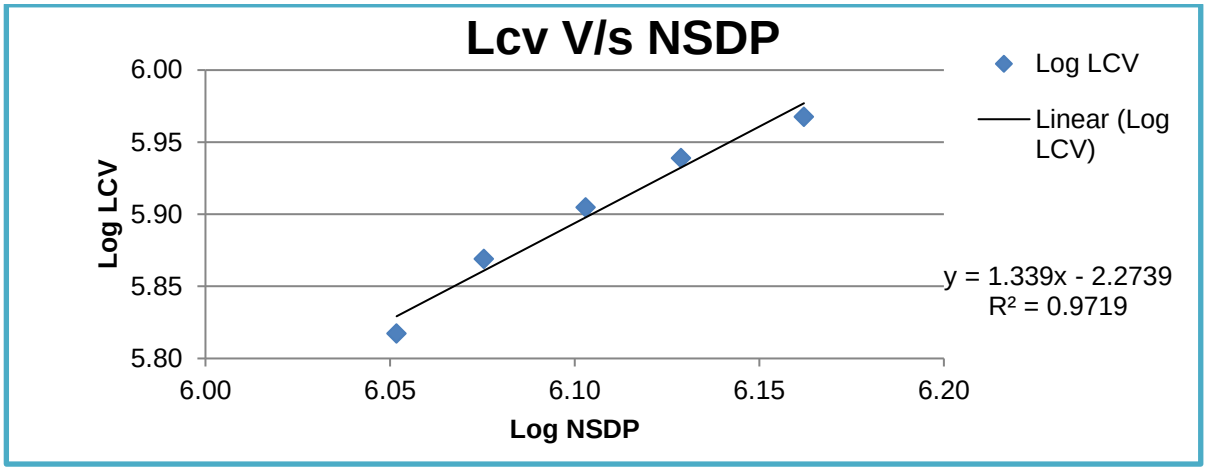


Table 5-4 : Truck Traffic Vs NSDP Maharashtra

Year	NSDP	TRUCK	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation.

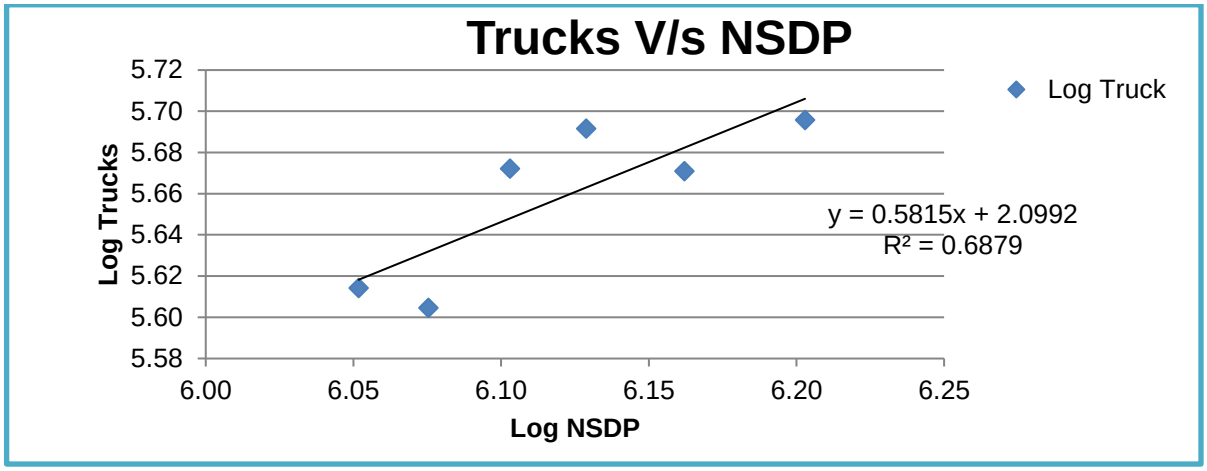


Figure 5-3: Regression and Elasticity NSDP vs. Goods Traffic – extrapolationMaharashtra

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit*regression as reflected by R^2 values are presented in the Table below

Table 5-4 : Summary Regression Analysis Maharashtra

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R² = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R² = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R² = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R² = 0.6879	0.5815	7.22%	4.20%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-5 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1269430	4.96	6.10		
2013	94382	1420767	4.97	6.15	5%	
2014	101864	1572521	5.01	6.20	8%	
2015	105703	1741831	5.02	6.24	4%	
2016	116819	1916373	5.07	6.28	11%	
2017	131260	2110493	5.12	6.32	12%	7.83%

Regression analysis of same is given in figure below

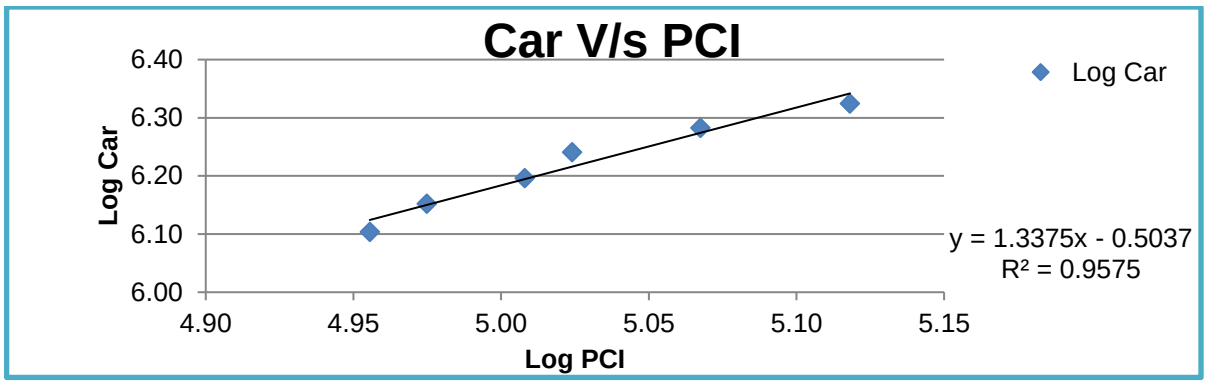


Figure 5-4: Regression and Elasticity PCI vs. Car–Extrapolation Karnataka

Table 5-6 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61095297	175705	7.79	5.24		
2013	62058777	186705	7.79	5.27	2%	
2014	63017877	195913	7.80	5.29	2%	

2015	63972322	204803	7.81	5.31	2%	
2016	64921845	213699	7.81	5.33	1%	
2017	65866188	224580	7.82	5.35	1%	1.52%

Regression analysis of same is given in figure below

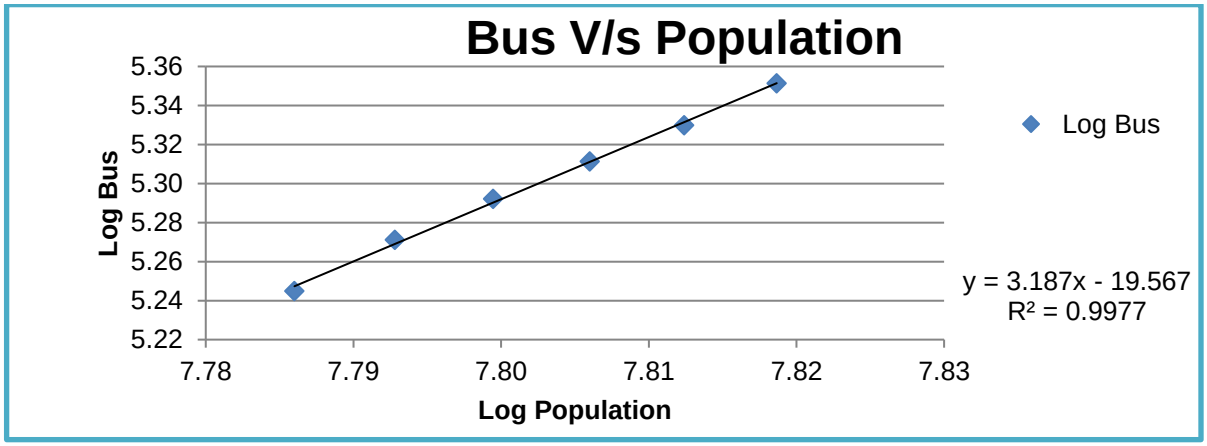


Figure 5-5: Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-7 : LCV Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	7.85%

Following figure depict regression analysis and extrapolation.

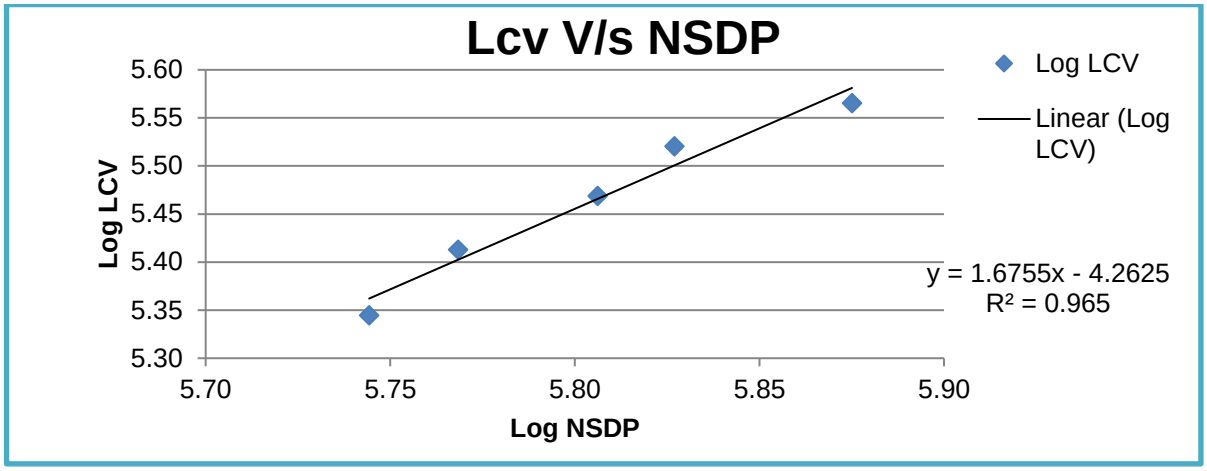


Table 5-4 : Truck Traffic Vs NSDP Karnataka

Year	NSDP	TRUCK	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation.

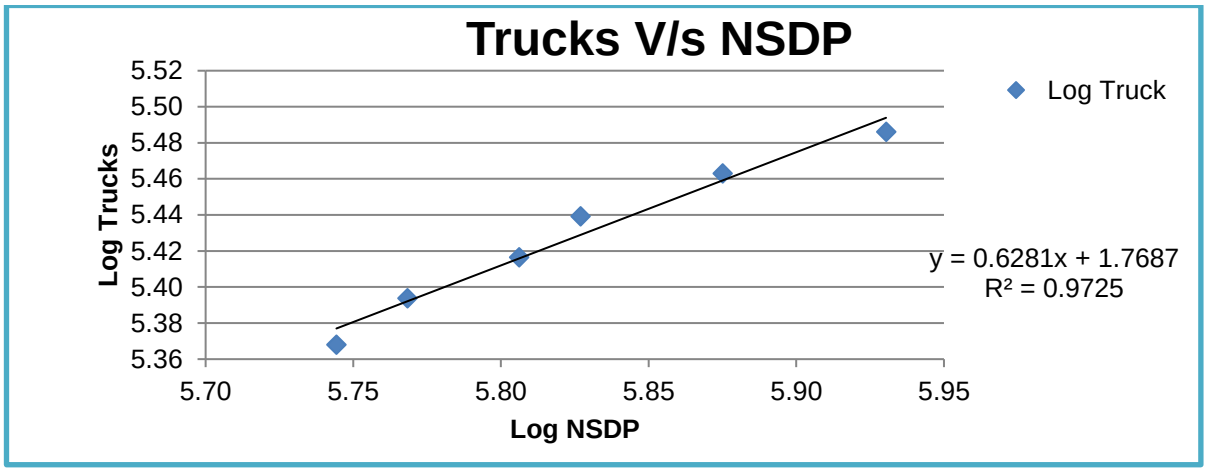


Figure 5-6: Regression and Elasticity NSDP vs. Goods Traffic – extrapolation Karnataka

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-8 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.3375x + -0.5037	R² = 0.9575	1.3375	7.83%	10.47%
	Bus	Population	y = 3.187x - -19.567	R² = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R² = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R² = 0.9725	0.6281	9.00%	5.65%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Kaithal to Rajasthan Border is under tolling operation with current concessionaire and has only two years of tolling history from 2018-19. As traffic data available with the project concessionaires of just a year about, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

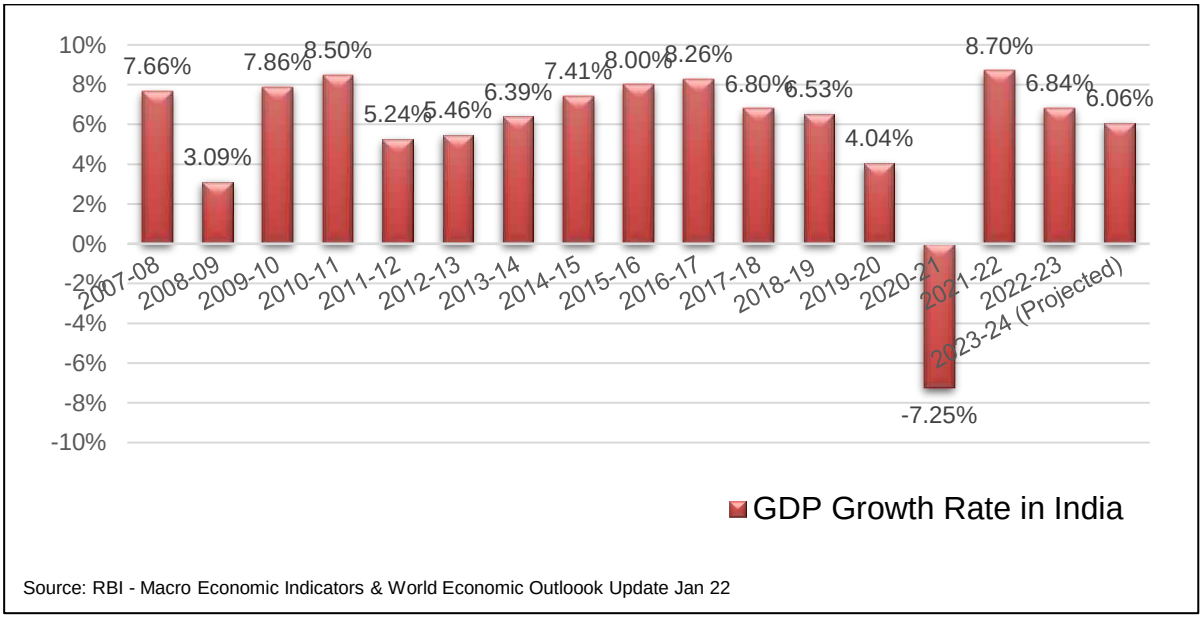


Figure 5-7 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of

COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch falls in region of good development potential. The same is discussed as under.

Solapur

Solapur is one of the major city of Karnataka which shares boundary with Karnataka. Thus, it can be called as gateway to south for this region. Solapur district has highest number of sugar factories in India.

Solapur leads Karnataka in production of Indian cigarettes or beedi.Solapuri Chadars and towels are famous in India and also at a global level, however, there has been a significant decline in their exports due to quality reasons. ***"SolapuriChadars"*** are the famous and first product in Karnataka. It has been a leading centre for cotton mills and power looms in Karnataka. Solapur had the world's second-largest and Asia's largest spinning mill. The National Research Centre on Pomegranate (NRCP) of India is located in Solapur and pomegranate farming is done on a large scale in Solapur District. MIDC (Karnataka Industrial Development Corporation) has been very successful in creating and promoting industrial hubs in various part of Karnataka. It provides businesses with infrastructure such as land (open plot or built-up spaces), roads, water supply, drainage facilities and street lights along with necessary clearances. In total MIDC has developed about 300 industrial centres which have attracted large number of domestic and international industries to set up their business and production houses in Karnataka. Solapur is one of the major Industrial cluster focusing on textile and food processing. Following are major MIDCs spread over Solapur district.

- Chincholi, Mohol
- Tembhurni, Madha
- Kurduwadi, Madha

- Akkalkot
- Mangalwedha
- Solapur, Solapur citybelow.

Pandharpur

This is a holy place of Shri.Vitthal and Shri Rukmini. It is also known as the Southern Kashi of India and Kuldaivat of Karnataka State. It is located at a distance of 72 kms by road. from Solapur District headquarters. Large number of devotees from all over Karnataka and surrounding States gather at Pandharpur mainly to celebrate the Aashadhi and Kartiki Ekadashis (in month of June and July) every year in addition to the regular rush of devotees every day. As per estimate about 8-10 lakhs of devotees visit Pandharpur during this auspicious periods.

Jalna

Government of Karnataka and JNPT are developing dry ports at Jalna and BidkinShendra which on Paithan road. Project road would work like feeder to these economic hubs for traffic from Karnataka and other southern states.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-9 : Recommended Growth Rates Optimistic

Category / Year	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.53%	8.92%	8.77%	8.47%	8.11%
Bus	5.83%	5.50%	5.47%	5.41%	5.15%
LCV	4.31%	4.02%	3.88%	3.61%	3.32%
2- Axle	5.13%	4.56%	4.43%	4.15%	3.86%
3 - Axle	6.46%	5.72%	5.55%	5.20%	4.82%
4 to6 Axle	7.12%	6.30%	6.11%	5.72%	5.30%
7 and Above Axle	7.12%	6.30%	6.11%	5.72%	5.30%

Table 5-10 : Recommended Growth Rates Pessimistic

Category / Year	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.03%	8.42%	8.27%	7.97%	7.61%
Bus	5.33%	5.00%	4.97%	4.91%	4.65%
LCV	3.81%	3.52%	3.38%	3.11%	2.82%
2- Axle	4.63%	4.06%	3.93%	3.65%	3.36%
3 - Axle	5.96%	5.22%	5.05%	4.70%	4.32%
4 to6 Axle	6.62%	5.80%	5.61%	5.22%	4.80%
7 and Above Axle	6.62%	5.80%	5.61%	5.22%	4.80%

Table 5-11 : Recommended Growth Rates Most Likely

Category / Year	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.28%	8.67%	8.52%	8.22%	7.86%
Bus	5.58%	5.25%	5.22%	5.16%	4.90%
LCV	4.06%	3.77%	3.63%	3.36%	3.07%
2- Axle	4.88%	4.31%	4.18%	3.90%	3.61%
3 - Axle	6.21%	5.47%	5.30%	4.95%	4.57%
4 to6 Axle	6.87%	6.05%	5.86%	5.47%	5.05%

7 and Above Axle	6.87%	6.05%	5.86%	5.47%	5.05%

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

Taking recommended traffic growth and additional factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Tamalwadi19.300 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	8586	461	719	1209	1015	2025	7	14022	27251
2024-25	9403	481	760	1271	1080	2169	7	15171	29250
2025-26	10242	500	801	1329	1142	2306	7	16327	31217
2026-27	11155	520	845	1390	1207	2451	7	17575	33322
2027-28	12150	540	891	1453	1276	2606	7	18923	35579
2028-29	13234	562	939	1519	1349	2769	7	20379	37990
2029-30	14414	584	990	1588	1427	2944	7	21954	40585
2030-31	15677	606	1044	1657	1506	3123	7	23620	43292
2031-32	17051	629	1101	1730	1589	3313	7	25420	46195
2032-33	18545	653	1161	1806	1676	3515	7	27363	49303
2033-34	20171	678	1224	1886	1770	3730	7	29466	52645
2034-35	21940	704	1290	1970	1868	3958	7	31737	56223
2035-36	23798	729	1360	2053	1966	4184	7	34097	59888
2036-37	25814	755	1433	2138	2068	4423	7	36638	63799
2037-38	28001	782	1510	2226	2175	4676	7	39377	67981
2038-39	30373	810	1591	2318	2288	4943	7	42330	72454
2039-40	32945	838	1677	2414	2407	5226	7	45514	77245
2040-41	35615	866	1763	2507	2523	5503	7	48784	82088

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2041-42	38502	894	1854	2604	2644	5795	7	52300	87258
2042-43	41623	924	1949	2704	2772	6102	7	56081	92775
2043-44	44997	954	2049	2808	2905	6426	7	60146	98663
2044-45	48644	985	2154	2917	3045	6766	7	64518	104948

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Yedashi77.400 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	3995	297	253	1001	1051	2284	7	8888	21665
2024-25	4374	309	268	1052	1119	2446	7	9575	23193
2025-26	4763	321	283	1100	1183	2600	7	10257	24674
2026-27	5188	333	298	1150	1251	2763	7	10990	26250
2027-28	5651	345	314	1202	1322	2938	7	11779	27935
2028-29	6155	359	331	1257	1397	3123	7	12629	29734
2029-30	6703	373	349	1314	1477	3319	7	13542	31650
2030-31	7290	387	368	1372	1559	3521	7	14504	33644
2031-32	7929	402	388	1432	1645	3736	7	15539	35771
2032-33	8624	417	409	1495	1736	3964	7	16652	38039
2033-34	9379	433	432	1561	1831	4206	7	17849	40459
2034-35	10201	449	455	1629	1933	4463	7	19137	43041
2035-36	11065	465	479	1696	2034	4718	7	20464	45652
2036-37	12002	481	505	1767	2140	4987	7	21889	48433
2037-38	13019	498	532	1840	2250	5273	7	23419	51392
2038-39	14121	515	560	1916	2367	5574	7	25060	54537
2039-40	15316	534	590	1995	2490	5892	7	26824	57888
2040-41	16558	551	620	2071	2610	6204	7	28621	61237
2041-42	17899	568	652	2151	2735	6534	7	30546	64800
2042-43	19350	587	686	2233	2867	6880	7	32610	68580
2043-44	20918	606	721	2318	3005	7245	7	34820	72593
2044-45	22613	626	758	2407	3150	7629	7	37190	76859

Table 6-3 : Total Tollable Traffic@ Toll Plaza 1- Tamalwadi19.300 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	8548	459	715	1203	1011	2015	7	13958	27123
2024-25	9319	476	753	1258	1071	2149	7	15033	28981
2025-26	10103	493	791	1309	1126	2273	7	16102	30781
2026-27	10954	510	830	1363	1185	2404	7	17253	32703
2027-28	11875	528	871	1418	1247	2543	7	18489	34750
2028-29	12875	547	915	1476	1312	2691	7	19823	36946
2029-30	13959	566	960	1535	1380	2847	7	21254	39276
2030-31	15113	585	1007	1595	1449	3006	7	22762	41702
2031-32	16362	605	1057	1657	1522	3174	7	24384	44292
2032-33	17714	625	1109	1722	1599	3352	7	26128	47057
2033-34	19179	645	1163	1790	1680	3540	7	28004	50007
2034-35	20764	667	1221	1859	1765	3738	7	30021	53152
2035-36	22419	687	1280	1927	1847	3933	7	32100	56342
2036-37	24206	709	1343	1997	1933	4137	7	34332	59737
2037-38	26136	731	1408	2069	2023	4353	7	36727	63353
2038-39	28219	753	1477	2144	2118	4580	7	39298	67207
2039-40	30468	776	1549	2223	2217	4819	7	42059	71316
2040-41	32786	798	1621	2298	2313	5050	7	44873	75436
2041-42	35279	820	1695	2375	2413	5292	7	47881	79804
2042-43	37963	843	1773	2455	2517	5546	7	51104	84451
2043-44	40850	866	1855	2538	2626	5812	7	54554	89392
2044-45	43957	890	1941	2624	2739	6091	7	58249	94645

Table 6-4 : Total Tollable Traffic @ Toll Toll Plaza 2- Yedashi77.400 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	3976	296	251	996	1046	2273	7	8845	21559
2024-25	4334	307	264	1043	1109	2423	7	9487	22978
2025-26	4698	317	277	1085	1166	2564	7	10114	24327
2026-27	5093	328	290	1129	1227	2713	7	10787	25763
2027-28	5522	339	305	1175	1291	2870	7	11509	27290
2028-29	5987	350	320	1223	1358	3036	7	12281	28909
2029-30	6491	362	336	1273	1428	3213	7	13110	30635

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2030-31	7027	374	352	1323	1499	3394	7	13976	32415
2031-32	7608	386	369	1375	1575	3584	7	14904	34304
2032-33	8237	398	388	1429	1654	3784	7	15897	36307
2033-34	8917	412	407	1485	1737	3996	7	16961	38436
2034-35	9654	426	427	1543	1825	4220	7	18102	40700
2035-36	10422	438	448	1599	1910	4440	7	19264	42962
2036-37	11253	452	469	1657	2000	4672	7	20510	45365
2037-38	12149	466	492	1717	2093	4916	7	21840	47908
2038-39	13118	480	516	1780	2191	5172	7	23264	50605
2039-40	14164	495	541	1845	2294	5441	7	24787	53463
2040-41	15241	509	566	1907	2393	5702	7	26325	56293
2041-42	16400	523	593	1971	2497	5976	7	27967	59291
2042-43	17647	538	621	2037	2605	6263	7	29718	62458
2043-44	18989	553	650	2105	2717	6564	7	31585	65804
2044-45	20434	568	681	2176	2835	6878	7	33579	69345

Traffic projections for Most Likely scenario are given as under

Table 6-5 : Total Tollable Traffic @ Toll Plaza 1- Tamalwadi19.300 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	8566	460	717	1206	1013	2019	7	13988	27181
2024-25	9360	479	757	1265	1076	2158	7	15102	29115
2025-26	10172	497	796	1320	1135	2288	7	16215	30998
2026-27	11054	516	837	1377	1197	2426	7	17414	33010
2027-28	12012	535	881	1436	1262	2573	7	18706	35162
2028-29	13054	555	927	1498	1331	2729	7	20101	37467
2029-30	14185	575	975	1562	1403	2893	7	21600	39918
2030-31	15394	595	1026	1627	1477	3062	7	23188	42487
2031-32	16705	617	1079	1695	1555	3241	7	24899	45234
2032-33	18128	639	1134	1765	1637	3431	7	26741	48166
2033-34	19672	662	1193	1838	1723	3632	7	28727	51303
2034-35	21349	686	1254	1915	1814	3845	7	30870	54661
2035-36	23103	709	1319	1990	1903	4056	7	33087	58086
2036-37	25002	732	1386	2068	1997	4278	7	35470	61736
2037-38	27057	757	1457	2149	2096	4511	7	38034	65630
2038-39	29280	782	1531	2233	2199	4758	7	40790	69785
2039-40	31687	808	1610	2320	2308	5018	7	43758	74226

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2040-41	34176	833	1689	2404	2413	5272	7	46794	78699
2041-42	36861	858	1771	2491	2524	5538	7	50050	83459
2042-43	39757	884	1857	2581	2639	5817	7	53542	88522
2043-44	42881	911	1948	2674	2759	6111	7	57291	93922
2044-45	46250	939	2043	2771	2885	6419	7	61314	99673

Table 6-6 : Total Tollable Traffic @ Toll Toll Plaza 2- Yedeshi 77.400 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU
2023-24	3986	296	252	998	1049	2278	7	8866	21610
2024-25	4355	307	266	1047	1114	2434	7	9530	23081
2025-26	4732	318	280	1092	1175	2581	7	10185	24496
2026-27	5142	329	295	1139	1240	2737	7	10889	26006
2027-28	5588	341	310	1188	1308	2902	7	11644	27608
2028-29	6073	353	326	1239	1379	3078	7	12455	29317
2029-30	6599	365	343	1292	1454	3264	7	13324	31133
2030-31	7161	377	361	1345	1531	3455	7	14237	33017
2031-32	7770	391	380	1401	1612	3657	7	15218	35024
2032-33	8431	405	400	1459	1697	3871	7	16270	37158
2033-34	9149	420	420	1519	1787	4098	7	17400	39430
2034-35	9929	435	442	1582	1881	4338	7	18614	41849
2035-36	10745	450	465	1643	1974	4575	7	19859	44285
2036-37	11628	465	489	1707	2071	4825	7	21192	46871
2037-38	12584	480	514	1773	2174	5088	7	22620	49615
2038-39	13618	496	541	1842	2281	5366	7	24151	52533
2039-40	14737	512	569	1914	2394	5660	7	25793	55638
2040-41	15894	527	597	1982	2503	5946	7	27456	58719
2041-42	17142	543	626	2054	2617	6246	7	29235	61986
2042-43	18488	559	657	2128	2737	6561	7	31137	65449
2043-44	19940	576	689	2204	2862	6893	7	33171	69119
2044-45	21506	593	723	2284	2992	7241	7	35346	73009

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession

period shall be modified subject to calculation stipulated therein. For Solapur-Yedeshi project, the Target Date and Target Traffic are defined as under:

Target Date - 1st October 2023

Target Traffic - 22210 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about a year. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	24431	10%	-7%	-7%	29	-2.2

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	24493	10%	-8%	-8%	29	-2.2

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	22210	24373	10%	-7%	-7%	29	-2.1

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

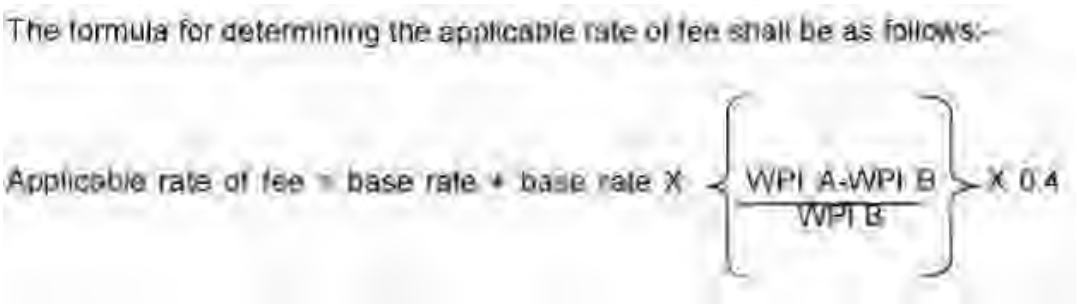
This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

As per the Toll Notification (Schedule -R) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent user's monthly pass would be issued for 50 trips at 2/3rd rate as per provision of fee notification.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car – Rs. 275 Per Month
    b) Local Commercial Traffic at 50% rate for single trip.

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.



Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

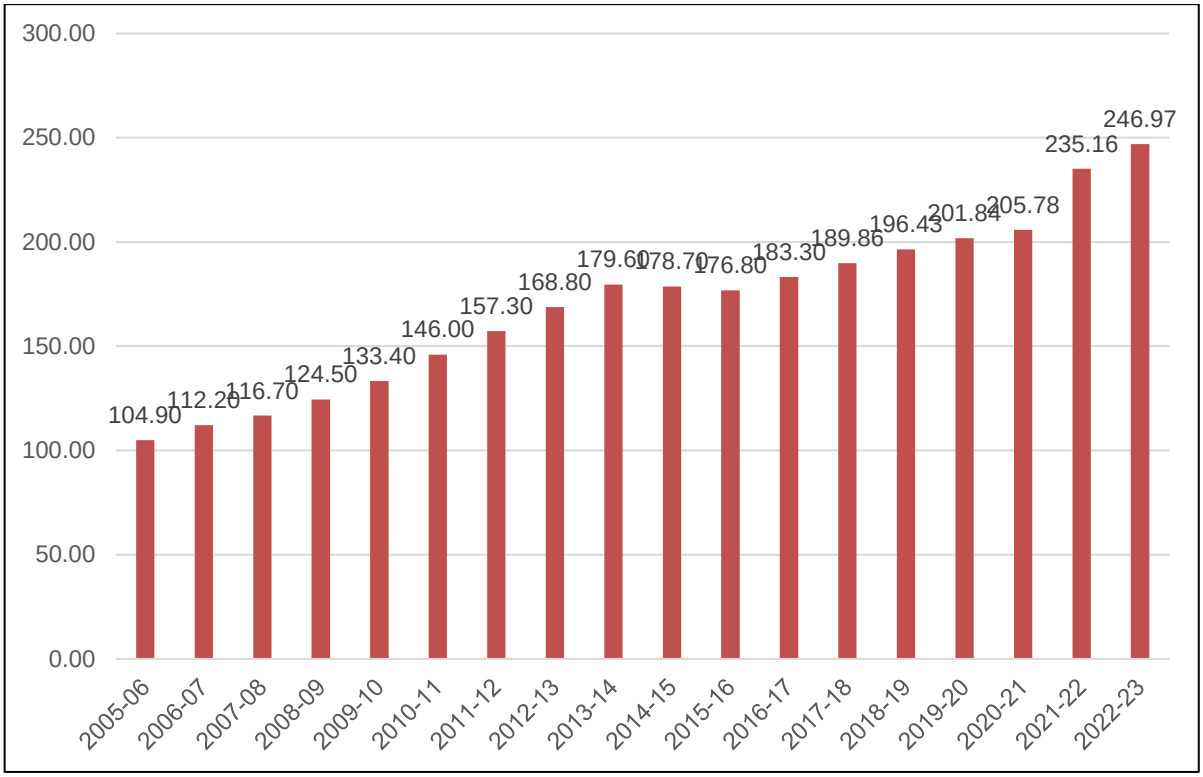


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey@ Toll Plaza 1- Tamalwadi 19.300 KM

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	75	115	245	245	270
2024-25	75	125	260	260	280
2025-26	80	130	270	270	295
2026-27	85	135	285	285	310
2027-28	90	145	300	300	325
2028-29	90	150	315	315	340
2029-30	95	155	330	330	360
2030-31	100	165	345	345	375
2031-32	105	170	360	360	395
2032-33	110	180	380	380	415
2033-34	115	190	395	395	435
2034-35	125	200	415	415	455
2035-36	130	210	435	435	475
2036-37	135	220	460	460	500
2037-38	140	230	480	480	525
2038-39	150	240	505	505	550

2039-40	155	250	530	530	575
2040-41	165	265	555	555	605
2041-42	170	280	585	585	635
2042-43	180	290	610	610	670
2043-44	190	305	645	645	700
2044-45	200	320	675	675	735

Table 7-3 : Toll Rates for Single Journey @ Toll Plaza 2- Yedashi 77.400 KM

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	75	115	245	245	270
2024-25	75	125	260	260	280
2025-26	80	130	270	270	295
2026-27	85	135	285	285	310
2027-28	90	145	300	300	325
2028-29	95	150	315	315	340
2029-30	95	155	330	330	360
2030-31	100	165	345	345	375
2031-32	105	170	360	360	395
2032-33	110	180	380	380	415
2033-34	115	190	395	395	435
2034-35	125	200	415	415	455
2035-36	130	210	435	435	475
2036-37	135	220	460	460	500
2037-38	140	230	480	480	525
2038-39	150	240	505	505	550
2039-40	155	255	530	530	580
2040-41	165	265	555	555	605
2041-42	170	280	585	585	635
2042-43	180	290	615	615	670
2043-44	190	305	645	645	700
2044-45	200	325	675	675	735

Table 7-4 : Toll Rates for Return Journey@ Toll Plaza 1- Tamalwadi 19.300 KM

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	110	175	370	370	400
2024-25	115	185	385	385	420
2025-26	120	195	405	405	445
2026-27	125	205	425	425	465
2027-28	130	215	450	450	490

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2028-29	140	225	470	470	510
2029-30	145	235	490	490	535
2030-31	150	245	515	515	565
2031-32	160	260	540	540	590
2032-33	170	270	565	565	620
2033-34	175	285	595	595	650
2034-35	185	300	625	625	680
2035-36	195	310	655	655	715
2036-37	205	330	685	685	750
2037-38	215	345	720	720	785
2038-39	225	360	755	755	825
2039-40	235	380	795	795	865
2040-41	245	400	835	835	910
2041-42	260	415	875	875	955
2042-43	270	440	920	920	1000
2043-44	285	460	965	965	1050
2044-45	300	485	1010	1010	1105

Table 7-5 : Toll Rates for Return Journey @ Toll Plaza 2- Yedashi 77.400 KM

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	110	175	370	370	400
2024-25	115	185	385	385	425
2025-26	120	195	405	405	445
2026-27	125	205	430	430	465
2027-28	130	215	450	450	490
2028-29	140	225	470	470	515
2029-30	145	235	495	495	540
2030-31	155	245	515	515	565
2031-32	160	260	540	540	590
2032-33	170	270	570	570	620
2033-34	175	285	595	595	650
2034-35	185	300	625	625	680
2035-36	195	315	655	655	715
2036-37	205	330	690	690	750
2037-38	215	345	720	720	785
2038-39	225	360	755	755	825
2039-40	235	380	795	795	865
2040-41	245	400	835	835	910
2041-42	260	420	875	875	955
2042-43	270	440	920	920	1005
2043-44	285	460	965	965	1055
2044-45	300	485	1015	1015	1105

Table 7-6 : Toll Rates for Monthly Pass Local @ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car
2023-24	330
2024-25	345
2025-26	365
2026-27	385
2027-28	400
2028-29	420
2029-30	440
2030-31	460
2031-32	485
2032-33	510
2033-34	535
2034-35	560
2035-36	585
2036-37	615
2037-38	645
2038-39	680
2039-40	710
2040-41	745
2041-42	785
2042-43	825
2043-44	865
2044-45	905

Table 7-7 : Toll Rates for Monthly Pass Local @ Toll Plaza 2- Yedashi 77.400 KM

Year	Car
2023-24	330
2024-25	345
2025-26	365
2026-27	385
2027-28	400
2028-29	420
2029-30	440
2030-31	460
2031-32	485
2032-33	510
2033-34	535
2034-35	560
2035-36	585
2036-37	615
2037-38	645
2038-39	680
2039-40	710
2040-41	745
2041-42	785

Year	Car
2042-43	825
2043-44	865
2044-45	905

Table 7-8 : Toll Rates for Monthly Pass @ Toll Plaza 1- Tamalwadi 19.300 KM

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	2420	3905	8185	8185	8925
2024-25	2540	4105	8600	8600	9380
2025-26	2670	4310	9035	9035	9855
2026-27	2805	4535	9495	9495	10360
2027-28	2940	4750	9955	9955	10860
2028-29	3080	4980	10430	10430	11380
2029-30	3230	5220	10935	10935	11930
2030-31	3385	5470	11465	11465	12505
2031-32	3550	5735	12020	12020	13115
2032-33	3725	6015	12605	12605	13750
2033-34	3905	6310	13220	13220	14420
2034-35	4095	6615	13865	13865	15125
2035-36	4295	6940	14545	14545	15865
2036-37	4510	7285	15260	15260	16645
2037-38	4730	7640	16010	16010	17465
2038-39	4965	8020	16800	16800	18330
2039-40	5210	8415	17635	17635	19235
2040-41	5470	8835	18510	18510	20190
2041-42	5740	9275	19430	19430	21195
2042-43	6030	9735	20400	20400	22255
2043-44	6330	10225	21420	21420	23370
2044-45	6645	10735	22495	22495	24540

Table 7-9 : Toll Rates for Monthly Pass @ Toll Plaza 2- Yedashi77.400 KM

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	2420	3910	8195	8195	8940
2024-25	2545	4110	8610	8610	9390
2025-26	2675	4320	9045	9045	9870
2026-27	2810	4540	9510	9510	10375
2027-28	2945	4755	9965	9965	10870
2028-29	3085	4985	10445	10445	11395
2029-30	3235	5225	10950	10950	11945
2030-31	3390	5480	11480	11480	12525
2031-32	3555	5745	12035	12035	13130
2032-33	3730	6025	12620	12620	13770
2033-34	3910	6315	13235	13235	14440
2034-35	4100	6625	13880	13880	15145
2035-36	4305	6950	14560	14560	15885

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2036-37	4515	7290	15280	15280	16665
2037-38	4735	7650	16030	16030	17490
2038-39	4970	8030	16820	16820	18350
2039-40	5215	8425	17655	17655	19260
2040-41	5475	8845	18530	18530	20215
2041-42	5750	9285	19455	19455	21225
2042-43	6035	9750	20425	20425	22285
2043-44	6335	10235	21450	21450	23400
2044-45	6655	10750	22525	22525	24575

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 starting from the year 2022-23 are shown in tables below.

Table 7-10 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2023-24	73.50	62.71	**136.21**
2024-25	81.98	70.00	**151.98**
2025-26	91.84	78.08	**169.92**
2026-27	102.79	87.17	**189.95**
2027-28	115.81	97.92	**213.73**
2028-29	128.36	108.73	**237.09**

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2029-30	143.64	120.88	**264.52**
2030-31	160.18	134.63	**294.81**
2031-32	179.79	150.02	**329.81**
2032-33	201.19	167.33	**368.51**
2033-34	223.63	186.08	**409.71**
2034-35	251.93	208.22	**460.15**
2035-36	281.91	231.42	**513.33**
2036-37	313.79	256.91	**570.70**
2037-38	349.28	284.91	**634.20**
2038-39	391.04	317.22	**708.26**
2039-40	436.53	353.60	**790.14**
2040-41	485.40	390.86	**876.25**
2041-42	540.31	433.52	**973.83**
2042-43	601.67	481.23	**1082.90**
2043-44	674.47	536.35	**1210.82**
2044-45	750.41	593.94	**1344.35**

Table 7-11 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2023-24	73.19	62.43	**135.62**
2024-25	81.25	69.36	**150.61**
2025-26	90.60	77.02	**167.62**
2026-27	100.93	85.57	**186.50**
2027-28	113.14	95.67	**208.81**
2028-29	124.84	105.76	**230.61**
2029-30	139.01	117.04	**256.05**
2030-31	154.25	129.75	**284.00**
2031-32	172.33	143.93	**316.26**
2032-33	191.98	159.80	**351.79**
2033-34	212.36	176.86	**389.21**
2034-35	238.10	196.99	**435.09**
2035-36	265.16	217.90	**483.06**
2036-37	293.75	240.73	**534.48**
2037-38	325.46	265.69	**591.15**
2038-39	362.64	294.41	**657.05**
2039-40	402.94	326.63	**729.58**
2040-41	445.95	359.33	**805.29**
2041-42	494.07	396.71	**890.78**
2042-43	547.63	438.29	**985.92**
2043-44	611.02	486.19	**1097.21**
2044-45	676.66	535.81	**1212.47**

Table 7-12 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	Toll Plaza Km 19.300	Toll Plaza Km 77.400	Total
2023-24	73.33	62.56	**135.89**
2024-25	81.59	69.66	**151.25**
2025-26	91.19	77.54	**168.73**
2026-27	101.82	86.34	**188.17**
2027-28	114.43	96.77	**211.19**
2028-29	126.56	107.23	**233.79**
2029-30	141.24	118.90	**260.14**
2030-31	157.14	132.14	**289.28**
2031-32	175.98	146.90	**322.88**
2032-33	196.50	163.49	**359.99**
2033-34	217.86	181.39	**399.25**
2034-35	244.87	202.50	**447.37**
2035-36	273.36	224.54	**497.90**
2036-37	303.54	248.65	**552.19**
2037-38	337.11	275.11	**612.22**
2038-39	376.52	305.60	**682.12**
2039-40	419.39	339.82	**759.21**
2040-41	465.23	374.68	**839.91**
2041-42	516.61	414.55	**931.16**
2042-43	573.87	459.06	**1032.94**
2043-44	641.81	510.46	**1152.27**
2044-45	712.40	563.98	**1276.38**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Solapur to Yedashi section of NH-211 in state of Karnataka from km 0.000 to km 100.000has been widened to four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is main transport link for Karnataka- Marathwada traffic. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 6%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does notrun a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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UDAIPUR TO GUJARAT BORDER ON NH 8
(KM 287.400 TO KM 401.200)
IN THE STATE OF RAJASTHAN



APRIL 2023





TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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UDAIPUR TO GUJARAT BORDER SECTION OF NH-8

(KM 287.400 TO 401.200)

IN THE STATE OF RAJASTHAN

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023



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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under NHDP Phase V. Under Phase V NHAI has planned to convert 6,500 km of existing 4-lane National Highways into 6-lane National Highway. Sections envisaged under 6-laning comprise the Golden Quadrilateral section (5,700 km) and some other sections which are 800 km in length.

The project under consideration, Six Laning of section from Km 287.400 to Km 401.200 of NH-8 in state of Rajasthan and Gujarat is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s Udaipur Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 21 years starting from 3rd September 2017. The Project has been commissioned and is currently in the operation / maintenance phase. Six laning of project has also been completed in June 2021.

The length of project road is 114.00 Km approx. The project road is section of NH-8, one of the busiest national highways of India and part of Mumbai – Delhi arm of golden quadrilateral.

Project road alignment passes through the rural area in most part of stretch. After Udaipur there is no major urban establishment other than Rishabhdeo, a famous religious place in the region. The following figure show project road in regional context.

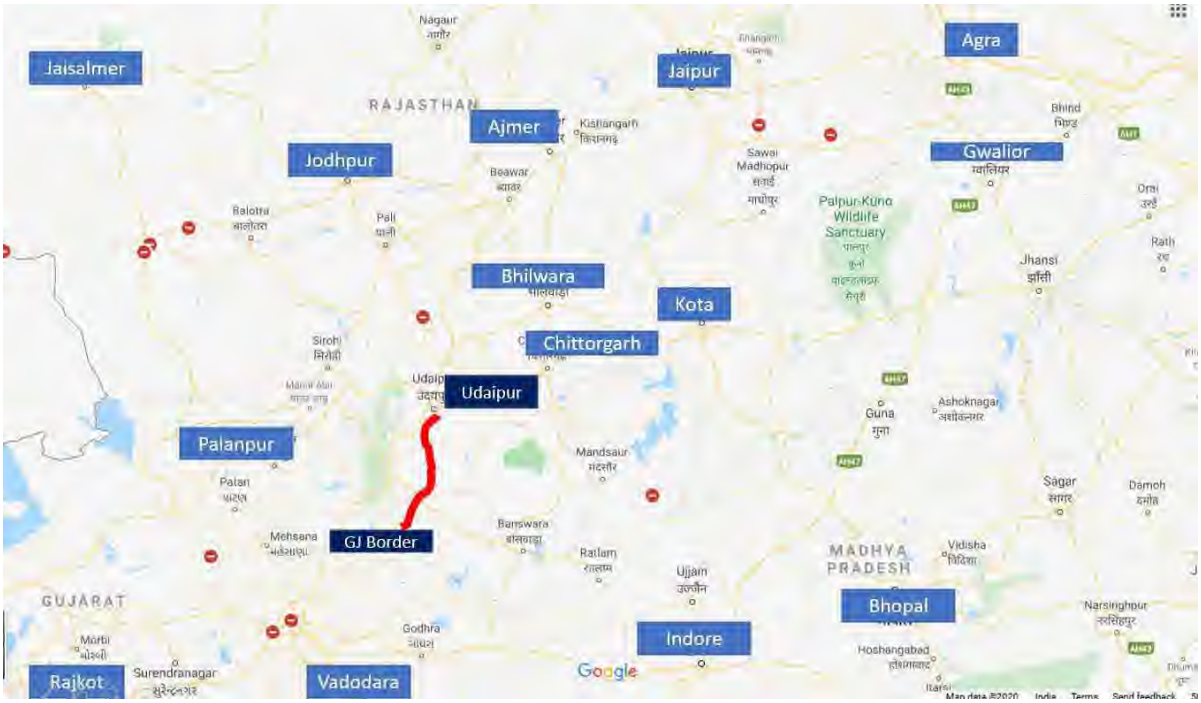


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 8 is one of the busiest national highways of India. Project stretch from Udaipur to Gujarat border on NH-8 is part of Delhi Mumbai arm of Golden quadrilateral.

Besides being part of major transport link between Mumbai and Delhi, stretch from Udaipur to Shamlaji forms major connectivity between Udaipur, Ahmedabad, Rajkot Jamnagar and Porbandar. After renumbering of all national highways by National Highway Authority of India in 2010, the current NH 48 was formed by merging the old NH 8 (Delhi-Mumbai section) and NH 4 (Mumbai-Chennai). National Highway 48 starts at Delhi and terminates at Chennai and goes through Jaipur, Udaipur, Vadodara, Mumbai, Pune and Bengaluru, traversing through six states of India.

2.2 Project Stretch Description

Section of NH-8 (New NH-48) from Udaipur to Gujarat Border is part of major transportation link in the area connecting industrial / tourist cities of Udaipur- , Ahmedabad, Vadodara, Mumbai. Project stretch would be faster connectivity to Udaipur from Gujarat border and onwards to Ahmedabad once six laning is complete.

Project stretch from Udaipur to Gujarat border as such passes through rural areas. Area has number of green marble mines and there are lot many establishments on the way. Rishabhdeo in one such area having more than 500 such units.

Major religious centres like Shamlaji and Ekling ji contribute to substantial passenger traffic on project stretch.

There is one operative toll plaza at project stretch at Khandi Obri at km 348.450.

Following figure show project alignment and toll plaza location.

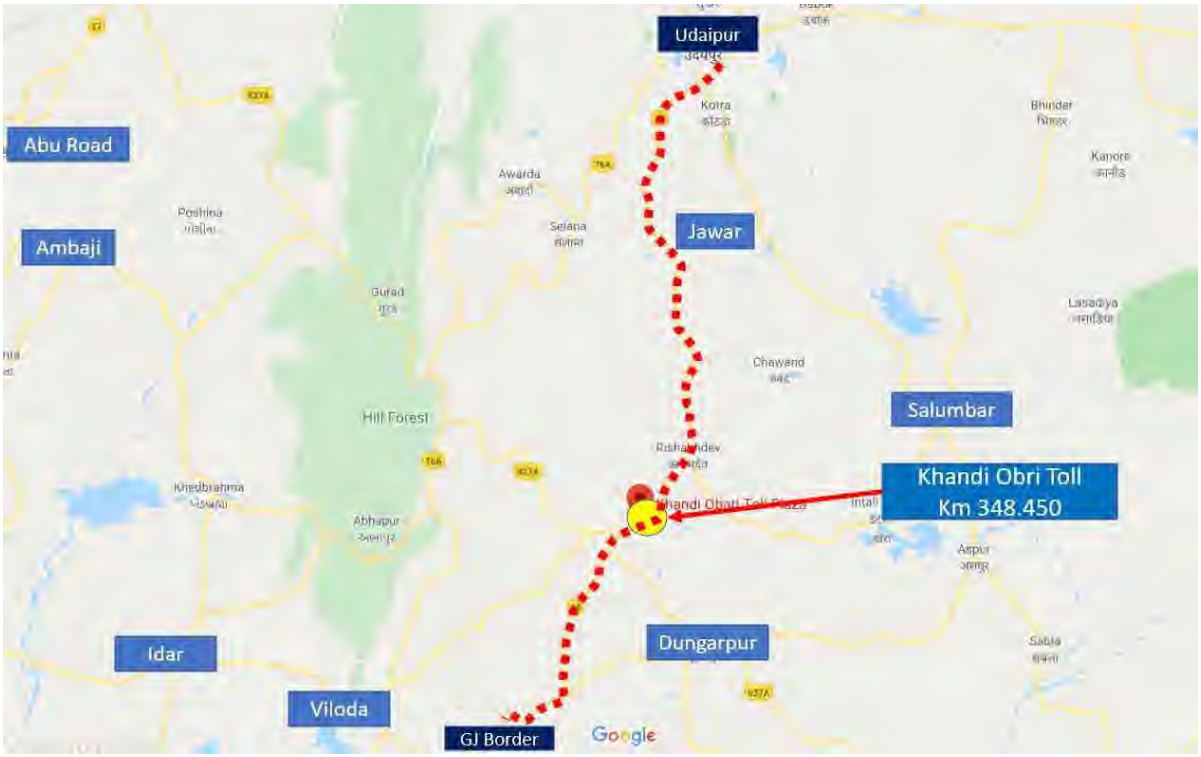


Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete underway and is expected to complete soon.

Following photographs illustrate project section along the corridor.









Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza location on Udaipur – Gujarat section of NH-8 for year 2017-18 (part), 2018-2019, 2019-20, 2020-21, 2021-2022 & traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 348.450 Toll Plaza at Khandi Obri	AADT for Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23	For Year 2017-18, 2018-19, 2019-2020, 2020-21, 2021-22 & 2022-23

3.2 Classified traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)

	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected corresponds to category of tollable vehicles. The following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Min Bus /LCV
- Truck / Bus
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of the report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base year 2019-20 ,2020-21, 2021-22 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Khandi Obri Toll Plaza at Km 348.450

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	4532	3574	4773	5335
2	LCV	934	737	619	672
3	BUS	800	472	661	781
4	Truck	1448	1402	1703	1864
5	3-Axle	1806	1548	1691	1724

6	Multi Axle	3717	3367	3887	4157
7	Oversized Vehicle	11	13	21	13
	Total	**13248**	**11113**	**13355**	**14545**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July - 21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed due to second and third wave of Covid-19. Traffic numbers for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table 3-4.***

Table 3-4 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-5 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Khandi Obri at Km 348.450	13248	34871	2.63
2020-21	Khandi Obri at Km 348.450	11113	30155	2.71
2021-22	Khandi Obri at Km 348.450	13355	35453	2.65
2022-23	Khandi Obri at Km 348.450	14545	38213	2.63

It can be observed from above that project traffic has PCU index more than 2.5 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

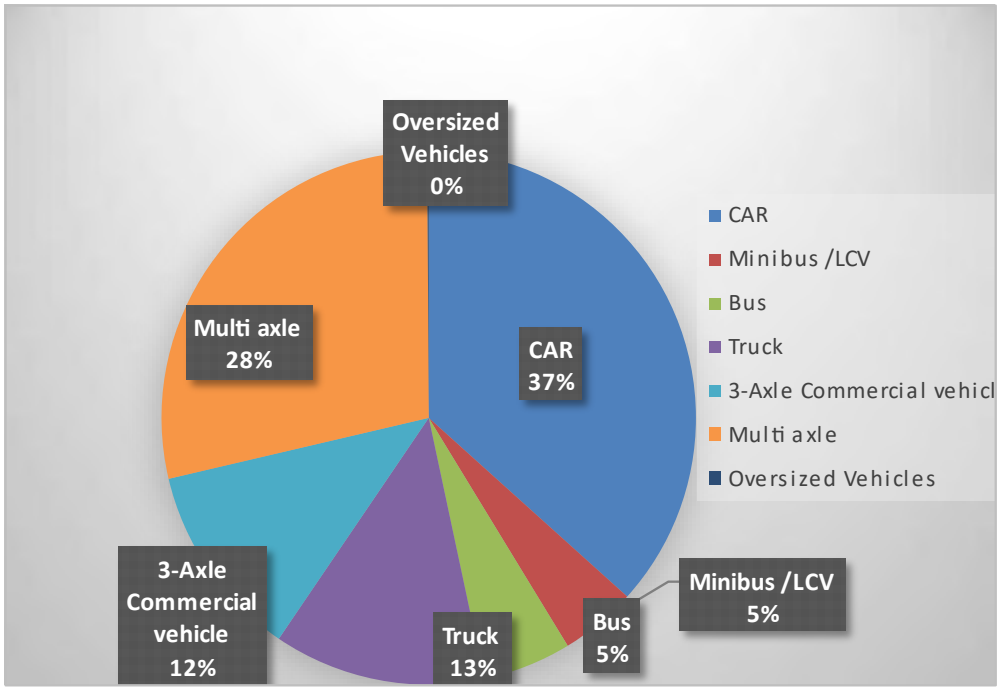


Figure 3-1 : Model Split of Tollable Vehicle

It is observed that car traffic forms about 37% of total traffic at toll plaza locations while multi axle commercial vehicles are about 40% of total traffic. Truck / Bus and LCV share about 18% and 5 % of traffic volume respectively.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23

Table 3-6 : Journey Type Bifurcation of Traffic at Khandi Obri TP KM 348.450

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	11685
2	Return Journey	2664
3	Local Commercial Single Journey	131
4	Monthly Pass Local	60
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 80%. Return journey component is 18%. The number of monthly pass Local is 1% and Local Commercial Single journey is 1% at Khandi Obri toll plaza.

It is observed that the project corridor demonstrates pattern of single journey dominated mix of traffic which is typical of major national highways having more long distance traffic.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.

2. Economic Data
    a) GDP
    b) NSDP
    c) Population Growth
    d) Per Capita Income growth
    e) Industrial Growth
    f) Special Industry Potential
    g) Regional and National development vision / plan
    h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network.

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch is part of Delhi – Mumbai arm of golden quadrilateral transport network. Additionally, it also forms good connectivity to Ahmedabad, Rajkot, Jamnagar and other port and industrial establishments in bay of Khambat of Gujarat.

At regional level, there can be three alternates for Udaipur- Ahmedabad pair of Origin & Destination. One via project road (Udaipur – Rishabhdeo- Shamlaji- Ahemedabad), second on east side (via Himmatnagar) and third on far east side via Palanpur- Mehsana..

Following maps show these routes in relation to project stretch at regional level.

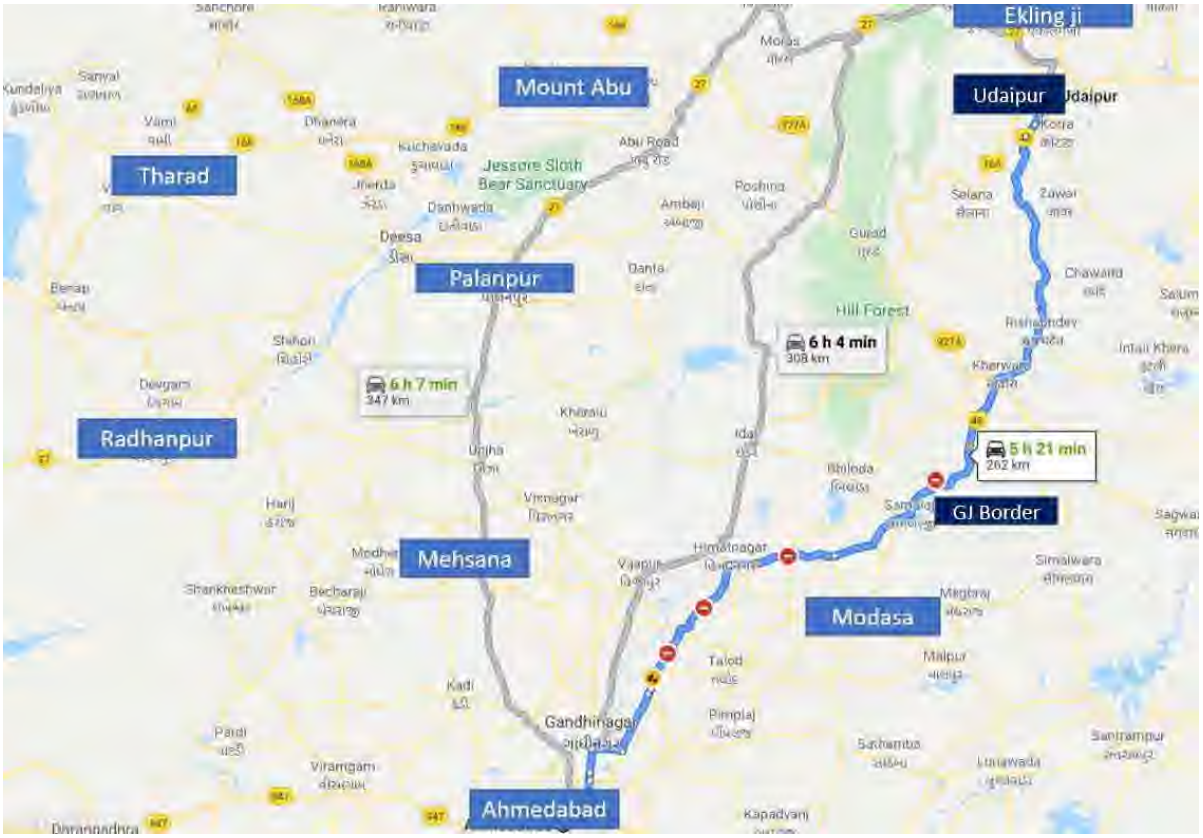


Figure 4-1 : Alternate route at regional level Udaipur - Ahmedabad

Route via project road is most preferred one due to minimum travel time and shortest length.

On a high level, between Delhi and Vadodara, there can be three alternatives. One via project road (Delhi- Jaipur- Udaipur- Shamlaji -Vadodara), second via Delhi-Sikar-Ahmedabad- Vadodara) and third via Delhi- Jaipur- Mandsauar – Banswara- Godhra-Vadodara. Following map shows these alignments.

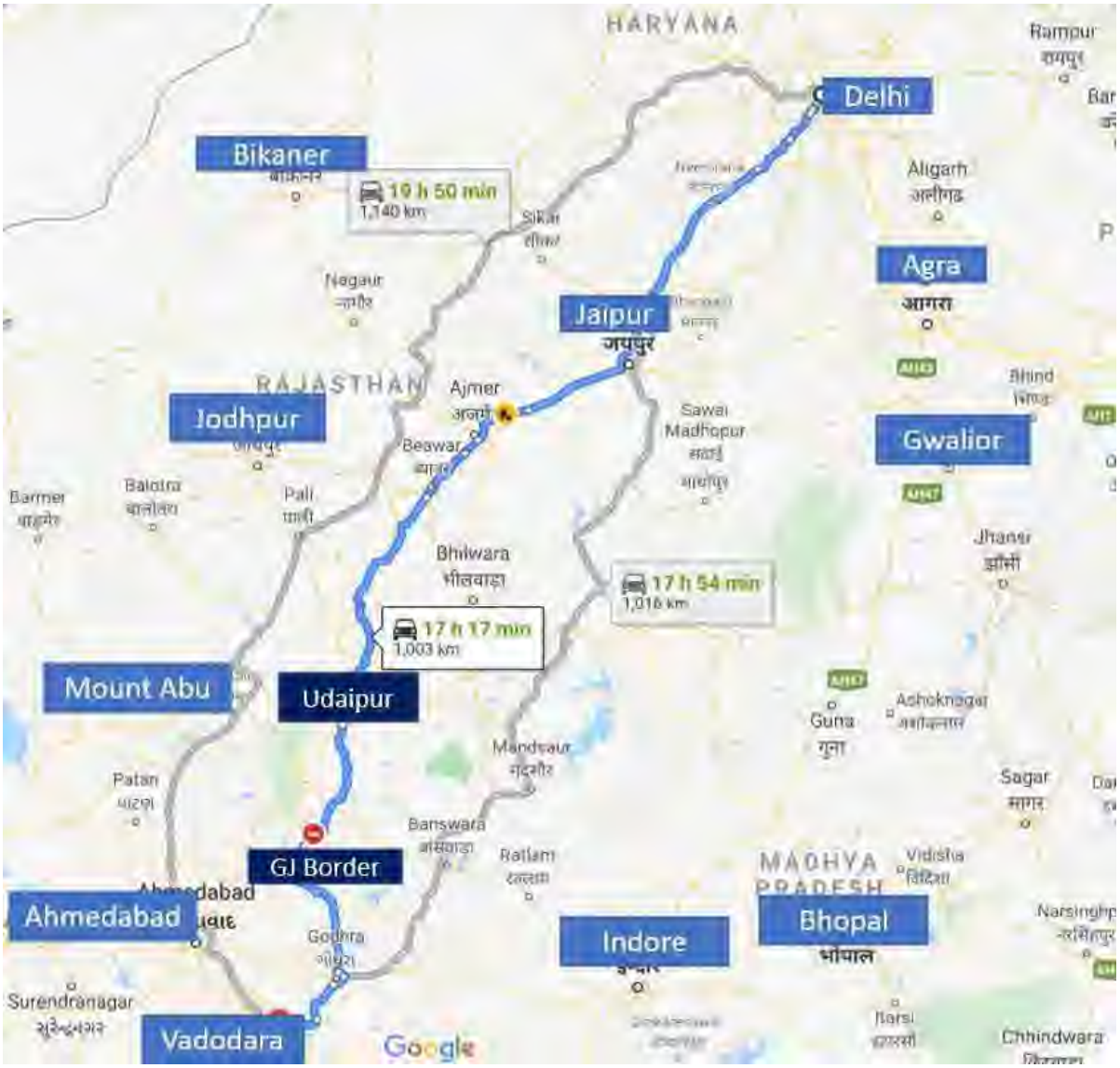


Figure 4-2 : Alternate route at regional level Delhi - Vadodara

For Delhi- Vadodara pair of origin and destination, route via project road (Udaipur – Shamlaji) is most preferred one due to minimum travel time and length of route.

Thus, at regional level project road is preferred route of long-distance traffic between Mumbai- Delhi and Udaipur- Ahmedabad. Project road is under toll operation since long hence traffic on project road is now settled and it can be assumed as dedicated traffic on project road for logistic obligations.

After six laning completion, project stretch would become slightly more attractive due to improved level of service. In such case any further diversion of traffic from project road is not envisaged. It is expected that there could be some attracted traffic on project road after completion of six laning of Kishangarh Gulabpura stretch which is connecting section for project corridor.

At local level there is no potential alternate route to bypass toll plaza.

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Udaipur- Palanpur -Mehsana- Ahemedabad	Alternate Route	347	64	6 Hr 7 Min	Project road alternate has minimum travel time and shortest road
	Udaipur- Idar - Himmatnagar- Ahemedabad	Alternate Route	308	50	6 Hr 8 Min	
	Udaipur- Rishabhdeo- Shamlaji- Ahemedabad	Project Road	262	49	5 Hr 21 Min	
2	Delhi- Jaipur- Mandsaur - Banswara- Vadodara	Alternate Route	1140	57	19 Hr 50 Min	Project road alternate has minimum travel time and shortest road
	Delhi- Sikar- Mt. Abu - Ahemedabad- Vadodara	Alternate Route	1016	57	17 Hr 54 Min	
	Delhi- Jaipur- Udaipur - Vadodara	Project Road	1003	58	17 Hr 54 Min	

Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further, it may be noted that since the project highway has already been commissioned and has a tolling history, the current traffic

traversing the project corridor already factors in traffic diversion (if any) that may have taken place. Further after completion of six laning, level of service would improve on project corridor and this would create favorable conditions for traffic.

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Udaipur to Gujarat Border section of NH-8 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Rajasthan. Toll plazas at Khondi Obri is in the state of Rajasthan but the traffic on project stretch has certain contribution

from other states as well. For elasticity calculations, working data from such states in addition to Rajasthan has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-1 : Per Capita Income Vs Car Rajasthan

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	57192	591069	4.76	5.77		
2013	58441	659542	4.77	5.82	2%	
2014	61053	733916	4.79	5.87	4%	
2015	64496	814079	4.81	5.91	6%	
2016	68565	899307	4.84	5.95	6%	
2017	71394	988391	4.85	5.99	4%	4.55%

Regression analysis of same is given in figure below

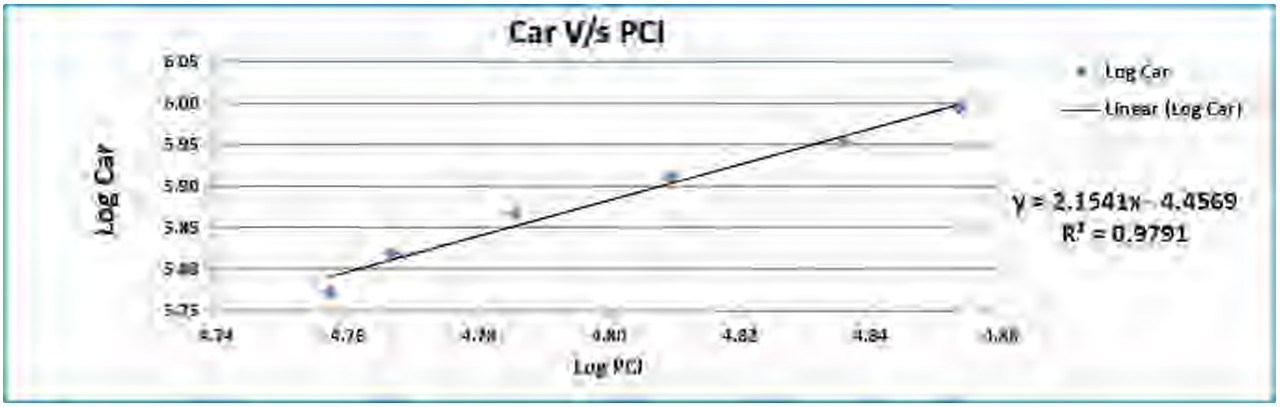


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Rajasthan

Table 5-2 : Population Vs Bus Rajasthan

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	68548437	83345	7.84	4.92		
2013	69783885	88616	7.84	4.95	2%	
2014	71016445	93892	7.85	4.97	2%	
2015	72245688	97650	7.86	4.99	2%	
2016	73471198	102818	7.87	5.01	2%	
2017	74692571	108680	7.87	5.04	2%	1.73%

Regression analysis of same is given in figure below

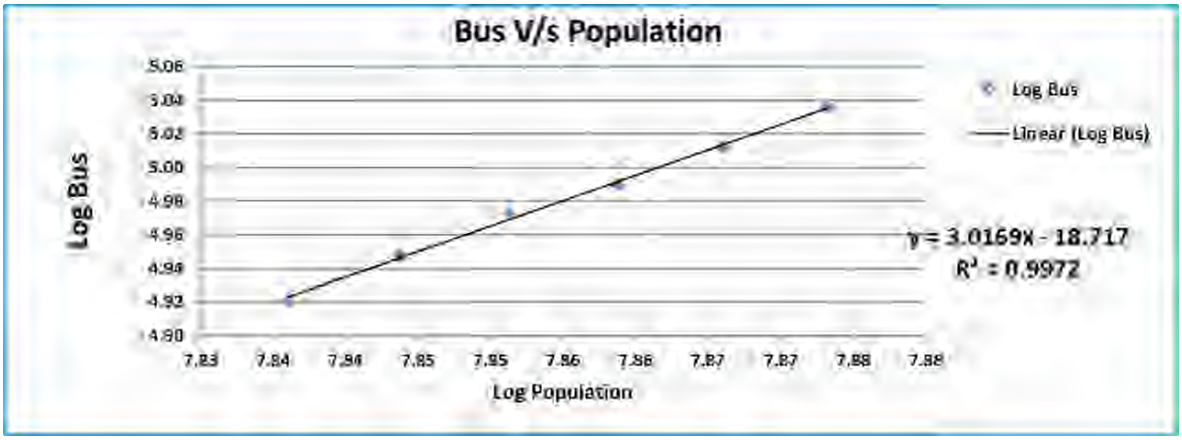


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Rajasthan

Elasticity of LCV has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Vs NSDP Rajasthan

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	395331	69509	5.60	4.84		
2013	409802	76396	5.61	4.88	4%	
2014	434292	33379	5.64	4.52	6%	
2015	465408	91787	5.67	4.96	7%	
2016	501922	99763	5.70	5.00	8%	6.16%

Following figure depict regression analysis and extrapolation.

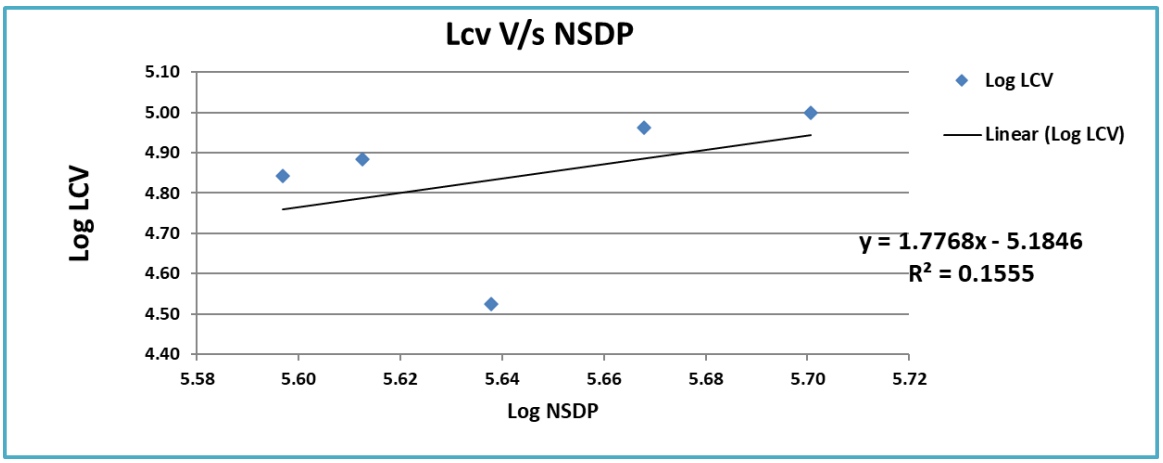


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Rajasthan

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-4 : GOODS Traffic Vs NSDP Rajasthan

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth
2012	395331	362028	5.60	5.56		
2013	409802	401983	5.61	5.60	4%	
2014	434292	434379	5.64	5.64	6%	
2015	465408	472365	5.67	5.67	7%	
2016	501922	517604	5.70	5.71	8%	
2017	530172	561158	5.72	5.75	6%	6.06%

Following figure depict regression analysis and extrapolation.

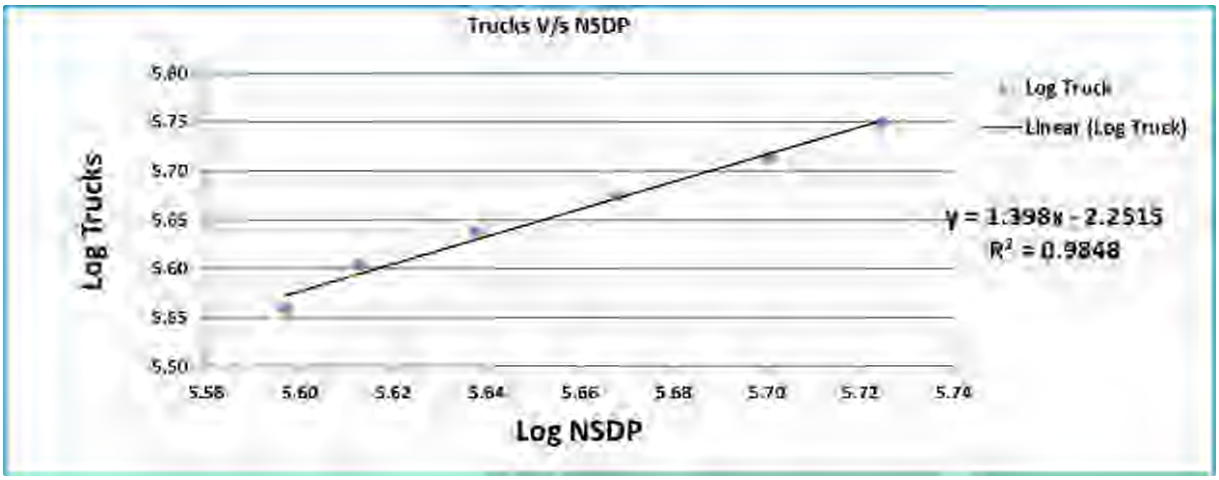


Figure 5-4 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Rajasthan

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Rajasthan

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Rajasthan	Car/Jeep	PCI	y = 2.1541x + -4.4569	R^2 = 0.9791	2.1541	4.55%	9.79%	Good Regression
	Bus	Population	y = 3.0169x - -18.7174	R^2 = 0.9972	3.0169	1.73%	5.22%	Good Regression
	LCV	NSDP	y = 1.7768x - -5.1846	R^2 = 0.1555	1.7768	6.16%	10.95%	Poor Regression
	Truck	NSDP	y = 1.398x - -2.2515	R^2 = 0.9848	1.3980	6.06%	8.46%	Good Regression

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Rajasthan State.

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below

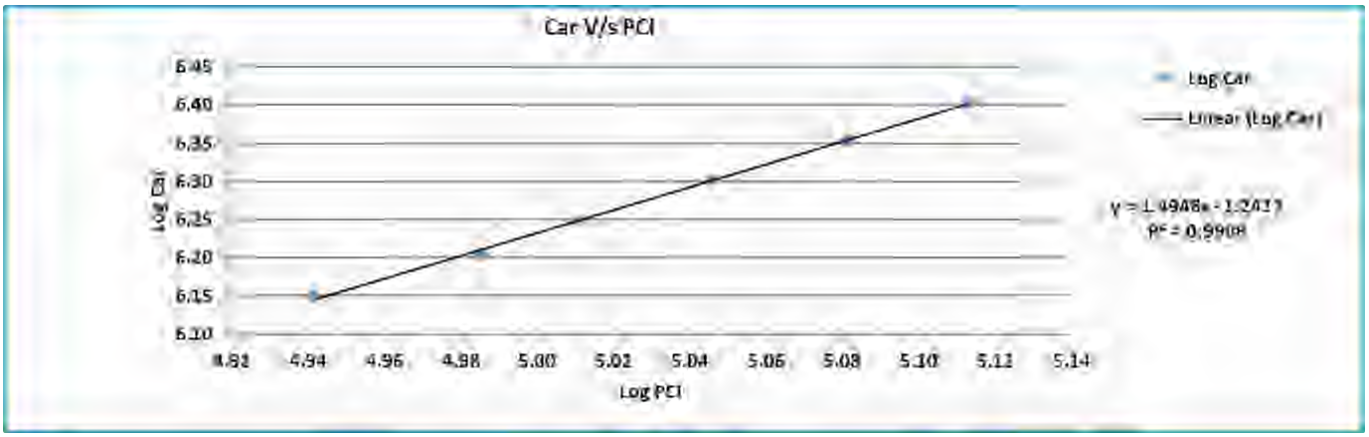


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Gujarat

Table 5-7 : Population Vs Bus Gujarat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below

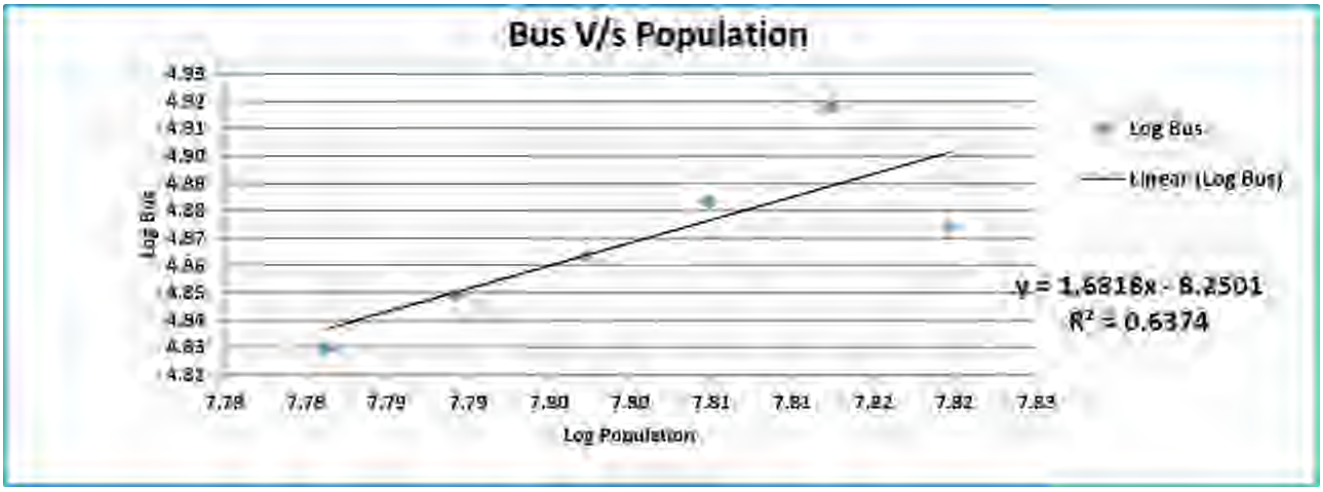


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of LCV has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Vs NSDP Gujarat

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

Following figure depict regression analysis and extrapolation.

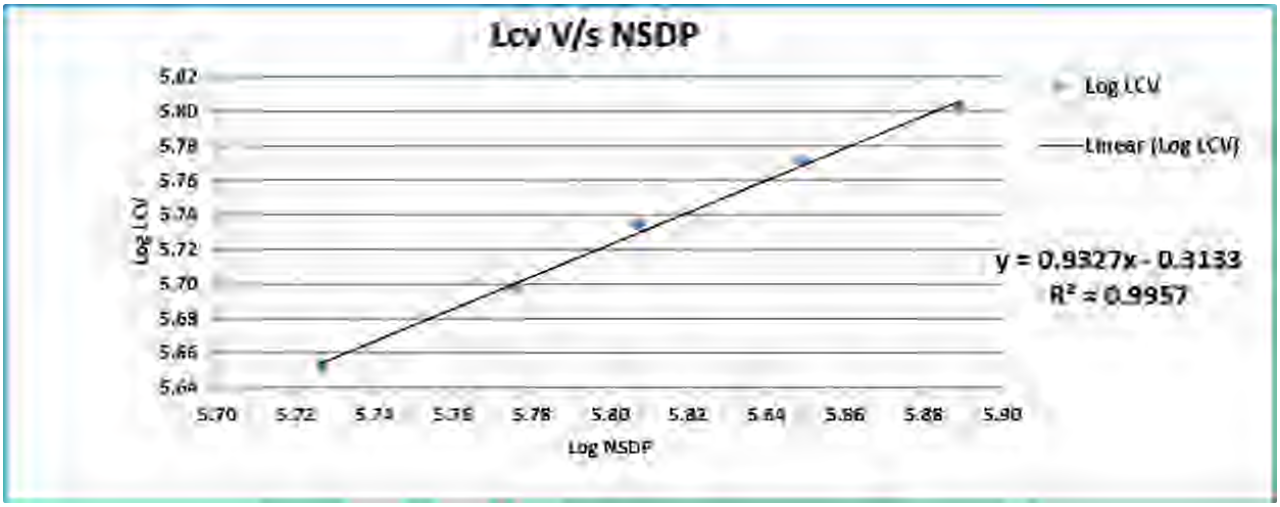


Figure 5-7 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Gujarat

Elasticity of Goods Traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-9 : GOODS Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

Following figure depict regression analysis and extrapolation.

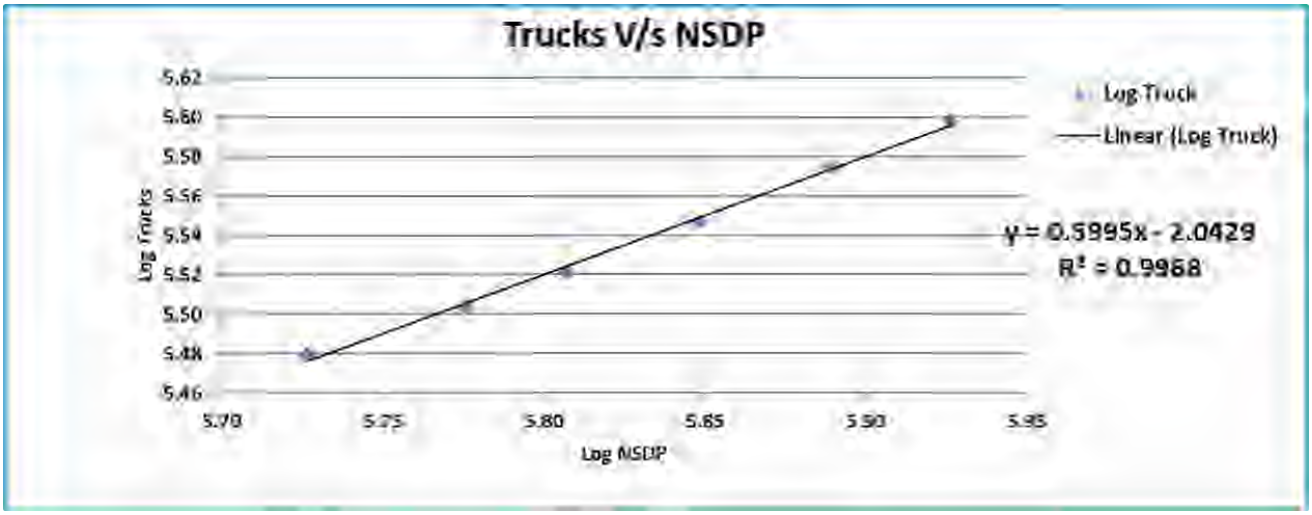


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Gujarat

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Gujarat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average IV Growth (5yrs)	Growth Elastic Model	Remarks
Gujarat	Car/Jeep	PCI	y = 1.4948x - -1.2417	R^2 = 0.9988	1.4948	8.21%	12.27%	Good Regression
	Bus	Population	y = 1.6818x - -8.2501	R^2 = 0.6374	1.6818	1.79%	3.00%	Fair Regression
	LCV	NSDP	y = 0.9327x - - 0.3133	R^2 = 0.9957	0.9327	9.82%	9.16%	Good Regression
	Truck	NSDP	y = 0.5995x - - 2.0429	R^2 = 0.9968	0.5995	9.64%	5.78%	Good Regression

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Udaipur to Gujarat on NH-8 is under tolling operation with current concessionaire and has three year of tolling history from 2017-18 (Part year). As traffic data available with the project concessionaire is of less than three years, we do not have sufficient data points to be able to establish a reliable past trend of traffic growth. A minimum of about 5 -6 years' traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

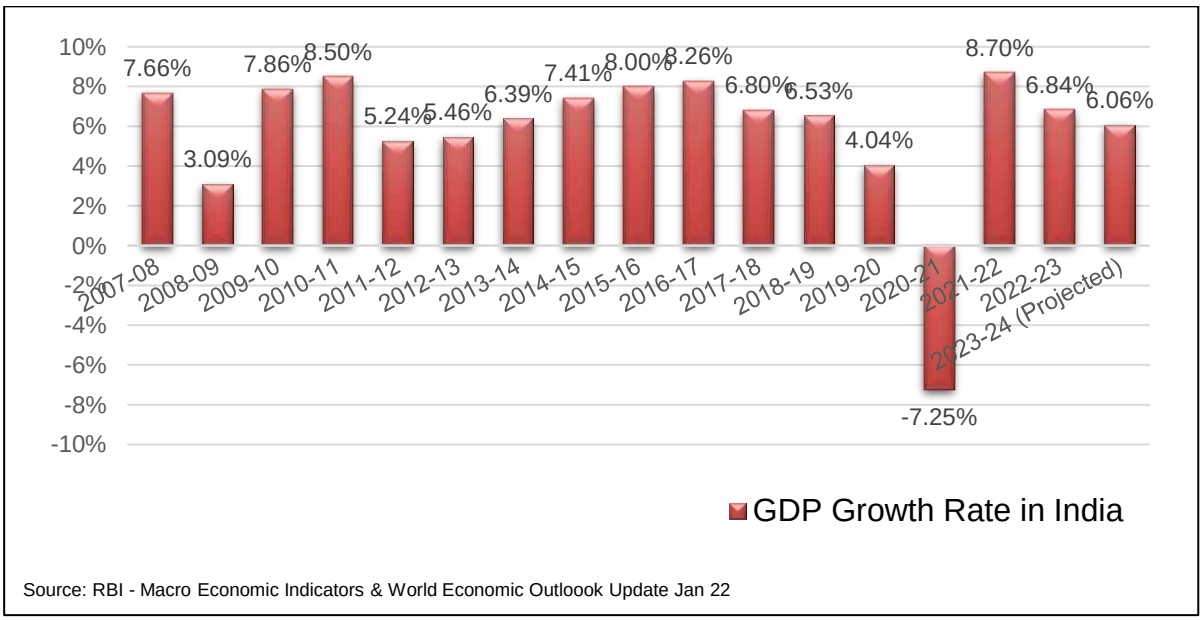


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of

6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Project stretch passes through mineral rich belt of marble and minerals.

Tourism, agriculture, and mineral industries contribute to Udaipur's diverse economic base. Udaipur sees major tourist footfall throughout the year owing to its picturesque landscape, lakes, and historic palaces and architecture. Shamlaji is a major Hindu pilgrimage dedicated to God Vishnu. Each year an annual fair is held October which attracts huge crowds from surrounding region. Udaipur district is rich in lead, zinc, silver, phosphate, calcite, copper and limestone minerals. Udaipur is known for its marble which is mined, processed, and is exported across the world. Nathdwara in north of asset is one of biggest extractors of marble and limestone minerals. Hindustran Zinc, which is world's second largest zinc producer, is based out of Udaipur.

Rishbhdeo is one of the major religious and industrial settlement on project corridor. This region has more than 200 mines of green marble. Rishabhdeo is the largest miner of green marble.9 0 per-cent of green marble in the world is produced in Rishabhdev. The turnover of marble industry is more than 500 crore. It also give employment to many labourers. Beyond this the town also has spinning and weaving mill by lnjbhilwara group. Thus it gives employment to 10000 local workers. The presence of temple also leads to income of many people

Growth of Rajasthan has been comparable to the national average economic growth. Rajasthan is rich in natural resources and benefits from its strategic geographic location in India. The state is pre-eminent in quarrying, mining in India and has been a leader in crude oil extraction over the past the few years. Moreover, Rajasthan is also a relevant tourism attractor in India. Considering the scenario, it may be assumed that the traffic growth on project highway would remain high and there are minimal risks in terms of growth.

Table 5-11 : GDP of India, Rajasthan and other important states

Year	India (GDP)	Bihar	Haryana	Madhya Pradesh	Maharashtra	Odisha	Punjab	Rajasthan	Uttar Pradesh	Uttarakhand	West Bengal	Delhi
1980-81	12336	514	357	623	1464	529	504	560	1631	138	830	269
1981-82	13030	543	371	639	1498	528	551	607	1670	141	808	291
1982-83	13411	548	394	668	1556	497	568	620	1800	152	840	328
1983-84	14464	601	402	702	1654	597	578	761	1871	158	939	320
1984-85	15037	658	418	668	1675	569	623	706	1900	161	964	333
1985-86	15663	672	493	726	1807	635	670	704	1975	167	1005	386
1986-87	16339	725	493	694	1832	643	694	771	2060	174	1045	411
1987-88	16917	685	484	789	1955	623	730	718	2154	182	1101	447
1988-89	18635	772	602	847	2159	754	769	1014	2434	206	1148	486
1989-90	19778	759	610	865	2515	805	834	993	2502	212	1188	531
1990-91	20824	831	674	987	2629	668	849	1149	2651	224	1251	553
1991-92	21122	784	688	916	2620	753	888	1061	2662	225	1349	638
1992-93	22254	737	688	983	3017	740	930	1220	2690	228	1389	660
1993-94	23519	755	719	1088	3349	788	970	1121	2757	233	1490	705
1994-95	25023	842	771	1107	3414	826	995	1325	2901	254	1594	790
1995-96	26846	712	787	1174	3791	864	1032	1374	2995	251	1713	804
1996-97	28987	893	879	1252	3941	804	1107	1535	3327	267	1832	915
1997-98	30234	850	887	1318	4158	920	1137	1721	3292	270	1985	1063
1998-99	32255	904	934	1405	4324	948	1203	1797	3316	274	2112	1116
1999-00	34837	950	1002	1552	4735	1008	1267	1801	3440	274	2264	1170
2000-01	36282	1106	1081	1426	4589	982	1309	1743	3511	308	2343	1215
2001-02	38236	1043	1165	1528	4751	1042	1326	1941	3575	323	2512	1262
2002-03	39719	1175	1236	1449	5079	1034	1348	1708	3690	353	2600	1359
2003-04	42883	1099	1358	1611	5471	1185	1433	2251	3885	381	2753	1433
2004-05	45906	1238	1475	1664	5948	1340	1504	2196	4079	431	2936	1588
2005-06	50257	1207	1608	1748	6810	1399	1577	2344	4317	492	3121	1752
2006-07	55066	1416	1791	1907	7748	1574	1748	2620	4660	551	3366	1969
2007-08	60199	1489	1931	1997	8650	1708	1899	2739	4959	648	3627	2191
2008-09	64248	1716	2080	2250	8786	1837	2004	2969	5336	716	3774	2464
2009-10	69769	1798	2340	2463	9634	1852	2132	3142	5668	839	4067	2667
2010-11	75987	2073	2498	2592	10732	1968	2270	3614	6120	927	4313	2888
2011-12	81069	2285	2712	2824	11222	2042	2392	3953	6451	1020	4471	3147
2012-13	85463	2369	2894	3069	11842	2163	2518	4098	6736	1095	4838	3342
2013-14	90636	2469	3142	3226	12671	2331	2675	4343	7075	1178	5247	3565
2014-15	97121	2557	3314	3394	13322	2359	2777	4656	7297	1257	5633	3882
2015-16	105033	2749	3612	3597	14417	2557	2926	4981	7894	1355	-	4291
2016-17	112476	3033	3927	4129	15744	2828	3095	5352	8457	1448	-	4658
2017-18	119762	-	-	4432	-	3029	-	5736	9011	1547	-	5035
Growth 1981-2018	6.34	5.05	6.88	5.44	6.82	4.83	5.17	6.49	4.73	6.75	5.79	8.24
Growth 1994-2018	7.02	6.23	7.66	6.03	6.96	5.77	5.17	7.04	5.06	8.20	6.54	8.53
Growth 2000-2018	7.10	7.07	8.37	6.00	7.32	6.30	5.40	6.65	5.50	10.10	6.27	8.45

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-12 : Recommended Growth Rates Optimistic

Category / Year	2021-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.44%	8.82%	8.21%	7.60%	7.01%	6.43%
Bus	5.26%	4.95%	4.64%	4.35%	4.07%	3.79%
LCV	3.55%	3.09%	2.64%	2.19%	1.75%	1.31%
2- Axle	3.73%	3.35%	2.96%	2.58%	2.21%	1.84%
3 - Axle	5.82%	5.20%	4.59%	3.99%	3.39%	2.80%
4 to6 Axle	6.52%	5.82%	5.13%	4.45%	3.78%	3.12%
7 and Above Axle	6.52%	5.82%	5.13%	4.45%	3.78%	3.12%

Table 5-13 : Recommended Growth Rates Pessimistic

Category / Year	2021-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	8.94%	8.32%	7.71%	7.10%	6.51%	5.93%
Bus	4.76%	4.45%	4.14%	3.85%	3.57%	3.29%
LCV	3.05%	2.59%	2.14%	1.69%	1.25%	0.81%
2- Axle	3.23%	2.85%	2.46%	2.08%	1.71%	1.34%
3 - Axle	5.32%	4.70%	4.09%	3.49%	2.89%	2.30%
4 to6 Axle	6.02%	5.32%	4.63%	3.95%	3.28%	2.62%
7 and Above Axle	6.02%	5.32%	4.63%	3.95%	3.28%	2.62%

Table 5-14 : Recommended Growth Rates Most Likely

Category / Year	2021-2026	2026-2031	2031-2036	2036-2041	2041-2046	2046-2051
Car/Jeep/Van	9.19%	8.57%	7.96%	7.35%	6.76%	6.18%
Bus	5.01%	4.70%	4.39%	4.10%	3.82%	3.54%
LCV	3.30%	2.84%	2.39%	1.94%	1.50%	1.06%
2- Axle	3.48%	3.10%	2.71%	2.33%	1.96%	1.59%
3 - Axle	5.57%	4.95%	4.34%	3.74%	3.14%	2.55%
4 to6 Axle	6.27%	5.57%	4.88%	4.20%	3.53%	2.87%
7 and Above Axle	6.27%	5.57%	4.88%	4.20%	3.53%	2.87%

It is expected that there will some bullet increment in traffic in year 2023-24 due to completion of Ahmedabad – Shyamalaji Road which is a feeder to project road. Hence some bullet increment is taken in year 2023-24.

Traffic and revenue have been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID-19 Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level

Taking recommended traffic growth and additional factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza - 348.450 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6540	781	921	2165	2043	4959	16	17424	45484
2024-25	7156	808	969	2246	2162	5283	16	18640	48345
2025-26	7786	833	1018	2321	2274	5591	17	19840	51111
2026-27	8473	859	1068	2398	2392	5916	18	21124	54039
2027-28	9219	886	1121	2477	2516	6260	19	22498	57146
2028-29	10031	913	1177	2560	2647	6624	20	23972	60451
2029-30	10915	941	1236	2645	2785	7010	21	25553	63964
2030-31	11811	966	1293	2723	2912	7370	22	27097	67308
2031-32	12780	992	1353	2804	3045	7747	23	28744	70839
2032-33	13829	1018	1416	2887	3185	8145	24	30504	74581
2033-34	14963	1045	1482	2972	3331	8563	25	32381	78532
2034-35	16191	1072	1551	3059	3484	9003	26	34386	82712
2035-36	17422	1096	1618	3137	3623	9404	27	36327	86640
2036-37	18746	1121	1688	3218	3767	9823	28	38391	90776
2037-38	20171	1146	1761	3301	3918	10261	29	40587	95135
2038-39	21704	1171	1838	3386	4074	10718	30	42921	99721
2039-40	23355	1197	1918	3473	4236	11196	31	45406	104553
2040-41	24993	1217	1996	3549	4380	11619	32	47786	109023
2041-42	26746	1238	2077	3627	4528	12058	33	50307	113709
2042-43	28621	1259	2161	3706	4682	12514	34	52977	118623

Table 6-2 : Total Tollable Traffic @ Toll Plaza - Chainage 348.450 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6508	775	916	2155	2034	4936	16	17340	45268
2024-25	7089	798	960	2225	2142	5233	16	18463	47888
2025-26	7678	818	1002	2288	2242	5511	17	19556	50377
2026-27	8316	839	1047	2353	2347	5804	18	20724	53015
2027-28	9007	860	1094	2419	2458	6113	19	21970	55804
2028-29	9755	881	1143	2487	2573	6438	20	23297	58747
2029-30	10566	903	1194	2558	2693	6780	21	24715	61860
2030-31	11380	922	1244	2621	2803	7094	22	26086	64789
2031-32	12257	941	1296	2685	2918	7422	23	27542	67868
2032-33	13201	961	1349	2751	3037	7766	24	29089	71109
2033-34	14218	981	1405	2818	3161	8126	25	30734	74521
2034-35	15313	1001	1463	2887	3290	8502	26	32482	78111
2035-36	16401	1018	1519	2947	3405	8838	27	34155	81434
2036-37	17566	1035	1578	3009	3523	9187	28	35926	84916
2037-38	18814	1053	1638	3072	3645	9550	29	37801	88564
2038-39	20150	1071	1701	3136	3771	9927	30	39786	92387
2039-40	21581	1089	1766	3201	3902	10319	31	41889	96397
2040-41	22987	1103	1829	3256	4015	10658	32	43880	100047
2041-42	24485	1117	1894	3312	4131	11007	33	45979	103852
2042-43	26080	1131	1961	3368	4250	11368	34	48192	107823

Traffic projections for Most Likely scenario are given as under

Table 6-3 : Total Tollable Traffic @ Toll Plaza - Chainage 348.450KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6524	776	918	2160	2038	4948	16	17381	45377
2024-25	7123	801	964	2236	2152	5258	16	18550	48114
2025-26	7733	823	1010	2304	2258	5551	17	19696	50740
2026-27	8396	847	1058	2375	2370	5861	18	20925	53531
2027-28	9115	872	1108	2448	2487	6187	19	22236	56479
2028-29	9896	897	1160	2523	2609	6531	20	23636	59597
2029-30	10744	923	1215	2600	2737	6895	21	25135	62907
2030-31	11599	944	1268	2671	2855	7232	22	26591	66040
2031-32	12522	966	1324	2743	2978	7584	23	28140	69338
2032-33	13517	989	1382	2817	3106	7954	24	29789	72817
2033-34	14592	1013	1442	2893	3241	8342	25	31548	76491
2034-35	15752	1038	1505	2971	3381	8750	26	33423	80372
2035-36	16910	1058	1567	3040	3507	9117	27	35226	83987
2036-37	18153	1078	1631	3111	3638	9500	28	37139	87786
2037-38	19488	1098	1697	3184	3774	9899	29	39169	91776
2038-39	20921	1119	1766	3258	3914	10315	30	41323	95966

2039-40	22460	1140	1839	3334	4059	10749	31	43612	100376
2040-41	23978	1157	1909	3399	4186	11129	32	45790	104420
2041-42	25600	1175	1982	3465	4317	11522	33	48094	108652
2042-43	27332	1193	2058	3532	4452	11930	34	50531	113086

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Udaipur – Gujarat Border on NH-8 project stretch, the Target Date and Target Traffic are defined as under:

Target Date – 21st September 2026

Target Traffic - 61435 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. The probable extension of concession period is estimated according to article 29 of concession agreement which comes to about a year. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	53583	-13%	19%	19%	21	4.0

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	54098	-12%	18%	18%	21	3.8

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2026	61435	53065	-14%	20%	20%	21	4.2

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

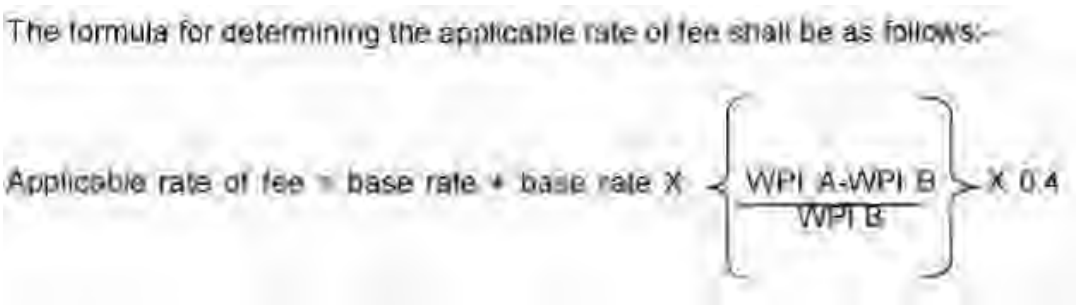
This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Udaipur- Gujarat Border section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee 30 time the single journey fee.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van I - Rs. 275 per month
    b) Other local Commercial at 50% of the regular single journey toll fee

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.



Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

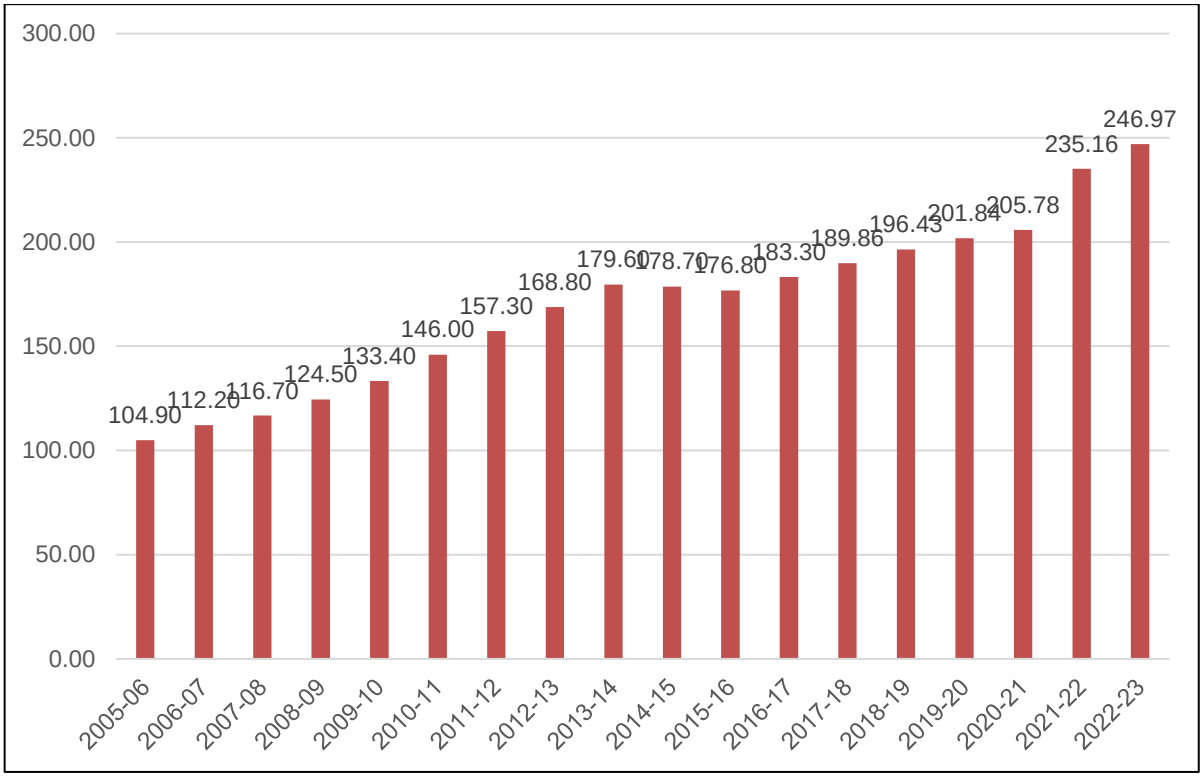


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus, worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km TP-348.450 KM

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	175	280	585	585	635	915	1115
2024-25	180	295	615	615	670	960	1170
2025-26	190	310	645	645	705	1010	1230
2026-27	200	325	680	680	740	1065	1295
2027-28	210	340	710	710	775	1115	1355
2028-29	220	355	745	745	810	1170	1420
2029-30	230	375	780	780	850	1225	1490
2030-31	240	390	820	820	895	1285	1560
2031-32	255	410	860	860	935	1345	1640
2032-33	265	430	900	900	980	1410	1720
2033-34	280	450	945	945	1030	1480	1800
2034-35	290	470	990	990	1080	1550	1890
2035-36	305	495	1040	1040	1130	1630	1980
2036-37	320	520	1090	1090	1190	1710	2080
2037-38	340	545	1145	1145	1245	1790	2180
2038-39	355	570	1200	1200	1310	1880	2290
2039-40	370	600	1260	1260	1375	1975	2405
2040-41	390	630	1320	1320	1440	2070	2520
2041-42	410	660	1385	1385	1515	2175	2650
2042-43	430	695	1455	1455	1590	2285	2780

Table 7-3 : Toll Rates for Return Journey @ TP-348.450 KM

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	260	420	875	875	955	1375	1675
2024-25	270	440	920	920	1005	1445	1755
2025-26	285	460	965	965	1055	1515	1845
2026-27	300	485	1015	1015	1110	1595	1940
2027-28	315	510	1065	1065	1160	1670	2035
2028-29	330	535	1115	1115	1220	1750	2130
2029-30	345	560	1170	1170	1275	1835	2235
2030-31	365	585	1225	1225	1340	1925	2345
2031-32	380	615	1285	1285	1405	2020	2455
2032-33	400	645	1350	1350	1470	2115	2575
2033-34	420	675	1415	1415	1545	2220	2700
2034-35	440	710	1485	1485	1620	2330	2835
2035-36	460	745	1555	1555	1700	2440	2975
2036-37	485	780	1635	1635	1780	2560	3120
2037-38	505	820	1715	1715	1870	2690	3270
2038-39	530	860	1800	1800	1960	2820	3435
2039-40	560	900	1890	1890	2060	2960	3605
2040-41	585	945	1980	1980	2160	3110	3785
2041-42	615	995	2080	2080	2270	3260	3970
2042-43	645	1040	2185	2185	2385	3425	4170

Table 7-4 : Toll Rates for Monthly Pass Local @ TP-348.450 KM

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	675
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825

Table 7-5 : Toll Rates for Monthly Pass @ TP-348.450 KM

Year	Car	Mini Bus /LCV	Bus	Truck	3-Axle Commercial Vehicle	Multi Axle	Oversized Vehicle
2023-24	5750	9290	19470	19470	21240	30530	37170
2024-25	6045	9765	20455	20455	22315	32080	39050
2025-26	6350	10260	21495	21495	23450	33710	41040
2026-27	6675	10785	22595	22595	24650	35430	43135
2027-28	6995	11300	23680	23680	25830	37135	45205
2028-29	7335	11845	24820	24820	27075	38920	47385
2029-30	7685	12415	26020	26020	28385	40800	49670
2030-31	8060	13020	27275	27275	29755	42775	52070
2031-32	8450	13650	28600	28600	31200	44845	54595
2032-33	8860	14315	29990	29990	32715	47025	57250
2033-34	9290	15010	31450	31450	34310	49320	60040
2034-35	9745	15745	32985	32985	35985	51730	62975
2035-36	10225	16515	34605	34605	37750	54265	66060
2036-37	10725	17325	36305	36305	39605	56930	69305
2037-38	11255	18180	38090	38090	41555	59735	72720
2038-39	11810	19080	39970	39970	43605	62685	76310
2039-40	12395	20025	41950	41950	45765	65790	80090
2040-41	13010	21015	44035	44035	48040	69055	84070
2041-42	13660	22065	46230	46230	50430	72495	88255
2042-43	14340	23165	48535	48535	52950	76115	92660

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2042-43 years starting from the year 2023-24 are shown in tables below.

Table 7-6 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	317.77	**317.77**
2024-25	352.95	**352.95**
2025-26	392.17	**392.17**
2026-27	436.46	**436.46**
2027-28	484.30	**484.30**
2028-29	535.23	**535.23**
2029-30	592.73	**592.73**
2030-31	653.88	**653.88**
2031-32	722.93	**722.93**
2032-33	794.12	**794.12**
2033-34	877.80	**877.80**
2034-35	966.36	**966.36**
2035-36	1064.97	**1064.97**
2036-37	1167.05	**1167.05**
2037-38	1281.88	**1281.88**
2038-39	1408.37	**1408.37**
2039-40	1552.21	**1552.21**
2040-41	1690.83	**1690.83**
2041-42	1850.84	**1850.84**
2042-43	2025.08	**2025.08**

Table 7-7 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	316.21	**316.21**
2024-25	349.52	**349.52**

2025-26	386.49	**386.49**
2026-27	428.11	**428.11**
2027-28	472.84	**472.84**
2028-29	520.10	**520.10**
2029-30	573.22	**573.22**
2030-31	629.39	**629.39**
2031-32	692.62	**692.62**
2032-33	757.26	**757.26**
2033-34	833.03	**833.03**
2034-35	912.79	**912.79**
2035-36	1001.21	**1001.21**
2036-37	1091.86	**1091.86**
2037-38	1193.46	**1193.46**
2038-39	1304.95	**1304.95**
2039-40	1431.20	**1431.20**
2040-41	1551.61	**1551.61**
2041-42	1690.38	**1690.38**
2042-43	1840.63	**1840.63**

Table 7-8 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	Total
2023-24	316.88	**316.88**
2024-25	351.03	**351.03**
2025-26	389.16	**389.16**
2026-27	432.12	**432.12**
2027-28	478.41	**478.41**
2028-29	527.44	**527.44**
2029-30	582.64	**582.64**
2030-31	641.32	**641.32**
2031-32	707.38	**707.38**
2032-33	775.29	**775.29**
2033-34	854.90	**854.90**
2034-35	938.83	**938.83**
2035-36	1032.21	**1032.21**
2036-37	1128.41	**1128.41**
2037-38	1236.44	**1236.44**
2038-39	1355.15	**1355.15**
2039-40	1490.04	**1490.04**
2040-41	1619.18	**1619.18**
2041-42	1768.22	**1768.22**
2042-43	1930.15	**1930.15**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Udaipur to Gujarat Border section of NH-8 in state of Rajasthan is nearing completion of six laning. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-8 which connects Mumbai to Delhi and is part of golden quadrilateral. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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GOA/KARNATAKA BORDER TO KUNDARPUR (KM 93.300 TO KM 283.300) SECTION OF NH-17 IN THE STATE OF GOA & KARNATAKA





TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

APRIL 2023

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A-465

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(KM 93.300 TO KM 283.300)

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GOA & KARNATAKA

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GMD CONSULTANTS ★ NAVI MUMBAI ★

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1

INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various phases of NHDP. Under Phase IV NHAI has planned to convert existing 2-lane National Highways into 4-lane National Highway.

The project under consideration, Four Laning of **Goa / Karnataka Border** to **Kundapur** section of NH-17 from km 93.300 to km 283.300 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s IRB Westcoast Tollway Ltd*. (Concessionaire) has been awarded the Project for a concession period of 28 years starting from appointed date of 3rd March 2014. The Project is under capacity augmentation to six lanes. Tolling operation under current concession has commenced in February 2020 after partial COD on 31th January 2020.Further to it additional length of 161.050 Km has been completed and put to commercial operation in February 2022. PCOD-3 has been received in March 2023 & the rest of length is expected to complete by Financial Year 2024.

Project road from Goa/ Karnataka Border (Near Karwar) to Kundapur is about 190 km section of Mumbai - Goa highway (NH-17) from Km 93.700 to Km 283.300. NH-17 is most important transportation corridor along west cost of India. It starts at Panvel, at the junction of National Highway 4 (NH 4), and ends at Kanyakumari. NH-17 mainly traverses through the west coast of India, sometimes touching the shores of the Arabian Sea. The NH 17 touches the Arabian Sea at Maravanthe in Karnataka, Thalassery, Alappuzha and Kollam in Kerala. It passes through the Indian states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu

Following figure shows the project road alignment.

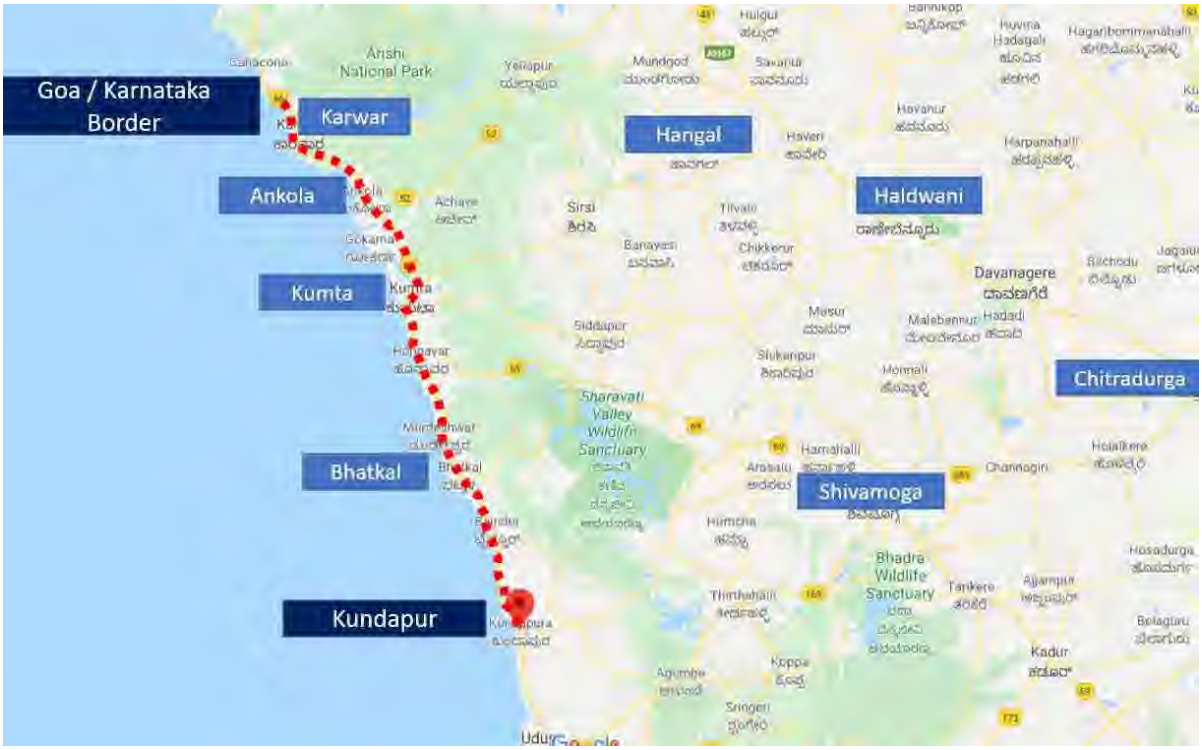


Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

Project of Four Laning of Goa / Karnataka Border – Kundapur section of NH-17 from Km 93.700 to Km 283.300 is Phase-IV project of NHAI on PPP basis under DBFOT pattern. Ankola, Bhatkal, Kumta and Karwar are the main urban centers on project Corridor. For most of the length project road runs parallel to western coast.

It can be observed that project road forms a main connectivity between Mumbai and southern parts on west coast like Goa, Kanoor, Kocchi, Thiruanantpuram and finally Kanyakumai. Thus transportation requirement in terms of passenger and goods are largely dependent on this spinal road

2.2 Project Stretch Description

project road section of NH-17 (now NH-66) passes through the important places like Karwar, Bhatkal, Ankola. This is the main connectivity between Mumbai and-Goa and Kerala. The Project Road passes through the districts of Karnataka and Goa.

National Highway 66, commonly referred to as NH 66 (Erstwhile NH-17 and a part of NH-47),is a busy National Highway that runs roughly north–south along the western coast of India, parallel to the Western Ghats. It connects Panvel (a city south of Mumbai) to Kanyakumari, passing through the states of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu

Following are the major centers of areas which have impact on project road in terms of traffic.

Goa: is a state in India within the coastal region known as the Konkan, in Western India. It is bounded by Maharashtra to the north and Karnataka to the east and south, with the Arabian Sea forming its Western coast. It is India's smallest state by area and the fourth smallest by population. Goa has the highest GDP per capita among all Indian states,[3] that is two and a half times that of the country. It was ranked the 'best placed State' by the "Eleventh Finance

Commission" for its infrastructure and ranked on top for the 'best quality of life' in India by the National Commission on Population based on the 12 Indicators

Kumta: is a town and a taluk in the Uttara Kannada district of Karnataka, India. Kumta is about 142 km south of Margao and 58 km north of Bhatkal. It is situated 72.7 km from Karwar, the district headquarters. It is one of the important stations along the Konkan Railway line running between Mumbai and Mangalore.

Bhatkal: is a port town in the Uttara Kannada District of the South Indian state of Karnataka. The town of Bhatkal lies on National Highway 66, which runs between Mumbai and Kochi, and has one of the major railway stations along the Konkan Railway line, which runs between Mumbai and Mangaluru

As project highway runs along the west coast for most parts of its alignment, there are only radial roads connecting to project highway which work as feeder network to project road.

Four laning of project highway is higher priority of both central & concerned state governments. Currently highway has bottlenecks at many places which are being improved on priority. Due to poor condition of NH-17 and higher number of accidents some part of traffic uses Mumbai -Pune Expressway and then take Bangalore Highway (NH-48) to go to Goa and parts of Karnataka and Kerala. This traffic is expected to come back on project highway

There are three operative toll plazas at project stretch. at km 119.00, km 184.00 and km 243.00 respectively. Following figure show project alignment and toll plaza locations.



Figure 2-1 : Project Alignment with Toll Plaza

2.3 Project Corridor Illustration

Six laning of project stretch is complete. The following photographs illustrate project section along the corridor.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from a client for project.

- Classified traffic volume counts at toll plaza locations on Goa Karnataka Border to Kundapur section of NH17 for period for February 2020 to March 2020, 2020-21, 2021-22 and 2022-23.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 119 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23
2	Km 184 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23	For Period from February 2020 to March 2020, 2020-21, 2021-2022 & 2022-23
3	Km 243 Toll Plaza	AADT for Period from February 2020 to March 2020, 2020-21, 2021-2022 &	For Period from February 2020 to March 2020, 2020-21, 2021-2022	For Period from February 2020 to March 2020, 2020-21,	For Period from February 2020 to March 2020, 2020-21, 2021-2022	For Period from February 2020 to March 2020, 2020-21, 2021-2022 &

		2022-23	& 2022-23	2021-2022 & 2022-23	& 2022-23	2022-23

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below.

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Minibus /LCV
- Bus
- Truck
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base year 2019-20, 2020-21, 2021-22 and from April 2022 to March 2023 as under for both toll plazas–

Table 3-3 : Traffic Data at Belekeri Toll Plaza at Km 119.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	1485	1639	1974	3061
2	Minibus/LCV	380	360	150	130
3	Bus	308	101	159	234
4	Truck	177	256	240	259
5	3 Axle	162	130	155	182

6	Multi Axle	339	329	519	627
7	Oversized Vehicles	8	7	5	6
Total		**2859**	**2821**	**3202**	**4497**

Table 3-4 : Traffic Data at Holegadde Toll Plaza at Km 184.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	2587	2759	3240	5084
2	Minibus/LCV	830	582	266	292
3	Bus	455	293	343	532
4	Truck	662	676	693	844
5	3 Axle	312	272	277	303
6	Multi Axle	888	815	869	1139
7	Oversized Vehicles	2	5	6	6
Total		**5736**	**5401**	**5693**	**8198**

Table 3-5 : Traffic Data at Shirur Toll Plaza at Km 243.00

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	2600	2953	3644	5778
2	Minibus/LCV	756	602	318	394
3	Bus	463	295	334	523

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- February 20 to March 20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
4	Truck	700	684	814	950
5	3 Axle	305	273	315	319
6	Multi Axle	853	805	873	1123
7	Oversized Vehicles	2	7	6	6
Total		**5679**	**5619**	**6304**	**9092**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July -21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed due to second and third wave of Covid-19. Traffic numbers for period from April-2020 to March 2021 were not representative of traffic pattern at project corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Since the traffic data is available year 2022-23 report has been updated taking this as base year traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in ***Table 3-6.***

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch Base Year 2022-23

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-20	Belekeri at Km 119.00	2859	5557	1.94
	Holegadde at Km 184.00	5736	12124	2.11
	Shirur at Km 243.00	5679	11986	2.11
2020-21	Belekeri at Km 119.00	2821	5150	1.83
	Holegadde at Km 184.00	5401	11043	2.04
	Shirur at Km 243.00	5619	11266	2.00

2021-22	Belekeri at Km 119.00	3202	6219	1.94
	Holegadde at Km 184.00	5693	11512	2.02
	Shirur at Km 243.00	6304	12465	1.98
2022-23	Belekeri at Km 119.00	4497	8125	1.81
	Holegadde at Km 184.00	8198	15705	1.92
	Shirur at Km 243.00	9092	16823	1.85

It can be observed from above that project traffic has PCU index from 1.8 to 2.0 which is an indicator of good proportion of commercial traffic in traffic mix in project corridor. The following figure illustrates variation of PCU index at three toll plaza locations.

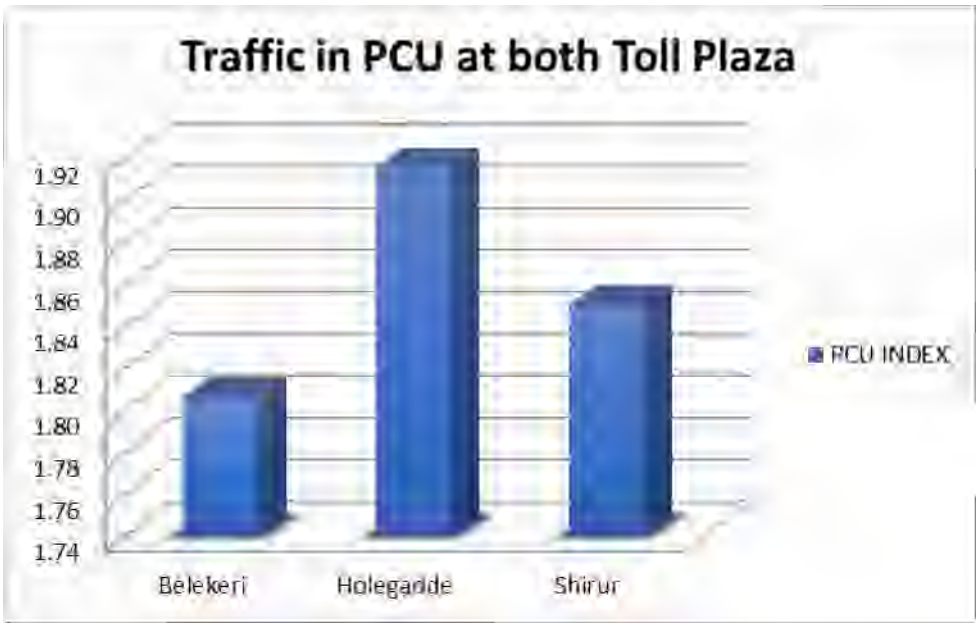


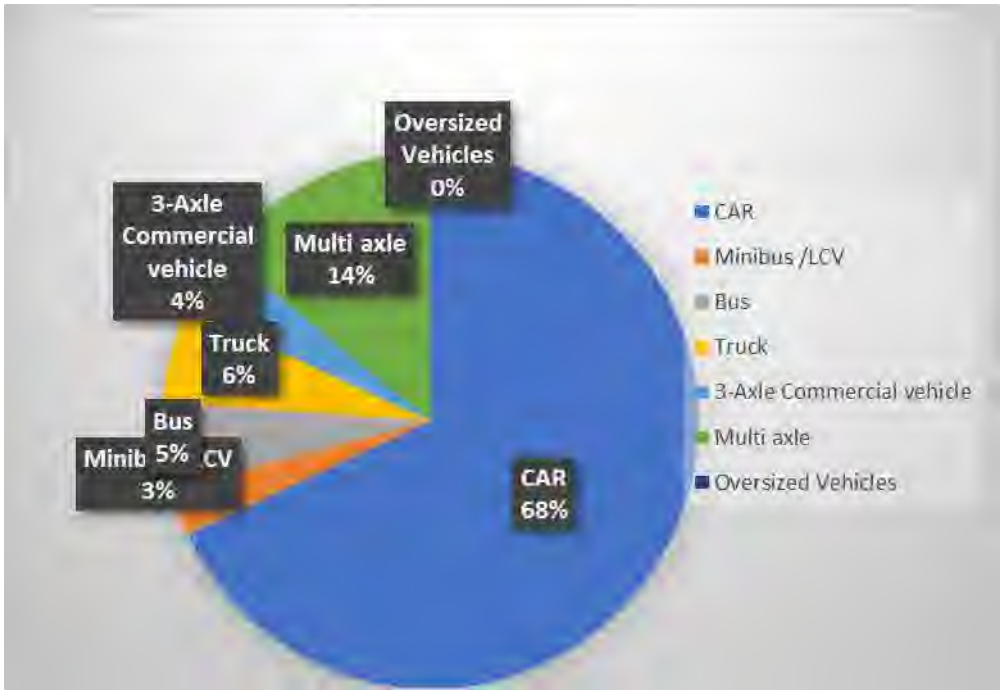
Figure 3-1 : Comparison of PCU Index

It can be observed that PCU index is consistent at all three plaza locations.

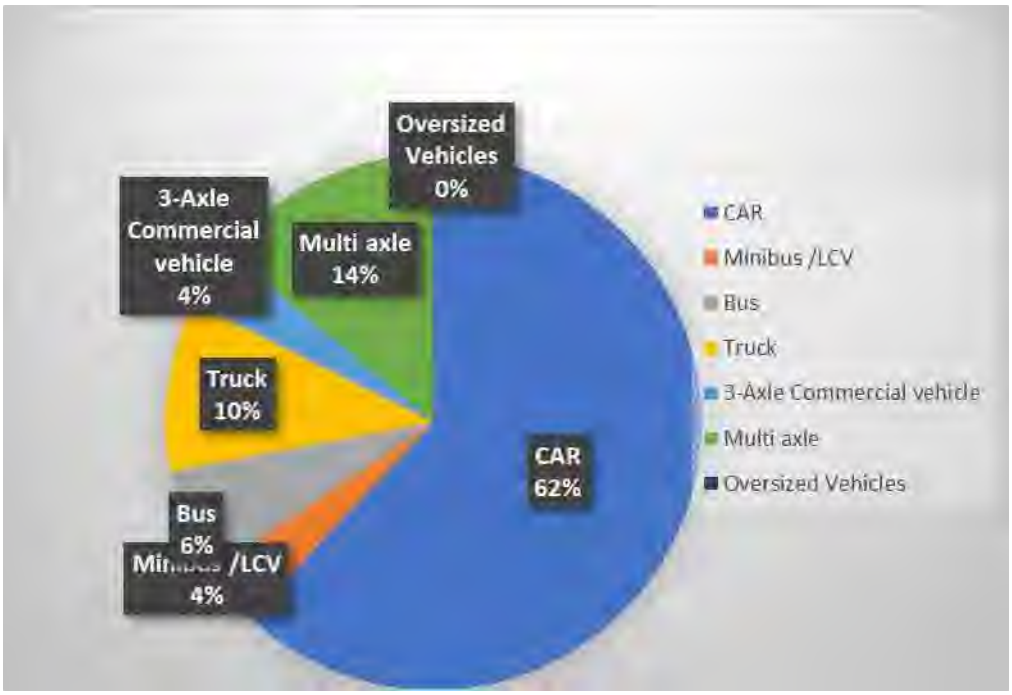
3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher

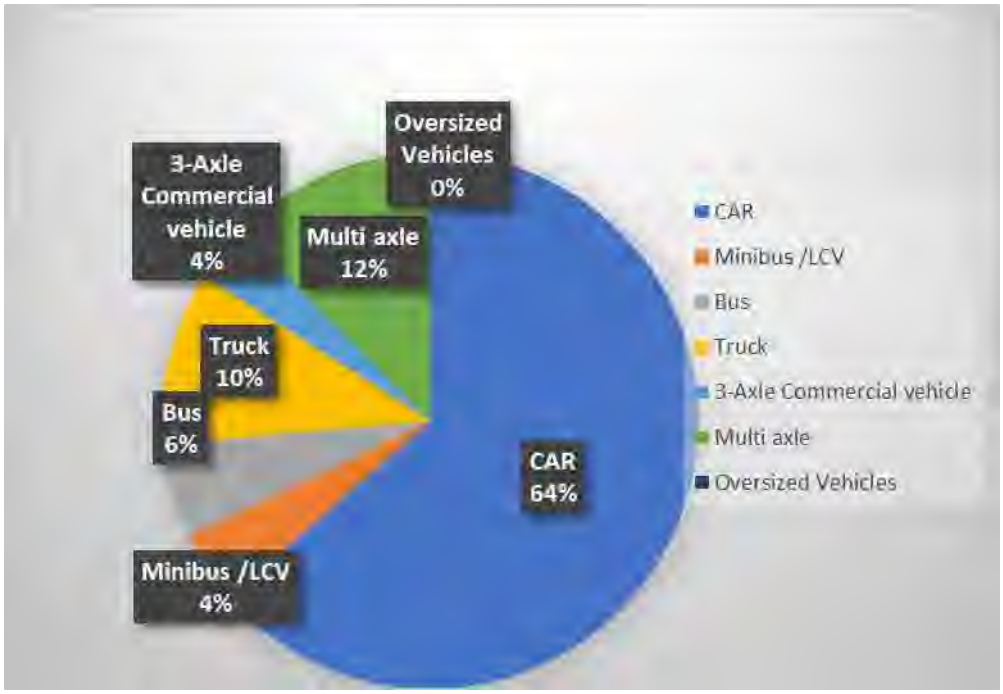
axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.



Model Split of Tollable Vehicle @ KM 119.000



Model Split of Tollable Vehicle @ KM 184.000



Model Split of Tollable Vehicle @ KM 243.000

It is observed that car traffic forms about 68% of total traffic at toll plaza location 1 while multi axle along with 3 axle commercial vehicles are about 18% of total traffic. Truck / Bus and LCV share about 11% and 3% of traffic volume respectively at toll plaza on 119.000 km.

It is observed that car traffic forms about 62% of total traffic at toll plaza location 2 while multi axle along with 3 axle commercial vehicles are about 18% of total traffic. Truck / Bus and LCV share about 16% and 4% of traffic volume respectively at toll plaza on 184.000 km.

It is observed that car traffic forms about 64% of total traffic at toll plaza location 3 while multi axle along with 3 axle commercial vehicles are about 16% of total traffic. Truck / Bus and LCV share about 16% and 4% of traffic volume respectively at toll plaza on 243.000 km.

Thus project corridor has good mix of about 60% -70% passenger and 30-40% commercial traffic.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey

3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2019-20, 2020-21, 2021-22 & April 2022 to March 2023.

Table 3-8 : Journey Type Bifurcation of Traffic at TP-1 KM 119.00

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	2572
2	Return Journey	1764
3	Local Commercial Single Journey	159
4	Monthly Pass Local	2
5	Monthly Pass	0

Table 3-9 : Journey Type Bifurcation of Traffic at TP KM 184.00

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	4940
2	Return Journey	2868
3	Local Commercial Single Journey	386
4	Monthly Pass Local	4
5	Monthly Pass	0

Table 3-10 : Journey Type Bifurcation of Traffic at TP KM 243.00

Sr. No	Type	Traffic Volume (Nos.)2022-23
1	Single Journey	4893
2	Return Journey	3852
3	Local Commercial Single Journey	337

4	Monthly Pass Local	10
5	Monthly Pass	0

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 57%. Return journey component is 39% and Local Commercial Single Journey is 4% at toll plaza at Km 119.00

The single journey component in total traffic numbers is a high as 60%. Return journey component is 35% and Local Commercial single journey 5% at toll plaza at Km 184.00

The single journey component in total traffic numbers is a high as 54%. Return journey component is 42% and Local Commercial Single Journey is 4% at toll plaza at Km 243.00

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors.

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4
INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc,
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

Project stretch runs on west coast of India. Most of the roads other than NH-17 run radial to NH-17 as complimentary network. There are large number of stream and rivers falling into Arabian sea on west coast. Hence any parallel road would require many major bridges. This has prevented any parallel road to NH-17. Following figure show bird's eye view of project corridor.



Figure 4-1 : Project corridor and radial roads

Still geographically there can be alternate routes to project road between certain pairs of origin and destinations. Following figure show such routes which are much longer than project road practically cannot be considered as alternate routes.



Figure 4-2 : Alternate route at regional level

Thus practically there is no alternate route to project road between Goa/ Karnataka border and Kundapur. Under these circumstances it is not envisaged that commercial or passenger traffic would switch to alternate roads from the project road. Further with completion of Mumbai Kanyakumari section of road traffic on project road would get a boost in period 2024-2026 when it would be completed.

CHAPTER 5
GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Goa/ Karnataka Border – Kundapur section of NH-17 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic

indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log(P) = k \times Log(EI) + A$$

Where,

P	=	*Number of Vehicles (Mode wise)*
EI	=	*Economic Indicator*
A	=	*Regression constant*
k	=	*Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Karnataka. Toll plazas at Km 119.00. Km 184.00 and 243.00 are in the state of Karnataka. Contribution of Goa / Maharashtra is also substantial at stretch. For elasticity calculations, working data from Karnataka and Maharashtra / Goa has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-1 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1269430	4.96	6.10		
2013	94382	1420767	4.97	6.15	5%	
2014	101864	1572521	5.01	6.20	8%	
2015	105703	1741831	5.02	6.24	4%	
2016	116819	1916373	5.07	6.28	11%	
2017	131260	2110493	5.12	6.32	12%	7.83%

Regression analysis of same is given in figure below

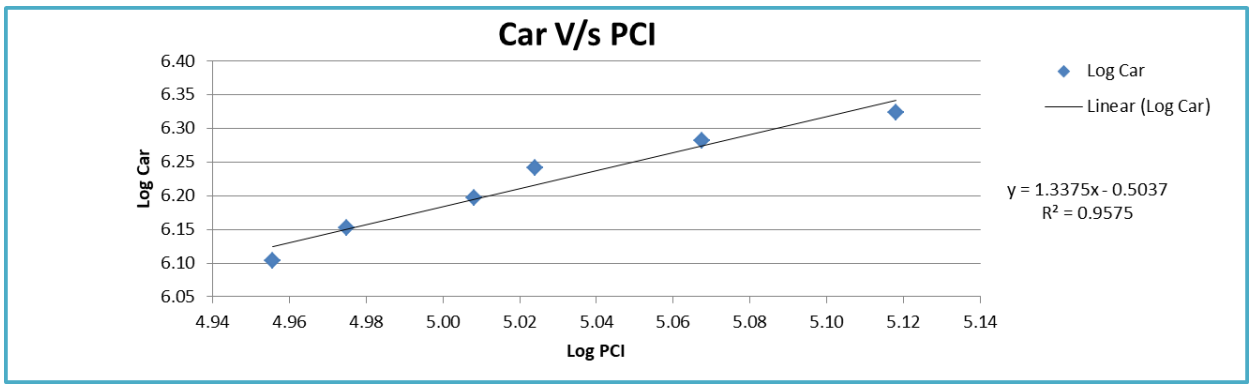


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Karnataka

Table 5-2 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	1458545	9513	6.16	3.98		
2013	1466020	9956	6.17	4.00	1%	
2014	1473384	10925	6.17	4.04	1%	
2015	1480636	11224	6.17	4.05	0%	
2016	1487779	11503	6.17	4.06	0%	
2017	1494812	11888	6.17	4.08	0%	0.49%

Regression analysis of same is given in figure below

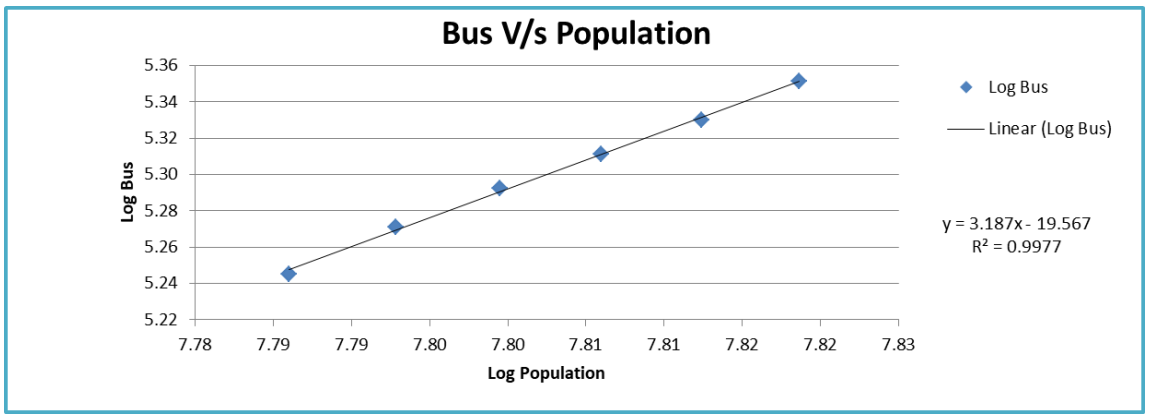


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details

Table 5-3 : Goods Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth
2012	554990	221160	5.74	5.34		
2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	7.85%

Following figure depict regression analysis and extrapolation.

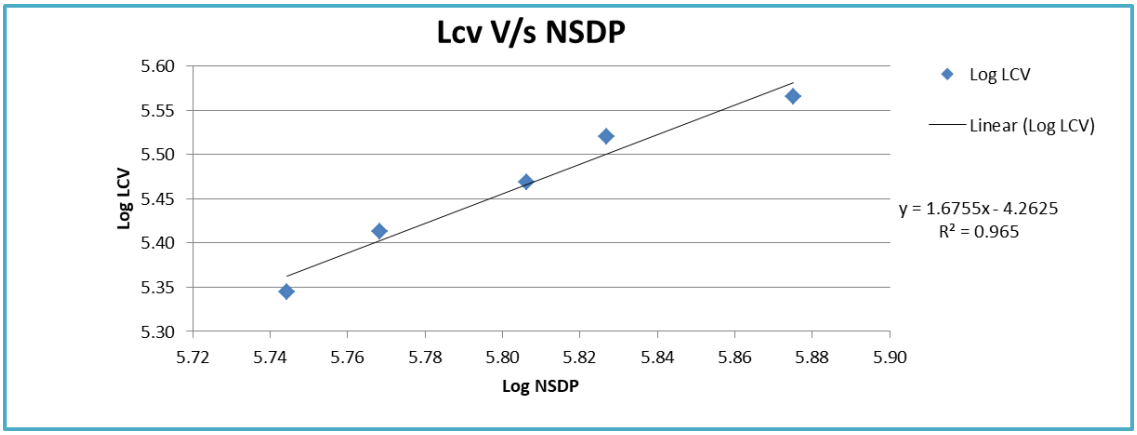


Figure 5-3 : Regression and Elasticity NSDP vs. LCV Traffic - extrapolation Karnataka

Table 5-4 : Traffic Truck Vs NSDP Karnataka

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation.

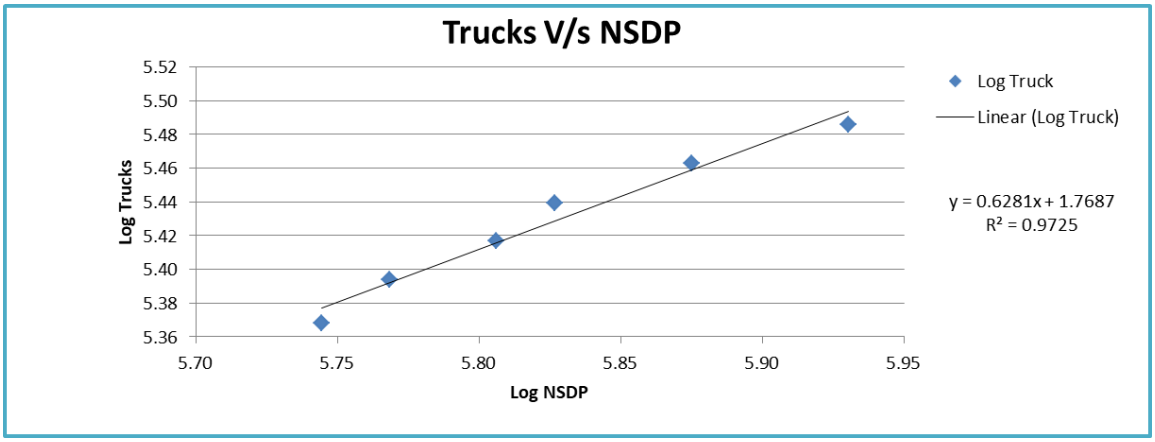


Figure 5-4 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Karnataka

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-5 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.3375x + -0.5037	R² = 0.9575	1.3375	7.83%	10.47%
	Bus	Population	y = 3.187x - -19.567	R² = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - -4.2625	R² = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R² = 0.9725	0.6281	9.00%	5.65%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-6 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

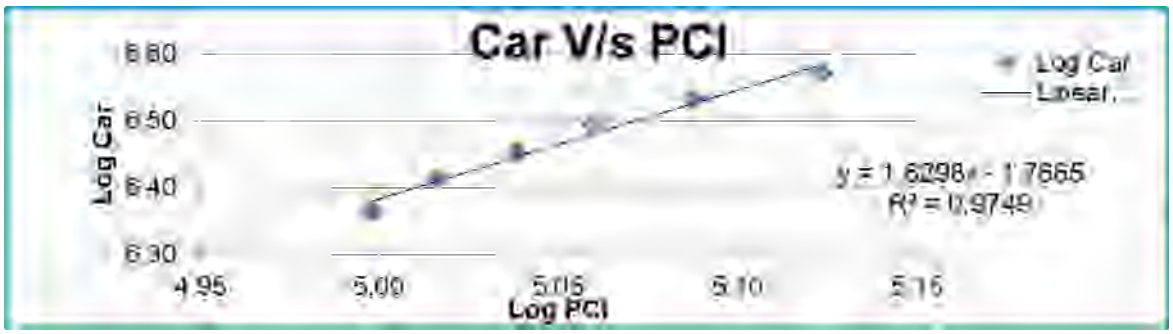


Figure 5-5 : Regression and Elasticity PCI vs. Car – Extrapolation Maharashtra

Table 5-7 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	
2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	

2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

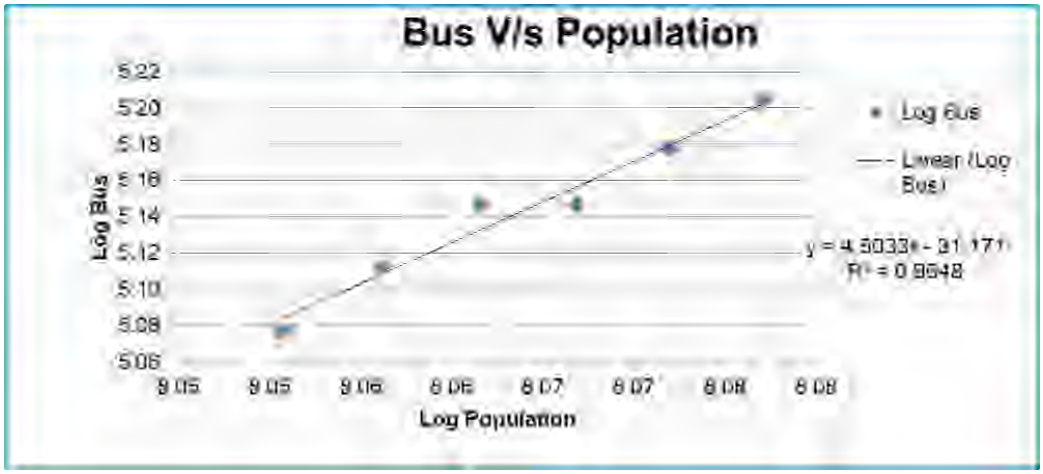


Figure 5-6 : Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

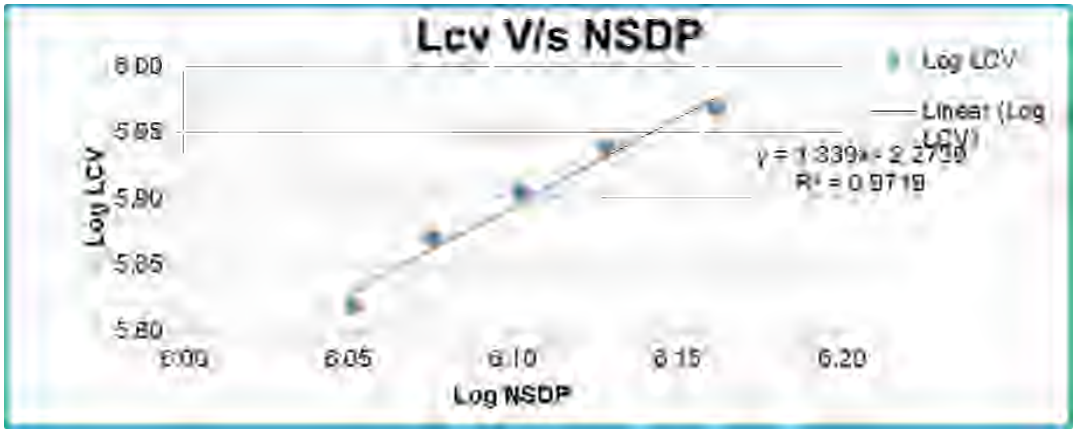


Figure 5-7 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Maharashtra

Table 5-9 : Trucks Traffic Vs NSDP Maharashtra

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation.

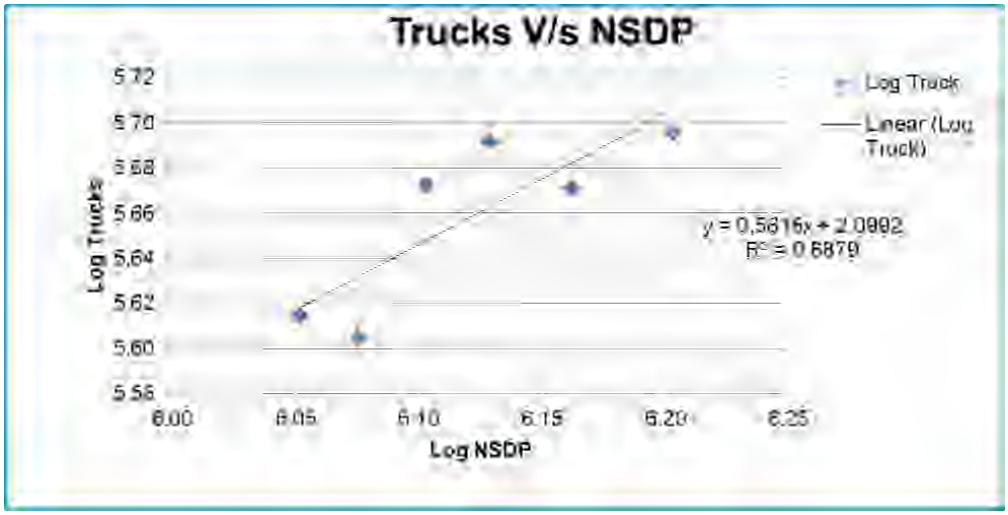


Figure 5-8 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Maharashtra

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Maharashtra.

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R^2 = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R^2 = 0.9648	4.5033	1.23%	5.52%

	LCV	NSDP	y = 1.339x - -2.2739	R^2 = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R^2 = 0.6879	0.5815	7.22%	4.20%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Goa/ Karnataka Border to Kundapur is under tolling operation with current concessionaire and has only two month of tolling history from February 2020. Further for last two years traffic is impacted by COVID-19 pandemic. Hence sufficient data points to be able to establish a reliable past trend of traffic growth are not available. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

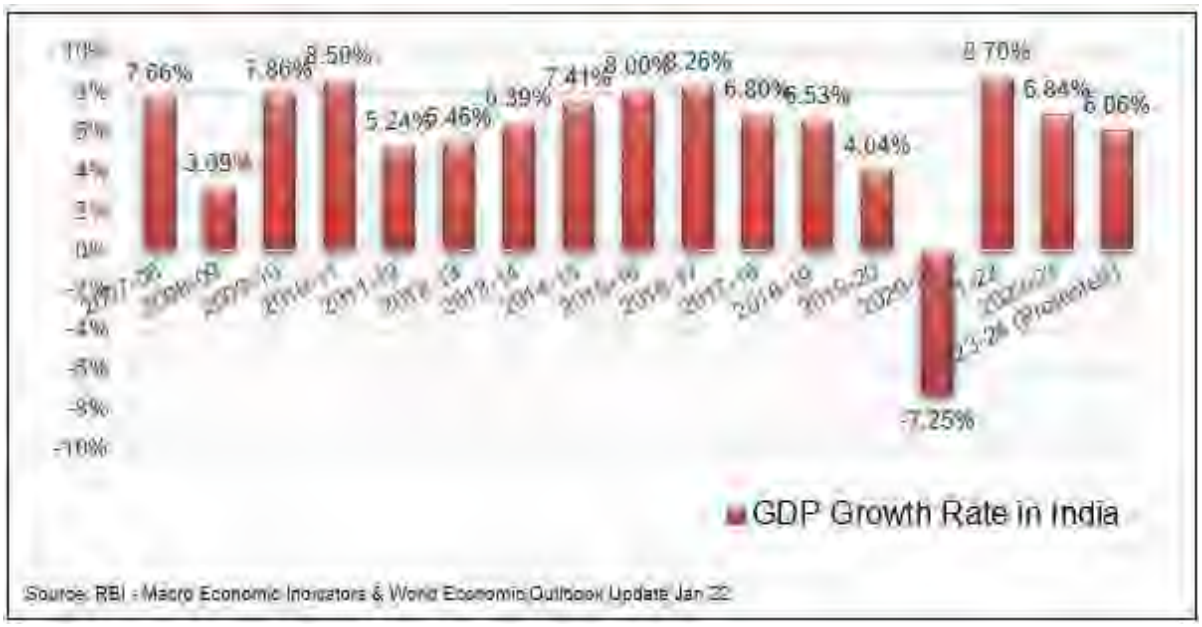


Figure 5-9 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

West Coast Ports - West coast is coast of submergence (except Malabar Coast) while east coast is an emergent coast. These imply that sea is deeper in west coast than sea on east coast. So, west coast has favourable conditions for natural

harbours. This is the reason that ports on west coast of India contribute more in terms of commercial cargo traffic. Expansion of JNPT port may further boost cargo traffic from Kerala, Karnataka and Parts of Tamilnaduon project corridor.

Mangalore - The coastal city of Mangalore is one of the upcoming and fastest developing metropolises of Karnataka. While Mangalore embeds itself in the conventional city affairs, what sets it apart from others is the amalgamation of its heritage, history, culture, food and scenic coastal lines.

Known for its architectural marvels, temples, churches and pristine beaches, the city attracts tourists throughout the year. Some of the popular tourist spots include Mangaladevi temple, St. Aloysius church, Pilikula Nisarga Dhama (a biological park and a picnic spot), Panambur beach and Surathkal beach. Its proximity to Agumbe, Coorg, Kaup beach and temple town Udupi also makes for a quick getaway for city folks.

Mangalore is the largest exporter of coffee in India. One of the flourishing industries in the city is the automobile leaf spring business. Petrochemicals, iron-ore, fertilizers and agricultural processing are some other thriving industries.

In addition, three special economic zones (SEZs) are being set up in the city with IT companies such as TCS, Wipro and Lotus estimated to invest up to Rs.30 billion, creating 67,000 jobs over the next three years. Mangalore is also one of the top five emerging cities of India for outsourcing, according to Alsbridge.

The city is witnessing aggressive industrial development, aiding in its economic growth. Growth of Mangalore as tourism and Industrial hub would have positive impact on growth of traffic on project road

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend.

Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth is suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.5% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Project Stretch

Table 5-11 : Recommended Growth Rates Optimistic

Category / Year	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	10.02%	9.29%	8.50%	8.14%	8.03%	7.57%
Bus	5.59%	5.28%	4.97%	4.90%	4.75%	4.52%
LCV	5.80%	4.95%	4.12%	3.72%	3.70%	3.28%
2- Axle	5.71%	5.04%	4.36%	4.04%	4.02%	3.68%
3 - Axle	6.04%	5.32%	4.60%	4.26%	4.24%	3.88%
4 to 6 Axle	7.02%	6.17%	5.33%	4.93%	4.90%	4.47%
7 and Above Axle	7.02%	6.17%	5.33%	4.93%	4.90%	4.47%

Table 5-12 : Recommended Growth Rates Pessimistic

Category / Year	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	9.52%	8.79%	8.00%	7.64%	7.53%	7.07%
Bus	5.09%	4.78%	4.47%	4.40%	4.25%	4.02%
LCV	5.30%	4.45%	3.62%	3.22%	3.20%	2.78%
2- Axle	5.21%	4.54%	3.86%	3.54%	3.52%	3.18%
3 - Axle	5.54%	4.82%	4.10%	3.76%	3.74%	3.38%
4 to6 Axle	6.52%	5.67%	4.83%	4.43%	4.40%	3.97%
7 and Above Axle	6.52%	5.67%	4.83%	4.43%	4.40%	3.97%

Table 5-13 : Recommended Growth Rates Most Likely

Category / Year	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050
Car/Jeep/Van	9.77%	9.04%	8.25%	7.89%	7.78%	7.32%
Bus	5.34%	5.03%	4.72%	4.65%	4.50%	4.27%
LCV	5.34%	5.03%	4.72%	4.65%	4.50%	4.27%
2- Axle	5.55%	4.70%	3.87%	3.47%	3.45%	3.03%
3 - Axle	5.46%	4.79%	4.11%	3.79%	3.77%	3.43%
4 to 6 Axle	5.79%	5.07%	4.35%	4.01%	3.99%	3.63%

7 and Above Axle	6.77%	5.92%	5.08%	4.68%	4.65%	4.22%

Project road is part of planned Mumbai- Kochi Economic Corridor under Bharatmala Pariyojna. At present various sections of corridor are under advance stage of construction and planning. Out of total about 1300 km of total length of corridor approximately 900 km is either completed or in under construction. Balance 400 km is to be awarded soon under Bharatmala Pariyojna. It is expected that substantial part of Mumbai – Kochi Economic Corridor would be operational by year 2024-25. This would be shorter than current preferred route of Bangalore highway (NH-48) by about 100 km. In such case it is expected that in horizon year 2024-25 certain part of traffic between Gujarat / Mumbai and Kochi / Kanyakumari would starts using project corridor as most preferred route. Further development of Tuticorin – Kochi economic corridor and ports at Mangalore, Goa and Kochi would also boost traffic on project corridor by year say 2024-25. Same has been considered while taking additional growth of traffic as discussed above.

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID Impact

All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

Taking recommended traffic growth and additional factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- 119 KM
(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3367	137	247	273	192	671	6	4893	8755
2024-25	3704	145	261	289	204	718	6	5327	9442
2025-26	4048	152	275	304	214	762	6	5761	10111
2026-27	4424	159	290	319	226	809	6	6233	10835
2027-28	4835	167	305	335	238	858	6	6744	11608
2028-29	5284	175	321	352	251	910	6	7299	12441
2029-30	5775	184	338	370	264	965	6	7902	13337
2030-31	6266	191	355	386	276	1016	6	8496	14203
2031-32	6798	199	372	403	289	1070	6	9137	15131
2032-33	7376	207	391	421	302	1127	6	9830	16127
2033-34	8003	216	410	439	316	1187	6	10577	17191

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2034-35	8683	225	430	459	330	1250	6	11383	18330
2035-36	9389	234	451	477	344	1311	6	12212	19483
2036-37	10153	243	473	497	358	1375	6	13105	20716
2037-38	10978	252	497	517	373	1442	6	14065	22033
2038-39	11870	261	521	538	389	1513	6	15098	23441
2039-40	12835	270	547	560	406	1587	6	16211	24948
2040-41	13865	280	573	582	423	1664	6	17393	26534
2041-42	14978	291	600	605	441	1745	6	18666	28232
2042-43	16181	302	628	629	459	1831	6	20036	30049
2043-44	17481	313	657	654	478	1921	6	21510	31989
2044-45	18884	324	689	680	499	2015	6	23097	34069
2045-46	20314	335	721	705	518	2105	6	24704	36148
2046-47	21852	346	754	730	538	2199	6	26425	38360
2047-48	23506	357	788	757	559	2298	6	28271	40722

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- 184KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	5594	309	562	891	320	1219	6	8901	16889
2024-25	6155	326	594	942	339	1305	6	9667	18169
2025-26	6727	342	626	989	357	1385	6	10432	19416
2026-27	7352	359	659	1039	375	1471	6	11261	20756
2027-28	8035	376	694	1091	394	1561	6	12157	22188
2028-29	8781	394	731	1146	415	1657	6	13130	23732
2029-30	9597	413	769	1204	437	1758	6	14184	25385
2030-31	10413	430	807	1256	457	1852	6	15221	26979

2031-32	11299	447	848	1311	478	1950	6	16339	28683
2032-33	12260	465	890	1368	500	2054	6	17543	30502
2033-34	13302	484	935	1428	522	2164	6	18841	32448
2034-35	14432	504	981	1491	545	2280	6	20239	34526
2035-36	15606	523	1029	1551	568	2392	6	21675	36626
2036-37	16875	542	1079	1614	591	2510	6	23217	38862
2037-38	18248	562	1132	1679	616	2633	6	24876	41248
2038-39	19733	582	1187	1747	642	2763	6	26660	43795
2039-40	21338	604	1245	1817	669	2899	6	28578	46510
2040-41	23052	626	1303	1890	697	3041	6	30615	49373
2041-42	24904	649	1365	1966	727	3190	6	32807	52434
2042-43	26905	672	1430	2045	758	3346	6	35162	55696
2043-44	29065	697	1497	2127	790	3509	6	37691	59170
2044-45	31399	722	1568	2213	824	3681	6	40413	62889
2045-46	33776	745	1639	2295	855	3845	6	43161	66590
2046-47	36335	770	1713	2379	887	4018	6	46108	70535
2047-48	39087	795	1791	2466	921	4198	6	49264	74732

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 243 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6356	417	551	1004	338	1203	6	9875	18101
2024-25	6993	441	582	1062	358	1288	6	10730	19484
2025-26	7643	463	613	1115	376	1367	6	11583	20828
2026-27	8352	487	645	1170	396	1451	6	12507	22272
2027-28	9128	511	679	1229	417	1540	6	13510	23827
2028-29	9975	537	714	1291	439	1635	6	14597	25497
2029-30	10901	563	752	1356	461	1736	6	15775	27292

2030-31	11827	587	790	1415	482	1829	6	16936	29026
2031-32	12833	611	830	1477	504	1926	6	18187	30877
2032-33	13924	637	871	1542	526	2028	6	19534	32850
2033-34	15108	663	915	1609	550	2136	6	20987	34964
2034-35	16392	691	961	1679	575	2249	6	22553	37221
2035-36	17726	717	1008	1747	599	2360	6	24163	39511
2036-37	19168	743	1058	1817	624	2476	6	25892	41949
2037-38	20727	771	1109	1890	650	2597	6	27750	44544
2038-39	22414	799	1164	1966	678	2725	6	29752	47326
2039-40	24238	829	1221	2046	707	2859	6	31906	50296
2040-41	26184	859	1278	2128	736	2999	6	34190	53421
2041-42	28287	891	1338	2213	767	3146	6	36648	56762
2042-43	30559	923	1401	2302	799	3299	6	39289	60322
2043-44	33013	958	1467	2395	832	3460	6	42131	64129
2044-45	35664	993	1536	2491	867	3629	6	45186	68193
2045-46	38365	1025	1605	2582	900	3791	6	48274	72250
2046-47	41270	1058	1677	2676	935	3960	6	51582	76568
2047-48	44395	1093	1753	2774	971	4137	6	55129	81172

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 119 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	3352	136	247	271	191	668	6	4871	8716
2024-25	3671	143	259	286	201	711	6	5277	9350
2025-26	3993	149	271	299	210	751	6	5679	9963
2026-27	4344	156	283	312	220	793	6	6114	10619
2027-28	4725	163	296	327	230	838	6	6585	11327
2028-29	5141	170	311	342	242	886	6	7098	12095
2029-30	5593	177	326	358	254	936	6	7650	12912

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2030-31	6040	184	341	372	264	981	6	8188	13689
2031-32	6524	191	356	387	274	1029	6	8767	14519
2032-33	7045	198	373	402	286	1078	6	9388	15403
2033-34	7608	205	390	418	298	1130	6	10055	16346
2034-35	8217	212	407	434	310	1185	6	10771	17348
2035-36	8844	219	424	449	322	1237	6	11501	18351
2036-37	9519	226	443	465	334	1292	6	12285	19425
2037-38	10246	233	462	481	347	1349	6	13124	20563
2038-39	11028	240	482	498	360	1408	6	14022	21771
2039-40	11871	247	503	516	373	1470	6	14986	23060
2040-41	12765	254	524	534	387	1535	6	16005	24416
2041-42	13726	263	546	552	401	1603	6	17097	25858
2042-43	14760	272	570	572	416	1674	6	18270	27402
2043-44	15871	281	594	592	432	1748	6	19524	29040
2044-45	17065	290	619	612	448	1825	6	20865	30777
2045-46	18271	298	644	632	463	1897	6	22211	32499
2046-47	19564	307	670	652	479	1972	6	23650	34329
2047-48	20948	316	697	672	495	2050	6	25184	36266

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 184 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	5568	308	559	887	319	1213	6	8860	16811
2024-25	6098	324	588	933	336	1292	6	9577	17996
2025-26	6633	338	616	976	352	1365	6	10286	19142
2026-27	7216	353	646	1021	369	1442	6	11053	20370

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2027-28	7850	368	677	1067	386	1525	6	11879	21682
2028-29	8540	384	709	1116	404	1612	6	12771	23084
2029-30	9290	401	743	1166	423	1703	6	13732	24578
2030-31	10033	415	776	1211	440	1786	6	14667	26001
2031-32	10836	430	811	1258	458	1872	6	15671	27513
2032-33	11702	445	847	1307	476	1962	6	16745	29116
2033-34	12637	461	884	1357	495	2057	6	17897	30820
2034-35	13647	478	924	1409	515	2156	6	19135	32637
2035-36	14689	493	965	1459	534	2252	6	20398	34464
2036-37	15810	509	1007	1510	554	2351	6	21747	36393
2037-38	17017	525	1052	1563	575	2455	6	23193	38449
2038-39	18316	542	1098	1619	596	2563	6	24740	40629
2039-40	19715	559	1146	1677	618	2676	6	26397	42946
2040-41	21200	576	1194	1736	641	2794	6	28147	45377
2041-42	22796	594	1244	1797	664	2917	6	30018	47956
2042-43	24512	613	1297	1860	689	3045	6	32022	50699
2043-44	26358	633	1352	1925	715	3178	6	34167	53612
2044-45	28342	653	1409	1993	741	3317	6	36461	56704
2045-46	30346	671	1466	2056	766	3448	6	38759	59760
2046-47	32492	690	1524	2121	792	3585	6	41210	62998
2047-48	34790	709	1585	2189	818	3728	6	43825	66433

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 243 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	6327	415	550	1000	337	1197	6	9832	18024

2024-25	6929	437	578	1052	355	1275	6	10632	19304
2025-26	7537	456	605	1099	372	1347	6	11422	20538
2026-27	8199	476	634	1149	390	1424	6	12278	21867
2027-28	8919	498	665	1201	408	1504	6	13201	23283
2028-29	9703	520	697	1255	427	1589	6	14197	24798
2029-30	10554	544	731	1312	448	1679	6	15274	26426
2030-31	11398	563	763	1362	466	1760	6	16318	27963
2031-32	12309	583	797	1414	485	1845	6	17439	29601
2032-33	13295	605	832	1469	505	1934	6	18646	31351
2033-34	14358	627	868	1526	526	2027	6	19938	33207
2034-35	15507	650	908	1584	547	2124	6	21326	35184
2035-36	16691	672	948	1639	568	2218	6	22742	37172
2036-37	17965	694	989	1697	589	2316	6	24256	39280
2037-38	19337	716	1033	1757	611	2418	6	25878	41522
2038-39	20813	740	1078	1819	633	2524	6	27613	43898
2039-40	22403	764	1125	1884	657	2636	6	29475	46436
2040-41	24091	788	1173	1951	681	2752	6	31442	49099
2041-42	25905	814	1223	2020	706	2873	6	33547	51929
2042-43	27856	840	1274	2091	732	2999	6	35798	54930
2043-44	29953	867	1328	2164	759	3131	6	38208	58123
2044-45	32209	895	1385	2240	787	3268	6	40790	61521
2045-46	34487	920	1441	2311	813	3397	6	43375	64876
2046-47	36926	946	1499	2384	841	3532	6	46134	68438
2047-48	39537	972	1559	2460	869	3673	6	49076	72215

Traffic projections for Most Likely scenario are given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 119 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	3360	137	247	273	192	670	6	4885	8744
2024-25	3687	144	260	288	204	715	6	5304	9404
2025-26	4020	151	272	302	214	757	6	5722	10044
2026-27	4383	158	286	317	224	802	6	6176	10737
2027-28	4778	165	301	332	236	850	6	6668	11485
2028-29	5210	172	316	348	248	901	6	7201	12286
2029-30	5680	180	332	365	261	955	6	7779	13149
2030-31	6149	187	348	380	273	1003	6	8346	13973
2031-32	6656	194	365	396	285	1054	6	8956	14855
2032-33	7204	201	382	412	297	1108	6	9610	15792
2033-34	7798	208	400	429	310	1164	6	10315	16792
2034-35	8442	216	419	447	323	1223	6	11076	17864
2035-36	9108	223	438	464	336	1280	6	11855	18944
2036-37	9826	230	458	482	349	1340	6	12691	20095
2037-38	10600	238	479	500	363	1402	6	13588	21319
2038-39	11435	247	501	518	377	1467	6	14551	22622
2039-40	12337	256	525	538	392	1535	6	15589	24021
2040-41	13297	265	549	558	408	1606	6	16689	25494
2041-42	14332	274	573	579	424	1680	6	17868	27058
2042-43	15447	283	599	601	441	1758	6	19135	28733
2043-44	16649	292	625	623	458	1839	6	20492	30508
2044-45	17944	303	653	646	476	1924	6	21952	32409
2045-46	19259	312	681	668	493	2005	6	23424	34303
2046-47	20669	321	710	691	511	2089	6	24997	36314
2047-48	22182	330	740	714	529	2177	6	26678	38450

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 184 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU(Including Exempted)
2023-24	5581	308	561	890	320	1216	6	8882	16855
2024-25	6126	325	591	939	338	1299	6	9624	18090
2025-26	6679	340	621	984	355	1375	6	10360	19284
2026-27	7282	356	653	1031	373	1457	6	11158	20571
2027-28	7940	373	685	1080	391	1543	6	12018	21938
2028-29	8656	390	719	1131	410	1635	6	12947	23406
2029-30	9437	408	755	1185	431	1732	6	13954	24983
2030-31	10215	423	791	1234	449	1820	6	14938	26489
2031-32	11057	439	828	1284	468	1913	6	15995	28091
2032-33	11969	456	868	1337	489	2010	6	17135	29807
2033-34	12956	473	909	1392	510	2112	6	18358	31630
2034-35	14024	491	951	1450	532	2219	6	19673	33572
2035-36	15130	508	996	1505	553	2323	6	21021	35535
2036-37	16323	525	1042	1563	575	2431	6	22465	37617
2037-38	17610	543	1090	1622	598	2545	6	24014	39834
2038-39	18999	562	1140	1684	621	2664	6	25676	42192
2039-40	20497	581	1193	1747	646	2789	6	27459	44704
2040-41	22091	601	1246	1813	672	2918	6	29347	47344
2041-42	23810	621	1302	1882	698	3054	6	31373	50158
2042-43	25662	642	1360	1953	725	3196	6	33544	53148
2043-44	27658	664	1421	2026	754	3345	6	35874	56337
2044-45	29809	687	1485	2102	784	3501	6	38374	59734
2045-46	31991	707	1549	2174	812	3649	6	40888	63104
2046-47	34332	728	1615	2248	842	3803	6	43574	66680
2047-48	36846	750	1684	2325	872	3963	6	46446	70475

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 230 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	6341	415	550	1002	337	1199	6	9850	18053
2024-25	6960	439	580	1057	356	1280	6	10678	19385
2025-26	7589	460	610	1107	374	1355	6	11501	20677
2026-27	8275	482	641	1160	392	1435	6	12391	22062
2027-28	9023	505	673	1215	411	1520	6	13353	23545
2028-29	9838	529	707	1273	432	1609	6	14394	25135
2029-30	10727	554	742	1334	454	1704	6	15521	26843
2030-31	11612	576	777	1389	473	1791	6	16624	28480
2031-32	12570	598	813	1446	494	1881	6	17808	30218
2032-33	13607	622	852	1506	515	1976	6	19084	32078
2033-34	14730	646	892	1568	537	2077	6	20456	34064
2034-35	15945	671	934	1633	560	2182	6	21931	36179
2035-36	17203	695	978	1695	582	2284	6	23443	38316
2036-37	18560	719	1023	1760	605	2390	6	25063	40585
2037-38	20023	744	1070	1827	629	2502	6	26801	43003
2038-39	21602	770	1120	1897	654	2619	6	28668	45583
2039-40	23306	796	1172	1969	680	2741	6	30670	48325
2040-41	25120	823	1224	2043	706	2868	6	32790	51207
2041-42	27075	851	1280	2119	734	3001	6	35066	54282
2042-43	29181	880	1337	2198	763	3140	6	37505	57552
2043-44	31452	910	1397	2281	793	3286	6	40125	61044
2044-45	33899	941	1460	2367	825	3438	6	42936	64765
2045-46	36382	969	1523	2448	854	3583	6	45765	68461
2046-47	39045	998	1588	2533	885	3734	6	48789	72390
2047-48	41903	1028	1655	2620	917	3892	6	52021	76562

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Goa/ Karnataka - Moradabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st April 2022

Target Traffic - 21307 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 6 years. Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2022	21307	12120	-43%	65%	20%	28	5.6

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2022	21307	12131	-43%	65%	20%	28	5.6

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2022	21307	12109	-43%	65%	20%	28	5.6

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Goa / Karnataka Border- Kundapur section of NH-17 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued for 50 trips in month at 2/3d rate..
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travelers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Passenger Car Jeep Van I - Rs. 275 per month as per fee notification
    b) Local commercial vehicles single at 50% rate for normal single trip

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A} - \text{WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

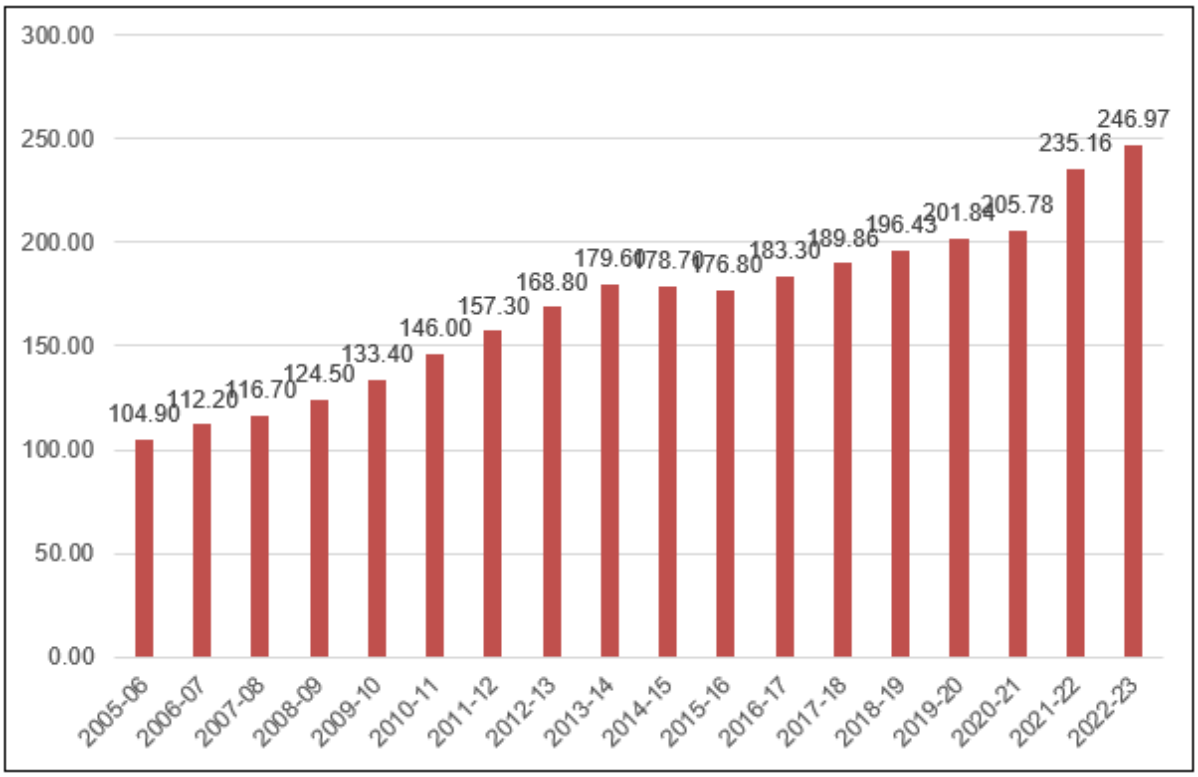


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

There is no bypass or structure to be factored in for rates calculations.

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs.) for the concession period and are given below.

Thus worked out rates for various categories of vehicle and discounts are given as under

Table 7-2 : Toll Rates for Single Journey @ Km 119.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	110	175	360	360	390
2023-24	125	195	405	405	440
2024-25	130	200	415	415	455
2025-26	135	210	440	440	480
2026-27	140	225	460	460	505

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2027-28	150	235	485	485	530
2028-29	155	245	505	505	555
2029-30	165	260	530	530	580
2030-31	170	270	560	560	610
2031-32	180	285	585	585	640
2032-33	190	300	615	615	675
2033-34	200	315	645	645	705
2034-35	210	330	680	680	740
2035-36	220	345	715	715	780
2036-37	230	365	750	750	820
2037-38	245	380	785	785	860
2038-39	255	400	825	825	905
2039-40	270	420	870	870	950
2040-41	280	445	915	915	1000
2041-42	295	465	960	960	1050
2042-43	310	490	1010	1010	1105
2043-44	330	515	1060	1060	1160
2044-45	345	540	1115	1115	1220
2045-46	365	570	1175	1175	1285
2046-47	380	600	1235	1235	1355
2047-48	400	630	1300	1300	1425

Table 7-3 : Toll Rates for Single Journey @ Km 184.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	110	170	355	355	390
2023-24	120	185	385	385	425

2024-25	120	195	400	400	440
2025-26	130	205	420	420	460
2026-27	135	215	445	445	485
2027-28	140	225	465	465	510
2028-29	150	235	490	490	535
2029-30	155	250	515	515	560
2030-31	165	260	540	540	590
2031-32	170	275	565	565	615
2032-33	180	285	595	595	650
2033-34	190	300	620	620	680
2034-35	200	315	655	655	715
2035-36	210	330	685	685	750
2036-37	220	350	720	720	785
2037-38	230	365	755	755	825
2038-39	240	385	795	795	870
2039-40	255	405	835	835	915
2040-41	270	425	875	875	960
2041-42	280	445	920	920	1010
2042-43	295	470	970	970	1060
2043-44	310	490	1020	1020	1115
2044-45	325	515	1070	1070	1170
2045-46	345	545	1125	1125	1230
2046-47	360	570	1185	1185	1295
2047-48	380	600	1245	1245	1360

Table 7-4 : Toll Rates for Single Journey @ Km 243.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	100	160	330	330	360
2023-24	100	165	345	345	375
2024-25	105	175	360	360	395
2025-26	110	180	380	380	415
2026-27	120	190	400	400	435
2027-28	125	200	420	420	455
2028-29	130	210	440	440	480
2029-30	135	220	460	460	505
2030-31	145	230	485	485	525
2031-32	150	240	505	505	550
2032-33	155	255	530	530	580
2033-34	165	265	555	555	610
2034-35	175	280	585	585	635
2035-36	180	290	615	615	670
2036-37	190	305	645	645	700
2037-38	200	320	675	675	735
2038-39	210	340	710	710	770
2039-40	220	355	745	745	810
2040-41	230	370	780	780	850
2041-42	240	390	820	820	895
2042-43	255	410	860	860	940
2043-44	265	430	900	900	985
2044-45	280	450	950	950	1035
2045-46	295	475	995	995	1085
2046-47	310	500	1045	1045	1140
2047-48	325	525	1100	1100	1200

Table 7-5 : Toll Rates for Return journey @ Km 119.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	165	260	535	535	590
2023-24	185	295	605	605	660
2024-25	190	305	625	625	685
2025-26	200	320	655	655	720
2026-27	215	335	690	690	755
2027-28	225	350	725	725	795
2028-29	235	370	760	760	830
2029-30	245	385	800	800	875
2030-31	260	405	835	835	915
2031-32	270	425	880	880	960
2032-33	285	450	925	925	1010
2033-34	300	470	970	970	1060
2034-35	315	495	1020	1020	1115
2035-36	330	520	1070	1070	1170
2036-37	345	545	1125	1125	1230
2037-38	365	575	1180	1180	1290
2038-39	385	600	1240	1240	1355
2039-40	400	630	1305	1305	1425
2040-41	425	665	1370	1370	1500
2041-42	445	700	1440	1440	1575
2042-43	470	735	1515	1515	1660
2043-44	490	775	1595	1595	1745
2044-45	515	815	1675	1675	1835
2045-46	545	855	1765	1765	1930

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2046-47	575	900	1855	1855	2030
2047-48	605	945	1950	1950	2135

Table 7-6 : Toll Rates for Return Journey @ Km 184.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	165	255	535	535	580
2023-24	175	280	580	580	635
2024-25	185	290	605	605	660
2025-26	195	305	635	635	690
2026-27	205	320	665	665	730
2027-28	215	335	700	700	765
2028-29	225	355	735	735	800
2029-30	235	370	770	770	840
2030-31	245	390	805	805	880
2031-32	260	410	845	845	925
2032-33	270	430	890	890	970
2033-34	285	450	935	935	1020
2034-35	300	475	980	980	1070
2035-36	315	495	1030	1030	1125
2036-37	330	520	1080	1080	1180
2037-38	345	550	1135	1135	1240
2038-39	365	575	1190	1190	1305
2039-40	380	605	1250	1250	1370
2040-41	400	635	1315	1315	1440
2041-42	420	670	1385	1385	1510

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2042-43	445	700	1455	1455	1590
2043-44	465	740	1530	1530	1670
2044-45	490	775	1605	1605	1755
2045-46	515	815	1690	1690	1845
2046-47	540	860	1775	1775	1940
2047-48	570	905	1870	1870	2045

Table 7-7 : Toll Rates for Return journey @ Km 243.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	145	235	495	495	540
2023-24	155	245	515	515	565
2024-25	160	260	545	545	595
2025-26	170	275	570	570	625
2026-27	175	285	600	600	655
2027-28	185	300	630	630	685
2028-29	195	315	660	660	720
2029-30	205	330	690	690	755
2030-31	215	345	725	725	790
2031-32	225	365	760	760	830
2032-33	235	380	795	795	870
2033-34	245	400	835	835	910
2034-35	260	420	875	875	955
2035-36	270	440	920	920	1005
2036-37	285	460	965	965	1050
2037-38	300	485	1010	1010	1105

2038-39	315	505	1060	1060	1160
2039-40	330	530	1115	1115	1215
2040-41	345	560	1170	1170	1275
2041-42	365	585	1230	1230	1340
2042-43	380	615	1290	1290	1405
2043-44	400	645	1355	1355	1475
2044-45	420	680	1420	1420	1550
2045-46	440	715	1495	1495	1630
2046-47	465	750	1570	1570	1710
2047-48	485	785	1650	1650	1800

Table 7-8 : Toll Rates for Monthly Pass Local Car Ticket @ all Toll Plaza

Year	Car	Mini Bus /LCV
2023-24	330	330
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615

2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	865	865
2044-45	905	905
2045-46	955	955
2046-47	1000	1000
2047-48	1050	1050

Table 7-9 : Toll Rates for Monthly Pass @ Km 119.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3695	5795	11935	11935	13060
2023-24	4140	6515	13425	13425	14690
2024-25	4275	6725	13870	13870	15175
2025-26	4495	7070	14585	14585	15955
2026-27	4725	7435	15340	15340	16780
2027-28	4960	7805	16100	16100	17615
2028-29	5205	8190	16895	16895	18480
2029-30	5465	8600	17730	17730	19395
2030-31	5735	9025	18610	18610	20360
2031-32	6025	9475	19535	19535	21370
2032-33	6325	9945	20510	20510	22440
2033-34	6640	10445	21535	21535	23560
2034-35	6975	10970	22620	22620	24745
2035-36	7330	11525	23760	23760	25995

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2036-37	7700	12110	24960	24960	27305
2037-38	8090	12720	26225	26225	28695
2038-39	8505	13370	27560	27560	30155
2039-40	8940	14055	28970	28970	31695
2040-41	9400	14775	30450	30450	33315
2041-42	9880	15535	32015	32015	35030
2042-43	10390	16335	33665	33665	36835
2043-44	10930	17180	35405	35405	38740
2044-45	11500	18070	37245	37245	40750
2045-46	12100	19015	39180	39180	42865
2046-47	12730	20005	41220	41220	45100
2047-48	13400	21050	43375	43375	47460

Table 7-10 : Toll Rates for Monthly Pass @ Km 184.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3615	5720	11835	11835	12940
2023-24	3935	6230	12900	12900	14105
2024-25	4080	6465	13390	13390	14640
2025-26	4290	6795	14080	14080	15390
2026-27	4510	7145	14800	14800	16180
2027-28	4730	7500	15530	15530	16980
2028-29	4965	7865	16290	16290	17810
2029-30	5210	8255	17095	17095	18685
2030-31	5465	8660	17935	17935	19605
2031-32	5735	9090	18820	18820	20575
2032-33	6020	9540	19755	19755	21595
2033-34	6320	10015	20735	20735	22665

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2034-35	6635	10515	21770	21770	23795
2035-36	6970	11040	22860	22860	24990
2036-37	7320	11595	24005	24005	26240
2037-38	7690	12175	25215	25215	27565
2038-39	8080	12790	26485	26485	28955
2039-40	8490	13440	27825	27825	30420
2040-41	8920	14125	29240	29240	31965
2041-42	9375	14845	30730	30730	33595
2042-43	9855	15605	32300	32300	35310
2043-44	10360	16405	33955	33955	37120
2044-45	10895	17245	35700	35700	39030
2045-46	11460	18135	37540	37540	41040
2046-47	12050	19075	39480	39480	43165
2047-48	12675	20065	41525	41525	45400

Table 7-11 : Toll Rates for Monthly Pass @ Km 243.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3260	5265	11030	11030	12035
2023-24	3395	5485	11490	11490	12535
2024-25	3565	5765	12075	12075	13170
2025-26	3750	6055	12690	12690	13840
2026-27	3940	6365	13335	13335	14550
2027-28	4130	6670	13975	13975	15250
2028-29	4330	6990	14650	14650	15980
2029-30	4535	7330	15355	15355	16755
2030-31	4755	7685	16100	16100	17565
2031-32	4985	8055	16880	16880	18415

2032-33	5230	8450	17700	17700	19310
2033-34	5485	8860	18565	18565	20250
2034-35	5755	9295	19470	19470	21240
2035-36	6035	9750	20425	20425	22280
2036-37	6330	10225	21430	21430	23375
2037-38	6645	10730	22485	22485	24525
2038-39	6970	11260	23595	23595	25740
2039-40	7315	11820	24765	24765	27015
2040-41	7680	12405	25990	25990	28355
2041-42	8060	13025	27285	27285	29765
2042-43	8465	13675	28650	28650	31255
2043-44	8890	14360	30085	30085	32820
2044-45	9335	15080	31590	31590	34465
2045-46	9805	15835	33180	33180	36200
2046-47	10300	16635	34855	34855	38025
2047-48	10820	17475	36615	36615	39945

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2047-48 starting from the year 2023-24 are shown in tables below.

Table 7-12 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	32.46	63.26	61.19	**156.91**
2024-25	41.74	78.65	74.85	**195.24**
2025-26	46.87	88.91	83.87	**219.65**
2026-27	52.72	99.74	94.51	**246.96**
2027-28	59.74	111.58	106.42	**277.74**
2028-29	66.57	125.31	118.78	**310.66**
2029-30	75.04	140.12	132.66	**347.82**
2030-31	83.52	156.45	148.43	**388.39**
2031-32	93.68	174.14	165.38	**433.19**
2032-33	104.74	194.02	183.16	**481.91**
2033-34	117.10	216.58	204.48	**538.16**
2034-35	131.06	241.86	228.86	**601.78**
2035-36	146.57	269.74	253.74	**670.05**
2036-37	162.76	299.26	282.24	**744.26**
2037-38	182.71	332.52	314.36	**829.59**
2038-39	203.63	370.33	349.99	**923.95**
2039-40	228.40	414.25	390.53	**1033.18**
2040-41	253.93	461.88	432.88	**1148.69**
2041-42	283.70	512.46	482.05	**1278.21**
2042-43	317.45	573.06	537.82	**1428.33**
2043-44	357.03	640.12	599.40	**1596.56**
2044-45	397.74	712.33	667.66	**1777.73**
2045-46	445.11	794.44	742.01	**1981.55**
2046-47	495.21	881.43	826.14	**2202.78**
2047-48	552.71	982.78	917.06	**2452.55**

Table 7-13 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	32.42	63.17	61.11	**156.70**
2024-25	41.37	77.87	74.16	**193.40**
2025-26	46.24	87.61	82.68	**216.53**
2026-27	51.80	97.88	92.79	**242.47**
2027-28	58.41	109.03	103.95	**271.40**
2028-29	64.82	121.89	115.45	**302.16**
2029-30	72.77	135.73	128.40	**336.90**
2030-31	80.64	150.84	142.99	**374.47**
2031-32	90.08	167.13	158.55	**415.77**
2032-33	100.29	185.31	174.84	**460.45**
2033-34	111.65	205.88	194.27	**511.80**
2034-35	124.32	228.86	216.35	**569.54**
2035-36	138.32	254.01	238.78	**631.12**
2036-37	152.84	280.46	264.36	**697.66**
2037-38	170.78	310.13	292.99	**773.89**
2038-39	189.32	343.71	324.62	**857.64**
2039-40	211.30	382.68	360.52	**954.49**
2040-41	233.85	424.62	397.68	**1056.16**
2041-42	259.98	469.01	440.92	**1169.91**
2042-43	289.58	522.02	489.62	**1301.22**
2043-44	324.17	580.32	543.04	**1447.52**
2044-45	359.34	642.64	601.99	**1603.97**
2045-46	400.29	713.28	665.83	**1779.41**
2046-47	443.26	787.61	737.96	**1968.84**
2047-48	492.39	874.11	815.43	**2181.93**

Table 7-14 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	32.44	63.21	61.15	**156.80**
2024-25	41.55	78.21	74.52	**194.28**
2025-26	46.57	88.23	83.32	**218.12**
2026-27	52.30	98.79	93.70	**244.78**
2027-28	59.10	110.23	105.20	**274.53**
2028-29	65.75	123.53	117.16	**306.44**
2029-30	73.99	137.83	130.55	**342.37**
2030-31	82.16	153.53	145.71	**381.40**
2031-32	92.00	170.48	161.96	**424.44**
2032-33	102.60	189.51	178.99	**471.10**
2033-34	114.47	211.02	199.36	**524.85**
2034-35	127.78	235.08	222.58	**585.44**
2035-36	142.52	261.55	246.20	**650.27**
2036-37	157.85	289.44	273.26	**720.55**
2037-38	176.78	320.80	303.56	**801.15**
2038-39	196.48	356.42	337.13	**890.03**
2039-40	219.86	397.84	375.29	**992.98**
2040-41	243.94	442.49	415.01	**1101.44**
2041-42	271.94	489.84	461.08	**1222.86**
2042-43	303.58	546.52	513.21	**1363.32**
2043-44	340.56	609.06	570.63	**1520.24**
2044-45	378.43	676.13	634.15	**1688.71**
2045-46	422.52	752.30	703.01	**1877.83**
2046-47	468.87	832.76	780.87	**2082.50**
2047-48	522.10	926.20	864.80	**2313.10**

CHAPTER 8

CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Goa/ Karnataka to Kundapur section of NH-17 in state of Karnataka from km 93.70.000 to km 183.300 is four lane. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the busy and prominent national highway NH-17 which is main link for traffic on west coast to from Rajasthan, Gujarat, Maharashtra to Kerala. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As Indian economy is poised to grow at 6%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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YEDISHI TO AURANGABAD SECTION OF NH-211

(KM 100.000 TO KM 290.200)

IN THE STATE OF MAHARASHTRA







TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

GMD CONSULTANTS NAVI MUMBAI

APRIL 2023

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ABBREVIATIONS

AADT	-	Annual Average Daily Traffic	**NHAI**	-	National Highway Authority of India
BOT	-	Build Operate Transfer	**NHDP**	-	National Highways Development Project
CAGR	-	Compound Annual Growth Rate	**NSDP**	-	Net State Domestic Product
CTV	-	Classified traffic volume	**O&M**	-	Operation & Maintenance
DBFOT	-	Design, Build, Finance, Operate & Transfer	**PCDP**	-	Per Capita Domestic Product
EME	-	Earth Moving Equipment	**PCI**	-	Per Capita Income
GDP	-	Gross Domestic Product	**PCU**	-	Passenger Car Unit
GSDP	-	Gross State Domestic Product	**PSC**	-	Pre-stressed Concrete
HCM	-	Heavy Construction Machinery	**RCC**	-	Reinforced cement concrete
HCV	-	Heavy Commercial Vehicle	**RHS**	-	Right Hand Side
HTMS	-	Highway Traffic Management System	**SH**	-	State Highway
IRC	-	Indian Road Congress	**TP**	-	Toll Plaza
IRR	-	Internal Rate of Return	**WPI**	-	Wholesale Price Index
LCV	-	Light Commercial Vehicle	**SIR**	-	Special Investment Region
LHS	-	Left Hand Side	**c.**	-	Circa
LGV	-	Light Goods Vehicle	**ROB**	-	Railway Over Bridge
MAV	-	Multi Axle Vehicle	**MDR**	-	Major District Road
MORTH	-	Ministry of Road Transport and Highways	**ODR**	-	Other District Road
NH	-	National Highway	**CA**	-	Concession Agreement
PCC	-	Plain Cement Concrete	**RMT**	-	Running Meter
CR	-	Coarse Rubble			

CHAPTER 1
INTRODUCTION

1.1 Background

The Government of India through National Highway Authority of India (NHAI) embarked upon a program to enhance the traffic capacity and safety for efficient transportation of goods as well as passenger traffic on National Highway Sections under various NHDP Phases.

The project under consideration, four laning of **Yedeshi** to **Aurangabad** section of NH-211 from km 100.000 to km 290.200 is one such road project NHAI intended to implement on a BOT basis in the DBFOT format. *M/s YA Tollway Ltd.* (Concessionaire) has been awarded the Project for a concession period of 26 years starting from 1st July 2015. Four laning of project has also been completed in September 2020.

Length of project road is 189.090 Kms. The project road is section of NH-211, is one of the important transportation link in Maharashtra which connects Solapur to Dhule and then at Dhule it can join other important highway like NH-3 (Mumbai – Agra Road) and NH-6 (east-west highway). The project road passes through the important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The Project Road passes through the districts of Beed and Aurangabad.

Following figure shows alignment of project road section from Yedeshi to Aurangabad.



Figure 1-1 : Alignment of Project Stretch

1.2 Objective of the Study

M/s IRB INFRASTRUCTURE TRUST has engaged *GMD Consultants* to assess the future traffic and toll potential of project along with related operation & maintenance expenditure involved.

This report named as **"Traffic Study & *Toll Revenue Projection Report*"** mainly focuses on traffic and revenue aspects of the project. Other parameters like competing road, area developments etc. have been considered from a traffic development point of view.

1.2.1 Scope of Services

The broad scope of work covered in the assignment is as follows

a) Analysis of Traffic Growth
b) Toll Rate Growth
c) Revenue Forecasting

The Concessionaire has provided basic traffic data and other project details on the basis of which the above analysis has been carried out.

CHAPTER 2

PROJECT DETAILS

2.1 Project Corridor

National Highway 211 which is now part of NH-52. The national highway 52 was numbered after amalgamating many existing national highways of India.

It connects the important places like Chausala, Beed, Adul, Chitegaon and then Aurangabad. The Project Road passes through the districts of Beed and Aurangabad. Following are the major centers of development around project road.

Project Stretch Description

Like other parts of India rapid ribbon development is happening around these cities on project highway. This also contributes to sustainable traffic growth.

There are three operative toll plazas at project stretch. First is at Yedeshi at Km 134.000, second at Padalshingi at Km 194.000 and third at Bhokarwadi at Km 254.000. Following figure show project alignment and toll plaza locations.



Figure 2-1 : Project Alignment with Toll Plaza

2.2 Project Corridor Illustration

Four laning of project stretch is complete. Following photographs illustrate project section along the corridor.



Figure 2-2 : Photographs showing Project Corridor

CHAPTER 3

TRAFFIC SURVEYS AND ANALYSIS

3.1 Traffic Surveys

The Consultants have collected the required information for project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic data has been collected from client for project.

- Classified traffic volume counts at toll plaza locations on Yedeshi-Aurangabad section of NH-211 for year 2019-20, 2020-21, 2021-2022 and traffic data from April 2022 to March 2023.
- Local Component of traffic
- Component of Return Journey
- Component of Monthly Pass Journey

The main objective of the traffic data analysis is to:

- Determine the existing traffic movement characteristics of the project
- Establish base year traffic
- Identification of travel patterns and modal split of project traffic
- Deriving growth factors for traffic forecasting
- Estimation of corridor traffic including traffic diversion if any
- Preparation of revenue model and projection of revenue as per toll policy for various scenarios

Table 3-1 below lists provides details of locations from where traffic details have been collected.

Table 3-1 : Traffic Data Details

SR. NO	LOCATION	CTV	Single Journey Traffic	Daily Return Journey	Monthly Pass	Local Pass
1	Km 134.000 Toll Plaza at Pargaon	AADT for Year 2019-20, 2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23
2	Km 194.000 Toll Plaza at Padalshingi	AADT for Year 2019-20, 2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23
3	Km 254.000 Toll Plaza at Maliwadi	AADT for Year 2019-20, 2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23	For Year 2019-20 ,2020-2021, 2021-22 & 2022-23

All toll plazas are located in Maharashtra.

3.2 Classified Traffic Volume

The objective of conducting a Classified Traffic Volume Count is to understand the traffic flow pattern including modal split on a roadway. The Classified Traffic Volume Count survey has been provided by the concessionaire of project highway from actual traffic data gathered at toll plaza locations based on monthly data shared with NHAI.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles are further segregated to capture the tollable

vehicle categories specifically and toll exempted vehicles are counted separately. The detailed vehicle classification system as per IRC: 64-1990 is given in table below .

Table 3-2 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer

Source - IRC: 64 – 1990

However, since project highway is currently under toll operation, the data collected is corresponding to category of tollable vehicles. Following are the type of vehicles as per concession agreement.

- Car / Jeep / van
- Mini Bus /LCV
- Bus
- Truck /
- 3 Axle commercial vehicle
- Multi Axle

3.3 Traffic Characteristic

Toll revenue of project highway does not solely depend on traffic volume. There are certain characteristics of traffic which have substantial potential to affect toll collection. Component of local traffic, component of passenger and commercial

traffic, portion of return journey traffic, % of monthly pass traffic are some of such characteristics of traffic. These will be discussed in subsequent sections of report.

3.3.1 Traffic Data

Project concessionaire has provided Traffic data for base year 2019-20 ,2020-21, 2021-22 and from April 2022 to March 2023 as under for all toll plazas–

Table 3-3 : Traffic Data at Pargaon Toll Plaza at Km 134.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	1641	1439	2426	2863
2	Minibus /LCV	658	482	257	317
3	Bus	199	109	110	215
4	Truck	635	704	786	988
5	3-Axle Commercial vehicle	793	845	876	967
6	Multi axle	1081	1284	1567	2164
7	Oversize Vehicle	0	50	74	31
	Total	**5007**	**4913**	**6096**	**7544**

Table 3-4 : Traffic Data at Padalshingi Toll Plaza at Km 194.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	4114	3166	4969	5458
2	Minibus /LCV	1095	883	383	451
3	Bus	473	260	252	478
4	Truck	788	839	891	1159

5	3-Axle Commercial vehicle	944	1049	1098	1119
6	Multi axle	1134	1363	1641	2290
7	Oversize Vehicle	1	60	65	29
	Total	**8549**	**7620**	**9299**	**10985**

Table 3-5 : Traffic Data at Maliwadi Toll Plaza at Km 254.000

Sr. No	Type of Vehicle	Annual Average Daily Traffic (Nos.)- 2019-20	Annual Average Daily Traffic (Nos.)- 2020-21	Annual Average Daily Traffic (Nos.)- 2021-22	Annual Average Daily Traffic (Nos.)- 2022-23
1	CAR	3089	2492	3992	4717
2	Minibus /LCV	687	546	192	295
3	Bus	347	177	177	341
4	Truck	547	579	567	892
5	3-Axle Commercial vehicle	679	737	718	841
6	Multi axle	866	1046	1164	1914
7	Oversize Vehicle	1	47	52	23
	Total	**6216**	**5623**	**6862**	**9023**

Pandemic of COVID-19 (Corona Virus) had impacted entire world. Taking precaution, government of India announced a complete lockdown in last of March 2020 and traffic on highways was stopped which was eased out progressively later. There after India was hit by Covid-19 second and third wave in February 21 to July - 21 and December 21 to March-22. Recovering traffic pattern was somewhat again disturbed du to second and third wave of Covid-19. Traffic numbers of for period from April-2020 to March 2021 were not representative of traffic pattern at project

corridor due to pandemic lockdown impact. However, for integrity of data same shown above. Traffic has almost recovered from Covid -19 impact as of now.

Adjacent road to project stretches Ahmednagar – Karmala road was in poor condition and due to which there is some additional traffic on project road in current period. Hence as correction factor is applied to average traffic of year 2022-23 to arrive at realistic yearly average traffic.

This data was then bifurcated to various components like through local, monthly, return journey etc. category. Same is discussed in detail in following section.

3.4 Data Analysis

3.4.1 Analysis of Traffic Volume Count

Understanding the character of existing traffic forms the basis of the traffic forecast. The various vehicle types having different sizes and characteristics can be converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in "IRC-64-1990: Guidelines for Capacity of Roads in Rural areas". The adopted passenger car unit values (PCU) are presented in ***Table*** 3-6**.**

Table 3-6 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0

Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5

Source: IRC: 64-1990

Traffic volume at each toll plaza was converted to PCU and same is presented as under

Table 3-7 : Traffic in PCU at Project Stretch

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2019-2020	Km 134.000 Toll Plaza at Pargaon	5007	12373	2.47
	Km 194.000 Toll Plaza at Padalshingi	8549	17479	2.04
	Km 254.000 Toll Plaza at Maliwadi	6216	12740	2.05
2020-2021	Km 134.000 Toll Plaza at Pargaon	4913	13136	2.67
	Km 194.000 Toll Plaza at Padalshingi	7620	17339	2.28
	Km 254.000 Toll Plaza at Maliwadi	5623	12706	2.26
2021-2022	Km 134.000 Toll Plaza at Pargaon	6096	15511	2.54
	Km 194.000 Toll Plaza at Padalshingi	9299	19945	2.14
	Km 254.000 Toll Plaza at Maliwadi	6862	14138	2.06

Year	Toll Plaza Location (Km)	Traffic No	PCU	PCU Index
2022-2023	Km 134.000 Toll Plaza at Pargaon	7544	19724	2.61
	Km 194.000 Toll Plaza at Padalshingi	10985	24840	2.26
	Km 254.000 Toll Plaza at Maliwadi	9023	20097	2.23

It can be observed from above that project traffic has PCU index 2 to 2.6 which is an indicator of high proportion of commercial traffic in traffic mix in project corridor. Following figure illustrates variation of PCU index at three toll plaza locations.

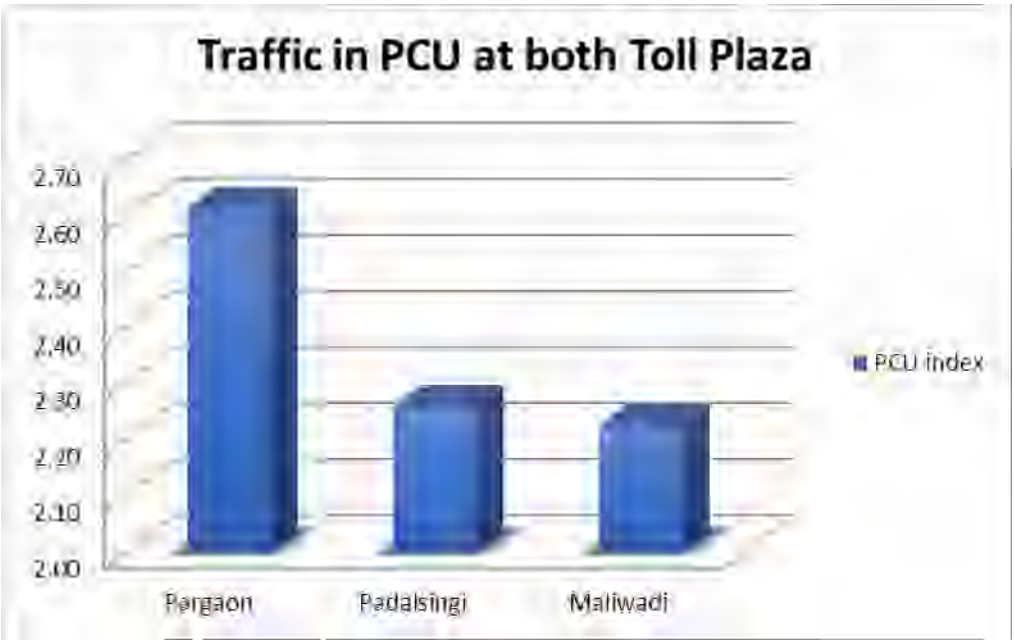


Figure 3-1 : Comparison of PCU Index

It can be observed that PCU index is consistent at all three toll plaza locations.

3.4.2 Components of Traffic

As discussed previously, components of traffic volume play an important role in determining project revenue. A larger component of commercial traffic with higher axle configuration adds to project revenue positively. Similarly, a larger component of local traffic affects the project revenue potential negatively.

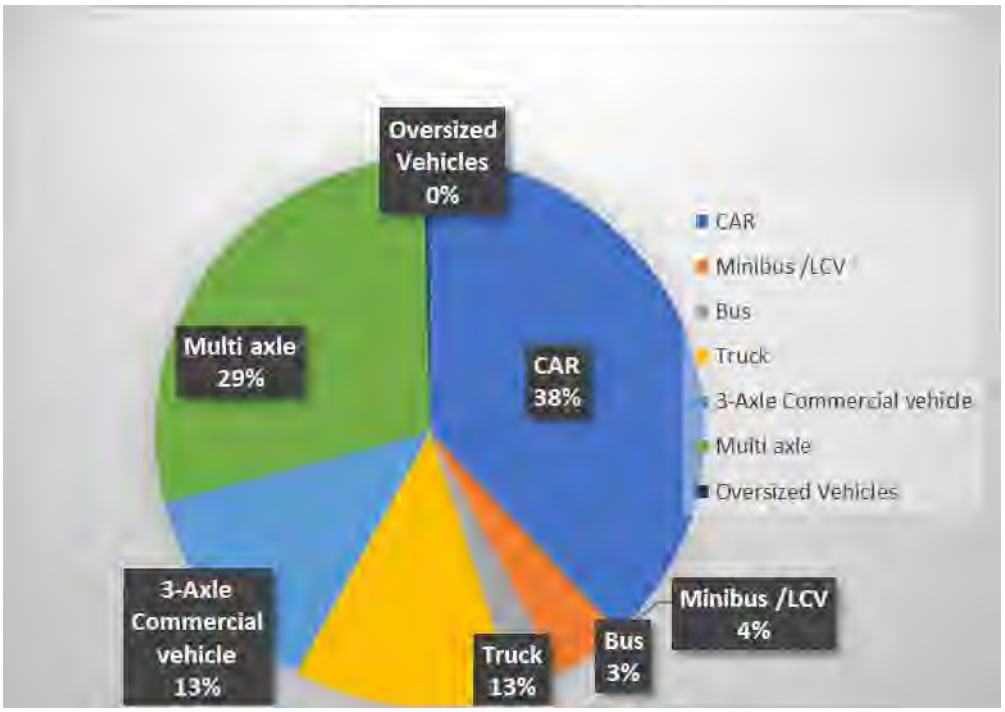


Figure 3-2: Model split of tollable vehicle @ Km 134.000

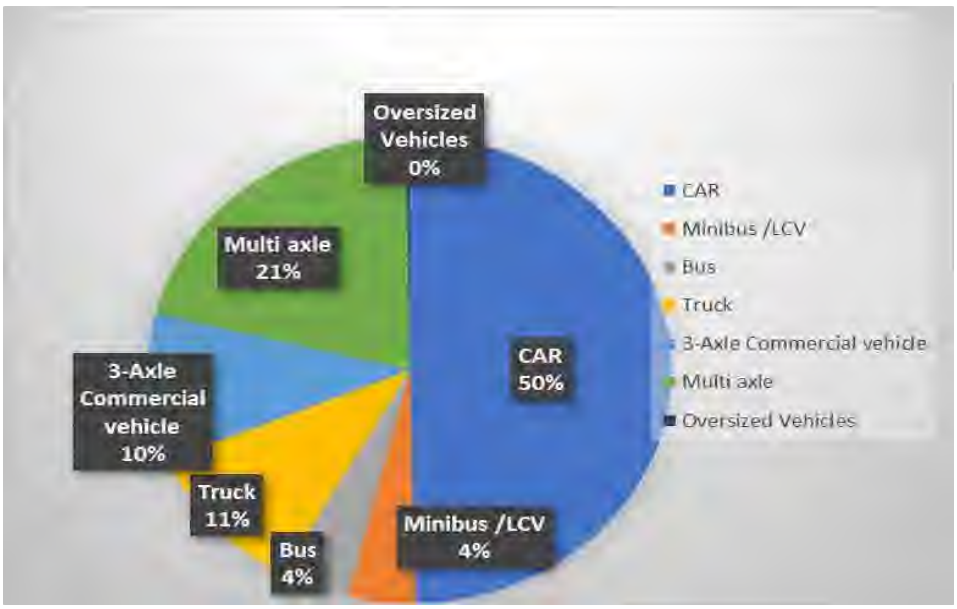


Figure 3-3: Model split of tollable vehicle @ Km 194.000

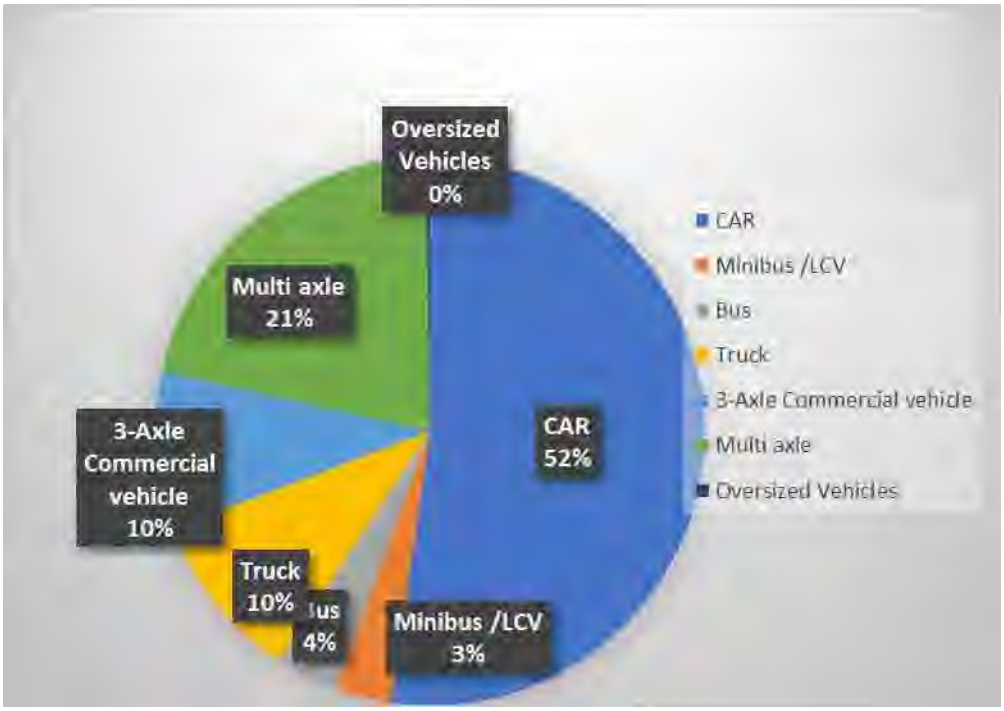


Figure 3-3: Model split of tollable vehicle @ Km 254.000

It is observed that car traffic forms about 38% of total traffic at toll plaza location KM 134.000 while multi axle commercial vehicles are about 42% of total traffic. Truck / Bus and LCV share about 16% and 4% of traffic volume respectively.

It is observed that car traffic forms about 50% of total traffic at toll plaza location KM 194.000 while multi axle commercial vehicles are about 31% of total traffic. Truck / Bus and LCV share about 15% and 4% of traffic volume respectively.

It is observed that car traffic forms about 52% of total traffic at toll plaza location KM 254.000 while multi axle commercial vehicles are about 31% of total traffic. Truck / Bus and LCV share about 14% and 3% of traffic volume respectively.

At second & third toll plaza passenger traffic component is higher due to urban settlement around.

Another important bifurcation of traffic is components of traffic with respect various type of toll ticketing like

1. Single Journey
2. Multi Journey
3. Monthly Pass (Local and General)

The following table provides numbers of vehicles falling in each of above category on base year 2022-23.

Table 3-8 : Journey Type Bifurcation of Traffic at Pargaon Toll Plaza KM 134.000

Sr. No	Type	Traffic Volume (Nos.)
		2022-23
1	Single Journey	5719
2	Return Journey	1782
3	Local Commercial Single Journey	34
4	Monthly Pass Local	8
5	Monthly Pass	2

Most dominant part of the above is the single journey type followed by return journey at project stretch. Monthly pass commuters are a very low fraction of the total traffic on the project corridor.

The single journey component in total traffic numbers is a high as 76%. Return journey component is 24%. The number of monthly pass Local is 0% and Local Commercial single Journey 0% at Pargaon toll plaza.

Following tables give the detail of journey distribution at Padalshingi toll plaza at Km 194.000 and Km 254.000.

Table 3-9 : Journey Type Bifurcation of Traffic at Padalshingi Toll Plaza KM 194.000

Sr. No	Type	Traffic Volume (Nos.)
		2022-23
1	Single Journey	6730
2	Return Journey	3896

3	Local Commercial Single Journey	284
4	Monthly Pass Local	73
5	Monthly Pass	2

Table 3-10 : Journey Type Bifurcation of Traffic at Maliwadi Toll Plaza KM 254.000

Sr. No	Type	Traffic Volume (Nos.)
		2022-23
1	Single Journey	5708
2	Return Journey	3241
3	Local Commercial Single Journey	36
4	Monthly Pass Local	29
5	Monthly Pass	8

It is observed that the project corridor demonstrates a similar pattern of single journey dominated mix of traffic across the entire stretch which is typical of major national highways.

3.5 Secondary Data Collection

There are several other factors which have a substantial impact on traffic pattern and growth on any project corridor. Following are some of such important factors

- Industrial development around project corridor and its catchment
- Educational infrastructure along project corridor
- Demographic pattern
- Urban area development
- Tourism potential
- Upcoming major infrastructural or Industrial projects
- Special Industry in project corridor
- Overall trends of economic growth local as well as national / regional

Hence in addition to traffic details on project site, secondary data was also collected from various other sources. Typical secondary data includes the following:

1. Vehicle registration data of regional and national level.
2. Economic Data
   a) GDP
   b) NSDP
   c) Population Growth
   d) Per Capita Income growth
   e) Industrial Growth
   f) Special Industry Potential
   g) Regional and National development vision / plan
   h) Any other relevant data
3. Competing road network

We have collected and utilized such underlying data in the study to estimate the growth and risk factors for traffic along the project corridor.

CHAPTER 4

INFLUENCE ZONE TRANSPORT NETWORK ANALYSIS

4.1 Introduction

Highway corridors behave like integrated circuit network and more often than not every road is connected to various networks having different origin and destinations. Traffic running on these networks behave like fluid and flow on network on alignment of least friction.

Following Factors can be considered as major contributors to friction on transportation network

- Travel Speed / Travel Time
- Geometric deficiencies like blind horizontal curves and steep vertical gradients etc.
- Configuration of road
- Riding quality
- Traffic delays,
- Length of road,
- Passing through built up or Urban Area,
- Terrain,
- Facilities,

4.2 Competing / Alternate route

In BOT projects there is always a risk factor of traffic shifting on competing roads after imposition of toll. Shifting of traffic depends on factors such as road length, type, geometry, riding quality ad capacity. Competing road network was identified around section and a speed delay analysis was conducted. In this detail of competing roads are provided and a comparison with project road is made. There can be some alternate route between Yedashi and Aurangabad. Following figure provide alignment of competing road network between Yedashi and Aurangabad.



Figure 4-1 : Alternate routes – Yedashi- Aurangabad

It can be observed that alternate routes are quire long and take more time to travel. Hence project road remains the most preferred option for travel between Yedashi and Aurangabad.

Similarly, at regional level there can be alternate via Ahmednagar for travel between Solapur and Aurangabad. Following figure show competing network in area.



Figure 4-2 : Alternate route Between Solapur and Aurangabad

For travel between Solapur and Aurangabad as well project road is most preferred option due to shorter length and less travel time. Completion of four laning of Solapur Yedashi section has complemented travel on this route.

Following table provide summary of analysis of alternate route/ roads discussed above.

Table 4-1 : Competing Roads Details

Sr. No	Route Details	Designation	Length (Km)	Avg. Speed (KMPH)	Time Taken (Min)	Observations
Regional Level						
1	Solapur-Ahmednagar-Aurangabad	Alternate Route	346	50	6 Hr 50 Min	Project road has minimum travel time and shortest road
	Solapur- Yedashi-Aurangabad	Project Road	310	60	5 Hr 10 Min	
2	Yedashi- Kalam-Madalmoni-Aurangabad (SH-61)	Alternate Route	270	50	5 Hr 24 Min	Project road has minimum travel time and shortest road
	Yedashi-Ahmednagar-Aurangabad	Alternate Route	289	50	5 Hr 49 Min	

	Yedashi- Beed-Aurangabad	Project Road	223	57	3 Hr 54 Min	

It light of above discussion project road remains most preferred route for the traffic of influence area. Moreover, project stretch is under toll operation for last one year. Hence any shifting of traffic, if any, would have settled by now and any further shifting of traffic is not envisaged from project road.

Regional Network

Project corridor is important transportation link for the traffic between Karnataka and Rajasthan / Delhi and other northern states. Part of this traffic uses the Bijapur- Solapur- Ahmednagar- Shirdi route to join back at Dhule and proceed towards northern parts of country. The length of route between Bijapur via project road and route via Ahmednagar is almost equal. Thus, it is expected that some part traffic will come back on project road as the four laning is complete. Following figures show route between Bijapur and Dhule via Project road and via Ahmednagar for better understanding.



Figure 4-3 : Project Road in regional network

CHAPTER 5

GROWTH OF TRAFFIC ON PROJECT HIGHWAY

5.1 Introduction

Traffic growth is a function of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. As these factors have a number of uncertainties associated with them, forecasts of traffic are dependent on the projections of other factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a reasonable degree of accuracy and hence the resultant traffic forecast levels may not be precise.

Traffic growth forecast for project corridor Yedeshi - Aurangabad section of NH-8 has been done taking the above factors into consideration. "**IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways**" is established best practice and has been used for traffic growth forecast.

5.2 Trend Analysis

One of the methods of estimation of future rate of growth is to assume the same rate of growth as in the past. Although such a method is more suitable to projects of short durations say 5-10 years, however for long term projections it would-be erroneous to assume that the past rate of growth will continue to prevail for a long time in future. Economic conditions, which are major influencing factors, are bound to change over a long period of time. Thus, it would be necessary to modify the past trends of growth suitably.

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. The same is recommended in **IRC: 108-12015-Guidelines for Traffic Prediction on Rural Highways**.

In this method the past trend of vehicular data is paired with an economic indicator and a regression analysis is done to yield the economic model of growth. Growth of vehicle traffic varies for different type of vehicle. It is a proven fact that the growth pattern for passenger and goods vehicle is different. Traffic growth on any highway

typically depends on number of economic parameters. Most important and direct parameters are given as under

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

It can be observed that the ownership of a car is more closely related to affordability; hence per capita is the index which closely fits the growth of car traffic among other criteria. In a similar fashion, the following can be pairs of vehicle type and independent variable for elasticity modeling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

5.3 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to a change in the corresponding indicator selected. Hence, In order to estimate the elasticity of traffic demand, it is necessary to establish relationship between the growth in number of given category of vehicles with the relevant economic variable considered, such as NSDP, per capita income and population growth. Latest available data for vehicle registration, per capita income, NSDP and population is used in analysis.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is given as below:

$$Log\ (P) = k \times Log\ (EI) + A$$

Where,

P = *Number of Vehicles (Mode wise)*

EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP).

The project corridor spreads across state of Maharashtra. Toll plazas at Paragaon, Padalsingi and Bhokharwadi are in the state of Maharashtra. Project traffic share of many states like Karnataka, Gujarat & Haryana also. For elasticity calculations, working data from these states also has been analyzed.

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Maharashtra State.

Table 5-1 : Per Capita Income Vs Car Maharashtra

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	99564	2307841	5.00	6.36		
2013	103904	2592565	5.02	6.41	4%	
2014	109399	2834847	5.04	6.45	5%	
2015	114746	3113773	5.06	6.49	5%	
2016	122422	3406872	5.09	6.53	7%	
2017	132899	3715744	5.12	6.57	9%	5.96%

Regression analysis of same is given in figure below

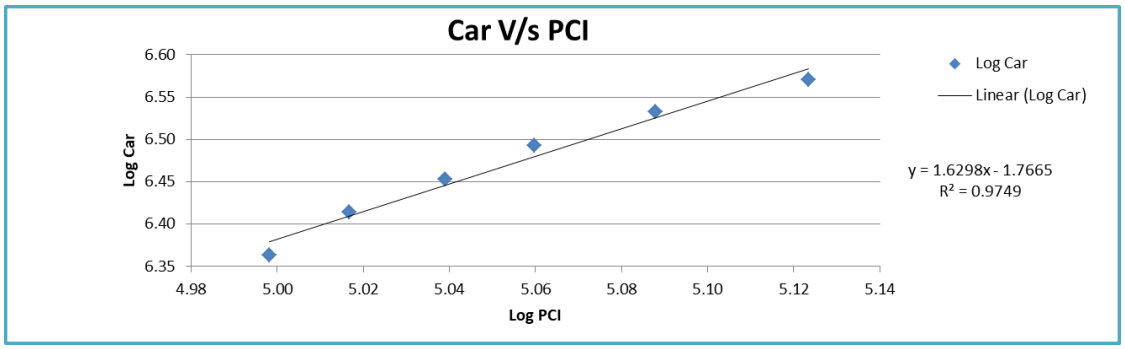


Figure 5-1 : Regression and Elasticity PCI vs. Car – Extrapolation Maharashtra

Table 5-2 : Population Vs Bus Maharashtra

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	112374333	119298	8.05	5.08		
2013	113807248	129535	8.06	5.11	1%	

2014	115229410	140087	8.06	5.15	1%	
2015	116640546	140102	8.07	5.15	1%	
2016	118040394	150427	8.07	5.18	1%	
2017	119428710	160042	8.08	5.20	1%	1.23%

Regression analysis of same is given in figure below

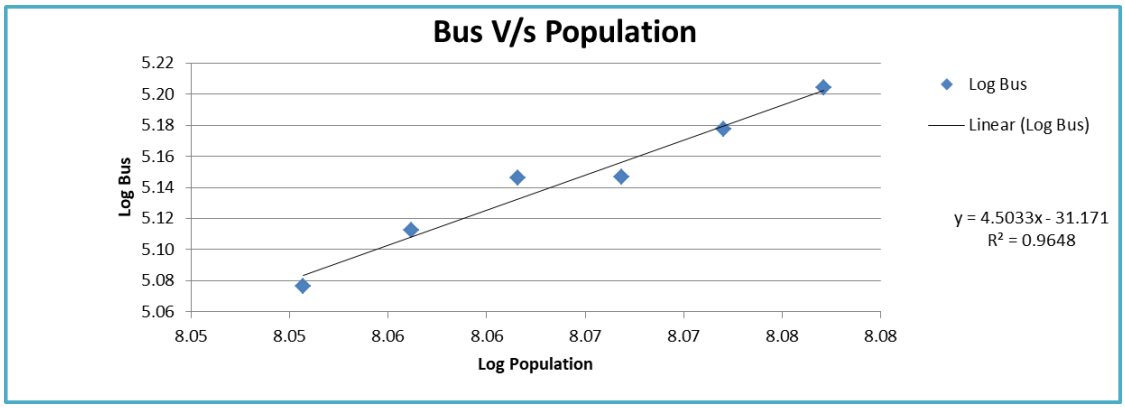


Figure 5-2 : Regression and Elasticity Population vs. Bus – Extrapolation Maharashtra

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-3 : LCV Traffic Vs NSDP Maharashtra

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	1126595	656407	6.05	5.82		
2013	1189711	739725	6.08	5.87	6%	
2014	1267551	803128	6.10	5.90	7%	
2015	1345341	868632	6.13	5.94	6%	
2016	1452439	927903	6.16	5.97	8%	6.56%

Following figure depict regression analysis and extrapolation.

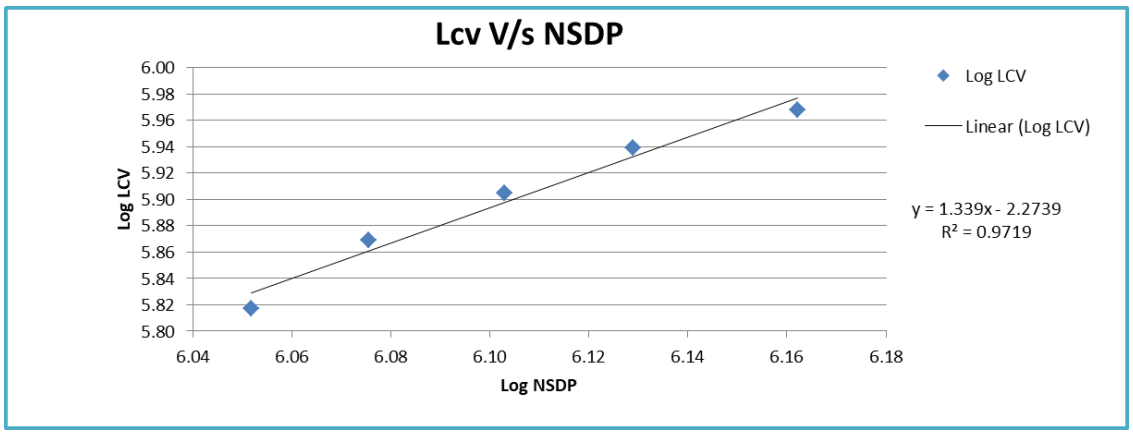


Table 5-4 : Truck Traffic Vs NSDP Maharashtra

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	1126595	411418	6.05	5.61		
2013	1189711	402366	6.08	5.60	6%	
2014	1267551	470128	6.10	5.67	7%	
2015	1345341	491582	6.13	5.69	6%	
2016	1452439	468810	6.16	5.67	8%	
2017	1595514	496439	6.20	5.70	10%	7.22%

Following figure depict regression analysis and extrapolation

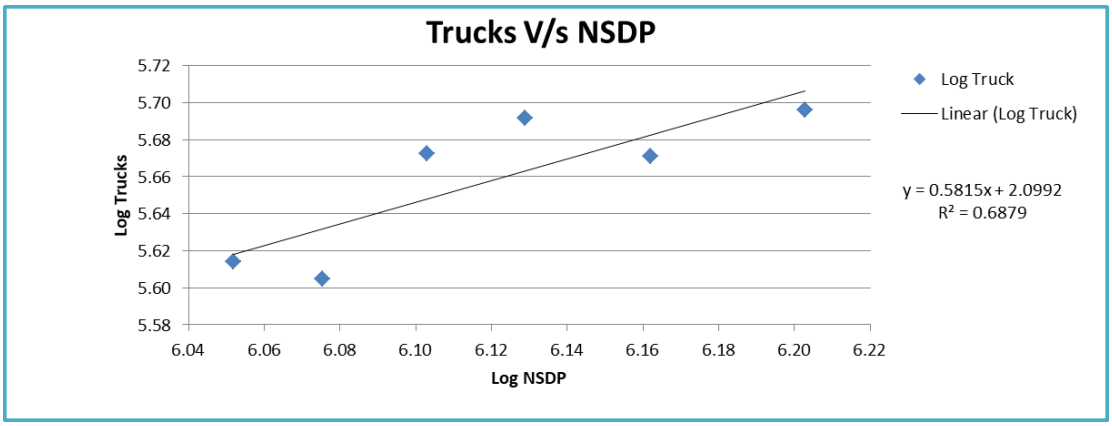


Figure 5-3 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Maharashtra

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-5 : Summary Regression Analysis Maharashtra

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Maharashtra	Car/Jeep	PCI	y = 1.6298x + -1.7665	R^2 = 0.9749	1.6298	5.96%	9.71%
	Bus	Population	y = 4.5033x - -31.1713	R^2 = 0.9648	4.5033	1.23%	5.52%
	LCV	NSDP	y = 1.339x - -2.2739	R^2 = 0.9719	1.3390	6.56%	8.78%
	Truck	NSDP	y = 0.5815x - 2.0992	R^2 = 0.6879	0.5815	7.22%	4.20%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Gujrat State.

Table 5-6 : Per Capita Income Vs Car Gujarat

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	87481	1411898	4.94	6.15		
2013	96683	1602129	4.99	6.20	11%	
2014	102589	1771298	5.01	6.25	6%	
2015	111370	2008748	5.05	6.30	9%	
2016	120683	2260084	5.08	6.35	8%	
2017	129738	2527537	5.11	6.40	8%	8.21%

Regression analysis of same is given in figure below

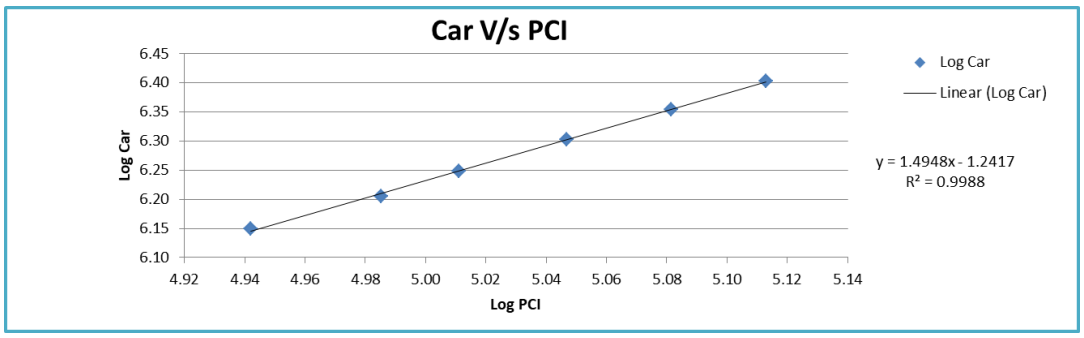


Figure 5-4 : Regression and Elasticity PCI vs. Car – Extrapolation Uttar Pradesh

Table 5-7 : Population Vs Bus Gujrat

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	60439692	67546	7.78	4.83		
2013	61563037	70615	7.79	4.85	2%	
2014	62684375	72998	7.80	4.86	2%	
2015	63803304	76435	7.80	4.88	2%	
2016	64919427	82734	7.81	4.92	2%	
2017	66032362	74855	7.82	4.87	2%	1.79%

Regression analysis of same is given in figure below

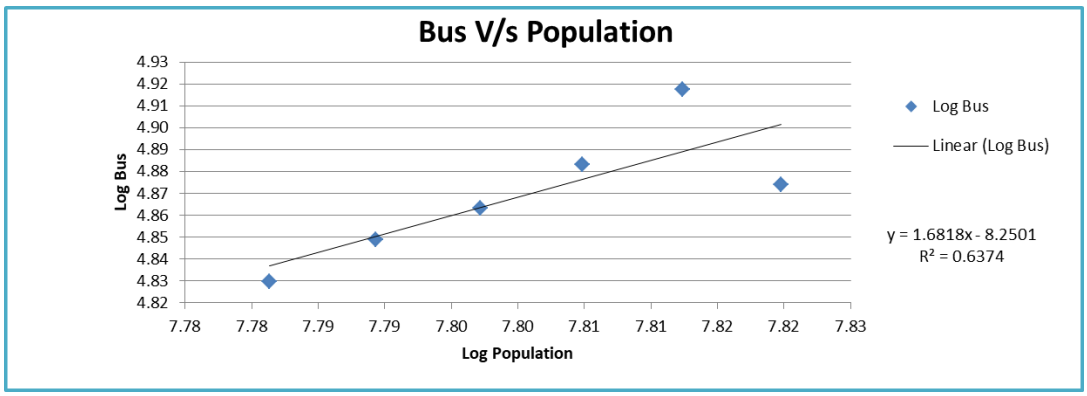


Figure 5-5 : Regression and Elasticity Population vs. Bus – Extrapolation Gujarat

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-8 : LCV Traffic Vs NSDP Gujarat

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	532809	448958	5.73	5.65		
2013	596659	499277	5.78	5.70	12%	
2014	641489	542918	5.81	5.73	8%	
2015	705629	589984	5.85	5.77	10%	
2016	774775	633599	5.89	5.80	10%	9.82%

Following figure depict regression analysis and extrapolation.

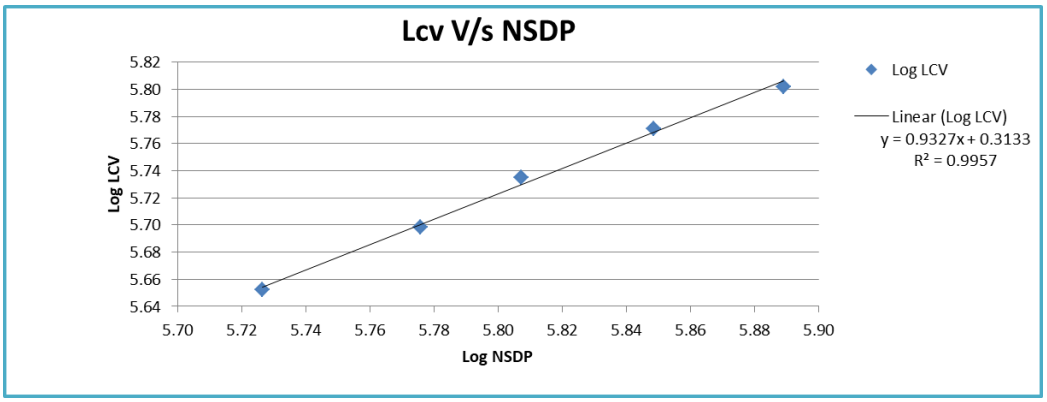


Table 5-9 : Truck Traffic Vs NSDP Gujarat

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	532809	301533	5.73	5.48		
2013	596659	319207	5.78	5.50	12%	
2014	641489	332185	5.81	5.52	8%	
2015	705629	352225	5.85	5.55	10%	
2016	774775	375265	5.89	5.57	10%	
2017	843930	396061	5.93	5.60	9%	9.64%

Following figure depict regression analysis and extrapolation

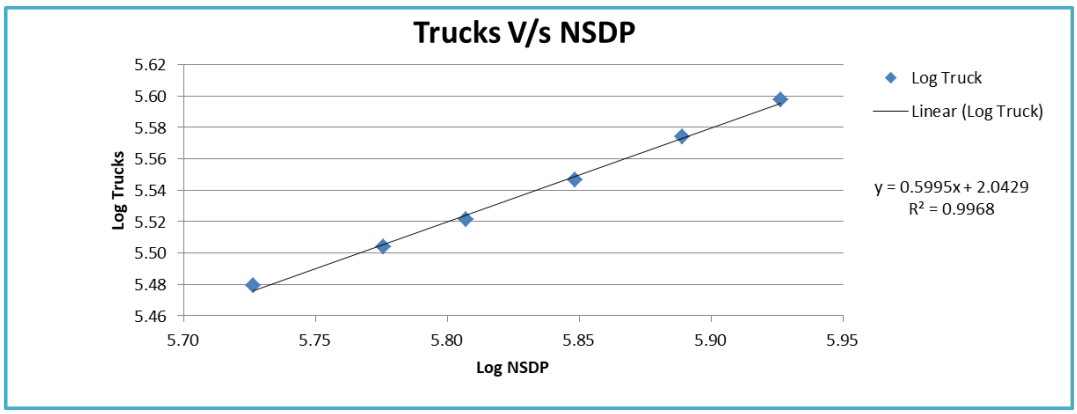


Figure 5-6 : Regression and Elasticity NSDP vs. Truck Traffic - extrapolation Gujarat

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-10 : Summary Regression Analysis Gujrat

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Gujarat	Car/Jeep	PCI	y = 1.4948x + -1.2417	R² = 0.9988	1.4948	8.21%	12.27%
	Bus	Population	y = 1.6818x - -8.2501	R² = 0.6374	1.6818	1.79%	3.00%
	LCV	NSDP	y = 0.9327x - 0.3133	R² = 0.9957	0.9327	9.82%	9.16%
	Truck	NSDP	y = 0.5995x - 2.0429	R² = 0.9968	0.5995	9.64%	5.78%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Haryana State.

Table 5-11 : Per Capita Income Vs Car Haryana

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	106085	1134514	5.03	6.05		
2013	111780	1293065	5.05	6.11	5%	
2014	119791	1454182	5.08	6.16	7%	
2015	125032	1609544	5.10	6.21	4%	
2016	137818	1764448	5.14	6.25	10%	
2017	150241	1879587	5.18	6.27	9%	7.23%

Regression analysis of same is given in figure below

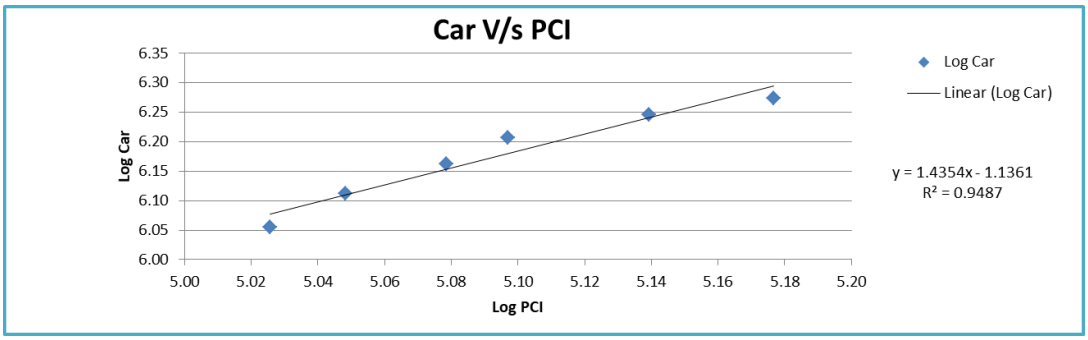


Figure 5-7 : Regression and Elasticity PCI vs. Car – Extrapolation Haryana

Table 5-12 : Population Vs Bus Haryana

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	25351462	39153	7.40	4.59		
2013	25751257	43456	7.41	4.64	2%	
2014	26149236	46558	7.42	4.67	2%	
2015	26545282	52640	7.42	4.72	2%	
2016	26939286	55781	7.43	4.75	1%	
2017	27331141	60129	7.44	4.78	1%	1.52%

Regression analysis of same is given in figure below

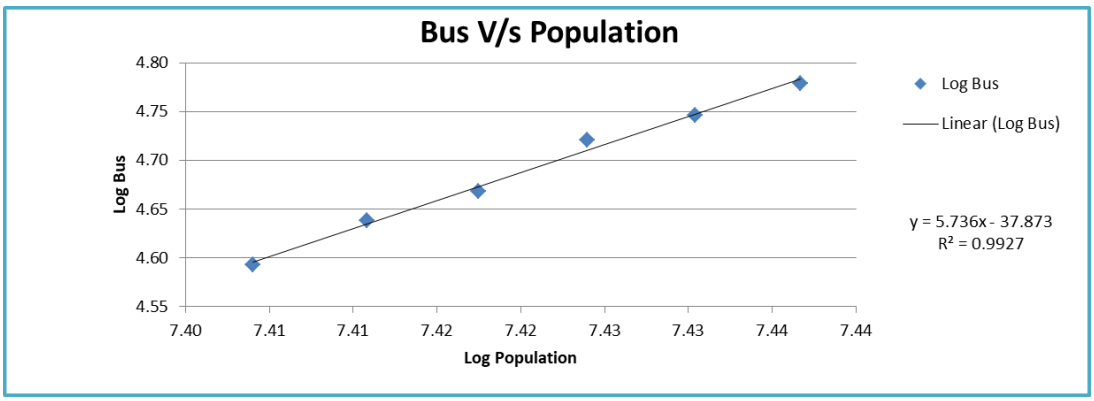


Figure 5-8 : Regression and Elasticity Population vs. Bus – Extrapolation Haryana

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-13 : LCV Traffic Vs NSDP Haryana

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	271152	124897	5.43	5.10		
2013	289756	137511	5.46	5.14	7%	
2014	314931	152069	5.50	5.18	9%	
2015	333359	167901	5.52	5.23	6%	
2016	372659	182776	5.57	5.26	12%	8.30%

Following figure depict regression analysis and extrapolation.

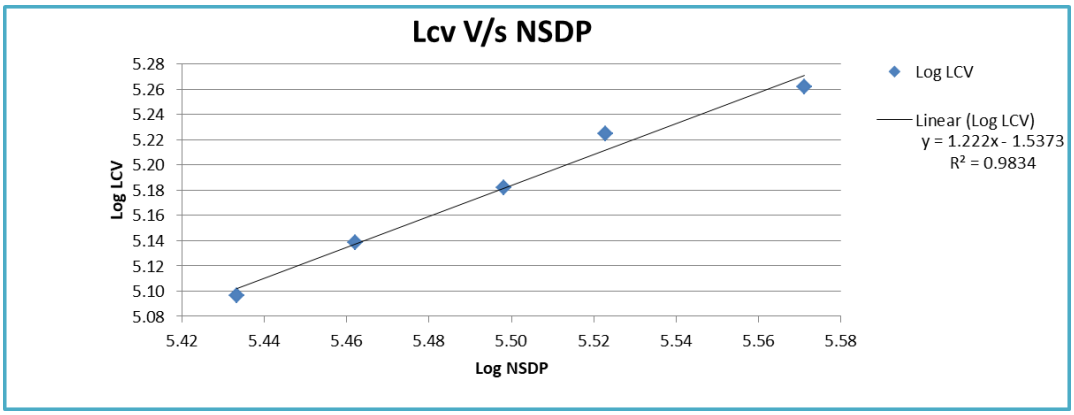


Table 5-14 : Truck Traffic Vs NSDP Haryana

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	271152	292735	5.43	5.47		
2013	289756	307509	5.46	5.49	7%	
2014	314931	327882	5.50	5.52	9%	
2015	333359	348732	5.52	5.54	6%	
2016	372659	367730	5.57	5.57	12%	
2017	412006	390321	5.61	5.59	11%	8.75%

Following figure depict regression analysis and extrapolation

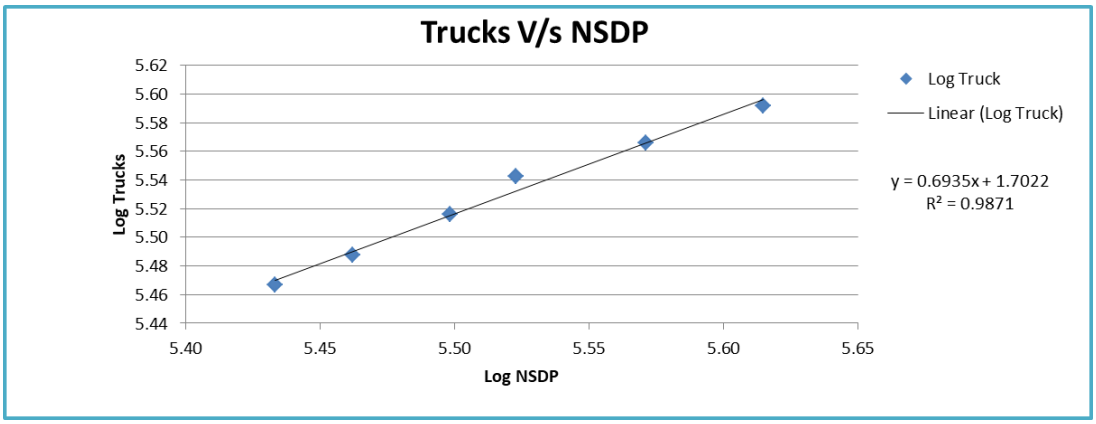


Figure 5-9 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Haryana

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below

Table 5-15 : Summary Regression Analysis Haryana

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Haryana	Car/Jeep	PCI	y = 1.4354x - -1.1361	R^2 = 0.9487	1.4354	7.23%	10.38%
	Bus	Population	y = 5.736x - - 37.8732	R^2 = 0.9927	5.7360	1.52%	8.69%
	LCV	NSDP	y = 1.222x - - 1.5373	R^2 = 0.9834	1.2220	8.30%	10.14%
	Truck	NSDP	y = 0.6935x - 1.7022	R^2 = 0.9871	0.6935	8.75%	6.07%

Following tables and graphs depict regression and elasticity of growth model for stretch falling in Karnataka State.

Table 5-16 : Per Capita Income Vs Car Karnataka

Year	PCI	Car	Log PCI	Log Car	PCI Growth	Average Growth
2012	90269	1454309	4.96	6.16		
2013	94382	1626924	4.97	6.21	5%	
2014	101864	1798035	5.01	6.25	8%	
2015	105703	1992262	5.02	6.30	4%	
2016	116819	2207852	5.07	6.34	11%	
2017	131260	2203562	5.12	6.34	12%	7.83%

Regression analysis of same is given in figure below

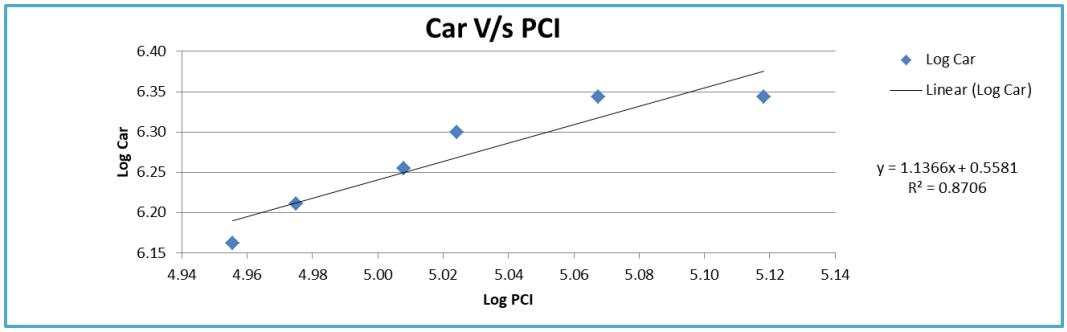


Figure 5-10 : Regression and Elasticity PCI vs. Car – Extrapolation Karnataka

Table 5-17 : Population Vs Bus Karnataka

Year	Population	Buses	Log Pop	Log Bus	Pop Growth	Average Growth
2012	61095297	175705	7.79	5.24		
2013	62058777	186705	7.79	5.27	2%	
2014	63017877	195913	7.80	5.29	2%	
2015	63972322	204803	7.81	5.31	2%	
2016	64921845	213699	7.81	5.33	1%	
2017	65866188	224580	7.82	5.35	1%	1.52%

Regression analysis of same is given in figure below

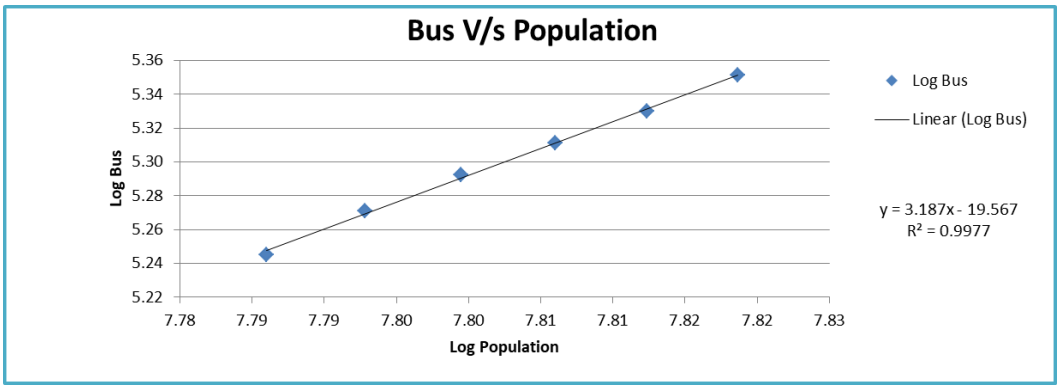


Figure 5-11 : Regression and Elasticity Population vs. Bus – Extrapolation Karnataka

Elasticity of goods traffic has been worked out by regression analysis with NSDP. Following table represents the data and details.

Table 5-18 : LCV Traffic Vs NSDP Karnataka

Year	NSDP	LCV	Log NDSP	Log LCV	NSDP Growth	Average Growth (5 Year)
2012	554990	221160	5.74	5.34		

2013	586592	258701	5.77	5.41	6%	
2014	639981	294266	5.81	5.47	9%	
2015	671322	331381	5.83	5.52	5%	
2016	749990	367572	5.88	5.57	12%	8%

Following figure depict regression analysis and extrapolation.

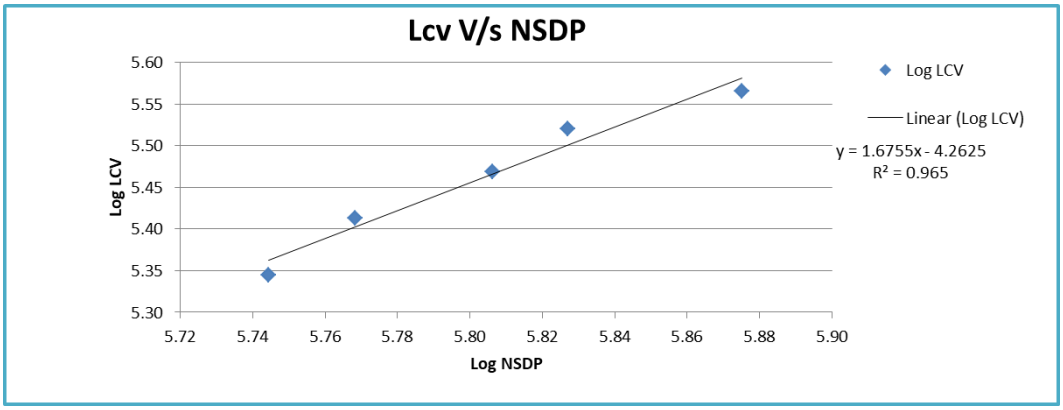


Table 5-19 : Truck Traffic Vs NSDP Karnataka

Year	NSDP	Trucks	Log NDSP	Log Truck	NSDP Growth	Average Growth (5 Year)
2012	554990	233422	5.74	5.37		
2013	586592	247639	5.77	5.39	6%	
2014	639981	260989	5.81	5.42	9%	
2015	671322	274971	5.83	5.44	5%	
2016	749990	290415	5.88	5.46	12%	
2017	851880	306290	5.93	5.49	14%	9.00%

Following figure depict regression analysis and extrapolation

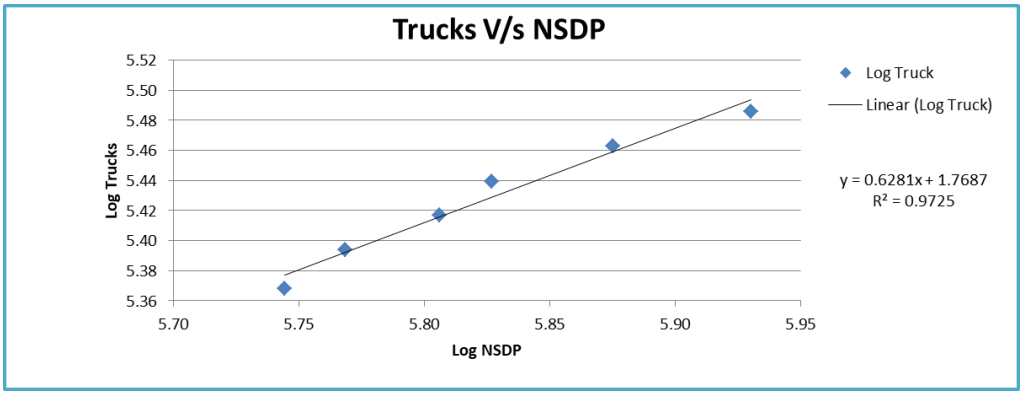


Figure 5-12 : Regression and Elasticity NSDP vs. Goods Traffic - extrapolation Karnataka

Using the regression analysis above, we have arrived at the elasticity of traffic demand for each class of vehicle to a given change in relevant economic indicators. Average traffic growth of a vehicle class is multiplied by the corresponding elasticity coefficient to arrive at traffic growth. R2 statistical measure of how close the data are to the fitted regression line. It varies from 0 to 1. Higher the value of R2 more representative is the regression model of data.

The results of these analyses for *the good fit* regression as reflected by R^2 values are presented in the Table below.

Table 5-20 : Summary Regression Analysis Karnataka

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient (y)	Average Growth	Growth Elastic Model
Karnataka	Car/Jeep	PCI	y = 1.1366x - 0.5581	R² = 0.8706	1.1366	7.83%	8.90%
	Bus	Population	y = 3.187x - - 19.567	R² = 0.9977	3.1870	1.52%	4.83%
	LCV	NSDP	y = 1.6755x - - 4.2625	R² = 0.965	1.6755	7.85%	13.16%
	Truck	NSDP	y = 0.6281x - 1.7687	R² = 0.9725	0.6281	9.00%	5.65%

Economical model for predicting growth is good tool, however other local, regional, national factors should also be considered before finalizing growth factors. Considering factors such as proposed developments and other influencing economic factors, moderated growth should be considered. These factors are discussed in subsequent sections.

5.4 Analysis of Historic Traffic Data

Historical traffic data forms useful information for any highway project. It provides useful information for establishing past trend of growth. Project stretch of Yedashi to Aurangabad has recently been commissioned and is under tolling operation since March 2019. As traffic data available for last two years was affected due to COVID-19 the same cannot be taken as representative. A minimum of about 5 -6 years' consistent traffic data is required for establishing a reliable past trend.

5.5 Other Factors Influencing Growth

There are many factors which have impact on traffic growth. As discussed previously these factors can be economical, social, educational, and industrial.

Potentiality of such factors for project highway is discussed as under.

ECONOMY

After witnessing a slowdown during 2011-12, the economy recovered in 2013-14, and a high growth rate of GDP was recorded in up to 2018-19. Pandemic of COVID-19 impacted all economies of world including India. Following figure show trend of GDP growth in India.

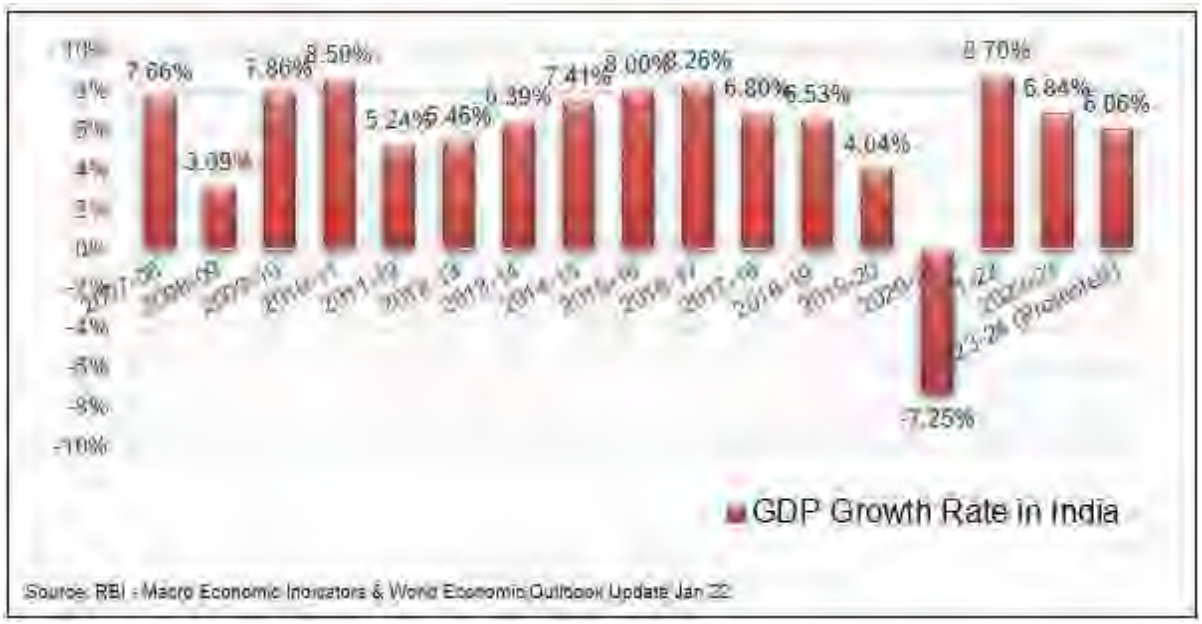


Figure 5-13 : Growth of GDP in India

FY 2017-18 recorded a growth of 6.7% which had slight impact of GST and demonetization. Indian economy appears on recovery path with estimated growth of 6.8% in FY 2018-19. Government took major policy decision including tax infrastructure reforming, banking sector improvement and ease of doing business.

Major economies of world collapsed due to pandemic COVID-19 including India. Indian economy is also registered negative growth in financial year 2020-21. After that Indian economy recovered handsomely and registered a growth of about 9% in Year 2021-22. This was partly due to low base of year 2020-21 as well.

Honorable Prime Minister has announced a major relief package of Rs. 20 lakh crores which is about 10% of GDP. This is aimed at turning this major crisis of COVID-19 into opportunity by providing major impetus to industrial production to the limit of becoming a self-reliant economy. With major thrust of this package being on **Make -In- India** it is expected that industry in India would grow at rapid pace and recover handsomely in post COVID-19 scenario. World Economic Outlook update also has predicted a growth rate of about 7.5 % in year 2022-23.

5.6 Developments along and around the Project Corridor & State

Aurangabad: is the fifth largest city in Maharashtra. It lies on a major trade route that used to connect north-west India's sea and land ports to the Deccan region. Aurangabad is administrative headquarters of the Aurangabad Division or Marathwada region.

Beed: Agriculture is the main business in Beed, and it is largely dependent on monsoon rain. Beed also is a district which provides a large number of laborers in India specially in the form of sugarcane cutters.

Jalna: is connected to major towns of the state by state highways. Road connectivity is excellent, roads connecting to Aurangabad, Pune, Ahmednagar, Nagpur, Beed, Mumbai having been upgraded to four-lane highways. A New Nagpur-Aurangabad-Mumbai highway, passing through Jalna, is being developed. There are various cotton-ginning & oil-pressing factories in Jalna.

Until 1960 Aurangabad was a undeveloped city and industrially backward area. After 1960 Growth began when the Maharashtra Industrial Development Corporation (MIDC) began acquiring land and setting up industrial estates. Aurangabad is a now

classic example of efforts of a state government towards the balanced industrialisation of the state. Major Industrial areas of Aurangabad are Chikhalthana MIDC, Shendra MIDC and Waluj MIDC. Many of the large India and multinational firms have established themselves in Industrial areas of Shendra, Waluj, Paithan.

Some of the big names include Audi, Skoda, Videocon, Siemens, Bajaj, Forbes, Goodyear, Wockhardt, Johnson & Johnson, Kenstar which have set up their production houses in Industrial areas of Aurangabad.

DMIC

Delhi Mumbai Industrial Corridor (DMIC) which is passing close to PIA envisaged to influence the pattern of development and industrialization of the region. To tap the development potential of the proposed freight corridor, an area spanning 150 kilometers wide on both sides of the freight corridor has been identified as Influence Region and is proposed to be developed as Delhi-Mumbai Industrial Corridor (DMIC). One of the Nashik Sinnar Igatpuri Investment Region's identified early bird projects is an industrial area comprising of total 40 sq. km to be developed into two parts one of 8 sq. km in Shendra and other with an area of 32 sq. km at Bidkin some 24 km from Aurangabad on the Paithan road.

The Aurangabad Industrial City (AURIC) Bidkin Industrial Area (BIA) is strategically positioned and directly connected to the major state highways which are Paithan Road, NH-211 and SH-178 (Jalna Road). Nearest major city is Aurangabad which is served by NH-211, Major State Highway (MSH) 6 and MSH-8, and SH-16, SH-60 and SH-148.

Considering the scenario, it may be assumed that the traffic growth on project highway would remain high and there are minimal risks in terms of growth.

5.7 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle as under. Rate of growth is moderated in light of overall regional trend. Growth of Multi-Axle is kept slightly higher as trend of technological advances in logistic industry favors multi-axle over 2/3 axle carriage. It is also expected that as

the economy moves from developing to developed, rate of growth diminishes. Same growth rate is not sustainable for long. Traffic growth has been suitably stepped down for future years.

Growth rates are recommended for three scenarios for sensitivity analysis namely **Optimistic, Pessimistic** and **Most Likely** with a positive and negative variation 0.25% from Most Likely case for corridor in both states.

5.7.1 Recommended Growth Rates of Traffic for Maharashtra Part of Stretch

Table 5-21 : Recommended Growth Rates Optimistic

Category / Year	2021-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.46%	7.71%	7.08%	6.77%	6.72%
Bus	6.00%	4.79%	4.27%	4.01%	4.01%
Minibus	6.00%	4.79%	4.27%	4.01%	4.01%
LCV	5.98%	4.10%	3.41%	3.07%	3.00%
2- Axle	4.92%	3.69%	3.17%	2.91%	2.86%
3 - Axle	6.19%	4.75%	4.05%	3.71%	3.65%
4 to6 Axle	6.82%	4.75%	4.05%	3.71%	3.65%
7 and Above Axle	6.82%	4.75%	4.05%	3.71%	3.65%

Table 5-22 : Recommended Growth Rates Pessimistic

Category / Year	2021-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	8.96%	7.21%	6.58%	6.27%	6.22%
Bus	5.50%	4.29%	3.77%	3.51%	3.51%
Minibus	5.48%	3.60%	2.91%	2.57%	2.50%
LCV	4.42%	3.19%	2.67%	2.41%	2.36%
2- Axle	5.69%	4.25%	3.55%	3.21%	3.15%
3 - Axle	6.32%	4.25%	3.55%	3.21%	3.15%
4 to6 Axle	6.32%	4.25%	3.55%	3.21%	3.15%
7 and Above Axle	6.32%	4.25%	3.55%	3.21%	3.15%

Table 5-23 : Recommended Growth Rates Most Likely

Category / Year	2021-2025	2025-2030	2031-2035	2036-2040	2041-2045
Car/Jeep/Van	9.21%	7.46%	6.83%	6.52%	6.47%
Bus	5.75%	4.54%	4.02%	3.76%	3.76%
Minibus	5.75%	4.54%	4.02%	3.76%	3.76%
LCV	5.73%	3.85%	3.16%	2.82%	2.75%
2- Axle	4.67%	3.44%	2.92%	2.66%	2.61%
3 - Axle	5.94%	4.50%	3.80%	3.46%	3.40%
4 to6 Axle	6.57%	4.50%	3.80%	3.46%	3.40%
7 and Above Axle	6.57%	4.50%	3.80%	3.46%	3.40%

Traffic and revenue has been worked out on the basis of above growths and same is presented in subsequent chapter of report.

5.8 COVID -19 Impact

All All social and economic activities had been completely disrupted due worldwide pandemic of Corona Virus. This had affected traffic on project stretch as well. Traffic was severely affected form March-2020 due to lockdown and then in second wave and third waves.

Government has announced a mega economic stimulate and package of Rs. 20 Lakh Crore to bring the economy back on track and recover the losses. Traffic has shown impressive recovery post lockdown period and has recovered to normal level.

Taking recommended traffic growth and additional factors as discussed above into consideration traffic forecast for concession period is done and presented in next chapter.

CHAPTER 6

TRAFFIC FORECAST

6.1 Traffic Projections

Growth rates recommended in previous section of report are used to arrive at traffic projections for future years. Toll plaza wise futuristic traffic projection is given in tables below.

These projections have been done for following three cases of growth up to concession period

1. Optimistic Scenario
2. Pessimistic Scenario
3. Most Likely Scenario

Table 6-1 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM (Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3134	337	228	1037	1026	2311	34	8107	21065
2024-25	3431	356	242	1088	1090	2468	36	8711	22493
2025-26	3696	370	253	1128	1142	2585	38	9212	23624
2026-27	3980	385	265	1170	1196	2708	40	9744	24817
2027-28	4286	400	277	1213	1253	2836	42	10307	26066
2028-29	4616	416	291	1258	1312	2970	44	10907	27386
2029-30	4971	433	305	1304	1375	3110	46	11544	28775
2030-31	5322	447	318	1346	1431	3236	48	12148	30056
2031-32	5698	462	332	1389	1489	3367	50	12787	31398
2032-33	6101	477	346	1433	1549	3503	52	13461	32798
2033-34	6533	493	361	1478	1612	3644	54	14175	34267
2034-35	6996	510	376	1524	1677	3792	56	14931	35808
2035-36	7470	525	391	1568	1739	3932	58	15683	37307
2036-37	7975	540	406	1613	1804	4078	60	16476	38875

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2037-38	8514	556	422	1660	1871	4230	62	17315	40521
2038-39	9090	573	439	1708	1940	4387	64	18201	42240
2039-40	9705	591	457	1758	2011	4550	66	19138	44042
2040-41	10357	609	475	1809	2085	4716	68	20119	45906
2041-42	11053	627	494	1861	2161	4888	70	21154	47853
2042-43	11795	646	513	1914	2240	5066	72	22246	49886
2043-44	12587	665	534	1969	2321	5250	75	23401	52019

Table 6-2 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5973	478	507	1216	1188	2447	31	11840	26574
2024-25	6537	506	537	1276	1261	2614	33	12764	28430
2025-26	7041	527	562	1323	1321	2738	34	13546	29924
2026-27	7583	548	588	1372	1384	2868	36	14379	31505
2027-28	8168	571	615	1422	1450	3004	38	15268	33175
2028-29	8797	595	644	1475	1519	3146	40	16216	34941
2029-30	9475	619	675	1529	1591	3295	42	17226	36805
2030-31	10146	640	704	1577	1656	3428	44	18195	38541
2031-32	10863	662	734	1627	1724	3566	46	19222	40365
2032-33	11631	685	765	1678	1794	3711	48	20312	42285
2033-34	12454	709	797	1731	1866	3861	50	21468	44299
2034-35	13335	733	830	1786	1941	4017	52	22694	46416
2035-36	14238	756	863	1838	2013	4166	54	23928	48504
2036-37	15202	779	897	1892	2087	4320	56	25233	50691
2037-38	16231	803	933	1947	2165	4480	58	26617	52992
2038-39	17329	827	970	2003	2246	4646	60	28081	55404
2039-40	18502	852	1008	2061	2329	4818	62	29632	57934
2040-41	19745	877	1048	2119	2414	4994	64	31261	60565
2041-42	21072	903	1090	2180	2501	5176	66	32988	63329
2042-43	22487	930	1133	2242	2593	5365	68	34818	66235

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2043-44	23997	957	1178	2306	2688	5560	70	36756	69284

Table 6-3 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM

(Optimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5163	313	362	936	894	2044	25	9737	21519
2024-25	5651	332	383	982	950	2183	27	10508	23039
2025-26	6087	345	401	1018	995	2287	28	11161	24264
2026-27	6557	359	420	1056	1042	2396	29	11859	25562
2027-28	7062	373	440	1095	1091	2510	30	12601	26930
2028-29	7605	388	461	1135	1142	2629	31	13391	28371
2029-30	8191	404	483	1176	1197	2753	32	14236	29898
2030-31	8770	417	503	1213	1246	2864	33	15046	31318
2031-32	9390	431	524	1251	1296	2980	34	15906	32813
2032-33	10054	445	546	1290	1349	3100	35	16819	34384
2033-34	10765	460	570	1330	1404	3225	36	17790	36042
2034-35	11527	476	595	1372	1461	3356	37	18824	37794
2035-36	12307	490	619	1412	1516	3480	38	19862	39514
2036-37	13139	505	644	1453	1572	3610	39	20962	41324
2037-38	14028	521	670	1495	1630	3744	40	22128	43223
2038-39	14978	537	697	1539	1690	3883	41	23365	45220
2039-40	15991	553	725	1584	1752	4027	42	24674	47314
2040-41	17065	569	754	1629	1816	4174	43	26050	49492
2041-42	18210	586	785	1675	1882	4326	44	27508	51780
2042-43	19434	603	817	1723	1950	4483	46	29056	54189
2043-44	20739	620	850	1772	2021	4646	48	30696	56721

Table 6-4 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM
(Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3119	335	226	1032	1022	2300	33	8067	20960

2024-25	3398	353	238	1077	1080	2446	35	8627	22277
2025-26	3642	366	248	1111	1126	2550	36	9079	23283
2026-27	3904	379	259	1146	1173	2659	37	9557	24339
2027-28	4186	392	270	1182	1222	2772	38	10062	25441
2028-29	4487	406	281	1219	1274	2890	40	10597	26603
2029-30	4810	420	293	1257	1328	3013	42	11163	27822
2030-31	5126	432	304	1291	1375	3120	43	11691	28918
2031-32	5462	445	315	1325	1423	3231	44	12245	30056
2032-33	5820	458	327	1360	1473	3346	45	12829	31247
2033-34	6202	471	339	1396	1526	3465	47	13446	32496
2034-35	6609	484	351	1433	1580	3588	49	14094	33794
2035-36	7023	497	363	1468	1630	3703	51	14735	35045
2036-37	7464	510	375	1503	1683	3822	53	15410	36350
2037-38	7931	523	389	1539	1737	3944	55	16118	37706
2038-39	8428	536	403	1576	1793	4070	57	16863	39120
2039-40	8956	550	417	1614	1850	4200	59	17646	40590
2040-41	9512	564	432	1652	1908	4332	61	18461	42103
2041-42	10103	578	447	1691	1968	4468	63	19318	43678
2042-43	10731	592	462	1730	2029	4609	65	20218	45315
2043-44	11398	606	478	1771	2093	4754	67	21167	47028

Table 6-5 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5947	477	505	1210	1183	2435	31	11788	26454
2024-25	6479	503	532	1264	1251	2590	33	12652	28178
2025-26	6945	521	555	1305	1304	2699	34	13363	29517
2026-27	7446	540	579	1347	1360	2814	35	14121	30935
2027-28	7983	560	604	1390	1418	2934	36	14925	32424
2028-29	8558	581	630	1435	1478	3058	37	15777	33986
2029-30	9175	602	656	1481	1541	3188	38	16681	35629
2030-31	9778	620	681	1521	1596	3301	39	17536	37132
2031-32	10421	638	706	1562	1653	3418	40	18438	38702
2032-33	11106	657	732	1604	1712	3539	41	19391	40346
2033-34	11837	677	759	1647	1772	3664	42	20398	42064
2034-35	12614	697	787	1692	1835	3794	43	21462	43868
2035-36	13405	715	814	1733	1894	3916	44	22521	45621
2036-37	14245	733	842	1775	1954	4041	45	23635	47445
2037-38	15138	752	872	1818	2017	4170	46	24813	49359
2038-39	16087	772	903	1862	2082	4303	47	26056	51361
2039-40	17094	792	935	1907	2149	4440	48	27365	53451
2040-41	18156	812	967	1953	2217	4579	49	28733	55611
2041-42	19284	833	1000	1999	2287	4723	50	30176	57870
2042-43	20484	854	1034	2046	2359	4872	52	31701	60240
2043-44	21758	875	1070	2094	2433	5025	54	33309	62717

Table 6-6 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Pessimistic Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5139	312	361	933	889	2035	25	9694	21426
2024-25	5600	329	381	974	939	2164	26	10413	22831
2025-26	6004	341	398	1005	979	2256	27	11010	23935
2026-27	6437	353	415	1037	1021	2352	28	11643	25096
2027-28	6901	366	433	1070	1065	2452	29	12316	26319
2028-29	7398	379	452	1104	1111	2556	30	13030	27605
2029-30	7930	392	471	1140	1158	2665	31	13787	28957
2030-31	8451	403	489	1170	1200	2760	32	14505	30197
2031-32	9006	415	507	1201	1243	2858	33	15263	31491
2032-33	9598	427	526	1233	1288	2960	34	16066	32853
2033-34	10229	439	546	1265	1334	3065	35	16913	34273
2034-35	10902	452	566	1298	1381	3174	36	17809	35760
2035-36	11585	464	586	1329	1426	3276	37	18703	37213
2036-37	12312	476	606	1361	1472	3381	38	19646	38729
2037-38	13084	488	627	1393	1519	3489	39	20639	40309
2038-39	13904	501	649	1426	1568	3601	40	21689	41969
2039-40	14774	514	672	1460	1618	3716	41	22795	43702
2040-41	15694	527	696	1494	1669	3833	42	23955	45499
2041-42	16669	540	721	1530	1722	3953	43	25178	47380
2042-43	17705	553	746	1566	1776	4078	44	26468	49348
2043-44	18806	566	772	1603	1832	4207	45	27831	51410

Traffic projections for Most Likely scenario are given as under

Table 6-7 : Total Tollable Traffic @ Toll Plaza 1- Chainage 134.000 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	3126	335	227	1034	1024	2306	34	8086	21014
2024-25	3414	354	240	1082	1084	2458	36	8668	22386
2025-26	3667	367	251	1119	1132	2569	38	9143	23455
2026-27	3940	381	262	1157	1182	2685	40	9647	24577
2027-28	4233	395	274	1196	1235	2806	42	10181	25757
2028-29	4548	410	286	1237	1290	2932	44	10747	26994
2029-30	4887	425	299	1280	1348	3064	46	11349	28301
2030-31	5221	438	311	1317	1399	3181	48	11915	29490
2031-32	5577	452	323	1355	1452	3302	50	12511	30729

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2032-33	5957	466	336	1394	1507	3427	52	13139	32023
2033-34	6363	480	350	1434	1564	3557	54	13802	33377
2034-35	6798	495	364	1476	1623	3692	56	14504	34796
2035-36	7241	509	378	1515	1679	3820	58	15200	36172
2036-37	7713	523	392	1555	1737	3952	60	15932	37604
2037-38	8215	537	407	1597	1797	4088	62	16703	39099
2038-39	8750	552	422	1640	1859	4229	64	17516	40660
2039-40	9320	567	437	1684	1924	4376	66	18374	42295
2040-41	9923	582	454	1728	1989	4525	68	19269	43978
2041-42	10565	597	471	1773	2056	4679	70	20211	45731
2042-43	11248	613	489	1819	2126	4838	72	21205	47565
2043-44	11975	630	507	1866	2198	5002	74	22252	49475

Table 6-8 : Total Tollable Traffic @ Toll Plaza 2- Chainage 194.000 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5960	477	506	1213	1185	2441	31	11813	26512
2024-25	6507	504	535	1269	1255	2602	33	12705	28298
2025-26	6992	524	559	1313	1312	2719	34	13453	29719
2026-27	7513	545	584	1359	1371	2841	35	14248	31215
2027-28	8073	566	610	1406	1432	2968	36	15091	32784
2028-29	8675	588	637	1454	1496	3101	38	15989	34444
2029-30	9323	611	666	1504	1564	3240	40	16948	36202
2030-31	9959	631	692	1549	1623	3363	41	17858	37816
2031-32	10639	651	719	1595	1684	3491	42	18821	39508
2032-33	11365	672	748	1642	1748	3623	44	19842	41289
2033-34	12140	693	778	1690	1815	3760	46	20922	43156
2034-35	12969	715	809	1739	1884	3902	48	22066	45113
2035-36	13813	736	839	1786	1949	4037	50	23210	47031
2036-37	14713	757	870	1834	2017	4176	52	24419	49038
2037-38	15672	778	902	1883	2087	4320	54	25696	51138
2038-39	16692	800	935	1933	2159	4470	56	27045	53340
2039-40	17780	823	970	1984	2233	4625	58	28473	55649
2040-41	18930	846	1006	2036	2308	4782	60	29968	58038
2041-42	20154	869	1043	2089	2387	4944	62	31548	60542
2042-43	21457	893	1082	2143	2468	5111	64	33218	63163
2043-44	22844	917	1122	2199	2552	5284	66	34984	65914

Table 6-9 : Total Tollable Traffic @ Toll Plaza 3- Chainage 254.000 KM (Most Likely Growth Scenario)

Year	CAR	Minibus /LCV	Bus	Truck	3-Axle Commercial vehicle	Multi axle	Oversized Vehicles	Total Tollable Traffic	PCU (Including Exempted)
2023-24	5151	312	361	934	891	2039	25	9713	21465
2024-25	5626	329	381	978	945	2173	27	10459	22932
2025-26	6046	342	399	1011	988	2271	28	11085	24099
2026-27	6498	355	417	1046	1033	2373	29	11751	25328
2027-28	6982	368	436	1082	1080	2480	30	12458	26623
2028-29	7502	382	456	1119	1129	2591	31	13210	27986
2029-30	8062	396	476	1157	1180	2707	32	14010	29421
2030-31	8612	409	495	1190	1225	2810	33	14774	30749
2031-32	9200	422	515	1225	1272	2917	34	15585	32149
2032-33	9827	435	535	1261	1320	3028	35	16441	33611
2033-34	10498	448	556	1298	1370	3143	36	17349	35148
2034-35	11215	462	578	1336	1422	3262	37	18312	36762
2035-36	11946	475	599	1372	1471	3375	38	19276	38343
2036-37	12725	488	621	1409	1522	3492	39	20296	40003
2037-38	13554	501	645	1446	1574	3612	40	21372	41735
2038-39	14437	515	669	1484	1629	3737	41	22512	43557
2039-40	15378	529	694	1523	1686	3867	42	23719	45471
2040-41	16372	543	720	1562	1743	3999	43	24982	47451
2041-42	17431	557	747	1602	1802	4135	44	26318	49525
2042-43	18558	573	775	1644	1863	4276	45	27734	51708
2043-44	19759	589	804	1687	1926	4421	46	29232	53995

6.2 Modification in Concession Period

As per Article 29 of the concession agreement, if actual traffic on the project falls short or exceeds Target Traffic on project highway on defined date, concession period shall be modified subject to calculation stipulated therein. For Yedeshi – Aurangabad project, the Target Date and Target Traffic are defined as under:

Target Date - 1st October 2023

Target Traffic -24407 in PCU

It was observed that as per traffic projections, average traffic volume falls short of target traffic in all scenarios. Probable extension of concession period is estimated according to article 29 of concession agreement which comes to about 4-5 years Traffic forecast and revenue projections are done for probable extended period accordingly.

Most Likely

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	23030	-6%	8%	8%	26	2.2

Optimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	23087	-5%	8%	8%	26	2.1

Pessimistic

Target Year	Target Traffic	Actual Traffic	% of Excess / Short traffic	% Revision (+ or -) in CP as per CA	% Variation in CP	Original CP	Change in CP (In Years)
2023	24407	22976	-6%	9%	9%	26	2.3

CHAPTER 7

FORECAST OF TOLL REVENUE

7.1 General

This chapter presents the tolling rate calculations, categories and toll revenue of the project.

7.2 Discount Categories

The fee schedule in the CA of Surat- Dahisar section of NH-8 is based on the old toll policy. As per the Toll Notification (Schedule - G) the discounts and special provisions have been considered. In addition to discounts as per Fee Notification concessionaire has declared special category rates also. Salient features of toll rate structure are given as under

1. Monthly Pass: For frequent users monthly pass would be issued at fee at 2/3rd rate for 50 single journey trips.
2. Multiple Journeys (for Return Trip): Will be charged at 1.5 times single journey.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.
4. Local Discounts: There are several categories of local discounts.
    a) Local Car Jeep Van - Rs. 275 per month (for locals residing within a radius of 20 kms from toll plaza)

Building of inflation and escalation of rate on the basis of WPI are done as per toll notification (Schedule G) as given under as extract from concession agreement.

The formula for determining the applicable rate of fee shall be as follows:-

$$\text{Applicable rate of fee} = \text{base rate} + \text{base rate} \times \left\{ \frac{\text{WPI A-WPI B}}{\text{WPI B}} \right\} \times 0.4$$

Factor of inflation / growth has been incorporated as per Schedule R. WPI numbers (2011-12 series) are available up to 2018-19. A moderate growth in Wholesale Price Index (WPI) has been assumed after that. The following graph provides historical rate of inflation (WPI) in India. Data has been sourced from the Office of Economic Advisor web site (www.eaindustry.nic.in) WPI for year 2017-18 and 2018-2019 is worked back by applying a correlation factor for 2004-05 series as 2017-18 and 2018-2019 data is available in 2011-12 series only. Ratio of WPI for year 2016-17 for both series is used for conversion of WPI in 2004-05 series

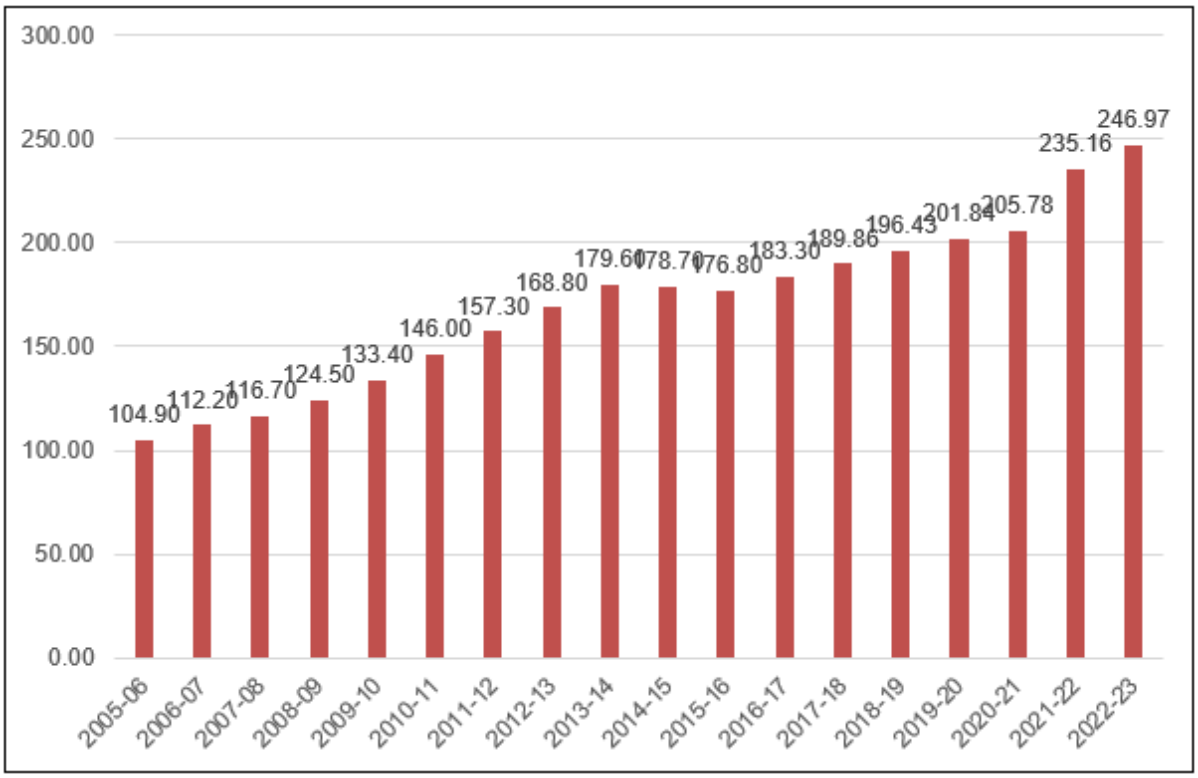


Figure 7-1 : Historical Rate of WPI Inflation in India

Average inflation in WPI in last few years is steadily growing. It grew in range of 4% - 5% in previous years. For future years initially it is takes 5% and Suitably Stepped down for future years.

7.3 Estimation of Toll Rates

As per the applicable MORTH notification and Schedule R of contract agreement, the following Base rate of fee for the categories mentioned in the table stands true in the National Highways Fee Rules applicable for contract.

Table 7-1 : Base Toll Rates June 2007-08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (Two Axles)	2.20
Three Axle Commercial Vehicles	2.40
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4 to 6 axles)	3.45
Oversized Vehicles (7 or more Axles)	4.20

Toll rates are calculated as per guidelines provided in schedule R (rounded to nearest Rs. five) for the concession period and are given below. Since applicable length of highway length is equal for both plazas, applicable toll rates are also same

Thus, worked out rates for various categories of vehicle and discounts are given as under.

Table 7-2 : Toll Rates for Single Journey @ Km 134.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	80	125	265	265	285
2024-25	80	130	275	275	300
2025-26	85	140	290	290	315
2026-27	90	145	305	305	335
2027-28	95	155	320	320	350
2028-29	100	160	335	335	365
2029-30	105	170	350	350	385
2030-31	110	175	370	370	400
2031-32	115	185	385	385	420
2032-33	120	195	405	405	440
2033-34	125	205	425	425	465
2034-35	130	215	445	445	485
2035-36	140	225	470	470	510
2036-37	145	235	490	490	535
2037-38	150	245	515	515	560
2038-39	160	260	540	540	590

2039-40	170	270	565	565	620
2040-41	175	285	595	595	650
2041-42	185	300	625	625	680
2042-43	195	315	655	655	715
2043-44	205	330	690	690	750

Table 7-3 : Toll Rates for Single Journey @ Km 194.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	110	175	365	365	395
2024-25	115	185	385	385	415
2025-26	120	190	400	400	440
2026-27	125	200	425	425	460
2027-28	130	210	445	445	485
2028-29	135	220	465	465	505
2029-30	145	230	485	485	530
2030-31	150	245	510	510	555
2031-32	160	255	535	535	585
2032-33	165	270	560	560	610
2033-34	175	280	590	590	640
2034-35	180	295	615	615	675
2035-36	190	310	645	645	705
2036-37	200	325	680	680	740
2037-38	210	340	715	715	775
2038-39	220	355	750	750	815
2039-40	230	375	785	785	855
2040-41	245	395	825	825	900
2041-42	255	415	865	865	945
2042-43	270	435	910	910	990
2043-44	280	455	955	955	1040

Table 7-4 : Toll Rates for Single Journey @ Km 243.00

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	105	170	355	355	390
2024-25	110	180	375	375	410
2025-26	115	190	395	395	430
2026-27	120	195	415	415	450
2027-28	130	205	435	435	475
2028-29	135	215	455	455	495

2029-30	140	225	475	475	520
2030-31	145	240	500	500	545
2031-32	155	250	525	525	570
2032-33	160	260	550	550	600
2033-34	170	275	575	575	630
2034-35	180	290	605	605	660
2035-36	185	300	635	635	690
2036-37	195	315	665	665	725
2037-38	205	335	695	695	760
2038-39	215	350	730	730	800
2039-40	225	365	765	765	835
2040-41	240	385	805	805	880
2041-42	250	405	845	845	925
2042-43	260	425	890	890	970
2043-44	275	445	930	930	1015

Table 7-5 : Toll Rates for Return Journey @ Km 134.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	115	190	395	395	430
2024-25	125	200	415	415	455
2025-26	130	210	435	435	475
2026-27	135	220	460	460	500
2027-28	140	230	480	480	525
2028-29	150	240	505	505	550
2029-30	155	250	530	530	575
2030-31	165	265	555	555	605
2031-32	170	275	580	580	635
2032-33	180	290	610	610	665
2033-34	190	305	640	640	695
2034-35	200	320	670	670	730
2035-36	205	335	700	700	765
2036-37	220	350	735	735	805
2037-38	230	370	775	775	845
2038-39	240	385	810	810	885
2039-40	250	405	850	850	930
2040-41	265	425	895	895	975
2041-42	275	450	940	940	1025
2042-43	290	470	985	985	1075
2043-44	305	495	1035	1035	1130

Table 7-6 : Toll Rates for Return journey @ Km 194.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	160	260	545	545	595
2024-25	170	275	575	575	625
2025-26	180	290	605	605	660
2026-27	185	305	635	635	690
2027-28	195	315	665	665	725
2028-29	205	330	695	695	760
2029-30	215	350	730	730	795
2030-31	225	365	765	765	835
2031-32	235	385	805	805	875
2032-33	250	400	840	840	920
2033-34	260	420	885	885	965
2034-35	275	440	925	925	1010
2035-36	285	465	970	970	1060
2036-37	300	485	1020	1020	1110
2037-38	315	510	1070	1070	1165
2038-39	330	535	1120	1120	1225
2039-40	350	560	1175	1175	1285
2040-41	365	590	1235	1235	1350
2041-42	385	620	1295	1295	1415
2042-43	400	650	1360	1360	1485
2043-44	425	685	1430	1430	1560

Table 7-7 : Toll Rates for Return journey @ Km 243.000

Year	CAR	Minibus /LCV	Truck/Bus	Multi axle	Oversized Vehicles
2023-24	160	255	535	535	585
2024-25	165	270	560	560	610
2025-26	175	280	590	590	645
2026-27	185	295	620	620	675
2027-28	190	310	650	650	710
2028-29	200	325	680	680	745
2029-30	210	340	715	715	780
2030-31	220	355	750	750	815
2031-32	230	375	785	785	855
2032-33	245	395	825	825	900
2033-34	255	410	865	865	940
2034-35	265	430	905	905	985
2035-36	280	455	950	950	1035
2036-37	295	475	995	995	1085
2037-38	310	500	1045	1045	1140

2038-39	325	525	1095	1095	1195
2039-40	340	550	1150	1150	1255
2040-41	355	575	1210	1210	1320
2041-42	375	605	1270	1270	1385
2042-43	395	635	1330	1330	1455
2043-44	415	665	1400	1400	1525

Table 7-8 : Toll Rates for Monthly Pass Local@ all Toll Plaza

Year	Car	Mini Bus /LCV
2023-24	330	330
2024-25	345	345
2025-26	365	365
2026-27	385	385
2027-28	400	400
2028-29	420	420
2029-30	440	440
2030-31	460	460
2031-32	485	485
2032-33	510	510
2033-34	535	535
2034-35	560	560
2035-36	585	585
2036-37	615	615
2037-38	645	645
2038-39	680	680
2039-40	710	710
2040-41	745	745
2041-42	785	785
2042-43	825	825
2043-44	865	865

Table 7-9 : Toll Rates for Monthly Pass @ Km 134.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	2595	4190	8775	8775	9575
2024-25	2725	4400	9220	9220	10060
2025-26	2865	4625	9690	9690	10570
2026-27	3010	4860	10185	10185	11110
2027-28	3155	5095	10675	10675	11645
2028-29	3305	5340	11190	11190	12205
2029-30	3465	5600	11730	11730	12795
2030-31	3635	5870	12295	12295	13415
2031-32	3810	6155	12895	12895	14065

2032-33	3995	6455	13520	13520	14750
2033-34	4190	6765	14180	14180	15470
2034-35	4395	7100	14870	14870	16225
2035-36	4610	7445	15600	15600	17020
2036-37	4835	7810	16365	16365	17855
2037-38	5075	8195	17175	17175	18735
2038-39	5325	8600	18020	18020	19660
2039-40	5590	9025	18915	18915	20635
2040-41	5865	9475	19855	19855	21655
2041-42	6160	9945	20840	20840	22735
2042-43	6465	10445	21880	21880	23870
2043-44	6790	10965	22975	22975	25065

Table 7-10 : Toll Rates for Monthly Pass @ Km 194.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3585	5795	12140	12140	13245
2024-25	3770	6090	12755	12755	13915
2025-26	3960	6400	13405	13405	14625
2026-27	4165	6725	14090	14090	15370
2027-28	4365	7050	14765	14765	16110
2028-29	4575	7385	15480	15480	16885
2029-30	4795	7745	16225	16225	17700
2030-31	5025	8120	17010	17010	18555
2031-32	5270	8510	17835	17835	19455
2032-33	5525	8925	18700	18700	20400
2033-34	5795	9360	19615	19615	21395
2034-35	6080	9820	20570	20570	22440
2035-36	6375	10300	21580	21580	23540
2036-37	6690	10805	22640	22640	24695
2037-38	7020	11335	23755	23755	25915
2038-39	7365	11895	24930	24930	27195
2039-40	7730	12485	26160	26160	28540
2040-41	8115	13105	27460	27460	29960
2041-42	8520	13760	28830	28830	31450
2042-43	8945	14445	30270	30270	33020
2043-44	9390	15170	31785	31785	34675

Table 7-11 : Toll Rates for Monthly Pass @ Km 243.000

Year	Car	Mini Bus /LCV	Truck/Bus	Multi Axle	Oversized Vehicle
2023-24	3505	5665	11870	11870	12950
2024-25	3685	5955	12475	12475	13605
2025-26	3875	6255	13110	13110	14300
2026-27	4070	6575	13775	13775	15030

2027-28	4265	6890	14440	14440	15750
2028-29	4470	7225	15135	15135	16510
2029-30	4685	7570	15865	15865	17305
2030-31	4915	7940	16630	16630	18145
2031-32	5150	8325	17440	17440	19025
2032-33	5405	8725	18285	18285	19950
2033-34	5665	9155	19175	19175	20920
2034-35	5945	9600	20115	20115	21940
2035-36	6235	10070	21100	21100	23020
2036-37	6540	10565	22135	22135	24150
2037-38	6860	11085	23225	23225	25340
2038-39	7200	11635	24375	24375	26590
2039-40	7560	12210	25580	25580	27905
2040-41	7935	12815	26850	26850	29290
2041-42	8330	13455	28190	28190	30750
2042-43	8745	14125	29595	29595	32285
2043-44	9180	14830	31075	31075	33900

7.4 Toll Revenue

As indicated earlier, toll revenue on the Project Road has been calculated in all three scenarios based on above rates and projected traffic. The estimates of toll revenue under ***Optimistic***, ***Pessimistic*** and ***Most Likely*** growth scenarios are presented in the following section.

7.5 Toll Revenue at all toll plazas under Scenarios

Toll Revenue estimates under all scenarios at each of the toll plaza up to 2045-46 years starting from the year 2023-24 are shown in tables below.

Table 7-12 : Toll Revenue Optimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	66.85	110.80	88.90	**266.56**
2024-25	74.39	124.39	99.20	**297.97**
2025-26	81.91	137.30	109.70	**328.91**
2026-27	90.68	151.64	121.45	**363.77**
2027-28	99.70	167.43	134.51	**401.64**
2028-29	109.57	183.86	147.45	**440.88**

Year	TP-1	TP2	TP3	Total
2029-30	120.57	203.10	162.52	**486.19**
2030-31	132.36	222.15	177.96	**532.47**
2031-32	144.59	244.94	196.28	**585.81**
2032-33	157.98	267.42	214.83	**640.24**
2033-34	172.96	293.87	235.70	**702.53**
2034-35	189.42	321.96	258.94	**770.32**
2035-36	207.89	352.49	284.15	**844.52**
2036-37	226.09	385.29	310.14	**921.52**
2037-38	246.89	422.31	340.30	**1009.49**
2038-39	270.23	462.35	372.35	**1104.94**
2039-40	295.96	507.70	409.06	**1212.71**
2040-41	322.28	555.34	448.16	**1325.77**
2041-42	351.79	608.29	490.77	**1450.85**
2042-43	384.99	666.89	537.56	**1589.44**
2043-44	422.05	732.83	591.64	**1746.52**

Table 7-13 : Toll Revenue Pessimistic Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	66.54	110.23	88.51	**265.28**
2024-25	73.71	123.14	98.30	**295.15**
2025-26	80.77	135.29	108.22	**324.28**
2026-27	88.97	148.75	119.22	**356.94**
2027-28	97.31	163.49	131.39	**392.19**
2028-29	106.39	178.69	143.34	**428.42**
2029-30	116.46	196.44	157.25	**470.15**
2030-31	127.18	213.85	171.37	**512.41**
2031-32	138.19	234.68	188.11	**560.97**
2032-33	150.21	255.04	204.95	**610.19**
2033-34	163.66	278.91	223.73	**666.30**
2034-35	178.34	304.14	244.60	**727.08**
2035-36	194.80	331.40	267.09	**793.30**
2036-37	210.86	360.51	290.14	**861.51**
2037-38	229.09	393.26	316.78	**939.14**
2038-39	249.54	428.47	344.98	**1022.99**
2039-40	271.96	468.11	377.17	**1117.24**
2040-41	294.69	509.54	411.30	**1215.54**
2041-42	320.20	555.35	448.22	**1323.77**
2042-43	348.81	605.97	488.61	**1443.39**
2043-44	380.56	662.77	535.17	**1578.50**

Table 7-14 : Toll Revenue Most Likely Scenario

(Rs. Crores)

Year	TP-1	TP2	TP3	Total
2023-24	66.71	110.47	88.69	**265.87**
2024-25	74.08	123.69	98.76	**296.53**
2025-26	81.38	136.22	108.96	**326.56**
2026-27	89.86	150.07	120.33	**360.26**
2027-28	98.54	165.28	132.92	**396.74**
2028-29	107.99	181.06	145.35	**434.41**
2029-30	118.58	199.56	159.86	**478.00**
2030-31	129.82	217.75	174.61	**522.19**
2031-32	141.42	239.48	192.10	**572.99**
2032-33	154.14	260.88	209.80	**624.81**
2033-34	168.37	286.01	229.62	**684.00**
2034-35	183.96	312.62	251.64	**748.23**
2035-36	201.46	341.52	275.46	**818.45**
2036-37	218.58	372.46	300.00	**891.04**
2037-38	238.10	407.31	328.37	**973.78**
2038-39	260.04	444.82	358.47	**1063.33**
2039-40	284.16	487.28	392.88	**1164.32**
2040-41	308.68	531.67	429.39	**1269.74**
2041-42	336.14	580.91	469.07	**1386.13**
2042-43	367.01	635.31	512.60	**1514.93**
2043-44	401.38	696.52	562.78	**1660.68**

CHAPTER 8
CONCLUSION & RECOMMENDATIONS

8.1 Conclusion & Recommendations

Project stretch of Yedeshi to Aurangabad section of NH-211 in state of Maharashtra from km 100.000 to km 290.200 is currently four lane road. The road is in sound condition and serves healthy traffic volumes. Project corridor is a part of the important regional network connecting Maharashtra with Karnataka and other southern states. There are large number of townships, industrial corridors and other business establishment coming up along project corridor. As discussed, dominant portion of traffic is long route traffic, which is more sensitive towards the growth of national economy. As Indian economy is poised to grow at 7%+ post COVID-19, the project corridor is expected to pick up the same trend in terms of traffic flow. All these developments have potential to give positive impact to traffic flow on project. The following can be considered as major outcomes of the study

a) There is good amount of tollable traffic running on project

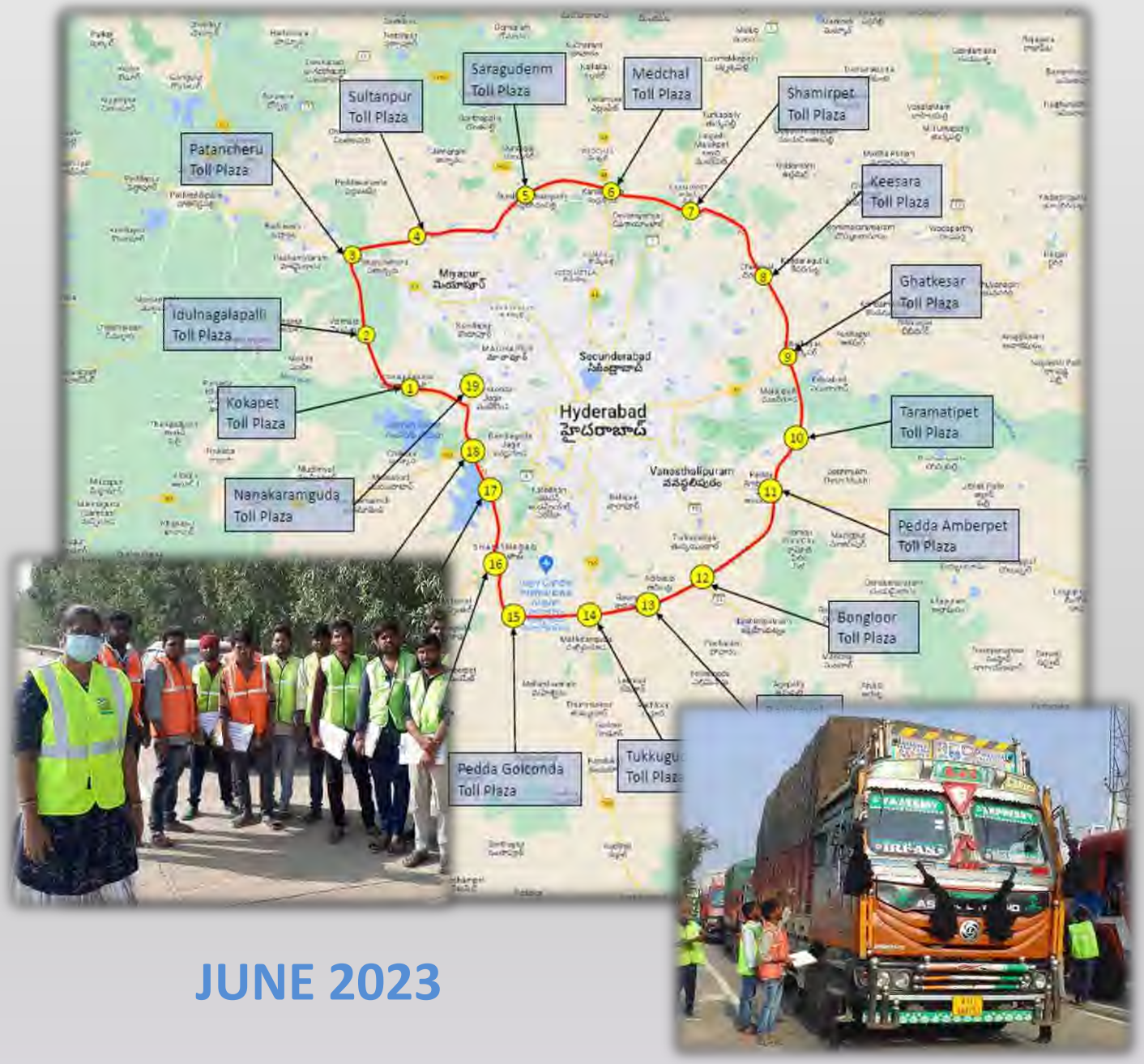
b) Project corridor has potential to witness traffic growth @ 6-8% annually in near future due to various development in area and overall development of economy

c) Project corridor has committed traffic as long route traffic and does not run a risk of traffic leakage due to quality competing road

Based on above it can be considered a stable healthy project from traffic and revenue point of view.

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Nehru Outer Ring Road in Hyderabad from Km 0.000 to Km 158.000 in State of Telangana on TOT mode



JUNE 2023

TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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TRAFFIC STUDY & REVENUE PROJECTION REPORT (FINAL)

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CHAPTER 1

INTRODUCTION

1.1 General

The Outer Ring Road, officially as, Jawaharlal Nehru Outer Ring Road and abbreviated as, O.R.R., is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. The expressway is designed for speeds up to 100 km/h. A large part, 124 km (covering urban nodes viz., Hi- Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012. Rest of the length of Outer Ring Road was opened to traffic in year 2015-16. Hence onward, for ease of reference, Nehru Outer Ring Road will be referred as NORR or ORR.

ORR is one of the most important infrastructural development which has complimented growth of Hyderabad as major metro of India. On Eastern side it has provided express connectivity to major commercial and upscale residential centres of Gachibowli, Banjara Hills, Jublee Hills, Hitec- City, Manikonda, Nanakramguda. As a result large number of residential and commercial projects have come up on this north-east part of ORR. Tellapur, Mokila, Kollur, Narsingi can be named as few of these. On north and western side ORR connects to Shamirpet and Genome Valley.

ORR also provides fast connectivity to various radial state and national highways connecting to Mumbai, Nagpur, Karimnagar, Warangal, Suryapet, Vijayawada, Bengaluru. Regional traffic now does not need to go into congested network of Hyderabad.

The Outer Ring Road also helps in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad & Adilabad as it connects to NH44. The expressway is fenced and 33 radial roads connect it with the Inner Ring Road.

ORR is fully access controlled road and traffic can enter or exit from designated locations only. There are total 19 locations from where ORR can be entered or exited. Toll plaza and or booths have been placed at all such entry / exit points.

ORR has been developed by Hyderabad Metropolitan Development Authority (HMDA). Its maintained by HMDA and special purpose vehicle Hyderabad Growth Corridor Limited (HGCL). The bid for Operation, Maintenance of ORR for a longer concession period of 30 years on TOT model is invited by HMDA and HGCL.

Following figure show alignment of Hyderabad Outer Ring Road in regional context.

.



Figure 1-1: Location & Alignment of ORR in Regional Context

M/s IRB Infrastructure Developers Limited (IRB) intends to participate in bidding for Nehru Outer Ring Road (NORR) on TOT basis.

GMD Consultants have been assigned by M/s IRB for the wok of conducting traffic study and developing revenue model based on traffic projections and forecast.

For making the proper assessment of traffic volume on project stretch, base year traffic and its projection, GMD Consultants have carried out necessary traffic surveys and investigations. The base year traffic data is the primary input for determination of future traffic demand. With a view to estimate the base year traffic volume in different categories of goods and passenger carrying vehicles, the Classified Traffic Volume Count (CTVC) surveys, & Origin-Destination (O-D) were conducted at all Main Toll Plaza (MTP) and Ramp Toll Plaza (RTP).

Year 2022-23 has been taken as the base year for projections and forecasting of traffic in horizon year.

This report fulfils part requirement of the assignment.

1.2 Project Scope

Following may be referred to as broad scope of Traffic Study of four laning of development of EPE

- 7 days 24 hrs Classified Traffic Volume Count at 19 locations where toll plaza has been provided either at single location or on various arms of interchange
- Origin & Destination Survey (OD)- 1 Day at all CTV locations as above
- Establishment of traffic pattern
- Working our traffic demand elasticity and growth
- Traffic forecast up to concession period
- Preparation of revenue model up to concession period

- Any other analysis relevant to scope

1.3 Brief Description of the Project Influence Area (PIA)

Nehru Outer Ring Road is a 158 km access controlled transportation ring around city of Hyderabad and Secundrabad Average radial distance of ORR from city centre is about 20-25 km. Hyderabad is fourth most populous city of India. It is capital of one of the fastest growing state of India, Telangana. Hyderabad if merging and the major global hum in field of IT, IT&ES, Pharmaceutical & Biotechnical Research. As discussed previously it provides fast connectivity to Airport (near Shamsabad) from various parts of city. Following figure show positioning of ORR in city context.



Figure 1-2: Positioning of ORR in city context

NORR makes a complete circle around city of Hyderabad and Secunderabad. It provides fast connectivity to all part of Hyderabad Metropolitan Area (HMA). Hyderabad Metropolitan Area includes part of following districts.

- **Hyderabad** - Hyderabad district is a most populous district in the state of Telangana in India that contains a part of the metropolitan area of Hyderabad

- **Rangareddy –** This is basically rural Hyderabad area. It has head quarter in Lakdi ka Pul which is basically part of Hyderabad City only. Ranga Reddy has maximum per capita income in entire state
- **Nalgonda** – Nalgonda is another district which is part of HMA. This touches south eastern boundary of Hyderabad
- **Mahboob Nagar -** Mahabubnagar district is a district in **Telangana**. Mahabubnagar is the district headquarters which is popularly known as Palamoor. The district shares boundaries with Narayanapet, Vikarabad, Rangareddy, Nagarkurnool, Wanaparthy and Jogulamba Gadwal districts. It is famous for its milk production. It is on south western boundary of Hyderabad.
- **Medak –** It was one of the most backward district of Andhra Pradesh. Now part of this district is in HMA. Geographically it on north west side of Hyderabad. This is the most developing part of HMA now.

Hence all of HMA fall in immediate influence zone of ORR. In addition to Hyderabad city centre large number of suburban areas which are either developed on are upcoming, are part of PIA. Following figure shows major urban and commercial hubs in relation to ORR.

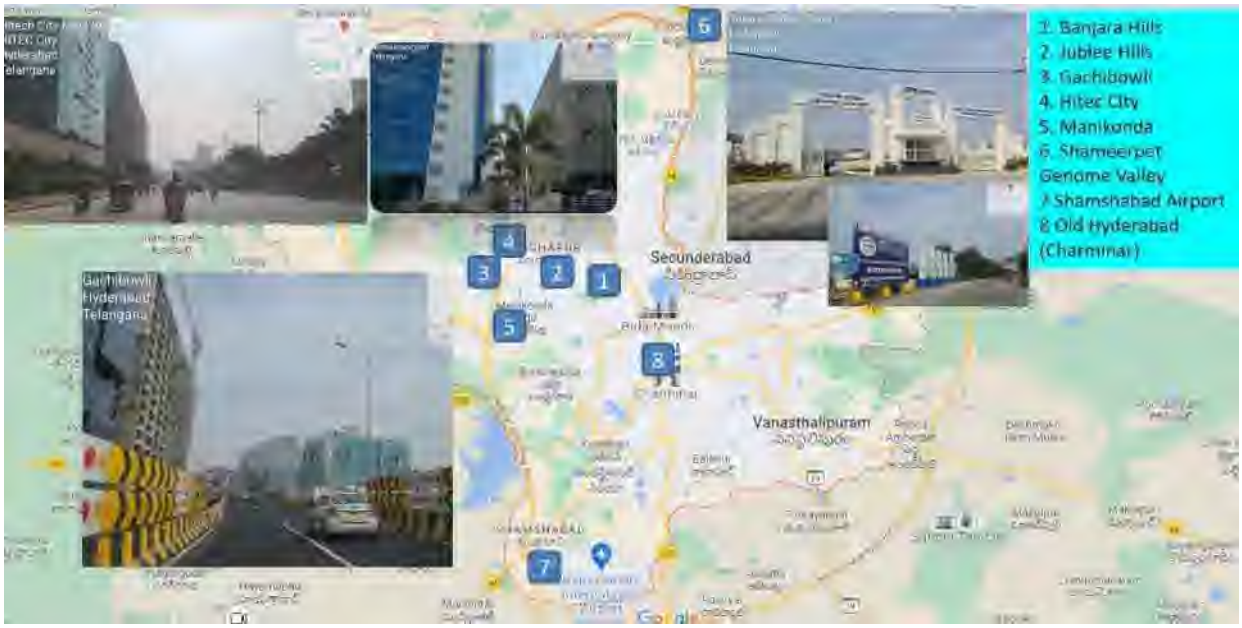


Figure 1-3: Major urban & commercial hubs

Additionally large number of new commercial and urban centres are in various phase of development around ORR. In fact ORR has been one of the reason for developing of these centres. Mots of these centres are coming up in north west corner of Hyderabad in which major commercial and residential centres like Gachibowli. Manikonda, Banjara Hills, Jublee Hills etc have already developed along with Financial District and Hitec City. Following figure shows these locations in context of ORR.

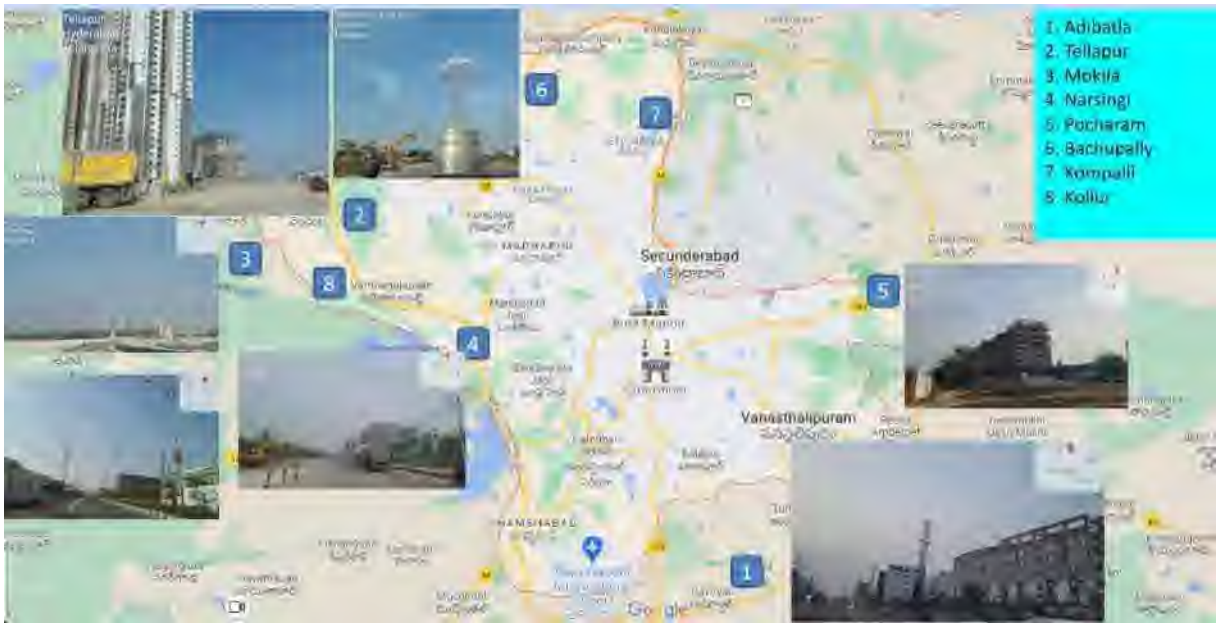


Figure 1-4: Upcoming Development Locations in context of ORR

Prominent of above are discussed as under.

Tellapur
Being in close proximity to Gachibowli, Kondapur, and Madhapur, Tellapur is an ideal settlement place for IT Professionals. Since it is around 15 km from Hitech city and 9-10 km from Gachibowli, the new investment options in the area are relatively better and easier to settle as well. Tellapur comes in the Medak district.

Narsingi
The western outskirts are home to Narsingi. This area is attracting many potential investors due to the presence of multiple residential options like villas, gated communities, community apartments, and so on. It is the best option for people who are family oriented and would want to settle down there. Housing investment options are available in Narsingi. If you're a modern home buyer, Narsingi is an ideal option.

Adibatla
Adibatla is an area located in Ranga Reddy district and is a fast-upcoming residential area that offers budget-friendly properties starting from 20 lakhs only. The main attraction of the area is ITIR (Information Technology Investment Region) as it is said that there will be many IT Parks as it's SEZ (Special Economic Zone). As a result of IT and aviation companies setting up offices in the area, Adibatla has already transformed into a modern infrastructural hub.

Mokila
Located approximately 35 kilometres away from Hyderabad city, Mokila's biggest advantage is its proximity to HiTech City, IT hubs like Kokapet, and prime neighbourhoods like Gachibowli. Well-connected via the Outer Ring Road (ORR), Mokila has witnessed a consistent increase in prices in recent years. The airport is around 40 kilometres away but takes just under an hour to reach via the ORR while Nagulapalli and Shankarpalli railway stations, and Miyapur metro station are both within a 10-kilometre radius.

Pocharam

The demand for residential real estate in Pocharam soared incredibly after the AP Housing Board set up the Singapore Township in 2005-06, which was a fully integrated and well-planned township comprising 2000 houses. Later, Infosys set up a 440-acre campus and with other IT companies following suit the area has seen increased commercial real estate activity, as well.

In addition to above ORR connects following radial arterial roads which connect Hyderabad to various important parts of state and country. Following figure shows such radial roads in context of ORR.



Figure 1-5: Regional context of ORR

1. **NH-165 –** This is major highway which connects to Maharashtra / Pune / Solapur on western side and Suryapet, Vijayawada and Machilipatnam on eastern side. Interchange and toll plaza is constructed at Patancheru and Pedda Amberpet at crossing locations of ORR and NH-165
2. **NH-44 –** This north south connecting NH connects Hyderabad with Nagpur on north side and Bengaluru on south side. Medchal and Shamshabad interchange and Toll plazas are built at crossing of NH-44 on north and south side respectively.
3. **SH-163** – This connects Hyderabad to Warangal. Ghatshekar toll plaza and interchange is constructed at crossing of SH-163 with ORR
4. **Karimnagar Road** – This road connects city of Karmnagar and Siddipet to Hyderabad. Shamirpet Toll plaza and interchange are entry and exit point for this road.
5. **NH- 765** – It's a new national highway connects Hyderabad to Tokapelle. This highway crosses from very near to Airport. There are some residential and

commercial projects coming up on either side of this road in influence zone area of Hyderabad Airport.

1.4 Project Appreciation

Nehru Outer Ring Road of Hyderabad was built in phases and the complete ring was thrown open to public in year 2016. ORR is 8 lane expressway kind of specification. Pavement is flexible except that at toll plazas where rigid pavement is provided. Condition of pavement is good in general in entire stretch of 158 Km. ORR is fully access controlled road. There is no leakage point and entry / exit can happen from toll plaza location only. Safety items like crash barriers, lighting, delineators, signage and markings etc are well placed and are in good condition. Following photographs show general condition of road.









ORR has 19 location at which currently toll is in operation. Toll plaza configuration and arrangement of movement is not same at all such locations. Depending on availability of land and other constraints. Following table presents location of toll plaza and type of interchange at such locations.

Table 1-1 : Details of Toll plazas locations

Hyderabad Ring Road				
Sr. No	Name of Interchange	Chainage in Km	Type of Interchange	Number of Toll booths
1	Kokapet	2+000	Rotary	4
1A	Neopolis	3+700	Single Trumpet (Under Construction)	
2	Idulnagalapalli	13+900	Rotary	4
3	Patancheru	22+500	Double Trumpet	1
4	Sultanpur	31+000	Rotary	4
4A	Mallampet	37+000	Double Trumpet (Under Construction)	
5	Saragudem	42+700	Double Trumpet	1
6	Medchal	52+200	Double Trumpet	1
7	Shamirpet	61+100	Double Trumpet	1
8	Keesara	73+000	Rotary	4
9	Ghatkesar	81+550	Double Trumpet	1
10	Taramatipet	89+750	Rotary	4
11	Pedda Amberpet	96+650	Double Trumpet	1
12	Bongloor	108+900	Double Trumpet	1
13	Ravirayal	116+000	Diamond	4
14	Tukkuguda	121+500	Diamond	4
15	Pedda Golconda	129+750	Rotary	4
16	Shamshabad	136+100	Partial Clover Leaf with directional Ramps	4
17	Rajandranagar-1&2	142+620	Rotary	2
18	TSPA	147+650	Diamond	4
18A	Narsingi (One Entry + One Exit Ramp	152+000	(Under Construction)	
19	Nanakramguda	154+350	Toll Plaza	1

Configuration and movement pattern of above types of toll plaza is shown in following figures.

1. **Rotary Type interchange – with 4 toll booths**

Kokapet, Idulnagalpalli, Sultanpur, Keesara, Taramatipet, Shamsabad, have such type of arrangement. Following image shows typical location (Kokapet) of

toll booths and movement pattern for such type of arrangements. All above locations have similar arrangements.



Figure 1-6 **: Rotary Type Interchange with 4 toll booths**

2. Diamond Type interchange – with 4 toll booths

Ravirayal, Tukkuguda and TSPA have diamond type interchange with four booth arrangement. Following image shows the general arrangement and movement pattern.



Figure 1-7 **: Diamond Type Interchange with 4 toll booths**

3. Double Trumpet Type Interchange with Single Toll Plaza

Patancheru, Saragudam, Medchal, Shamirpet, Ghatkesar, Pedda Amberpet, Bongolor and Nanakramguda locations have double trumpet interchange in which all the movements are brough to one location for toll payment.



Figure 1-8 : Double Trumpet Type Interchange

4. Partial Cloverleaf with directional ramps

Shamshabad interchange is partial cloverleaf type with directional ramps. It also has four tool booths.



Figure 1-9 **: Shamashabad Interchange and Ramps**

5. Single Toll Plaza at Nanakramguda

Nanakram Guda has special arrangement. At this location all movement which enter or exit at this location are brough to one side road on which toll plaza is constructed.



Figure 1-10 : **Toll Plaza Nanakramguda and movements**

In addition to above 19 toll plaza locations two are under construction at following locations.

- Neopolis- Single Trumpet
- Narsingi – One Entry and one Exit Ramp

1.5 Organization of Report

The traffic study report covers the traffic study along the project corridor. The entire analysis, modelling and traffic and toll forecast have been covered in following sections and chapters:

i. Traffic Surveys and Analysis
ii. Traffic Forecasting
iii. Toll Revenue Forecasting
iv. SWOT Analysis

CHAPTER 2

TRAFFIC SURVEYS AND ANALYSIS

2.1 Traffic Surveys

The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

Traffic data forecast is one of the important inputs required for a TOT/BOT/DBFO highway/roadway project. In order to arrive at a fair estimate of traffic forecast it is necessary to collect data, analyse, model, validate and then forecast. The Consultants have carried out a reconnaissance survey of the project corridor to understand the general traffic and travel characteristics on the corridor.

The following traffic studies have been carried out for the project.

- **Classified traffic volume counts**

  ORR has 19 access locations where one can take entry or exit on ORR. Toll is under operations at all these locations. Classified traffic volume count for 7 days has been done at all these location including entry and exits by videographic method. Survey locations thus have been selected strategically in consultation with client.
  Following table provides the details of selected traffic locations

Table 2-1 : CTV Traffic Survey & OD Locations

Survey Schedule		
Survey Location	**CVC Date**	**OD Date**
TP-1 Kokapet Toll Plaza	05-12-2022 to 11-12-2022	06-12-2022
TP-2 Idulnagalapalli Toll Plaza	05-12-2022 to 11-12-2022	07-12-2022
TP-3 Patancheru Toll Plaza	05-12-2022 to 11-12-2022	07-12-2022
TP-4 Sultanpur Toll Plaza	05-12-2022 to 11-12-2022	07-12-2022
TP-5 Saragudem Toll Plaza	05-12-2022 to 11-12-2022	08-12-2022
TP-6 Medchal Toll Plaza	05-12-2022 to 11-12-2022	08-12-2022
TP-7 Shamirpet Toll Plaza	05-12-2022 to 11-12-2022	08-12-2022
TP-8 Keesara Toll Plaza	05-12-2022 to 11-12-2022	08-12-2022

Survey Schedule		
Survey Location	**CVC Date**	**OD Date**
TP-9 Ghatkesar Toll Plaza	05-12-2022 to 11-12-2022	09-12-2022
TP-10 Taramatipet Toll Plaza	05-12-2022 to 11-12-2022	09-12-2022

- **Origin Destination Survey**

Origin and Destination surveys are important for understanding the pattern of travel. In current project though fast tag traffic data has been provide with is authentic and accurate for segmentation of journey type and seasonality. OD survey provides further inputs. Following table provides schedule of survey. These surveys were done at toll plazas in controlled atmosphere.

Table 2-2 : Traffic Survey Schedule

Survey Schedule		
Survey Location	**CVC Date**	**OD Date**
TP-11 Pedda Amberpet Toll Plaza	05-12-2022 to 11-12-2022	10-12-2022
TP-12 Bongloor Toll Plaza	05-12-2022 to 11-12-2022	10-12-2022
TP-13 Ravirayal Toll Plaza	05-12-2022 to 11-12-2022	10-12-2022
TP-14 Tukkuguda Toll Plaza	05-12-2022 to 11-12-2022	11-12-2022
TP-15 Pedda Golconda Toll Plaza	05-12-2022 to 11-12-2022	11-12-2022
TP-16 Shamshabad Toll Plaza	05-12-2022 to 11-12-2022	05-12-2022
TP-17 Rajandranagar-1&2 Toll Plaza	05-12-2022 to 11-12-2022	05-12-2022
TP-18 TSPA Toll Plaza	05-12-2022 to 11-12-2022	05-12-2022
TP-19 Nanakramguda Toll Plaza	05-12-2022 to 11-12-2022	06-12-2022

Locations of surveys are shown in following images for in context of alignment of ORR.

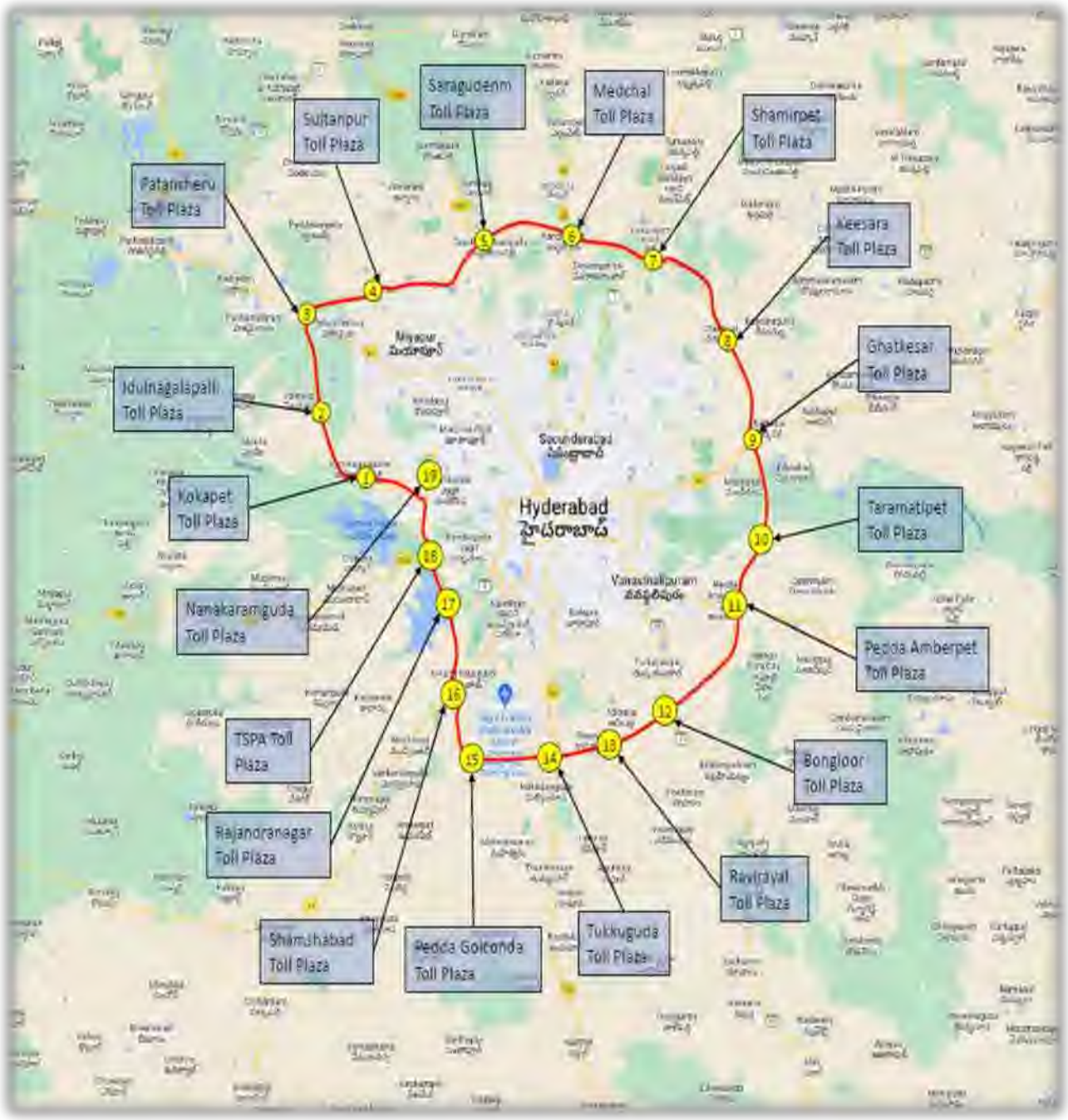


Figure 2-1: Traffic Survey Location

The main objective of the these surveys is to:

- Determine the existing traffic movement characteristics of project
- Establish Base year traffic demand
- Identification of travel patterns and influence area of project
- Deriving growth factor for traffic demand forecasting
- Estimation of corridor traffic including traffic diversion if any

Brief description of each of the survey undertaken for the project corridor is presented in subsequent sections.
Following photographs show traffic survey in progress at various toll plazas.

Classified Volume Count:

<table>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>CVC at TP-1 (Kokapet)</td><td>CVC at TP-2 (Idulnagalapalli)</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>CVC at TP-3 (Patancheru)</td><td>CVC at TP-4 (Sultanpur)</td></tr>
</table>



CVC at TP-5 (Saragudem)



CVC at TP-6 (Medchal)



CVC at TP-7 (Shamirpet)



CVC at TP-8 (Keesara)



CVC at TP-9 (Ghatkesar)



CVC at TP-10 (Taramatipet)



CVC at TP-11 (Pedda Amberpet)



CVC at TP-12 (Bongloor)



CVC at TP-13 (Ravirayal)



CVC at TP-14 (Tukkuguda)



CVC at TP-13 (Ravirayal)



CVC at TP-14 (Tukkuguda)



CVC at TP-15 (Pedda Golconda)



CVC at TP-16 (Shamshabad)



CVC at TP-17 (Rajandranagar-1&2)



CVC at TP-18 (TSPA)



CVC at TP-19 (Nanakramguda)

Original-Destination Survey:

OD Survey were done for 24 Hrs. at each entry and exit location on random sample basis. Following photographs show OD survey in progress at various Toll plaza locations.

	
O-D at TP-1 (Kokapet)	**O-D at TP-1 (Kokapet)**
	
O-D at TP-2 (Idulnagalapalli)	**O-D at TP-2 (Idulnagalapalli)**
	
O-D at TP-3 (Patancheru)	**O-D at TP-4 (Sultanpur)**



`

O-D at TP-4 (Sultanpur)



O-D at TP-5 (Saragudem)



O-D at TP-6 (Medchal)



O-D at TP-7 (Shamirpet)



O-D at TP-8 (Keesara)



O-D at TP-8 (Keesara)



O-D at TP-9 (Ghatkesar)



O-D at TP-10 (Taramatipet)



O-D at TP-10 (Taramatipet)



O-D at TP-11 (Pedda Amberpet)



O-D at TP-12 (Bongloor)



O-D at TP-13 (Ravirayal)

	
O-D at TP-13 (Ravirayal)	**O-D at TP-14 (Tukkuguda)**
	
O-D at TP-14 (Tukkuguda)	**O-D at TP-15 (Pedda Golconda)**
	
O-D at TP-16 (Shamshabad)	**O-D at TP-16 (Shamshabad)**

	
O-D at TP-17 (Rajandranagar-1&2)	**O-D at TP-18 (TSPA)**
	
O-D at TP-18 (TSPA)	**O-D at TP-19 (Nanakramguda)**

Figure 2-2: Traffic Survey in Progress

2.2 Classified Traffic Volume Count

The objective of conducting Classified Traffic Volume Count is to understand the traffic flow pattern on a roadway. The Classified Traffic Volume Count survey has been conducted at all 19-toll location for the entire 24 hours a day, 7 day period as recommended in IRC: SP: 19-2001 “Manual for Survey, Investigation and Preparation of Road Projects” at the proposed three toll plaza locations on NORR.

The vehicles can broadly be classified into fast moving / motorized and slow moving / non-motorized vehicles, which can be further classified into specific categories of vehicles. The groupings of vehicles were further segregated to capture the tollable vehicle categories specifically and toll exempted vehicles were counted separately. The detailed vehicle classification system considered for this study is presented in **Table 2.1.** Traffic surveys were conducted for both directional traffic using video graphic method. The count data was recorded at 15-minute intervals for each vehicle group for each direction of travel separately. Trained enumerators were deployed for counting and recording by making tally marks in the five-dash system. Hourly totals were made at the end of the shift.

Table 2-3 : Vehicle Classification System

Vehicle Type	
Auto Rickshaw	
Passenger Car	Car, Jeep, Taxi & Van (Old / new technology)
Bus	Minibus
	Standard Bus
Truck	Light Goods Vehicle (LCV)
	2 – Axle Truck
	3 Axle Truck (HCV)
	Multi Axle Truck (4-6 Axle)
	Oversized Vehicles (7 or more axles)
Other Vehicles	Agriculture Tractor, Tractor & Trailer, Two-Wheeler, Three-Wheeler

Source - IRC: 64 – 1990

2.3 Origin Destination Survey

In order to understand the travel pattern in the influence area of the project, Origin and Destination (O-D) Surveys was carried out for one day (24 hours) at eight locations. Refer **Table 2-1** for location details.

The O-D survey was carried out based on the roadside interview method as described in IRC: 102-1988. Police assistance was arranged at the survey locations for successfully carrying out these surveys. Both passenger and

commercial vehicles plying on the project road were stopped on a random sampling basis and interviewed.

Trained enumerators under the supervision of transport planners collected the trip characteristics using the survey forms designed for this purpose. The O-D survey elicited characteristics like origin, destination, frequency, length of trip, etc., both for passenger and goods vehicles. The information collected during roadside interviews was analysed to obtain the trip distribution based on a zoning system suitably designed in the study.

2.3.1 Sample Size

As per normal standards of sound engineering practices 10-15% sample in each category of vehicle is considered as good representative sample on which traffic analysis can be done to arrive at probable traffic on project highway. Since OD survey was done at toll plaza locations in controlled environment good sample was collected during survey at most of the locations. Following table provides sample size of OD survey.

Table 2-4 : Sample size for O-D Surveys

Type of Vehicle	CVC Volume	OD Sample	% OD Sample
Passenger	143600	29814	20.76%
Goods	44764	20215	45.16%
Total	**188364**	**50029**	**26.56%**

It can be observed from above that a good traffic sample was collected at toll locations which can be taken as representative to traffic on project road.

2.4 Data Analysis

2.4.1 Analysis of Traffic Volume Count

Data collected from the site were punched into the computer and analysed using spread sheet in MS Excel. The various vehicle types having different sizes and characteristics were converted into a single unit called Passenger Car Unit (PCU). Passenger Car equivalents for various vehicles are adopted based on recommendations of Indian Road Congress prescribed in “IRC-64-1990: Guidelines for Capacity of Roads in Rural areas”. The adopted passenger car unit values (PCU) are presented in ***Table 2-5*****.** These factors were used for converting vehicles of different classification into common Passenger Car Unit (PCU).

Table 2-5 : PCU Factors Adopted for Study

Vehicle Type	PCUs
Car	1.0
Minibus	1.5
Standard Bus	3.0
LCV/LGV	1.5
2 Axle Truck	3.0
3 – 6 Axle Truck	4.5
MAV	4.5
Auto Rickshaw	1.0
Van/Tempo	1.0
Agriculture Tractor with Trailer	4.5
Agriculture Tractor without Trailer	1.5
Two-Wheeler	0.5
Three-Wheeler	1.0

Source: IRC: 64-1990

2.4.2 Average Daily Traffic (ADT)

Video graphic traffic count for 7 days has been done at all toll plaza locations including entry and exit ramps. Average daily traffic entering and exiting at various toll plazas is given in following tables with illustrative modal spilt and daily variation.

Table 2-6 : Classified Traffic Count at TP-1 Kokapet (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	7621	83	33	504	48	316	265	2	8872
Tuesday	7622	87	16	541	32	305	203	0	8806
Wednesday	8275	100	24	532	30	292	273	0	9526
Thursday	8799	84	37	571	21	251	280	5	10048
Friday	9023	92	32	564	40	189	253	0	10193
Saturday	8462	41	21	541	54	224	281	0	9624
Sunday	8370	42	11	285	25	200	162	0	9095
ADT	**8310**	**76**	**25**	**505**	**36**	**254**	**245**	**1**	**9452**

Modal split of same is given as under.

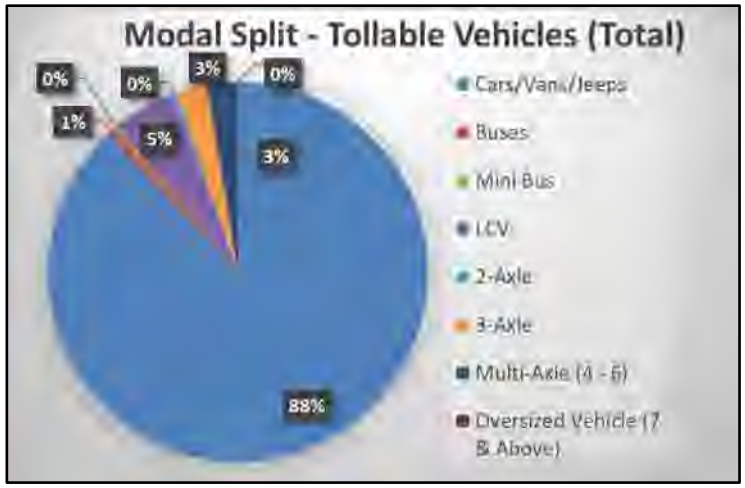


Figure 2-3: Mode wise Composition of Exit Traffic at Survey Location 1

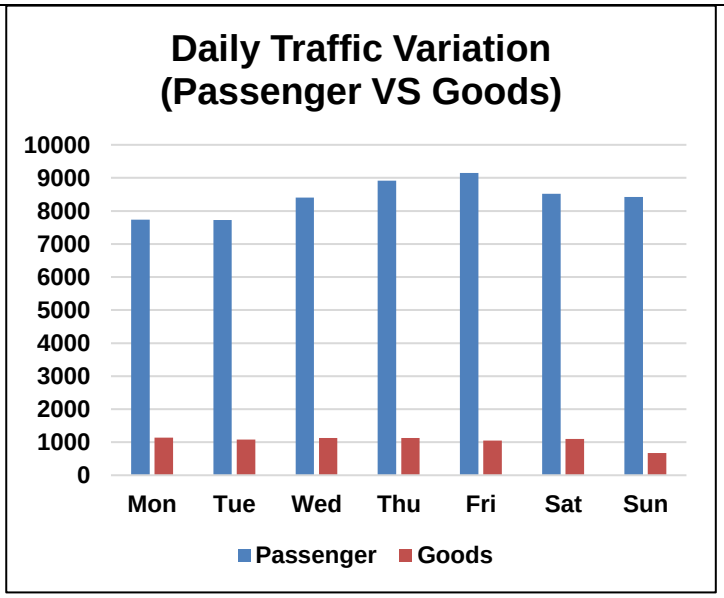


Figure 2-4: Variation of Total Tollable Exit Traffic at Survey Location 1

Table 2-7 : Classified Traffic Count at TP-1 Kokapet (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	8251	93	29	527	59	368	306	0	9633
Tuesday	8316	94	29	578	34	313	243	0	9607
Wednesday	9042	92	30	592	52	313	276	0	10397
Thursday	9444	86	28	563	42	257	295	0	10715
Friday	10105	88	24	649	35	200	289	0	11390
Saturday	9071	48	7	601	64	282	294	0	10367
Sunday	8215	47	10	325	22	248	156	0	9023
ADT	**8921**	**78**	**22**	**548**	**44**	**283**	**266**	**0**	**10162**

Modal split of same is given as under.

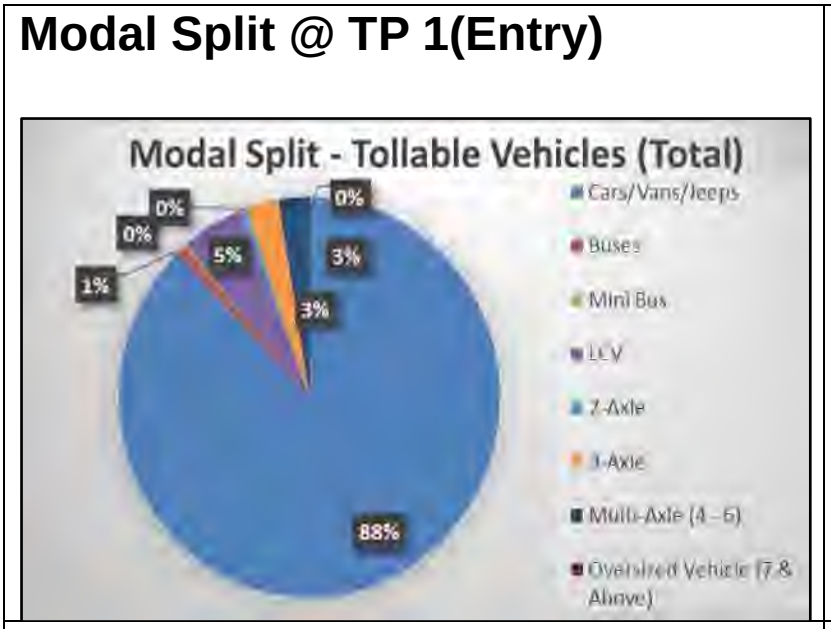


Figure 2-5: Mode wise Composition of Entry Traffic at Survey Location 1

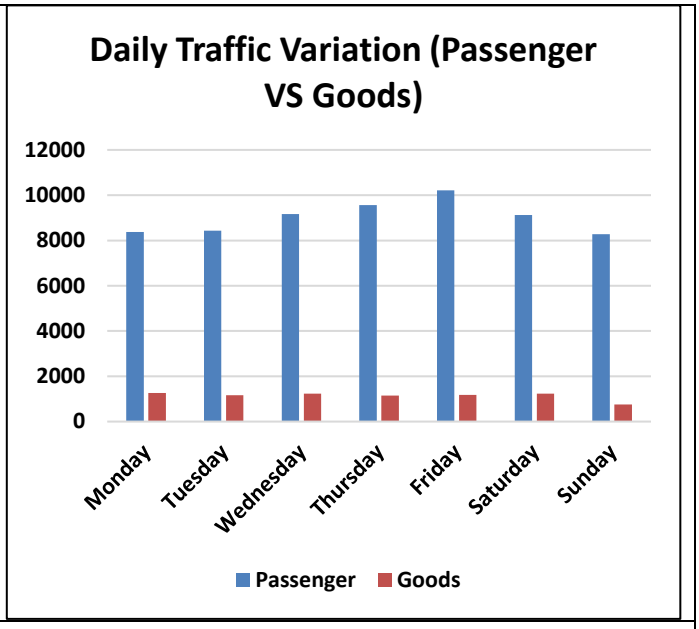


Figure 2-6: Variation of Total Tollable Entry Traffic at Survey Location 1

Table 2-8: Classified Traffic Count at TP-2 Idulnagapalli (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2274	48	11	213	31	358	136	0	3071
Tuesday	2234	44	27	237	26	273	121	0	2962
Wednesday	2401	39	30	268	42	372	143	0	3295
Thursday	2566	34	37	260	26	306	166	0	3395
Friday	3023	50	21	265	24	338	151	0	3872
Saturday	2938	16	7	285	18	338	188	0	3790
Sunday	3462	9	9	142	16	229	104	0	3971
ADT	**2700**	**34**	**20**	**239**	**26**	**316**	**144**	**0**	**3479**

Modal split of same is given as under.

Modal Split @ TP 2(Exit)

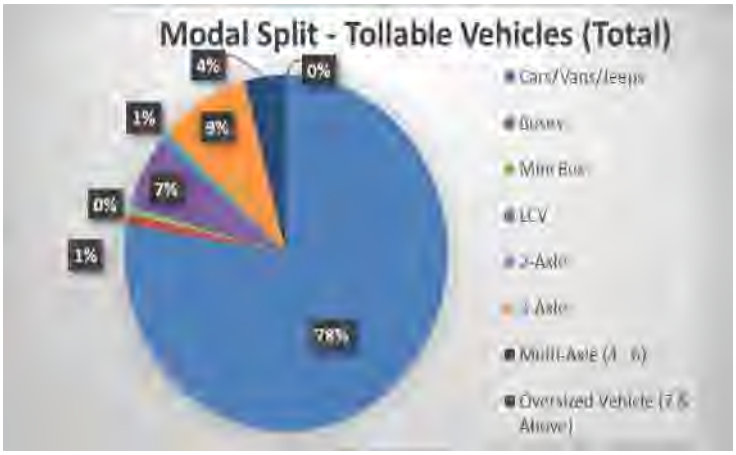


Figure 2-7: Mode wise Composition of Exit Traffic at Survey Location 2

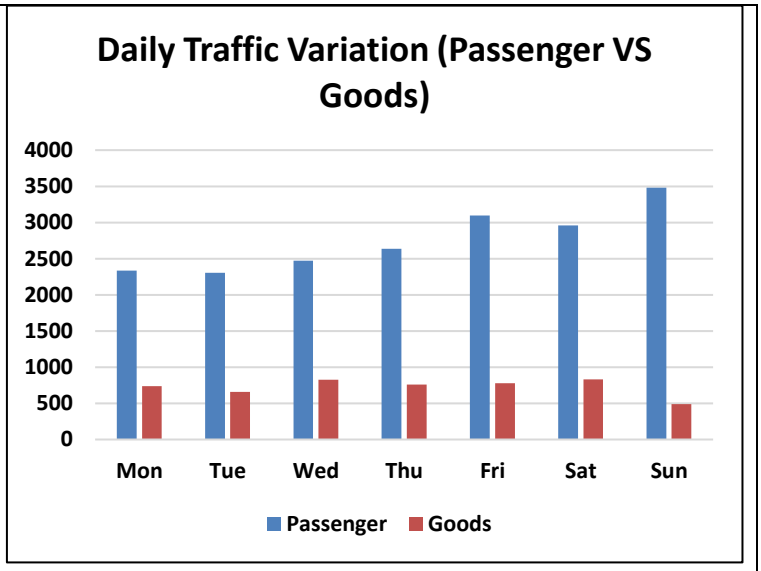


Figure 2-8: Variation of Total Tollable Exit Traffic at Survey Location 2

Table 2-9: Classified Traffic Count at TP-2 Idulnagapalli (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2084	43	13	206	36	337	142	0	2861
Tuesday	2077	46	15	240	24	235	121	0	2758
Wednesday	2189	49	13	246	30	365	154	0	3046
Thursday	2415	51	23	256	37	268	176	0	3226
Friday	2691	45	17	249	21	289	140	0	3452
Saturday	2604	25	6	253	42	313	180	0	3423
Sunday	3078	27	11	119	15	223	109	0	3582
ADT	**2448**	**41**	**14**	**224**	**29**	**290**	**146**	**0**	**3193**

Modal split of same is given as under.

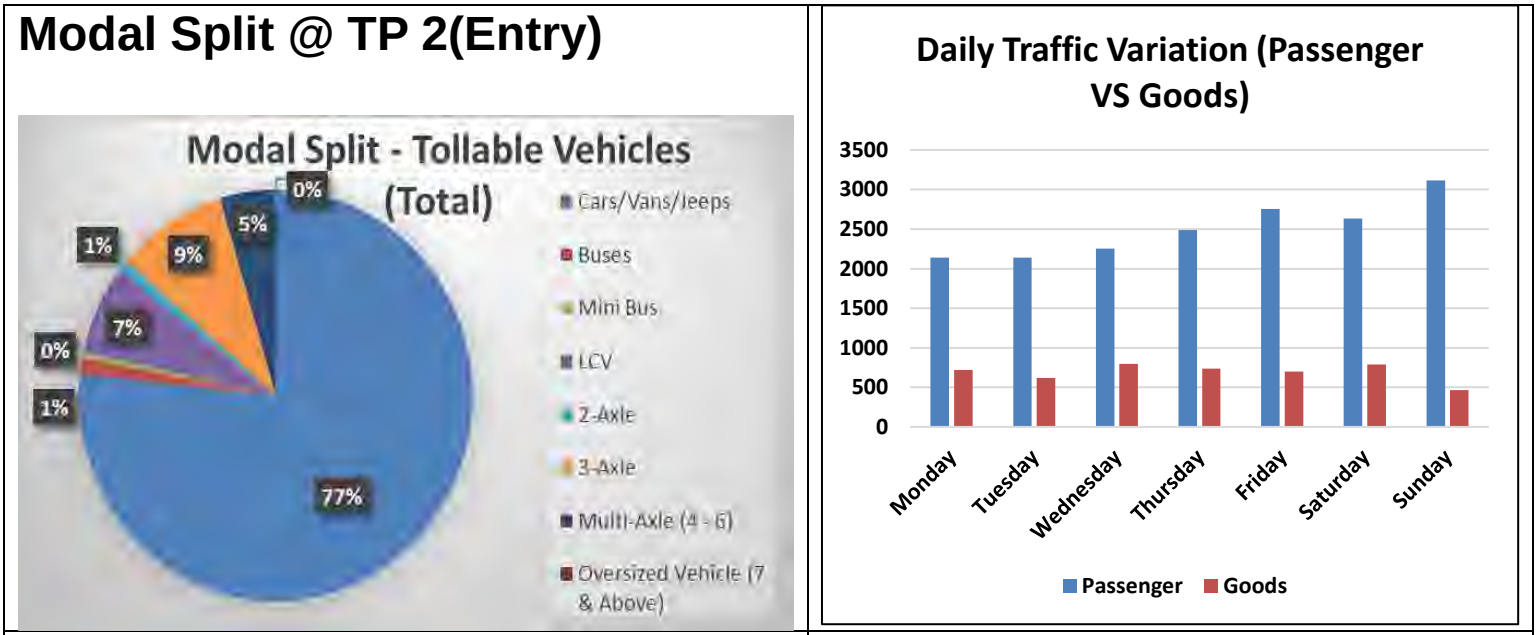


Figure 2-9: Mode wise Composition of Entry Traffic at Survey Location 2

Figure 2-10: Variation of Total Tollable Entry Traffic at Survey Location 2

Table 2-10: Classified Traffic Count at TP-3 Patancheru (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	7919	141	53	2673	578	1186	1865	2	14417
Tuesday	7603	168	38	2969	649	1133	1836	1	14397
Wednesday	7955	181	50	2880	714	1189	1957	0	14926
Thursday	7851	189	38	2868	749	1046	1998	0	14739
Friday	8726	193	38	3071	666	1118	1881	0	15693
Saturday	8823	170	44	3110	610	1123	1931	0	15811
Sunday	10137	133	40	1701	444	750	1421	0	14626
ADT	**8431**	**168**	**43**	**2753**	**630**	**1078**	**1841**	**0**	**14944**

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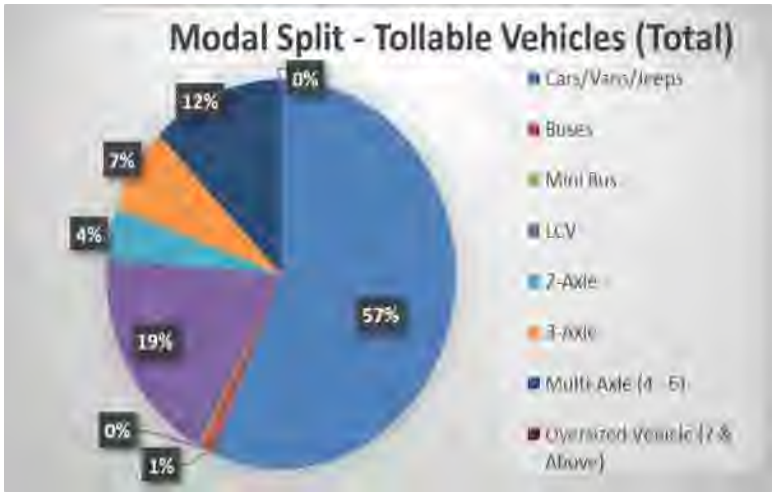


Figure 2-11: Mode wise Composition of Exit Traffic at Survey Location 3

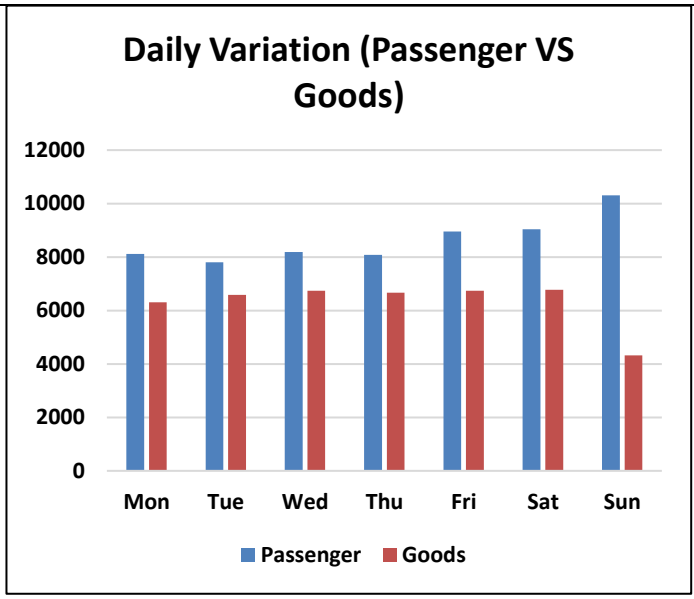


Figure 2-12: Variation of Total Tollable Exit Traffic at Survey Location 3

Table 2-11: Classified Traffic Count at TP-3 Patancheru (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	8106	258	55	2762	619	1298	2091	2	15191
Tuesday	7444	264	29	2823	649	1046	1994	0	14249
Wednesday	7987	289	49	2683	752	1102	2085	1	14948
Thursday	8355	262	28	2977	695	1159	2026	2	15504
Friday	9080	291	50	3046	631	1153	2129	0	16380
Saturday	9101	248	64	2889	559	1164	1905	1	15931
Sunday	11000	221	54	1922	563	849	1842	0	16451
ADT	**8725**	**262**	**47**	**2729**	**638**	**1110**	**2010**	**1**	**15522**

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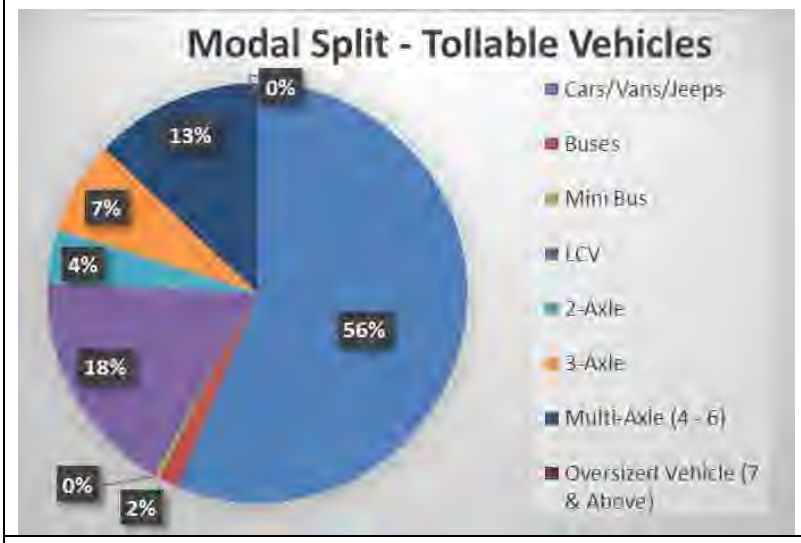


Figure 2-13: Mode wise Composition of Entry Traffic at Survey Location 3

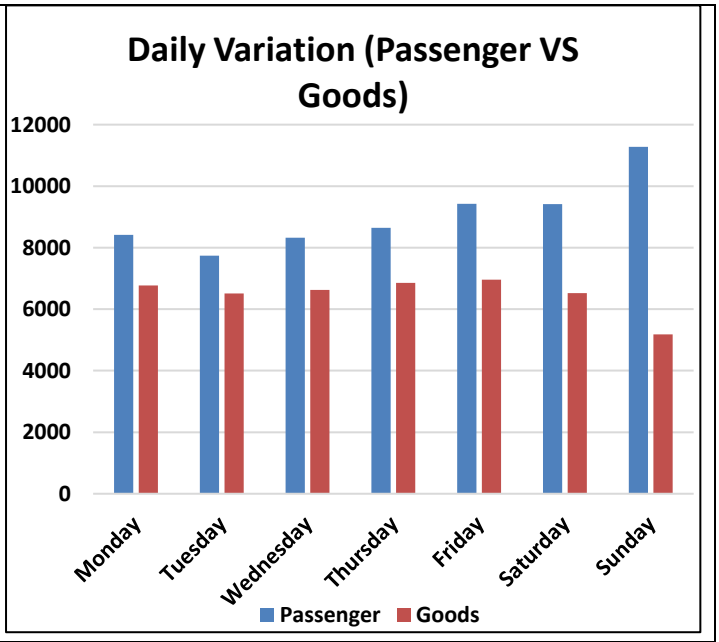


Figure 2-14: Variation of Total Tollable Entry Traffic at Survey Location 3

Table 2-12: Classified Traffic Count at TP-4 Sultanpur (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2877	24	14	539	67	224	181	0	3926
Tuesday	2349	27	12	501	65	240	134	1	3329
Wednesday	2786	21	15	524	64	183	154	0	3747
Thursday	2813	27	9	545	74	181	186	0	3835
Friday	3228	32	16	576	63	164	227	0	4306
Saturday	3191	26	21	527	63	217	215	0	4260
Sunday	4161	24	23	284	27	116	156	0	4791
ADT	**3058**	**26**	**16**	**499**	**60**	**189**	**179**	**0**	**4028**

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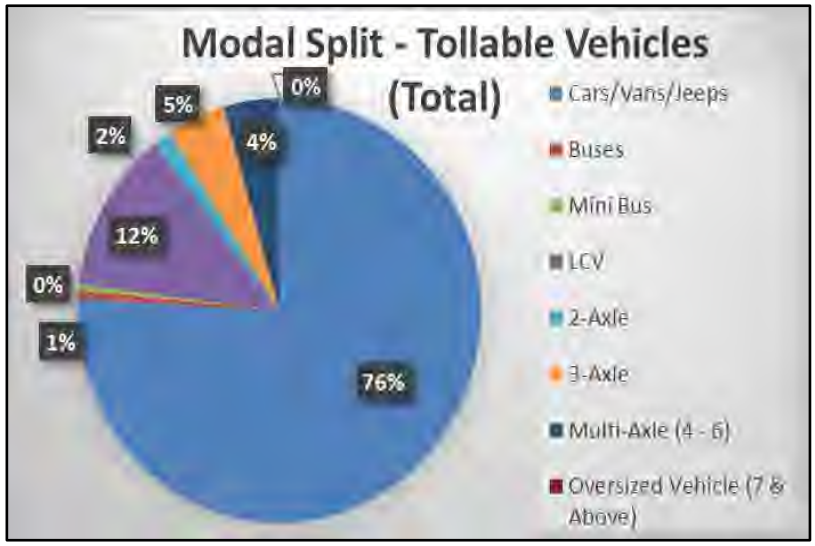


Figure 2-15: Mode wise Composition of Exit Traffic at Survey Location 4

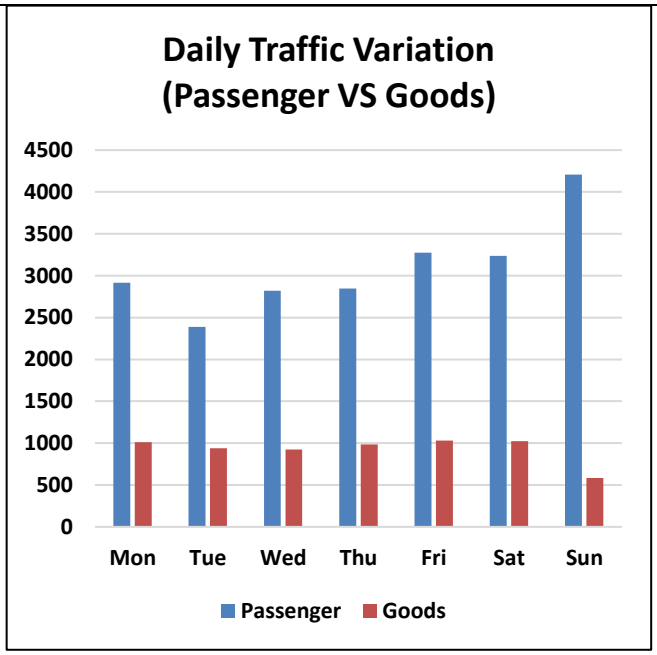


Figure 2-16: Variation of Total Tollable Exit Traffic at Survey Location 4

Table 2-13: Classified Traffic Count at TP-4 Sultanpur (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2733	28	19	560	64	214	196	0	3814
Tuesday	2481	23	20	546	68	258	213	0	3609
Wednesday	2979	23	13	582	61	207	168	0	4033
Thursday	2965	21	18	577	70	181	245	0	4077
Friday	3493	29	21	593	82	195	244	1	4658
Saturday	3532	17	23	569	66	216	218	0	4641
Sunday	3830	20	25	309	30	127	159	0	4500
ADT	**3145**	**23**	**20**	**534**	**63**	**200**	**206**	**0**	**4190**

Modal split of same is given as under.

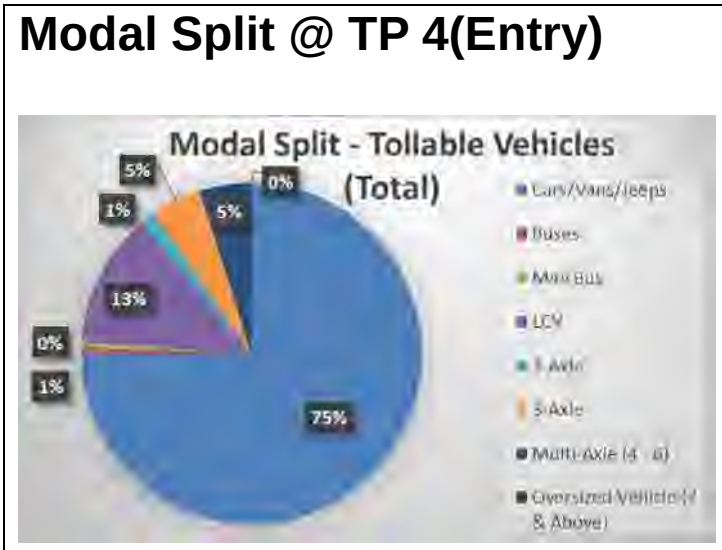


Figure 2-17: Mode wise Composition of Entry Traffic at Survey Location 4

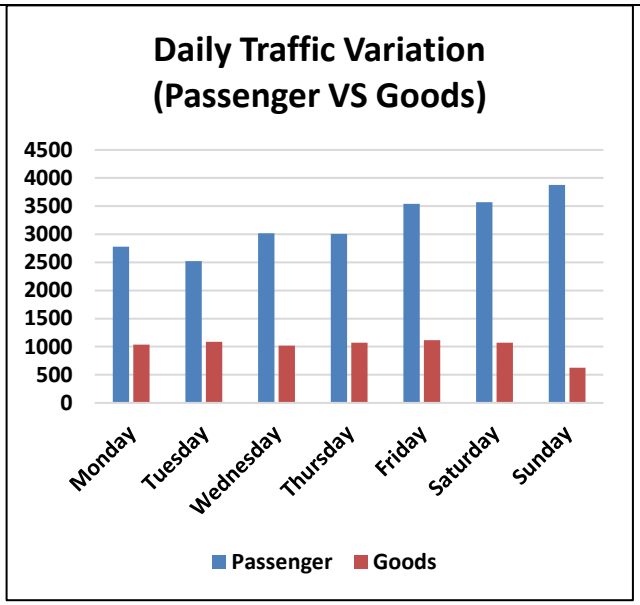


Figure 2-18: Variation of Total Tollable Entry Traffic at Survey Location 4

Table 2-14: Classified Traffic Count at TP-5 Saragudenm (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5862	139	40	1519	239	380	518	0	8697
Tuesday	4644	140	24	1637	200	313	633	0	7591
Wednesday	5589	141	40	1672	230	345	677	0	8694
Thursday	5740	126	45	1604	239	395	694	0	8843
Friday	6241	176	25	1641	213	367	671	0	9334
Saturday	6182	99	55	1672	204	364	614	0	9190
Sunday	8600	65	41	797	145	240	563	2	10453
ADT	**6166**	**127**	**39**	**1506**	**210**	**343**	**624**	**0**	**9015**

Modal split of same is given as under.

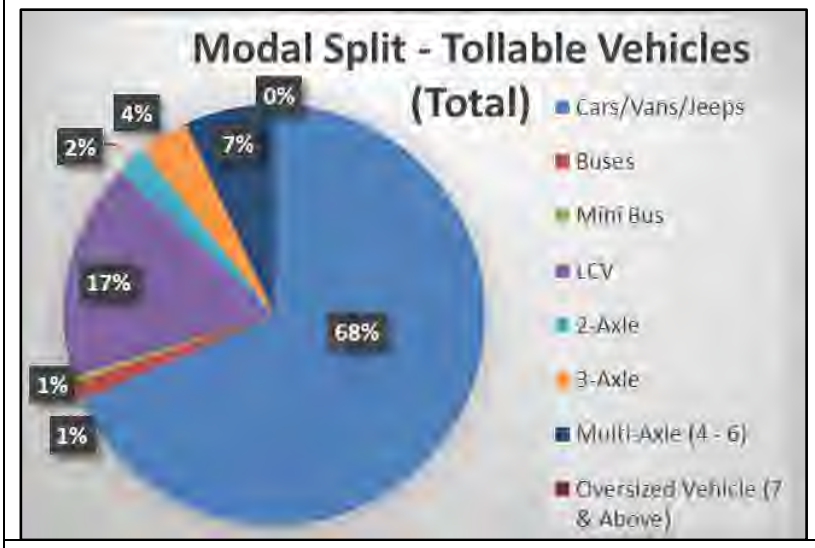


Figure 2-19: Mode wise Composition of Exit Traffic at Survey Location 5

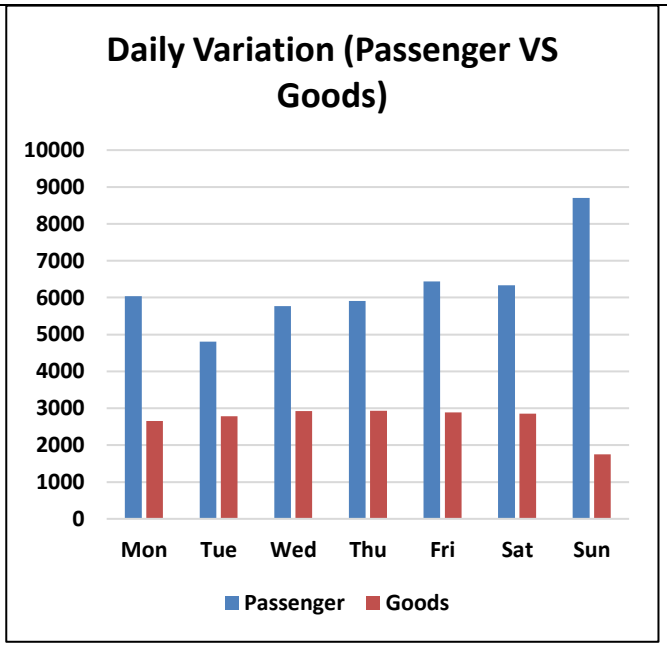


Figure 2-20: Variation of Total Tollable Exit Traffic at Survey Location 5

Table 2-15: Classified Traffic Count at TP-5 Saragudenm (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5492	154	22	1595	178	345	614	1	8401
Tuesday	4798	144	33	1713	202	328	587	0	7805
Wednesday	5820	163	30	1766	196	358	652	0	8985
Thursday	5848	152	33	1725	205	339	640	0	8942
Friday	6661	173	31	1657	213	368	643	0	9746
Saturday	6862	123	15	1640	220	338	585	0	9783
Sunday	7620	109	37	754	134	248	424	0	9326
ADT	**6157**	**145**	**29**	**1550**	**193**	**332**	**592**	**0**	**8998**

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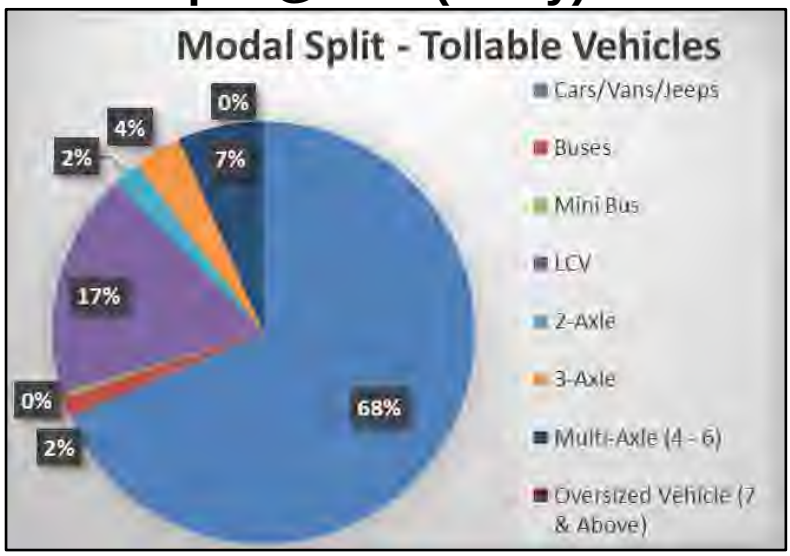


Figure 2-21: Mode wise Composition of Entry Traffic at Survey Location 5

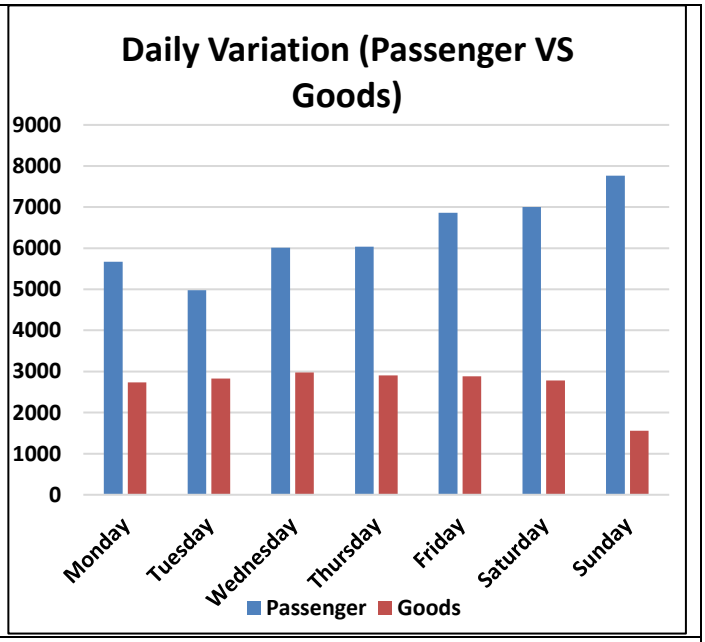


Figure 2-22: Variation of Total Tollable Entry Traffic at Survey Location 5

Table 2-16: Classified Traffic Count at TP-6 Medchal (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5475	80	38	2230	686	835	1125	0	10469
Tuesday	4633	85	27	2464	771	799	1232	0	10011
Wednesday	5572	91	30	2632	707	1020	1111	0	11163
Thursday	6044	98	32	2473	946	916	1384	0	11893
Friday	6708	119	26	2638	845	936	1405	0	12677
Saturday	6020	85	48	2512	895	950	1219	0	11729
Sunday	7728	87	34	1457	646	745	1094	1	11792
ADT	**6026**	**92**	**34**	**2344**	**785**	**886**	**1224**	**0**	**11391**

Modal split of same is given as under.

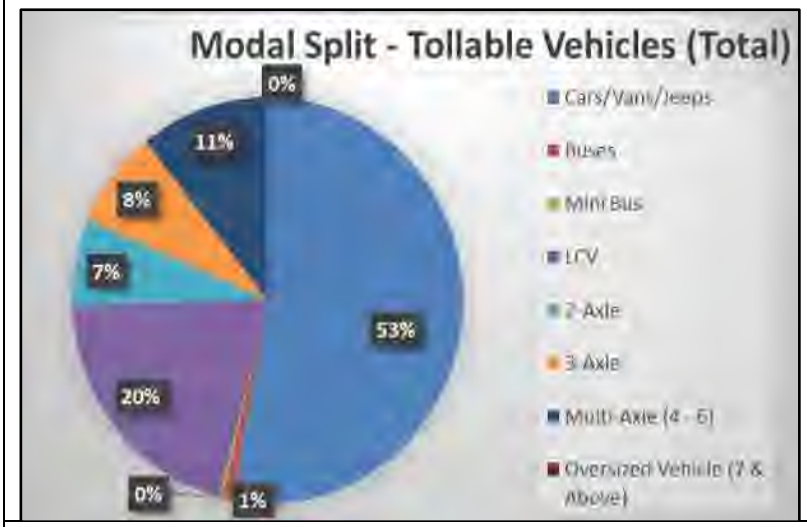


Figure 2-23: Mode wise Composition of Exit Traffic at Survey Location 6

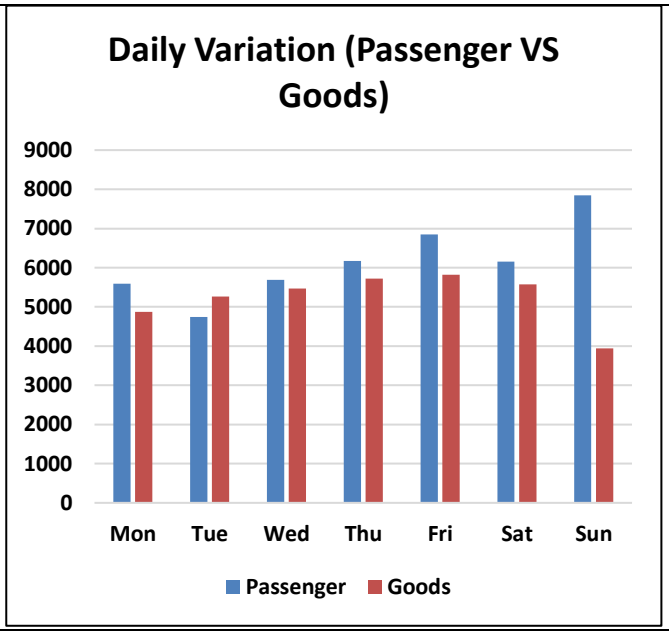


Figure 2-24: Variation of Total Tollable Exit Traffic at Survey Location 6

Table 2-17: Classified Traffic Count at TP-6 Medchal (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5489	92	34	2433	956	1084	1204	0	11292
Tuesday	4900	79	34	2603	918	1043	1276	0	10853
Wednesday	5919	114	40	2454	921	900	1319	0	11667
Thursday	6290	108	28	2610	887	951	1279	0	12153
Friday	6813	124	31	2578	889	864	1378	0	12677
Saturday	6527	103	46	2565	864	1031	1215	0	12351
Sunday	8267	95	25	1417	768	733	1057	0	12362
ADT	**6315**	**102**	**34**	**2380**	**886**	**944**	**1247**	**0**	**11908**

Modal split of same is given as under.

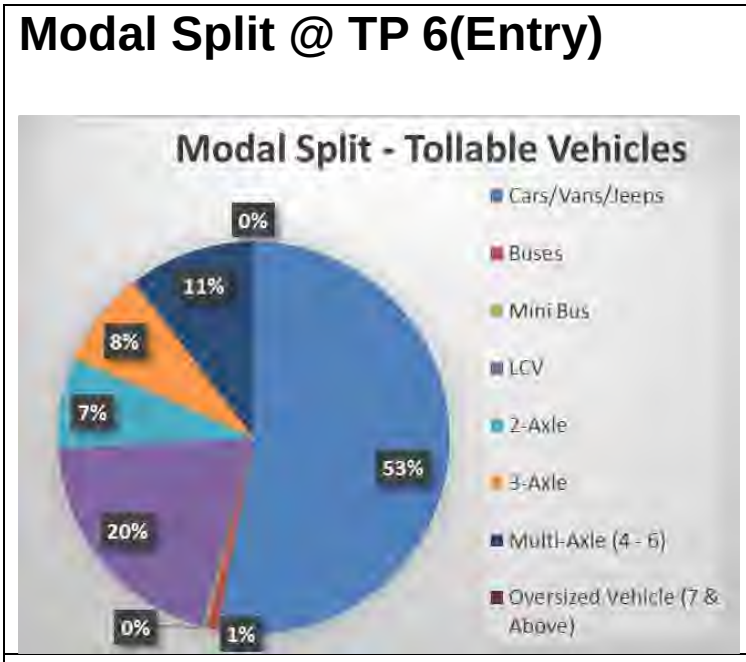


Figure 2-25: Mode wise Composition of Entry Traffic at Survey Location 6

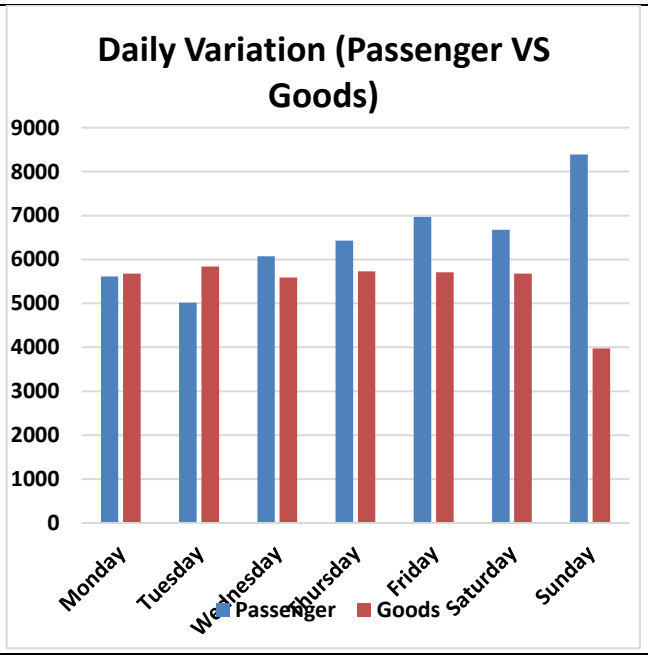


Figure 2-26: Variation of Total Tollable Entry Traffic at Survey Location 6

Table 2-18: Classified Traffic Count at TP-7 Shamirpet (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5968	127	34	1070	108	166	568	0	8041
Tuesday	4881	126	37	1181	110	188	551	0	7074
Wednesday	6242	142	38	1153	121	188	614	0	8498
Thursday	6111	147	39	1187	119	223	592	0	8418
Friday	7761	212	36	1205	130	224	631	0	10199
Saturday	7323	105	48	1208	95	173	646	0	9598
Sunday	8902	109	22	703	51	130	478	0	10395
ADT	**6741**	**138**	**36**	**1101**	**105**	**185**	**583**	**0**	**8889**

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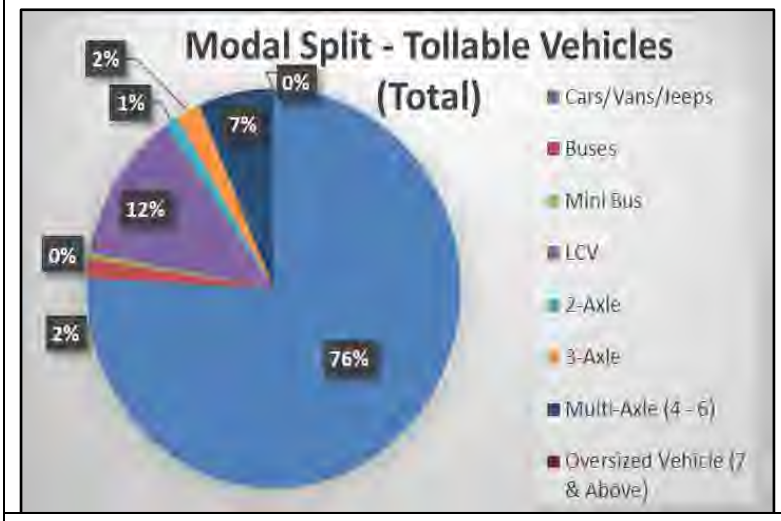


Figure 2-27: Mode wise Composition of Exit Traffic at Survey Location 7

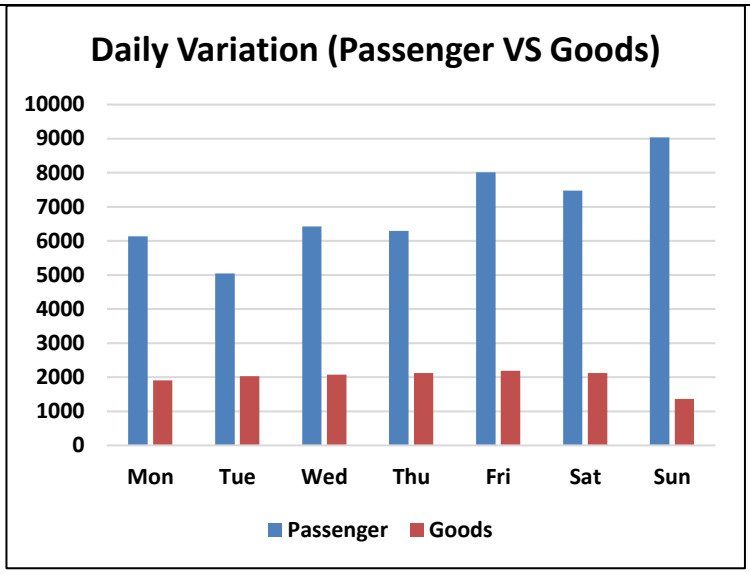


Figure 2-28: Variation of Total Tollable Exit Traffic at Survey Location 7

Table 2-19: Classified Traffic Count at TP-7 Shamirpet (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	6145	125	55	1069	91	174	635	0	8294
Tuesday	4967	134	32	1121	92	247	707	1	7301
Wednesday	6140	138	49	1169	121	214	713	0	8544
Thursday	5971	150	43	1168	119	235	748	0	8434
Friday	6825	208	53	1198	120	236	649	0	9289
Saturday	6470	90	39	1154	107	217	716	0	8793
Sunday	9319	81	55	751	74	140	604	0	11024
ADT	**6548**	**132**	**47**	**1090**	**103**	**209**	**682**	**0**	**8811**

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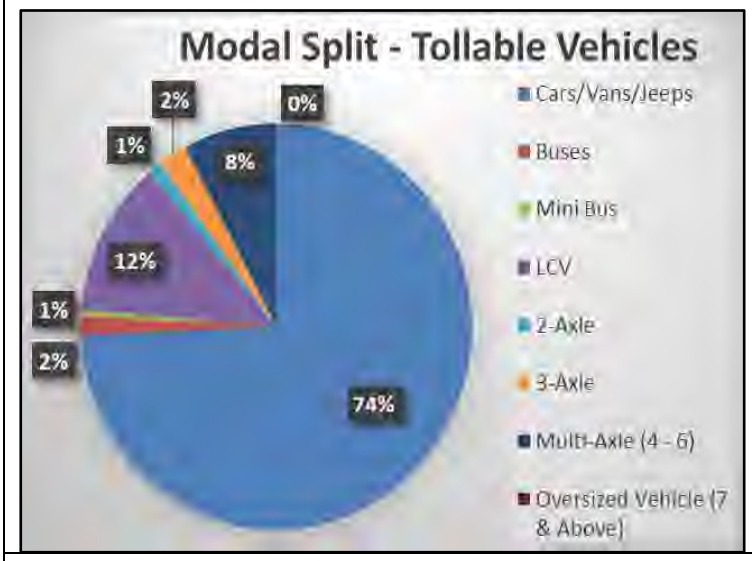


Figure 2-29: Mode wise Composition of Entry Traffic at Survey Location 7

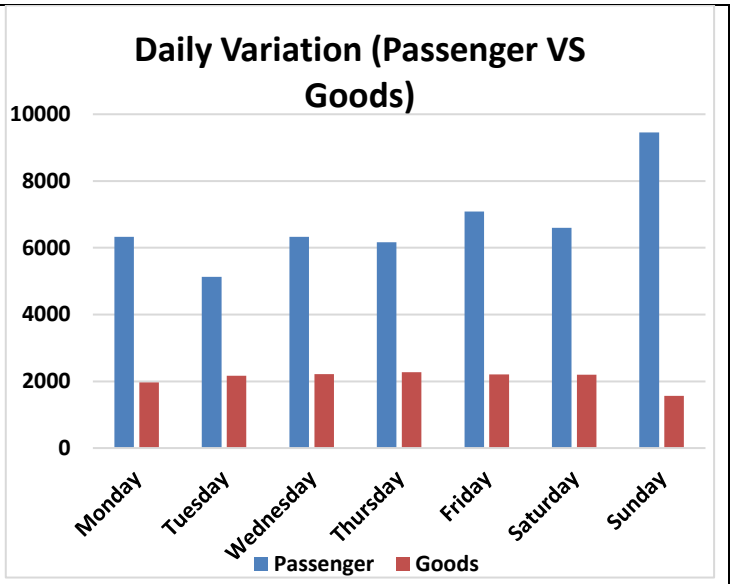


Figure 2-30: Variation of Total Tollable Entry Traffic at Survey Location 7

Table 2-20: Classified Traffic Count at TP-8 Keesara (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2750	22	18	621	149	151	160	0	3871
Tuesday	2406	22	17	699	189	133	170	1	3637
Wednesday	2981	28	20	685	166	152	160	0	4192
Thursday	2872	33	12	723	146	167	161	0	4114
Friday	3197	19	20	729	168	145	192	0	4470
Saturday	3204	13	28	718	166	122	134	1	4386
Sunday	4474	29	11	359	118	80	111	0	5182
ADT	**3126**	**24**	**18**	**648**	**157**	**136**	**155**	**0**	**4265**

Modal split of same is given as under.

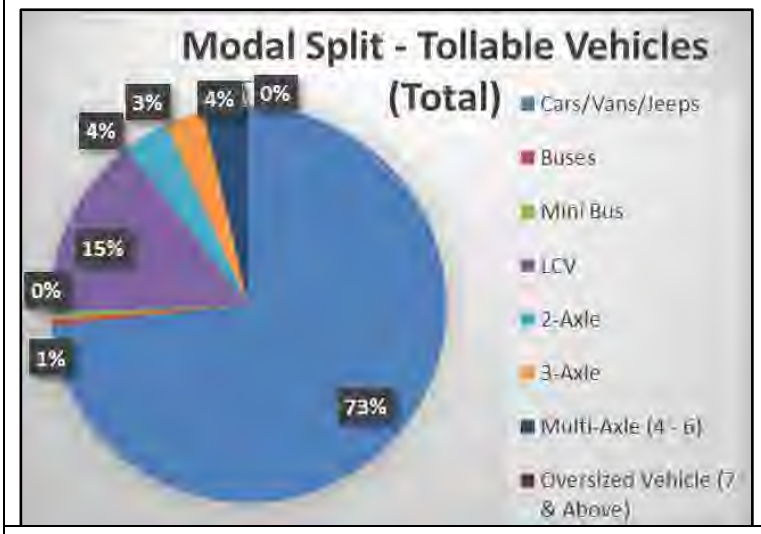


Figure 2-31: Mode wise Composition of Exit Traffic at Survey Location 8

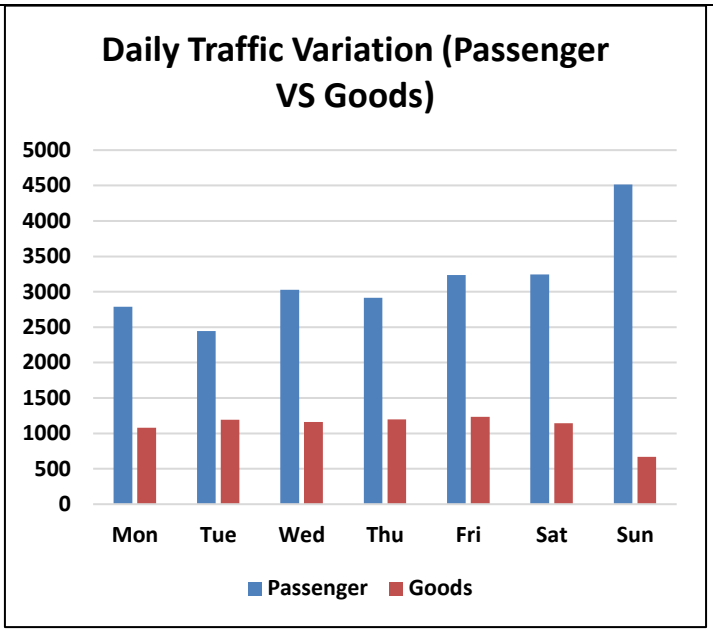


Figure 2-32: Variation of Total Tollable Exit Traffic at Survey Location 8

Table 2-21: Classified Traffic Count at TP-8 Keesara (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2661	22	20	723	170	153	157	0	3906
Tuesday	2441	24	13	713	178	127	158	0	3654
Wednesday	3038	29	21	709	186	143	162	1	4289
Thursday	2920	23	16	720	154	135	139	0	4107
Friday	3098	14	22	705	160	148	178	0	4325
Saturday	3181	18	23	730	169	121	163	0	4405
Sunday	4340	28	10	333	60	52	82	0	4905
ADT	**3097**	**23**	**18**	**662**	**154**	**126**	**148**	**0**	**4227**

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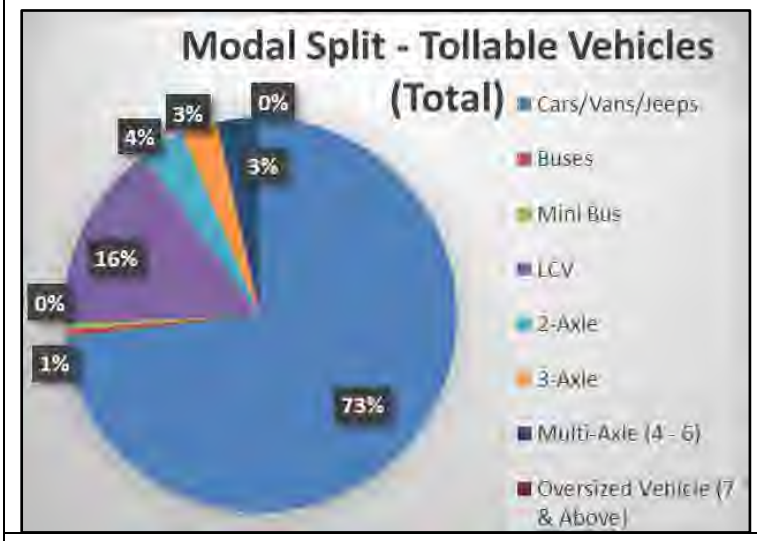


Figure 2-33: Mode wise Composition of Entry Traffic at Survey Location 8

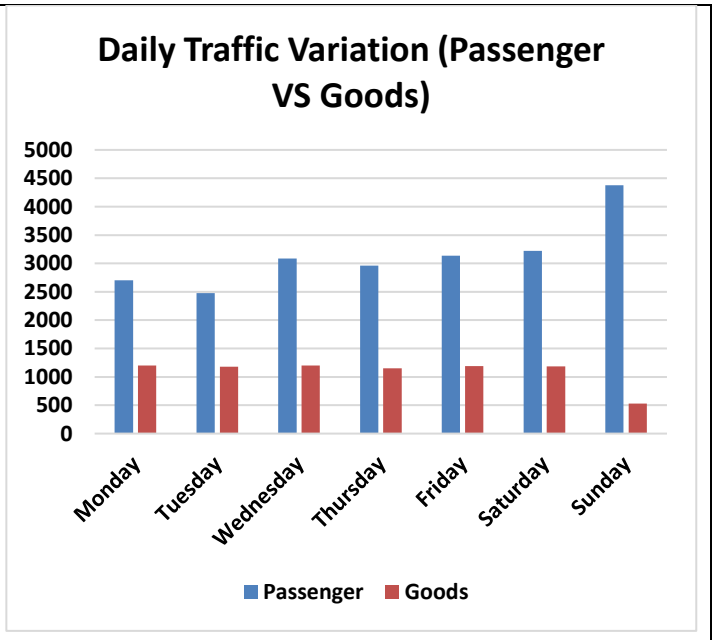


Figure 2-34: Variation of Total Tollable Entry Traffic at Survey Location 8

Table 2-22: Classified Traffic Count at TP-9 Ghatkesar (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	6053	48	37	1157	290	305	736	0	8626
Tuesday	5271	47	26	1237	319	320	740	0	7960
Wednesday	6521	68	18	1311	288	335	765	0	9306
Thursday	6891	56	26	1328	386	324	717	1	9729
Friday	7986	89	40	1364	294	344	776	0	10893
Saturday	8330	54	62	1292	298	313	791	8	11148
Sunday	10212	76	59	761	214	208	628	0	12158
ADT	**7323**	**63**	**38**	**1207**	**298**	**307**	**736**	**1**	**9974**

Modal split of same is given as under.

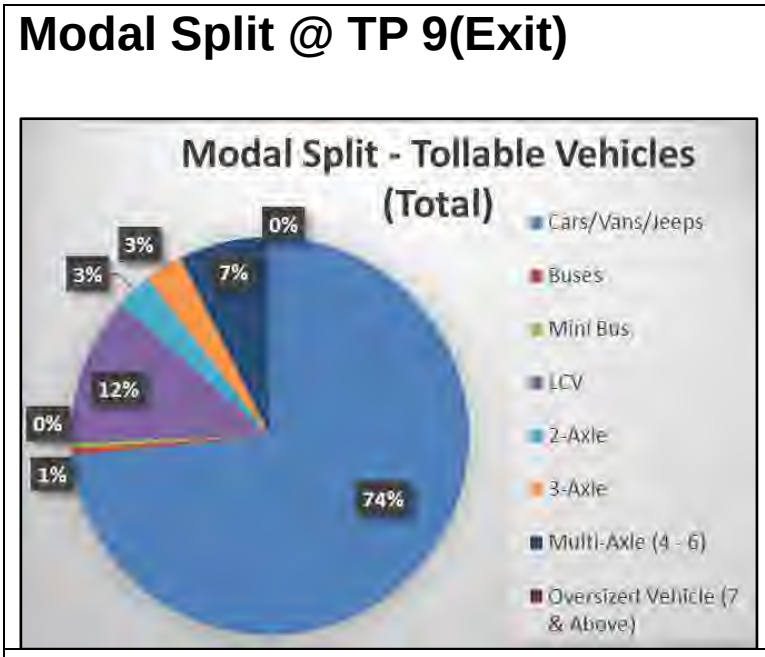


Figure 2-35: Mode wise Composition of Exit Traffic at Survey Location 9

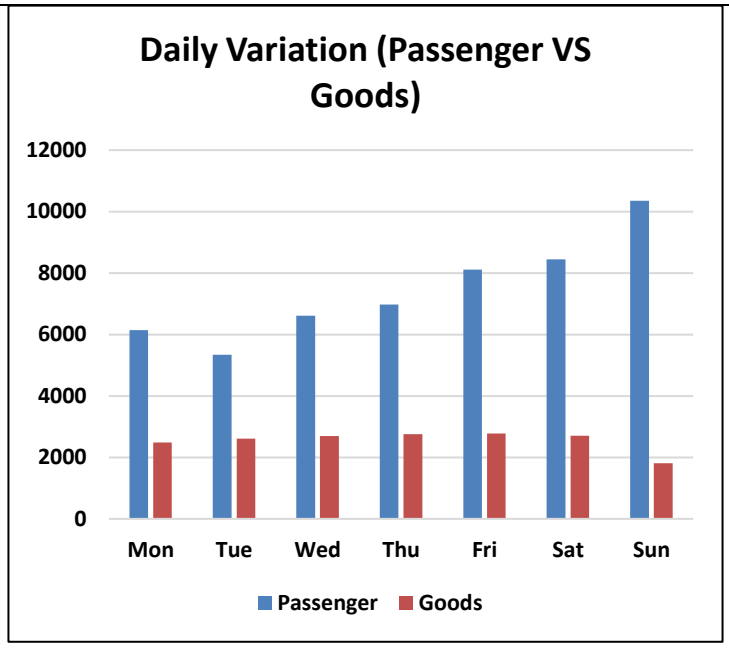


Figure 2-36: Variation of Total Tollable Exit Traffic at Survey Location 9

Table 2-23: Classified Traffic Count at TP-9 Ghatkesar (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	6281	48	25	1259	328	271	765	0	8977
Tuesday	5509	52	15	1383	337	338	801	5	8440
Wednesday	6612	71	29	1395	364	307	718	0	9496
Thursday	6683	52	26	1301	359	287	798	0	9506
Friday	7894	82	46	1451	340	364	728	0	10905
Saturday	8160	69	39	1379	335	332	761	0	11075
Sunday	11014	95	48	729	169	145	584	0	12784
ADT	**7450**	**67**	**33**	**1271**	**319**	**292**	**736**	**1**	**10169**

Modal split of same is given as under.

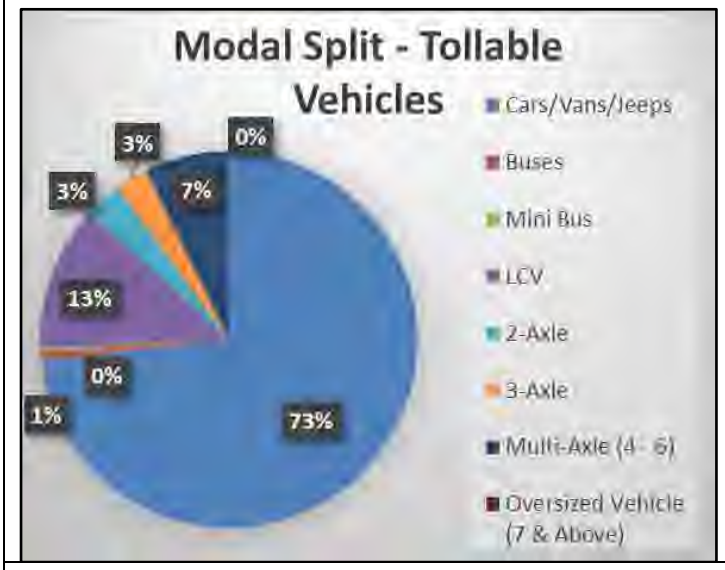


Figure 2-37: Mode wise Composition of Entry Traffic at Survey Location 9

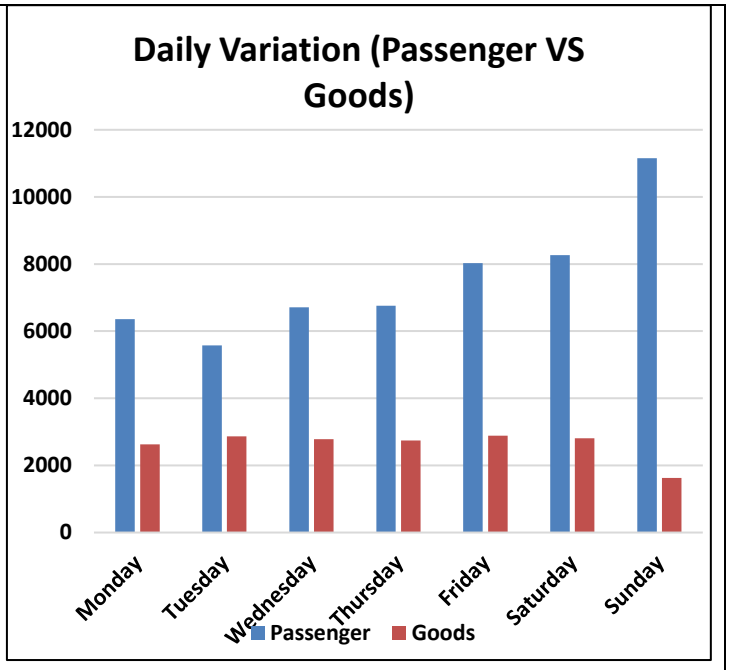


Figure 2-38: Variation of Total Tollable Entry Traffic at Survey Location 9

Table 2-24: Classified Traffic Count at TP-10 Taramatipet (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	1489	3	2	224	26	36	65	0	1845
Tuesday	1274	7	8	276	21	53	92	0	1731
Wednesday	1674	6	5	290	29	59	114	0	2177
Thursday	1699	7	3	316	26	64	76	0	2191
Friday	1807	8	7	304	26	58	90	0	2300
Saturday	1668	6	3	303	28	49	98	1	2156
Sunday	2222	12	9	193	18	34	90	0	2578
ADT	**1690**	**7**	**5**	**272**	**25**	**50**	**89**	**0**	**2140**

Modal split of same is given as under.

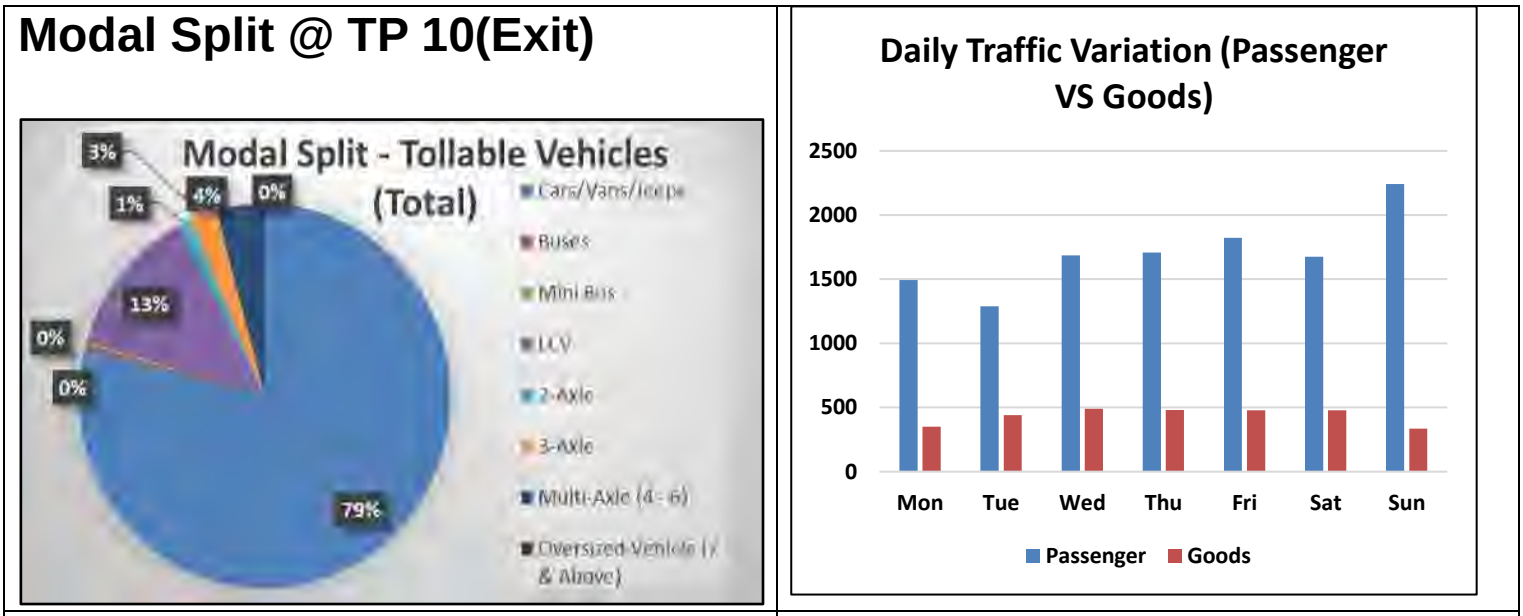


Figure 2-39: Mode wise Composition of Exit Traffic at Survey Location 10

Figure 2-40: Variation of Total Tollable Exit Traffic at Survey Location 10

Table 2-25: Classified Traffic Count at TP-10 Taramatipet (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	1568	4	2	273	45	42	95	1	2030
Tuesday	1323	8	4	304	26	57	150	0	1872
Wednesday	1751	5	4	308	50	78	236	0	2432
Thursday	1899	17	4	348	43	81	225	0	2617
Friday	1925	18	4	300	36	70	188	0	2541
Saturday	1859	9	8	352	41	75	220	0	2564
Sunday	2479	13	5	181	26	45	161	0	2910
ADT	**1829**	**11**	**4**	**295**	**38**	**64**	**182**	**0**	**2424**

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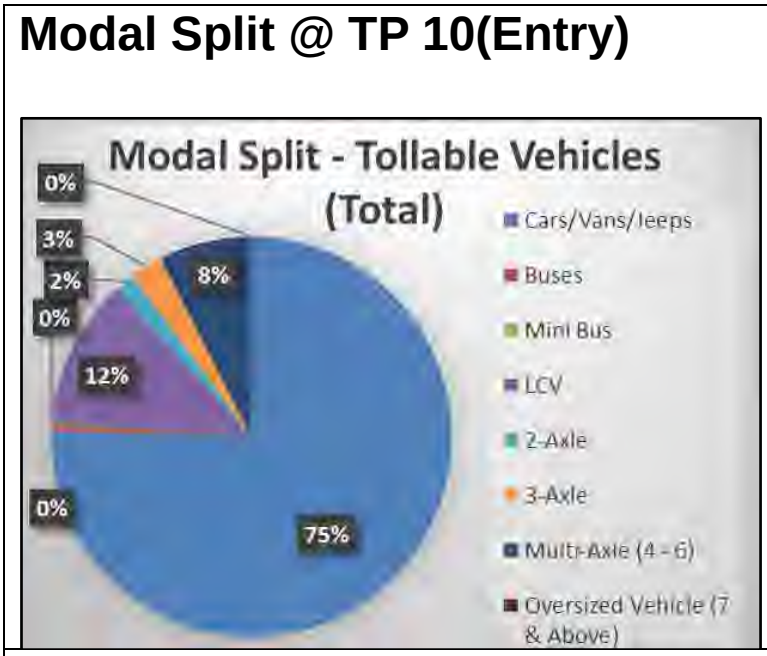


Figure 2-41: Mode wise Composition of Entry Traffic at Survey Location 10

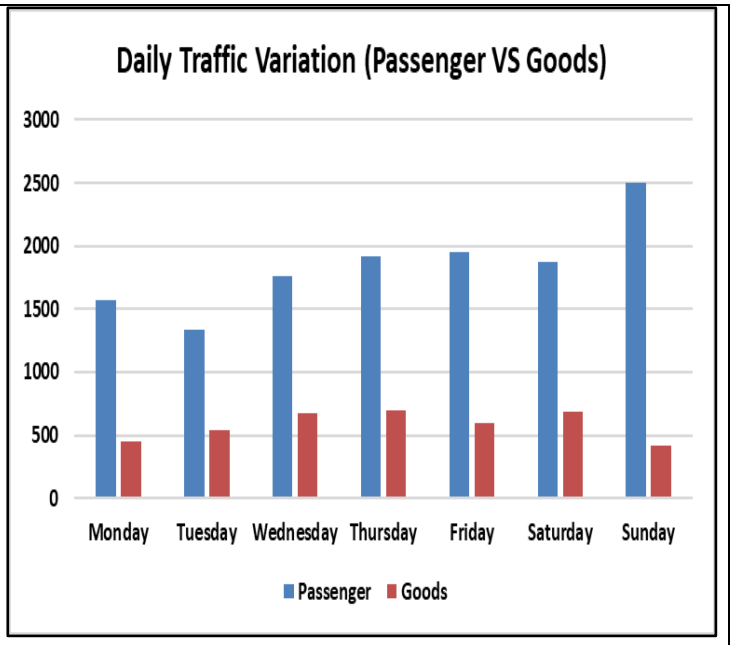


Figure 2-42: Variation of Total Tollable Entry Traffic at Survey Location 10

Table 2-26: Classified Traffic Count at TP-11 Pedda Amberpet (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	6997	59	20	1917	749	636	1805	2	12185
Tuesday	6983	50	23	2236	574	604	1894	0	12364
Wednesday	7092	56	24	2313	521	682	1882	1	12571
Thursday	8426	73	30	2241	580	679	2016	3	14048
Friday	9044	111	35	2347	530	627	1981	0	14675
Saturday	9309	123	97	2143	516	636	2060	0	14884
Sunday	10349	83	42	1329	472	579	1619	0	14473
ADT	**8314**	**79**	**39**	**2075**	**563**	**635**	**1894**	**1**	**13600**

Modal split of same is given as under.

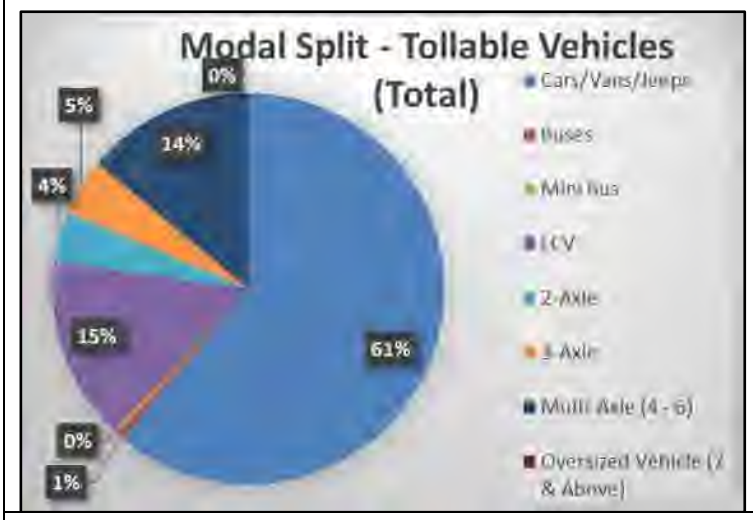


Figure 2-43: Mode wise Composition of Exit Traffic at Survey Location 11

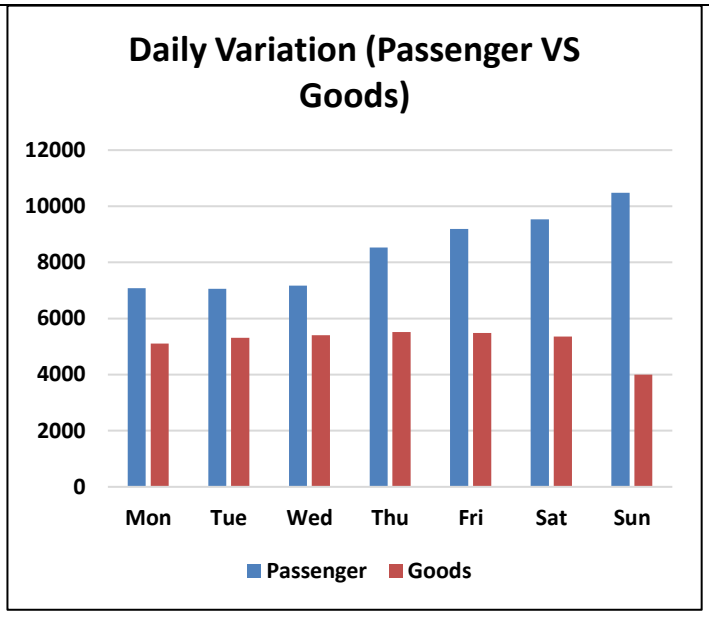


Figure 2-44: Variation of Total Tollable Exit Traffic at Survey Location 11

Table 2-27: Classified Traffic Count at TP-11 Pedda Amberpet (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	8081	33	41	2015	610	592	1625	1	12998
Tuesday	6388	38	23	2248	570	644	1856	2	11769
Wednesday	8242	72	56	2238	623	660	1969	0	13860
Thursday	8872	73	30	2385	704	744	1994	0	14802
Friday	9084	77	52	2399	638	680	2113	0	15043
Saturday	9375	184	39	2205	535	631	1929	0	14898
Sunday	11478	86	56	1420	515	530	1614	1	15700
ADT	**8789**	**80**	**42**	**2130**	**599**	**640**	**1871**	**1**	**14153**

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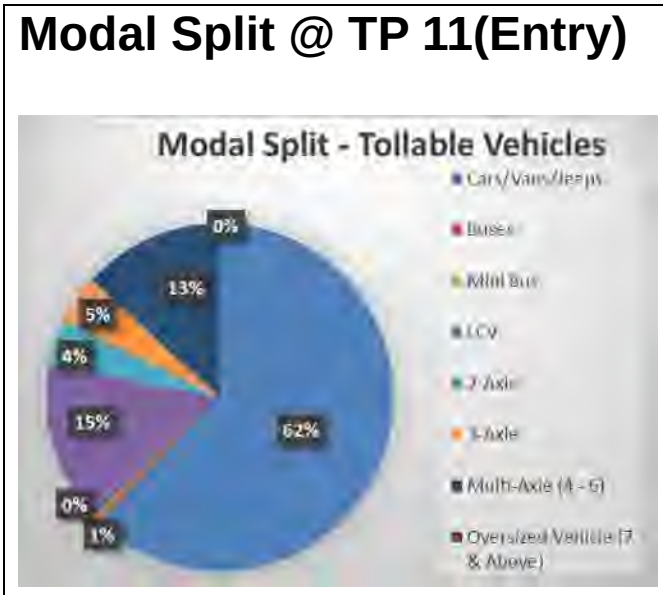


Figure 2-45: Mode wise Composition of Entry Traffic at Survey Location 11

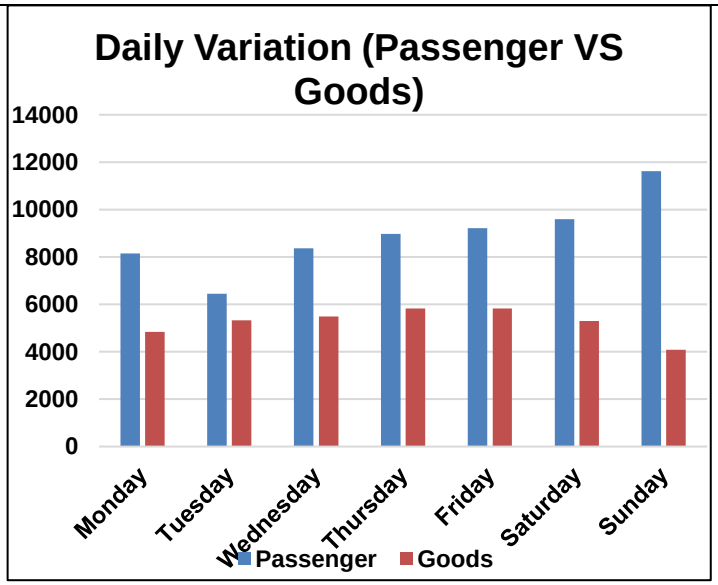


Figure 2-46: Variation of Total Tollable Entry Traffic at Survey Location 11

Table 2-28: Classified Traffic Count at TP-12 Bongloor (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	4460	65	35	818	102	80	298	0	5858
Tuesday	4586	105	17	913	94	127	313	0	6155
Wednesday	4993	110	28	924	100	112	338	0	6605
Thursday	5412	121	22	863	100	146	358	0	7022
Friday	6037	128	17	901	94	162	336	0	7675
Saturday	5466	40	31	927	69	144	338	0	7015
Sunday	7522	61	23	612	64	118	257	0	8657
ADT	**5497**	**90**	**25**	**851**	**89**	**127**	**320**	**0**	**6998**

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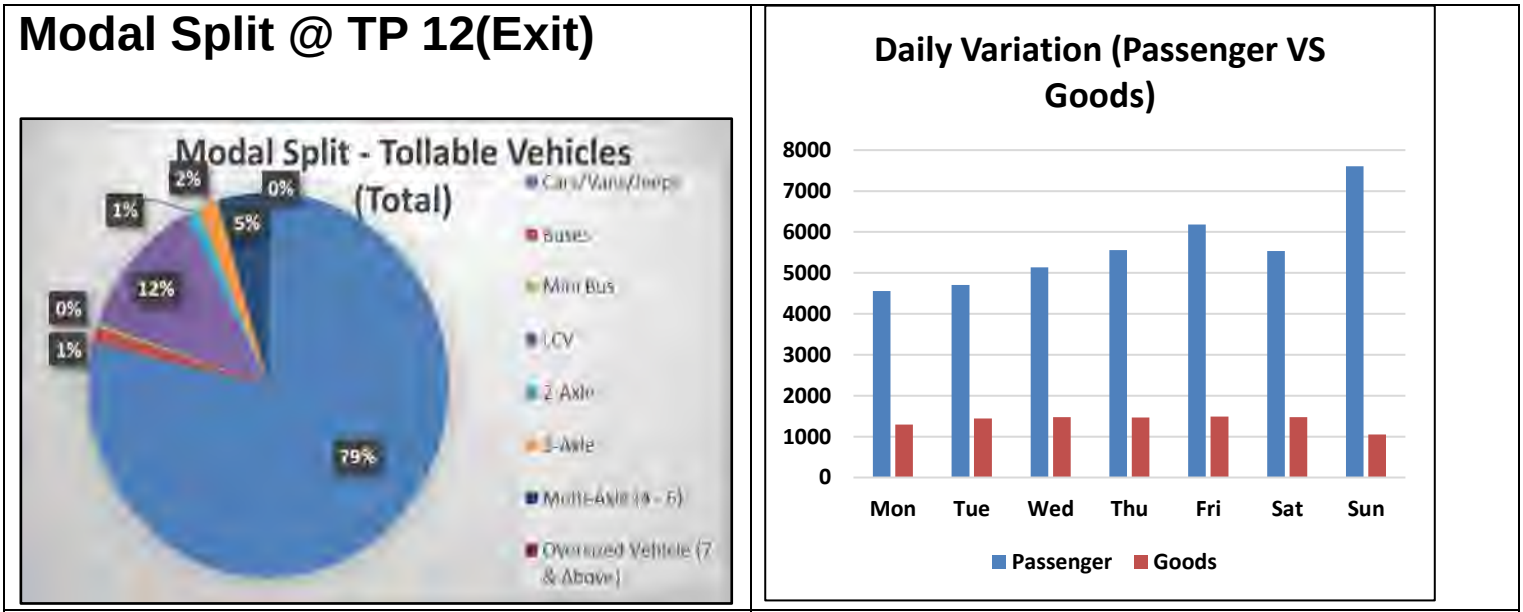


Figure 2-47: Mode wise Composition of Exit Traffic at Survey Location 12

Figure 2-48: Variation of Total Tollable Exit Traffic at Survey Location 12

Table 2-29: Classified Traffic Count at TP-12 Bongloor (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	4607	100	11	849	81	121	304	0	6073
Tuesday	4155	84	23	906	96	123	344	1	5732
Wednesday	4831	95	23	954	105	112	336	0	6456
Thursday	5208	103	28	925	109	131	336	0	6840
Friday	5671	96	20	918	111	138	294	0	7248
Saturday	5262	38	26	817	116	103	303	0	6665
Sunday	7188	41	26	538	78	85	256	0	8212
ADT	**5275**	**80**	**22**	**844**	**99**	**116**	**310**	**0**	**6747**

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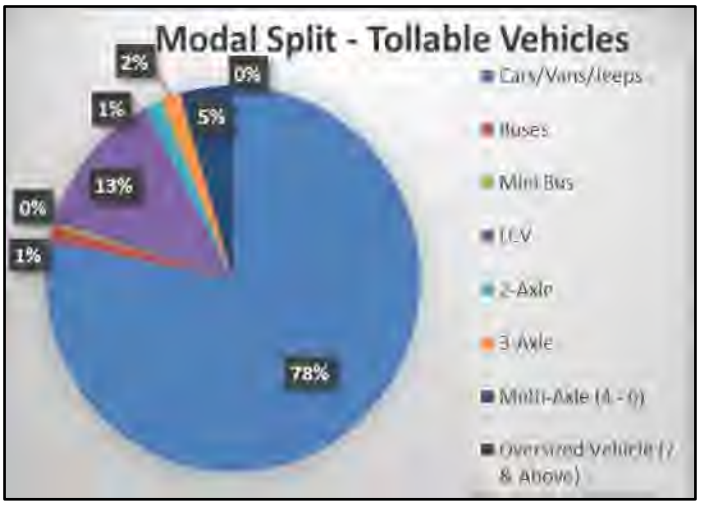


Figure 2-49: Mode wise Composition of Entry Traffic at Survey Location 12

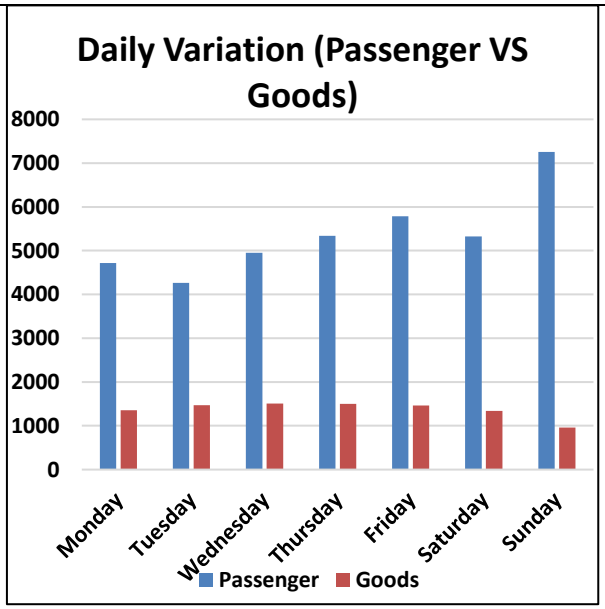


Figure 2-50: Variation of Total Tollable Entry Traffic at Survey Location 12

Table 2-30: Classified Traffic Count at TP-13 Ravirayal (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	1185	111	8	97	20	42	70	0	1533
Tuesday	989	87	21	154	23	53	63	0	1390
Wednesday	1010	84	12	145	26	95	70	0	1442
Thursday	1074	103	2	128	23	101	63	0	1494
Friday	1071	167	20	134	24	88	93	0	1597
Saturday	966	76	24	118	14	67	60	0	1325
Sunday	1133	25	3	74	20	21	35	0	1311
ADT	**1061**	**93**	**13**	**121**	**21**	**67**	**65**	**0**	**1442**

Modal split of same is given as under.

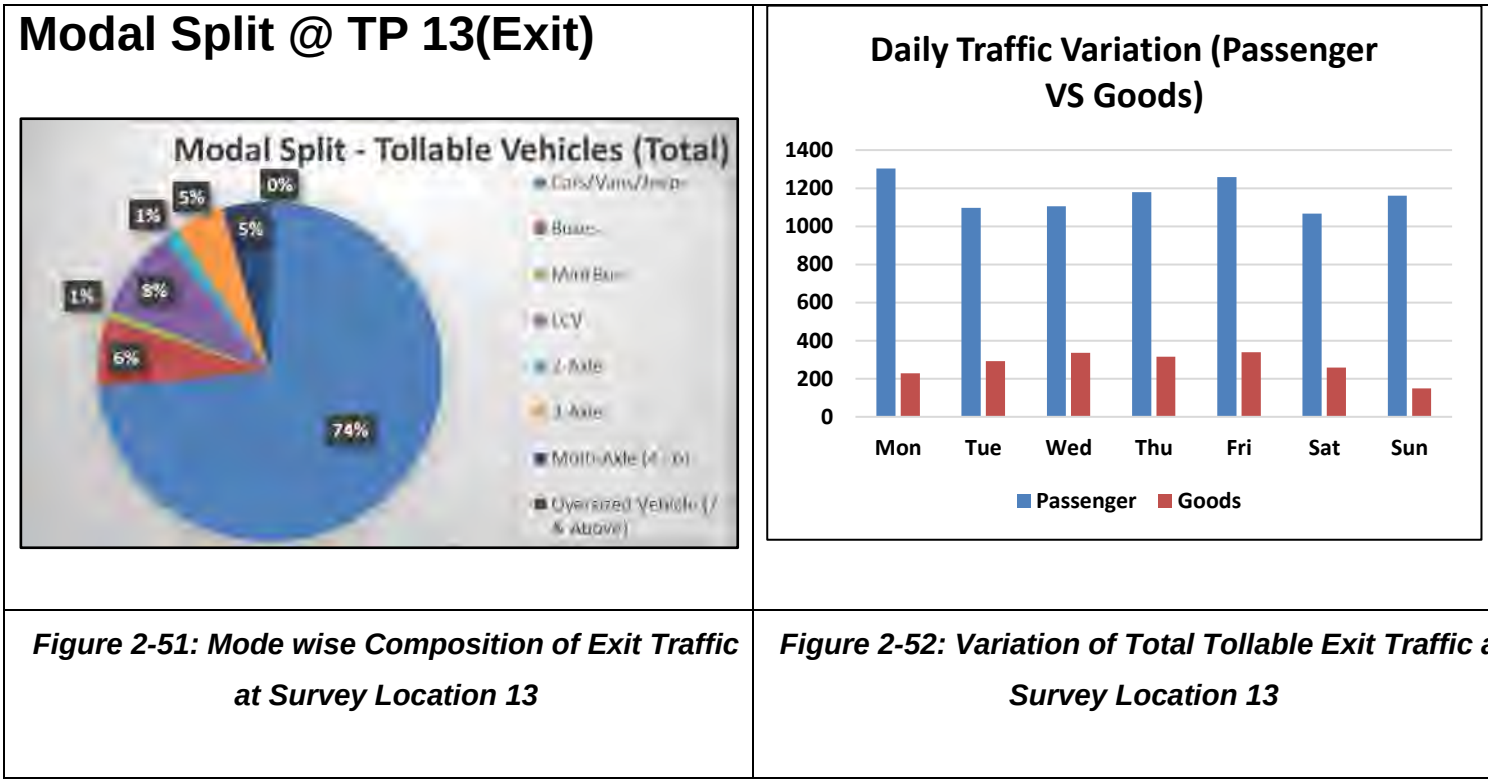


Figure 2-51: Mode wise Composition of Exit Traffic at Survey Location 13

Figure 2-52: Variation of Total Tollable Exit Traffic at Survey Location 13

Table 2-31: Classified Traffic Count at TP-13 Ravirayal (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	1165	111	18	137	29	39	39	0	1538
Tuesday	1020	90	25	154	38	55	50	0	1432
Wednesday	1122	81	31	168	32	60	40	0	1534
Thursday	1084	115	4	152	44	88	39	0	1526
Friday	1123	218	7	128	41	58	55	1	1631
Saturday	958	90	8	129	29	41	40	0	1295
Sunday	1111	30	2	75	24	17	24	0	1283
ADT	**1083**	**105**	**14**	**135**	**34**	**51**	**41**	**0**	**1463**

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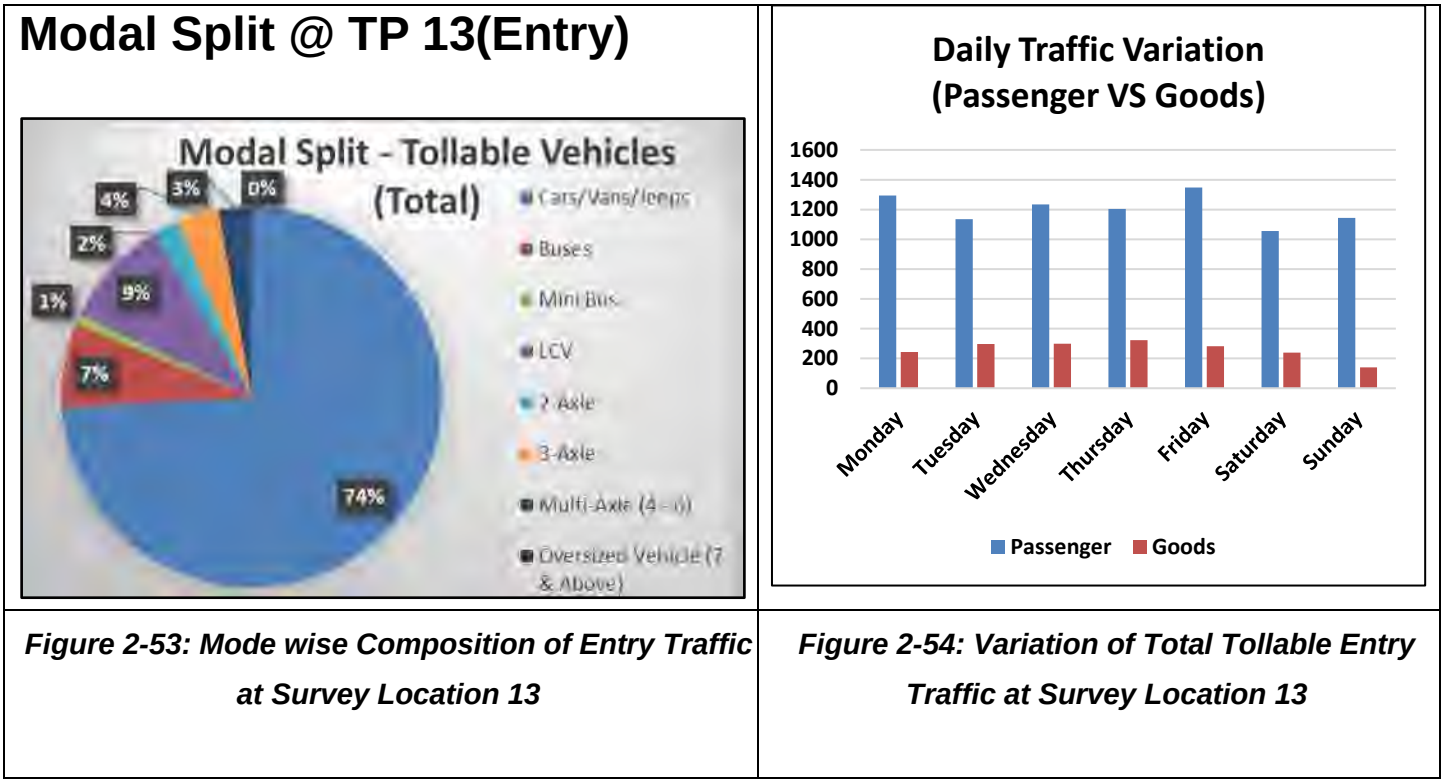


Figure 2-53: Mode wise Composition of Entry Traffic at Survey Location 13

Figure 2-54: Variation of Total Tollable Entry Traffic at Survey Location 13

Table 2-32: Classified Traffic Count at TP-14 Tukkuguda (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5266	43	27	845	159	180	321	1	6842
Tuesday	4968	34	35	939	143	215	379	0	6713
Wednesday	5474	43	27	971	135	199	396	0	7245
Thursday	5855	49	41	900	141	237	383	0	7606
Friday	6374	62	32	889	146	238	396	0	8137
Saturday	6899	52	33	944	161	181	290	0	8560
Sunday	7110	45	30	498	98	115	258	0	8154
ADT	**5992**	**47**	**32**	**855**	**140**	**195**	**346**	**0**	**7608**

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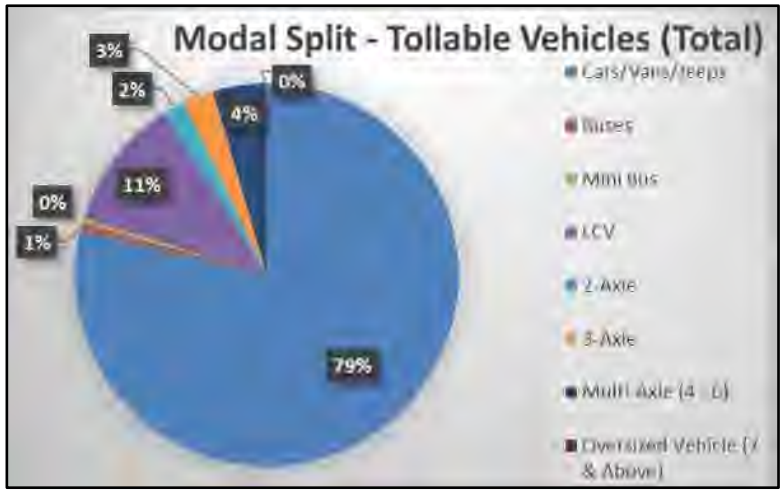


Figure 2-55: Mode wise Composition of Exit Traffic at Survey Location 14

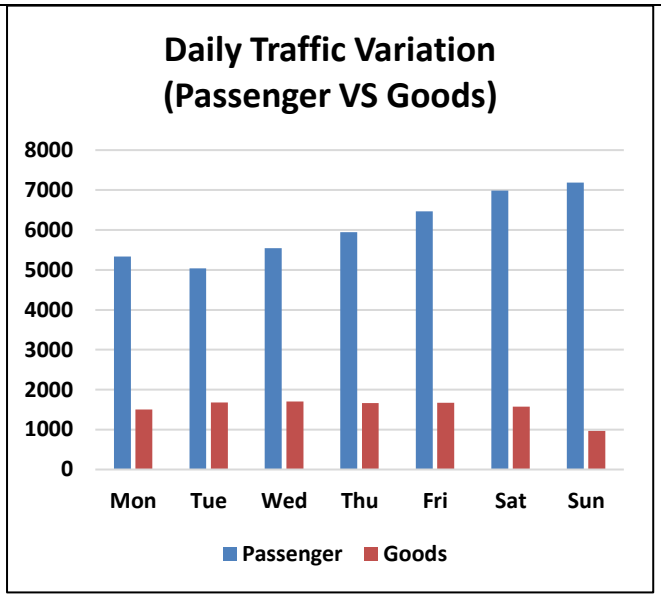


Figure 2-56: Variation of Total Tollable Exit Traffic at Survey Location 14

Table 2-33: Classified Traffic Count at TP-14 Tukkuguda (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	5234	38	29	822	141	180	298	0	6742
Tuesday	4770	34	32	872	148	213	345	0	6414
Wednesday	5194	48	31	902	128	224	373	0	6900
Thursday	5427	50	39	877	141	268	383	0	7185
Friday	5709	63	18	862	121	242	392	0	7407
Saturday	6115	60	33	875	145	249	321	1	7799
Sunday	7399	42	33	538	86	91	243	0	8432
ADT	**5693**	**48**	**31**	**821**	**130**	**210**	**336**	**0**	**7268**

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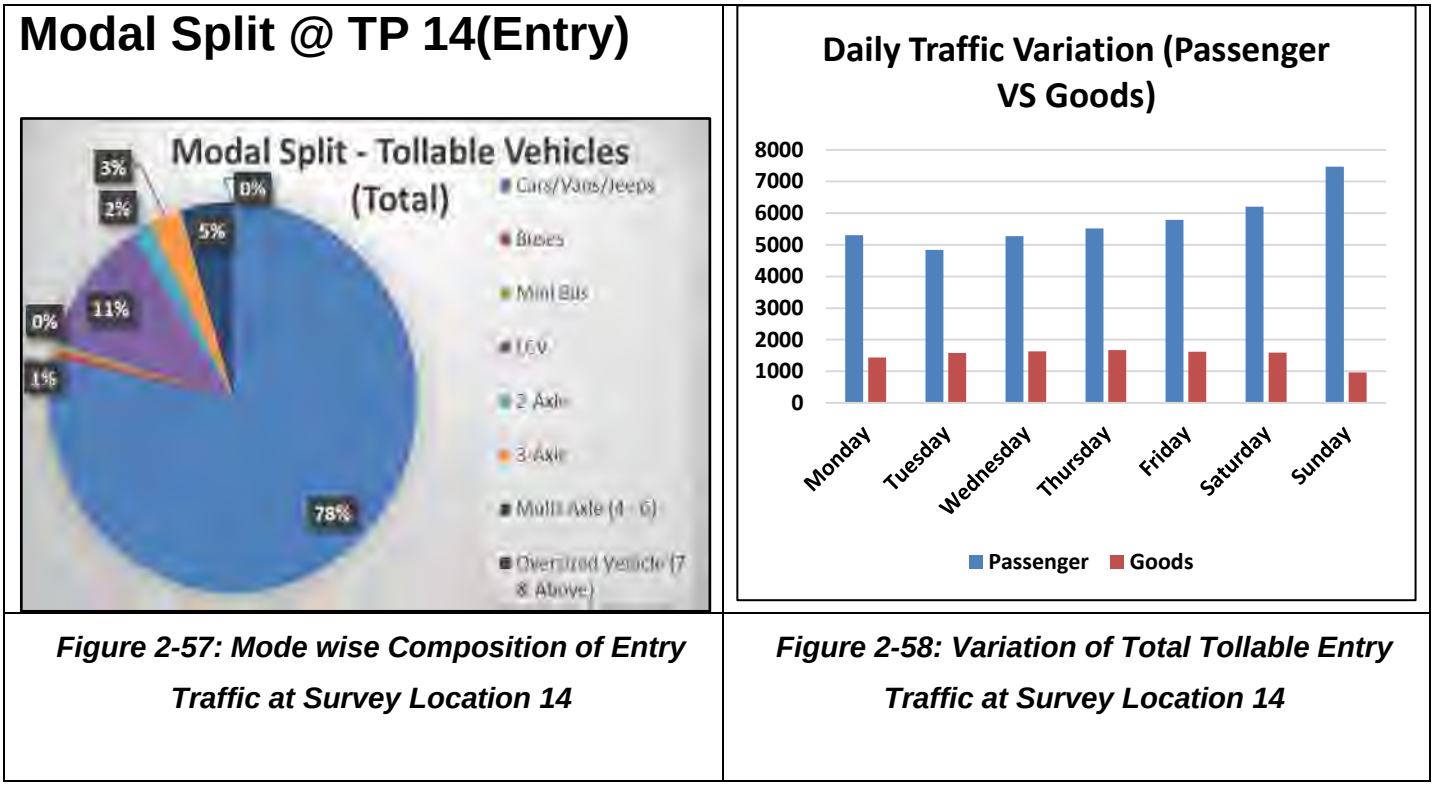


Figure 2-57: Mode wise Composition of Entry Traffic at Survey Location 14

Figure 2-58: Variation of Total Tollable Entry Traffic at Survey Location 14

Table 2-34: Classified Traffic Count at TP-15 Pedda Golconda (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	1888	6	10	523	111	78	140	0	2756
Tuesday	2022	10	11	687	140	127	305	0	3302
Wednesday	2211	20	20	855	107	109	338	0	3660
Thursday	2245	18	17	745	138	146	285	0	3594
Friday	2393	17	21	780	123	98	326	0	3758
Saturday	2466	19	33	769	115	125	280	0	3807
Sunday	2954	14	31	486	103	93	311	0	3992
ADT	**2311**	**15**	**20**	**692**	**120**	**111**	**284**	**0**	**3553**

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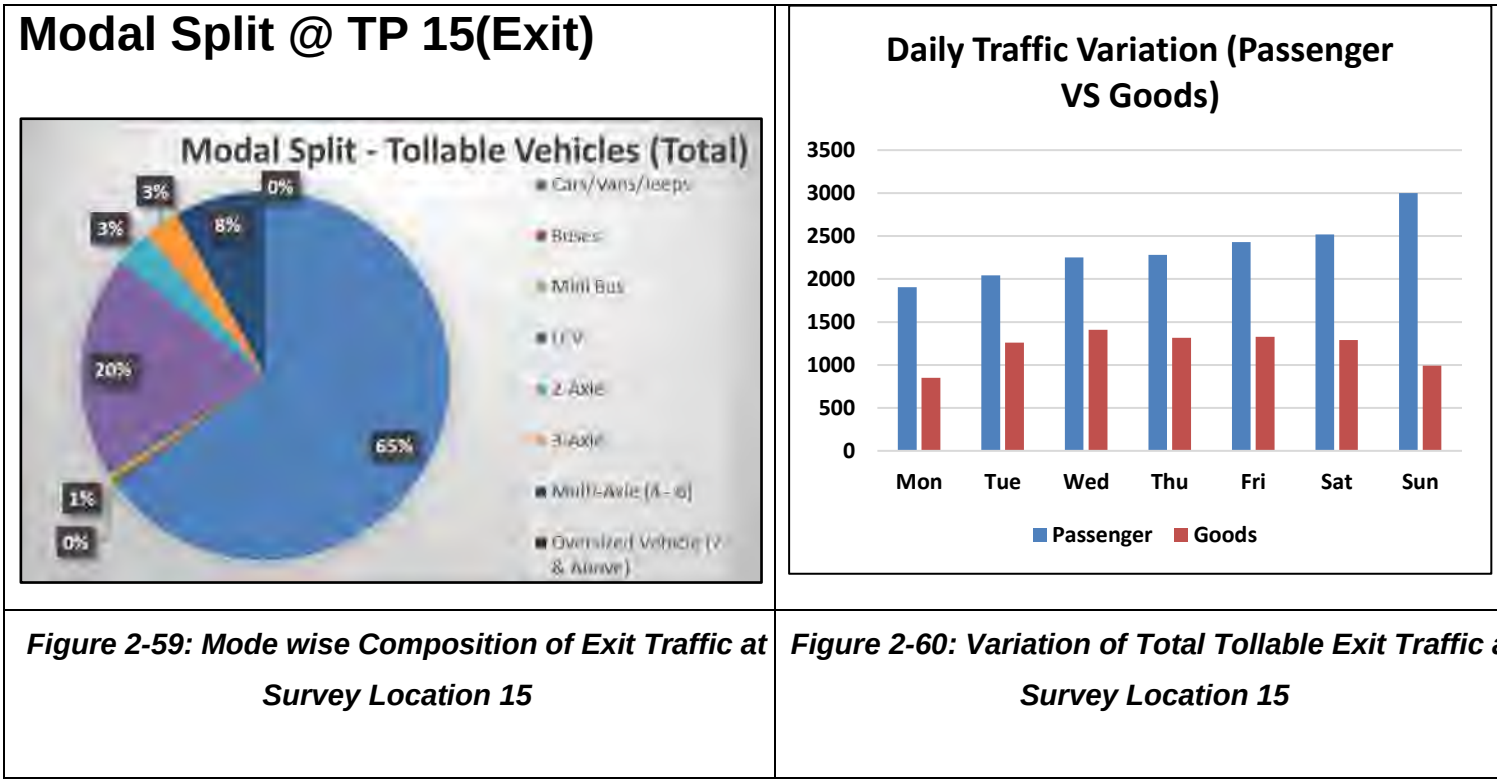


Figure 2-59: Mode wise Composition of Exit Traffic at Survey Location 15

Figure 2-60: Variation of Total Tollable Exit Traffic at Survey Location 15

Table 2-35: Classified Traffic Count at TP-15 Pedda Golconda (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	2025	5	15	709	146	96	216	0	3212
Tuesday	1984	10	15	609	120	70	153	0	2961
Wednesday	2073	10	8	658	89	92	197	2	3129
Thursday	2251	19	11	613	113	91	146	0	3244
Friday	2422	18	17	622	124	101	215	0	3519
Saturday	2696	25	17	618	97	84	245	0	3782
Sunday	3273	6	20	373	84	57	139	0	3952
ADT	**2389**	**13**	**15**	**600**	**110**	**84**	**187**	**0**	**3400**

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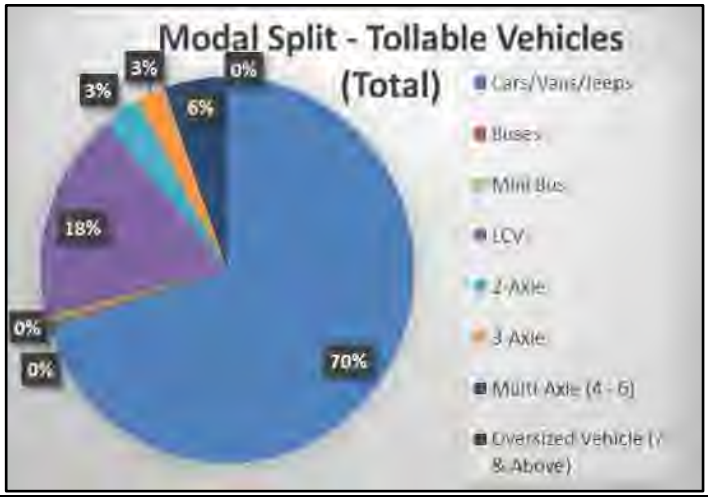


Figure 2-61: Mode wise Composition of Entry Traffic at Survey Location 15

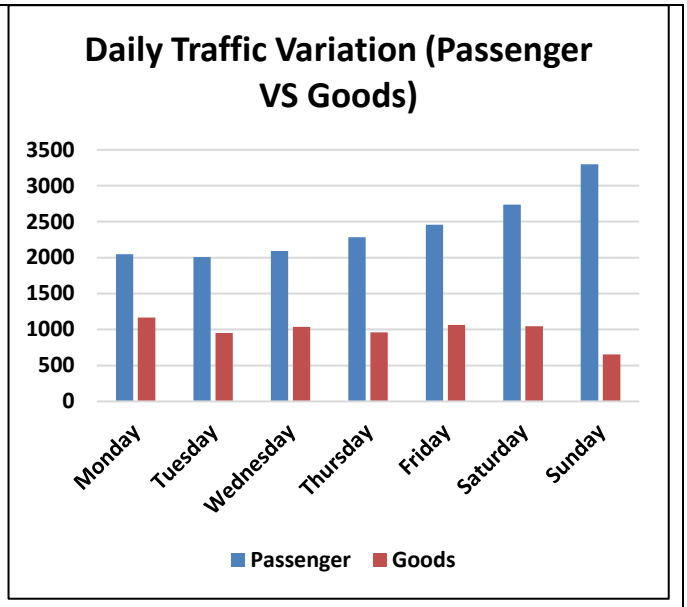


Figure 2-62: Variation of Total Tollable Entry Traffic at Survey Location 15

Table 2-36: Classified Traffic Count at TP-16 Shamshabad (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	18027	241	66	2362	684	754	1462	0	23596
Tuesday	19182	277	66	2442	563	774	1563	0	24867
Wednesday	20555	237	95	2389	644	707	1573	1	26201
Thursday	21300	244	103	2427	650	751	1508	0	26983
Friday	22302	348	48	2439	611	747	1479	0	27974
Saturday	22494	271	103	2230	547	756	1418	0	27819
Sunday	23517	229	96	1425	561	599	1241	2	27670
ADT	**21054**	**264**	**82**	**2245**	**609**	**727**	**1463**	**0**	**26444**

Modal split of same is given as under.

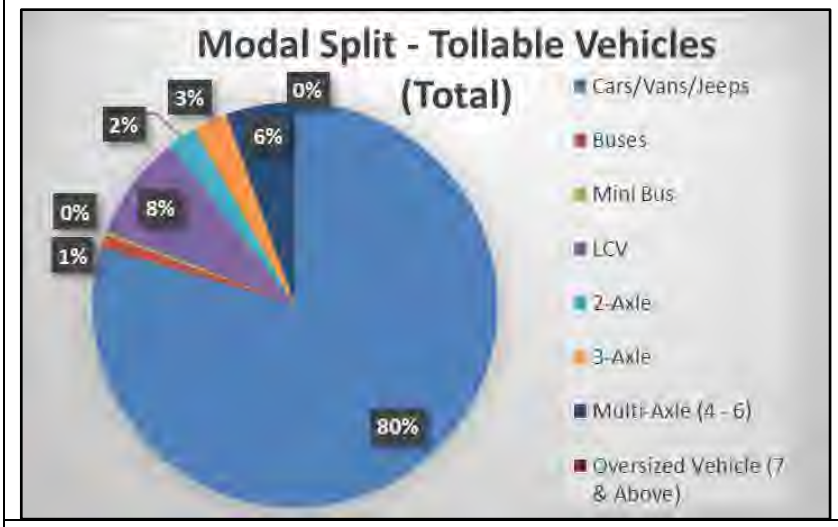


Figure 2-63: Mode wise Composition of Exit Traffic at Survey Location 16

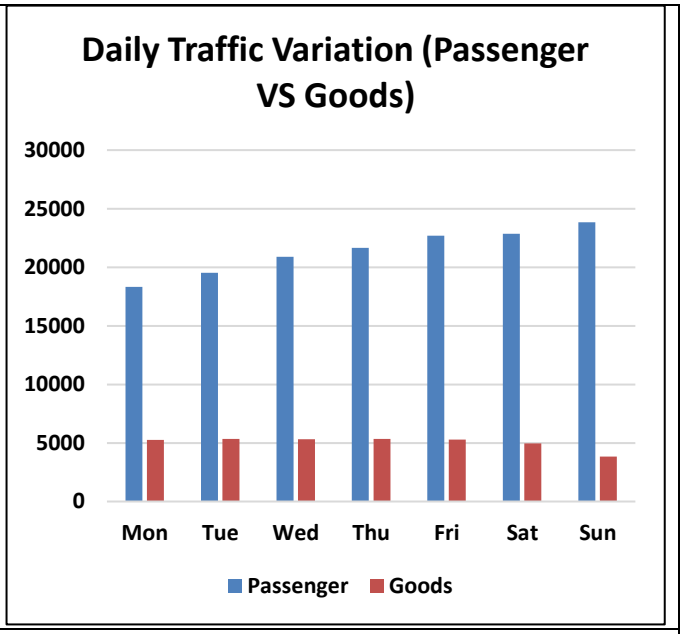


Figure 2-64: Variation of Total Tollable Exit Traffic at Survey Location 16

Table 2-37: Classified Traffic Count at TP-16 Shamshabad (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	18741	264	58	2088	473	604	1368	0	23596
Tuesday	17658	254	54	2423	503	680	1368	0	22940
Wednesday	19254	254	80	2440	643	781	1467	0	24919
Thursday	20354	260	62	2416	561	941	1452	0	26046
Friday	21328	327	89	2468	645	679	1527	0	27063
Saturday	21708	275	84	2253	541	690	1448	0	26999
Sunday	24772	234	74	1544	516	673	1200	0	29013
ADT	**20545**	**267**	**72**	**2233**	**555**	**721**	**1404**	**0**	**25797**

Modal split of same is given as under.

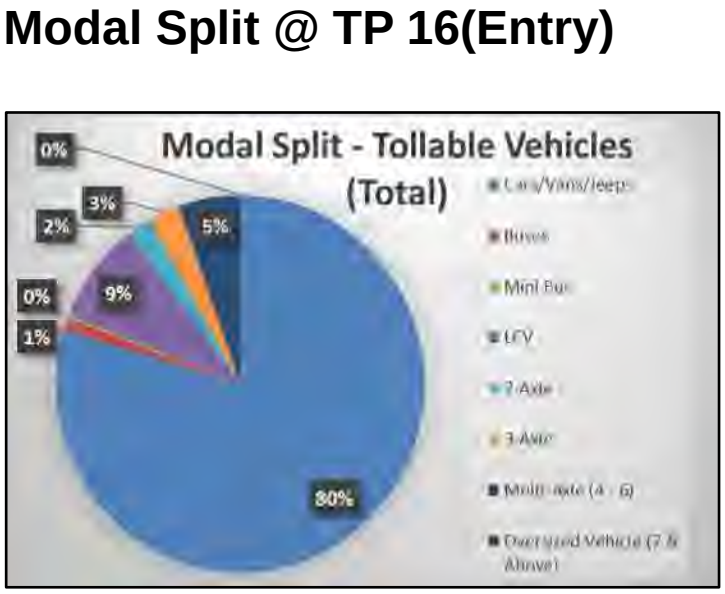


Figure 2-65: Mode wise Composition of Entry Traffic at Survey Location 16

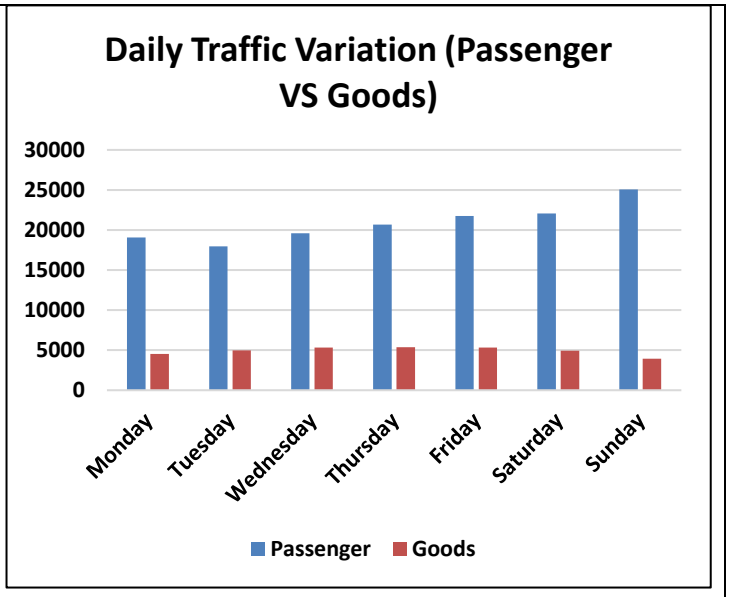


Figure 2-66: Variation of Total Tollable Entry Traffic at Survey Location 16

Table 2-38: Classified Traffic Count at TP-17 Rajendranagar 1 & 2 (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	6595	157	31	1183	129	339	276	6	8716
Tuesday	6817	152	78	1421	177	397	197	0	9239
Wednesday	7268	180	45	1411	191	269	257	6	9627
Thursday	7668	175	49	1413	167	285	277	0	10034
Friday	9205	198	64	1342	160	324	247	0	11540
Saturday	7337	122	42	1304	128	331	248	0	9512
Sunday	7959	116	30	732	92	216	253	0	9398
ADT	**7550**	**157**	**48**	**1258**	**149**	**309**	**251**	**2**	**9724**

Modal split of same is given as under.

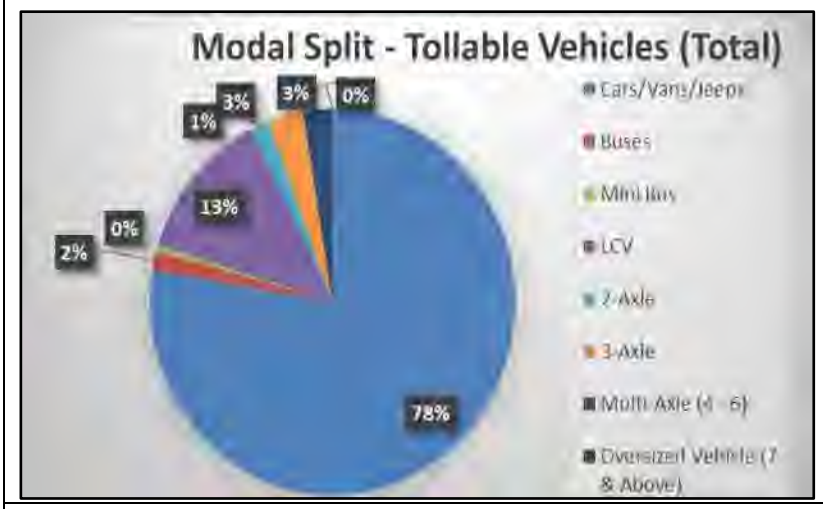


Figure 2-67: Mode wise Composition of Exit Traffic at Survey Location 17

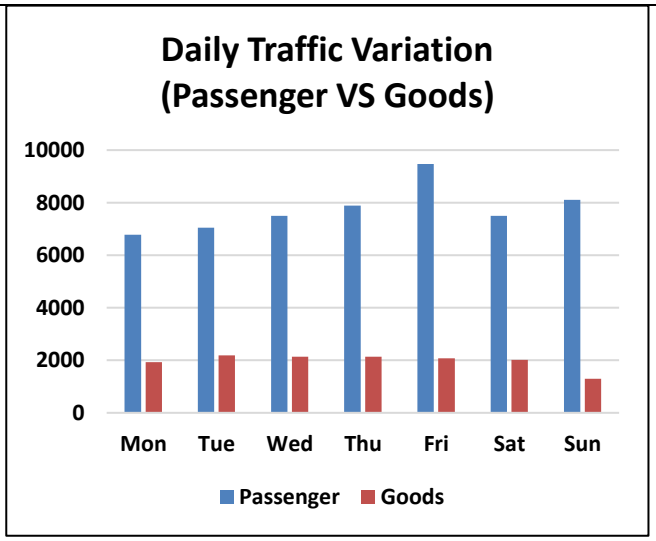


Figure 2-68: Variation of Total Tollable Exit Traffic at Survey Location 17

Table 2-39: Classified Traffic Count at TP-17 Rajendranagar 1 & 2 (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	6259	88	37	1117	97	324	200	0	8122
Tuesday	6236	82	43	1203	120	373	227	0	8284
Wednesday	6694	92	37	1333	119	323	278	0	8876
Thursday	6950	112	44	1275	100	357	204	0	9042
Friday	8601	132	60	1286	100	313	225	0	10717
Saturday	7316	68	37	1313	111	332	198	0	9375
Sunday	7511	58	33	680	47	171	161	0	8661
ADT	**7081**	**90**	**42**	**1172**	**99**	**313**	**213**	**0**	**9011**

Modal split of same is given as under.

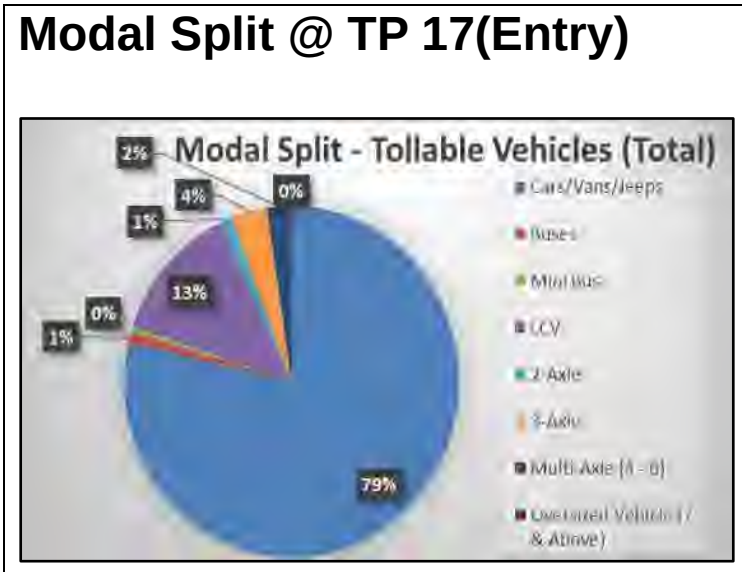


Figure 2-69: Mode wise Composition of Entry Traffic at Survey Location 17

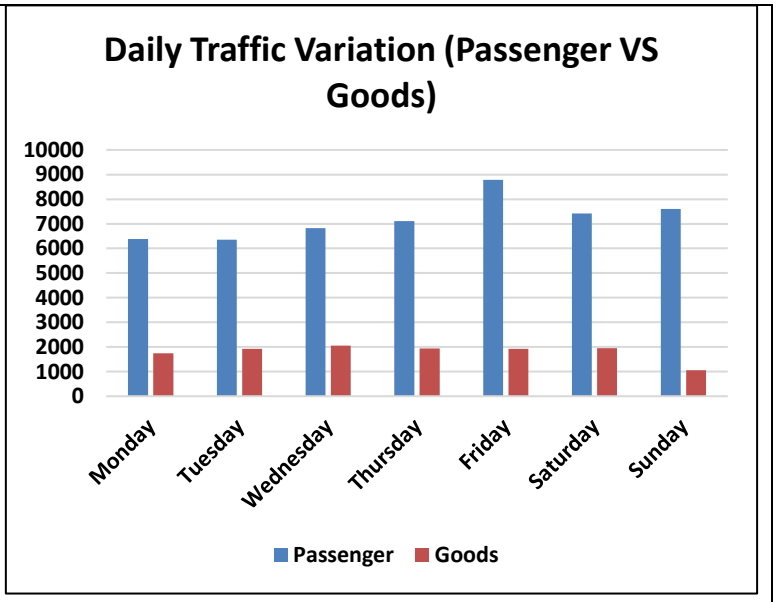


Figure 2-70: Variation of Total Tollable Entry Traffic at Survey Location 17

Table 2-40: Classified Traffic Count at TP-18 TSPA (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	12804	179	48	943	116	286	370	0	14746
Tuesday	12770	149	62	1000	101	437	388	0	14907
Wednesday	13422	195	68	1066	116	312	380	0	15559
Thursday	14292	156	91	1115	112	292	364	0	16422
Friday	13434	308	72	871	107	147	340	0	15279
Saturday	16498	164	43	1049	87	257	369	0	18467
Sunday	16422	124	62	700	57	197	297	0	17859
ADT	**14235**	**182**	**64**	**963**	**99**	**275**	**358**	**0**	**16177**

Modal split of same is given as under.

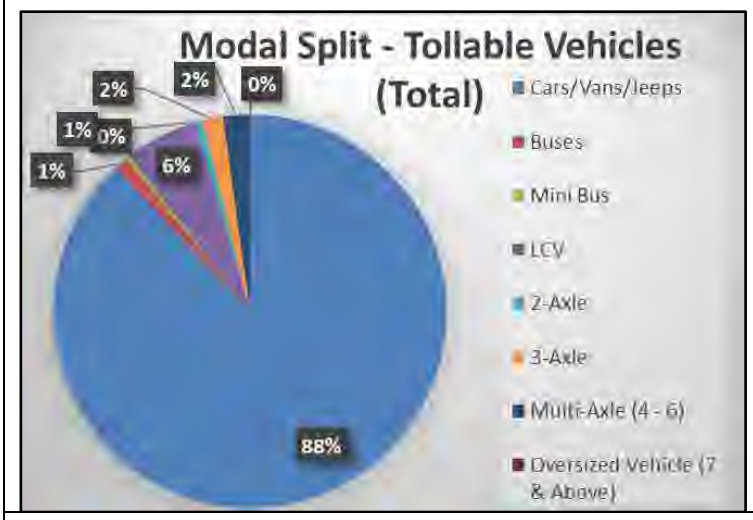


Figure 2-71: Mode wise Composition of Exit Traffic at Survey Location 18

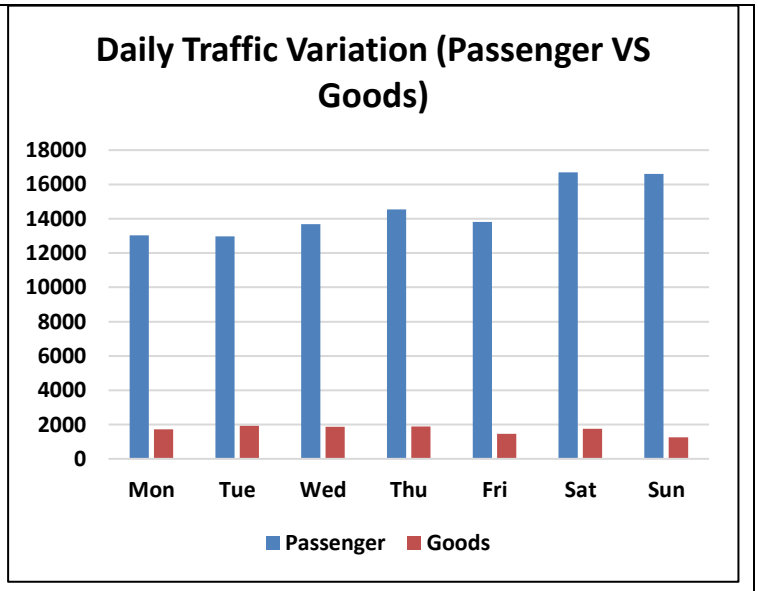


Figure 2-72: Variation of Total Tollable Exit Traffic at Survey Location 18

Table 2-40: Classified Traffic Count at TP-18 TSPA (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	12601	161	46	918	115	285	376	0	14502
Tuesday	13450	182	74	1083	115	420	392	0	15716
Wednesday	14033	207	70	1138	103	291	485	0	16327
Thursday	14472	197	71	1199	90	293	462	0	16784
Friday	12978	264	59	919	68	168	351	0	14807
Saturday	16171	163	80	1095	94	203	366	0	18172
Sunday	16761	105	61	676	61	167	327	0	18158
ADT	**14352**	**183**	**66**	**1004**	**92**	**261**	**394**	**0**	**16352**

Modal split of same is given as under.

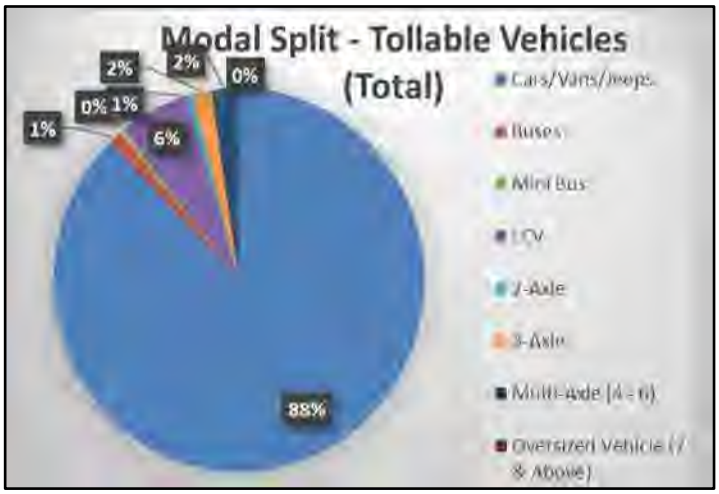


Figure 2-73: Mode wise Composition of Entry Traffic at Survey Location 18

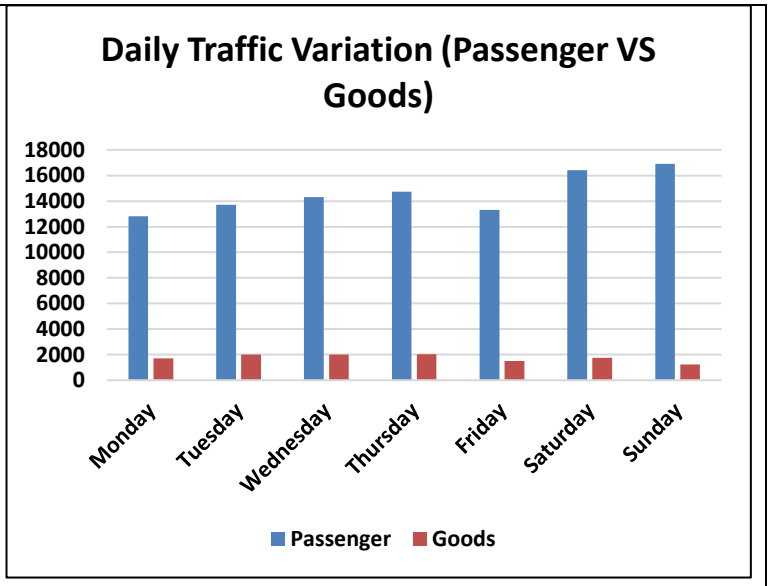


Figure 2-74: Variation of Total Tollable Entry Traffic at Survey Location 18

Table 2-41: Classified Traffic Count at TP-19 Nanakramguda (Exit)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	27574	405	88	1387	87	182	176	0	29899
Tuesday	26225	403	69	1438	96	281	189	0	28701
Wednesday	28119	436	58	1489	134	237	193	0	30666
Thursday	29533	445	56	1513	111	259	175	0	32092
Friday	30362	441	134	1574	90	224	198	0	33023
Saturday	32187	355	55	1519	62	220	235	0	34633
Sunday	33593	281	65	910	46	98	183	0	35176
ADT	**29656**	**395**	**75**	**1404**	**89**	**214**	**193**	**0**	**32027**

Modal split of same is given as under.

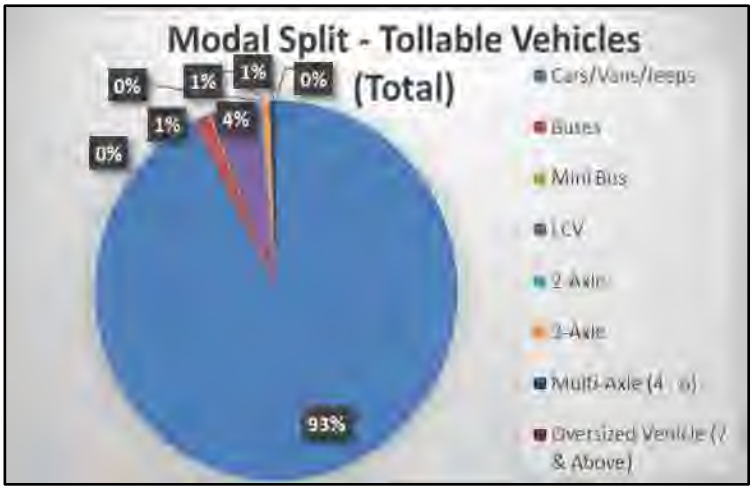


Figure 2-75: Mode wise Composition of Exit Traffic at Survey Location 19

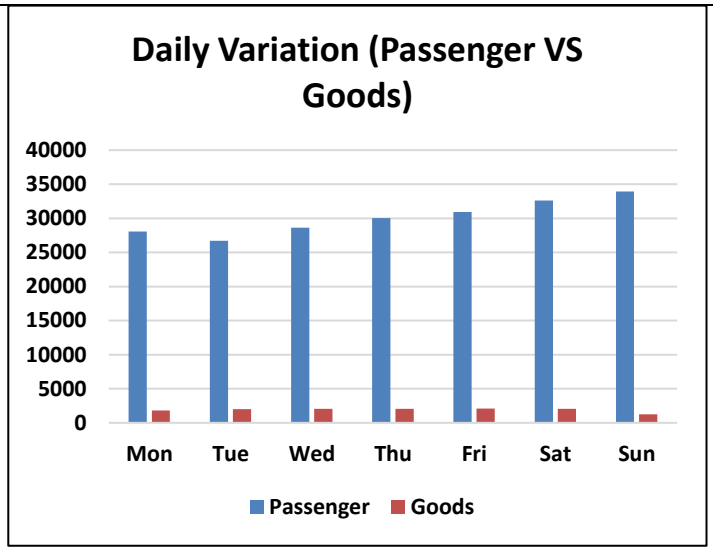


Figure 2-76: Variation of Total Tollable Exit Traffic at Survey Location 19

Table 2-42: Classified Traffic Count at TP-19 Nanakramguda (Entry)

Day	Passenger Vehicles			Goods Vehicles					
	Cars/ Vans/ Jeeps	Buses	Mini Buses	LCV	2 - Axle Trucks	3 Axle Trucks	4 - 6 Axle Trucks, HCM, EME, MAV	6+ Axle Trucks	Tollable Vehicles
Monday	25996	405	68	1365	79	188	186	0	28287
Tuesday	26648	365	60	1418	51	283	169	1	28995
Wednesday	28031	410	61	1458	75	226	181	0	30442
Thursday	30278	402	53	1492	82	223	173	0	32703
Friday	31749	469	106	1462	87	212	171	0	34256
Saturday	33827	284	69	1440	80	212	193	0	36105
Sunday	30337	289	44	841	59	81	121	0	31772
ADT	**29552**	**375**	**66**	**1354**	**73**	**204**	**171**	**0**	**31794**

Modal split of same is given as under.

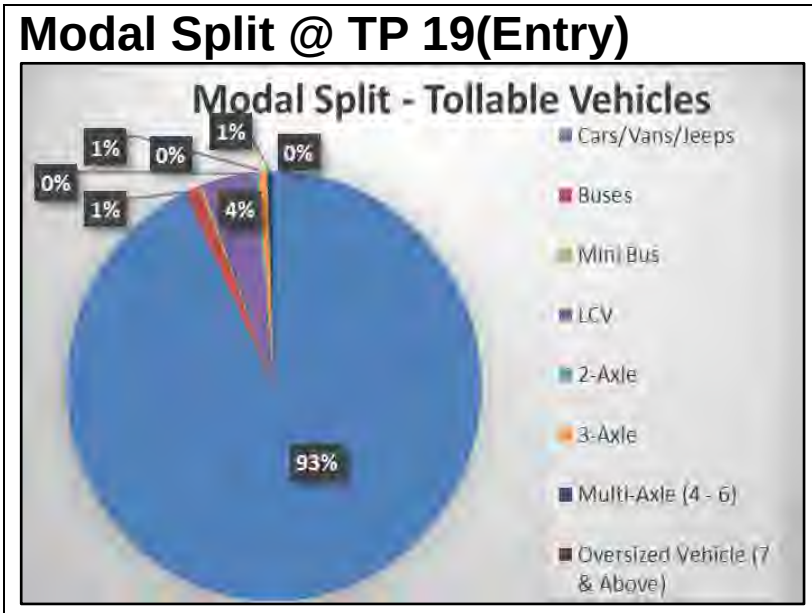


Figure 2-77: Mode wise Composition of Entry Traffic at Survey Location 19

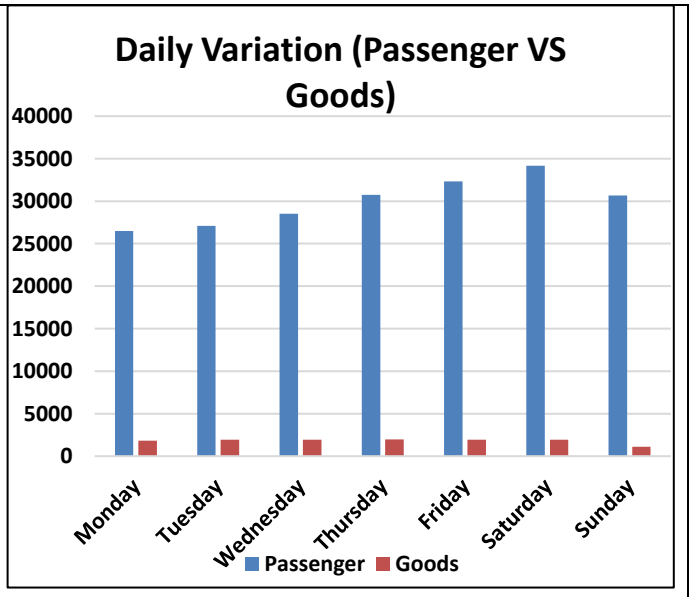


Figure 2-78: Variation of Total Tollable Entry Traffic at Survey Location 19

It can be observed that at most of the toll plaza passenger car traffic dominates the traffic volume. At these locations passenger car traffic is in range of 80 to 90%. At some toll plaza like Patancheru, Pedda Amberpet, Medchal and Shamshabad where regional roads connects to ORR there is considerable commercial traffic and cars share reduces to about 60-70%.

Summary of all toll plaza entry and exit traffic is given in following table for a better Understanding of traffic pattern.

Table 2-41 : Average Daily Entry/ Exit Traffic

Survey Locations	Toll Plaza	Entry/Exit	Vehicle Type								Tollable Vehicles	Total Tollable (Passenger)	Total Tollable (Commercial)
			Cars/Vans/Jeeps	Buses	Mini Bus	LCV	2-Axle	3-Axle	Multi-Axle (4 - 6)	Oversized Vehicle (7 & above)			
TP-1	Kokapet	Entry	8921	78	22	548	44	283	266	0	10162	9021	1140
		Exit	8310	76	25	505	36	254	245	1	9452	8411	1041
TP-2	Idulnagalapalli	Entry	2448	41	14	224	29	290	146	0	3193	2503	689
		Exit	2700	34	20	239	26	316	144	0	3479	2754	725
TP-3	Patancheru	Entry	8725	262	47	2729	638	1110	2010	1	15522	9034	6488
		Exit	8431	168	43	2753	630	1078	1841	0	14944	8641	6303
TP-4	Sultanpur	Entry	3145	23	20	534	63	200	206	0	4190	3188	1003
		Exit	3058	26	16	499	60	189	179	0	4028	3099	928
TP-5	Saragudem	Entry	6157	145	29	1550	193	332	592	0	8998	6331	2667
		Exit	6123	127	39	1506	210	343	624	0	8972	6288	2684
TP-6	Medchal	Entry	6315	102	34	2380	886	944	1247	0	11908	6451	5457
		Exit	6026	92	34	2344	785	886	1224	0	11391	6151	5239
TP-7	Shamirpet	Entry	6548	132	47	1090	103	209	682	0	8811	6727	2084
		Exit	6741	138	36	1101	105	185	583	0	8889	6916	1973
TP-8	Keesara	Entry	3097	23	18	662	154	126	148	0	4227	3137	1090
		Exit	3126	24	18	648	157	136	155	0	4265	3168	1097
TP-9	Ghatkesar	Entry	7450	67	33	1271	319	292	736	1	10169	7550	2619
		Exit	7323	63	38	1207	298	307	736	1	9974	7424	2550
TP-10	Taramatipet	Entry	1829	11	4	295	38	64	182	0	2424	1844	580
		Exit	1690	7	5	272	25	50	89	0	2140	1703	437
TP-11	Pedda Amberpet	Entry	8789	80	42	2130	599	640	1871	1	14153	8911	5241
		Exit	8314	79	39	2075	563	635	1894	1	13600	8432	5168
TP-12	Bongloor	Entry	5275	80	22	844	99	116	310	0	6747	5377	1370
		Exit	5497	90	25	851	89	127	320	0	6998	5611	1387
TP-13	Ravirayal	Entry	1083	105	14	135	34	51	41	0	1463	1202	261
		Exit	1061	93	13	121	21	67	65	0	1442	1167	274
TP-14	Tukkuguda	Entry	5693	48	31	821	130	210	336	0	7268	5771	1497
		Exit	5992	47	32	855	140	195	346	0	7608	6071	1537
TP-15	Pedda Golconda	Entry	2389	13	15	600	110	84	187	0	3400	2417	983
		Exit	2311	15	20	692	120	111	284	0	3553	2347	1206

Survey Locations	Toll Plaza	Entry/Exit	Vehicle Type								Tollable Vehicles	Total Tollable (Passenger)	Total Tollable (Commercial)
			Cars/Vans/Jeeps	Buses	Mini Bus	LCV	2-Axle	3-Axle	Multi-Axle (4 - 6)	Oversized Vehicle (7 & above)			
TP-16	Shamshabad	Entry	20545	267	72	2233	555	721	1404	0	25797	20883	4913
		Exit	21054	264	82	2245	609	727	1463	0	26444	21400	5044
TP-17	Rajandranagar-1&2	Entry	7081	90	42	1172	99	313	213	0	9011	7213	1798
		Exit	7550	157	48	1258	149	309	251	2	9724	7755	1968
TP-18	TSPA	Entry	14352	183	66	1004	92	261	394	0	16352	14601	1751
		Exit	14235	182	64	963	99	275	358	0	16177	14480	1697
TP-19	Nanakramguda	Entry	29552	375	66	1354	73	204	171	0	31794	29993	1801
		Exit	29656	395	75	1404	89	214	193	0	32027	30126	1901

It can be observed from above that entry and exit volumes at all TPs are comparable. This is due to that fact that traffic on ORR is settled and since it is a complete ring ORR is being used effectively for both side journeys. Following figure show comparison of entry and exit volume of traffic at Hyderabad ORR level.

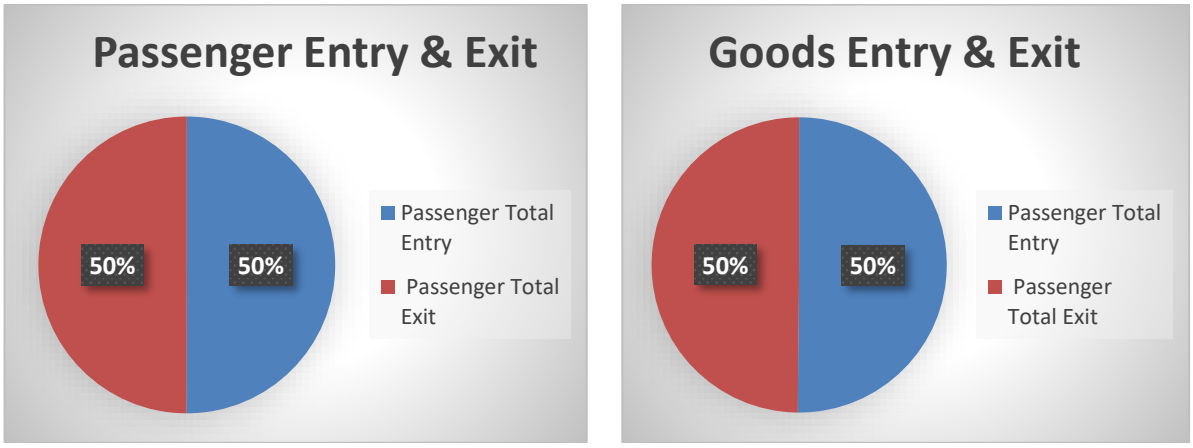


Figure 2-79 : Entry-Exit comparison at Hyderabad ORR

Entry and exit traffic is balanced even at toll plaza level also.

A toll plaza wise comparsiosn of total traffic is given in following figure.

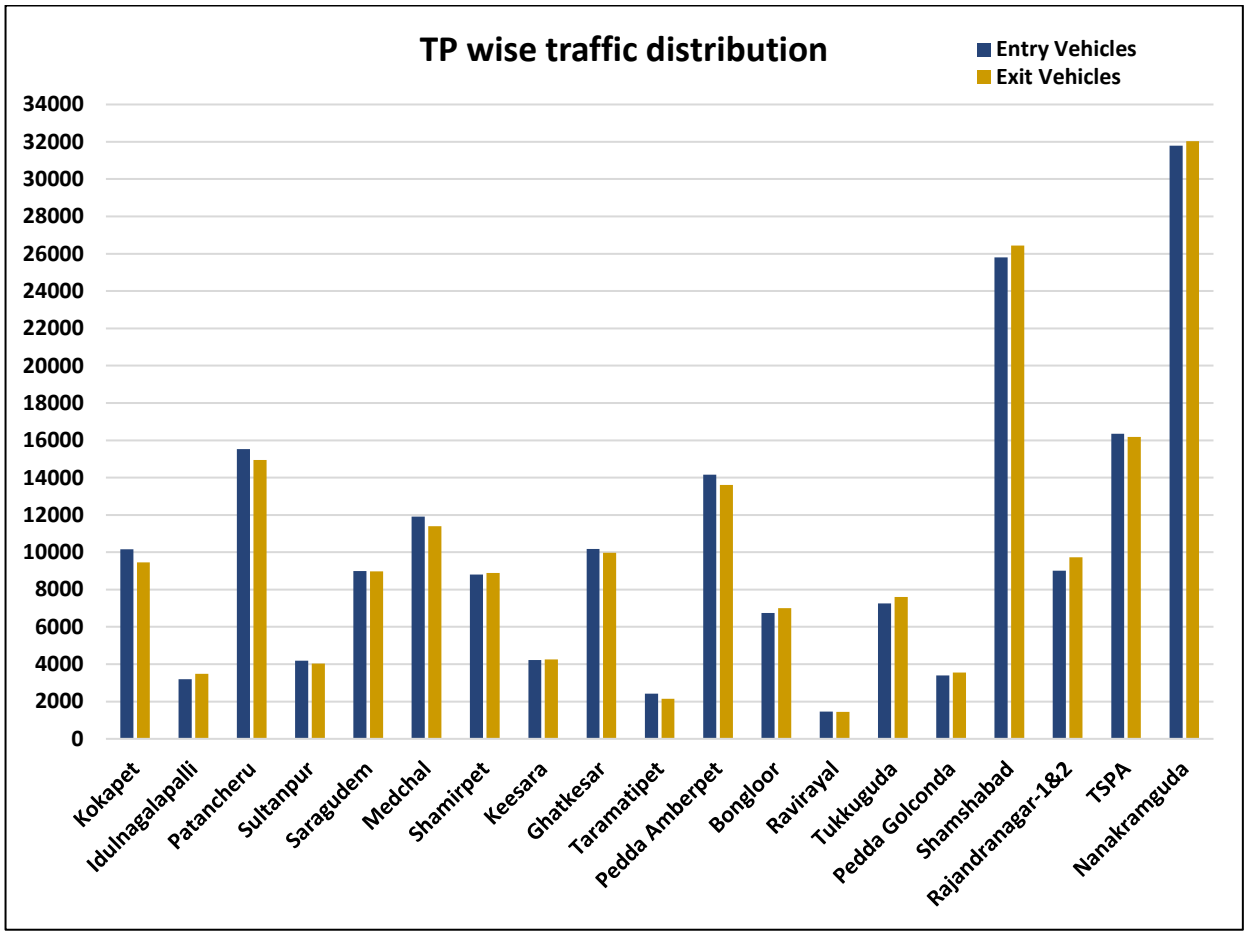


Figure 2-80: Total Traffic (ADT) at Survey Locations

Car traffic is highest at Nanakramguda and this is the entry point of business district and commercial centres of Gachibowli, Hitec City and Banjara Hills etc. Second

highest traffic is a at Shmasabad followed by TSPA. These all Toll plzas fall on westsren side arm of ORR in influence zone of upscale commercial and urban centres and Airport.

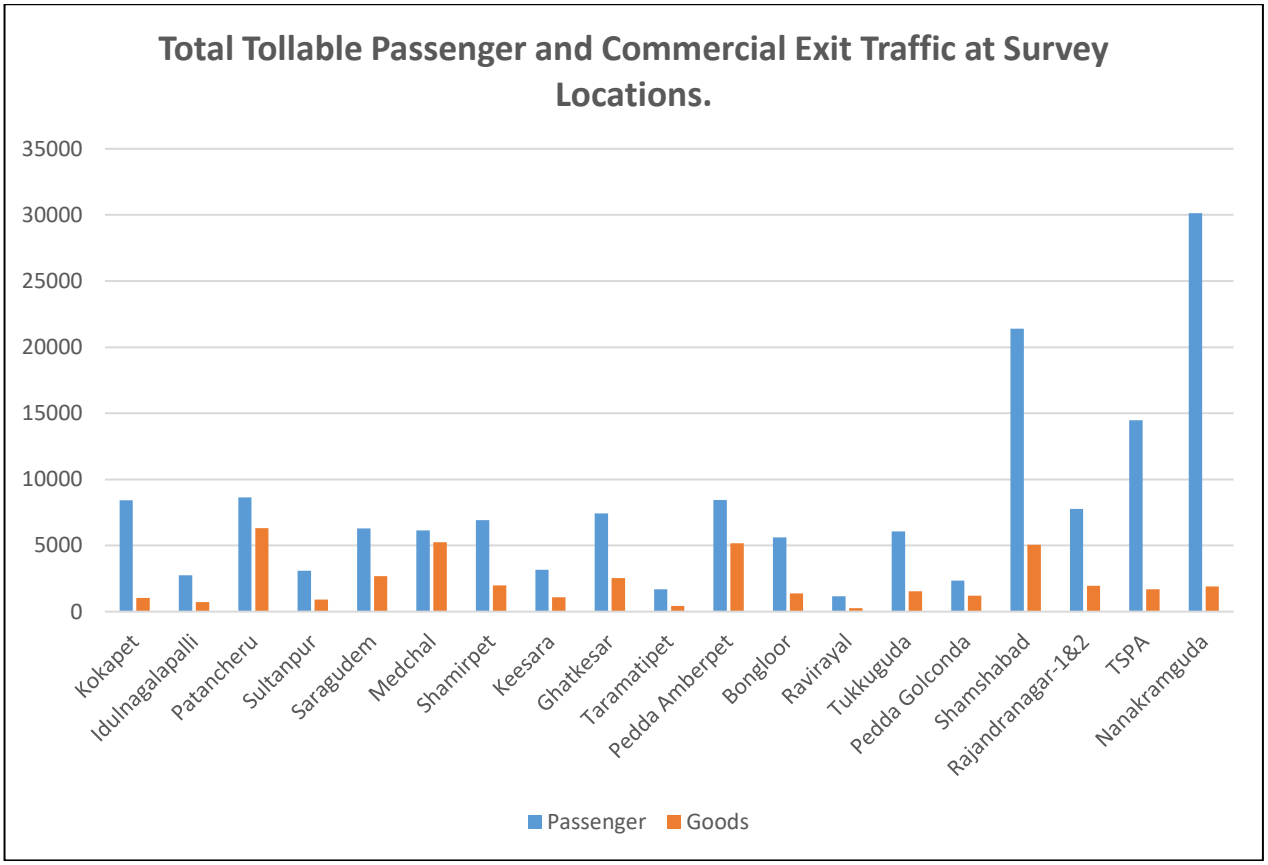


Figure 2-81: Total Tollable Passenger & Commercial Exit Traffic at Survey Locations

As far as commercial traffic is concerned it is highest at Patancheru which is basically a NH-165 connection from Maharashtra and Mumbai. Peda Amberpet, Shamshabad and Medchal also have commercial traffic in range of 5000 vehicles daily. All these locations are basically interchanges with regional arterial roads which connect ORR with regional traffic. Following table shows ADT Summary of traffic at all survey locations.

Table 2-42 : Average Daily Exit Traffic (Survey)

TP no.	Car	LCV/Minibus	Bus/Axle truck	3 Axle truck	4/5/6 Axle	Oversized 7 or more axle
1	8310	530	111	254	245	1
1A	Under	Construction				
2	2700	259	60	316	144	0
3	8431	2796	798	1078	1841	0
4	3058	515	86	189	179	0

TP no.	Car	LCV/Minibus	Bus/Axle truck	3 Axle truck	4/5/6 Axle	Oversized 7 or more axle
4A	Under	Construction				
5	6123	1545	337	343	624	0
6	6026	2377	877	886	1224	0
7	6741	1137	243	185	583	0
8	3126	666	181	136	155	0
9	7323	1245	361	307	736	1
10	1690	278	32	50	89	0
11	8314	2114	642	635	1894	1
12	5497	876	179	127	320	0
13	1061	134	115	67	65	0
14	5992	887	187	195	346	0
15	2311	713	134	111	284	0
16	21054	2327	872	727	1463	0
17	7550	1306	306	309	251	2
18	14235	1027	282	275	358	0
18A	Under	Construction				
19	29656	1479	485	214	193	0
Total	**149198**	**22212**	**6290**	**6404**	**10995**	**7**

It has been observed from HMDA data that there is about 5% cash traffic. In such case traffic as per survey and Fast tag is almost comparable for all categories except LCV. In case of LCV survey traffic is about 22000 whereas ETC traffic is only 7000 per day. This could be due to fact it's as local harvest season and also it was observed at toll plazas that large number of LCV go for cash option instead of fast tag as there is no penalty for paying in cash. Cash traffic looks like under reported. It is felt that there is excess volume of LCV traffic captured in traffic survey during the period and same may not continue. Hence LCV traffic is suitably adjusted in alignment with fast tag data and site information.

Table 2-43 : Average Daily Exit Traffic (Survey)- Corrected

TP no.	Car	LCV/Minibus	Bus/Axle truck	3 Axle truck	4/5/6 Axle	Oversized 7 or more axle
1	8310	214	111	254	245	1
1A	Under	Construction				
2	2700	109	60	316	144	0
3	8431	1071	798	1078	1841	0
4	3058	202	86	189	179	0
4A	Under	Construction				

TP no.	Car	LCV/Minibus	Bus/Axle truck	3 Axle truck	4/5/6 Axle	Oversized 7 or more axle
5	6123	601	337	343	624	0
6	6026	908	877	886	1224	0
7	6741	447	243	185	583	0
8	3126	260	181	136	155	0
9	7323	489	361	307	736	1
10	1690	107	32	50	89	0
11	8314	813	642	635	1894	1
12	5497	342	179	127	320	0
13	1061	58	115	67	65	0
14	5992	351	187	195	346	0
15	2311	279	134	111	284	0
16	21054	920	872	727	1463	0
17	7550	518	306	309	251	2
18	14235	423	282	275	358	0
18A	Under	Construction				
19	29656	599	485	214	193	0
Total	**149198**	**8712***	**6290**	**6404**	**10995**	**7**

Fast tag traffic of last three years up to Dec 2022 has been made available by HMDA. Following tables show summary of ETC traffic of December 2022 during which period traffic survey was also conducted.

Table 2-44 : Average Daily Exit Traffic (HMDA ETC)

TP no.	Car	LCV/Minibus	Bus/Axle truck	3 Axle truck	4/5/6 Axle	Oversized 7 or more axle
1	7656	178	75	210	251	0
1A	0	0	0	0	0	0
2	2370	125	83	279	200	0
3	9517	1025	1208	1038	2025	3
4	3419	162	126	156	195	0
4A	0	0	0	0	0	0
5	5773	509	458	309	560	0
6	6206	876	1287	922	1200	1
7	5925	387	315	209	691	0
8	2694	168	203	108	133	0
9	7040	404	482	275	728	1
10	1644	61	58	55	133	0
11	8523	673	1005	604	1791	1

TP no.	Car	LCV/Minibus	Bus/Axle truck	3 Axle truck	4/5/6 Axle	Oversized 7 or more axle
12	4648	301	218	106	295	0
13	889	45	91	46	39	0
14	5236	267	246	187	344	0
15	2140	175	156	76	174	0
16	17445	785	1044	689	1427	1
17	6048	257	160	234	202	0
18	11803	275	150	213	370	0
18A	0	0	0	0	0	0
19	24900	354	293	163	171	0
Total	**133874**	**7026**	**7658**	**5881**	**10930**	**8**

2.4.3 Seasonal Correction Factor

Seasonal variation factors are required to account for variations in the pattern of traffic volume on the sections of project road over different months or seasons of the year. There are various methods of determining the seasonality factor. The most direct method is using the past traffic counts, if traffic surveys are carried out round the year. But in India, round the year counts are seldom carried out or available for any road.

Traffic data for last three years has been made available by HMDA to all bidders. It shows monthly data for all toll plazas. The same has also been utilized for assessing the seasonality. But since this includes first and second waves of COVID period in which traffic was impacted adversely, use of such data for seasonality would require some adjustment. Additionally, HMDA has provided monthly revenue data for past period. This also has been used to assess the overall sense of seasonal variations.

Traffic surveys have been carried out in the month of October (2022). Therefore, the seasonal variation factors for the month of October will be applicable to derive the Annual Average Daily Traffic (AADT) from Average Analysis of data for seasonality is presented as under.
HMDA traffic data for full year from December 2022 to January 2022 is given in the table below.

Table 2-45 :Seasonal Correction Factor (From HMDA Traffic data)

Traffic Volume (No)

Types of Vehicles	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Passenger	2463583	2815992	2977211	3063438	3455876	3433278	3328480	3721631	3250011	3469378	3449698	3473178

Types of Vehicles	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Goods	933276	932862	993011	950787	984633	1009123	1001598	1037983	1014653	908371	939633	852999

Taking above data into account following seasonality is worked out.

Table 2-46 :Seasonal Correction Factor (From HMDA Traffic data)

Months	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Passenger	1.32	1.15	1.09	1.06	0.94	0.94	0.97	0.87	1.00	0.93	0.94	0.93
Goods	1.03	1.03	0.97	1.01	0.98	0.95	0.96	0.93	0.95	1.06	1.03	1.13

It can be observed that seasonality of January and February month is very high and may not represent the future sustainable trend. It is due to that fact that in January and February month of 2022 there was impact of COVID second wave which impacted passenger traffic considerably in all urban centres.
HMDA has provided revenue data of period from November 2021 to October 2021. Following table show revenue data made available by HMDA.

Table 2-47 : HMDA Revenue data for one year period

Revenue (Cr.)

Months	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-21	Dec-21
Revenue (Cr.)	36.45	37.89	40.55	40.82	44.15	44.43	43.43	47.00	42.87	44.30	36.39	40.55

Seasonality worked from above data is given in table below.

Table 2-48 : Seasonal Correction Factors (from HMDA Revenue data)

Months	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-21	Dec-21
Total	1.14	1.10	1.03	1.02	0.94	0.94	0.96	0.88	0.97	0.94	1.14	1.03

It is a fact and also verified from local inquires that traffic remains higher in period of December and January due to festival seasons and holidays. It will prudent that February and January traffic data is adjusted to make it comparable with December traffic data as January and December traffic volume are more likely to remain similar.
Following table shows adjusted traffic data for COVID impact in January and February 2022.

Table 2-49: HMDA Traffic ADT data- with adjustment for COVID second wave

Months	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
ADT Passenger	133584	120685	96039	102115	111480	114443	107370	120053	108334	111915	114990	133584
ADT Goods	32808	33317	32033	31693	31762	33637	32310	33483	33822	29302	31321	32808

Seasonality thus worked out from above data is given un table below.

Table 2-50 :Seasonal Correction Factor (From adjusted HMDA Traffic data)

Months	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Passenger	0.86	0.95	1.19	1.12	1.03	1.00	1.07	0.95	1.06	1.02	1.00	0.86
Goods	0.99	0.97	1.01	1.02	1.02	0.96	1.00	0.97	0.96	1.10	1.03	0.99

CRISIL had done a technical analysis and submitted its report in 2018. In this report seasonality of traffic is worked out for ORR. Following figure show the seasonality as worked out in 2017-18 period which was free from COVID -19 impact.

Table 5-5: Historical Monthly Average Traffic and SCF at NORR

Month	Total Vehicles	SCF
January	21,76,965	0.97
February	19,23,483	**1.10**
March	22,69,448	0.93
April	20,68,043	1.02
May	21,60,993	0.98
June	20,43,436	1.03
July	18,69,818	1.13
August	20,87,450	1.01
September	21,04,848	1.00
October	21,33,890	0.99
November	21,90,642	0.96
December	22,85,109	0.92
Total	**21,09,510**	1.00

Figure 2-82: Traffic Seasonality as per CRISIL Report

Thus, it looks like that to assess the seasonality best case would be to build it from current year actualised revenue data with cash assumptions. Following table provides the seasonality worked out on the basis of actualised revenue data.

Table 2-51 :Seasonal Correction Factor (From Financial Yr. Revenue data)

Month	Revenue Per Month Rs Cr	SCF	Remarks
Apr-22	40.82	1.11	TMS Revenue including cash
May-22	44.15	1.02	TMS Revenue including cash
Jun-22	44.43	1.02	TMS Revenue including cash
Jul-22	43.43	1.04	TMS Revenue including cash
Aug-22	47.00	0.96	TMS Revenue including cash
Sep-22	42.87	1.05	TMS Revenue including cash
Oct-22	44.30	1.02	TMS Revenue including cash
Nov-22	44.24	1.02	ETC Traffic Revenue Plus 6% cash
Dec-22	49.10	0.92	ETC Traffic Revenue Plus 6% cash
Jan-23	48.12	0.94	Assumed reduction in traffic in Jan Feb and March 2% each month.
Feb-23	47.16	0.96	
Mar-23	46.22	0.98	

Since we have actual revenue / traffic for 9 months hence the seasonality on actualised revenue basis is more realistic. Adopted **0.92** SCF for month of December.

Table 2-52 : Seasonal Correction Factors (Adopted)

Toll Plaza	Seasonal Variation Factors*	
	Passenger	**Goods**
All Locations	0.92	0.92

**Note: The ADT values will be multiplied by the Seasonal Variation Factor to obtain the AADT values.*

These factors were used to arrive at AADT volume of different category of vehicles.

2.4.4 Annual Average Daily Traffic (AADT)

Video graphic traffic count for 7 days has been done at all toll plaza locations including entry and exit ramps. Since tolling system is based on exit charging hence most of analysis is done on exiting traffic. Annual Average daily traffic exiting at all toll plazas is given in following table with due seasonality applied to it.

Table 2-53 : Traffic Summary in AADT (Exit)

Seasonal Correction Factor (SCF)		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
TP no.	Toll Plaza	Cars/Vans/Jeeps	Buses	Minibus	LCV	2-Axle	3-Axle	Multi-Axle (4 - 6)	Oversized Vehicle (7 & above)	Passenger (Exit)	Goods (Exit)	Total Exit vehicles
1	Kokapet	7645	70	23	174	33	234	226	1	7738	668	8406
1A	Neopolis	0	0	0	0	0	0	0	0	0	0	0
2	Edula nagulapally	2484	32	19	82	24	291	133	0	2535	530	3065
3	Patancheru	7756	154	40	945	580	992	1694	0	7950	4211	12161
4	Sultanpur	2813	24	14	172	56	174	165	0	2851	567	3418
4A	Mallampet	0	0	0	0	0	0	0	0	0	0	0
5	Dindigal/ Saragudem	5633	116	35	517	193	316	574	0	5784	1600	7384
6	Medchal	5544	85	31	805	722	815	1126	0	5660	3468	9128
7	Shamirpet	6202	127	33	378	96	170	536	0	6362	1180	7542
8	Keesara	2876	22	17	222	145	125	143	0	2915	635	3550
9	Ghatkesar	6738	58	35	415	275	282	677	1	6831	1650	8481
10	Taramptipet	1555	6	5	94	23	46	82	0	1566	245	1811
11	Pedda Amberpet	7649	73	36	713	518	584	1742	1	7758	3558	11316
12	Bonguluru	5057	83	23	292	82	117	294	0	5163	785	5948
13	Raviryal	976	86	12	42	20	61	60	0	1074	183	1257
14	Tukkuguda	5513	43	30	294	129	179	318	0	5586	920	6506

Seasonal Correction Factor (SCF)		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
TP no.	Toll Plaza	Cars/Vans/Jeeps	Buses	Minibus	LCV	2-Axle	3-Axle	Multi-Axle (4 - 6)	Oversized Vehicle (7 & above)	Passenger (Exit)	Goods (Exit)	Total Exit vehicles
15	Pedda Golconda	2126	14	19	238	110	102	261	0	2159	711	2870
16	Shamshabad	19370	243	76	771	560	669	1346	0	19689	3346	23035
17	Rajendra Nagar	6946	145	45	432	137	284	231	2	7136	1086	8222
18	TSPA	13096	168	59	331	91	253	330	0	13323	1005	14328
18A	Narsingi	0	0	0	0	0	0	0	0	0	0	0
19	Nanakramguda	27284	364	69	482	82	197	177	0	27717	938	28655
Total		**137263**	**1913**	**621**	**7399**	**3876**	**5891**	**10115**	**5**	**139797**	**27286**	**167083**

2.5 Origin - Destination Survey

In order to understand the travel pattern in the influence area of the project, Origin and Destination (O-D) Surveys is one of the most important tools. O-D survey was carried out at all the survey locations as shown in **Error! Reference source not found.** At all locations, OD survey was done at existing toll plazas to avoid duplicity.

2.5.1 Data Validation

The collected data from Origin - Destination Survey were entered into the designed spreadsheets and was scrutinized for errors. Incorrect entries were corrected by cross-checking it with original field data sheets. The data was also checked for inconsistencies.

2.5.2 Zoning System

For understanding the spatial dimensions of the trip characteristics of the vehicles interviewed during the O-D survey, a scientifically derived zoning system was adopted.

While defining zone boundaries, the following were considered:

- Important towns and industrial centres along the project corridor.
- Administrative boundaries of district and state boundaries.
- Configuration of the project roads in the regional road network with respect to other National Highways.

The following table presents the Zoning System considered in this study.

Table 2-54: Zoning System considered for the study (Project Stretch)

Before Ring Road (South)	
Place Name	**Code**
Kollur, Velimela	101
Bengaluru, City market, Electronic city, Vijayanagar	102
Anantapur, Guntakal, Tadipatri, Puttaparthi	103
Bhanur	104
ISRO, Shadnagar, Shabad	105
Janwada	106
Kalimandir	107
Kothapeta	108
Kurnool, Velugodu	109

Before Ring Road (South)	
Place Name	**Code**
Nalgonda, Appaji Peta	110
Ongole, Chirala, Chilakaluripet	111
Rajapur, Mahbubnagar,	112
Thimmapur, Appareddy Guda	113
Shankarpalle, Mokila, Nandigaon, Yelwarthy	114
Vikarabad, Tandur	115
Muthangi, Lakdaram, Isnapur	116
Rangareddy	117
Chennai (Kolathur,	118
Gandipet	119
Narkhuda	120
Dubbacherla	121
Ramoji Filmcity, Nagannally,	122
Guntur, Piduguralla	123
Dilsukhnagar	124
Miryalaguda	125

Before Ring Road (South)	
Choutuppal, Yellanki, Gundrampally	126
Kodad, Suryapet, Yasanthapuram	127
Nalgonda, Appaji Peta	128

Before Ring Road (South)	
Place Name	**Code**
Narketpalle, nakrekal, Appaji Peta	129
Nellore	130
Hindupur, Bilhar	131
Marikal	132
Kothur, Thimmapur, Venkannaguda, Nandigama	133
Peddapally, Jeelugupalle, Bacharam	134
Nagarguda	135
Raichur, Azad nagar	136
Mallareddy, Suraram, Jeedimetla, Kaziguda, Alwal, Suchitra, Sainikpuri, Dammaiguda, Chinthal	137
Moinabad, Chilkoor, Ameer Guda	138
Ballari	139

Before Ring Road (South)	
Place Name	**Code**
Budhera, Sadashivpet, Aroor	140
Vijayapura	141
Chennampalle	142
Guntakal, Govindpalle,	143

Before Ring Road (South)	
Place Name	**Code**
Adoni, sindhanur, Pattikonda	
Ibrahimpatnam	144
Pocharam	145
Tirupati	146
Chintapalle	147

Before Ring Road (South)	
Place Name	**Code**
Gulbarga	148
Mumbai	149
Narayanpet	150
Zahirabad, Krisnapur	151
Thellarallapalle, Kollapur, Wanaparthy, Yeloor, Telkapally, Nagarkurnool, Gadwal	152
Devarakonda	153
Machilipatnam	154
Maheshwaram	155
Amangal	156
Kolar, Upparpet	157
Kodangal	158

Ring Road to NH-65	
Place Name	**Code**
Ameerpet, RBI, SR Nagar, Domalguda, Sanath Nagar, Srinagar, Kesari	201
Begumpet, Sanath nagar, C.B.N Nagar, Victory school	202
Gajavalli	203
Hitec city	204
Manikonda, Shaikpet	205

Ring Road to NH-65	
Place Name	**Code**
Malakpet	206
Shamshabad, Ghansimiaguda, gandiguda, Thondapalli, Rallaguda	207
Airport	208
Appa Junction, TSPA, Aziznagar	209
A V College	210
Ashok nagar	211
Bandlaguda, suncity, Rampally, Balapur	212
Nanakaramguda, financial district, Amazone, Microsoft	213
santosh nagar, saroornagar, Champapet, Saidabad, Nagarjuna Sagar	214

Ring Road to NH-65	
Place Name	**Code**
Gachibowli, jayabheri	215
Isnapur, Rudraram, Lakdaram	216
Jubilee Hills	217
Kachiguda	218
Kakinada	219
Kadapa, Bachapuram, Velikonda	220
Wipro	221
Koti, ABIDS	222

Ring Road to NH-65	
Place Name	**Code**
Kondapur, Kothaguda,	223
Kukatpally, Balanagar, JNTU	224
L.B.Nagar	225
Meerpet, Sagar Road	226
Uppal, Nacharam	227

Ring Road to NH-65	
Place Name	**Code**
Tukkuguda	228
Secunderabad, A V College, Ashok Nagar	229
Rajendra Nagar, Shivarampally	230
Patancheru	231
Pedda Amberpet, Taramatipet	232

Ring Road to NH-65	
Place Name	**Code**
Pedda Golconda	233
Madhapur, my home, Tulasi nagar, Allapur, Venkateshwara	234
Mehdipatnam, Masab tank, Lakdikapul, Mallepally, Film Nagar, Suryanagar, Shanti Nagar	235
Kokapet, Movie Tower	236
Nalagandla	237
Serilingampalle	238
hast	239
Chanda Nagar	240
Narsingi, P.N. Reddy	241
Narayanapur	242
Gowliguda	243
Charminar, old city, Aliabad, Uppuguda, Turkapally, Yellampet, Zoo Park	244
Golconda	245
Banjara Hills (Hospital	246
Mindspace, AIG Hospital	247
Kankar Alawa	248
Attapur, Langar Houz	249
Amberpet, Hayathnagar, Vanasthalipuram, Hastinapurum, YGT, B.N Reddy Nagar, Vidya Nagar, Shirdi Nagar	250
Sagar road	251
Himayatnagar, Kachiguda, Domalguda, Narayanguda, Kismatpur, Dayara	252
Pallecheruvu	253

Ring Road to NH-65	
Place Name	**Code**
Aramghar, Katedhan	254

Ring Road to NH-65	
Place Name	**Code**
ECIL, Kumpati	255
Mallapur, R K nagar	256
Nagarjuna Sagar, Turkayamjal, Ragannaguda	257
Edulanagulapalle, Pati	258
University of Hyderabad, Aparna Road	259
Bongloor	260
Tellapur, Osman Nagar	261
Sagar Hills	262

NH-65 to Ring Road	
Place Name	**Code**
Gandi Maisamma	601
Bollaram	602
Beeramguda	603
Dharga	604
Shamirpet	605
Miyapur, Nizampet, Ameenpur, Madeenaguda	606
Keesara	607
Kompally, Kaziguda	608
Medipally	609
Thumukunta, Hakimpet	610
Auto Nagar, Jangareddy	611
Nagole	612
Nacharam	613
Sultanpur	614
Kistareddypet	615
Bachupally, Pragathi nagar,	616

After Ring road (North)	
Place Name	**Code**
Ghatkesar, Yamnampet	701
Kondapalli (AP)	702
Khanapur, Valgonda	703
Kukuda	704
Vijayawada, Tadepalle, Rajeev Nagar, Badepuram	705
Yadagirigutta, Saidapur	706
Sangareddy, Erdanoor, Kandi, Sadashivpet, Budhera, Ismailkhanpet, Nizampur, Pothireddypally	707
Medchal, kandlakoya, Dundigal, Railapur	708
Medapalli	709
Machapur	710
Nagpur	711
Miyapur	712
Mancherial, Pancheri	713
reddy	714
Mukkidipally	715
Singampalli	716
Karimnagar, Ramagundam, Vemalwada, Dharmapuri, Yellampally, Pottur, Vellapelly	717
Dundigal	718
Warangal, Singapur, Rajaji Nagar, Mysam Pally	719
Saregudem	720
Nizamabad, Sarangpur, Bodhan	721
Somakkapet	722
Eluru	723
Khammam, Sathupalli, Nayakulagudem	724
Kothagudem	725
Rajamahendravaram,	726

After Ring road (North)	
Place Name	**Code**
Peddapuram, West Godavari, Vemuluru	
Visakhaptnam, Srikakulam	727
Jagtial, Gollapalli	728
Pochampalle	729
Narsampet	730
Namavaram	731
Yellareddy, Krishnapoor, Rajampet, Lingampet, Wajidnagar, Kamareddy, Shankarampet	732
Bidar, Basavakalyan, Shapur	733
Vizag, Visakhapatnam	734
Bhuvanagiri	735
Srisailam	736
Jogipet	737
Nirmal	738
Siddipet	739
Chimanpally	740
Husnabad	741
Latur, Udgir	742
Tupran	743
Ramanagaram	744
Medak	745
Shambipur	746
Shivapoor	747
Narsapur	748
Adilabad	749
Vantimamidi, Wargal	750

Table 2-55 : Zoning System considered for the study (State Codes)

State (South)	
Place Name	**Code**
Andhra Pradesh (Adoni, Nandyal	1
Karnataka, Bidar, Dasarahalli Thanda,	2

State (South)	
Place Name	**Code**
Ullur, Nagalapur, Hubballi, Yellapur	
Goa (Vasco da Gama	3
Tamil nadu(Dindigul, Pondicherry, Vellore	4
Kerala	5

State (North)	
Place Name	**Code**
Haryana	51
Uttar Pradesh (Husainbad, kanpur,Allahabad	52
Maharashtra (Nagpur	53
Gujarat (Patan	54
Chhattisgarh	55
Odisha	56
Madhya Pradesh	57
Rajasthan	58
Bihar	59
Jharkhand	60
West Bengal	61
Delhi	62
Uttarakhand	63
Punjab	64
Himachal Pradesh	65
J & K	66
Assam	67
Meghalaya	68
Nagaland	69
Manipur	70
Mizoram	71
Tripura	72

2.5.3 State Dominance

One of the most important parameters of OD analysis is state dominance among vehicles. This gives fair idea of local or regional character of traffic on project stretch. The state wise distribution of registered vehicles at each survey locations is given as under for passenger and commercial vehicles respectively.

Table 2-56 : State wise distribution of vehicles at Survey locations for passenger vehicles

States	Survey Locations																		
	TP 1	TP 2	TP 3	TP 4	TP 5	TP 6	TP 7	TP 8	TP 9	TP 10	TP 11	TP 12	TP 13	TP 14	TP 15	TP 16	TP 17	TP 18	TP 19
AP	17.12%	21.10%	21.93%	19.90%	21.04%	20.80%	21.50%	20.95%	25.58%	22.53%	30.44%	21.45%	20.48%	24.19%	22.82%	23.82%	25.80%	21.50%	19.44%
AR	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.10%	0.00%
AS	0.00%	0.00%	0.00%	0.00%	0.26%	0.00%	0.00%	0.00%	0.08%	0.00%	0.04%	0.00%	0.00%	0.07%	0.00%	0.03%	0.08%	0.00%	0.05%
BR	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%
CG	0.07%	0.00%	0.00%	0.00%	0.00%	0.16%	0.12%	0.00%	0.00%	0.00%	0.11%	0.11%	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%
CH	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%
DD	0.00%	0.00%	0.17%	0.00%	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%
DL	0.20%	0.00%	0.17%	0.10%	0.53%	0.21%	0.18%	0.13%	0.15%	0.00%	0.08%	0.11%	0.06%	0.40%	0.09%	0.17%	0.00%	0.52%	0.24%
DN	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
GA	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.06%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	0.09%
GJ	0.07%	0.00%	0.29%	0.10%	0.45%	0.05%	0.48%	0.00%	0.04%	0.00%	0.38%	0.00%	0.23%	0.07%	0.00%	0.35%	0.48%	0.00%	0.09%
HP	0.20%	0.00%	0.12%	0.00%	0.04%	0.11%	0.00%	0.13%	0.00%	0.00%	0.15%	0.00%	0.12%	0.27%	0.09%	0.00%	0.00%	0.10%	0.00%
HR	0.34%	0.13%	0.58%	0.30%	0.34%	0.53%	0.42%	0.00%	0.04%	0.00%	0.38%	0.05%	0.23%	0.13%	0.00%	0.24%	0.16%	0.21%	0.07%
JH	0.00%	0.00%	0.00%	0.00%	0.19%	0.00%	0.00%	0.13%	0.00%	0.00%	0.04%	0.00%	0.06%	0.00%	0.00%	0.00%	0.00%	0.10%	0.02%
JK	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%
KA	2.59%	1.97%	6.20%	1.01%	2.56%	2.00%	1.85%	2.01%	1.64%	0.74%	2.55%	1.53%	5.60%	1.33%	1.74%	4.91%	3.37%	1.57%	1.79%
KL	0.07%	0.00%	0.00%	0.00%	0.04%	0.21%	0.12%	0.13%	0.08%	0.19%	0.08%	0.27%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.09%
MH	0.95%	1.05%	4.92%	2.42%	1.88%	1.94%	0.89%	0.75%	0.76%	0.56%	1.16%	0.87%	0.12%	1.13%	0.37%	2.02%	3.13%	0.63%	0.86%
MP	0.14%	0.13%	0.08%	0.10%	0.08%	0.42%	1.01%	0.13%	0.11%	0.00%	0.00%	0.05%	0.18%	0.33%	0.00%	0.07%	0.00%	0.21%	0.07%
NL	0.07%	0.00%	0.66%	0.00%	0.23%	0.89%	0.00%	0.00%	0.11%	0.00%	0.15%	0.00%	0.29%	0.00%	0.09%	0.07%	0.00%	0.00%	0.00%
OD	0.07%	0.00%	0.00%	0.00%	0.00%	0.16%	0.00%	0.00%	0.08%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%
PB	0.34%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.02%
PY	0.27%	0.26%	0.21%	0.10%	0.26%	0.00%	0.00%	0.13%	0.00%	0.00%	0.00%	0.44%	0.00%	0.00%	0.18%	0.00%	0.00%	0.10%	0.17%
RJ	0.20%	0.00%	0.50%	0.00%	0.00%	0.21%	0.12%	0.13%	0.19%	0.00%	0.19%	0.16%	0.82%	0.07%	0.00%	0.31%	0.88%	0.21%	0.09%
TN	0.41%	0.79%	0.62%	0.30%	1.32%	0.89%	0.83%	0.25%	0.42%	0.00%	1.05%	0.49%	2.57%	0.27%	0.09%	0.38%	0.80%	0.84%	0.48%
TS	76.33%	74.31%	63.28%	75.56%	70.61%	71.11%	71.95%	75.16%	70.30%	75.98%	63.03%	74.29%	69.02%	71.50%	74.43%	67.08%	65.14%	72.96%	76.24%
UK	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.02%
UP	0.27%	0.13%	0.17%	0.10%	0.04%	0.16%	0.36%	0.00%	0.00%	0.00%	0.00%	0.05%	0.12%	0.20%	0.00%	0.24%	0.16%	0.52%	0.09%
WB	0.20%	0.13%	0.04%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	0.10%	0.09%
Grand Total	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00 %**

Table 2-57 : State wise distribution of vehicles at Survey locations for commercial vehicle

States	Survey Locations																		
	TP 1	TP 2	TP 3	TP 4	TP 5	TP 6	TP 7	TP 8	TP 9	TP 10	TP 11	TP 12	TP 13	TP 14	TP 15	TP 16	TP 17	TP 18	TP 19
AP	18.33%	22.52%	19.02%	24.95%	25.72%	17.56%	24.03%	26.85%	23.69%	24.43%	24.69%	27.69%	15.50%	18.08%	15.10%	15.69%	29.02%	25.83%	18.78%
AR	0.00%	0.00%	0.03%	0.00%	0.00%	0.04%	0.10%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
AS	0.00%	0.00%	0.00%	0.00%	0.59%	0.03%	0.00%	0.31%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BR	0.00%	0.00%	0.00%	0.00%	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
CG	0.10%	0.00%	0.27%	0.53%	0.07%	0.50%	0.86%	0.52%	0.15%	0.22%	0.12%	0.48%	0.00%	1.12%	0.00%	0.72%	0.00%	0.00%	0.00%
CH	0.00%	0.00%	0.10%	0.20%	0.07%	0.14%	0.17%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%	0.00%
DD	0.00%	0.00%	0.15%	0.00%	0.16%	0.29%	0.00%	0.00%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%
DL	0.07%	0.00%	0.27%	0.00%	0.00%	0.88%	0.12%	0.00%	0.05%	0.00%	0.22%	0.34%	0.00%	0.00%	0.00%	0.13%	0.00%	0.00%	0.00%
DN	0.00%	0.00%	0.10%	0.00%	0.36%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
GA	0.00%	0.00%	0.17%	0.26%	0.11%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.29%
GJ	0.13%	0.00%	3.63%	1.39%	1.43%	0.86%	0.36%	0.16%	0.64%	0.54%	1.40%	1.22%	0.00%	0.00%	0.22%	0.79%	1.34%	0.71%	0.21%
HP	0.00%	0.00%	0.11%	0.00%	0.20%	0.09%	0.07%	0.21%	0.18%	0.00%	0.19%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
HR	0.23%	0.00%	1.90%	0.73%	0.63%	8.10%	0.97%	1.52%	1.57%	0.43%	3.11%	0.07%	0.48%	3.04%	0.00%	7.14%	0.00%	1.31%	0.25%
JH	0.00%	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.21%	0.05%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
JK	0.00%	0.00%	0.11%	0.00%	0.00%	0.11%	0.00%	0.00%	0.06%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.31%	0.00%	0.00%	0.00%
KA	4.70%	1.40%	7.83%	2.38%	3.94%	7.20%	4.52%	1.42%	5.37%	1.74%	7.55%	2.51%	7.91%	3.44%	4.14%	11.82%	6.03%	2.86%	4.70%
KL	0.00%	0.00%	0.03%	0.00%	0.00%	0.56%	0.00%	0.00%	0.26%	0.00%	0.00%	0.07%	0.00%	0.00%	0.00%	1.03%	0.00%	0.00%	0.00%
MH	0.47%	0.93%	15.90%	5.48%	6.52%	8.38%	2.73%	5.61%	3.52%	2.28%	6.06%	3.36%	0.24%	6.00%	0.75%	5.46%	5.58%	3.45%	2.26%
MN	0.00%	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MP	0.07%	0.00%	0.61%	0.59%	0.66%	1.14%	0.97%	0.63%	0.61%	0.00%	0.36%	0.00%	0.88%	0.00%	0.00%	0.92%	0.00%	0.00%	0.25%
NL	0.30%	0.27%	1.88%	0.20%	0.66%	6.94%	0.00%	1.21%	1.76%	0.65%	2.84%	0.78%	0.32%	0.72%	0.44%	4.17%	0.00%	1.79%	1.38%
OD	0.00%	0.00%	0.10%	0.00%	0.00%	0.22%	0.10%	0.00%	0.06%	0.00%	0.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PB	0.00%	0.00%	0.19%	0.00%	0.29%	0.85%	0.00%	0.00%	0.57%	0.43%	0.34%	0.10%	0.00%	0.00%	0.00%	0.76%	0.00%	0.24%	0.00%
PY	0.00%	0.00%	0.00%	0.00%	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RJ	0.17%	0.00%	3.36%	0.46%	1.25%	4.63%	0.36%	1.21%	1.70%	0.54%	2.08%	1.60%	1.76%	0.00%	0.44%	3.32%	3.13%	0.71%	0.00%
TN	0.03%	0.13%	2.01%	1.32%	2.76%	6.96%	2.88%	2.73%	4.66%	1.41%	5.66%	1.77%	7.19%	3.04%	0.35%	14.09%	0.00%	1.31%	1.72%
TS	75.03%	74.75%	40.80%	61.52%	54.29%	31.15%	61.37%	56.69%	54.40%	65.69%	43.58%	59.26%	65.73%	63.60%	78.51%	32.27%	54.91%	61.79%	70.15%
UK	0.00%	0.00%	0.04%	0.00%	0.00%	0.60%	0.00%	0.26%	0.00%	0.00%	0.16%	0.00%	0.00%	0.32%	0.00%	0.13%	0.00%	0.00%	0.00%
UP	0.23%	0.00%	0.75%	0.00%	0.18%	1.91%	0.12%	0.37%	0.48%	0.00%	0.34%	0.31%	0.00%	0.40%	0.04%	1.09%	0.00%	0.00%	0.00%
WB	0.13%	0.00%	0.39%	0.00%	0.11%	0.48%	0.29%	0.00%	0.09%	1.63%	0.75%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

In case of passenger vehicles more than 90% vehicles belong to Telangana or Andhra Pradesh. For commercial traffic such dominance is diluted specially at location where regional roads connect like at Patancheru, Medchal, Pedda Amberpet and Shamshabad.
Summary of state dominance of overall traffic at ORR level is given in following tables for passenger and commercial traffic both.

Table 2-58: Overall State wise distribution of vehicles in PIA for Passenger vehicles

Overall TP (Passenger)	
State	**% of Share**
TS	71.43%
AP	22.33%
KA	2.46%
MH	1.46%
TN	0.62%
HR	0.23%
DL	0.22%
RJ	0.18%
MP	0.15%
UP	0.14%
GJ	0.13%
NL	0.11%
PY	0.09%
KL	0.08%
HP	0.06%
WB	0.06%
AS	0.04%
CG	0.03%
GA	0.03%
PB	0.03%
AR	0.02%
JH	0.02%
DD	0.02%
OD	0.02%
BR	0.01%
CH	0.01%
UK	0.01%
Grand Total	**100.00%**

Similarly, summary of state distribution is given in following table for commercial vehicles.

Table 2-59 : Overall State wise distribution of vehicles in PIA for Commercial vehicles

Overall TP (Goods)	
States	**% of Share**
TS	54.53%
AP	21.23%
MH	5.57%
KA	5.35%
TN	3.73%
HR	2.19%
NL	1.79%
RJ	1.72%
GJ	1.00%
UP	0.53%
MP	0.49%
PB	0.29%
CG	0.26%
WB	0.23%
DL	0.18%
KL	0.16%
HP	0.11%
UK	0.11%
AS	0.08%
OD	0.07%
DD	0.07%
GA	0.06%
DN	0.06%
CH	0.06%
JK	0.05%
MN	0.03%
BR	0.02%
AR	0.02%
JH	0.02%
PY	0.01%
Grand Total	**100.00%**

Table 2-60 : Commodity share for Commercial vehicles.

Types of Commodities	% of Share
Empty	44.28%
Sand/Cement/Aggregate/Steel/ Brick/ Tiles	9.15%
Others	9.03%
Finished Consumer Goods (Electronic, Bikes, Fans etc)	7.52%
Petrol/ Diesel/Gas/LPG/Sulphur	6.48%
Vegetables/ Fruits/ Milk/ Fish	6.23%
Food Grains (Rice/ Wheat/ etc.)	3.03%
Industrial Goods (Alloy/Steel)	2.78%
Iron	2.64%
Textile Materials/Cotton	2.31%
Pipe/Plastic	2.18%
Rubber/Wood/Tyre/Paper	1.97%
Chemicals & Fertilisers	1.08%
Machines	1.06%
Drums/Tubes/Cables/Wire	0.20%
Container	0.07%

2.5.4 Traffic Pairing

NORR is fully access controlled road and follows a close toll system. Any vehicle when enters onto ORR from ant toll plaza, it gets registered for start point of journey. This vehicle is charged for toll when it exits from some toll plaza. It pays for the minimum length of travel between entry and exit toll plaza. NORR is a complete ring hence a Vehicle may travel a complete loop of 158 km and can exit at same toll plaza from which entered to NORR. As the distance between same toll plaza will be zero system would charge no toll or such vehicle. Thus, there can be two options for any vehicle to travel between two toll plazas as ORR is complete ring. System captures minimum length for charging toll.

HMDA has provided traffic distribution of various toll plaza on the basis of entry and exit toll plaza. This data, being more accurate and authentic, has been used for working out pairing of traffic between two toll plazas. The % distribution of such pairing is given in following table for each category toll.

Table 2-61 : Traffic Share Matrix TP wise for all vehicle types

Car

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0.0%	0.0%	4.9%	8.8%	1.6%	0.0%	1.8%	3.8%	2.9%	0.6%	1.2%	0.2%	3.7%	2.8%	0.8%	2.0%	0.4%	20.6%	11.9%	10.7%	0.0%	21.2%
1A	0%	0.0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2	14.3%	0.0%	0.0%	15.7%	3.4%	0.0%	4.1%	13.8%	3.9%	1.4%	1.8%	0.1%	1.5%	1.1%	0.2%	0.8%	2.7%	5.3%	5.1%	4.8%	0.0%	20.1%
3	6.9%	0.0%	4.1%	0.0%	5.5%	0.0%	8.0%	7.7%	6.3%	2.6%	3.1%	0.4%	2.6%	1.4%	0.2%	1.2%	0.1%	14.2%	14.6%	7.8%	0.0%	13.0%
4	4.5%	0.0%	2.8%	15.1%	0.0%	0.0%	9.5%	11.6%	10.1%	3.7%	6.9%	0.7%	4.3%	0.5%	0.2%	0.7%	0.1%	4.9%	2.0%	1.9%	0.0%	20.6%
4A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	5.4%	0.0%	1.8%	12.1%	4.8%	0.0%	0.0%	12.5%	20.7%	5.8%	13.4%	1.6%	12.2%	1.2%	0.1%	0.6%	0.1%	3.9%	1.0%	1.3%	0.0%	1.6%
6	5.3%	0.0%	3.7%	12.0%	6.2%	0.0%	12.2%	0.0%	8.6%	5.4%	10.9%	2.6%	11.0%	2.2%	0.2%	1.6%	0.2%	8.8%	1.9%	2.6%	0.0%	4.7%
7	4.1%	0.0%	2.0%	11.6%	6.0%	0.0%	19.5%	8.9%	0.0%	5.4%	11.8%	4.3%	9.9%	2.4%	0.2%	4.0%	0.8%	2.3%	0.8%	1.7%	0.0%	4.3%
8	1.8%	0.0%	1.4%	8.6%	4.7%	0.0%	11.8%	12.8%	12.7%	0.0%	9.1%	3.9%	15.2%	3.3%	0.4%	6.6%	1.9%	2.7%	0.2%	1.2%	0.0%	1.7%
9	1.3%	0.0%	0.8%	4.2%	3.5%	0.0%	13.9%	9.4%	11.0%	3.8%	0.0%	6.3%	17.6%	4.5%	0.6%	7.6%	2.5%	3.5%	0.7%	3.6%	0.0%	5.1%
10	0.7%	0.0%	0.2%	2.9%	1.6%	0.0%	6.0%	11.0%	17.3%	7.3%	32.8%	0.0%	6.8%	3.4%	0.5%	2.9%	1.3%	1.6%	0.2%	1.3%	0.0%	2.4%
11	3.1%	0.0%	0.5%	3.1%	1.8%	0.0%	8.8%	7.9%	7.1%	5.2%	15.2%	1.4%	0.0%	2.9%	0.6%	7.3%	2.2%	3.9%	0.8%	5.0%	0.0%	23.2%
12	3.7%	0.0%	0.7%	2.8%	0.3%	0.0%	1.4%	3.0%	3.1%	3.7%	6.6%	1.1%	5.3%	0.0%	1.8%	23.9%	10.2%	7.1%	1.1%	7.2%	0.0%	17.0%
13	4.1%	0.0%	0.5%	2.9%	0.5%	0.0%	0.5%	1.3%	1.4%	1.3%	4.1%	0.8%	5.2%	9.0%	0.0%	12.4%	9.5%	9.8%	1.9%	10.1%	0.0%	24.8%
14	2.6%	0.0%	0.4%	2.0%	0.4%	0.0%	0.7%	1.7%	4.3%	3.1%	13.1%	0.9%	10.7%	21.0%	1.9%	0.0%	5.2%	7.7%	1.3%	5.0%	0.0%	17.9%
15	1.9%	0.0%	0.3%	0.8%	0.2%	0.0%	0.2%	0.5%	1.8%	2.3%	8.1%	3.5%	8.0%	22.5%	3.2%	11.1%	0.0%	17.7%	0.9%	4.9%	0.0%	12.3%
16	8.0%	0.0%	0.8%	3.9%	0.8%	0.0%	1.2%	2.5%	0.8%	0.5%	1.7%	0.2%	3.9%	2.5%	0.5%	2.7%	2.4%	0.0%	1.5%	12.3%	0.0%	53.8%
17	13.8%	0.0%	2.0%	20.0%	1.9%	0.0%	1.0%	1.9%	0.6%	0.1%	0.7%	0.0%	0.8%	0.8%	0.2%	0.7%	0.2%	2.6%	0.0%	24.4%	0.0%	28.3%
18	6.4%	0.0%	1.0%	2.6%	0.4%	0.0%	0.6%	1.3%	0.9%	0.3%	2.3%	0.3%	3.8%	4.4%	0.7%	2.4%	0.7%	19.9%	12.7%	0.0%	0.0%	39.5%
18A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	5.9%	0.0%	2.0%	5.0%	0.3%	0.0%	0.4%	1.1%	1.0%	0.2%	1.5%	0.2%	7.3%	3.4%	0.8%	4.3%	0.7%	39.5%	7.2%	19.1%	0.0%	0.0%

Bus /2-axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0.0%	0.0%	12.5%	12.4%	2.9%	0.0%	4.0%	11.4%	2.7%	0.2%	0.6%	1.0%	3.8%	4.6%	10.8%	2.7%	0.2%	9.7%	11.4%	7.0%	0.0%	2.3%
1A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	9.9%	0.0%	0.0%	14.0%	1.4%	0.0%	3.3%	46.2%	0.5%	1.4%	0.3%	0.7%	0.5%	0.3%	0.0%	1.4%	10.6%	1.0%	5.9%	2.1%	0.0%	0.5%
3	1.3%	0.0%	0.8%	0.0%	3.2%	0.0%	10.2%	16.9%	3.1%	3.3%	3.3%	0.7%	17.5%	2.2%	0.4%	2.2%	0.3%	18.7%	11.7%	2.3%	0.0%	1.8%
4	2.0%	0.0%	1.3%	32.2%	0.0%	0.0%	15.2%	7.2%	3.0%	4.0%	2.0%	0.8%	8.4%	1.1%	1.5%	0.6%	0.3%	9.4%	2.3%	0.5%	0.0%	8.2%
4A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	0.7%	0.0%	0.5%	26.6%	4.1%	0.0%	0.0%	15.6%	9.0%	5.0%	5.3%	0.3%	16.0%	2.1%	0.0%	1.2%	0.2%	11.0%	1.3%	0.8%	0.0%	0.3%
6	0.7%	0.0%	0.3%	17.8%	0.9%	0.0%	5.2%	0.0%	1.8%	5.5%	5.3%	0.4%	21.4%	1.3%	0.4%	2.3%	0.4%	34.5%	1.1%	0.5%	0.0%	0.3%
7	0.5%	0.0%	0.3%	25.1%	1.0%	0.0%	13.0%	7.7%	0.0%	5.8%	10.5%	1.0%	14.8%	3.6%	0.8%	4.1%	4.2%	6.1%	0.5%	0.5%	0.0%	0.4%
8	0.2%	0.0%	0.6%	16.2%	2.1%	0.0%	13.3%	34.5%	9.0%	0.0%	2.5%	1.6%	9.1%	1.2%	0.1%	2.7%	1.6%	4.9%	0.4%	0.1%	0.0%	0.0%
9	0.0%	0.0%	0.1%	11.1%	0.6%	0.0%	7.9%	15.0%	7.7%	1.4%	0.0%	1.9%	26.7%	6.0%	0.7%	5.5%	8.7%	4.6%	0.1%	1.5%	0.0%	0.2%
10	1.2%	0.0%	1.5%	11.0%	0.7%	0.0%	2.2%	12.0%	7.6%	7.1%	17.4%	0.0%	16.6%	7.1%	0.5%	2.4%	4.6%	3.2%	0.5%	2.2%	0.0%	2.2%
11	0.2%	0.0%	0.1%	19.3%	0.8%	0.0%	6.7%	30.4%	4.6%	2.3%	12.9%	0.5%	0.0%	1.8%	0.4%	6.2%	5.5%	5.6%	0.4%	1.3%	0.0%	1.2%
12	0.4%	0.0%	0.1%	10.9%	0.2%	0.0%	4.7%	7.6%	6.7%	5.8%	12.3%	0.9%	9.6%	0.0%	0.4%	10.7%	18.7%	6.4%	0.1%	2.5%	0.0%	2.1%
13	3.1%	0.0%	0.2%	7.9%	0.8%	0.0%	0.6%	4.1%	2.5%	0.5%	2.8%	0.5%	5.0%	1.7%	0.0%	2.7%	9.3%	9.3%	2.7%	7.1%	0.0%	39.3%
14	0.6%	0.0%	0.3%	13.2%	0.5%	0.0%	1.7%	9.5%	4.4%	2.3%	16.0%	0.5%	21.8%	10.4%	0.3%	0.0%	5.6%	8.0%	0.9%	1.9%	0.0%	2.1%
15	0.0%	0.0%	0.2%	4.9%	0.0%	0.0%	0.1%	2.5%	4.3%	2.0%	19.5%	2.1%	23.8%	18.6%	7.4%	7.1%	0.0%	4.3%	0.5%	2.2%	0.0%	0.5%
16	0.6%	0.0%	0.2%	15.6%	0.8%	0.0%	4.4%	36.5%	2.6%	1.0%	2.4%	0.3%	9.0%	2.3%	0.8%	1.7%	0.8%	0.0%	0.9%	2.7%	0.0%	17.3%
17	2.9%	0.0%	3.2%	46.8%	3.9%	0.0%	4.6%	7.8%	0.9%	0.8%	0.9%	0.3%	2.5%	0.3%	0.3%	0.5%	1.2%	5.1%	0.0%	12.7%	0.0%	5.4%
18	2.7%	0.0%	1.1%	5.5%	1.8%	0.0%	1.5%	2.7%	0.8%	0.4%	3.6%	0.9%	8.7%	9.5%	5.5%	4.9%	2.0%	20.5%	15.2%	0.0%	0.0%	12.8%
18A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	1.2%	0.0%	0.1%	3.8%	0.1%	0.0%	0.1%	2.9%	0.3%	0.1%	0.3%	0.4%	3.1%	2.2%	9.6%	4.8%	0.3%	57.5%	6.9%	6.1%	0.0%	0.0%

LCV/Minibus

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0.0%	0.0%	12.7%	22.3%	2.6%	0.0%	3.2%	8.5%	2.0%	0.2%	0.2%	0.3%	1.6%	1.1%	1.0%	1.8%	0.2%	11.4%	16.3%	9.8%	0.0%	4.9%
1A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	16.2%	0.0%	0.0%	21.4%	2.5%	0.0%	5.3%	30.7%	0.9%	0.3%	0.3%	0.0%	1.0%	1.0%	0.0%	0.2%	6.4%	1.6%	2.3%	2.2%	0.0%	7.6%
3	3.4%	0.0%	2.2%	0.0%	6.8%	0.0%	15.6%	16.1%	5.8%	3.1%	2.7%	0.3%	9.6%	2.6%	0.4%	1.5%	0.3%	16.0%	9.0%	2.4%	0.0%	2.1%
4	1.5%	0.0%	1.4%	42.6%	0.0%	0.0%	9.3%	7.8%	3.3%	2.0%	1.8%	0.2%	4.5%	0.4%	0.4%	1.2%	0.0%	12.2%	3.6%	0.5%	0.0%	7.1%
4A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	1.4%	0.0%	1.1%	32.0%	2.6%	0.0%	0.0%	12.4%	9.3%	4.0%	5.5%	0.7%	11.0%	2.1%	0.2%	0.8%	0.4%	12.1%	3.4%	0.6%	0.0%	0.4%
6	1.5%	0.0%	1.1%	19.4%	1.7%	0.0%	7.1%	0.0%	3.8%	5.3%	6.9%	1.0%	19.2%	3.0%	0.3%	2.4%	0.3%	21.3%	3.8%	1.2%	0.0%	0.6%
7	0.7%	0.0%	0.3%	20.6%	1.6%	0.0%	12.9%	8.1%	0.0%	4.7%	9.6%	1.8%	17.5%	3.4%	0.4%	5.2%	5.0%	4.1%	1.6%	1.7%	0.0%	0.9%
8	0.4%	0.0%	0.2%	18.2%	2.5%	0.0%	13.0%	27.8%	12.2%	0.0%	4.3%	2.0%	9.1%	1.8%	0.0%	3.2%	2.4%	2.5%	0.1%	0.2%	0.0%	0.1%
9	0.0%	0.0%	0.1%	7.4%	0.8%	0.0%	11.0%	16.0%	10.1%	2.1%	0.0%	3.6%	23.0%	4.6%	1.0%	5.3%	7.3%	5.9%	0.3%	1.0%	0.0%	0.3%
10	0.2%	0.0%	0.0%	9.8%	0.5%	0.0%	5.8%	16.6%	15.2%	5.6%	23.1%	0.0%	6.1%	2.8%	0.7%	1.2%	4.0%	4.7%	0.0%	2.3%	0.0%	1.4%
11	0.6%	0.0%	0.2%	13.1%	1.0%	0.0%	7.9%	25.3%	10.1%	2.7%	11.2%	0.6%	0.0%	3.0%	0.6%	6.2%	6.4%	7.0%	0.4%	2.1%	0.0%	1.7%
12	0.7%	0.0%	0.2%	8.7%	0.0%	0.0%	3.2%	8.1%	5.2%	3.5%	6.4%	0.4%	9.0%	0.0%	0.8%	16.7%	20.0%	9.0%	0.4%	4.6%	0.0%	3.1%
13	0.6%	0.0%	0.3%	8.8%	2.2%	0.0%	1.6%	5.7%	0.9%	0.0%	11.3%	0.0%	9.4%	2.5%	0.0%	4.1%	23.0%	8.2%	0.0%	7.9%	0.0%	13.5%
14	1.1%	0.0%	0.2%	7.0%	0.4%	0.0%	1.9%	8.1%	7.6%	2.3%	11.7%	0.5%	14.7%	19.0%	0.5%	0.0%	8.7%	6.9%	0.7%	3.6%	0.0%	5.0%
15	0.2%	0.0%	0.1%	2.0%	0.2%	0.0%	0.8%	1.6%	6.9%	2.5%	11.2%	3.1%	22.7%	26.9%	6.8%	9.3%	0.0%	3.4%	0.3%	1.0%	0.0%	0.7%
16	3.2%	0.0%	0.6%	15.4%	1.7%	0.0%	6.6%	19.8%	2.5%	0.6%	3.0%	0.3%	10.2%	4.3%	0.5%	3.0%	0.8%	0.0%	1.0%	6.2%	0.0%	20.2%
17	10.0%	0.0%	1.1%	28.8%	3.4%	0.0%	6.7%	11.8%	1.6%	0.1%	0.6%	0.1%	1.6%	0.3%	0.1%	1.1%	0.3%	2.2%	0.0%	18.6%	0.0%	11.7%
18	5.8%	0.0%	1.1%	3.9%	0.4%	0.0%	1.2%	3.3%	1.8%	0.1%	1.6%	0.3%	5.3%	8.7%	1.5%	4.1%	0.6%	16.8%	18.9%	0.0%	0.0%	24.8%
18A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	2.4%	0.0%	2.5%	6.1%	0.1%	0.0%	1.3%	1.5%	0.8%	0.1%	0.5%	0.2%	3.1%	2.1%	1.5%	6.7%	0.4%	41.3%	11.1%	18.3%	0.0%	0.0%

For 3-axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0%	0%	11%	22%	7%	0%	0%	0%	0%	0%	0%	0%	1%	2%	1%	1%	2%	7%	11%	26%	0%	8%
1A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2	8%	0%	0%	65%	4%	0%	0%	12%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	1%	4%	0%	2%
3	4%	0%	18%	0%	6%	0%	8%	11%	3%	2%	4%	1%	13%	2%	0%	1%	0%	13%	8%	2%	0%	2%
4	5%	0%	13%	43%	0%	0%	10%	10%	2%	2%	2%	0%	2%	0%	0%	0%	0%	7%	1%	1%	0%	4%
4A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5	1%	0%	1%	27%	4%	0%	0%	28%	13%	3%	2%	1%	9%	0%	0%	0%	0%	9%	1%	0%	0%	0%
6	0%	0%	1%	12%	2%	0%	9%	0%	1%	5%	5%	0%	22%	1%	0%	1%	0%	38%	3%	0%	0%	0%
7	0%	0%	0%	32%	1%	0%	24%	5%	0%	3%	6%	1%	9%	2%	0%	4%	5%	5%	0%	1%	0%	0%
8	0%	0%	0%	18%	3%	0%	8%	37%	5%	0%	8%	3%	8%	1%	0%	1%	3%	4%	0%	1%	0%	0%
9	0%	0%	0%	18%	1%	0%	7%	13%	5%	3%	0%	3%	22%	3%	0%	5%	6%	9%	0%	2%	0%	1%
10	1%	0%	0%	11%	1%	0%	7%	5%	5%	6%	22%	0%	12%	7%	2%	7%	2%	4%	1%	6%	0%	2%
11	0%	0%	0%	23%	0%	0%	4%	32%	5%	2%	13%	1%	0%	2%	1%	4%	5%	6%	0%	1%	0%	0%
12	4%	0%	0%	16%	0%	0%	0%	9%	4%	6%	8%	2%	12%	0%	6%	6%	14%	10%	1%	2%	0%	0%
13	0%	0%	0%	1%	0%	0%	0%	2%	0%	0%	2%	3%	8%	14%	0%	9%	17%	17%	0%	6%	0%	22%
14	1%	0%	0%	11%	0%	0%	1%	4%	4%	1%	15%	2%	11%	4%	3%	0%	7%	11%	12%	4%	0%	9%
15	5%	0%	0%	5%	0%	0%	0%	1%	5%	2%	14%	3%	17%	15%	9%	11%	0%	10%	1%	1%	0%	1%
16	2%	0%	0%	14%	1%	0%	4%	45%	2%	1%	2%	0%	11%	2%	1%	4%	1%	0%	1%	1%	0%	7%
17	14%	0%	1%	23%	3%	0%	2%	6%	0%	0%	0%	0%	0%	1%	0%	9%	0%	2%	0%	26%	0%	13%
18	24%	0%	5%	7%	1%	0%	1%	1%	1%	0%	1%	0%	2%	4%	1%	4%	1%	7%	28%	0%	0%	12%
18A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19	14%	0%	4%	9%	1%	0%	0%	0%	0%	0%	1%	0%	1%	0%	10%	10%	0%	20%	14%	14%	0%	0%

4 to 6 axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0.0%	0.0%	1.0%	30.4%	6.6%	0.0%	1.3%	1.4%	2.7%	0.2%	0.6%	0.1%	10.0%	2.2%	1.6%	7.4%	0.2%	12.0%	7.9%	8.0%	0.0%	6.5%
1A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	0.9%	0.0%	0.0%	41.5%	2.4%	0.0%	1.2%	25.9%	4.5%	0.1%	1.3%	0.4%	6.7%	0.1%	0.1%	0.4%	6.4%	6.4%	0.3%	1.3%	0.0%	0.1%
3	3.8%	0.0%	3.7%	0.0%	3.4%	0.0%	8.2%	10.4%	6.7%	2.1%	3.8%	0.9%	28.6%	3.1%	0.0%	1.7%	0.3%	16.3%	4.9%	1.2%	0.0%	0.9%
4	2.8%	0.0%	8.5%	35.0%	0.0%	0.0%	4.8%	6.1%	11.7%	0.6%	4.0%	0.6%	11.9%	0.4%	0.1%	1.0%	0.1%	9.0%	0.5%	0.2%	0.0%	2.9%
4A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5	1.4%	0.0%	0.2%	28.4%	1.2%	0.0%	0.0%	10.2%	18.1%	2.0%	4.7%	0.6%	17.4%	0.7%	0.0%	0.8%	0.0%	13.5%	0.3%	0.5%	0.0%	0.0%
6	0.6%	0.0%	1.0%	17.0%	0.6%	0.0%	4.7%	0.0%	1.6%	1.6%	4.5%	0.4%	18.9%	1.1%	0.1%	1.3%	0.5%	45.0%	0.7%	0.4%	0.0%	0.0%
7	0.5%	0.0%	1.0%	29.9%	2.7%	0.0%	17.4%	2.6%	0.0%	3.2%	5.0%	0.5%	8.3%	1.4%	0.1%	5.6%	6.4%	14.0%	0.2%	1.1%	0.0%	0.1%
8	0.1%	0.0%	0.5%	25.6%	1.1%	0.0%	9.5%	14.7%	16.9%	0.0%	4.4%	2.4%	11.8%	3.5%	0.5%	1.1%	2.2%	5.3%	0.0%	0.4%	0.0%	0.0%
9	0.1%	0.0%	0.3%	11.4%	0.7%	0.0%	7.1%	5.1%	4.5%	0.9%	0.0%	1.5%	36.2%	3.3%	0.4%	5.7%	10.8%	9.1%	0.1%	2.3%	0.0%	0.2%
10	0.3%	0.0%	0.6%	12.3%	1.3%	0.0%	2.1%	6.3%	6.6%	2.1%	11.5%	0.0%	29.1%	7.3%	3.3%	4.0%	1.8%	3.5%	1.0%	6.0%	0.0%	0.7%
11	1.8%	0.0%	0.6%	26.3%	1.3%	0.0%	6.6%	15.7%	3.9%	1.4%	15.2%	1.1%	0.0%	2.3%	1.6%	3.8%	5.3%	6.8%	0.7%	4.0%	0.0%	1.3%
12	0.4%	0.0%	0.1%	35.3%	0.2%	0.0%	1.2%	5.3%	3.1%	3.3%	8.5%	2.1%	11.5%	0.0%	0.5%	5.8%	11.1%	7.0%	0.7%	3.3%	0.0%	0.6%
13	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.4%	1.1%	2.2%	2.2%	7.4%	3.0%	40.4%	3.3%	0.0%	7.0%	9.3%	9.3%	1.5%	6.3%	0.0%	1.5%
14	5.4%	0.0%	0.1%	9.8%	0.2%	0.0%	0.5%	3.9%	10.6%	0.7%	21.6%	1.0%	19.0%	5.0%	1.0%	0.0%	2.0%	8.2%	3.5%	5.0%	0.0%	2.4%
15	0.0%	0.0%	0.0%	4.6%	0.0%	0.0%	0.1%	2.4%	3.5%	1.3%	22.3%	3.9%	39.1%	14.5%	1.8%	2.5%	0.0%	3.0%	0.1%	0.7%	0.0%	0.2%
16	2.2%	0.0%	0.7%	15.6%	0.9%	0.0%	4.7%	34.8%	5.2%	0.6%	5.2%	0.2%	15.0%	3.3%	0.4%	2.0%	0.4%	0.0%	1.1%	2.7%	0.0%	4.8%
17	8.8%	0.0%	0.3%	22.4%	3.5%	0.0%	0.9%	3.0%	1.6%	0.1%	1.4%	0.2%	5.3%	1.1%	0.8%	5.9%	0.5%	5.3%	0.0%	36.0%	0.0%	2.8%
18	5.3%	0.0%	0.7%	2.1%	0.1%	0.0%	0.5%	1.4%	2.4%	0.2%	6.3%	0.8%	26.6%	9.5%	1.0%	5.1%	0.3%	8.6%	21.8%	0.0%	0.0%	7.4%
18A	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7.8%	0.0%	0.9%	10.9%	0.2%	0.0%	0.4%	0.9%	0.8%	0.2%	1.2%	0.2%	11.7%	1.9%	0.5%	15.1%	0.5%	30.4%	3.7%	12.8%	0.0%	0.0%

7 & above axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3	0%	0%	0%	0%	0%	0%	16%	5%	0%	0%	5%	0%	42%	0%	0%	0%	0%	26%	5%	0%	0%	0%
4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5	0%	0%	0%	67%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%
6	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%
7	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	33%	0%	0%	0%	0%
8	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9	0%	0%	0%	0%	0%	0%	17%	17%	0%	17%	0%	0%	0%	0%	0%	17%	17%	17%	0%	0%	0%	0%
10	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	0%	0%	0%	38%	0%	0%	25%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%
12	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16	0%	0%	0%	25%	0%	0%	0%	25%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	25%	0%	0%
17	0%	0%	0%	25%	0%	0%	0%	25%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	25%	0%	0%
18	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

AADT traffic has been distributed as per above pairing distribution matrix. Following tables show base traffic matrix of each category of vehicles for Base year 2022-23

Table 2-62 : Tollable AADT Matrix for Car/Jeep/Van

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	375	674	124	0	141	291	221	46	93	14	286	214	59	153	30	1572	910	819	0	1624
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	355	0	0	389	85	0	101	342	96	35	45	1	38	28	6	21	67	131	125	120	0	499
3	537	0	321	0	428	0	622	597	490	201	237	34	205	112	18	95	9	1102	1131	607	0	1010
4	128	0	78	425	0	0	266	326	285	104	194	21	121	15	4	19	2	137	57	53	0	578
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	304	0	99	682	273	0	0	706	1164	327	753	89	687	69	4	36	4	217	55	72	0	92
6	292	0	203	667	346	0	675	0	479	300	604	145	608	120	11	89	9	486	107	144	0	259
7	253	0	121	719	374	0	1208	550	0	333	734	264	611	151	12	250	51	144	49	108	0	268
8	53	0	40	248	136	0	340	368	364	0	262	111	436	94	12	190	54	78	7	33	0	49
9	85	0	52	283	234	0	935	637	741	259	0	427	1188	305	38	514	170	236	44	246	0	345
10	11	0	4	44	24	0	93	170	269	113	510	0	106	52	8	45	21	24	4	20	0	37
11	236	0	40	234	139	0	671	607	539	398	1166	104	0	221	48	556	172	300	62	385	0	1771
12	186	0	34	141	16	0	73	152	158	185	335	57	267	0	89	1207	517	361	55	363	0	862
13	40	0	5	28	5	0	5	12	14	13	40	8	51	88	0	121	93	96	19	99	0	242
14	146	0	24	110	21	0	39	94	237	171	721	49	589	1159	107	0	287	424	71	277	0	987
15	40	0	7	17	4	0	4	11	39	48	171	73	169	478	67	237	0	377	19	103	0	261
16	1547	0	151	749	151	0	227	489	161	100	322	34	748	483	103	530	464	0	297	2383	0	10429
17	956	0	137	1393	135	0	67	133	45	7	47	3	56	53	16	49	15	179	0	1692	0	1962
18	838	0	128	347	56	0	84	166	112	36	297	36	493	579	91	308	93	2607	1659	0	0	5167
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1604	0	547	1370	93	0	115	304	283	59	397	54	2004	929	207	1184	186	10790	1956	5202	0	0

Table 2-63 : Tollable AADT Matrix for Bus

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	9	9	2	0	3	8	2	0	0	1	3	3	8	2	0	7	8	5	0	2
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	3	0	0	4	0	0	1	15	0	0	0	0	0	0	0	0	3	0	2	1	0	0
3	2	0	1	0	5	0	16	26	5	5	5	1	27	3	1	3	0	29	18	4	0	3
4	0	0	0	8	0	0	4	2	1	1	0	0	2	0	0	0	0	2	1	0	0	2
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	1	31	5	0	0	18	10	6	6	0	19	2	0	1	0	13	2	1	0	0
6	1	0	0	15	1	0	4	0	2	5	5	0	18	1	0	2	0	29	1	0	0	0
7	1	0	0	32	1	0	17	10	0	7	13	1	19	5	1	5	5	8	1	1	0	0
8	0	0	0	4	0	0	3	8	2	0	1	0	2	0	0	1	0	1	0	0	0	0
9	0	0	0	6	0	0	5	9	4	1	0	1	15	3	0	3	5	3	0	1	0	0
10	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0
11	0	0	0	14	1	0	5	22	3	2	9	0	0	1	0	5	4	4	0	1	0	1
12	0	0	0	9	0	0	4	6	6	5	10	1	8	0	0	9	16	5	0	2	0	2
13	3	0	0	7	1	0	1	4	2	0	2	0	4	1	0	2	8	8	2	6	0	34
14	0	0	0	6	0	0	1	4	2	1	7	0	9	4	0	0	2	3	0	1	0	1
15	0	0	0	1	0	0	0	0	1	0	3	0	3	3	1	1	0	1	0	0	0	0
16	1	0	0	38	2	0	11	89	6	3	6	1	22	6	2	4	2	0	2	7	0	42
17	4	0	5	68	6	0	7	11	1	1	1	0	4	0	0	1	2	7	0	18	0	8
18	4	0	2	9	3	0	3	4	1	1	6	1	15	16	9	8	3	34	26	0	0	22
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	4	0	0	14	1	0	1	10	1	0	1	2	11	8	35	18	1	209	25	22	0	0

Table 2-64 : Tollable AADT Matrix for Minibus

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	3	5	1	0	1	2	0	0	0	0	0	0	0	0	0	3	4	2	0	1
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	3	0	0	4	0	0	1	6	0	0	0	0	0	0	0	0	1	0	0	0	0	1
3	1	0	1	0	3	0	6	6	2	1	1	0	4	1	0	1	0	6	4	1	0	1
4	0	0	0	6	0	0	1	1	0	0	0	0	1	0	0	0	0	2	1	0	0	1
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	11	1	0	0	4	3	1	2	0	4	1	0	0	0	4	1	0	0	0
6	0	0	0	6	1	0	2	0	1	2	2	0	6	1	0	1	0	7	1	0	0	0
7	0	0	0	7	1	0	4	3	0	2	3	1	6	1	0	2	2	1	1	1	0	0
8	0	0	0	3	0	0	2	5	2	0	1	0	2	0	0	1	0	0	0	0	0	0
9	0	0	0	3	0	0	4	6	4	1	0	1	8	2	0	2	3	2	0	0	0	0
10	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	5	0	0	3	9	4	1	4	0	0	1	0	2	2	2	0	1	0	1
12	0	0	0	2	0	0	1	2	1	1	1	0	2	0	0	4	5	2	0	1	0	1
13	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	3	1	0	1	0	2
14	0	0	0	2	0	0	1	2	2	1	3	0	4	6	0	0	3	2	0	1	0	1
15	0	0	0	0	0	0	0	0	1	0	2	1	4	5	1	2	0	1	0	0	0	0
16	2	0	0	12	1	0	5	15	2	0	2	0	8	3	0	2	1	0	1	5	0	15
17	4	0	0	13	2	0	3	5	1	0	0	0	1	0	0	0	0	1	0	8	0	5
18	3	0	1	2	0	0	1	2	1	0	1	0	3	5	1	2	0	10	11	0	0	15
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	2	0	2	4	0	0	1	1	1	0	0	0	2	1	1	5	0	28	8	13	0	0

Table 2-65 : Tollable AADT Matrix for LCV

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	22	39	5	0	6	15	3	0	0	1	3	2	2	3	0	20	28	17	0	8
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	13	0	0	18	2	0	4	25	1	0	0	0	1	1	0	0	5	1	2	2	0	6
3	32	0	21	0	64	0	148	152	55	29	25	3	91	25	4	14	3	152	85	23	0	20
4	3	0	2	73	0	0	16	13	6	3	3	0	8	1	1	2	0	21	6	1	0	12
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	7	0	6	165	14	0	0	64	48	21	28	3	57	11	1	4	2	62	18	3	0	2
6	12	0	9	156	14	0	57	0	30	43	56	8	155	24	3	20	2	172	31	10	0	5
7	3	0	1	78	6	0	49	31	0	18	36	7	66	13	1	20	19	16	6	6	0	3
8	1	0	0	40	5	0	29	62	27	0	10	5	20	4	0	7	5	5	0	0	0	0
9	0	0	0	31	3	0	45	66	42	9	0	15	96	19	4	22	30	25	1	4	0	1
10	0	0	0	9	0	0	5	16	14	5	22	0	6	3	1	1	4	4	0	2	0	1
11	4	0	2	93	7	0	56	180	72	19	80	4	0	21	4	44	46	50	3	15	0	12
12	2	0	1	26	0	0	9	24	15	10	19	1	26	0	2	49	58	26	1	14	0	9
13	0	0	0	4	1	0	1	2	0	0	5	0	4	1	0	2	10	3	0	3	0	6
14	3	0	0	21	1	0	6	24	22	7	34	1	43	56	2	0	26	20	2	11	0	15
15	0	0	0	5	1	0	2	4	16	6	27	7	54	64	16	22	0	8	1	2	0	2
16	25	0	4	119	13	0	51	153	19	5	23	3	78	33	4	23	6	0	8	48	0	156
17	43	0	5	124	15	0	29	51	7	0	2	0	7	1	0	5	1	10	0	80	0	51
18	19	0	4	13	1	0	4	11	6	0	5	1	18	29	5	14	2	55	62	0	0	82
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	11	0	12	30	0	0	6	7	4	1	2	1	15	10	7	32	2	199	54	88	0	0

Table 2-66 : Tollable AADT Matrix for 2-axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	4	4	1	0	1	4	1	0	0	0	1	1	4	1	0	3	4	2	0	1
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	3	0	0	1	11	0	0	0	0	0	0	0	0	3	0	1	0	0	0
3	7	0	5	0	19	0	59	98	18	19	19	4	101	13	3	13	2	108	68	13	0	11
4	1	0	1	18	0	0	8	4	2	2	1	0	5	1	1	0	0	5	1	0	0	5
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	1	51	8	0	0	30	17	10	10	1	31	4	0	2	0	21	3	2	0	1
6	5	0	2	129	6	0	37	0	13	39	38	3	155	10	3	16	3	249	8	4	0	2
7	0	0	0	24	1	0	13	7	0	6	10	1	14	3	1	4	4	6	0	0	0	0
8	0	0	1	23	3	0	19	50	13	0	4	2	13	2	0	4	2	7	1	0	0	0
9	0	0	0	30	2	0	22	41	21	4	0	5	73	17	2	15	24	13	0	4	0	0
10	0	0	0	3	0	0	1	3	2	2	4	0	4	2	0	1	1	1	0	1	0	1
11	1	0	0	100	4	0	35	158	24	12	67	2	0	9	2	32	28	29	2	7	0	6
12	0	0	0	9	0	0	4	6	5	5	10	1	8	0	0	9	15	5	0	2	0	2
13	1	0	0	2	0	0	0	1	0	0	1	0	1	0	0	1	2	2	1	1	0	8
14	1	0	0	17	1	0	2	12	6	3	21	1	28	13	0	0	7	10	1	2	0	3
15	0	0	0	5	0	0	0	3	5	2	21	2	26	21	8	8	0	5	1	2	0	1
16	3	0	1	88	5	0	25	204	15	6	14	2	50	13	5	9	4	0	5	15	0	97
17	4	0	4	64	5	0	6	11	1	1	1	0	3	0	0	1	2	7	0	17	0	7
18	2	0	1	5	2	0	1	2	1	0	3	1	8	9	5	4	2	19	14	0	0	12
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1	0	0	3	0	0	0	2	0	0	0	0	3	2	8	4	0	47	6	5	0	0

Table 2-67: Tollable AADT Matrix for 3-axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	25	51	17	0	1	0	0	0	0	0	1	5	2	3	4	17	25	61	0	19
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	24	0	0	188	12	0	1	34	0	0	1	0	1	0	0	0	5	2	2	13	0	7
3	39	0	179	0	63	0	75	110	31	23	36	7	134	17	1	14	3	133	77	24	0	25
4	9	0	22	74	0	0	17	18	3	4	3	0	3	0	0	0	0	11	1	1	0	6
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	0	2	85	14	0	0	88	41	8	7	4	29	0	0	1	0	28	3	1	0	0
6	1	0	8	94	13	0	73	0	8	37	42	3	183	9	2	5	2	311	23	2	0	0
7	0	0	0	55	2	0	41	9	0	6	10	2	16	4	0	7	8	8	0	2	0	0
8	0	0	0	22	4	0	10	46	6	0	10	4	10	1	0	1	3	5	0	1	0	0
9	0	0	0	52	4	0	20	37	14	9	0	9	63	7	0	15	18	26	0	5	0	1
10	0	0	0	5	0	0	3	3	2	3	10	0	5	3	1	3	1	2	0	3	0	1
11	1	0	1	137	3	0	25	189	28	9	74	4	0	10	4	25	27	37	1	8	0	2
12	5	0	0	19	0	0	0	10	5	6	9	3	14	0	7	8	16	12	1	2	0	0
13	0	0	0	0	0	0	0	1	0	0	1	2	5	8	0	6	10	10	0	4	0	13
14	2	0	0	19	0	0	1	7	8	1	26	3	21	8	5	0	12	21	22	7	0	17
15	5	0	0	5	0	0	0	1	5	2	14	3	17	15	9	11	0	10	1	1	0	1
16	12	0	2	91	8	0	28	299	11	6	16	1	74	16	7	28	7	0	7	8	0	47
17	39	0	3	64	8	0	6	17	1	1	1	0	1	2	0	25	1	5	0	75	0	37
18	60	0	13	17	2	0	2	2	2	1	4	1	5	10	4	9	2	17	72	0	0	31
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	28	0	8	17	2	0	0	1	0	0	2	0	3	1	20	20	0	40	28	28	0	0

Table 2-68 : Tollable AADT Matrix for 4 to 6 axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	2	69	15	0	3	3	6	0	1	0	23	5	4	17	1	27	18	18	0	15
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	55	3	0	2	34	6	0	2	1	9	0	0	0	8	9	0	2	0	0
3	65	0	62	0	58	0	139	177	113	35	65	15	485	53	1	28	5	275	84	21	0	15
4	5	0	14	58	0	0	8	10	19	1	7	1	20	1	0	2	0	15	1	0	0	5
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	8	0	1	163	7	0	0	59	104	11	27	3	100	4	0	5	0	78	1	3	0	0
6	6	0	11	192	6	0	53	0	18	18	51	4	213	12	1	15	5	507	8	5	0	1
7	3	0	5	160	15	0	94	14	0	17	27	3	44	8	0	30	34	75	1	6	0	1
8	0	0	1	37	2	0	14	21	24	0	6	3	17	5	1	2	3	8	0	1	0	0
9	1	0	2	78	5	0	48	35	30	6	0	10	245	23	3	39	73	61	1	16	0	2
10	0	0	1	10	1	0	2	5	5	2	9	0	24	6	3	3	1	3	1	5	0	1
11	32	0	11	459	23	0	115	274	69	24	265	19	0	40	28	67	93	119	13	69	0	22
12	1	0	0	104	1	0	3	16	9	10	25	6	34	0	1	17	33	20	2	10	0	2
13	0	0	0	3	0	0	0	1	1	1	4	2	24	2	0	4	6	6	1	4	0	1
14	17	0	0	31	1	0	2	12	34	2	69	3	60	16	3	0	6	26	11	16	0	8
15	0	0	0	12	0	0	0	6	9	3	58	10	102	38	5	6	0	8	0	2	0	1
16	30	0	9	210	12	0	64	469	71	8	70	2	202	44	6	27	6	0	15	37	0	65
17	20	0	1	52	8	0	2	7	4	0	3	0	12	3	2	14	1	12	0	83	0	6
18	17	0	2	7	0	0	2	4	8	1	21	3	88	31	3	17	1	28	72	0	0	24
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	14	0	2	19	0	0	1	2	1	0	2	0	21	3	1	27	1	54	7	23	0	0

Table 2-69 : Tollable AADT Matrix for 7 & above axle

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

This base traffic shall be forecasted for future years of concession period for calculation of future revenue. Same is discussed in next chapter.

CHAPTER 3

TRAFFIC FORCAST

3.1 Introduction

Traffic is generated and grows as a result of the interplay of a number of contributory factors such as National economy, Government policy, socio-economic conditions of the people, and changes in land uses along the project corridor precincts etc. Further these factors have uncertainties associated with them. Forecasts of traffic have, therefore, to be dependent on the forecasts of factors such as population, gross domestic product (GDP), vehicle ownership, per capita income (PCI), agricultural output, fuel consumption etc. Future pattern of change in these factors can be estimated with only a limited degree of accuracy and hence the forecasting of future traffic levels cannot be precise. The success of any road project with private sector participation hinges on the accuracy and robustness with which the future traffic and revenues are estimated.

Further, future traffic forms the basis of the design of the transportation infrastructure facility and also determines the viability of the project. The following section deals with different methods, techniques, and considerations used in traffic forecast for the project under study.

3.2 Secondary Data Collection

In addition to the above mentioned traffic surveys, secondary data was also collected from the sources where ever the data available. This data is effectively used to determine and estimate past trends of growth and future pattern. Following secondary data was collected for study:

1. Vehicle registration data of Andhra Pradesh, Telangana, Karnataka and Maharashtra as these are the state which make most of the influence om traffic.
2. Data of Indian national GDP (Gross Domestic Product), NSDP (Net State Domestic Product) of Andhra Pradesh, Telangana, Karnataka and Maharashtra.
3. Estimated population data of Andhra Pradesh, Telangana, Karnataka and Maharashtra.

This data is utilized in the study to estimate the growth factors along the project corridor. Relevant part of secondary data is placed at Annexure.

3.3 Development in the Project Influence Area

The **Outer Ring Road**, officially as, **Jawaharlal Nehru Outer Ring Road** and abbreviated as, **O.R.R.**, is a 158 kilometer, 8-lanes ring road expressway encircling Hyderabad, capital of the Indian state of Telangana. The expressway is designed for speeds up to 100 km/h. A large part, 124 km (covering urban nodes viz., Hi- Tech city, Nanakramguda Financial District, Rajiv Gandhi International Airport, IKP Knowledge park, Hardware Park, Telangana State Police Academy, Singapore Financial District, and Games village) of the 158-km was opened by December 2012.

Rest of the stretch was opened by 2016. Thus from 2016 onwards ORR is under operation and has contributed to great extent not only to ease out traffic flow but also has influenced the development of Hyderabad around ORR. Most of the development which are happening on periphery of Hyderabad take positioning with respect to NORR into account. It gives an easy connectivity between NH 44, NH 65, NH 161, NH 765 and NH 163 from Hyderabad to Vijayawada and Warangal as well as state highways leading to Vikarabad Nagarjuna Sagar and Karimnagar /Mancherial. The Outer Ring Road also helps in reducing the travel time from Rajiv Gandhi International Airport to cities like Nizamabad & Adilabad as it connects to NH44. The expressway is fenced and 33 radial roads connect it with the Inner Ring Road.

Telangana State

Telangana is one of the fastest-growing states in India posing average annual growth rate of 13.90% over the last five years. Telangana's nominal gross state domestic product for the year 2020-21 stands at ₹12.05 lakh crore (US$170 billion). Service sector is the largest contributor to the Telangana's economy with a share of about 65% in the year 2018-19. Growth in services has largely been fuelled by IT services with the State holding leading position in IT & ITeS in the country in terms of production and exports.



Traffic growth on NORR would be synonym with growth of Hyderabad. Hence various aspects of Growth of Hyderabad are relevant and discussed as under.

Hyderabad.

Hyderabad is among the top-10 fastest growing cities in the world, according to the World Economic Forum (WEF). Interestingly, all 10 of the fastest-growing cities in the world are in India. And, going by Gross Domestic Product (GDP) growth, this is likely to be the case till 2035, says research institute Oxford Economics. Hyderabad, with an 8.47% GDP growth, holds the second place among metropolitan cities in India.

By some estimates Hyderabad will be the second-fastest growing city in the world. It is just marginally behind Bengaluru, and should become number one (in India), since the projections are on a time-series trajectory, and Hyderabad's actual growth has been geometrically exponential.

A city with rich history and magnificent olden structures is slowly became host to some of the most modern buildings, a blend of both the bygone kingdoms and the new corporate revolution. To boost Hyderabad's development, the then Chief Minister of Andhra Pradesh Chandrababu Naidu successfully bid for the National Games in 2002 and the Afro Asian games in 2003, along with a strong bid to create a Formula One circuit in the state. These endeavours led to the development of efficient sports infrastructure in Hyderabad. The Indian School of Business (ISB) and IIT were also established in a similar endeavour to boost modern education.



The resulting urban agglomeration now has an area of over eight hundred square kilometres and consists of Hyderabad and other municipal entities surrounding it. The city population is expected to exceed one hundred and thirty-six lakhs in 2021.

As development picked up pace at the end of the nineties, the old city has declined, and the newer peripheral regions started to gain prominence. By 2001, the city was the sixth largest urban agglomeration in India; and during the last decade it registered a growth of 32%.

Developed land on the outskirts of Hyderabad has been utilised for large scale development just outside the Cybercity. The city itself is on its way to become the leader in e-governance. It has been predicted about Hyderabad that it would become a leading information-based society in the next two decades.

Rapid industrialisation has led to the increase in land prices while simultaneously driving the demand for infrastructure development. Commercial growth, therefore, has been concentrated in the Municipal Corporation of Hyderabad area while the metropolis has experienced pressure in residential growth. As workers prefer proximity to the workplace, their daily commute has resulted in the improvement of the road networks as well.

Growth of IT Sector

Ever since the 1990s, Andhra Pradesh had been promoting itself as a world class IT location and Hyderabad City, as a result, has managed to attract investment from companies such as IBM, Oracle, and Microsoft. The Hyderabad Technology Park has seen hundreds of IT companies registering themselves as soon as spaces are available. The objective of this elaborate promotional program has been to attract the right number of companies which together would form a critical mass for the city to develop as a high-tech city which would rub shoulders with Silicon Valley and Malaysia's Multimedia Super Corridor. During the nineties, several initiatives were taken up by the state government towards promotion of IT sector. These included setting up of IT training institutes, initiatives in e-governance, development of a Hi-Tech city and promoting the Software Technology Park as a preferred destination for private sector companies. Steps were then taken even further to allow the development of a Hardware Park, creation of a knowledge Park, and establishment of a financial district. The state government started tapping resources to invest in the biotechnology sector and, as a first step towards making the region specialized, a Biotech Park was introduced.



The result of these efforts can be seen in the form of various parks. One called Gnome Valley has been set up to focus on research and training in biomedicine for industrial production. Within this valley are also established the IKP Knowledge Park and Alexandria Knowledge Park with areas of two hundred acres and three hundred acres respectively. These parks cover Ameerpet, Medchal, Uppal, and a number of other parts of the Hyderabad Metropolitan region. The thrust areas of research here include vaccines, bioinformatics, seeds etc. Some of the biggest global pharmaceutical and research firms have setup their offices here. Similarly, a Hardware Park of one thousand seven hundred acres in area is also being developed.

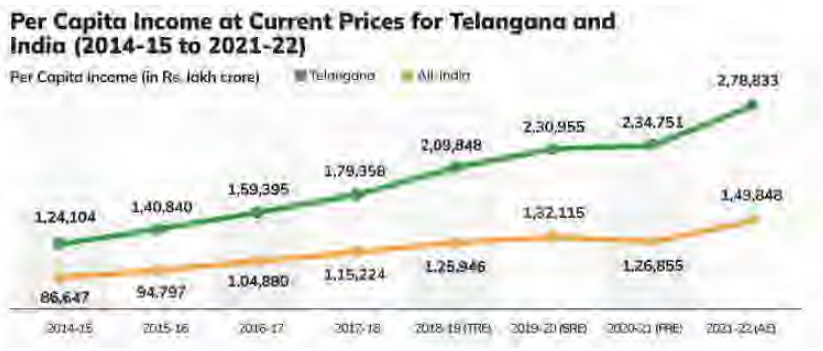


The economic activities particularly related to manufacturing and associated activities, are concentrated in Ramachandrapuram, Patancheru, Balanagar, Uppal, Cherlapalli, Jeedimetla, and Moula Ali. These developments, on one hand,

contributed to the economic growth of the city and, on the other hand, are responsible for the spatial growth, particularly the growth of the surrounding areas.

Development of Relevant Infrastructure

With expansion in infrastructure capabilities and progressive state policy framework, Hyderabad is not only providing strong impetus to its leading industries: IT/ITES, pharmaceuticals but also laying strong foundation for its growth sectors: aerospace, automotive and electric vehicle, textiles and emerging technologies. I strongly believe that the metropolis is on an ambitious journey to become one of the most diverse business hubs of the world by 2035.



The city's infrastructure is providing for evolving needs of massive commercial growth. Hyderabad's metro rail is India's second longest operational metro network after the Delhi Metro. In phase 1, 67 kilometers (kms) are operational of planned 72 kms. The route covers three major traffic corridors through 60 stations. The next phase aims to connect airport at Shamshabad with major economic zones of the greater Hyderabad region. Another groundwork capability worth mentioning is logistics parks. The Hyderabad Metropolitan Development Authority has developed 6 logistics parks in last 5 years and 8 more to come by 2025. The facilities are catering to over 340 logistics companies and 100 major manufacturing firms, making Hyderabad one of the largest logistics hubs of the country. In addition to the above, the metropolitan offers second cheapest office rentals amongst the major cities of India, adding to cost effectiveness of doing business in the city. In 2021, Hyderabad accounted for 36% country's share of office spaces.

It also holds the badge of most liveable city in the country for last five consecutive years as per Mercer's quality of living index. The city attracts talent pool from across the nation as well as from other world economies due to its notable social infrastructure: healthcare, education, housing, recreation, and personal freedom.

Telangana is a state known for its robust economic initiatives and trade friendly policies since its inception in 2014. A key example is state's TS I-pass industrial policy that is

best in the country. It provides single window application clearance process capped at 15 days for all capital investment projects. This policy enabled Amazon to get clearance in just 11 days for its largest campus in the world to be built in Hyderabad. The state is poised to keep pace with technological advancements and thus first in India to launch actionable framework for AI and other emerging technologies. It has partnered with NASSCOM to formulate and execute the strategy. Telangana has taken many sectors specific initiatives that has improved ease of doing business and garnered foreign direct investments in the metro. Telangana's Electric vehicle and energy storage policy has aided Fiat Chrysler to set up global digital hub in Hyderabad. With availability of largest commercial land bank in the country, Telangana offers 1.45 lakhs acres of land to investors. This has enabled aerospace companies to set up production facilities in the city. Boeing and Safran have announced new manufacturing lines in Hyderabad. Airbus is setting up helicopter manufacturing plant in Shamshabad and committed to investment of INR 2500 Crores. The city ranked first in the Aerospace cities of the future in 2020-21.

The city's primary sectors, IT and pharma, continue to grow and bring in public and private investments. Google is investing INR 1000 Crores in its biggest facility outside US. This commercial space is set to be functional in Hyderabad by early 2023 and will be home to 13000 employees. The metro's Genome Valley is witnessing Biopharma scale-up facility, a public-private partnership between the state and Cytiva life sciences. The state is also developing 800-acre new pharma park in Rangareddy district.

Though Hyderabad faced the heat in 2020, the pandemic and subsequent lockdown compelled considerable layoffs in IT and SME sectors. Office space absorption rate declined, strongly indicating many firms shutting shops or reducing operations in the city. Few economic experts questioned Hyderabad's potential as a growing business hub. However, I find the argument short sighted and reactive. The city strongly stood the test of time, India's first ICMR approved RT-PCR kits and first indigenously developed vaccine for COVID-19 came from Hyderabad. In 2021, the city's economy started showing green shoots. It contributed to 30% of the pharmaceutical production of the country. It also gained momentum as the "Vaccine capital of the world" with 4 out of 5 leading vaccine manufacturers in India already present in Genome Valley. The same year, the city also had the highest net office absorption rate (of existing stock) at 20% and highest office completion rate in the country. It also witnessed lowest office space vacancies: 7.1% in comparison to its other metro counterparts.

Hyderabad's strong economic fundamentals with respect to infrastructure, social capital and economic policies, equip it to meet future challenges of global economies. It is poised for long-term growth and on a progressive path to become world's prominent

commercial hub. With current GDP of $74 billion, it is projected to move forward with 8.47% CAGR and set to deliver as $201.4 billion economy by 2035.

IT INCUBATION CENTERS – HYDERABAD

Hyderabad has witnessed a very growth of IT incubation centers. Some are summarized as below.

- Hyderabad is recognised as the leading IT hubs globally; the city houses more than 1500 IT and ITES companies.
- IT SEZs -53
- State contributes 11.6% of India's IT exports in 2019-20
- Accounts for 23.5% of India's IT export growth 2019-20
- T-HUB Phase-II, Hyderabad Built-up Area: 3.72 L sft; India's Largest start-up Incubator
- Plug & play facility in E city Built-up Area: 1.8 lakh sft With an integrated testing & training facility
- T-Works, Hyderabad Built-up Area: 78,000 sft – Phase 1; India's largest prototyping facility



- Image Tower, Hyderabad Built-up Area: 460,000 sft A one of its kind plug & Play Facility for Animation and Gaming companies. Expected completion: March 2023
- Incubation Centre, Warangal(U) Built-up Area: 15000 sft Plug & Play Facility for startups.

LIFE SCIENCES - HYDERABAD

Life Sciences sector continues to continue to consolidate the position of the State as one of the most important life sciences hubs in the world

International Companies including **Sandoz Research and Development Laboratories**, **Chemo India Formulations**, **Jamp India Pharmaceutical**, **Ferring Laboratories** and **Tokyo Chemical Industr**y, among others have established their footprint in the State.

Telangana is the leading contributor of Pharma Exports from the Country since 2015-16 (28% share in FY 2020-21)

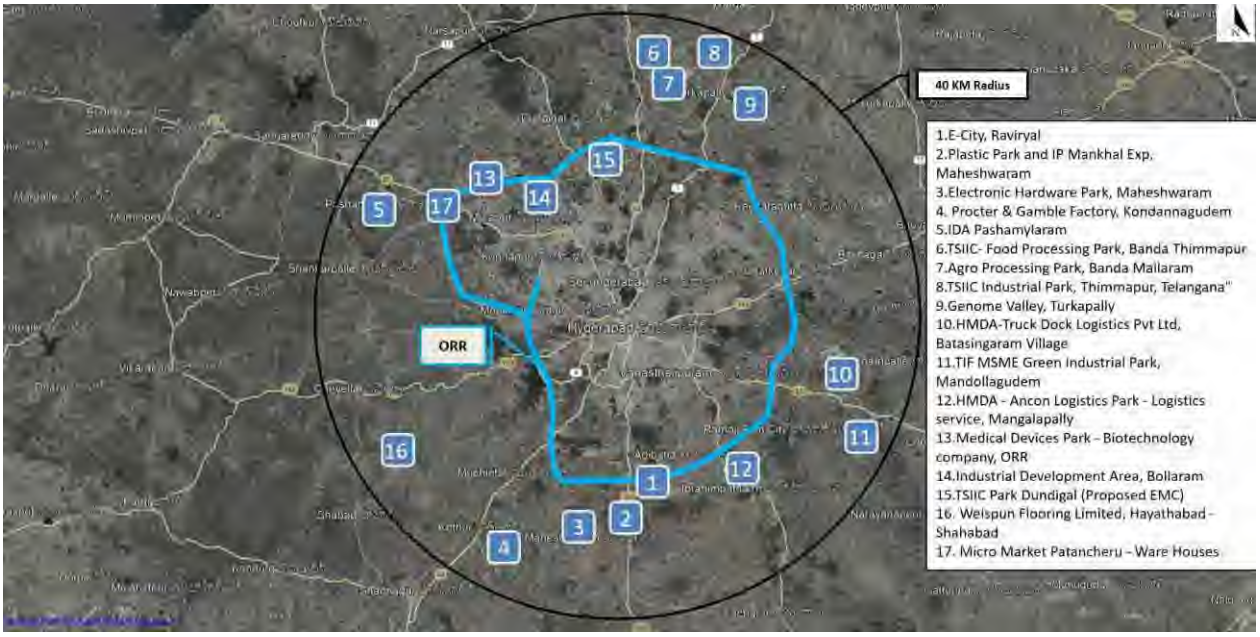
Hyderabad Pharma City: world's largest integrated pharma cluster spread over approx 19,333 acres. The cluster has been recognized as National Investment and Manufacturing Zone (NIMZ) by Government of India, given its national and international importance.

Genome Valley: Built over 1200 acres in three phases, more land is being added to the cluster along with more ready built labspace (more than 2 Million square foot) Genome Valley houses more than 200 companies with a scientific workforce of about 15,000 professionals.

Medical Devices Park: Spread across 302 acres, 105 acres have already been allotted (more than 60 percent of the allottable land) to 40 companies. The park will house Asia's largest Stent manufacturing facility established by Sahajanand Medical Technologies



There is considerable industrial development on peripheries of Hyderabad as well. ORR being a fast connectivity has provided boost to such development. Following figure marks such developments on periphery of Hyderabad.

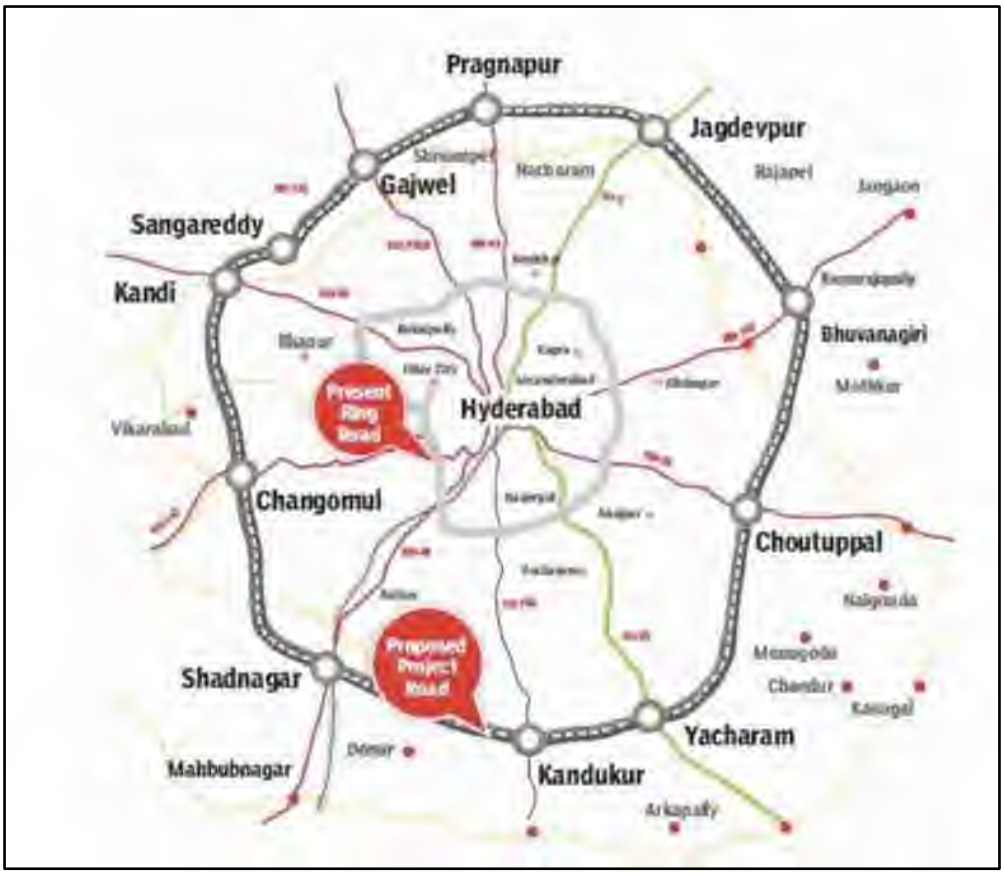


All above discussion indicates that Hyderabad is going to witness a good growth in near decade and would sustain on that.

Proposed Regional Ring Road (RRR)- Hydearabad

- A 8-lane expressway stretched over 340 km of length with a project cost Rs 17,000 crore is proposed to strengthen the existing roads connecting major national highways passing through Telangana, easing the regional road connectivity.
- The road will be developed at par with international standards over a stretch from Sangareddy to Kandi via Narsapur, Toopran, Gajwel, Jagdevpur, Bhongir, Choutuppal, Ibrahimpatnam, Chevella and Shankarapalli

- The RRR will have amenities such as parking, food courts, toilets, parks, children play area, malls, and drinking water facilities.
- The RRR will connect the surrounding districts with Hyderabad and to the Industrial Clusters, covering 40 of the region's population and will link 20 towns with National Highways.



Source: Pink-Book.pdf (telangana.gov.in)

As Proposed Regional Ring Road (RRR) would have faster connectivity to all important urban/commercial establishment, development of RRR has potential to alter focus of growth around Hyderabad Metropolitan Region. Hence may result in having some negative impact on future growth of traffic on ORR. Futuristic growth on ORR has been accordingly modify to this effect.

3.4 Trend Analysis

Time series data of vehicle Registered in state of concerned states is taken from respective authorized websites and the same is used as the base data for analysis of growth.

Growth of vehicle traffic depends on type of vehicle. Traffic growth on any highway typically depends on number of economic parameters like

- Per Capita Income
- Net State Domestic Product (NSDP)
- Population

Elasticity model of growth projection is one of the most widely acceptable methods for traffic forecast. Same is recommended in IRC: 108-2015-Guidelines for Traffic Prediction on Rural Highways.

Following can be pair of vehicle type and independent variable for elasticity modelling of growth.

- Car / Jeep – Par Capita Income
- Bus / Minibus – Population
- Goods Vehicle – NSDP

Same is used in analysis below.

Vehicle Registered at the end of financial year in the state of Delhi, Haryana and Uttar Pradesh is given in tables below and also compared with the growth rate achieved in terms of vehicle registered on all India basis.

3.5 Estimation of Traffic Demand Elasticity

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to change in the corresponding indicator selected. Hence, in order to estimate the elasticity of traffic demand, it is necessary to establish the relationship between the growth in number of given categories of vehicle with one of the economic variables considered, such as NSDP, per capita income and population growth.

As per IRC: 108-1996 the model for estimating elasticity index for the project corridor is of the following form and is as given below:

$$Log(P) = k \times Log(EI) + A$$

Where,

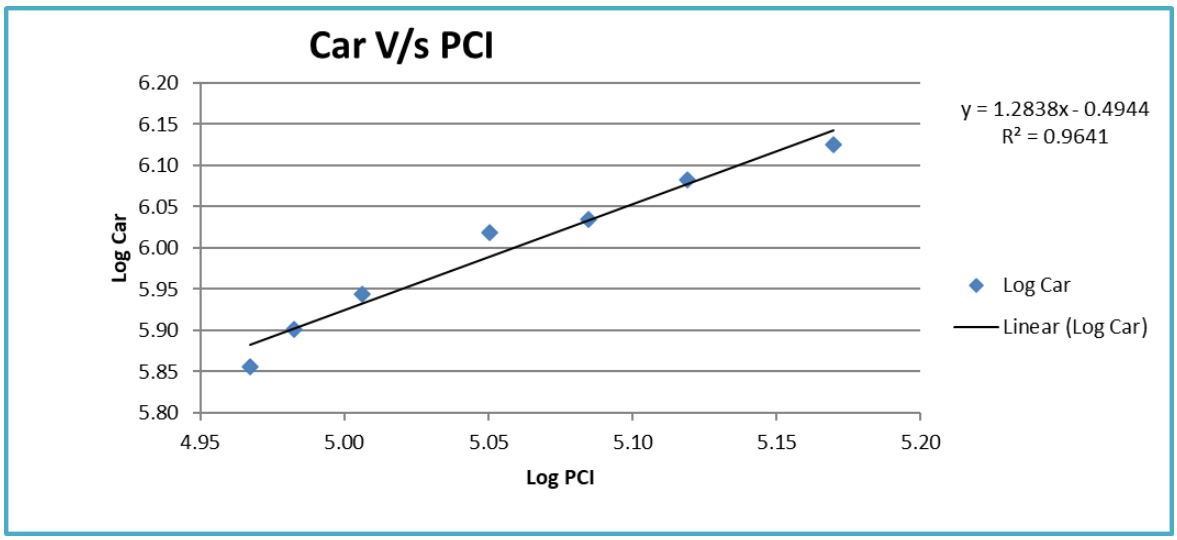
P = *Number of Vehicles (Mode wise)*

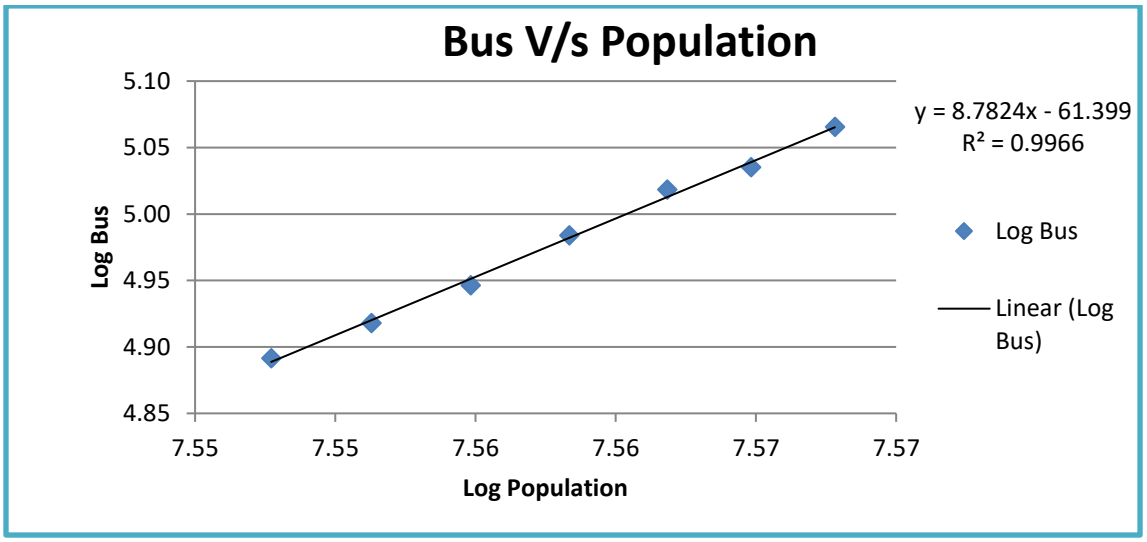
EI = *Economic Indicator*

A = *Regression constant*

k = *Elasticity coefficient (Regression coefficient)*

The elasticity for car and bus (passenger vehicles) is calculated based on the Population and Per Capita Domestic Product (PCDP) and the elasticity for trucks is calculated based on the Net State Domestic Product (NSDP). The graphical presentation of the elasticity is presented in figures below:





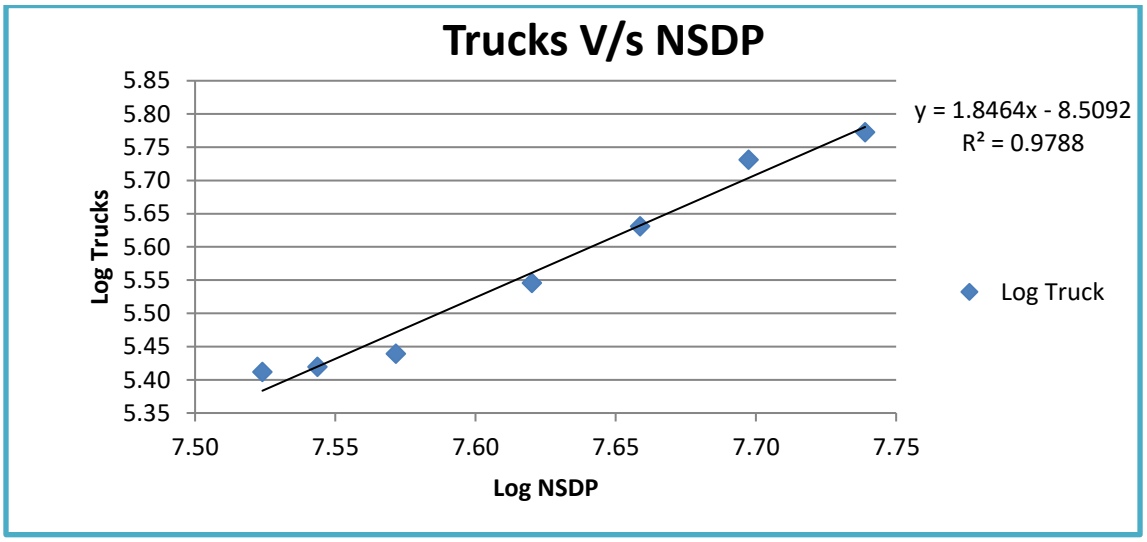
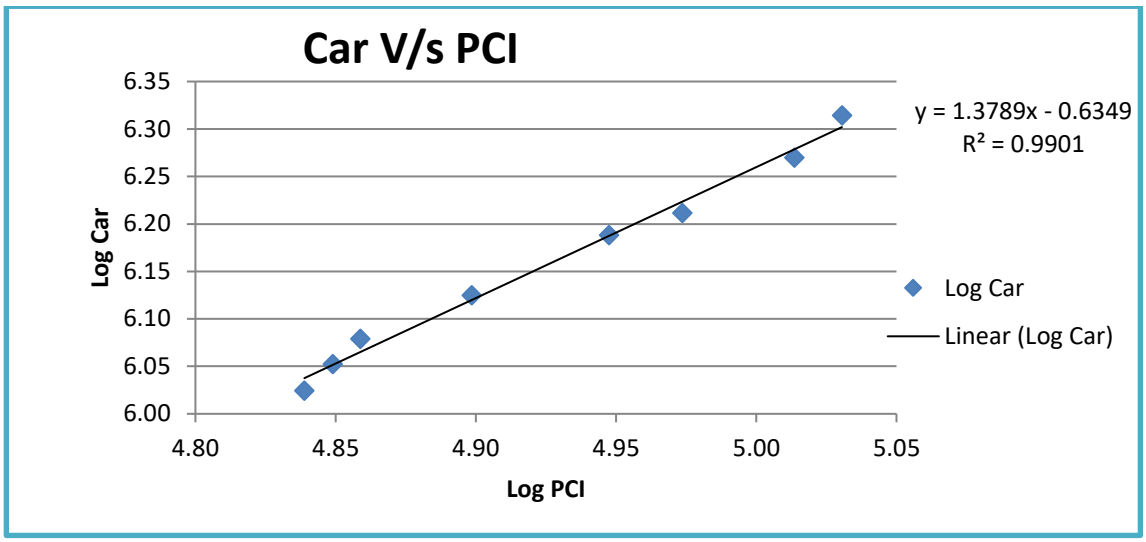
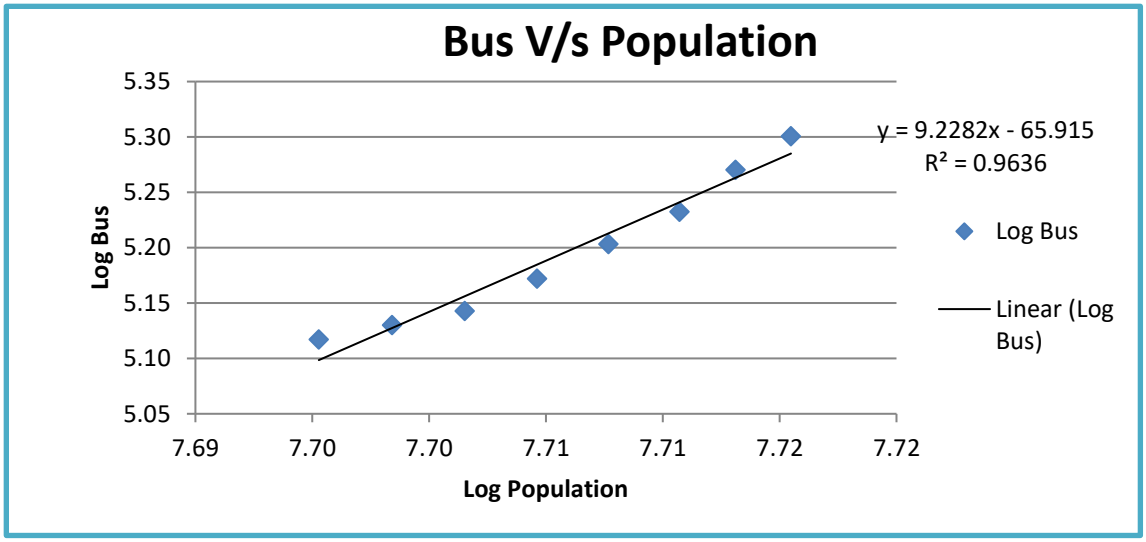


Figure 3-1: Elasticity by Graphical Extrapolation for Telangana





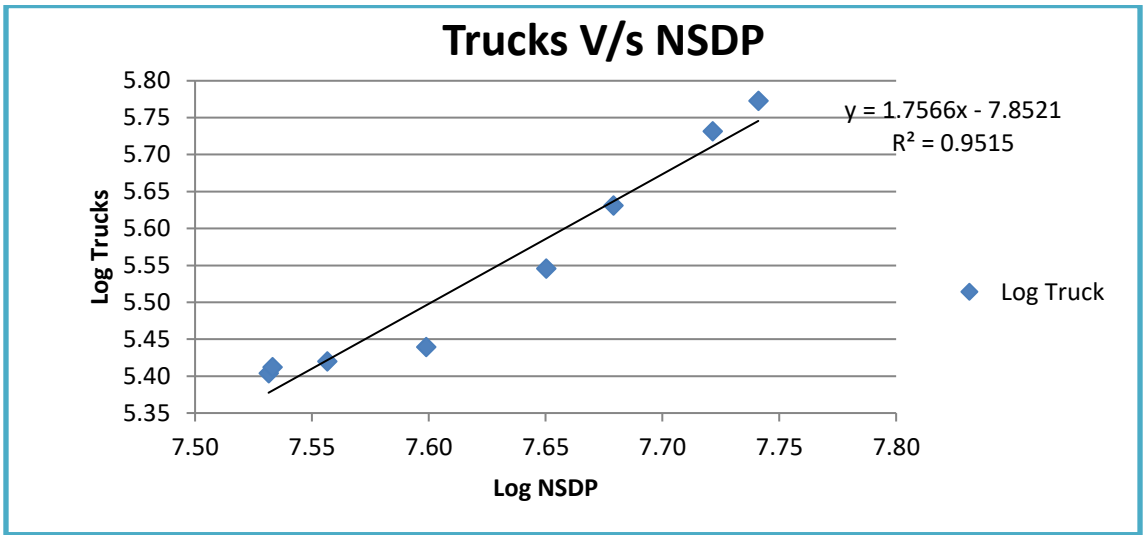
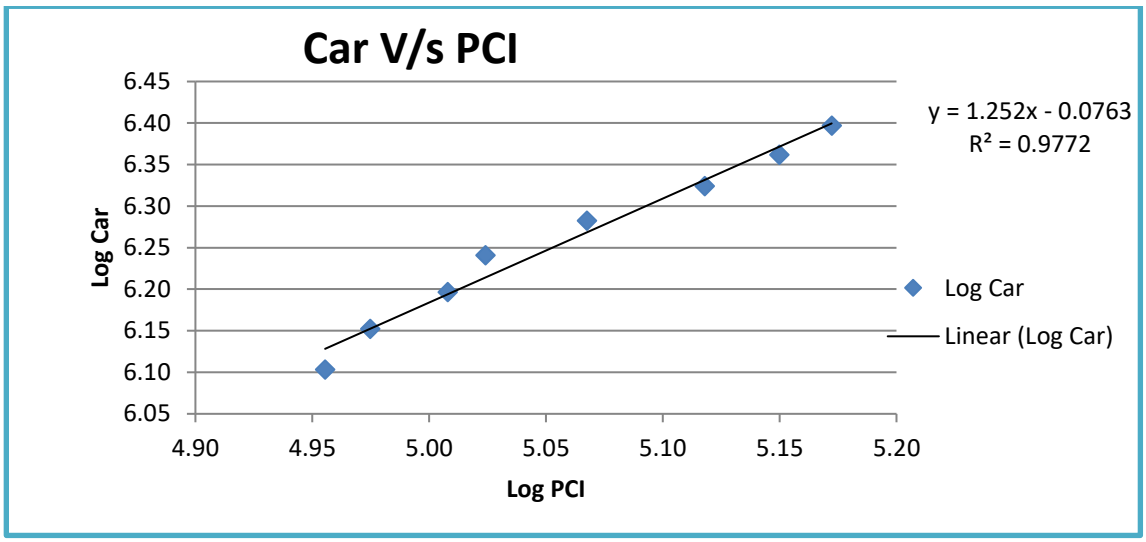
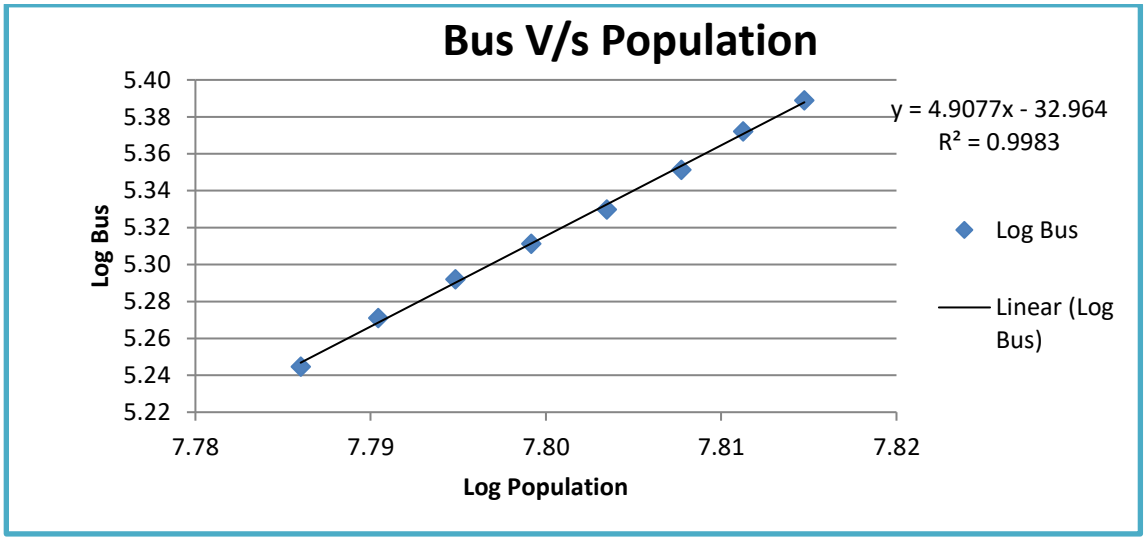


Figure 3-2: Elasticity by Graphical Extrapolation for Andra pradesh





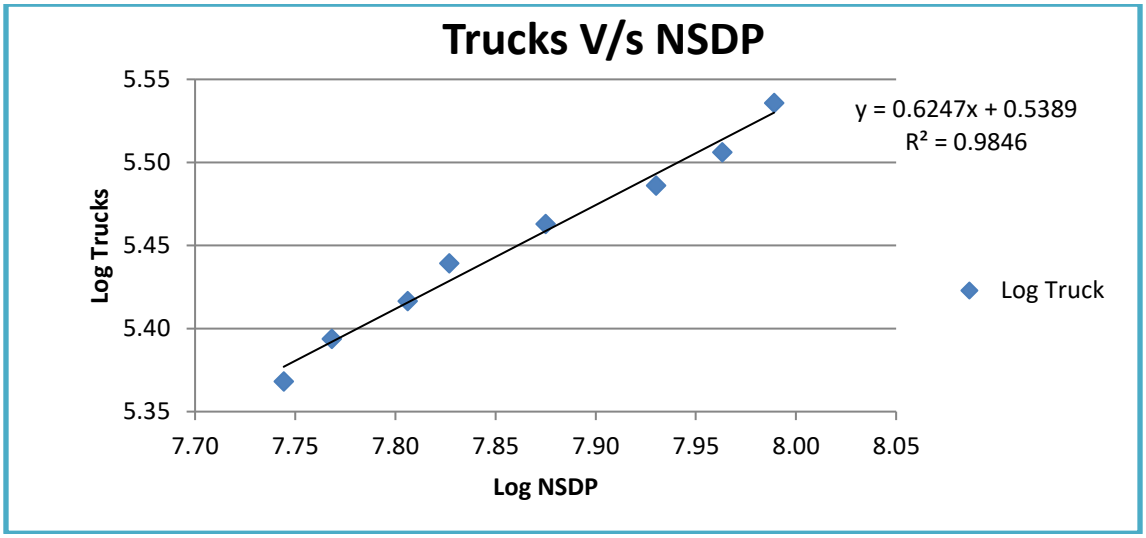


Figure 3-3: Elasticity by Graphical Extrapolation for Karnataka

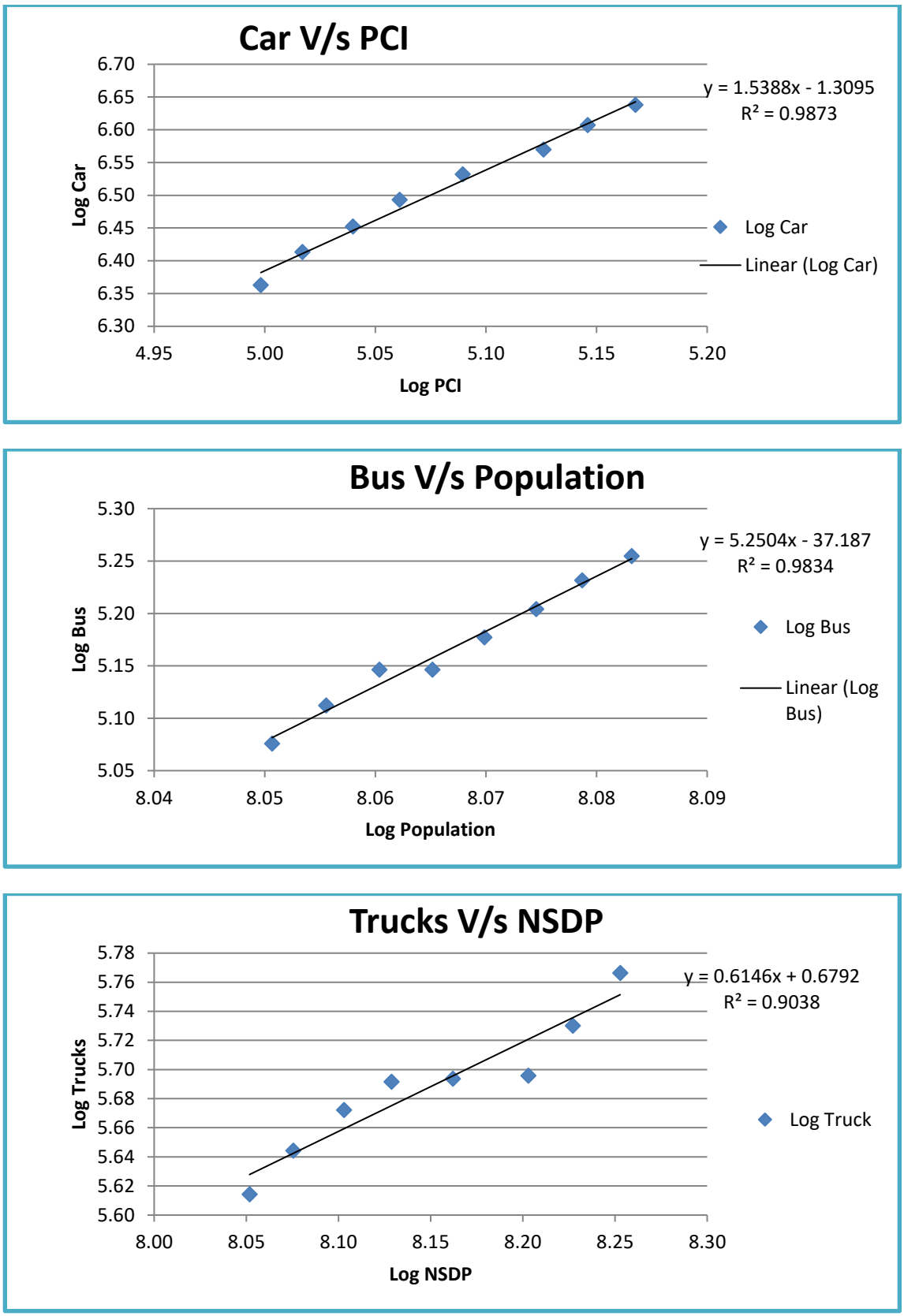


Figure 3-4: Elasticity by Graphical Extrapolation for Maharashtra

It shall be noted that the growth rates for various modes are not same as they are influenced by different parameters. In other words, whilst the growth of the passenger vehicles (cars, Jeeps, two wheelers and even buses) could be attributed to the growth

in the per capita income, population growth and vehicle registration growth, the growth of the LCV, Trucks, Multi Axle Trucks are found to be influenced with factors including the industrial production and growth of the National or state Domestic products.

For establishing the elasticity equations, details regarding NSDP/GDP, per capita income, population growth and registered vehicles in the state have been collected for the past few years and are presented in the Annexure. Based on this data, Log-Log regression curve fits have been developed for each type of vehicle with the most suitable parameters and the elasticity values obtained.

The results of these analyses for the good fit as reflected by R^2 values are presented in the table below.

Table 3-1 : Results of Regression analysis

State	Vehicle Category	Independent Variable	Regression Equation	R Square	Elasticity Coefficient
TELANGANA	Car/Jeep	PCI	y = 1.2838x - - 0.4944	R² = 0.9641	1.2838
	Bus	Population	y = 8.7824x - - 61.3985	R² = 0.9966	8.7824
	Truck	NSDP	y = 1.8464x - - 8.5092	R² = 0.9788	1.8464
ANDRAPRADESH	Car/Jeep	PCI	y = 1.3789x - - 0.6349	R² = 0.9901	1.3789
	Bus	Population	y = 9.2282x - - 65.9151	R² = 0.9636	9.2282
	Truck	NSDP	y = 1.7566x - - 7.8521	R² = 0.9515	1.7566
KARNATAKA	Car/Jeep	PCI	y = 1.252x - - 0.0763	R² = 0.9772	1.252
	Bus	Population	y = 4.9077x - - 32.9642	R² = 0.9983	4.9077
	Truck	NSDP	y = 0.6247x - 0.5389	R² = 0.9846	0.6247
MAHARASHTRA	Car/Jeep	PCI	y = 1.5388x - - 1.3095	R² = 0.9873	1.5388
	Bus	Population	y = 5.2504x - - 37.1874	R² = 0.9834	5.2504
	Truck	NSDP	y = 0.6146x - 0.6792	R² = 0.9038	0.6146

However, considering factors such as proposed developments and other influencing economic factors moderated growth factors as listed below are considered. Change all tables.

3.6 Basis for arriving at growth rates.

Arriving at growth rates for each mode on particular road stretch is always a complex issue. Transportation planners before arriving at such growth rates have to have a comprehensive understanding of the various disciplines such as land use, economy,

automobile industry, anticipated changes in the region, traffic, and other related issues.

Giving due consideration to all the factors elaborated in the previous sections, three growth scenarios are suggested with a wide range of growth rates which are resilient and ready to respond to the changes in socio-economic conditions which are likely to influence the project corridor.

3.7 Growth of Economy and Projection of GDP in India and States

After witnessing a slowdown during previous years, the economy is expected to firm up further in coming years. The growth outlook for the Indian economy in the medium and long term remains upbeat and positive. Therefore, in this study, in base case scenario, it is assumed that a GDP growth rate of around 8% will be sustained up to the year 2028 and thereafter for every five-year period the GDP growth rate is reduced. Similarly other independent variables of Per Capita Income (PCI) and Population is growth is assumed. Following table shows summary of such assumption.

Table 3-2 : Growth of Independent Variables

Assumed Growth Rate of Independent Indicators							
Indicator	**2023-2028**	**2028-2033**	**2033-2038**	**2038-2043**	**2043-2048**	**2048-2053**	**2053-2058**
PCI	7.71%	6.71%	5.00%	4.50%	4.00%	3.50%	3.50%
Population	0.76%	0.71%	0.66%	0.61%	0.56%	0.51%	0.51%
NSDP	8.15%	6.15%	4.15%	3.15%	2.15%	1.15%	1.15%

3.7.1 Recommended Growth Rates of Traffic

Based on the above analysis and after giving due consideration to the entire listed factors, the following overall growth rates are recommended for each category of vehicle are as under.

Table 3-3: Recommended Growth Rates Pessimistic case

Category / Year	**2023-2028**	**2028-2033**	**2033-2038**	**2038-2043**	**2043-2048**	**2048-2053**	**2053-2058**
Car/Jeep/Van	6.81%	5.43%	3.63%	2.77%	2.01%	1.36%	1.36%
Bus	4.67%	4.26%	3.87%	3.49%	3.12%	2.76%	2.76%
Minibus	4.67%	4.26%	3.87%	3.49%	3.12%	2.76%	2.76%
LCV	3.02%	2.03%	1.16%	0.73%	0.35%	0.04%	0.04%
2- Axle	3.02%	2.03%	1.16%	0.73%	0.35%	0.04%	0.04%
3 - Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%
4 to6 Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%
7 and Above Axle	4.10%	2.79%	1.64%	1.05%	0.55%	0.13%	0.13%

Table 3-4: Recommended Growth Rates Most likely case

Category / Year	2023-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	7.06%	5.68%	3.88%	3.02%	2.26%	1.61%	1.61%
Bus	4.92%	4.51%	4.12%	3.74%	3.37%	3.01%	3.01%
Minibus	4.92%	4.51%	4.12%	3.74%	3.37%	3.01%	3.01%
LCV	3.27%	2.28%	1.41%	0.98%	0.60%	0.29%	0.29%
2- Axle	3.27%	2.28%	1.41%	0.98%	0.60%	0.29%	0.29%
3 - Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%
4 to6 Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%
7 and Above Axle	4.35%	3.04%	1.89%	1.30%	0.80%	0.38%	0.38%

Table 3-5: Recommended Growth Rates Optimistic case

Category / Year	2023-2028	2028-2033	2033-2038	2038-2043	2043-2048	2048-2053	2053-2058
Car/Jeep/Van	7.31%	5.93%	4.13%	3.27%	2.51%	1.86%	1.86%
Bus	5.17%	4.76%	4.37%	3.99%	3.62%	3.26%	3.26%
Minibus	5.17%	4.76%	4.37%	3.99%	3.62%	3.26%	3.26%
LCV	3.52%	2.53%	1.66%	1.23%	0.85%	0.54%	0.54%
2- Axle	3.52%	2.53%	1.66%	1.23%	0.85%	0.54%	0.54%
3 - Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%
4 to6 Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%
7 and Above Axle	4.60%	3.29%	2.14%	1.55%	1.05%	0.63%	0.63%

3.8 Traffic Forecast

3.8.1 AADT

In previous chapter base traffic matrix for all category of vehicles have been worked out and presented. This traffic is projected in future years of concession period. Thus, for every year there would be a 19X19 matrix of traffic of each category. It will be cumbersome to show all such tables here. Hence combined PCU in every year of all vehicles has been shown as traffic forecast. Details matrix of each category of vehicles has been placed at Annexure to this report.

3.9 Capacity Augmentation

As per provision of DCA capacity of NORR is 2,50,000 PCU. Capacity Augmentation would be required if traffic at any link exceed such capacity threshold. Following figure show base (2022-23) traffic on all links.



Figure 3-5: Link wise PCU Traffic Volume (Base Yr. 2022-23)

As can be seen from table below, some links exceed threshold values of 2.5 Lakh PCU in most likely and optimistic scenario. In pessimistic scenario, however, traffic on all links remains under threshold value Following table show summary traffic (PCU) on such links in three scenarios.

Table 3-6: Traffic Forecast in PCU (Exit)

Pessimistic Case

Total PCU	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	50664	53165	55785	57770	60650	63678	66126	68645	71306	74086	76969	78897	80888	82946	85075	87267	88915	90599	92328	94098	95914	97215	98536	99882	101252	102642	103529	104432	105345	106268	107206	108154
2 to 3	48763	51187	53714	55647	58438	61370	63736	66213	68792	71488	74285	76155	78082	80078	82144	84268	85872	87509	89189	90906	92668	93934	95220	96530	97862	99212	100074	100950	101836	102730	103639	104557
3 to 4	49044	51370	53810	55609	58283	61102	63322	65633	68030	70531	73122	74855	76638	78481	80381	82329	83801	85293	86823	88387	89991	91111	92249	93408	94586	95777	96508	97251	98001	98762	99531	100310
4 to 5	51055	53513	56075	57998	60813	63775	66129	68580	71120	73774	76526	78374	80275	82241	84271	86355	87918	89509	91139	92803	94510	95703	96914	98145	99395	100666	101454	102253	103062	103882	104711	105552
5 to 6	53823	56495	59286	61449	64514	67746	70332	73031	75833	78769	81816	83866	85976	88160	90417	92731	94477	96257	98086	99956	101870	103212	104576	105969	107381	108817	109725	110646	111577	112518	113469	114436
6 to 7	43206	45377	47674	49660	52192	54856	56997	59227	61553	63987	66519	68211	69950	71751	73604	75515	76958	78429	79939	81487	83070	84175	85299	86448	87612	88798	89557	90321	91095	91879	92672	93474
7 to 8	46728	49052	51467	53312	55964	58752	60991	63323	65751	68296	70939	72713	74545	76441	78384	80387	81882	83405	84965	86567	88210	89347	90500	91680	92878	94096	94878	95672	96474	97289	98109	98940
8 to 9	42680	44779	46928	48493	50853	53338	55329	57400	59559	61820	64166	65733	67351	69023	70738	72508	73831	75178	76557	77974	79428	80443	81470	82523	83590	84674	85361	86056	86759	87471	88190	88917
9 to 10	42361	44449	46604	48449	50822	53323	55325	57411	59588	61869	64239	65815	67441	69113	70822	72590	73910	75253	76632	78046	79493	80521	81563	82629	83707	84802	85486	86175	86875	87588	88306	89037
10 to 11	39793	41728	43727	45402	47598	49914	51759	53680	55680	57775	59945	61376	62853	64372	65924	67526	68717	69931	71179	72455	73758	74677	75609	76559	77521	78498	79107	79717	80338	80966	81600	82242
11 to 12	32352	34031	35742	37298	39185	41177	42779	44456	46202	48035	49958	51262	52607	53995	55420	56886	57968	59078	60217	61378	62566	63437	64323	65226	66143	67074	67664	68257	68863	69478	70099	70726
12 to 13	44537	46864	49294	51393	54073	56902	59196	61599	64101	66726	69471	71329	73247	75218	77251	79343	80918	82528	84180	85865	87591	88841	90113	91411	92727	94067	94925	95793	96674	97569	98472	99389
13 to 14	40137	42305	44541	46653	49126	51743	53878	56115	58450	60903	63474	65219	67023	68882	70797	72766	74263	75801	77376	78985	80635	81843	83070	84323	85596	86898	87744	88603	89477	90365	91262	92173
14 to 15	38535	40604	42747	44763	47130	49640	51712	53881	56141	58510	60989	62659	64388	66170	68006	69894	71318	72781	74278	75810	77379	78532	79706	80902	82120	83363	84180	85009	85851	86708	87575	88451
15 to 16	35816	37758	39778	41667	43905	46284	48259	50323	52477	54743	57113	58732	60406	62135	63917	65750	67138	68561	70022	71514	73046	74178	75330	76506	77704	78926	79740	80566	81402	82252	83111	83982
16 to 17	78700	83149	87863	92122	97388	102969	107596	108829	113719	118849	124220	127932	131771	135752	139868	144113	147382	150728	154170	157695	161322	163995	166717	169493	172323	175210	177162	179144	181154	183189	185255	187347
17 to 18	100305	105963	111937	117485	124156	131221	137080	139878	146138	152700	159562	164309	169216	174300	179559	184983	189159	193435	197837	202347	206983	210391	213860	217395	221001	224677	227151	229662	232209	234785	237401	240050
18 to 19	96142	101705	107576	113058	119630	126597	132402	135514	141744	148278	155121	159873	164782	169871	175132	180566	184766	189070	193500	198039	202705	206153	209662	213246	216896	220618	223145	225708	228305	230935	233604	236309
19 to 1	59978	63095	66370	69046	72664	76474	79590	82455	85836	89366	93043	95518	98071	100714	103447	106261	108390	110566	112807	115101	117454	119157	120891	122657	124453	126278	127471	128685	129908	131145	132403	133675
Total	994620	1046584	1100912	1147271	1207380	1270857	1322534	1366187	1422015	1480499	1541474	1582826	1625505	1669639	1715154	1762033	1797576	1833906	1871218	1909408	1948586	1976860	2005601	2034927	2064740	2095088	2114856	2134895	2155200	2175774	2196610	2217716

In Pessimistic scenario, no link is exceeding threshold value of PCU 2,50,000 throughout concession period.

Most Likely Case

Total PCU	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	50664	53292	56032	58165	61202	64418	67051	69772	72656	75663	78814	81009	83276	85628	88051	90542	92487	94483	96525	98622	100770	102376	104007	105669	107366	109094	110289	111507	112739	113992	115260	116555
2 to 3	48763	51305	53955	56033	58975	62087	64634	67293	70085	72995	76047	78176	80368	82649	85000	87419	89305	91238	93217	95248	97327	98884	100464	102073	103717	105391	106548	107726	108922	110136	111364	112616
3 to 4	49044	51490	54050	55990	58815	61793	64189	66687	69300	72030	74881	76851	78874	80972	83132	85355	87072	88830	90628	92475	94358	95746	97159	98590	100057	101543	102570	103613	104674	105745	106825	107925
4 to 5	51055	53629	56320	58389	61353	64486	67023	69663	72424	75311	78321	80420	82583	84821	87128	89498	91323	93195	95107	97075	99084	100555	102050	103570	105125	106704	107806	108926	110062	111211	112371	113552
5 to 6	53823	56635	59559	61874	65111	68536	71330	74242	77287	80470	83791	86121	88520	91001	93564	96207	98244	100335	102474	104672	106918	108579	110271	111987	113747	115534	116774	118035	119315	120610	121920	123251
6 to 7	43206	45497	47896	50014	52671	55490	57811	60224	62746	65388	68148	70065	72046	74091	76201	78370	80049	81776	83545	85366	87230	88611	90014	91442	92906	94390	95418	96462	97520	98592	99678	100779
7 to 8	46728	49182	51713	53687	56464	59417	61842	64365	66999	69746	72619	74617	76684	78815	81011	83268	85030	86841	88693	90598	92549	93976	95424	96896	98408	99938	100984	102049	103131	104228	105340	106470
8 to 9	42680	44905	47164	48850	51327	53963	56119	58362	60702	63139	65683	67453	69283	71171	73118	75119	76685	78293	79938	81632	83365	84635	85921	87232	88573	89933	90863	91810	92769	93745	94734	95737
9 to 10	42361	44588	46848	48815	51310	53966	56144	58405	60767	63228	65795	67573	69410	71302	73253	75259	76812	78403	80034	81717	83438	84709	85998	87312	88654	90016	90948	91892	92848	93817	94803	95801
10 to 11	39793	41864	43958	45756	48066	50520	52526	54607	56781	59040	61393	63023	64706	66437	68227	70065	71479	72928	74413	75939	77500	78647	79807	80992	82202	83430	84262	85108	85963	86830	87710	88603
11 to 12	32352	34127	35921	37573	39558	41670	43418	45246	47160	49148	51239	52706	54226	55788	57400	59057	60339	61648	62991	64388	65824	66869	67926	69009	70118	71243	72028	72824	73632	74449	75282	76127
12 to 13	44537	46995	49534	51761	54586	57582	60059	62658	65380	68220	71201	73287	75447	77678	79984	82356	84195	86074	88001	89998	92051	93571	95115	96690	98306	99946	101084	102238	103410	104598	105806	107031
13 to 14	40137	42420	44746	46971	49576	52345	54649	57069	59610	62263	65052	67016	69050	71146	73318	75562	77302	79081	80913	82812	84761	86218	87702	89218	90767	92342	93450	94572	95711	96867	98042	99232
14 to 15	38535	40729	42963	45091	47601	50259	52484	54813	57258	59810	62489	64378	66334	68349	70437	72595	74273	75993	77760	79587	81463	82851	84266	85711	87186	88687	89762	90849	91953	93075	94213	95367
15 to 16	35816	37875	39977	41969	44333	46844	48963	51184	53514	55950	58512	60321	62196	64134	66142	68222	69843	71509	73220	74991	76813	78174	79564	80978	82425	83899	84961	86033	87122	88231	89350	90488
16 to 17	78700	83373	88302	92807	98350	104246	109197	110780	116056	121589	127411	131546	135827	140271	144877	149645	153429	157326	161321	165435	169664	172882	176167	179514	182940	186441	188958	191517	194116	196761	199442	202173
17 to 18	100305	106239	112465	118315	125332	132789	139045	142271	148995	156054	163481	168777	174262	179948	185835	191924	196759	201745	206859	212121	217530	221633	225819	230086	234454	238914	242110	245357	248653	252008	255409	258869
18 to 19	96142	101953	108064	113836	120731	128065	134255	137773	144459	151475	158874	164163	169642	175328	181223	187321	192169	197158	202277	207548	212971	217106	221326	225636	230047	234555	237795	241090	244437	247840	251292	254808
19 to 1	59978	63248	66666	69519	73330	77372	80717	83822	87468	91280	95285	98101	101011	104027	107142	110350	112850	115421	118051	120754	123527	125605	127722	129872	132073	134317	135893	137497	139123	140777	142452	144162
Total	994620	1049340	1106129	1155413	1218686	1285844	1341451	1389232	1449642	1512796	1579030	1625597	1673742	1723552	1775038	1828128	1869641	1912272	1955963	2000975	2047139	2081623	2116718	2152473	2189067	2226313	2252497	2279101	2306094	2333508	2361287	2389542

Table 3-7: Link wise Capacity Augmentation required for Most likely Case.

Sr.no.	Link No.	Capacity Augmentation (Year)
1	17 to 18	2051-52
2	18 to 19	2052-53

Optimistic Case

Total PCU	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	50664	53431	56324	58634	61848	65264	68089	71014	74114	77357	80761	83226	85773	88400	91115	93923	96176	98489	100879	103326	105824	107744	109702	111708	113767	115867	117420	119015	120633	122274	123947	125653
2 to 3	48763	51438	54242	56487	59596	62903	65626	68489	71489	74631	77932	80329	82800	85348	87982	90701	92884	95130	97447	99817	102237	104106	106008	107958	109958	111996	113501	115047	116613	118204	119821	121469
3 to 4	49044	51625	54347	56457	59440	62598	65187	67896	70729	73683	76785	78999	81281	83637	86072	88587	90594	92656	94786	96960	99176	100871	102596	104360	106163	108000	109342	110708	112095	113500	114932	116396
4 to 5	51055	53765	56615	58860	61992	65316	68041	70894	73875	76991	80266	82611	85031	87528	90111	92788	94943	97154	99429	101751	104118	105926	107766	109647	111571	113534	114958	116407	117878	119370	120892	122446
5 to 6	53823	56763	59859	62372	65787	69417	72405	75533	78815	82251	85849	88443	91121	93888	96748	99696	102088	104545	107076	109660	112305	114322	116377	118485	120640	122841	124438	126063	127716	129395	131110	132859
6 to 7	43206	45595	48126	50394	53208	56187	58667	61270	63993	66839	69820	71964	74177	76466	78837	81287	83278	85319	87417	89559	91755	93424	95134	96889	98680	100509	101822	103157	104516	105895	107305	108744
7 to 8	46728	49280	51952	54088	57046	60176	62761	65487	68334	71300	74407	76644	78950	81336	83800	86343	88404	90522	92695	94918	97198	98927	100697	102517	104384	106287	107650	109038	110451	111883	113350	114843
8 to 9	42680	44987	47367	49204	51844	54640	56934	59345	61865	64490	67247	69233	71285	73410	75606	77871	79699	81574	83500	85470	87488	89019	90588	92198	93851	95536	96747	97980	99235	100509	101813	103139
9 to 10	42361	44668	47059	49166	51828	54639	56965	59396	61945	64600	67379	69380	71446	73580	75784	78058	79893	81772	83700	85678	87707	89225	90780	92377	94012	95679	96900	98138	99399	100676	101983	103311
10 to 11	39793	41933	44151	46067	48525	51119	53260	55497	57838	60278	62830	64668	66565	68524	70546	72630	74304	76017	77776	79577	81422	82795	84203	85648	87125	88631	89730	90845	91978	93125	94299	95494
11 to 12	32352	34181	36073	37831	39944	42181	44051	46016	48072	50228	52486	54114	55792	57525	59317	61166	62689	64250	65857	67501	69181	70441	71732	73053	74406	75788	76790	77812	78847	79895	80966	82058
12 to 13	44537	47088	49758	52123	55105	58268	60922	63706	66624	69690	72911	75244	77646	80134	82706	85358	87518	89735	92016	94356	96753	98587	100459	102376	104336	106339	107804	109297	110811	112348	113914	115509
13 to 14	40137	42497	44955	47315	50074	53001	55472	58069	60795	63655	66665	68850	71104	73441	75859	78359	80405	82510	84672	86892	89169	90918	92703	94531	96404	98318	99728	101164	102620	104104	105616	107160
14 to 15	38535	40797	43158	45411	48050	50847	53223	55714	58331	61070	63955	66061	68238	70490	72822	75230	77189	79204	81273	83398	85577	87246	88949	90692	92480	94308	95650	97018	98408	99824	101265	102740
15 to 16	35816	37941	40153	42255	44743	47382	49639	52009	54501	57111	59860	61876	63961	66123	68364	70679	72573	74518	76519	78575	80684	82302	83956	85651	87390	89170	90490	91835	93206	94599	96016	97468
16 to 17	78700	83571	88725	93487	99305	105517	110802	112742	118383	124320	130585	135162	139909	144838	149948	155245	159571	164019	168613	173346	178207	182024	185925	189919	194025	198215	201362	204578	207849	211178	214569	218028
17 to 18	100305	106475	112993	119180	126546	134411	141086	144761	151961	159539	167519	173371	179437	185728	192254	199020	204552	210242	216113	222159	228367	233236	238217	243317	248549	253898	257904	261997	266168	270409	274733	279149
18 to 19	96142	102183	108570	114662	121892	129606	136197	140157	147297	154818	162758	168593	174649	180929	187451	194215	199757	205460	211350	217418	223652	228540	233536	238654	243907	249278	253328	257466	261679	265966	270329	274784
19 to 1	59978	63396	66986	70046	74057	78322	81893	85248	89162	93263	97571	100704	103948	107299	110765	114357	117254	120228	123300	126457	129680	132163	134698	137294	139958	142679	144689	146747	148846	150974	153143	155355
Total	994620	1051610	1111408	1164035	1230824	1301787	1361216	1413238	1478119	1546109	1617584	1669467	1723109	1778619	1836082	1895508	1943766	1993339	2044414	2096815	2150496	2191811	2234024	2277270	2321601	2366869	2400250	2434308	2468945	2504123	2540000	2576600

Table 3-8: Link wise Capacity Augmentation required for Optimistic Case

Sr.no.	Link No.	Capacity Augmentation (Year)
1	17 to 18	2047-48
2	18 to 19	2048-49

CHAPTER 4

FORECAST OF TOLL REVENUE

4.1 General

This chapter presents the estimates of traffic forecast, tolling categories, tolling rate calculations and toll revenue of the project.

4.2 Toll Rate Guidelines

Toll rates at NORR are governed by "Nehru Outer Ring Road Hyderabad (Toll) Rules -2012 issued by Municipal Administration and Urban Development Department / Hyderabad Metropolitan Area Development Authority and Hyderabad Growth Corridor Limited. This policy was recently amended by circular dated 12th January 2023.

The policy is similar to NHAI toll rate policy. Basic rate and rate revision policy same as NHAI Policy. The basic per km rate however have been enhanced for categories as under.

Sl. No.	Vehicle types	Enhancement factor
1	Cars/ Jeep/ Van/ LMV/ SUV/ MPV	50%
2	LCV/ Mini Bus	50%
3	Bus/ 2-axle Truck	27%
4	3-axle commercial vehicles	50%
5.	Heavy Construction Machinery/ Earth Moving Equipment/ 4/5/6 axle trucks	50%
6.	Oversized vehicles (7 or more axles)	50%

Figure 4-1: Base Rate (Per Km) enhancement as per NORR amendment Policy

In amendment of policy provision of penalty for entering to fast tag lane without having valid fast tag and also for overloading of vehicles has been added. Penalty for fast tag lane violation is double the normal fee and overloaded vehicles would have to pay 10 times the toll rate for category. These are similar to NHAI policy.

4.2.1 Discounts

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

- Local discount for non-commercial vehicle owner with in 20 km of toll plaza is not included in schedule M.

4.2.2 Travel Passes

As per the Fee Notification (Schedule-R) fee discounts shall be provided to project users as under

1. Monthly Pass: For frequent user's monthly pass would have not more than 50 trips per month at 2/3rd rate
2. Daily Pass (for Return Trip): A 75% discount will be offered on the return trip.
3. Single Journey: Full single journey toll would be charged to this category of vehicles who are infrequent travellers or whose frequency does not yield any discount from the above categories.

4.3 Segmentation of traffic

It was confirmed from OD and fats tag date that monthly pass holder traffic is negligible. There are return passes though. Traffic segmentation for return pass has been done on the basis of fast tag data provided by HMDA as this is more reliable. Following table show % of return passes for each category of vehicle at respective toll plaza.

Table 4-1 : Segmentation share of Return Journey Traffic (Fast Tag)

Toll Name	Kokapet	Edulanagulapally	Patancheru	Sultanpur	Dindigal/ Saragudem	Medchal	Shamirpet	Keesara	Ghatkesar	Tarampitpet	Pedda Amberpet	Bongulu ru	Raviryal	Tukkuguda	Pedda Golconda	Shamshabad	Rajendra Nagar	TSPA	Nanakramguda
Type of Vehicle	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Car/Jeep/Van/Light Motor Vehicle	19.06%	19.23%	18.38%	17.09%	18.82%	18.27%	17.89%	17.90%	17.84%	17.27%	13.39%	18.20%	17.48%	17.93%	17.46%	21.35%	19.36%	22.96%	21.55%
Light Commercial Vehicle / Light Good Vehicle or Mini Bus	22.76%	23.18%	20.16%	20.25%	20.17%	18.05%	19.89%	20.06%	18.50%	17.58%	14.46%	19.19%	20.62%	19.89%	14.88%	16.29%	20.06%	21.99%	22.65%
Bus / Truck (Two Axles)	17.45%	13.58%	11.45%	16.42%	18.16%	10.32%	17.82%	21.50%	21.22%	18.85%	10.35%	15.66%	18.53%	15.36%	13.13%	11.55%	11.85%	17.50%	25.67%
Three Axle Commercial Vehicles	30.68%	30.08%	19.76%	24.02%	18.84%	8.05%	15.96%	21.48%	18.58%	20.55%	8.39%	16.18%	24.52%	21.53%	16.24%	7.80%	18.15%	25.81%	21.41%
Multi Axle Vehicle (MAV) (Four to Six Axles) / Heavy Construction Machinery (HCM)/Earth Moving Equipment (EME)	22.33%	18.01%	11.13%	15.45%	15.90%	6.60%	12.54%	15.18%	15.00%	18.25%	9.75%	9.79%	20.03%	20.15%	11.08%	6.48%	15.82%	14.35%	18.01%
Oversized Vehicle (Seven or More Axles)	1.82%	0.00%	3.82%	8.00%	11.48%	7.67%	10.12%	8.79%	6.24%	10.00%	1.60%	0.00%	0.00%	9.05%	10.00%	3.92%	9.00%	7.50%	14.52%

Table 4-2 : Segmentation Share of Single Journey Traffic (Fat Tag)

Toll Name	Kokapet	Edula nagulapally	Patancheru	Sultanpur	Dindigal/ Saragudem	Medchal	Shamirpet	Keesara	Ghatkesar	Tarampitpet	Pedda Amberpet	Bongulu ru	Raviryal	Tukkugu da	Pedda Golcond a	Shamsh abad	Rajendr a Nagar	TSPA	Nanakram guda
Type of Vehicle	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Car/Jeep/Van/Light Motor Vehicle	80.94%	80.77%	81.62%	82.91%	81.18%	81.73%	82.11%	82.10%	82.16%	82.73%	86.61%	81.80%	82.52%	82.07%	82.54%	78.65%	80.64%	77.04%	78.45%
Light Commercial Vehicle / Light Good Vehicle or Mini Bus	77.24%	76.82%	79.84%	79.75%	79.83%	81.95%	80.11%	79.94%	81.50%	82.42%	85.54%	80.81%	79.38%	80.11%	85.12%	83.71%	79.94%	78.01%	77.35%
Bus / Truck (Two Axles)	82.55%	86.42%	88.55%	83.58%	81.84%	89.68%	82.18%	78.50%	78.78%	81.15%	89.65%	84.34%	81.47%	84.64%	86.87%	88.45%	88.15%	82.50%	74.33%
Three Axle Commercial Vehicles	69.32%	69.92%	80.24%	75.98%	81.16%	91.95%	84.04%	78.52%	81.42%	79.45%	91.61%	83.82%	75.48%	78.47%	83.76%	92.20%	81.85%	74.19%	78.59%
Multi Axle Vehicle (MAV) (Four to Six Axles) / Heavy Construction Machinery (HCM)/Earth Moving Equipment (EME)	77.67%	81.99%	88.87%	84.55%	84.10%	93.40%	87.46%	84.82%	85.00%	81.75%	90.25%	90.21%	79.97%	79.85%	88.92%	93.52%	84.18%	85.65%	81.99%
Oversized Vehicle (Seven or More Axles)	98.18%	100.00%	96.18%	92.00%	88.52%	92.33%	89.88%	91.21%	93.76%	90.00%	98.40%	100.00%	100.00%	90.95%	90.00%	96.08%	91.00%	92.50%	85.48%

The above percentages have been used in the subsequent sections for segmenting the toll traffic for various discounts to be offered to frequent and local traffic. From OD also there is no substantial evidence of presence of monthly pass traffic. Hence same is ignored in current analysis.

4.4 Estimation of Tollable Traffic

The equivalent single journey tollable traffic inclusive of impact of monthly and daily passes for the toll plaza locations on NORR is worked out on the basis of above segmentation. Based on experience on various projects a flat DP / MP factor has been worked out as under.

Table 4-3 : Discount factor for Equivalent Single Journey Tollable Traffic

Toll Name	Kokapet	Edula nagulapally	Patancheru	Sultanpur	Dindigal/ Saragudem	Medchal	Shamirpet	Keesara	Ghatkesar	Taramptipet	Pedda Amberpet	Bonguluru	Raviryal	Tukkuguda	Pedda Golconda	Shamshabad	Rajendra Nagar	TSPA	Nanakramguda
Type of Vehicle	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Car/Jeep/Van/Light Motor Vehicle	0.952	0.952	0.954	0.957	0.953	0.954	0.955	0.955	0.955	0.957	0.967	0.955	0.956	0.955	0.956	0.947	0.952	0.943	0.946
Light Commercial Vehicle / Light Good Vehicle or Mini Bus	0.943	0.942	0.950	0.949	0.950	0.955	0.950	0.950	0.954	0.956	0.964	0.952	0.948	0.950	0.963	0.959	0.950	0.945	0.943
Bus / Truck (Two Axles)	0.956	0.966	0.971	0.959	0.955	0.974	0.955	0.946	0.947	0.953	0.974	0.961	0.954	0.962	0.967	0.971	0.970	0.956	0.936
Three Axle Commercial Vehicles	0.923	0.925	0.951	0.940	0.953	0.980	0.960	0.946	0.954	0.949	0.979	0.960	0.939	0.946	0.959	0.980	0.955	0.935	0.946
Multi Axle Vehicle (MAV) (Four to Six Axles) / Heavy Construction Machinery (HCM)/Earth Moving Equipment (EME)	0.944	0.955	0.972	0.961	0.960	0.984	0.969	0.962	0.963	0.954	0.976	0.976	0.950	0.950	0.972	0.984	0.960	0.964	0.955
Oversized Vehicle (Seven or More Axles)	0.995	1.000	0.990	0.980	0.971	0.981	0.975	0.978	0.984	0.975	0.996	1.000	1.000	0.977	0.975	0.990	0.978	0.981	0.964

4.5 Estimation of Toll Rates

As per the notification issued for toll policy the following Base rate of fee for the categories mentioned are applicable as base rate

Table 4-4 : Base Toll Rates 2007 - 08

Type of Vehicle	Base Rate of Fee / Km (in Rs.)
Car, Jeep, Van or Light Motor Vehicle	0.65
Light Commercial Vehicle, Light Goods Vehicle or Minibus	1.05
Bus or Truck (2 Axle)	2.2
Three Axle commercial vehicles	2.4
Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (4-6 axles)	3.45
Oversized Vehicle (seven or more axles)	4.2

These rates are then modified for as per procedure provided in guidelines of notification taking into account factors listed below

- These base rates have been enhanced by factors as mentioned in amendment to NORR Toll Policy dated 12th January 2023.

- Annual revision of fee rate - @3%
- Application of WPI
- a growth rate of 5% is assumed for WPI of future years
- As fee for structures is included in equivalent length at each toll plaza same shall not be considered separately

Applicable length for journey type at each toll plaza as per schedule M is given as under

Table 4-5 : Tollable Length

Name of IC		Kokapet	Neopolis	Edula nagulapally	Patancheru	Sultanpur	Mallampet	Dindigal/ Saragudem	Medchal	Shamirpet	Keesara	Ghatkesar	Taramptipet	Pedda Amberpet	Bonguluru	Raviryal	Tukkuguda	Pedda Golconda	Shamshabad	Rajendra Nagar	TSPA	Narsingi	Nanakramguda
	F/T	**1**	**1A**	**2**	**3**	**4**	**4A**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**18A**	**19**
Kokapet	**1**	0.000	1.700	11.900	20.500	29.000	35.000	40.700	50.200	59.100	71.000	74.112	65.862	58.962	46.712	39.612	34.112	25.862	19.512	11.262	7.962	3.612	7.252
Neopolis	**1A**	1.700	0.000	10.200	18.800	27.300	33.300	39.000	48.500	57.400	69.300	75.760	67.562	60.662	48.412	41.312	35.812	27.562	21.212	12.962	9.662	5.312	8.952
Edula nagulapally	**2**	11.900	10.200	0.000	8.600	17.100	23.100	28.800	38.300	47.200	59.100	67.650	75.850	70.862	58.612	51.512	46.012	37.762	31.412	23.162	19.862	15.512	19.152
Patancheru	**3**	20.500	18.800	8.600	0.000	8.500	14.500	20.200	29.700	38.600	50.500	59.050	67.250	74.150	67.212	60.112	54.612	46.362	40.012	31.762	28.462	24.112	27.752
Sultanpur	**4**	29.000	27.300	17.100	8.500	0.000	6.000	11.700	21.200	30.100	42.000	50.550	58.750	65.650	75.712	68.612	63.112	54.862	48.512	40.262	36.962	32.612	36.252
Mallampet	**4A**	35.000	33.300	23.100	14.500	6.000	0.000	5.700	15.200	24.100	36.000	44.550	52.750	59.650	71.900	74.612	69.112	60.862	54.512	46.262	42.962	38.612	42.252
Dindigal/ Saragudem	**5**	40.700	39.000	28.800	20.200	11.700	5.700	0.000	9.500	18.400	30.300	38.850	47.050	53.950	66.200	73.300	74.812	66.562	60.212	51.962	48.662	44.312	47.952
Medchal	**6**	50.200	48.500	38.300	29.700	21.200	15.200	9.500	0.000	8.900	20.800	29.350	37.550	44.450	56.700	63.800	69.300	76.062	69.712	61.462	58.162	53.812	57.452
Shamirpet	**7**	59.100	57.400	47.200	38.600	30.100	24.100	18.400	8.900	0.000	11.900	20.450	28.650	35.550	47.800	54.900	60.400	68.650	75.000	70.362	67.062	62.712	66.352
Keesara	**8**	71.000	69.300	59.100	50.500	42.000	36.000	30.300	20.800	11.900	0.000	8.550	16.750	23.650	35.900	43.000	48.500	56.750	63.100	71.350	74.650	74.612	78.252
Ghatkesar	**9**	74.112	75.760	67.650	59.050	50.550	44.550	38.850	29.350	20.450	8.550	0.000	8.200	15.100	27.350	34.450	39.950	48.200	54.550	62.800	66.100	70.450	76.610
Taramptipet	**10**	65.862	67.562	75.850	67.250	58.750	52.750	47.050	37.550	28.650	16.750	8.200	0.000	6.900	19.150	26.250	31.750	40.000	46.350	54.600	57.900	62.250	68.410
Pedda Amberpet	**11**	58.962	60.662	70.862	74.150	65.650	59.650	53.950	44.450	35.550	23.650	15.100	6.900	0.000	12.250	19.350	24.850	33.100	39.450	47.700	51.000	55.350	61.510
Bonguluru	**12**	46.712	48.412	58.612	67.212	75.712	71.900	66.200	56.700	47.800	35.900	27.350	19.150	12.250	0.000	7.100	12.600	20.850	27.200	35.450	38.750	43.100	49.260
Raviryal	**13**	39.612	41.312	51.512	60.112	68.612	74.612	73.300	63.800	54.900	43.000	34.450	26.250	19.350	7.100	0.000	5.500	13.750	20.100	28.350	31.650	36.000	42.160
Tukkuguda	**14**	34.112	35.812	46.012	54.612	63.112	69.112	74.812	69.300	60.400	48.500	39.950	31.750	24.850	12.600	5.500	0.000	8.250	14.600	22.850	26.150	30.500	36.660
Pedda Golconda	**15**	25.862	27.562	37.762	46.362	54.862	60.862	66.562	76.062	68.650	56.750	48.200	40.000	33.100	20.850	13.750	8.250	0.000	6.350	14.600	17.900	22.250	28.410
Shamshabad	**16**	19.512	21.212	31.412	40.012	48.512	54.512	60.212	69.712	75.000	63.100	54.550	46.350	39.450	27.200	20.100	14.600	6.350	0.000	8.250	11.550	15.900	22.060
Rajendra Nagar	**17**	11.262	12.962	23.162	31.762	40.262	46.262	51.962	61.462	70.362	71.350	62.800	54.600	47.700	35.450	28.350	22.850	14.600	8.250	0.000	3.300	7.650	13.810
TSPA	**18**	7.962	9.662	19.862	28.462	36.962	42.962	48.662	58.162	67.062	74.650	66.100	57.900	51.000	38.750	31.650	26.150	17.900	11.550	3.300	0.000	4.350	10.510
Narsingi	**18A**	3.612	5.312	15.512	24.112	32.612	38.612	44.312	53.812	62.712	74.612	70.450	62.250	55.350	43.100	36.000	30.500	22.250	15.900	7.650	4.350	0.000	6.160
Nanakramguda	**19**	7.252	8.952	19.152	27.752	36.252	42.252	47.952	57.452	66.352	78.252	76.610	68.410	61.510	49.260	42.160	36.660	28.410	22.060	13.810	10.510	6.160	0.000

Accordingly on the basis of above tollable lengths, toll rates of various categories of vehicle at different toll plaza locations are calculated. The adopted Toll Rates for all categories of vehicles for base year are given tables below.

Table 4-6: Car/Jeep/Van Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	20	40	60	70	80	100	120	140	150	130	120	90	80	70	50	40	20	20	10	10
1A	10	0	20	40	50	70	80	100	120	140	150	140	120	100	80	70	60	40	30	20	10	20
2	20	20	0	20	30	50	60	80	90	120	140	150	140	120	100	90	80	60	50	40	30	40
3	40	40	20	0	20	30	40	60	80	100	120	130	150	130	120	110	90	80	60	60	50	60
4	60	50	30	20	0	10	20	40	60	80	100	120	130	150	140	130	110	100	80	70	70	70
4A	70	70	50	30	10	0	10	30	50	70	90	110	120	140	150	140	120	110	90	90	80	80
5	80	80	60	40	20	10	0	20	40	60	80	90	110	130	150	150	130	120	100	100	90	100
6	100	100	80	60	40	30	20	0	20	40	60	80	90	110	130	140	150	140	120	120	110	120
7	120	120	90	80	60	50	40	20	0	20	40	60	70	100	110	120	140	150	140	130	130	130
8	140	140	120	100	80	70	60	40	20	0	20	30	50	70	90	100	110	130	140	150	150	160
9	150	150	140	120	100	90	80	60	40	20	0	20	30	50	70	80	100	110	130	130	140	150
10	130	140	150	130	120	110	90	80	60	30	20	0	10	40	50	60	80	90	110	120	120	140
11	120	120	140	150	130	120	110	90	70	50	30	10	0	20	40	50	70	80	100	100	110	120
12	90	100	120	130	150	140	130	110	100	70	50	40	20	0	10	30	40	50	70	80	90	100
13	80	80	100	120	140	150	150	130	110	90	70	50	40	10	0	10	30	40	60	60	70	80
14	70	70	90	110	130	140	150	140	120	100	80	60	50	30	10	0	20	30	50	50	60	70
15	50	60	80	90	110	120	130	150	140	110	100	80	70	40	30	20	0	10	30	40	40	60
16	40	40	60	80	100	110	120	140	150	130	110	90	80	50	40	30	10	0	20	20	30	40
17	20	30	50	60	80	90	100	120	140	140	130	110	100	70	60	50	30	20	0	10	20	30
18	20	20	40	60	70	90	100	120	130	150	130	120	100	80	60	50	40	20	10	0	10	20
18A	10	10	30	50	70	80	90	110	130	150	140	120	110	90	70	60	40	30	20	10	0	10
19	10	20	40	60	70	80	100	120	130	160	150	140	120	100	80	70	60	40	30	20	10	0

Table 4-7: Bus Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	70	120	170	200	230	290	340	410	430	380	340	270	230	200	150	110	60	50	20	40
1A	10	0	60	110	160	190	220	280	330	400	440	390	350	280	240	210	160	120	70	60	30	50
2	70	60	0	50	100	130	170	220	270	340	390	440	410	340	300	260	220	180	130	110	90	110
3	120	110	50	0	50	80	120	170	220	290	340	390	430	390	350	310	270	230	180	160	140	160
4	170	160	100	50	0	30	70	120	170	240	290	340	380	440	390	360	320	280	230	210	190	210
4A	200	190	130	80	30	0	30	90	140	210	260	300	340	410	430	400	350	310	270	250	220	240
5	230	220	170	120	70	30	0	50	110	170	220	270	310	380	420	430	380	350	300	280	250	280
6	290	280	220	170	120	90	50	0	50	120	170	220	260	330	370	400	440	400	350	330	310	330
7	340	330	270	220	170	140	110	50	0	70	120	160	200	270	320	350	390	430	400	390	360	380
8	410	400	340	290	240	210	170	120	70	0	50	100	140	210	250	280	330	360	410	430	430	450
9	430	440	390	340	290	260	220	170	120	50	0	50	90	160	200	230	280	310	360	380	410	440
10	380	390	440	390	340	300	270	220	160	100	50	0	40	110	150	180	230	270	310	330	360	390
11	340	350	410	430	380	340	310	260	200	140	90	40	0	70	110	140	190	230	270	290	320	350
12	270	280	340	390	440	410	380	330	270	210	160	110	70	0	40	70	120	160	200	220	250	280
13	230	240	300	350	390	430	420	370	320	250	200	150	110	40	0	30	80	120	160	180	210	240
14	200	210	260	310	360	400	430	400	350	280	230	180	140	70	30	0	50	80	130	150	180	210
15	150	160	220	270	320	350	380	440	390	330	280	230	190	120	80	50	0	40	80	100	130	160
16	110	120	180	230	280	310	350	400	430	360	310	270	230	160	120	80	40	0	50	70	90	130
17	60	70	130	180	230	270	300	350	400	410	360	310	270	200	160	130	80	50	0	20	40	80
18	50	60	110	160	210	250	280	330	390	430	380	330	290	220	180	150	100	70	20	0	30	60
18A	20	30	90	140	190	220	250	310	360	430	410	360	320	250	210	180	130	90	40	30	0	40
19	40	50	110	160	210	240	280	330	380	450	440	390	350	280	240	210	160	130	80	60	40	0

Table 4-8: Minibus Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	40	70	90	110	130	160	190	230	240	210	190	150	130	110	80	60	40	30	10	20
1A	10	0	30	60	90	110	130	160	190	220	250	220	200	160	130	120	90	70	40	30	20	30
2	40	30	0	30	60	70	90	120	150	190	220	250	230	190	170	150	120	100	80	60	50	60
3	70	60	30	0	30	50	70	100	130	160	190	220	240	220	190	180	150	130	100	90	80	90
4	90	90	60	30	0	20	40	70	100	140	160	190	210	250	220	200	180	160	130	120	110	120
4A	110	110	70	50	20	0	20	50	80	120	140	170	190	230	240	220	200	180	150	140	130	140
5	130	130	90	70	40	20	0	30	60	100	130	150	170	210	240	240	220	200	170	160	140	160
6	160	160	120	100	70	50	30	0	30	70	100	120	140	180	210	220	250	230	200	190	170	190
7	190	190	150	130	100	80	60	30	0	40	70	90	120	150	180	200	220	240	230	220	200	220
8	230	220	190	160	140	120	100	70	40	0	30	50	80	120	140	160	180	200	230	240	240	250
9	240	250	220	190	160	140	130	100	70	30	0	30	50	90	110	130	160	180	200	210	230	250
10	210	220	250	220	190	170	150	120	90	50	30	0	20	60	90	100	130	150	180	190	200	220
11	190	200	230	240	210	190	170	140	120	80	50	20	0	40	60	80	110	130	150	170	180	200
12	150	160	190	220	250	230	210	180	150	120	90	60	40	0	20	40	70	90	110	130	140	160
13	130	130	170	190	220	240	240	210	180	140	110	90	60	20	0	20	40	70	90	100	120	140
14	110	120	150	180	200	220	240	220	200	160	130	100	80	40	20	0	30	50	70	80	100	120
15	80	90	120	150	180	200	220	250	220	180	160	130	110	70	40	30	0	20	50	60	70	90
16	60	70	100	130	160	180	200	230	240	200	180	150	130	90	70	50	20	0	30	40	50	70
17	40	40	80	100	130	150	170	200	230	230	200	180	150	110	90	70	50	30	0	10	20	40
18	30	30	60	90	120	140	160	190	220	240	210	190	170	130	100	80	60	40	10	0	10	30
18A	10	20	50	80	110	130	140	170	200	240	230	200	180	140	120	100	70	50	20	10	0	20
19	20	30	60	90	120	140	160	190	220	250	250	220	200	160	140	120	90	70	40	30	20	0

Table 4-9: LCV Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	40	70	90	110	130	160	190	230	240	210	190	150	130	110	80	60	40	30	10	20
1A	10	0	30	60	90	110	130	160	190	220	250	220	200	160	130	120	90	70	40	30	20	30
2	40	30	0	30	60	70	90	120	150	190	220	250	230	190	170	150	120	100	80	60	50	60
3	70	60	30	0	30	50	70	100	130	160	190	220	240	220	190	180	150	130	100	90	80	90
4	90	90	60	30	0	20	40	70	100	140	160	190	210	250	220	200	180	160	130	120	110	120
4A	110	110	70	50	20	0	20	50	80	120	140	170	190	230	240	220	200	180	150	140	130	140
5	130	130	90	70	40	20	0	30	60	100	130	150	170	210	240	240	220	200	170	160	140	160
6	160	160	120	100	70	50	30	0	30	70	100	120	140	180	210	220	250	230	200	190	170	190
7	190	190	150	130	100	80	60	30	0	40	70	90	120	150	180	200	220	240	230	220	200	220
8	230	220	190	160	140	120	100	70	40	0	30	50	80	120	140	160	180	200	230	240	240	250
9	240	250	220	190	160	140	130	100	70	30	0	30	50	90	110	130	160	180	200	210	230	250
10	210	220	250	220	190	170	150	120	90	50	30	0	20	60	90	100	130	150	180	190	200	220
11	190	200	230	240	210	190	170	140	120	80	50	20	0	40	60	80	110	130	150	170	180	200
12	150	160	190	220	250	230	210	180	150	120	90	60	40	0	20	40	70	90	110	130	140	160
13	130	130	170	190	220	240	240	210	180	140	110	90	60	20	0	20	40	70	90	100	120	140
14	110	120	150	180	200	220	240	220	200	160	130	100	80	40	20	0	30	50	70	80	100	120
15	80	90	120	150	180	200	220	250	220	180	160	130	110	70	40	30	0	20	50	60	70	90
16	60	70	100	130	160	180	200	230	240	200	180	150	130	90	70	50	20	0	30	40	50	70
17	40	40	80	100	130	150	170	200	230	230	200	180	150	110	90	70	50	30	0	10	20	40
18	30	30	60	90	120	140	160	190	220	240	210	190	170	130	100	80	60	40	10	0	10	30
18A	10	20	50	80	110	130	140	170	200	240	230	200	180	140	120	100	70	50	20	10	0	20
19	20	30	60	90	120	140	160	190	220	250	250	220	200	160	140	120	90	70	40	30	20	0

Table 4-10: 2-axle Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	70	120	170	200	230	290	340	410	430	380	340	270	230	200	150	110	60	50	20	40
1A	10	0	60	110	160	190	220	280	330	400	440	390	350	280	240	210	160	120	70	60	30	50
2	70	60	0	50	100	130	170	220	270	340	390	440	410	340	300	260	220	180	130	110	90	110
3	120	110	50	0	50	80	120	170	220	290	340	390	430	390	350	310	270	230	180	160	140	160
4	170	160	100	50	0	30	70	120	170	240	290	340	380	440	390	360	320	280	230	210	190	210
4A	200	190	130	80	30	0	30	90	140	210	260	300	340	410	430	400	350	310	270	250	220	240
5	230	220	170	120	70	30	0	50	110	170	220	270	310	380	420	430	380	350	300	280	250	280
6	290	280	220	170	120	90	50	0	50	120	170	220	260	330	370	400	440	400	350	330	310	330
7	340	330	270	220	170	140	110	50	0	70	120	160	200	270	320	350	390	430	400	390	360	380
8	410	400	340	290	240	210	170	120	70	0	50	100	140	210	250	280	330	360	410	430	430	450
9	430	440	390	340	290	260	220	170	120	50	0	50	90	160	200	230	280	310	360	380	410	440
10	380	390	440	390	340	300	270	220	160	100	50	0	40	110	150	180	230	270	310	330	360	390
11	340	350	410	430	380	340	310	260	200	140	90	40	0	70	110	140	190	230	270	290	320	350
12	270	280	340	390	440	410	380	330	270	210	160	110	70	0	40	70	120	160	200	220	250	280
13	230	240	300	350	390	430	420	370	320	250	200	150	110	40	0	30	80	120	160	180	210	240
14	200	210	260	310	360	400	430	400	350	280	230	180	140	70	30	0	50	80	130	150	180	210
15	150	160	220	270	320	350	380	440	390	330	280	230	190	120	80	50	0	40	80	100	130	160
16	110	120	180	230	280	310	350	400	430	360	310	270	230	160	120	80	40	0	50	70	90	130
17	60	70	130	180	230	270	300	350	400	410	360	310	270	200	160	130	80	50	0	20	40	80
18	50	60	110	160	210	250	280	330	390	430	380	330	290	220	180	150	100	70	20	0	30	60
18A	20	30	90	140	190	220	250	310	360	430	410	360	320	250	210	180	130	90	40	30	0	40
19	40	50	110	160	210	240	280	330	380	450	440	390	350	280	240	210	160	130	80	60	40	0

Table 4-11: 3-axle Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	10	90	150	210	260	300	370	440	530	550	490	440	350	290	250	190	140	80	60	30	50
1A	10	0	80	140	200	250	290	360	430	510	560	500	450	360	310	270	200	160	100	70	40	70
2	90	80	0	60	130	170	210	280	350	440	500	560	530	430	380	340	280	230	170	150	110	140
3	150	140	60	0	60	110	150	220	290	370	440	500	550	500	450	400	340	300	240	210	180	210
4	210	200	130	60	0	40	90	160	220	310	370	440	490	560	510	470	410	360	300	270	240	270
4A	260	250	170	110	40	0	40	110	180	270	330	390	440	530	550	510	450	400	340	320	290	310
5	300	290	210	150	90	40	0	70	140	220	290	350	400	490	540	550	490	450	390	360	330	360
6	370	360	280	220	160	110	70	0	70	150	220	280	330	420	470	510	560	520	460	430	400	430
7	440	430	350	290	220	180	140	70	0	90	150	210	260	350	410	450	510	560	520	500	460	490
8	530	510	440	370	310	270	220	150	90	0	60	120	180	270	320	360	420	470	530	550	550	580
9	550	560	500	440	370	330	290	220	150	60	0	60	110	200	260	300	360	400	470	490	520	570
10	490	500	560	500	440	390	350	280	210	120	60	0	50	140	190	240	300	340	400	430	460	510
11	440	450	530	550	490	440	400	330	260	180	110	50	0	90	140	180	250	290	350	380	410	460
12	350	360	430	500	560	530	490	420	350	270	200	140	90	0	50	90	150	200	260	290	320	370
13	290	310	380	450	510	550	540	470	410	320	260	190	140	50	0	40	100	150	210	230	270	310
14	250	270	340	400	470	510	550	510	450	360	300	240	180	90	40	0	60	110	170	190	230	270
15	190	200	280	340	410	450	490	560	510	420	360	300	250	150	100	60	0	50	110	130	160	210
16	140	160	230	300	360	400	450	520	560	470	400	340	290	200	150	110	50	0	60	90	120	160
17	80	100	170	240	300	340	390	460	520	530	470	400	350	260	210	170	110	60	0	20	60	100
18	60	70	150	210	270	320	360	430	500	550	490	430	380	290	230	190	130	90	20	0	30	80
18A	30	40	110	180	240	290	330	400	460	550	520	460	410	320	270	230	160	120	60	30	0	50
19	50	70	140	210	270	310	360	430	490	580	570	510	460	370	310	270	210	160	100	80	50	0

Table 4-12: 4 to 6 axle Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	130	220	310	370	430	530	630	760	790	700	630	500	420	360	280	210	120	80	40	80
1A	20	0	110	200	290	350	420	520	610	740	810	720	650	520	440	380	290	230	140	100	60	100
2	130	110	0	90	180	250	310	410	500	630	720	810	750	620	550	490	400	330	250	210	170	200
3	220	200	90	0	90	150	220	320	410	540	630	720	790	720	640	580	490	430	340	300	260	300
4	310	290	180	90	0	60	120	230	320	450	540	630	700	810	730	670	580	520	430	390	350	390
4A	370	350	250	150	60	0	60	160	260	380	470	560	640	770	790	740	650	580	490	460	410	450
5	430	420	310	220	120	60	0	100	200	320	410	500	570	710	780	800	710	640	550	520	470	510
6	530	520	410	320	230	160	100	0	90	220	310	400	470	600	680	740	810	740	650	620	570	610
7	630	610	500	410	320	260	200	90	0	130	220	310	380	510	580	640	730	800	750	710	670	710
8	760	740	630	540	450	380	320	220	130	0	90	180	250	380	460	520	600	670	760	800	790	830
9	790	810	720	630	540	470	410	310	220	90	0	90	160	290	370	430	510	580	670	700	750	820
10	700	720	810	720	630	560	500	400	310	180	90	0	70	200	280	340	430	490	580	620	660	730
11	630	650	750	790	700	640	570	470	380	250	160	70	0	130	210	260	350	420	510	540	590	660
12	500	520	620	720	810	770	710	600	510	380	290	200	130	0	80	130	220	290	380	410	460	520
13	420	440	550	640	730	790	780	680	580	460	370	280	210	80	0	60	150	210	300	340	380	450
14	360	380	490	580	670	740	800	740	640	520	430	340	260	130	60	0	90	160	240	280	320	390
15	280	290	400	490	580	650	710	810	730	600	510	430	350	220	150	90	0	70	160	190	240	300
16	210	230	330	430	520	580	640	740	800	670	580	490	420	290	210	160	70	0	90	120	170	240
17	120	140	250	340	430	490	550	650	750	760	670	580	510	380	300	240	160	90	0	40	80	150
18	80	100	210	300	390	460	520	620	710	800	700	620	540	410	340	280	190	120	40	0	50	110
18A	40	60	170	260	350	410	470	570	670	790	750	660	590	460	380	320	240	170	80	50	0	70
19	80	100	200	300	390	450	510	610	710	830	820	730	660	520	450	390	300	240	150	110	70	0

Table 4-13: 7 & above axle Toll Rates for Year 2022-2023 (Rs. Rupees)

F/T	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19
1	0	20	150	270	380	450	530	650	770	920	960	850	760	610	510	440	340	250	150	100	50	90
1A	20	0	130	240	350	430	510	630	740	900	980	880	790	630	540	460	360	280	170	130	70	120
2	150	130	0	110	220	300	370	500	610	770	880	980	920	760	670	600	490	410	300	260	200	250
3	270	240	110	0	110	190	260	390	500	650	770	870	960	870	780	710	600	520	410	370	310	360
4	380	350	220	110	0	80	150	270	390	540	660	760	850	980	890	820	710	630	520	480	420	470
4A	450	430	300	190	80	0	70	200	310	470	580	680	770	930	970	900	790	710	600	560	500	550
5	530	510	370	260	150	70	0	120	240	390	500	610	700	860	950	970	860	780	670	630	570	620
6	650	630	500	390	270	200	120	0	120	270	380	490	580	740	830	900	990	900	800	750	700	750
7	770	740	610	500	390	310	240	120	0	150	270	370	460	620	710	780	890	970	910	870	810	860
8	920	900	770	650	540	470	390	270	150	0	110	220	310	470	560	630	740	820	930	970	970	1010
9	960	980	880	770	660	580	500	380	270	110	0	110	200	350	450	520	630	710	810	860	910	990
10	850	880	980	870	760	680	610	490	370	220	110	0	90	250	340	410	520	600	710	750	810	890
11	760	790	920	960	850	770	700	580	460	310	200	90	0	160	250	320	430	510	620	660	720	800
12	610	630	760	870	980	930	860	740	620	470	350	250	160	0	90	160	270	350	460	500	560	640
13	510	540	670	780	890	970	950	830	710	560	450	340	250	90	0	70	180	260	370	410	470	550
14	440	460	600	710	820	900	970	900	780	630	520	410	320	160	70	0	110	190	300	340	400	480
15	340	360	490	600	710	790	860	990	890	740	630	520	430	270	180	110	0	80	190	230	290	370
16	250	280	410	520	630	710	780	900	970	820	710	600	510	350	260	190	80	0	110	150	210	290
17	150	170	300	410	520	600	670	800	910	930	810	710	620	460	370	300	190	110	0	40	100	180
18	100	130	260	370	480	560	630	750	870	970	860	750	660	500	410	340	230	150	40	0	60	140
18A	50	70	200	310	420	500	570	700	810	970	910	810	720	560	470	400	290	210	100	60	0	80
19	90	120	250	360	470	550	620	750	860	1010	990	890	800	640	550	480	370	290	180	140	80	0

Above rates are applicable for base year 2022-23. These rates have been escalated for future year as NORR policy for future revenue working.

4.6 Toll Revenue at all toll plazas

Toll revenue has been worked out for concession period as per projected traffic and worked out rates.

4.6.1 Metro Impact in 2029-30

Government of Telangana has announced to connect Mind Space Junction in Gachibowli to Rajiv Gandhi International Airport. This would run almost parallel to NORR from Shmashabad to Nanakramguda. Following figure show proposed Express Airport Metro Line.



Figure 4-2: Airport Metro Proposed Alignment (Phase-2 Line 4)

Currently part of traffic going to Airport is taking NORR to commute. It is expected that this new metro line connecting Airport will be running by year 2029-30 It will have impact on NORR traffic as some part of airport bound traffic may take new alternative of Metro. OD data has been analysed to identify the quantum of traffic which has potential to divert to metro. Following has been considered in this regard.

- Travellers with light luggage will only travel via metro as it would be cumbersome for travellers with heavy luggage to carry it through metro where one needs to change mode, metro security scanning, and carry all along.
- Travellers in vicinity of metro station would be likely candidate for diversion to metro. Current airport travellers falling outside Metro catchment are less likely to divert to metro.

Benchmarking has been done for travel pattern from data available from other airports Following table shows summary of metro diversion analysis. It was observed that

about 30% of total potential airport traffic would be expected to divert from NORR to Metro to go to airport.

Table 4-14 : Potential Traffic for Metro Diversion to Airport (Dir-2)

Toll Plaza No	Total no of OD Data (Car)	No of Airport Traffic	% of Airport Traffic	Total no. of CVC (Car)	Potential Total Airport Traffic	% of traffic diversion to metro	No. of Traffic diverting to metro
17	753	47	6.2%	6946	434	30%	130
18	855	61	7.1%	13096	934	30%	280
19	4514	966	21.4%	27284	5839	30%	1752
1	1264	132	10.4%	7645	798	30%	240

Table 4-15 : Potential Traffic for Metro Diversion from Airport (Dir-1)

Toll Plaza No	Total no. (TP NO 16)	Destination Airport	% of Destination of Airport	Total no. of CVC	No of Destination	% of traffic Coming from metro	No. of Traffic go to Airport
1	2229	46	2.1%	19370	400	30%	120
2	2229	14	0.6%	19370	122	30%	36
17	2229	56	2.5%	19370	487	30%	146
18	2229	30	1.3%	19370	261	30%	78
19	2229	323	14.5%	19370	2807	30%	842

Impact on revenue due to Airport Metro is given in table below.

Table 4-16 : Metro impact on Revenue in 2029- 2030

Revenue in Cr. Of Year 2029-30 - Upcoming Metro Phase-2 Impact (Pessimistic Case)					
Name of TP	TP no.	Revenue without Airport Metro (Rs. Cr)	Revenue with Airport Metro (Rs. Cr)	Revenue Reduction (Rs. Cr)	% of Revenue decrease
Kokapet	**1**	36.05	35.55	0.50	1.4%
Shamshabad	**16**	173.85	171.18	2.67	1.5%
Rajendra Nagar	**17**	33.43	33.30	0.13	0.4%
TSPA	**18**	50.38	49.99	0.39	0.8%
Nanakramguda	**19**	131.72	127.48	4.24	3.2%

Total revenue impact of Airport Metro is **Rs. 7.93 Cr in year 2029-30.** Which comes to about **0.66%** of total corresponding revenue.

4.6.2 Long Route Traffic Impact 2025-26

It few toll plazas there is some volume of heavy commercial traffic which could be long distance traffic also. This traffic has potential to divert away from NORR once alternate route facilities are developed. Impact of such traffic is discussed as under on the basis of cost ration of travel.

- **CHENNAI - DELHI LONG ROUTE TRAFFIC**
  This traffic between Chennai and Delhi has potential to divert once **Chennai- Surat Expressway** is commissioned.

Project Route

Chennai -TP 11(Pedda amberpet)-TP 6(Medchal)-Nagpur-Jhansi-Gwalior-Agra-**Delhi**



Competing Route (Surat Chennai and Delhi Mumbai Expressway)

Chennai -Kurnool-Solapur- Dhule-Indore-Ratlam-**Delhi**



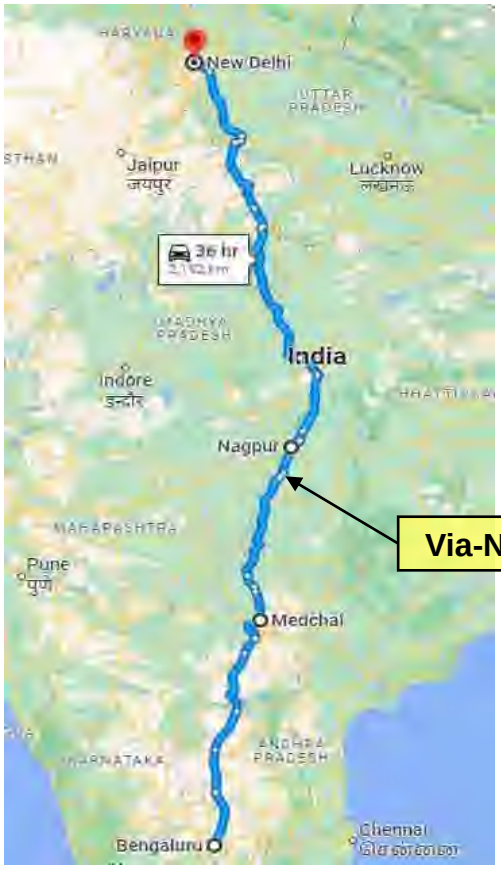
Route	Configuration	Length (Km)	Approximate Per Km cost	Total Cost of Trip (Rs.)	Cost Ratio=(P/C)	% Diversion on Project Route	% Diversion on Competing Route
Project Route(P)	Via. NH-44	2212	40	88480	0.88	76.21	23.79
Comp Route (C)	Via. NH-52	2493	40	99720			

% Long route traffic	No. of long route traffic	Total No. of Commercial vehicle	Traffic on Project Route	Traffic on Competing Route
2.70%	149	5507	113	35

- **BANGALORE - DELHI LONG ROUTE TRAFFIC**
  Similarly Bangalore Delhi traffic will also have potential to divert from NORR once Chennail – Surat Expressway is commissioned and Delhi- Mumbai Expressway also become operational. Same is analysed as under.

Project Route

Bangalore -TP 16(Shamshabad)-TP 6(Medchal)-Nagpur-Jhansi-Gwalior-Agra-**Delhi**



Competing Route (Surat Chennai and Delhi Mumbai Expressway)



Route	Configuration	Length (Km)	Approximate Per Km cost	Total Cost of Trip (Rs.)	Cost Ratio=(P/C)	% Diversion on Project Route	% Diversion on Competing Route
Project Route(P)	Via. NH-44	2152	40	86080	0.95	64.46	35.54
Comp Route (C)	Via. NH-52	2260	40	90400			

% Long route traffic	No. of long route traffic	Total No. of Commercial vehicle	Traffic on Project Route	Traffic on Competing Route
7.31%	383	5238	247	136

- **CHENNAI - MUMBAI LONG ROUTE TRAFFIC**

There is some traffic in Chennai (Vijawada) – Mumbai corridor also which will have potential of diversion from NORR once Surat Chennai and Delhi- Mumbai Expressway is operational.

Project Route

Chennai - TP 11(Pedda amberpet)-TP 3(Pantancheru)-Solapur-Pune **-Mumbai**



Competing Route (S-C Expressway)

Chennai-Kurnool-Solapur**-Mumbai**



Route	Configuration	Length (Km)	Approximate Per Km cost	Total Cost of Trip (Rs.)	Cost Ratio=(P/C)	% Diversion on Project Route	% Diversion on Competing Route
Project Route(P)	Via. NH-65	1358	40	54320	1.07	37.98	62.02
Comp Route (C)	Via S-C Exp.	1273	40	50920			

% Long route traffic	No. of long route traffic	Total No. of Commercial vehicle	Traffic on Project Route	Traffic on Competing Route
1.86%	113	6110	43	70

Above analysed traffic diversion potential has been considered in revenue working. The impact of long-distance traffic diversion is taken in year 2025-26.

Table 4-17 : Long Route Traffic impact on Revenue in 2025- 2026

Revenue in Cr 2025-2026 - Long Route Traffic Impact (Pessimistic Case)					
Name of TP	**TP no.**	**Revenue (Without Reduce Long route traffic)**	**Revenue (Reduce Long route traffic)**	**Difference in Revenue**	**% of Revenue decrease**
Patancheru	**3**	94.84	92.96	1.89	2.0%
Medchal	**6**	82.62	80.58	2.05	2.5%
Pedda Amberpet	**11**	99.21	98.77	0.44	0.4%
Shamshabad	**16**	118.47	116.50	1.97	1.7%

Total revenue impact of long route traffic is **Rs. 6.33 Cr in year 2025-26**. Which comes to about **0.78%** of total corresponding revenue.

4.6.3 Revenue Forecast

Revenue forecast with traffic numbers as per above analysis and rates worked out is given in following table.

Table 4-18: Total Toll Revenue – Rs. Cr (Pessimistic)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2022-23	15.26	0.00	7.45	65.80	9.40	0.00	25.47	57.40	27.24	10.73	31.07	4.57	67.73	18.88	3.70	19.45	9.64	77.59	15.17	21.79	0.00	53.13	**541.47**
2023-24	18.78	0.00	8.79	77.30	11.28	0.00	30.03	67.79	32.27	12.82	36.78	5.36	80.35	22.62	4.51	23.08	11.28	94.13	18.07	26.24	0.00	65.37	**646.84**
2024-25	21.17	0.00	9.89	86.04	12.65	0.00	32.94	74.68	35.44	14.35	41.08	5.98	89.56	25.13	4.91	25.72	12.62	103.99	20.14	30.69	0.00	74.90	**721.88**
2025-26	23.34	0.00	10.91	92.96	13.88	0.00	37.12	80.58	39.96	15.89	45.53	6.56	98.77	27.92	5.45	28.33	13.83	116.50	22.77	33.89	0.00	87.53	**801.72**
2026-27	26.03	0.00	11.98	103.53	15.71	0.00	41.31	89.68	44.49	17.69	51.24	7.31	110.22	30.75	5.99	31.99	15.55	127.83	25.50	37.24	0.00	95.99	**890.02**
2027-28	29.28	0.00	13.40	114.88	17.36	0.00	46.13	99.52	49.88	19.81	56.85	7.99	122.43	35.21	6.73	35.71	17.05	141.16	27.85	41.08	0.00	105.88	**988.18**
2028-29	32.00	0.00	15.31	126.88	19.48	0.00	51.26	109.01	55.45	21.94	63.36	8.76	135.22	38.56	7.39	39.82	18.77	159.49	30.67	46.23	0.00	120.59	**1100.18**
2029-30	35.55	0.00	16.48	139.41	21.78	0.00	56.63	119.78	60.87	24.52	70.61	9.82	147.74	42.97	8.07	44.28	20.80	171.18	33.30	49.99	0.00	127.48	**1201.26**
2030-31	39.55	0.00	18.51	153.39	23.73	0.00	62.09	131.03	66.95	26.74	77.38	10.95	162.91	46.88	8.91	49.23	22.74	192.11	37.88	57.75	0.00	148.95	**1337.67**
2031-32	44.38	0.00	20.29	169.33	26.49	0.00	69.21	144.75	74.66	29.93	86.67	12.00	180.31	53.06	9.84	54.40	25.13	208.61	41.63	62.96	0.00	162.00	**1475.66**
2032-33	49.75	0.00	22.41	186.25	29.54	0.00	76.80	159.23	82.91	33.19	95.64	13.24	198.97	58.62	10.78	60.40	27.43	233.96	44.91	68.55	0.00	183.53	**1636.10**
2033-34	54.37	0.00	24.91	203.00	32.36	0.00	83.91	173.27	91.17	36.54	103.98	14.45	216.59	63.53	11.77	65.46	30.20	252.46	50.55	75.14	0.00	199.40	**1783.04**
2034-35	59.91	0.00	26.98	220.73	35.21	0.00	91.41	188.72	99.32	39.29	114.69	16.07	236.79	70.36	13.05	72.38	32.74	278.76	54.71	85.52	0.00	222.82	**1959.43**
2035-36	65.43	0.00	29.90	241.22	38.87	0.00	100.51	205.73	109.74	43.73	125.89	17.59	259.17	77.04	14.22	79.24	35.64	300.42	61.90	92.66	0.00	241.70	**2140.59**
2036-37	72.72	0.00	32.64	261.57	42.28	0.00	109.81	223.68	118.64	47.42	137.75	18.90	282.49	83.76	15.62	85.33	38.39	331.25	67.40	101.44	0.00	268.09	**2339.18**
2037-38	78.81	0.00	35.74	286.20	46.28	0.00	120.72	244.19	131.19	52.29	150.23	20.64	308.47	92.44	17.08	94.78	41.81	363.11	72.75	113.15	0.00	299.43	**2569.34**
2038-39	86.54	0.00	39.17	310.87	50.90	0.00	131.55	264.51	142.97	57.33	164.55	22.93	334.99	100.57	18.58	103.26	45.92	399.45	79.35	123.21	0.00	327.75	**2804.40**
2039-40	94.82	0.00	42.50	337.49	55.18	0.00	143.38	288.10	156.23	62.38	178.86	24.95	364.83	110.81	20.19	112.53	49.97	436.20	86.21	132.20	0.00	359.18	**3056.02**
2040-41	103.89	0.00	47.04	366.02	60.71	0.00	155.27	311.53	169.78	67.93	194.06	27.17	394.69	119.71	22.28	122.62	54.23	467.24	94.72	147.13	0.00	388.78	**3314.81**
2041-42	113.56	0.00	50.66	397.30	65.58	0.00	170.12	339.22	185.00	74.15	212.55	29.69	431.03	131.00	24.28	134.24	58.95	508.41	103.99	158.42	0.00	424.99	**3613.14**
2042-43	123.50	0.00	55.60	432.33	71.93	0.00	185.29	367.92	203.04	81.18	230.94	32.16	468.05	142.58	26.38	145.91	64.11	563.71	112.33	176.05	0.00	475.64	**3958.64**
2043-44	135.37	0.00	60.84	467.98	78.52	0.00	202.03	399.70	220.16	88.25	252.12	35.46	507.70	155.56	28.73	159.21	69.82	610.70	123.84	189.29	0.00	516.22	**4301.49**
2044-45	147.66	0.00	65.38	505.34	84.89	0.00	218.51	429.59	240.06	95.17	272.93	38.24	549.45	168.93	31.16	172.31	74.77	658.41	135.13	208.11	0.00	562.88	**4658.93**
2045-46	160.01	0.00	71.56	548.61	92.49	0.00	238.77	465.47	259.80	103.86	297.23	41.79	596.09	184.21	33.93	188.92	81.34	712.40	146.37	228.74	0.00	616.51	**5068.10**
2046-47	173.89	0.00	77.84	592.47	101.13	0.00	258.02	504.07	282.09	112.49	321.97	45.14	645.39	200.12	36.96	203.08	88.47	777.02	159.33	243.84	0.00	673.21	**5496.53**

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2047-48	191.77	0.00	84.68	644.78	109.59	0.00	281.18	547.22	307.98	123.07	352.07	49.67	701.19	218.02	40.06	222.68	96.30	843.73	174.61	268.03	0.00	733.97	5990.60
2048-49	206.01	0.00	91.66	693.86	118.99	0.00	304.40	588.94	332.12	132.87	379.17	53.09	755.01	236.20	43.73	239.87	103.46	912.51	189.66	292.77	0.00	798.39	6472.73
2049-50	225.10	0.00	98.78	750.92	128.94	0.00	328.96	635.93	359.81	143.64	409.68	58.00	814.92	255.36	47.31	259.49	111.53	989.96	205.29	318.13	0.00	871.05	7012.80
2050-51	241.63	0.00	107.47	808.15	139.61	0.00	355.75	685.77	389.50	155.61	445.63	62.89	879.75	276.21	51.33	281.98	120.67	1069.47	220.75	343.47	0.00	945.08	7580.70
2051-52	264.26	0.00	117.53	876.51	152.55	0.00	386.47	741.37	424.34	169.38	482.37	68.06	953.67	301.45	55.98	307.55	131.07	1160.25	240.59	375.40	0.00	1030.08	8238.87
2052-53	286.31	0.00	126.89	945.31	164.69	0.00	418.20	799.02	458.73	182.87	521.78	73.80	1027.78	325.69	60.58	331.94	141.40	1250.91	261.89	405.42	0.00	1115.80	8899.00
2053-54	310.82	0.00	137.69	1019.63	178.47	0.00	454.54	862.89	495.98	198.73	564.32	80.04	1111.36	352.63	66.00	359.50	152.91	1362.06	281.73	440.20	0.00	1217.78	9647.27

Table 4-19: Total Toll Revenue – Rs. Cr (Most Likely)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2022-23	15.26	0.00	7.45	65.80	9.40	0.00	25.47	57.40	27.24	10.73	31.07	4.57	67.73	18.88	3.70	19.45	9.64	77.59	15.17	21.79	0.00	53.13	541.47
2023-24	18.83	0.00	8.80	77.53	11.30	0.00	30.11	67.97	32.31	12.84	36.93	5.38	80.56	22.67	4.51	23.14	11.33	94.37	18.11	26.30	0.00	65.52	648.52
2024-25	21.26	0.00	9.95	86.39	12.71	0.00	33.15	75.05	35.58	14.39	41.36	6.01	89.94	25.28	4.92	25.87	12.73	104.48	20.21	30.80	0.00	75.24	725.31
2025-26	23.48	0.00	11.01	93.56	13.99	0.00	37.48	81.19	40.25	15.94	45.96	6.62	99.42	28.15	5.46	28.57	13.99	117.27	22.90	34.06	0.00	88.11	807.39
2026-27	26.22	0.00	12.10	104.42	15.89	0.00	41.76	90.54	44.94	17.79	51.84	7.38	111.24	31.06	6.01	32.34	15.75	128.96	25.70	37.51	0.00	96.87	898.32
2027-28	29.57	0.00	13.54	116.13	17.59	0.00	46.69	100.69	50.46	19.95	57.68	8.09	123.94	35.62	6.76	36.23	17.33	142.77	28.13	41.48	0.00	107.07	999.73
2028-29	32.40	0.00	15.52	128.56	19.78	0.00	52.00	110.58	56.24	22.14	64.41	8.89	137.19	39.09	7.44	40.55	19.14	161.77	31.07	46.79	0.00	122.22	1115.78
2029-30	36.08	0.00	16.74	141.57	22.15	0.00	57.61	121.85	61.85	24.81	71.89	9.99	150.33	43.63	8.14	45.22	21.25	174.10	33.80	50.72	0.00	129.58	1221.31
2030-31	40.24	0.00	18.86	156.22	24.18	0.00	63.26	133.67	68.17	27.10	78.92	11.15	166.26	47.71	9.01	50.42	23.29	195.92	38.56	58.72	0.00	151.74	1363.39
2031-32	45.23	0.00	20.71	172.88	27.04	0.00	70.63	148.03	76.18	30.39	88.58	12.23	184.53	54.10	9.97	55.87	25.82	213.25	42.50	64.18	0.00	165.42	1507.56
2032-33	50.80	0.00	22.96	190.74	30.20	0.00	78.55	163.31	84.77	33.79	97.95	13.50	204.14	59.88	10.94	62.19	28.25	239.80	46.01	70.09	0.00	187.82	1675.68
2033-34	55.68	0.00	25.59	208.53	33.24	0.00	86.04	178.08	93.39	37.32	106.78	14.77	222.74	65.10	11.96	67.61	31.23	259.32	51.94	77.02	0.00	204.57	1830.91
2034-35	61.53	0.00	27.78	227.41	36.35	0.00	93.95	194.38	101.92	40.23	118.11	16.46	244.08	72.35	13.28	74.97	34.00	287.04	56.38	87.87	0.00	229.23	2017.33
2035-36	67.38	0.00	30.84	249.23	40.29	0.00	103.56	212.44	112.80	44.89	130.00	18.05	267.77	79.49	14.49	82.31	37.17	310.08	63.97	95.42	0.00	249.32	2209.50
2036-37	75.11	0.00	33.73	270.98	44.02	0.00	113.39	231.55	122.20	48.78	142.66	19.45	292.58	86.66	15.92	88.89	40.20	342.69	69.82	104.72	0.00	277.32	2420.64
2037-38	81.64	0.00	37.00	297.27	48.40	0.00	124.96	253.41	135.42	53.92	156.00	21.29	320.18	95.88	17.46	98.97	43.94	376.47	75.56	117.10	0.00	310.60	2665.48
2038-39	89.85	0.00	40.66	323.70	53.31	0.00	136.59	275.14	147.96	59.25	171.33	23.72	348.65	104.53	19.04	108.13	48.31	415.17	82.58	127.86	0.00	340.84	2916.62
2039-40	98.68	0.00	44.23	352.28	57.92	0.00	149.34	300.34	162.15	64.62	186.75	25.88	380.79	115.40	20.76	118.13	52.63	454.51	89.90	137.62	0.00	374.49	3186.44

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2040-41	108.37	0.00	49.08	382.95	63.83	0.00	162.21	325.46	176.69	70.55	203.17	28.24	413.17	124.87	22.99	129.07	57.15	488.05	98.97	153.61	0.00	406.33	3464.76
2041-42	118.73	0.00	52.97	416.75	69.07	0.00	178.24	355.10	193.12	77.20	223.15	30.96	452.45	136.91	25.14	141.66	62.18	532.50	108.86	165.90	0.00	445.31	3786.17
2042-43	129.43	0.00	58.27	454.60	75.89	0.00	194.68	385.93	212.55	84.72	243.09	33.62	492.73	149.31	27.39	154.35	67.70	592.01	117.84	184.90	0.00	499.58	4158.60
2043-44	142.18	0.00	63.92	493.32	82.97	0.00	212.64	420.30	231.03	92.28	266.07	37.14	535.87	163.16	29.91	168.65	73.82	642.87	130.22	199.20	0.00	543.52	4529.07
2044-45	155.45	0.00	68.86	534.00	89.83	0.00	230.42	452.83	252.55	99.70	288.72	40.11	581.44	177.47	32.53	182.81	79.18	694.67	142.42	219.41	0.00	594.12	4916.52
2045-46	168.84	0.00	75.54	581.13	98.02	0.00	252.18	491.77	274.01	108.99	315.17	43.93	632.43	193.81	35.52	200.75	86.24	753.34	154.65	241.62	0.00	652.28	5360.22
2046-47	183.90	0.00	82.35	629.08	107.41	0.00	273.03	533.87	298.28	118.26	342.27	47.57	686.55	210.97	38.78	216.14	93.94	823.55	168.76	258.08	0.00	713.97	5826.74
2047-48	203.27	0.00	89.78	686.28	116.59	0.00	298.08	580.96	326.44	129.65	375.14	52.47	747.85	230.24	42.11	237.38	102.41	896.38	185.41	284.22	0.00	780.26	6364.93
2048-49	218.78	0.00	97.36	740.21	126.81	0.00	323.57	626.79	352.95	140.24	404.90	56.22	807.15	250.07	46.07	256.12	110.27	971.71	201.76	311.25	0.00	850.76	6892.99
2049-50	239.54	0.00	105.13	802.90	137.68	0.00	350.65	678.51	383.33	151.93	438.47	61.55	873.24	271.00	49.95	277.56	119.15	1056.57	218.76	339.09	0.00	930.42	7485.42
2050-51	257.65	0.00	114.59	866.09	149.38	0.00	380.22	733.55	415.99	164.95	478.02	66.87	944.91	293.88	54.32	302.09	129.21	1144.05	235.68	367.01	0.00	1011.80	8110.27
2051-52	282.34	0.00	125.58	941.57	163.55	0.00	414.19	794.97	454.25	179.96	518.61	72.53	1026.75	321.59	59.37	330.01	140.60	1244.01	257.39	402.12	0.00	1105.47	8834.86
2052-53	306.55	0.00	135.85	1017.88	176.91	0.00	449.40	858.90	492.29	194.69	562.27	78.83	1109.19	348.33	64.33	356.79	152.00	1344.26	280.73	435.36	0.00	1200.19	9564.74
2053-54	333.48	0.00	147.69	1100.50	192.13	0.00	489.78	929.82	533.56	212.09	609.53	85.69	1202.24	378.01	70.15	387.13	164.71	1467.28	302.54	473.90	0.00	1312.95	10393.18

Table 4-20: Total Toll Revenue –Rs. Cr (Optimistic)

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2022-23	15.26	0.00	7.45	65.80	9.40	0.00	25.47	57.40	27.24	10.73	31.07	4.57	67.73	18.88	3.70	19.45	9.64	77.59	15.17	21.79	0.00	53.13	541.47
2023-24	18.85	0.00	8.84	77.67	11.32	0.00	30.22	68.13	32.40	12.85	37.01	5.39	80.76	22.73	4.52	23.17	11.35	94.59	18.13	26.36	0.00	65.66	649.95
2024-25	21.32	0.00	10.01	86.78	12.75	0.00	33.31	75.39	35.81	14.44	41.53	6.07	90.45	25.40	4.94	25.98	12.78	104.97	20.29	30.96	0.00	75.57	728.77
2025-26	23.61	0.00	11.09	94.21	14.06	0.00	37.70	81.80	40.57	16.05	46.26	6.73	100.30	28.34	5.50	28.77	14.06	118.23	23.05	34.35	0.00	88.71	813.40
2026-27	26.43	0.00	12.21	105.42	15.99	0.00	42.07	91.44	45.40	17.95	52.29	7.55	112.55	31.34	6.08	32.63	15.88	130.39	25.92	37.93	0.00	97.74	907.21
2027-28	29.86	0.00	13.70	117.51	17.74	0.00	47.18	101.99	51.11	20.17	58.27	8.33	125.64	36.06	6.86	36.60	17.53	144.75	28.43	42.06	0.00	108.26	1012.05
2028-29	32.78	0.00	15.72	130.41	20.00	0.00	52.66	112.24	57.06	22.46	65.24	9.16	139.45	39.64	7.55	41.03	19.39	164.37	31.49	47.58	0.00	123.88	1132.12
2029-30	36.58	0.00	16.99	144.06	22.45	0.00	58.44	123.95	62.88	25.24	73.00	10.29	153.16	44.33	8.28	45.86	21.58	177.48	34.35	51.72	0.00	131.68	1242.30
2030-31	40.87	0.00	19.19	159.38	24.57	0.00	64.33	136.24	69.48	27.66	80.34	11.50	169.72	48.58	9.18	51.25	23.74	200.15	39.30	60.02	0.00	154.56	1390.08

Year /TP no.	1	1A	2	3	4	4A	5	6	7	8	9	10	11	12	13	14	15	16	17	18	18A	19	Total
2031-32	46.03	0.00	21.19	176.81	27.56	0.00	72.02	151.26	77.82	31.10	90.37	12.65	188.67	55.26	10.16	56.95	26.42	218.34	43.44	65.76	0.00	168.87	1540.66
2032-33	51.80	0.00	23.57	195.54	30.86	0.00	80.35	167.22	86.82	34.65	100.19	14.00	209.13	61.36	11.16	63.55	29.00	246.00	47.10	71.95	0.00	192.22	1716.49
2033-34	56.94	0.00	26.33	214.41	34.09	0.00	88.17	182.80	95.88	38.33	109.55	15.35	228.69	66.91	12.22	69.28	32.14	266.72	53.31	79.28	0.00	209.85	1880.25
2034-35	63.13	0.00	28.65	234.46	37.41	0.00	96.48	200.07	104.91	41.40	121.53	17.13	251.13	74.56	13.58	77.04	35.06	295.88	58.00	90.68	0.00	235.70	2076.79
2035-36	69.33	0.00	31.86	257.62	41.61	0.00	106.54	219.20	116.37	46.29	134.18	18.81	276.10	82.13	14.84	84.79	38.42	320.37	65.96	98.74	0.00	256.94	2280.09
2036-37	77.53	0.00	34.90	280.77	45.62	0.00	116.93	239.48	126.35	50.43	147.78	20.28	302.36	89.77	16.36	91.80	41.65	354.81	72.15	108.63	0.00	286.43	2504.01
2037-38	84.49	0.00	38.34	308.80	50.31	0.00	129.18	262.71	140.33	55.87	162.17	22.23	331.68	99.65	17.98	102.51	45.65	390.60	78.24	121.75	0.00	321.51	2763.99
2038-39	93.29	0.00	42.20	337.10	55.66	0.00	141.52	285.96	153.63	61.58	178.59	24.79	362.42	108.97	19.65	112.36	50.31	431.84	85.70	133.35	0.00	353.80	3032.71
2039-40	102.78	0.00	45.97	367.84	60.70	0.00	155.12	312.93	168.67	67.37	195.15	27.10	397.06	120.66	21.47	123.15	54.98	473.99	93.53	143.91	0.00	389.79	3322.18
2040-41	113.24	0.00	51.10	400.91	67.16	0.00	168.90	340.06	184.13	73.74	212.89	29.62	432.13	130.96	23.82	134.98	59.89	510.37	103.22	161.05	0.00	424.09	3622.27
2041-42	124.46	0.00	55.26	437.36	72.98	0.00	186.04	372.04	201.57	80.90	234.48	32.52	474.61	144.00	26.06	148.59	65.36	558.12	113.80	174.41	0.00	466.08	3968.63
2042-43	136.12	0.00	60.90	478.25	80.51	0.00	203.73	405.44	222.27	89.04	256.09	35.36	518.21	157.47	28.43	162.40	71.37	621.75	123.47	194.88	0.00	524.27	4369.98
2043-44	149.81	0.00	67.04	520.10	88.17	0.00	223.21	442.61	242.23	97.27	280.85	39.16	564.81	172.54	31.11	177.99	78.00	676.68	136.77	210.54	0.00	571.73	4770.62
2044-45	164.10	0.00	72.47	564.22	95.64	0.00	242.55	478.00	265.56	105.41	305.37	42.42	614.36	188.15	33.88	193.52	83.83	732.84	149.93	232.55	0.00	626.39	5191.18
2045-46	178.57	0.00	79.79	615.49	104.58	0.00	266.34	520.35	288.90	115.64	334.02	46.57	669.87	206.00	37.05	213.10	91.47	796.43	163.18	256.82	0.00	689.33	5673.49
2046-47	194.85	0.00	87.29	667.98	114.78	0.00	289.23	566.14	315.38	125.89	363.44	50.54	728.88	224.77	40.53	230.13	99.82	872.71	178.49	275.12	0.00	756.31	6182.28
2047-48	215.77	0.00	95.51	730.57	124.84	0.00	316.72	617.49	346.13	138.47	399.16	55.87	795.83	245.91	44.06	253.47	109.05	952.07	196.53	303.88	0.00	828.52	6769.85
2048-49	232.78	0.00	103.81	789.88	136.01	0.00	344.46	667.79	375.10	150.08	431.92	59.97	860.88	267.52	48.28	274.13	117.68	1034.68	214.47	333.45	0.00	905.48	7348.37
2049-50	255.48	0.00	112.33	858.93	147.92	0.00	373.96	724.54	408.37	162.91	468.90	65.78	933.52	290.38	52.41	297.71	127.42	1128.06	233.21	364.02	0.00	992.59	7998.45
2050-51	275.44	0.00	122.70	928.92	160.78	0.00	406.28	785.15	444.24	177.21	512.47	71.57	1012.38	315.37	57.07	324.79	138.45	1224.69	251.91	394.86	0.00	1081.96	8686.24
2051-52	302.60	0.00	134.74	1012.37	176.29	0.00	443.40	852.97	486.31	193.73	557.30	77.74	1102.49	345.65	62.48	355.62	150.94	1335.22	275.82	433.55	0.00	1184.89	9484.08
2052-53	329.39	0.00	146.06	1097.12	191.03	0.00	482.02	923.82	528.32	210.01	605.63	84.63	1193.94	375.05	67.78	385.38	163.49	1446.64	301.59	470.34	0.00	1289.61	10291.84
2053-54	359.18	0.00	159.13	1189.31	207.88	0.00	526.37	1002.57	574.06	229.16	658.08	92.13	1297.19	407.80	74.08	419.04	177.53	1582.96	325.94	513.15	0.00	1414.25	11209.81

4.6.4 Modification in concession period.

Modification in concession period is analysed as per provisions of DCA and same is summarised in table below for all scenarios.

Pessimistic Case

Target Point 1- April 2033									
Target Month - March 2029	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Modified Concession Period
NORR	173.18	142.69	-17.61%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
NORR	448.25	344.34	-23.18%	No	-	0.00%	30.00	0.00	0.00	30.00	

Most Likely Case

Target Point 1- April 2033									
Target Month - March 2029	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Modified Concession Period
NORR	173.18	146.36	-15.49%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
NORR	448.25	362.19	-19.20%	No	-	0.00%	30.00	0.00	0.00	30.00	

Optimistic Case

Target Point 1- April 2033									
Target Month - March 2029	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Modified Concession Period
NORR	173.18	150.15	-13.30%	No	-	0.00%	30.00	0.00	

Target Point 2- April 2043											
Target Month - March 2036	Target Revenue (Rs. Crores)	Calculated Revenue (Rs. Crores)	Difference %	If qualifies for Modification in Concession Period	Qualifying increment or shortfall	Change in Concession period %	Original Concession Period	Change in Concession period	Total Change in Concession period	Calculated Modified Concession Period	Final Concession Period subject to Cap
NORR	448.25	381.13	-14.97%	No	-	0.00%	30.00	0.00	0.00	30.00	

Hyderabad NORR-Modification in Concession Period						
Types of Scenarios	**Pessimistic Case**		**Most likely Case**		**Optimistic Case**	
Target Month	**April 2033**	**April 2043**	**April 2033**	**April 2043**	**April 2033**	**April 2043**
Target Revenue (Rs. Crores)	173.18	448.25	173.18	448.25	173.18	448.25
Calculated Revenue (Rs. Crores)	142.69	344.34	146.36	362.19	150.15	381.13
Difference %	-17.61%	-23.18%	-15.49%	-19.20%	-13.30%	-14.97%
If qualifies for Modification in Concession Period	No	No	No	No	No	No
Qualifying Increment or shortfall	-	-	-	-	-	-
Change in Concession period %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Original Concession Period	30.00	30.00	30.00	30.00	30.00	30.00
Change in Concession period	0.00	0.00	0.00	0.00	0.00	0.00
Total Change in Concession period	0.00		0.00		0.00	
Calculated Modified Concession Period	30.00		30.00		30.00	
Final Concession Period subject to Cap	0.00		0.00		0.00	

Thus, there is no modification expected in concession period due to variation in revenue as per above estimates in all scenarios.

CHAPTER 5

STRENGTH WEAKNESS OPPORTUNITY & THREAT(SWOT)

5.1 General

SWOT analysis (alternately SLOT analysis) is a strategic planning method used to evaluate the Strengths, Weaknesses/Limitations, Opportunities, and Threats involved in a project or in a business venture. It involves specifying the objective of project and identifying the internal and external factors that are favorable and unfavorable to achieve that objective.

5.2 SWOT Analysis

Every project has its own strength and weaknesses. There are certain non quantifiable parameters which can make project attractive or unattractive. An attempt has been made to capture these parameters for project highway to get complete review of project for making a management decision. For this purpose a SWOT (Strength-Weakness-Opportunity-Threat) analysis has been done for project highway and is presented as below.

- **STRENGTH**

- Operational and has good tolling history.
- Its fully access control with no leakage possibility.
- Presence of major industrial and urban areas on periphery of expressway
- Good infrastructure and stable government policies
- Resources and skilled manpower easily available being in metropolitan area

- **WEAKNESS**

- No major weakness. High rates of resources and skilled manpower can be weakness

- **OPPORTUNITY**

- Telangana State is one of the fastest developing state. Large number of industrial establishments including manufacturing, IT & ITES, Pharmaceutical bio-engineering and research are being planned along NORR. This would have positive impact on NORR traffic.

- **THREAT**

- Airport Metro which runs parallel from Rajiv Gandhi International Airport to Nanakramguda can divert some part of traffic from ORR. This impact is minor though.
- Being in metro urban area there is always a possibility of metro coming up in median of NORR all along the length. It will have impact on NORR traffic.

ANNEXURES

Traffic Forecast Category wise (Pessimistic case)

Car	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	20837	22256	23764	25383	27107	28944	30511	32126	33866	35699	37630	38992	40407	41876	43393	44965	46211	47490	48807	50157	51545	52585	53645	54727	55833	56959	57732	58518	59314	60120	60941	61769
2 to 3	20190	21566	23028	24597	26269	28050	29567	31168	32855	34634	36509	37830	39202	40629	42101	43624	44833	46073	47348	48657	50003	51013	52042	53093	54165	55256	56008	56772	57545	58327	59123	59926
3 to 4	16927	18080	19307	20622	22023	23518	24790	26130	27545	29038	30612	31721	32869	34063	35298	36574	37587	38620	39688	40783	41914	42758	43620	44500	45399	46311	46943	47584	48232	48891	49558	50232
4 to 5	18477	19737	21077	22512	24045	25676	27069	28536	30080	31708	33425	34637	35891	37196	38545	39943	41047	42179	43347	44542	45776	46699	47640	48598	49575	50573	51262	51959	52666	53384	54111	54847
5 to 6	21728	23208	24787	26474	28278	30199	31839	33567	35384	37303	39324	40748	42222	43757	45345	46990	48287	49619	50996	52407	53859	54943	56049	57181	58332	59507	60321	61144	61978	62821	63675	64541
6 to 7	19000	20297	21680	23153	24730	26410	27846	29359	30948	32626	34395	35643	36930	38275	39663	41102	42239	43404	44608	45842	47112	48061	49029	50022	51030	52060	52775	53496	54226	54967	55716	56472
7 to 8	18992	20288	21668	23142	24722	26403	27838	29351	30939	32618	34385	35630	36922	38269	39655	41094	42232	43398	44601	45836	47108	48059	49026	50017	51026	52055	52767	53487	54216	54957	55704	56461
8 to 9	16543	17671	18872	20153	21523	22984	24234	25549	26932	28392	29927	31011	32135	33305	34510	35762	36752	37766	38812	39886	40993	41824	42666	43532	44411	45308	45930	46558	47193	47838	48489	49149
9 to 10	16959	18113	19341	20655	22059	23557	24837	26185	27603	29098	30675	31789	32945	34143	35378	36662	37677	38716	39790	40892	42027	42878	43743	44632	45533	46451	47086	47725	48376	49039	49708	50389
10 to 11	14849	15862	16938	18086	19318	20631	21751	22931	24174	25484	26862	27836	28848	29897	30980	32102	32988	33898	34841	35805	36796	37543	38302	39080	39869	40674	41233	41794	42365	42944	43528	44121
11 to 12	15233	16275	17380	18559	19820	21164	22313	23523	24795	26136	27551	28552	29591	30668	31783	32938	33846	34782	35747	36734	37748	38513	39292	40089	40899	41724	42294	42868	43454	44050	44651	45259
12 to 13	21965	23462	25058	26763	28583	30524	32181	33928	35764	37701	39745	41189	42690	44240	45847	47513	48828	50179	51571	52997	54463	55563	56685	57833	58999	60189	61008	61837	62679	63535	64399	65277
13 to 14	21663	23141	24714	26391	28186	30098	31727	33445	35254	37162	39177	40598	42075	43602	45186	46823	48115	49447	50817	52220	53662	54745	55848	56976	58122	59293	60102	60923	61757	62604	63458	64325
14 to 15	20776	22194	23703	25313	27034	28868	30431	32078	33813	35644	37577	38938	40355	41820	43340	44911	46151	47429	48742	50089	51471	52510	53570	54652	55753	56876	57652	58441	59239	60053	60873	61703
15 to 16	20761	22177	23684	25293	27012	28846	30407	32053	33785	35616	37544	38906	40321	41786	43304	44873	46115	47393	48708	50055	51438	52477	53536	54619	55721	56844	57621	58409	59205	60014	60830	61657
16 to 17	50051	53461	57099	60985	65135	69562	73331	73678	77669	81877	86316	89445	92691	96059	99549	103158	106016	108951	111972	115072	118258	120643	123077	125559	128089	130670	132456	134268	136100	137956	139838	141745
17 to 18	62682	66951	71510	76378	81578	87125	91846	93477	98544	103885	109517	113490	117610	121885	126315	130896	134521	138244	142079	146014	150059	153085	156171	159318	162529	165805	168066	170361	172683	175034	177419	179834
18 to 19	64444	68837	73524	78530	83876	89580	94434	96566	101800	107319	113137	117246	121502	125918	130492	135225	138971	142817	146776	150841	155020	158145	161332	164587	167906	171290	173625	175993	178389	180818	183280	185775
19 to 1	29167	31158	33277	35541	37958	40532	42726	44644	47062	49608	52295	54193	56158	58199	60313	62500	64233	66010	67844	69724	71656	73101	74577	76082	77617	79181	80260	81357	82463	83583	84724	85876
Total	**491245**	**524734**	**560411**	**598530**	**639256**	**682671**	**719678**	**748294**	**788812**	**831548**	**876603**	**908394**	**941364**	**975587**	**1010997**	**1047655**	**1076649**	**1106415**	**1137094**	**1168553**	**1200908**	**1225145**	**1249850**	**1275097**	**1300808**	**1327026**	**1345141**	**1363494**	**1382080**	**1400935**	**1420025**	**1439358**

Traffic Forecast Category wise (Pessimistic case)

Bus	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	532	554	573	593	615	638	660	683	706	729	754	777	802	827	853	880	905	931	958	985	1013	1040	1067	1095	1123	1151	1178	1206	1234	1262	1290	1319
2 to 3	516	537	556	576	598	621	643	666	689	712	737	760	785	810	836	863	888	914	941	968	996	1023	1050	1078	1106	1134	1161	1189	1217	1245	1273	1302
3 to 4	477	495	513	533	554	575	596	617	638	659	682	703	726	749	773	797	821	845	869	893	918	942	966	991	1016	1041	1065	1090	1115	1140	1165	1191
4 to 5	487	504	522	542	563	584	605	626	647	668	691	712	735	758	782	806	830	854	878	902	927	951	975	1000	1025	1050	1074	1099	1124	1149	1174	1200
5 to 6	467	484	502	521	541	561	581	601	621	641	663	683	705	727	750	773	796	819	842	865	889	912	935	959	983	1007	1030	1054	1078	1102	1126	1151
6 to 7	306	315	324	333	342	351	360	369	378	387	397	406	416	426	436	446	456	466	476	486	496	506	516	526	536	546	556	566	576	586	596	607
7 to 8	427	444	457	471	485	499	513	527	541	555	571	585	601	617	633	649	665	681	697	713	730	746	762	779	796	813	829	846	863	880	897	914
8 to 9	366	381	392	404	416	428	440	452	464	476	490	502	516	530	544	558	572	586	600	614	629	643	657	672	687	702	716	731	746	761	776	791
9 to 10	302	313	321	329	337	345	353	361	369	377	386	394	403	412	421	430	439	448	457	466	475	484	493	502	511	520	529	538	547	556	565	574
10 to 11	288	297	305	313	321	329	337	345	353	361	370	378	387	396	405	414	423	432	441	450	459	468	477	486	495	504	513	522	531	540	549	558
11 to 12	247	256	260	264	268	272	276	280	284	288	293	297	302	307	312	317	322	327	332	337	342	347	352	357	362	367	372	377	382	387	392	397
12 to 13	311	322	329	336	344	352	360	368	376	384	393	401	410	419	428	437	446	455	464	473	482	491	500	509	518	527	536	545	554	563	572	581
13 to 14	379	392	402	412	422	432	442	452	462	472	483	493	504	515	526	537	548	559	570	581	593	604	615	626	638	651	662	673	685	697	710	723
14 to 15	384	397	408	419	430	441	452	463	474	485	497	508	520	532	544	556	568	580	592	604	617	629	641	653	666	680	692	704	717	730	744	758
15 to 16	362	373	383	393	403	413	423	433	443	453	464	474	485	496	507	518	529	540	551	562	574	585	596	607	619	632	643	654	666	678	691	704
16 to 17	819	850	883	918	954	992	1028	1066	1104	1143	1185	1224	1266	1309	1352	1397	1440	1483	1528	1573	1622	1667	1712	1759	1808	1859	1904	1950	1999	2048	2099	2150
17 to 18	1041	1087	1129	1173	1219	1267	1313	1361	1409	1458	1510	1559	1611	1664	1719	1777	1831	1886	1944	2002	2064	2122	2180	2240	2302	2366	2424	2483	2545	2607	2671	2736
18 to 19	942	983	1020	1059	1100	1143	1184	1227	1270	1314	1361	1405	1452	1500	1549	1601	1649	1698	1750	1802	1857	1909	1961	2015	2070	2127	2179	2232	2287	2342	2399	2457
19 to 1	561	583	602	622	644	667	689	712	735	758	783	806	831	856	882	909	934	960	987	1014	1042	1069	1096	1124	1152	1180	1207	1235	1263	1291	1319	1348
Total	9213	9567	9881	10211	10556	10910	11255	11609	11963	12320	12710	13067	13457	13850	14252	14665	15062	15464	15877	16290	16725	17138	17551	17978	18413	18857	19270	19694	20129	20564	21008	21461

Traffic Forecast Category wise (Pessimistic case)

Mini bus	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	148	146	149	152	155	158	161	164	167	170	173	176	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236
2 to 3	143	141	144	147	150	153	156	159	162	165	168	171	174	177	180	183	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231
3 to 4	147	144	146	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200	202	204
4 to 5	147	145	147	149	151	153	155	157	159	161	163	165	167	169	171	173	175	177	179	181	183	185	187	189	191	193	195	197	199	201	203	205
5 to 6	130	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156
6 to 7	102	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
7 to 8	134	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166
8 to 9	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146
9 to 10	109	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
10 to 11	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
11 to 12	86	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
12 to 13	115	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
13 to 14	114	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
14 to 15	107	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
15 to 16	83	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
16 to 17	174	174	178	182	186	191	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320
17 to 18	252	257	263	269	275	282	288	295	302	309	316	323	330	337	344	351	358	365	372	379	386	393	400	407	414	421	428	435	442	449	456	463
18 to 19	236	240	247	254	261	269	276	284	292	300	308	316	324	332	340	348	356	364	372	380	388	396	404	412	420	428	436	444	452	460	468	476
19 to 1	158	158	161	164	167	170	173	176	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248
Total	2600	2582	2615	2648	2681	2717	2750	2786	2822	2858	2894	2930	2966	3002	3038	3074	3110	3146	3182	3218	3254	3290	3326	3362	3398	3434	3470	3506	3542	3578	3614	3650

Traffic Forecast Category wise (Pessimistic case)

LCV	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1864	1913	1966	2019	2073	2127	2166	2205	2245	2285	2325	2343	2361	2379	2397	2415	2429	2443	2457	2471	2485	2490	2495	2500	2505	2510	2510	2510	2510	2510	2510	2510
2 to 3	1762	1808	1859	1910	1962	2014	2052	2090	2129	2168	2207	2224	2241	2258	2275	2292	2305	2318	2331	2344	2357	2362	2367	2372	2377	2382	2382	2382	2382	2382	2382	2382
3 to 4	2152	2208	2269	2330	2393	2457	2502	2548	2595	2642	2689	2712	2735	2759	2783	2807	2827	2847	2867	2887	2907	2913	2919	2925	2931	2937	2937	2937	2937	2937	2937	2937
4 to 5	2127	2182	2242	2302	2364	2427	2471	2516	2562	2608	2654	2676	2698	2721	2744	2767	2785	2803	2821	2839	2857	2863	2869	2875	2881	2887	2887	2887	2887	2887	2887	2887
5 to 6	1949	2004	2059	2115	2173	2232	2273	2314	2355	2396	2437	2459	2481	2503	2525	2547	2564	2581	2598	2615	2632	2636	2640	2644	2648	2652	2652	2652	2652	2652	2652	2652
6 to 7	1645	1689	1737	1786	1836	1887	1923	1959	1995	2032	2069	2087	2105	2123	2141	2159	2171	2183	2195	2207	2219	2221	2223	2225	2227	2229	2229	2229	2229	2229	2229	2229
7 to 8	1990	2043	2104	2165	2226	2288	2332	2376	2421	2467	2513	2536	2559	2582	2605	2628	2644	2660	2676	2692	2708	2711	2714	2717	2720	2723	2723	2723	2723	2723	2723	2723
8 to 9	1732	1777	1828	1879	1930	1982	2018	2054	2090	2127	2164	2182	2200	2218	2236	2254	2268	2282	2296	2310	2324	2327	2330	2333	2336	2339	2339	2339	2339	2339	2339	2339
9 to 10	1652	1693	1743	1794	1845	1896	1930	1964	1998	2033	2068	2082	2096	2110	2124	2138	2150	2162	2174	2186	2198	2200	2202	2204	2206	2208	2208	2208	2208	2208	2208	2208
10 to 11	1562	1602	1650	1699	1748	1797	1831	1865	1899	1934	1969	1983	1997	2011	2025	2039	2051	2063	2075	2087	2099	2101	2103	2105	2107	2109	2109	2109	2109	2109	2109	2109
11 to 12	1091	1119	1150	1182	1214	1247	1268	1289	1310	1331	1352	1360	1368	1376	1384	1392	1396	1400	1404	1408	1412	1412	1412	1412	1412	1412	1412	1412	1412	1412	1412	1412
12 to 13	1451	1487	1530	1574	1619	1665	1695	1725	1755	1785	1815	1831	1847	1863	1879	1895	1904	1913	1922	1931	1940	1941	1942	1943	1944	1945	1945	1945	1945	1945	1945	1945
13 to 14	1301	1336	1375	1415	1455	1496	1522	1548	1574	1600	1626	1639	1652	1665	1678	1691	1698	1705	1712	1719	1726	1726	1726	1726	1726	1726	1726	1726	1726	1726	1726	1726
14 to 15	1173	1204	1236	1269	1302	1336	1360	1384	1408	1432	1456	1464	1472	1480	1488	1496	1502	1508	1514	1520	1526	1526	1526	1526	1526	1526	1526	1526	1526	1526	1526	1526
15 to 16	876	894	914	935	956	977	992	1007	1022	1037	1052	1056	1060	1064	1068	1072	1075	1078	1081	1084	1087	1087	1087	1087	1087	1087	1087	1087	1087	1087	1087	1087
16 to 17	1827	1873	1924	1975	2028	2081	2119	2157	2196	2235	2274	2293	2312	2331	2350	2369	2384	2399	2414	2429	2444	2450	2456	2462	2468	2474	2474	2474	2474	2474	2474	2474
17 to 18	2651	2721	2801	2881	2963	3045	3099	3153	3209	3265	3321	3350	3379	3408	3437	3466	3489	3512	3535	3558	3581	3588	3595	3602	3609	3616	3616	3616	3616	3616	3616	3616
18 to 19	2452	2517	2592	2667	2744	2821	2873	2925	2978	3031	3084	3110	3136	3162	3188	3214	3235	3256	3277	3298	3319	3326	3333	3340	3347	3354	3354	3354	3354	3354	3354	3354
19 to 1	1920	1971	2028	2085	2143	2201	2241	2281	2322	2363	2404	2422	2440	2458	2476	2494	2508	2522	2536	2550	2564	2569	2574	2579	2584	2589	2589	2589	2589	2589	2589	2589
Total	33176	34041	35007	35982	36974	37976	38667	39360	40063	40771	41479	41809	42139	42471	42803	43135	43385	43635	43885	44135	44385	44449	44513	44577	44641	44705	44705	44705	44705	44705	44705	44705

Traffic Forecast Category wise (Pessimistic case)

2-Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1293	1329	1363	1346	1381	1416	1441	1466	1491	1517	1543	1557	1571	1585	1599	1613	1623	1633	1643	1653	1663	1666	1669	1672	1675	1678	1678	1678	1678	1678	1678	1678
2 to 3	1183	1214	1244	1227	1258	1289	1312	1335	1358	1382	1406	1419	1432	1445	1458	1471	1480	1489	1498	1507	1516	1519	1522	1525	1528	1531	1531	1531	1531	1531	1531	1531
3 to 4	1381	1416	1457	1447	1488	1529	1555	1581	1607	1634	1661	1675	1689	1703	1717	1731	1741	1751	1761	1771	1781	1784	1787	1790	1793	1796	1796	1796	1796	1796	1796	1796
4 to 5	1401	1439	1479	1468	1508	1548	1575	1602	1629	1657	1685	1699	1713	1727	1741	1755	1765	1775	1785	1795	1805	1808	1811	1814	1817	1820	1820	1820	1820	1820	1820	1820
5 to 6	1392	1430	1470	1459	1499	1539	1566	1593	1620	1648	1676	1690	1704	1718	1732	1746	1754	1762	1770	1778	1786	1789	1792	1795	1798	1801	1801	1801	1801	1801	1801	1801
6 to 7	1077	1105	1136	1144	1175	1206	1227	1248	1269	1290	1311	1321	1331	1341	1351	1361	1366	1371	1376	1382	1388	1390	1392	1394	1396	1398	1398	1398	1398	1398	1398	1398
7 to 8	1340	1380	1417	1407	1444	1481	1507	1533	1559	1586	1613	1627	1641	1655	1669	1683	1691	1699	1707	1716	1725	1728	1731	1734	1737	1740	1740	1740	1740	1740	1740	1740
8 to 9	1225	1260	1292	1277	1309	1341	1365	1389	1413	1438	1463	1475	1487	1499	1511	1523	1530	1537	1544	1552	1560	1563	1566	1569	1572	1575	1575	1575	1575	1575	1575	1575
9 to 10	1116	1148	1176	1181	1209	1237	1259	1281	1303	1325	1347	1356	1365	1374	1383	1392	1399	1406	1413	1421	1429	1431	1433	1435	1437	1439	1439	1439	1439	1439	1439	1439
10 to 11	1088	1122	1150	1155	1183	1211	1233	1255	1277	1299	1321	1330	1339	1348	1357	1366	1373	1380	1387	1395	1403	1405	1407	1409	1411	1413	1413	1413	1413	1413	1413	1413
11 to 12	640	659	674	679	694	709	720	731	742	753	764	766	768	770	772	774	776	778	780	782	784	784	784	784	784	784	784	784	784	784	784	784
12 to 13	915	939	962	961	985	1008	1026	1044	1062	1080	1098	1104	1110	1116	1122	1128	1132	1136	1140	1144	1148	1149	1150	1151	1152	1153	1153	1153	1153	1153	1153	1153
13 to 14	690	710	725	730	745	760	772	784	796	808	820	822	824	826	828	830	832	834	836	838	840	840	840	840	840	840	840	840	840	840	840	840
14 to 15	603	619	631	633	645	657	666	675	684	693	702	704	706	708	710	712	714	716	718	720	722	722	722	722	722	722	722	722	722	722	722	722
15 to 16	495	510	518	516	524	532	536	540	544	548	552	554	556	558	560	562	564	566	568	570	572	572	572	572	572	572	572	572	572	572	572	572
16 to 17	1216	1251	1282	1267	1300	1333	1355	1377	1399	1422	1445	1458	1471	1484	1497	1510	1518	1526	1534	1542	1550	1553	1556	1559	1562	1565	1565	1565	1565	1565	1565	1565
17 to 18	1560	1605	1645	1635	1677	1719	1747	1775	1803	1832	1861	1877	1893	1909	1925	1941	1952	1963	1974	1985	1996	1999	2002	2005	2008	2011	2011	2011	2011	2011	2011	2011
18 to 19	1392	1435	1470	1459	1496	1533	1559	1585	1611	1638	1665	1680	1695	1710	1725	1740	1750	1760	1770	1780	1790	1793	1796	1799	1802	1805	1805	1805	1805	1805	1805	1805
19 to 1	1295	1332	1365	1347	1381	1415	1440	1465	1490	1516	1542	1556	1570	1584	1598	1612	1622	1632	1642	1652	1662	1665	1668	1671	1674	1677	1677	1677	1677	1677	1677	1677
Total	21302	21903	22456	22336	22901	23463	23861	24259	24657	25066	25475	25670	25865	26060	26255	26450	26582	26714	26846	26983	27120	27160	27200	27240	27280	27320	27320	27320	27320	27320	27320	27320

Traffic Forecast Category wise (Pessimistic case)

3-Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1834	1905	1980	2003	2080	2158	2217	2277	2339	2401	2463	2499	2535	2571	2609	2647	2667	2687	2707	2728	2749	2760	2771	2782	2793	2804	2806	2808	2810	2812	2814	2816
2 to 3	2032	2111	2195	2231	2318	2407	2473	2541	2611	2682	2753	2794	2835	2876	2920	2964	2989	3014	3039	3065	3091	3105	3119	3133	3147	3161	3163	3165	3167	3169	3171	3173
3 to 4	1941	2017	2094	2120	2200	2284	2345	2407	2471	2535	2600	2642	2684	2726	2769	2813	2837	2861	2886	2912	2938	2951	2964	2977	2990	3003	3005	3007	3009	3011	3013	3015
4 to 5	1842	1915	1989	2012	2089	2169	2228	2288	2350	2412	2475	2514	2553	2592	2632	2672	2694	2716	2739	2763	2787	2798	2809	2820	2831	2842	2844	2846	2848	2850	2852	2854
5 to 6	1867	1941	2016	2040	2118	2198	2255	2314	2375	2438	2502	2542	2582	2622	2663	2704	2728	2752	2777	2803	2829	2840	2851	2862	2873	2884	2886	2888	2890	2892	2894	2896
6 to 7	1300	1353	1403	1436	1489	1543	1580	1618	1658	1701	1744	1771	1798	1825	1852	1880	1898	1916	1934	1952	1970	1976	1982	1988	1994	2000	2000	2000	2000	2000	2000	2000
7 to 8	1541	1603	1663	1677	1739	1802	1847	1894	1943	1993	2043	2073	2103	2133	2164	2196	2215	2234	2253	2273	2293	2301	2309	2317	2325	2333	2334	2335	2336	2337	2338	2339
8 to 9	1469	1527	1582	1591	1648	1706	1747	1790	1835	1881	1927	1954	1981	2008	2036	2065	2083	2101	2119	2138	2157	2165	2173	2181	2189	2197	2198	2199	2200	2201	2202	2203
9 to 10	1227	1275	1319	1346	1392	1440	1476	1513	1551	1590	1629	1651	1673	1695	1717	1741	1753	1765	1777	1789	1801	1809	1817	1825	1833	1841	1841	1841	1841	1841	1841	1841
10 to 11	1201	1250	1295	1323	1370	1419	1456	1494	1533	1573	1613	1635	1657	1679	1701	1725	1737	1749	1761	1773	1785	1793	1801	1809	1817	1825	1825	1825	1825	1825	1825	1825
11 to 12	676	703	725	739	761	784	803	822	842	862	882	892	902	912	922	932	936	940	944	948	952	954	956	958	960	962	962	962	962	962	962	962
12 to 13	1043	1084	1123	1141	1181	1222	1254	1286	1320	1354	1388	1405	1422	1439	1456	1473	1482	1491	1500	1509	1518	1523	1528	1533	1538	1543	1544	1545	1546	1547	1548	1549
13 to 14	776	807	835	855	883	912	936	960	985	1010	1035	1045	1055	1065	1075	1085	1089	1093	1097	1101	1105	1107	1109	1111	1113	1115	1115	1115	1115	1115	1115	1115
14 to 15	837	870	903	928	961	995	1023	1051	1080	1109	1138	1149	1160	1171	1182	1193	1197	1201	1205	1209	1213	1215	1217	1219	1221	1223	1223	1223	1223	1223	1223	1223
15 to 16	740	765	791	809	835	862	884	906	929	952	975	985	995	1005	1015	1025	1029	1033	1037	1041	1045	1047	1049	1051	1053	1055	1055	1055	1055	1055	1055	1055
16 to 17	1539	1595	1655	1666	1726	1787	1835	1884	1935	1986	2037	2064	2091	2118	2146	2174	2190	2206	2222	2239	2256	2264	2272	2280	2288	2296	2298	2300	2302	2304	2306	2308
17 to 18	2125	2205	2289	2321	2407	2495	2562	2630	2701	2772	2843	2883	2923	2963	3005	3047	3071	3095	3119	3144	3169	3182	3195	3208	3221	3234	3236	3238	3240	3242	3244	3246
18 to 19	1995	2070	2152	2185	2268	2352	2415	2479	2545	2611	2677	2715	2753	2791	2831	2871	2893	2915	2937	2960	2983	2995	3007	3019	3031	3043	3045	3047	3049	3051	3053	3055
19 to 1	1960	2035	2115	2143	2225	2308	2370	2433	2498	2563	2628	2665	2702	2739	2778	2817	2838	2859	2880	2902	2924	2937	2950	2963	2976	2989	2991	2993	2995	2997	2999	3001
Total	27946	29031	30124	30566	31690	32843	33706	34587	35501	36425	37352	37878	38404	38930	39473	40024	40326	40628	40933	41249	41565	41722	41879	42036	42193	42350	42371	42392	42413	42434	42455	42476

Traffic Forecast Category wise (Pessimistic case)

4 to 6 Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	3515	3656	3799	3844	3993	4148	4259	4374	4491	4613	4735	4805	4876	4950	5027	5105	5152	5199	5247	5296	5346	5374	5402	5430	5458	5486	5491	5496	5501	5506	5511	5516
2 to 3	3226	3357	3487	3524	3661	3803	3904	4009	4116	4227	4338	4402	4466	4533	4603	4674	4717	4760	4804	4848	4893	4918	4943	4968	4993	5018	5022	5026	5030	5034	5038	5042
3 to 4	3836	3994	4152	4214	4381	4556	4679	4806	4934	5067	5200	5279	5359	5442	5527	5613	5669	5725	5781	5838	5895	5927	5959	5991	6023	6055	6059	6063	6067	6071	6075	6079
4 to 5	3993	4157	4320	4386	4558	4738	4865	4996	5128	5266	5404	5488	5573	5661	5752	5844	5902	5960	6018	6077	6136	6168	6200	6232	6264	6296	6300	6304	6308	6312	6316	6320
5 to 6	3953	4116	4278	4343	4512	4690	4817	4948	5081	5219	5357	5439	5522	5608	5697	5786	5843	5900	5957	6015	6073	6104	6135	6166	6197	6228	6232	6236	6240	6244	6248	6252
6 to 7	3006	3128	3255	3320	3453	3592	3692	3794	3899	4006	4114	4176	4239	4303	4369	4436	4478	4520	4562	4605	4648	4670	4692	4714	4736	4758	4761	4764	4767	4770	4773	4776
7 to 8	3248	3381	3517	3566	3709	3858	3965	4074	4186	4302	4419	4490	4562	4636	4711	4787	4832	4877	4922	4968	5014	5036	5058	5080	5102	5124	5128	5132	5136	5140	5144	5148
8 to 9	3151	3281	3409	3450	3586	3728	3829	3932	4038	4148	4259	4326	4394	4464	4535	4607	4650	4693	4736	4780	4824	4847	4870	4893	4916	4939	4943	4947	4951	4955	4959	4963
9 to 10	3293	3428	3564	3639	3782	3932	4037	4145	4257	4374	4492	4564	4637	4711	4785	4860	4905	4950	4995	5041	5087	5113	5139	5165	5191	5217	5222	5227	5232	5237	5242	5247
10 to 11	3269	3401	3536	3610	3752	3902	4007	4115	4226	4342	4459	4530	4602	4675	4748	4822	4867	4912	4957	5003	5049	5074	5099	5124	5149	5174	5179	5184	5189	5194	5199	5204
11 to 12	2368	2466	2563	2621	2722	2827	2898	2972	3047	3126	3208	3262	3316	3371	3426	3481	3511	3541	3571	3601	3631	3650	3669	3688	3707	3726	3727	3728	3729	3730	3731	3732
12 to 13	2980	3104	3229	3286	3414	3548	3641	3738	3836	3939	4044	4110	4176	4243	4311	4379	4419	4459	4499	4539	4579	4602	4625	4648	4671	4694	4696	4698	4700	4702	4704	4706
13 to 14	2402	2503	2602	2662	2764	2871	2944	3020	3097	3178	3261	3314	3367	3421	3475	3529	3561	3593	3625	3657	3689	3708	3727	3746	3765	3784	3785	3786	3787	3788	3789	3790
14 to 15	2302	2398	2491	2545	2640	2741	2814	2890	2966	3045	3125	3175	3225	3276	3327	3378	3405	3432	3459	3486	3513	3529	3545	3561	3577	3593	3594	3595	3596	3597	3598	3599
15 to 16	1960	2040	2118	2156	2235	2319	2382	2446	2510	2577	2645	2686	2727	2769	2811	2853	2873	2893	2913	2933	2953	2965	2977	2989	3001	3013	3014	3015	3016	3017	3018	3019
16 to 17	3316	3451	3589	3633	3776	3925	4031	4141	4252	4367	4482	4551	4620	4693	4768	4844	4884	4924	4965	5006	5048	5071	5094	5117	5140	5163	5167	5171	5175	5179	5183	5187
17 to 18	4241	4412	4587	4665	4847	5036	5175	5318	5464	5615	5766	5856	5947	6042	6139	6237	6290	6343	6397	6452	6508	6539	6570	6601	6632	6663	6668	6673	6678	6683	6688	6693
18 to 19	3261	3393	3526	3564	3701	3844	3949	4058	4169	4283	4397	4464	4531	4602	4674	4747	4785	4823	4862	4901	4941	4963	4985	5007	5029	5051	5055	5059	5063	5067	5071	5075
19 to 1	3609	3754	3903	3954	4109	4270	4388	4510	4634	4762	4890	4962	5035	5111	5189	5268	5313	5358	5404	5451	5499	5525	5551	5577	5603	5629	5634	5639	5644	5649	5654	5659
Total	60928	63420	65925	66986	69595	72328	74276	76286	78331	80456	82595	83879	85174	86511	87874	89250	90056	90862	91674	92497	93326	93783	94240	94697	95154	95611	95677	95743	95809	95875	95941	96007

Traffic Forecast Category wise (Pessimistic case)

7 & Above Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 to 3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 to 4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 to 5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 to 6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 to 7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 to 8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 to 9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 to 10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 to 11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 to 12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 to 13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 to 14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 to 15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 to 16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 to 17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 to 18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 to 19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 to 1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	34	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Traffic Forecast Category wise (Most likely case)

Car	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	20837	22309	23878	25562	27362	29289	30949	32667	34515	36469	38536	40036	41591	43208	44882	46625	48037	49490	50989	52530	54111	55337	56589	57868	59177	60513	61491	62485	63494	64520	65562	66624
2 to 3	20190	21615	23134	24767	26513	28382	29991	31689	33485	35384	37390	38847	40354	41922	43547	45237	46606	48015	49471	50965	52496	53687	54901	56141	57410	58706	59656	60621	61604	62602	63614	64644
3 to 4	16927	18119	19391	20759	22221	23787	25136	26560	28063	29652	31330	32550	33815	35129	36491	37908	39055	40236	41456	42706	43989	44986	46001	47035	48098	49181	49978	50786	51611	52447	53291	54153
4 to 5	18477	19780	21175	22669	24262	25972	27450	29004	30643	32379	34207	35537	36923	38357	39846	41391	42642	43932	45262	46628	48033	49121	50228	51359	52520	53704	54575	55458	56357	57269	58192	59133
5 to 6	21728	23264	24906	26667	28542	30554	32292	34123	36055	38098	40250	41815	43442	45128	46878	48697	50167	51684	53248	54855	56507	57786	59092	60423	61791	63187	64209	65247	66303	67375	68461	69566
6 to 7	19000	20345	21784	23325	24969	26729	28252	29853	31543	33327	35211	36579	38002	39474	41006	42596	43879	45206	46573	47980	49427	50550	51692	52856	54056	55276	56170	57081	58005	58944	59896	60864
7 to 8	18992	20335	21773	23312	24956	26717	28239	29842	31530	33314	35198	36565	37988	39459	40989	42579	43864	45190	46556	47962	49410	50533	51676	52841	54042	55262	56153	57061	57985	58925	59879	60849
8 to 9	16543	17711	18964	20302	21732	23261	24586	25981	27447	28996	30631	31820	33058	34337	35669	37053	38172	39326	40515	41739	43000	43977	44971	45986	47029	48090	48867	49658	50461	51281	52114	52958
9 to 10	16959	18156	19441	20811	22277	23846	25206	26633	28137	29727	31404	32624	33894	35207	36573	37993	39145	40327	41547	42805	44099	45100	46119	47160	48229	49318	50119	50933	51758	52597	53452	54320
10 to 11	14849	15900	17025	18227	19510	20883	22074	23324	24643	26034	27500	28569	29682	30831	32029	33273	34282	35317	36386	37488	38621	39498	40388	41300	42237	43192	43894	44609	45334	46070	46820	47582
11 to 12	15233	16311	17466	18700	20013	21424	22644	23925	25279	26705	28215	29312	30457	31636	32866	34139	35175	36238	37335	38468	39632	40532	41443	42378	43338	44315	45035	45767	46510	47263	48031	48812
12 to 13	21965	23517	25181	26958	28856	30892	32648	34498	36452	38512	40692	42271	43920	45624	47396	49233	50724	52255	53834	55465	57141	58438	59758	61107	62493	63904	64941	65992	67060	68145	69249	70371
13 to 14	21663	23194	24829	26579	28450	30457	32185	34009	35938	37972	40123	41679	43301	44977	46721	48533	50000	51506	53062	54667	56315	57589	58890	60220	61583	62972	63991	65025	66075	67143	68229	69331
14 to 15	20776	22247	23817	25494	27291	29217	30876	32625	34477	36429	38495	39989	41546	43155	44829	46568	47976	49426	50920	52461	54043	55264	56513	57788	59094	60425	61404	62395	63403	64429	65471	66529
15 to 16	20761	22231	23798	25472	27266	29187	30843	32590	34440	36388	38449	39940	41493	43101	44771	46509	47913	49361	50852	52389	53969	55192	56444	57717	59023	60356	61339	62331	63341	64370	65410	66468
16 to 17	50051	53592	57370	61415	65746	70386	74377	74972	79226	83717	88466	91898	95465	99169	103015	107013	110247	113581	117011	120547	124184	126997	129874	132810	135816	138889	141138	143419	145738	148095	150488	152922
17 to 18	62682	67113	71845	76914	82340	88150	93152	95090	100486	106183	112209	116566	121091	125790	130669	135741	139843	144071	148425	152910	157524	161093	164742	168466	172282	176182	179032	181923	184861	187850	190885	193970
18 to 19	64444	68996	73862	79074	84654	90626	95768	98210	103782	109668	115891	120390	125062	129915	134957	140195	144431	148799	153294	157925	162688	166374	170143	173989	177928	181956	184896	187882	190917	194000	197133	200320
19 to 1	29167	31229	33427	35783	38303	41006	43332	45392	47962	50681	53555	55637	57796	60038	62365	64786	66746	68766	70846	72985	75183	76888	78631	80405	82223	84082	85440	86821	88223	89651	91099	92577
Total	**491245**	**525964**	**563066**	**602790**	**645263**	**690765**	**730000**	**760987**	**804103**	**849635**	**897752**	**932624**	**968880**	**1006457**	**1045499**	**1086069**	**1118904**	**1152726**	**1187582**	**1223475**	**1260372**	**1288942**	**1318095**	**1347849**	**1378369**	**1409510**	**1432328**	**1455494**	**1479040**	**1502976**	**1527276**	**1551993**

Traffic Forecast Category wise (Most likely case)

Bus	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	532	554	575	598	621	645	668	692	717	742	769	794	821	848	876	904	931	959	987	1015	1045	1073	1101	1130	1161	1193	1222	1253	1284	1316	1348	1382
2 to 3	516	537	558	581	604	628	651	675	700	725	752	777	804	831	859	887	914	942	970	998	1028	1056	1084	1113	1144	1176	1205	1236	1267	1299	1331	1365
3 to 4	477	496	517	538	559	581	602	624	647	671	695	719	743	767	792	817	841	866	891	918	946	971	998	1025	1054	1083	1110	1139	1168	1197	1226	1256
4 to 5	487	505	526	547	568	590	611	633	656	680	704	728	752	776	801	826	850	875	900	927	955	980	1007	1034	1063	1092	1119	1148	1177	1206	1235	1265
5 to 6	467	485	505	525	545	566	586	607	629	652	675	698	721	744	768	792	815	839	863	888	914	938	963	988	1015	1042	1067	1094	1121	1148	1175	1203
6 to 7	306	316	325	334	343	353	362	372	382	392	402	412	422	432	442	452	462	472	482	493	505	515	526	538	550	562	574	586	598	610	622	634
7 to 8	427	445	459	473	487	502	516	531	547	563	579	595	611	627	644	661	677	694	711	728	746	763	780	798	817	836	854	873	892	911	930	950
8 to 9	366	382	394	406	418	431	443	456	470	484	498	512	526	540	555	570	584	599	614	629	645	660	675	691	708	725	741	758	775	792	809	827
9 to 10	302	314	322	330	338	347	355	364	373	382	391	400	409	418	427	436	445	454	463	472	482	491	500	510	520	530	540	550	560	570	580	590
10 to 11	288	298	306	314	322	331	339	348	357	366	375	384	393	402	411	420	429	438	447	456	466	475	484	494	504	514	524	534	544	554	564	574
11 to 12	247	256	260	264	268	273	277	282	287	292	297	302	307	312	317	322	327	332	337	342	348	353	358	364	370	376	382	388	394	400	406	412
12 to 13	311	322	330	338	346	355	363	372	381	390	399	408	417	426	435	444	453	462	471	480	491	500	509	519	530	541	551	562	573	584	595	606
13 to 14	379	392	402	412	422	433	443	454	465	476	487	498	509	520	532	545	557	569	582	595	609	622	635	649	663	677	691	705	719	733	747	761
14 to 15	384	397	408	419	430	442	453	465	477	489	501	513	525	537	550	564	577	590	604	618	633	647	661	676	691	706	721	736	751	766	781	796
15 to 16	362	373	383	393	403	414	424	435	446	457	468	479	490	501	513	526	538	550	563	576	590	603	616	630	644	658	672	686	700	714	728	742
16 to 17	819	850	886	923	961	1000	1038	1078	1120	1163	1207	1250	1294	1339	1386	1436	1482	1531	1581	1632	1685	1735	1786	1838	1893	1950	2001	2055	2110	2167	2224	2284
17 to 18	1041	1087	1132	1179	1227	1276	1324	1374	1426	1480	1537	1591	1648	1706	1766	1829	1888	1950	2013	2077	2144	2207	2271	2337	2406	2477	2542	2610	2679	2750	2821	2895
18 to 19	942	983	1023	1065	1108	1152	1195	1240	1287	1335	1386	1434	1485	1537	1591	1647	1700	1755	1811	1868	1930	1986	2043	2104	2168	2234	2294	2357	2421	2487	2553	2622
19 to 1	561	583	604	627	650	674	697	721	746	771	798	823	850	877	905	933	960	988	1016	1044	1074	1102	1130	1159	1190	1222	1251	1282	1313	1345	1377	1411
Total	9213	9575	9915	10266	10620	10993	11347	11723	12113	12510	12920	13317	13727	14140	14570	15011	15430	15865	16306	16756	17236	17677	18127	18597	19091	19594	20061	20552	21046	21549	22052	22575

Traffic Forecast Category wise (Most likely case)

Mini bus	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	148	148	151	154	157	160	163	166	169	172	175	178	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238
2 to 3	143	142	145	148	151	154	157	160	163	166	169	172	175	178	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232
3 to 4	147	147	149	151	153	155	157	159	161	163	165	167	169	171	173	175	177	179	181	183	185	187	189	191	193	195	197	199	201	203	205	207
4 to 5	147	147	149	151	153	155	157	159	161	163	165	167	169	171	173	175	177	179	181	183	185	187	189	191	193	195	197	199	201	203	205	207
5 to 6	130	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158
6 to 7	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102
7 to 8	134	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167
8 to 9	115	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148
9 to 10	109	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
10 to 11	101	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102
11 to 12	86	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
12 to 13	115	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
13 to 14	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
14 to 15	107	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
15 to 16	83	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
16 to 17	174	174	178	183	188	193	198	203	208	213	218	223	228	233	238	243	248	253	258	263	268	273	278	283	288	294	299	304	309	315	321	327
17 to 18	252	258	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376	383	390	397	404	411	418	426	433	440	447	455	463	471
18 to 19	236	241	248	256	264	272	280	288	296	304	312	320	328	336	344	352	360	368	376	384	392	400	408	416	424	433	441	449	457	466	475	484
19 to 1	158	159	162	165	168	171	174	177	180	183	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249
Total	2600	2607	2640	2676	2712	2748	2784	2820	2856	2892	2928	2964	3000	3036	3072	3108	3144	3180	3216	3252	3288	3324	3360	3396	3432	3471	3507	3543	3579	3618	3657	3696

Traffic Forecast Category wise (Most likely case)

LCV	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1864	1918	1973	2028	2083	2141	2185	2230	2276	2323	2370	2397	2424	2451	2478	2505	2522	2539	2556	2573	2590	2600	2610	2620	2630	2640	2645	2650	2655	2660	2665	2670
2 to 3	1762	1813	1866	1919	1972	2028	2071	2114	2158	2203	2248	2273	2298	2323	2348	2373	2389	2405	2421	2437	2453	2462	2471	2480	2489	2498	2503	2508	2513	2518	2523	2528
3 to 4	2152	2213	2278	2344	2411	2480	2530	2582	2636	2690	2745	2779	2813	2847	2881	2915	2937	2959	2981	3003	3025	3038	3051	3064	3077	3090	3096	3102	3108	3114	3120	3126
4 to 5	2127	2186	2251	2316	2382	2450	2499	2550	2603	2656	2710	2743	2776	2809	2842	2875	2895	2915	2935	2955	2975	2986	2997	3008	3019	3030	3036	3042	3048	3054	3060	3066
5 to 6	1949	2008	2068	2128	2189	2252	2298	2345	2394	2443	2493	2525	2557	2589	2621	2653	2674	2695	2716	2737	2758	2770	2782	2794	2806	2818	2822	2826	2830	2834	2838	2842
6 to 7	1645	1692	1745	1798	1853	1909	1950	1993	2038	2083	2129	2156	2183	2210	2237	2265	2282	2299	2317	2335	2353	2363	2373	2383	2393	2403	2405	2407	2409	2411	2413	2415
7 to 8	1990	2046	2111	2177	2245	2316	2370	2426	2483	2540	2598	2629	2660	2691	2722	2754	2774	2794	2815	2836	2857	2871	2885	2899	2913	2927	2930	2933	2936	2939	2942	2945
8 to 9	1732	1780	1835	1891	1948	2008	2052	2098	2145	2192	2240	2264	2288	2312	2336	2361	2377	2393	2410	2427	2444	2456	2468	2480	2492	2504	2507	2510	2513	2516	2519	2522
9 to 10	1652	1698	1752	1807	1863	1921	1966	2012	2059	2106	2154	2174	2194	2214	2235	2257	2269	2281	2294	2307	2320	2331	2342	2353	2364	2375	2377	2379	2381	2383	2385	2387
10 to 11	1562	1607	1658	1710	1763	1818	1862	1907	1953	1999	2046	2066	2086	2106	2127	2149	2161	2173	2186	2199	2212	2223	2234	2245	2256	2267	2269	2271	2273	2275	2277	2279
11 to 12	1091	1121	1157	1194	1232	1270	1297	1324	1353	1382	1411	1423	1435	1447	1459	1472	1479	1486	1493	1500	1507	1509	1511	1513	1515	1517	1517	1517	1517	1517	1517	1517
12 to 13	1451	1490	1537	1585	1634	1683	1721	1759	1799	1839	1879	1900	1921	1942	1963	1985	1998	2011	2024	2037	2050	2057	2064	2071	2078	2085	2086	2087	2088	2089	2090	2091
13 to 14	1301	1339	1381	1424	1468	1512	1545	1578	1613	1648	1683	1701	1719	1737	1755	1774	1785	1796	1807	1818	1829	1834	1839	1844	1849	1854	1854	1854	1854	1854	1854	1854
14 to 15	1173	1206	1242	1278	1314	1350	1377	1404	1433	1462	1491	1505	1519	1533	1547	1562	1569	1576	1583	1590	1597	1601	1605	1609	1613	1617	1617	1617	1617	1617	1617	1617
15 to 16	876	895	918	941	964	987	1005	1023	1042	1061	1080	1088	1096	1104	1112	1121	1124	1127	1130	1133	1136	1138	1140	1142	1144	1146	1146	1146	1146	1146	1146	1146
16 to 17	1827	1878	1933	1988	2044	2102	2144	2187	2232	2277	2323	2349	2375	2401	2427	2453	2471	2489	2507	2525	2543	2554	2565	2576	2587	2598	2604	2610	2616	2622	2628	2634
17 to 18	2651	2729	2813	2897	2983	3072	3136	3202	3270	3340	3411	3452	3493	3535	3577	3619	3647	3675	3703	3731	3759	3775	3791	3807	3823	3839	3846	3853	3860	3867	3874	3881
18 to 19	2452	2526	2604	2682	2762	2845	2905	2965	3027	3091	3157	3195	3233	3271	3309	3347	3372	3397	3422	3447	3472	3486	3500	3514	3528	3542	3549	3556	3563	3570	3577	3584
19 to 1	1920	1978	2037	2096	2156	2219	2266	2314	2363	2413	2463	2490	2517	2544	2571	2598	2615	2632	2649	2666	2683	2693	2703	2713	2723	2733	2738	2743	2748	2753	2758	2763
Total	33176	34123	35159	36203	37266	38363	39179	40013	40877	41748	42631	43109	43587	44066	44547	45038	45340	45642	45949	46256	46563	46747	46931	47115	47299	47483	47547	47611	47675	47739	47803	47867

Traffic Forecast Category wise (Most likely case)

2-Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1293	1331	1367	1353	1390	1428	1456	1485	1515	1545	1576	1593	1610	1628	1647	1666	1678	1691	1704	1717	1730	1740	1750	1760	1770	1780	1782	1784	1786	1788	1790	1792
2 to 3	1183	1216	1248	1234	1266	1299	1324	1350	1377	1404	1432	1447	1462	1478	1495	1512	1523	1535	1547	1559	1571	1580	1589	1598	1607	1616	1618	1620	1622	1624	1626	1628
3 to 4	1381	1418	1460	1452	1496	1542	1577	1614	1652	1690	1728	1746	1764	1783	1803	1824	1837	1850	1863	1876	1889	1898	1907	1916	1925	1934	1937	1940	1943	1946	1949	1952
4 to 5	1401	1441	1482	1473	1516	1561	1595	1631	1668	1705	1742	1760	1778	1797	1817	1838	1851	1864	1877	1890	1903	1912	1921	1930	1939	1948	1951	1954	1957	1960	1963	1966
5 to 6	1392	1435	1476	1467	1510	1555	1590	1627	1665	1703	1741	1761	1781	1802	1824	1847	1859	1871	1883	1895	1907	1915	1923	1931	1939	1947	1950	1953	1956	1959	1962	1965
6 to 7	1077	1111	1142	1151	1183	1218	1245	1273	1301	1329	1357	1373	1389	1405	1421	1437	1446	1455	1464	1473	1482	1486	1490	1494	1498	1502	1504	1506	1508	1510	1512	1514
7 to 8	1340	1387	1425	1416	1455	1497	1528	1560	1592	1624	1656	1675	1694	1713	1733	1753	1766	1779	1792	1805	1818	1824	1830	1836	1842	1848	1851	1854	1857	1860	1863	1866
8 to 9	1225	1266	1299	1285	1319	1356	1383	1411	1439	1467	1495	1513	1531	1549	1568	1587	1598	1609	1620	1631	1642	1648	1654	1660	1666	1672	1675	1678	1681	1684	1687	1690
9 to 10	1116	1151	1180	1188	1219	1252	1275	1299	1323	1347	1371	1385	1399	1413	1427	1441	1449	1457	1465	1473	1481	1487	1493	1499	1505	1511	1513	1515	1517	1519	1521	1523
10 to 11	1088	1125	1154	1162	1193	1226	1249	1273	1297	1321	1345	1359	1373	1387	1401	1415	1423	1431	1439	1447	1455	1461	1467	1473	1479	1485	1487	1489	1491	1493	1495	1497
11 to 12	640	660	676	683	699	715	726	738	750	762	774	782	790	798	806	814	816	818	820	822	824	825	826	827	828	829	829	829	829	829	829	829
12 to 13	915	941	966	969	995	1021	1039	1058	1078	1098	1118	1130	1142	1155	1168	1181	1186	1191	1196	1201	1206	1209	1212	1215	1218	1221	1222	1223	1224	1225	1226	1227
13 to 14	690	711	728	736	753	770	782	795	808	821	834	842	850	858	866	874	876	878	880	882	884	885	886	887	888	889	889	889	889	889	889	889
14 to 15	603	621	634	638	651	664	674	685	696	707	718	724	730	736	742	748	750	752	754	756	758	759	760	761	762	763	763	763	763	763	763	763
15 to 16	495	511	519	518	526	534	539	545	551	557	563	567	571	575	579	583	585	587	589	591	593	594	595	596	597	598	598	598	598	598	598	598
16 to 17	1216	1254	1289	1278	1313	1350	1376	1403	1431	1459	1488	1504	1520	1537	1555	1573	1584	1596	1608	1620	1632	1640	1648	1656	1664	1672	1674	1676	1678	1680	1682	1684
17 to 18	1560	1608	1652	1646	1691	1738	1772	1807	1843	1879	1916	1936	1956	1977	1999	2021	2035	2050	2065	2080	2095	2106	2117	2128	2139	2150	2152	2154	2156	2158	2160	2162
18 to 19	1392	1437	1475	1467	1505	1545	1574	1604	1635	1666	1698	1716	1734	1753	1773	1793	1806	1820	1834	1848	1862	1872	1882	1892	1902	1912	1914	1916	1918	1920	1922	1924
19 to 1	1295	1334	1369	1354	1390	1427	1455	1484	1514	1544	1575	1592	1609	1627	1646	1665	1677	1690	1703	1716	1729	1739	1749	1759	1769	1779	1781	1783	1785	1787	1789	1791
Total	21302	21958	22541	22468	23070	23698	24159	24642	25135	25628	26127	26405	26683	26971	27270	27572	27745	27924	28103	28282	28461	28580	28699	28818	28937	29056	29090	29124	29158	29192	29226	29260

Traffic Forecast Category wise (Most likely case)

3-Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1834	1909	1987	2014	2095	2180	2244	2311	2380	2450	2523	2570	2618	2668	2719	2770	2804	2838	2872	2906	2940	2959	2978	2997	3016	3035	3044	3053	3062	3071	3080	3089
2 to 3	2032	2117	2206	2247	2339	2436	2508	2583	2661	2739	2821	2874	2928	2984	3041	3099	3137	3175	3213	3251	3289	3311	3333	3355	3377	3399	3409	3419	3429	3439	3449	3459
3 to 4	1941	2022	2103	2135	2222	2313	2379	2447	2515	2585	2659	2708	2758	2810	2863	2916	2952	2988	3024	3060	3096	3116	3136	3156	3176	3196	3207	3218	3229	3240	3251	3262
4 to 5	1842	1920	1997	2024	2106	2192	2256	2322	2388	2455	2526	2573	2621	2671	2722	2773	2807	2841	2875	2909	2943	2961	2979	2997	3015	3033	3043	3053	3063	3073	3083	3093
5 to 6	1867	1945	2023	2050	2133	2221	2286	2353	2420	2489	2561	2608	2656	2706	2757	2809	2844	2879	2914	2949	2984	3004	3024	3044	3064	3084	3093	3102	3111	3120	3129	3138
6 to 7	1300	1356	1407	1443	1497	1555	1598	1641	1684	1731	1779	1810	1841	1874	1907	1940	1965	1990	2015	2040	2065	2081	2097	2113	2129	2145	2149	2153	2157	2161	2165	2169
7 to 8	1541	1607	1669	1686	1749	1815	1865	1916	1967	2022	2079	2114	2150	2187	2224	2261	2289	2317	2345	2373	2401	2418	2435	2452	2469	2486	2492	2498	2504	2510	2516	2522
8 to 9	1469	1531	1588	1600	1659	1721	1767	1814	1861	1911	1963	1995	2028	2062	2096	2130	2157	2184	2211	2238	2265	2281	2297	2313	2329	2345	2351	2357	2363	2369	2375	2381
9 to 10	1227	1278	1323	1352	1399	1449	1488	1527	1566	1608	1651	1678	1705	1733	1761	1789	1811	1833	1855	1877	1899	1910	1921	1932	1943	1954	1959	1964	1969	1974	1979	1984
10 to 11	1201	1253	1299	1329	1377	1428	1468	1508	1548	1591	1635	1663	1691	1720	1749	1778	1800	1822	1844	1866	1888	1899	1910	1921	1932	1943	1948	1953	1958	1963	1968	1973
11 to 12	676	707	729	743	766	790	810	830	850	871	892	905	918	932	946	960	970	980	990	1000	1010	1014	1018	1022	1026	1030	1032	1034	1036	1038	1040	1042
12 to 13	1043	1089	1129	1148	1190	1233	1268	1304	1340	1377	1415	1437	1459	1482	1506	1530	1546	1562	1578	1594	1610	1618	1626	1634	1642	1650	1654	1658	1662	1666	1670	1674
13 to 14	776	811	839	859	888	918	944	970	996	1023	1050	1065	1080	1096	1112	1128	1138	1148	1158	1168	1178	1182	1186	1190	1194	1198	1200	1202	1204	1206	1208	1210
14 to 15	837	874	908	934	969	1005	1036	1067	1098	1130	1162	1180	1198	1217	1236	1255	1265	1275	1285	1295	1305	1309	1313	1317	1321	1325	1327	1329	1331	1333	1335	1337
15 to 16	740	768	794	812	839	867	891	915	939	964	989	1004	1019	1035	1051	1067	1076	1085	1094	1103	1112	1116	1120	1124	1128	1132	1134	1136	1138	1140	1142	1144
16 to 17	1539	1601	1665	1680	1745	1813	1864	1918	1973	2028	2086	2123	2161	2201	2242	2283	2308	2333	2358	2383	2408	2423	2438	2453	2468	2483	2490	2497	2504	2511	2518	2525
17 to 18	2125	2210	2298	2336	2429	2525	2596	2670	2747	2825	2907	2960	3014	3070	3127	3184	3221	3259	3297	3335	3373	3395	3417	3439	3461	3483	3493	3503	3513	3523	3533	3543
18 to 19	1995	2076	2162	2200	2288	2380	2448	2519	2593	2667	2747	2797	2848	2901	2955	3009	3045	3081	3117	3153	3189	3209	3229	3249	3269	3289	3297	3305	3313	3321	3329	3337
19 to 1	1960	2040	2124	2157	2244	2334	2401	2470	2542	2615	2693	2744	2796	2850	2905	2960	2995	3030	3065	3100	3135	3155	3175	3195	3215	3235	3244	3253	3262	3271	3280	3289
Total	27946	29114	30250	30749	31934	33175	34117	35085	36068	37081	38138	38808	39489	40199	40919	41641	42130	42620	43110	43600	44090	44361	44632	44903	45174	45445	45566	45687	45808	45929	46050	46171

Traffic Forecast Category wise (Most likely case)

4 to 6 Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	3515	3666	3817	3873	4035	4203	4327	4454	4585	4719	4856	4941	5028	5118	5209	5300	5363	5427	5491	5558	5626	5668	5710	5752	5794	5836	5855	5874	5893	5912	5931	5950
2 to 3	3226	3365	3503	3550	3699	3853	3966	4081	4200	4322	4447	4525	4604	4687	4771	4855	4913	4971	5029	5090	5152	5190	5228	5266	5304	5342	5358	5374	5390	5406	5422	5438
3 to 4	3836	4004	4172	4246	4425	4609	4743	4879	5021	5168	5319	5413	5508	5607	5707	5808	5878	5949	6020	6094	6168	6214	6260	6306	6352	6398	6419	6440	6461	6482	6503	6524
4 to 5	3993	4166	4339	4418	4603	4794	4933	5074	5221	5373	5529	5629	5730	5835	5941	6048	6121	6195	6269	6346	6423	6469	6515	6561	6607	6653	6675	6697	6719	6741	6763	6785
5 to 6	3953	4126	4298	4375	4560	4750	4889	5030	5176	5326	5480	5579	5679	5782	5887	5993	6065	6138	6211	6287	6363	6409	6455	6501	6547	6593	6615	6637	6659	6681	6703	6725
6 to 7	3006	3136	3271	3346	3489	3637	3748	3860	3976	4095	4217	4292	4369	4448	4528	4608	4661	4715	4769	4825	4881	4915	4949	4983	5017	5051	5068	5085	5102	5119	5136	5153
7 to 8	3248	3390	3535	3594	3746	3905	4024	4144	4269	4395	4525	4608	4693	4781	4869	4957	5018	5080	5142	5207	5272	5308	5344	5380	5416	5452	5467	5482	5497	5512	5527	5542
8 to 9	3151	3291	3428	3479	3623	3774	3887	4001	4120	4240	4363	4441	4521	4604	4687	4770	4829	4889	4949	5012	5075	5111	5147	5183	5219	5255	5271	5287	5303	5319	5335	5351
9 to 10	3293	3442	3586	3671	3823	3984	4104	4226	4353	4481	4612	4696	4782	4870	4959	5048	5107	5168	5229	5293	5357	5396	5435	5474	5513	5552	5569	5586	5603	5620	5637	5654
10 to 11	3269	3416	3559	3644	3796	3956	4075	4196	4322	4449	4579	4663	4749	4837	4927	5017	5077	5139	5201	5265	5329	5368	5407	5446	5485	5524	5541	5558	5575	5592	5609	5626
11 to 12	2368	2475	2577	2641	2749	2862	2947	3035	3125	3215	3309	3370	3432	3495	3558	3621	3662	3703	3744	3789	3835	3860	3885	3910	3935	3960	3969	3978	3987	3996	4005	4014
12 to 13	2980	3115	3245	3309	3448	3593	3700	3811	3925	4041	4161	4238	4316	4396	4477	4558	4611	4664	4717	4774	4832	4866	4900	4934	4968	5002	5014	5026	5038	5050	5062	5074
13 to 14	2402	2512	2615	2681	2792	2908	2993	3081	3172	3264	3360	3422	3485	3549	3614	3679	3720	3761	3802	3847	3893	3920	3947	3974	4001	4028	4037	4046	4055	4064	4073	4082
14 to 15	2302	2409	2506	2567	2674	2784	2866	2950	3036	3123	3213	3272	3332	3393	3455	3517	3558	3599	3640	3684	3729	3752	3775	3798	3821	3844	3854	3864	3874	3884	3894	3904
15 to 16	1960	2051	2133	2178	2267	2359	2430	2502	2575	2649	2726	2774	2823	2873	2924	2975	3007	3039	3071	3106	3142	3160	3178	3196	3214	3232	3239	3246	3253	3260	3267	3274
16 to 17	3316	3464	3610	3665	3822	3984	4105	4228	4355	4486	4620	4702	4785	4871	4959	5047	5107	5167	5227	5289	5353	5389	5425	5461	5497	5533	5549	5565	5581	5597	5613	5629
17 to 18	4241	4429	4613	4703	4902	5108	5261	5417	5577	5742	5910	6018	6128	6241	6356	6471	6549	6629	6709	6792	6877	6924	6971	7018	7065	7112	7133	7154	7175	7196	7217	7238
18 to 19	3261	3404	3543	3591	3741	3896	4013	4132	4255	4380	4508	4591	4675	4762	4851	4940	4997	5054	5111	5171	5232	5267	5302	5337	5372	5407	5422	5437	5452	5467	5482	5497
19 to 1	3609	3765	3922	3984	4153	4328	4459	4593	4730	4870	5013	5104	5197	5293	5390	5487	5551	5616	5681	5749	5818	5858	5898	5938	5978	6018	6037	6056	6075	6094	6113	6132
Total	60928	63626	66272	67519	70347	73287	75470	77694	79993	82338	84747	86278	87836	89442	91069	92699	93794	94903	96012	97178	98357	99044	99731	100418	101105	101792	102092	102392	102692	102992	103292	103592

Traffic Forecast Category wise (Most likely case)

7 & Above Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 to 3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 to 4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 to 5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 to 6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 to 7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 to 8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 to 9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 to 10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 to 11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 to 12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 to 13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 to 14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 to 15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 to 16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 to 17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 to 18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 to 19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 to 1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	34	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Traffic Forecast Category wise (Optimistic case)

Car	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	20837	22358	23988	25741	27618	29631	31384	33204	35169	37250	39457	41086	42787	44552	46391	48305	49887	51518	53207	54948	56739	58167	59629	61131	62669	64246	65442	66663	67905	69168	70455	71770
2 to 3	20190	21663	23243	24939	26758	28710	30406	32205	34110	36126	38266	39847	41496	43205	44990	46847	48379	49962	51601	53287	55023	56407	57825	59283	60774	62301	63461	64645	65847	67072	68320	69593
3 to 4	16927	18166	19493	20918	22442	24075	25501	27010	28606	30297	32091	33418	34802	36238	37736	39292	40578	41906	43280	44698	46155	47316	48503	49724	50973	52254	53227	54218	55227	56252	57297	58365
4 to 5	18477	19829	21278	22832	24495	26280	27835	29480	31221	33066	35026	36474	37985	39552	41187	42890	44295	45744	47244	48790	50379	51648	52945	54279	55645	57047	58111	59194	60296	61417	62561	63728
5 to 6	21728	23317	25021	26851	28810	30913	32743	34680	36731	38905	41209	42913	44690	46534	48458	50457	52109	53813	55578	57395	59263	60755	62281	63852	65459	67107	68359	69633	70929	72249	73598	74972
6 to 7	19000	20389	21880	23480	25195	27034	28634	30328	32118	34017	36031	37522	39074	40686	42367	44115	45560	47051	48595	50184	51819	53122	54458	55832	57239	58681	59777	60891	62027	63182	64364	65566
7 to 8	18992	20381	21874	23471	25183	27021	28619	30316	32109	34007	36023	37516	39066	40675	42353	44103	45547	47040	48581	50173	51812	53114	54449	55820	57228	58669	59762	60874	62008	63161	64342	65545
8 to 9	16543	17748	19044	20435	21926	23528	24922	26396	27953	29601	31355	32651	34001	35403	36864	38386	39644	40940	42281	43666	45093	46227	47391	48585	49812	51068	52021	52990	53978	54985	56015	57063
9 to 10	16959	18194	19522	20947	22474	24117	25544	27056	28655	30346	32144	33471	34855	36290	37787	39347	40639	41966	43339	44758	46221	47385	48579	49804	51064	52353	53332	54326	55339	56369	57424	58497
10 to 11	14849	15930	17092	18339	19674	21111	22360	23683	25081	26562	28135	29296	30508	31765	33077	34444	35575	36736	37940	39182	40461	41480	42527	43600	44702	45830	46687	47558	48443	49343	50265	51205
11 to 12	15233	16341	17533	18813	20184	21659	22940	24300	25735	27255	28868	30060	31301	32589	33932	35333	36496	37688	38926	40201	41512	42557	43634	44736	45867	47027	47906	48802	49711	50633	51578	52541
12 to 13	21965	23566	25291	27140	29120	31247	33097	35057	37131	39330	41661	43385	45175	47038	48978	50999	52674	54398	56178	58017	59913	61423	62971	64559	66188	67859	69128	70421	71736	73072	74437	75825
13 to 14	21663	23243	24940	26762	28715	30814	32637	34570	36615	38783	41081	42778	44542	46379	48292	50286	51933	53630	55384	57196	59065	60553	62077	63640	65244	66887	68135	69406	70697	72013	73357	74724
14 to 15	20776	22293	23920	25667	27540	29554	31302	33154	35115	37193	39395	41023	42718	44480	46315	48227	49808	51436	53118	54856	56648	58077	59540	61038	62579	64156	65350	66566	67805	69066	70350	71658
15 to 16	20761	22276	23900	25646	27518	29530	31277	33127	35086	37162	39361	40988	42682	44443	46278	48186	49767	51394	53077	54815	56606	58032	59494	60992	62532	64109	65305	66522	67766	69028	70312	71621
16 to 17	50051	53709	57628	61839	66357	71207	75423	76265	80782	85566	90637	94380	98281	102341	106566	110965	114598	118344	122215	126214	130339	133620	136983	140428	143968	147590	150341	153144	156003	158912	161871	164886
17 to 18	62682	67262	72172	77445	83103	89178	94458	96701	102426	108495	114923	119668	124610	129755	135113	140689	145293	150042	154949	160020	165250	169408	173670	178041	182525	187113	190599	194152	197774	201458	205209	209034
18 to 19	64444	69151	74200	79622	85443	91686	97114	99874	105789	112054	118695	123596	128705	134019	139550	145310	150066	154971	160041	165278	170678	174975	179377	183890	188519	193260	196860	200529	204269	208076	211950	215901
19 to 1	29167	31296	33575	36028	38657	41480	43934	46135	48867	51758	54821	57081	59441	61892	64445	67105	69302	71563	73905	76325	78812	80797	82829	84915	87053	89244	90903	92594	94322	96078	97868	99694
Total	**491245**	**527112**	**565594**	**606915**	**651212**	**698775**	**740130**	**773541**	**819299**	**867773**	**919179**	**957153**	**996719**	**1037836**	**1080679**	**1125286**	**1162150**	**1200142**	**1239439**	**1280003**	**1321788**	**1355063**	**1389162**	**1424149**	**1460040**	**1496801**	**1524706**	**1553128**	**1582082**	**1611534**	**1641573**	**1672188**

Traffic Forecast Category wise (Optimistic case)

Bus	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	532	556	580	604	629	655	680	706	733	761	790	818	847	876	905	935	964	994	1026	1059	1092	1125	1158	1191	1228	1266	1299	1336	1374	1412	1451	1491
2 to 3	516	538	562	586	611	637	662	688	715	743	772	800	829	858	887	917	946	976	1008	1041	1074	1107	1140	1173	1210	1248	1281	1318	1356	1394	1433	1473
3 to 4	477	498	519	540	562	586	609	633	657	681	706	730	755	780	806	833	859	886	915	944	973	1002	1031	1060	1091	1123	1152	1183	1215	1247	1280	1315
4 to 5	487	507	528	549	571	595	618	642	666	690	715	739	764	789	815	842	868	895	924	953	982	1011	1040	1069	1100	1132	1161	1192	1224	1256	1289	1324
5 to 6	467	486	506	526	547	570	592	615	638	661	685	708	732	756	781	806	831	856	883	910	938	965	992	1020	1050	1082	1110	1140	1172	1204	1237	1272
6 to 7	306	317	327	337	348	359	370	381	392	403	414	425	436	447	460	473	486	499	512	525	539	552	565	579	594	610	624	639	655	671	687	705
7 to 8	427	445	459	473	488	504	519	535	551	567	584	600	617	634	652	670	688	706	725	744	766	785	804	826	850	875	897	921	946	971	997	1023
8 to 9	366	382	394	406	419	433	446	460	474	488	503	517	532	547	563	579	595	611	628	645	664	681	698	717	738	760	779	800	822	844	867	890
9 to 10	302	314	323	332	342	352	362	372	382	392	402	412	422	432	443	454	465	476	487	498	511	522	533	546	560	575	588	602	617	632	647	662
10 to 11	288	298	307	316	326	336	346	356	366	376	386	396	406	416	427	438	449	460	471	482	495	506	517	530	544	559	572	586	601	616	631	646
11 to 12	247	256	261	266	272	278	284	290	296	302	308	314	320	326	333	340	347	354	361	368	375	382	389	396	404	412	419	427	435	443	451	459
12 to 13	311	322	331	340	350	360	370	380	390	400	410	420	430	440	451	462	473	484	496	508	520	532	544	556	569	582	594	607	620	633	646	660
13 to 14	379	392	404	416	429	442	455	468	481	494	508	521	535	549	565	581	597	613	629	645	661	677	693	709	726	744	760	777	794	812	830	850
14 to 15	384	397	409	421	434	447	460	473	486	499	513	526	540	554	570	586	602	618	634	650	666	682	698	714	731	749	765	782	799	817	836	857
15 to 16	362	374	385	396	408	420	432	444	456	468	481	493	506	519	534	549	564	579	594	609	624	639	654	669	685	702	717	733	749	766	784	804
16 to 17	819	853	891	930	971	1014	1056	1099	1143	1189	1237	1283	1331	1381	1433	1486	1538	1590	1646	1704	1763	1820	1878	1937	2000	2064	2123	2186	2249	2314	2383	2455
17 to 18	1041	1090	1138	1187	1238	1292	1345	1399	1456	1515	1576	1635	1696	1759	1824	1891	1956	2022	2092	2164	2237	2308	2380	2453	2531	2613	2686	2764	2845	2928	3015	3107
18 to 19	942	986	1029	1073	1119	1167	1214	1262	1313	1366	1421	1474	1529	1585	1645	1707	1767	1828	1893	1960	2028	2094	2161	2229	2302	2377	2445	2518	2592	2668	2747	2830
19 to 1	561	585	609	633	658	684	709	735	762	790	819	847	876	905	934	964	993	1023	1055	1088	1121	1154	1187	1220	1257	1295	1328	1365	1403	1441	1480	1520
Total	**9213**	**9596**	**9962**	**10331**	**10722**	**11131**	**11529**	**11938**	**12357**	**12785**	**13230**	**13658**	**14103**	**14553**	**15028**	**15513**	**15988**	**16470**	**16979**	**17497**	**18029**	**18544**	**19062**	**19594**	**20170**	**20768**	**21300**	**21876**	**22468**	**23069**	**23691**	**24343**

Traffic Forecast Category wise (Optimistic case)

Mini bus	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	148	149	152	155	158	161	164	167	170	173	176	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239
2 to 3	143	143	146	149	152	155	158	161	164	167	170	173	176	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233
3 to 4	147	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200	202	204	206	208
4 to 5	147	148	150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184	186	188	190	192	194	196	198	200	202	204	206	208
5 to 6	130	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158
6 to 7	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102
7 to 8	134	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167
8 to 9	115	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148
9 to 10	109	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
10 to 11	101	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102
11 to 12	86	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
12 to 13	115	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
13 to 14	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
14 to 15	107	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
15 to 16	83	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
16 to 17	174	175	181	187	193	199	205	211	217	223	229	235	241	247	253	259	265	271	277	284	291	298	305	312	319	326	333	340	347	354	361	368
17 to 18	252	259	267	275	283	291	299	307	315	323	331	339	347	355	363	371	379	387	395	404	413	422	431	440	449	458	467	476	485	494	503	512
18 to 19	236	242	250	258	266	274	282	290	298	306	314	322	330	338	346	354	362	370	378	387	396	405	414	423	432	441	450	459	468	477	486	495
19 to 1	158	160	163	166	169	172	175	178	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250
Total	2600	2615	2653	2691	2729	2767	2805	2843	2881	2919	2957	2995	3033	3071	3109	3147	3185	3223	3261	3302	3343	3384	3425	3466	3507	3548	3589	3630	3671	3712	3753	3794

Traffic Forecast Category wise (Optimistic case)

LCV	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1864	1928	1989	2051	2116	2182	2236	2290	2344	2399	2454	2489	2524	2561	2598	2635	2662	2689	2716	2743	2770	2787	2804	2821	2838	2855	2864	2873	2882	2892	2902	2912
2 to 3	1762	1824	1883	1942	2004	2067	2119	2171	2223	2276	2329	2363	2397	2433	2469	2505	2530	2555	2580	2605	2630	2646	2662	2678	2694	2710	2718	2726	2734	2743	2752	2761
3 to 4	2152	2224	2295	2369	2445	2523	2584	2646	2708	2772	2836	2877	2919	2963	3007	3052	3086	3120	3154	3188	3222	3244	3266	3288	3310	3332	3344	3356	3368	3381	3394	3407
4 to 5	2127	2195	2264	2336	2410	2485	2546	2608	2670	2734	2798	2839	2881	2925	2969	3014	3047	3080	3113	3146	3179	3199	3219	3239	3259	3279	3289	3299	3309	3320	3331	3342
5 to 6	1949	2014	2078	2144	2212	2281	2336	2391	2448	2507	2566	2602	2639	2678	2717	2756	2788	2820	2852	2884	2916	2937	2958	2979	3000	3021	3029	3037	3045	3054	3063	3072
6 to 7	1645	1699	1755	1813	1873	1933	1981	2030	2081	2133	2185	2218	2252	2287	2322	2357	2384	2411	2438	2465	2492	2509	2526	2543	2560	2577	2584	2591	2598	2605	2612	2619
7 to 8	1990	2053	2125	2199	2277	2355	2418	2482	2546	2610	2674	2712	2751	2792	2835	2878	2909	2940	2971	3002	3033	3053	3073	3093	3113	3133	3144	3155	3166	3177	3188	3199
8 to 9	1732	1785	1846	1908	1973	2038	2091	2145	2199	2253	2307	2338	2370	2404	2439	2474	2498	2522	2546	2570	2594	2610	2626	2642	2658	2674	2683	2692	2701	2710	2719	2728
9 to 10	1652	1702	1760	1820	1882	1944	1996	2049	2102	2156	2210	2241	2273	2305	2338	2371	2391	2411	2431	2451	2471	2483	2495	2507	2519	2531	2540	2549	2558	2567	2576	2585
10 to 11	1562	1611	1665	1721	1779	1837	1886	1936	1986	2037	2088	2119	2151	2183	2216	2249	2269	2289	2309	2329	2349	2361	2373	2385	2397	2409	2418	2427	2436	2445	2454	2463
11 to 12	1091	1126	1165	1204	1244	1284	1318	1353	1388	1424	1460	1481	1502	1523	1544	1565	1577	1589	1601	1613	1625	1632	1639	1646	1653	1660	1662	1664	1666	1668	1670	1672
12 to 13	1451	1497	1547	1597	1649	1702	1745	1790	1835	1882	1929	1958	1987	2016	2045	2074	2095	2116	2137	2158	2179	2192	2205	2218	2231	2244	2249	2254	2259	2265	2271	2277
13 to 14	1301	1344	1389	1434	1480	1527	1566	1607	1648	1690	1732	1757	1782	1807	1832	1857	1875	1893	1911	1929	1947	1958	1969	1980	1991	2002	2006	2010	2014	2018	2022	2026
14 to 15	1173	1209	1248	1287	1327	1368	1402	1437	1472	1508	1544	1565	1586	1607	1628	1649	1663	1677	1691	1705	1719	1726	1733	1740	1747	1754	1758	1762	1766	1770	1774	1778
15 to 16	876	898	924	950	977	1004	1026	1049	1072	1096	1120	1133	1146	1159	1172	1185	1193	1201	1209	1217	1225	1228	1231	1234	1237	1240	1242	1244	1246	1248	1250	1252
16 to 17	1827	1884	1945	2006	2071	2136	2189	2242	2296	2351	2407	2440	2475	2512	2549	2586	2612	2638	2664	2690	2716	2734	2752	2770	2788	2806	2815	2824	2833	2843	2853	2863
17 to 18	2651	2737	2830	2924	3022	3120	3201	3282	3365	3449	3534	3583	3634	3687	3740	3793	3834	3875	3916	3957	3998	4026	4054	4082	4110	4138	4152	4166	4180	4195	4210	4225
18 to 19	2452	2535	2622	2709	2800	2892	2968	3045	3122	3200	3279	3326	3375	3426	3477	3528	3565	3602	3640	3678	3716	3741	3766	3791	3816	3841	3854	3867	3880	3894	3908	3922
19 to 1	1920	1987	2052	2118	2187	2256	2314	2372	2430	2489	2548	2584	2620	2658	2696	2734	2761	2788	2815	2842	2869	2886	2903	2920	2937	2954	2963	2972	2981	2991	3001	3011
Total	33176	34252	35382	36532	37728	38934	39922	40925	41935	42966	44000	44625	45264	45926	46593	47262	47739	48216	48694	49172	49650	49952	50254	50556	50858	51160	51314	51468	51622	51786	51950	52114

Traffic Forecast Category wise (Optimistic case)

2-Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1293	1334	1374	1364	1404	1448	1480	1513	1546	1580	1615	1637	1659	1681	1704	1728	1745	1762	1779	1796	1813	1824	1835	1846	1857	1868	1878	1888	1898	1908	1918	1928
2 to 3	1183	1219	1254	1243	1278	1317	1345	1374	1403	1433	1464	1484	1504	1524	1545	1567	1582	1597	1612	1627	1642	1652	1662	1672	1682	1692	1701	1710	1719	1728	1737	1746
3 to 4	1381	1423	1471	1468	1515	1564	1603	1643	1683	1724	1765	1790	1815	1840	1866	1892	1910	1928	1946	1964	1982	1994	2006	2018	2030	2042	2051	2060	2069	2078	2087	2096
4 to 5	1401	1445	1492	1488	1534	1582	1620	1659	1698	1738	1778	1803	1828	1853	1879	1905	1923	1941	1959	1977	1995	2007	2019	2031	2043	2055	2064	2073	2082	2091	2100	2109
5 to 6	1392	1439	1486	1482	1528	1576	1614	1653	1692	1732	1772	1798	1824	1850	1877	1904	1924	1944	1964	1984	2004	2014	2024	2034	2044	2054	2062	2070	2078	2086	2094	2102
6 to 7	1077	1113	1150	1164	1200	1239	1269	1300	1331	1362	1393	1412	1432	1452	1472	1493	1509	1525	1541	1557	1573	1582	1591	1600	1609	1618	1622	1626	1630	1634	1638	1642
7 to 8	1340	1391	1437	1436	1481	1529	1564	1601	1638	1675	1712	1736	1761	1786	1811	1837	1856	1875	1894	1913	1932	1944	1956	1968	1980	1992	1998	2004	2010	2016	2022	2028
8 to 9	1225	1270	1310	1303	1341	1382	1412	1444	1476	1508	1540	1562	1585	1608	1631	1655	1673	1691	1709	1727	1745	1755	1765	1775	1785	1795	1801	1807	1813	1819	1825	1831
9 to 10	1116	1152	1188	1201	1236	1273	1301	1330	1359	1388	1417	1435	1454	1474	1494	1515	1529	1543	1557	1571	1585	1593	1601	1609	1617	1625	1631	1637	1643	1649	1655	1661
10 to 11	1088	1126	1161	1173	1207	1243	1271	1300	1329	1358	1387	1405	1424	1444	1464	1485	1499	1513	1527	1541	1555	1563	1571	1579	1587	1595	1601	1607	1613	1619	1625	1631
11 to 12	640	660	678	686	703	721	737	753	769	785	801	811	821	831	841	851	859	867	875	883	891	893	895	897	899	901	902	903	904	905	906	907
12 to 13	915	941	969	973	1001	1030	1054	1078	1102	1127	1152	1167	1182	1197	1213	1229	1241	1253	1265	1277	1289	1294	1299	1304	1309	1314	1317	1320	1323	1326	1329	1332
13 to 14	690	711	730	739	757	776	793	810	827	844	861	871	881	891	901	911	919	927	935	943	951	953	955	957	959	961	962	963	964	965	966	967
14 to 15	603	621	635	639	652	666	679	692	705	718	731	739	747	755	763	771	777	783	789	795	801	803	805	807	809	811	812	813	814	815	816	817
15 to 16	495	511	520	519	527	536	544	552	560	568	576	580	584	588	592	596	600	604	608	612	616	618	620	622	624	626	627	628	629	630	631	632
16 to 17	1216	1256	1294	1285	1322	1362	1392	1423	1454	1487	1521	1541	1561	1581	1602	1624	1640	1656	1672	1688	1704	1714	1724	1734	1744	1754	1762	1770	1778	1786	1794	1802
17 to 18	1560	1611	1660	1659	1708	1761	1800	1840	1880	1922	1965	1990	2015	2040	2066	2093	2113	2133	2153	2173	2193	2206	2219	2232	2245	2258	2269	2280	2291	2302	2313	2324
18 to 19	1392	1439	1481	1477	1519	1565	1598	1632	1666	1702	1739	1762	1785	1808	1832	1857	1875	1893	1911	1929	1947	1959	1971	1983	1995	2007	2017	2027	2037	2047	2057	2067
19 to 1	1295	1337	1376	1365	1404	1447	1478	1510	1542	1575	1609	1631	1653	1675	1698	1722	1739	1756	1773	1790	1807	1818	1829	1840	1851	1862	1872	1882	1892	1902	1912	1922
Total	21302	21999	22666	22662	23317	24017	24554	25107	25660	26226	26798	27154	27515	27878	28251	28635	28913	29191	29469	29747	30025	30186	30347	30508	30669	30830	30949	31068	31187	31306	31425	31544

Traffic Forecast Category wise (Optimistic case)

3-Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	1834	1915	1997	2032	2120	2210	2281	2355	2430	2506	2584	2639	2695	2751	2809	2868	2909	2950	2992	3035	3078	3104	3130	3157	3184	3211	3227	3243	3259	3275	3291	3308
2 to 3	2032	2122	2215	2264	2363	2466	2545	2628	2713	2800	2889	2952	3016	3080	3145	3211	3259	3307	3355	3404	3453	3484	3515	3547	3579	3611	3629	3647	3665	3683	3701	3720
3 to 4	1941	2028	2116	2157	2251	2348	2420	2496	2574	2654	2736	2793	2851	2909	2968	3028	3073	3118	3164	3210	3257	3289	3321	3353	3385	3417	3435	3453	3471	3489	3507	3526
4 to 5	1842	1926	2009	2045	2134	2226	2294	2366	2440	2516	2594	2650	2707	2764	2822	2881	2924	2967	3011	3055	3100	3130	3160	3190	3220	3250	3266	3282	3298	3314	3330	3347
5 to 6	1867	1950	2034	2072	2164	2258	2328	2401	2476	2553	2631	2686	2742	2798	2855	2912	2956	3000	3045	3090	3136	3167	3198	3229	3260	3291	3307	3323	3339	3355	3371	3388
6 to 7	1300	1357	1414	1457	1519	1582	1629	1678	1728	1779	1831	1867	1903	1939	1976	2013	2043	2073	2104	2135	2166	2187	2209	2231	2253	2275	2284	2293	2302	2311	2320	2330
7 to 8	1541	1608	1675	1698	1769	1841	1896	1954	2013	2072	2133	2176	2219	2262	2306	2350	2384	2418	2453	2488	2523	2546	2570	2594	2618	2642	2653	2664	2675	2686	2697	2709
8 to 9	1469	1532	1593	1611	1677	1744	1794	1847	1901	1955	2011	2051	2091	2131	2172	2213	2244	2275	2307	2339	2371	2393	2416	2439	2462	2485	2496	2507	2518	2529	2540	2552
9 to 10	1227	1280	1331	1366	1420	1475	1517	1560	1604	1648	1693	1727	1761	1795	1830	1865	1891	1917	1944	1971	1998	2013	2029	2045	2061	2077	2086	2095	2104	2113	2122	2132
10 to 11	1201	1254	1304	1338	1391	1445	1488	1532	1577	1622	1668	1703	1738	1773	1809	1845	1871	1897	1924	1951	1978	1993	2009	2025	2041	2057	2066	2075	2084	2093	2102	2112
11 to 12	676	708	734	753	780	807	828	849	871	893	915	932	949	966	983	1000	1012	1024	1036	1048	1060	1065	1070	1075	1080	1085	1087	1089	1091	1093	1095	1098
12 to 13	1043	1091	1134	1157	1202	1248	1285	1323	1362	1402	1442	1472	1503	1534	1565	1596	1616	1636	1656	1676	1696	1707	1718	1729	1740	1751	1757	1763	1769	1775	1781	1788
13 to 14	776	812	844	869	902	935	962	989	1017	1045	1073	1095	1117	1139	1161	1183	1196	1209	1222	1235	1248	1253	1258	1263	1268	1273	1275	1277	1279	1281	1283	1286
14 to 15	837	874	911	941	979	1017	1050	1083	1117	1151	1185	1211	1237	1263	1289	1315	1331	1347	1363	1379	1395	1401	1407	1413	1419	1425	1427	1429	1431	1433	1435	1438
15 to 16	740	768	796	817	846	875	900	925	951	977	1003	1023	1043	1063	1083	1103	1117	1131	1145	1159	1173	1178	1183	1188	1193	1198	1200	1202	1204	1206	1208	1211
16 to 17	1539	1606	1671	1691	1760	1833	1890	1950	2011	2073	2136	2180	2225	2270	2316	2363	2396	2429	2462	2496	2530	2551	2572	2594	2616	2638	2650	2662	2674	2686	2698	2711
17 to 18	2125	2215	2308	2354	2453	2555	2636	2720	2805	2891	2979	3039	3100	3161	3225	3290	3337	3384	3432	3481	3530	3561	3592	3624	3656	3688	3706	3724	3742	3760	3778	3797
18 to 19	1995	2082	2172	2218	2313	2412	2490	2572	2655	2739	2825	2883	2942	3001	3062	3124	3170	3216	3262	3309	3356	3386	3416	3447	3478	3509	3525	3541	3557	3573	3589	3606
19 to 1	1960	2045	2133	2173	2266	2361	2437	2517	2598	2680	2764	2822	2881	2940	3001	3063	3108	3153	3199	3246	3293	3321	3349	3378	3407	3436	3453	3470	3487	3504	3521	3539
Total	27946	29173	30391	31013	32309	33638	34670	35745	36843	37956	39092	39901	40720	41539	42377	43223	43837	44451	45076	45707	46341	46729	47122	47521	47920	48319	48529	48739	48949	49159	49369	49598

Traffic Forecast Category wise (Optimistic case)

4 to 6 Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	3515	3675	3837	3906	4079	4261	4395	4533	4676	4823	4975	5078	5182	5289	5397	5507	5588	5671	5756	5841	5926	5982	6039	6097	6156	6215	6251	6288	6325	6362	6400	6438
2 to 3	3226	3374	3524	3584	3743	3910	4032	4158	4289	4424	4564	4659	4754	4852	4951	5051	5125	5201	5279	5357	5435	5487	5539	5592	5646	5700	5733	5767	5801	5835	5869	5903
3 to 4	3836	4011	4192	4279	4469	4668	4816	4968	5127	5289	5459	5571	5684	5801	5920	6042	6131	6222	6316	6410	6504	6566	6629	6693	6758	6823	6863	6903	6943	6983	7024	7065
4 to 5	3993	4174	4361	4454	4651	4858	5011	5168	5331	5498	5673	5788	5904	6024	6146	6272	6369	6468	6568	6668	6768	6833	6899	6966	7034	7102	7142	7182	7222	7262	7303	7344
5 to 6	3953	4134	4321	4414	4609	4815	4967	5123	5286	5453	5626	5742	5859	5980	6102	6227	6321	6418	6516	6614	6713	6777	6842	6908	6975	7042	7081	7120	7159	7198	7238	7278
6 to 7	3006	3143	3286	3371	3522	3680	3801	3926	4055	4186	4321	4411	4502	4596	4691	4788	4861	4935	5009	5083	5158	5205	5253	5302	5351	5400	5428	5456	5484	5512	5541	5570
7 to 8	3248	3396	3549	3619	3783	3953	4081	4214	4352	4493	4637	4734	4832	4934	5036	5139	5218	5299	5380	5461	5542	5594	5647	5701	5756	5811	5841	5871	5901	5931	5962	5993
8 to 9	3151	3296	3441	3503	3659	3821	3941	4065	4194	4326	4462	4554	4647	4744	4842	4941	5016	5093	5170	5247	5324	5374	5425	5477	5530	5583	5613	5643	5673	5703	5734	5765
9 to 10	3293	3448	3601	3695	3860	4031	4160	4292	4430	4571	4715	4813	4912	5014	5116	5219	5299	5381	5463	5546	5629	5681	5734	5788	5842	5896	5928	5960	5992	6024	6057	6090
10 to 11	3269	3422	3576	3670	3835	4006	4134	4265	4402	4542	4686	4784	4883	4985	5087	5190	5270	5352	5434	5517	5600	5652	5705	5759	5813	5867	5899	5931	5963	5995	6028	6061
11 to 12	2368	2478	2588	2660	2778	2900	2991	3085	3182	3282	3384	3452	3520	3590	3660	3730	3788	3848	3908	3968	4028	4064	4100	4137	4174	4211	4231	4251	4271	4291	4311	4331
12 to 13	2980	3121	3261	3335	3485	3641	3758	3878	4002	4129	4261	4350	4439	4531	4623	4715	4787	4861	4936	5011	5086	5135	5184	5234	5284	5334	5362	5390	5418	5446	5474	5502
13 to 14	2402	2516	2628	2702	2823	2948	3041	3137	3236	3337	3442	3512	3582	3654	3726	3798	3856	3916	3976	4036	4096	4135	4174	4214	4254	4294	4316	4338	4360	4382	4404	4426
14 to 15	2302	2413	2521	2590	2704	2821	2910	3001	3095	3190	3289	3357	3425	3495	3565	3635	3689	3745	3801	3857	3913	3948	3983	4019	4055	4091	4110	4129	4148	4167	4186	4205
15 to 16	1960	2054	2144	2194	2289	2386	2462	2540	2620	2700	2783	2841	2899	2959	3019	3079	3124	3170	3216	3262	3308	3335	3362	3390	3418	3446	3461	3476	3491	3506	3521	3536
16 to 17	3316	3473	3631	3698	3865	4040	4172	4307	4446	4588	4736	4835	4934	5036	5139	5243	5319	5397	5477	5557	5637	5689	5741	5794	5848	5902	5932	5963	5994	6025	6056	6087
17 to 18	4241	4438	4635	4741	4953	5176	5341	5511	5687	5867	6053	6184	6316	6451	6587	6725	6827	6931	7037	7143	7249	7318	7388	7459	7531	7603	7643	7684	7725	7766	7808	7850
18 to 19	3261	3410	3559	3619	3777	3942	4067	4196	4328	4463	4604	4704	4804	4907	5011	5115	5192	5271	5352	5433	5514	5562	5610	5659	5709	5759	5789	5820	5851	5882	5913	5944
19 to 1	3609	3773	3941	4017	4196	4383	4523	4667	4816	4969	5127	5236	5346	5459	5573	5689	5774	5861	5950	6039	6128	6184	6241	6299	6358	6417	6451	6486	6521	6556	6592	6628
Total	60928	63749	66596	68055	71080	74240	76603	79034	81554	84130	86797	88605	90424	92301	94191	96105	97554	99040	100544	102050	103558	104521	105495	106488	107492	108496	109074	109658	110242	110826	111421	112016

Traffic Forecast Category wise (Optimistic case)

7 & Above Axle	01-Apr-22	01-Apr-23	01-Apr-24	01-Apr-25	01-Apr-26	01-Apr-27	01-Apr-28	01-Apr-29	01-Apr-30	01-Apr-31	01-Apr-32	01-Apr-33	01-Apr-34	01-Apr-35	01-Apr-36	01-Apr-37	01-Apr-38	01-Apr-39	01-Apr-40	01-Apr-41	01-Apr-42	01-Apr-43	01-Apr-44	01-Apr-45	01-Apr-46	01-Apr-47	01-Apr-48	01-Apr-49	01-Apr-50	01-Apr-51	01-Apr-52	01-Apr-53
	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32	31-Mar-33	31-Mar-34	31-Mar-35	31-Mar-36	31-Mar-37	31-Mar-38	31-Mar-39	31-Mar-40	31-Mar-41	31-Mar-42	31-Mar-43	31-Mar-44	31-Mar-45	31-Mar-46	31-Mar-47	31-Mar-48	31-Mar-49	31-Mar-50	31-Mar-51	31-Mar-52	31-Mar-53	31-Mar-54
Link	Base Yr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 to 2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 to 3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 to 4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4 to 5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5 to 6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 to 7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 to 8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 to 9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 to 10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 to 11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 to 12	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 to 13	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 to 14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 to 15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15 to 16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 to 17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 to 18	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18 to 19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 to 1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	34	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5



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A-804



ANNEXURE B

TARGET VALUATION REPORT

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SUNIT KHANDELWAL
Registered Valuer under Companies (Registered Valuers and Valuation) Rules, 2017
IBBI Registration No. IBBI/RV/05/2018/10426
Asset class: Securities or Financial Assets

Valuation report

Valuation date: 30 June 2023
Report date: 17 July 2023

Registered office:
1006 A&B, 10th floor,
Welldone TechPark, Sohna Rd.,
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3.1.2 IRBIDL is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on July 27,1998 and is based in Mumbai, India. 5
3.1.3 IRBIDL's Build Operate and Transfer ("BOT") infrastructure development business involves the construction, development, operation and maintenance of road projects. 5
3.1.4 We understand that IRBIDL has proposed to transfer IGEPL to InvIT and accordingly the valuation of IGEPL is required in accordance with Regulation 21(8)(a) of Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 ("SEBI InvIT Regulations"). ("**Proposed Transaction**") 5
3.1.5 In this this regard, the Valuer has been appointed to determine Equity Value of the IGEPL on a stand-alone basis under the SEBI InvIT Regulations as on 30 June 2023 ("Valuation Date"). 5
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11.1.1 Based on the foregoing, and on a consideration of all the relevant factors and circumstances as discussed and outlined hereinabove, we have computed the following value: 24

11.1.2 Accordingly, the value of each credited and fully paid-up equity shares of IRB Golconda Expressway Private Limited as of 30 June 2023 to be INR 10,43,368.94/- (Indian Rupees Ten Lakhs Forty-Three Thousand and Three Hundred Sixty-Eight Point Nine-Four Only) (face value per unit: INR 10/-). 25

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2. Definitions, abbreviations & glossary of terms

BOT	Build, Operate and Transfer
CAGR	Compounded Annual Growth Rate
CCM	Comparable Companies Multiple
CTM	Comparable Transaction Multiple
DCF	Discounted Cash Flow
EV	Enterprise value
HMDA	Hyderabad Metropolitan Development Authority
IBBI	Insolvency and Bankruptcy Board of India
ICAI	Institute of Chartered Accountants of India
INR	Indian Rupees
IGEPL or Asset or SPV	IRB Golconda Expressway Private Limited
IRBIDL	IRB Infrastructure Developers Limited
IRR	Internal rate of return
Kms	Kilometres
Management	Management or representative of the Company/Target
NAV	Net Asset Value
NHAI	National Highways Authority of India
PAT	Profit After Tax
PBT	Profit before Tax
InvIT	IRB Infrastructure Trust
SEBI InvIT Regulations	Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014
TOT	Toll-Operate-Transfer
Valuer or I or me or my	Sunit Khandelwal
You or Client or Company	IRB Infrastructure Trust

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3. Background

3.1 Brief Background and Purpose

3.1.1 IRB Infrastructure Developers Limited ("IRBIDL") is a listed infrastructure development company, undertaking development of various infrastructure projects via the Public Private Partnership model in the toll road sector.

3.1.2 IRBIDL is one of the largest infrastructure development and construction companies in India in the roads and highways sector. It was incorporated on July 27,1998 and is based in Mumbai, India.

3.1.3 IRBIDL's Build Operate and Transfer ("BOT") infrastructure development business involves the construction, development, operation and maintenance of road projects.

3.1.4 We understand that IRBIDL has proposed to transfer IGEPL to InvIT and accordingly the valuation of IGEPL is required in accordance with Regulation 21(8)(a) of Securities Exchange Board of India (Infrastructure Investment Trusts) Regulations, 2014 ("SEBI InvIT Regulations"). ("**Proposed Transaction**").

3.1.5 In this this regard, the Valuer has been appointed to determine Equity Value of the IGEPL on a stand-alone basis under the SEBI InvIT Regulations as on 30 June 2023 ("Valuation Date").

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4. Sources of Information

We have relied on the following sources of information:

- As provided by the Management:
  - Concession agreement between IGEPL and Hyderabad Metropolitan Development Authority ("HMDA"), dated 26 May 2023.
  - Unaudited financial statements of IGEPL as on 30 June 2023.
  - Financial projections of IGEPL from FY24 till the end of the concession period which is 31 July 2053.
  - Traffic study report prepared by GMD Consultants dated June 2023. We have relied on such third-party reports and studies provided to us by the Client
  - Toll rate notification
  - The estimates and timing of the proposed major repairs to be carried out by IRBIDL as provided by the Management.
  - Management has represented that one-time sanctions/ approvals which are obtained or pending for IGEPL is not applicable as it is a TOT project.
  - Management has also represented that there are no on-going material litigations including tax litigations in relation to IGEPL.
  - Correspondence with the management of the Company
  - In addition to the above, we have also obtained such other information and explanations from the management, either verbally or in written form, as were considered relevant for the valuation.
  - Publicly available information and information available from proprietary secondary sources.

Please note that with respect to the provisional and projected financial statements, rounding-off of amounts in the underlying financial information could result in immaterial arithmetic differences

The Company has been provided with the opportunity to review the draft Report (excluding the valuation of the Business) as part of our standard practice to make sure that factual inaccuracies / omissions are avoided in our final Report.

4.1 Details of Site Visit

The site visit of the SPV is conducted during the fortnight ending 07 July 2023. Please refer later part of this report for the site photographs of the SPV.

5. Exclusions and Limitations

5.1 Context and Purpose

The Management has appointed the Valuer to determine the Enterprise Value of IGEPL pursuant to the SEBI InvIT Regulations.

This valuation analysis exercise and valuation report are solely for the Purpose mentioned herein in the Report.

5.2 Restricted Audience

This report and the information contained herein are absolutely confidential and are intended for use

only in connection with the Purpose set out in the report.

It should not be copied, disclosed, circulated, quoted or referred to, either in whole or in part, in correspondence or in discussion with any other person except to whom it is issued without the written consent of the Valuer. It can however be relied upon and disclosed in connection with any statutory and regulatory filing in connection with the SEBI InvIT Regulations. This report and summary of valuation included herein can be reproduced and included in the statutory filings and may be made available for inspection in the manner specified therein. In the event, if the Client or its management extend the use of the report beyond the Purpose mentioned earlier in the report, with or without the consent of the Valuer, the Valuer will not accept any responsibility to any other party to whom this report may be shown or who may acquire a copy of the report.

It is clarified that this report is not a fairness opinion under any of the stock exchange / listing regulations. In case of any third-party having access to this report, please note that this report is not a substitute for the third party own due diligence / appraisal / enquiries / independent advice that the third party should undertake for its purpose.

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5.3 Limitation Clause

The report is subject to the limitations detailed hereinafter. This Report is to be read in totality, and not in parts, in conjunction with the relevant documents referred to therein.

The scope of the assignment did not include performing audit tests for the purpose of expressing an opinion on the fairness or accuracy of any financial or analytical information that was used during the course of the work. Further, conducting a financial or technical feasibility study was also not covered. During the course of this work, the Valuer has relied upon assumptions and projections related to the SPV made by the management of the Sponsor. These assumptions require exercise of judgment and are subject to uncertainties. Also, the Valuer has relied on the traffic study reports.

Further, this valuation Report is based on the extant regulatory environment and the financial, economic, monetary and business/market conditions, and the information made available to the Valuer or used by the Valuer up to the date hereof, which are dynamic in nature and may change in future, thereby impacting the valuation of the SPV. Subsequent developments in the aforementioned conditions may affect this Report and the assumptions made in preparing this report and the Valuer shall not be obliged to update, review or reaffirm this report if the information provided to the Valuer changes. The information presented in this valuation Report does not reflect the outcome of any due diligence procedures, which may change the information contained herein and, therefore, the valuation Report materially.

Valuation is not a precise science and the conclusions arrived at in many cases will of necessity be subjective and dependent on the exercise of individual judgment. There is therefore no indisputable single value. While the Valuer has provided an assessment of the value based on an analysis of information available and within the scope of engagement, others may place a different value on the businesses.

Valuation is based on estimates of future financial performance or opinions, which represent reasonable expectations at a particular point in time, but such information, estimates or opinions are not offered as prediction or as assurances that a particular level of income or profit will be achieved, a particular event will occur or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analysis will vary from these estimates and the variations may be material.

The realization of these projections is dependent on the continuing validity of the assumptions on which they are based. Since the projections relate to the future, actual results are likely to be different from the projected results in case of events and circumstances not occurring as projected and the differences may be material. The Valuer's work did not constitute a validation of the financial projections of the Target under consideration and accordingly, the Valuer does not express any opinion on the same. The Valuer has not commented on the appropriateness of or independently verified the assumptions or Information provided to us for arriving at the financial projections. Further, while the Valuer has discussed the assumptions and projections with the management of the Sponsor, Valuer’s reliance on them for the purpose of valuation should not be construed as an assurance about the accuracy of the assumptions or the achievability of the financial projections.

This Report is based on information received from sources mentioned herein and discussions with the management of the Sponsor. This information has not been independently verified by the Valuer. The Valuer has assumed that the Sponsor has furnished all information, which it is aware of concerning the financial statements and respective liabilities, which may have an impact on my report.

The Valuer has not done any independent technical valuation or appraisal or due diligence of the assets or liabilities of the SPV mentioned in this Report and has considered them at the value as



disclosed by the Trust in their regulatory filings or in submissions, oral or written, made to me. Nothing has come to the Valuer's knowledge to indicate that the material provided to the Valuer was misstated or incorrect or would not afford reasonable grounds upon which to base my Report.

The Valuer has not made any independent verification with respect to the Sponsor's claim to title of assets or property for the purpose of this valuation. With respect to claim to title of assets or property, the Valuer has solely relied on representations, whether verbal or otherwise, made by the Management to us for the purpose of this Report.

For the present valuation analysis exercise, the Valuer has also relied upon information available in the public domain; however, the accuracy and timeliness of the same has not been independently verified. Further, the Valuer has not verified the publicly available information cited in this Report.

In the particular circumstances of this case, the Valuer shall be liable only to the Sponsor, the Trust and the Investment Manager. The Valuer shall have no liability (in contract or under statute or otherwise) to any other party for any economic loss or damage arising out of or in connection with this engagement, however the loss or damage is caused other than in cases of fraud, gross negligence or wilful misconduct, or on account of any natural calamities, shall be limited to the amount of fees actually received by the Valuer as laid out in the engagement letter, for such valuation work.

Whilst, all reasonable care has been taken to ensure that facts stated in the Report are accurate and opinions given are fair and reasonable, neither the Valuer, nor any of the Valuer's team member shall in any way be responsible for the management content, third party content or other any content sourced from publicly available information, stated herein. Accordingly, the Valuer makes no representation or warranty, express or implied, in respect of the completeness, authenticity or accuracy of such content. The Valuer expressly disclaim any and all liabilities, which may arise based upon such content used in this Report.

This Report does not look into the business / commercial reasons behind the transaction nor the likely benefits arising out of the same. Similarly, it does not address the relative merits of investing in InvIT as compared with any other alternative business transaction, or other alternatives, or whether or not such alternatives, or whether or not such alternatives could be achieved or are available. The assessment of commercial and investment merits of the Trust are sole responsibility of the investors of the Trust and the Valuer does not express opinion on the suitability or otherwise of entering into any financial or other transactions with the Investment Manager, the Trust or the Sponsor.

The Valuer is not advisor with respect to legal tax and regulatory matters for the transaction. No investigation of the SPV claim to title or assets has been made for the purpose of this Report and the SPVs' claim to such right have been assumed to be valid. No consideration has been given to liens or encumbrances against the assets beyond the loans disclosed in the accounts. Therefore, no responsibility is assumed for matters of a legal nature.

Except to the extent required under the SEBI InvIT Regulations and other applicable law, the Valuer is not responsible for matters of legal nature including issues of legal title and compliance with local laws in respect of the SPV and also no consideration has been given to litigation and other contingent liabilities that are not recorded in the financials of the SPV.

The valuation analysis in this Report should not be construed as investment advice; specifically, and the Valuer do not express any opinion on the suitability or otherwise of entering into any financial or other transactions with the Investment Manager, the Trust or any of the SPVs.

The estimate of value contained herein are not intended to represent value of the SPV at any time other than the dates specifically mentioned for each valuation result, as per the agreed scope of

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engagement and as required under the SEBI InvIT Regulations.

Our work in preparing the report was undertaken, and our report has been produced in accordance with the terms of engagement between us and the Client. Provision of valuation opinions and consideration of the issues described herein are areas of our regular practice. The services do not represent accounting, assurance, diligence services, or consulting/ tax-related services.

This Valuation Report, its contents, and results herein are specific to (i) the purpose of valuation agreed as per the terms of our engagement along with subsequent discussions with the management; (ii) the date of this Valuation Report, and (iii) are based on the data detailed in the section – Sources of information. An analysis of this nature is necessarily based on the prevailing stock market, financial, economic, and other conditions in general and industry trends in particular, and the information made available to us as of the Valuation Date. Events occurring after the Valuation Date may affect this Valuation Report and the assumptions used in preparing it, and we do not assume any obligation to update, revise or reaffirm this Valuation Report

Management has represented that the business activities of the Company have been carried out in the normal and ordinary course and that no material adverse change has occurred in operations between the Valuation Date and the date of issue of the Valuation Report

The Valuer is not responsible for updating this Valuation Report because of events or transactions occurring subsequent to the date of issue of this Report

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6. Overview of the SPV

6.1 IRB Golconda Expressway Private Limited ("IGEPL" or "IRB Golconda")

IRB Golconda Expressway Private Limited is a toll road asset owned by IRBIDL. The Nehru Outer Ring Road ("ORR") was developed as an access-controlled road and became fully operational in the year 2016. The project was developed in 3 phases comprising of 13 packages of which 8 packages were executed under item rate contracts and 5 under BOT - Annuity mode. The stretch is a ~158 Km, 8 lane ring road encircling Hyderabad. The project was developed with the objective of decongesting internal roads, providing quick access to important nodes in the city and to connect various urban nodes outside the city by connecting the NH and SH network and other important city roads. The Design speed and capacity of the ORR is 120 kmph and 2,50,000 PCUs respectively.

Concession Period: The concession period for this project is 30 years commencing from the Appointed Date. As per the concession agreement, IGEPL is entitled to collect fees from project highway users, subject to and in accordance with this Agreement, Telangana Infrastructure Development Enabling Act, 2001 (Act No. 36 of 2001), Nehru Outer Ring Road, Hyderabad (Toll) Rules, 2012 issued vide G.O.Ms. No. 365 dated September 22, 2012 [published by Municipal Administration & Urban Development (12) Department], the Andhra Pradesh Reorganisation Act, 2014, Amendment to Nehru Outer Ring Road, Hyderabad (Toll) Rules 2012 issued vide GOMs. No 5 dated 12 January 2023 [published by Municipal Administration & urban Development (Plg.II) Department] and any further amendments issued till bid due date (the "Fee Rules"). The toll rates shall be revised annually on April 01, subject to and in accordance with provisions of the Fee rules.

Operation and Maintenance: IGEPL is required to carry out the operation and maintenance of this project, and if required, modify, repair or otherwise make improvements to the project highway in accordance with the concession agreement.









The key details of IGEPL are as follows:

Particulars	Details
Project name	Tolling, Operation, Maintenance & Transfer of Nehru Outer Ring Road (from Km 0+000 to Km 158+000) in Hyderabad, Telangana
Name of concessionaire	IRB Golconda Expressway Private Limited
State	Telangana
NH/SH	Nehru Outer Ring Road
PPP mode	Yes
Execution of concession agreement date	May 26, 2023
Appointed date (Expected)	Aug 01, 2023
Completion certificate date	NA
Scheduled concession end date	July 31, 2053
Original concession period (yrs)	30 Years
Expected concession end date	July 31, 2053
Tollable length (Kms)	158 Kms
Toll plaza	22

The shareholding pattern of IGEPL as on 30 June 2023 is as follows:

Name of shareholder	No of shares held	Stake%
IRB Infrastructure Developers Limited	49,994	*99.99%*
Nominees of IRB Infrastructure Developers Limited	6	*0.01%*
Total	**50,000**	***100.00%***

For the list of approvals and disclosure on litigation please refer annexure I related to the above SPV.

7. Industry Overview

7.1 Indian Economy

India intends to raise its ranking in the Logistics Performance Index to 25 and bring down the logistics cost from 14 per cent to 8 per cent of GDP, leading to a reduction of approximately 40 per cent, within the next five years. This would ensure that logistics play the role of a growth engine in the Indian economy, according to National Logistics Policy. India's National Logistics Policy is expected to give a massive boost to the country's USD 200 billion logistics sector.

Market Size and Growth:

Real GDP or GDP at Constant (2011-12) Prices in the year FY2023 is estimated at INR 157.60 lakh crore, as against the Provisional Estimate of GDP for the year FY2022 of INR 147.36 lakh crore, released on 31 May 2022. The growth in real GDP during FY2024 is estimated at 6.3 per cent as compared to 6.9 per cent in FY2023.

7.2 Infrastructure Sector in India

The infrastructure sector is a key driver for the Indian economy. The infrastructure sector includes power, bridges, dams, roads, and urban infrastructure development. In Budget 2023-24, capital investment outlay for infrastructure is being increased by 33 per cent to INR 10 lakh crore (USD 122 billion), which would be 3.3 per cent of GDP.

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7.3 Road and Highway Sector in India (Sector background)

India with a total road network of 6.37 million Km comprises national & state highways and urban & India has the second largest road network in the world of about 63.32 lakh kilometers (kms).

As on 31 March 2023, the length of various categories of roads is as under:

National Highways	1,44,955 km
State Highways	1,67,079 km
Other Roads	60,19,757 km
Total	**63,31,791 km**

7.4 Sector Trends

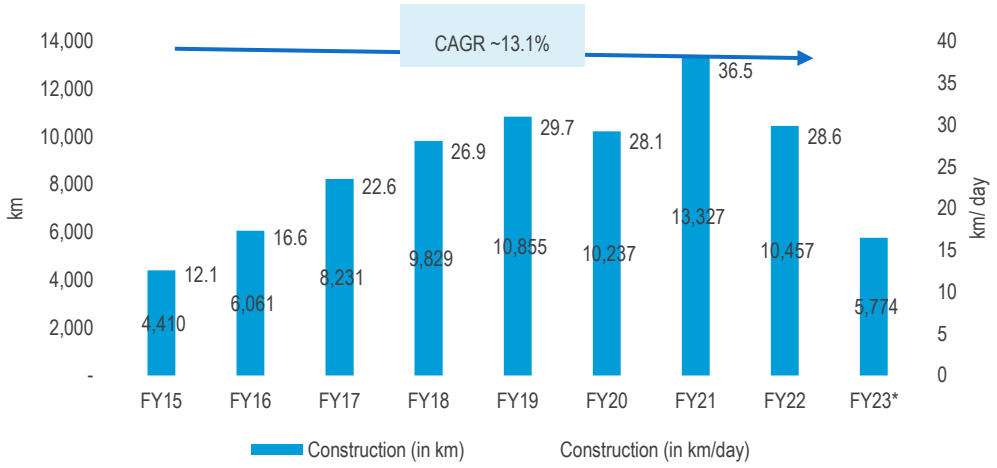
The Government of India has launched major initiatives to upgrade and strengthen National Highways through various phases of the National Highways Development Project (NHDP). The status of various components of Bharatmala Pariyojana Phase-1 and other schemes up to 31.12.2022 are as under:

Components / Scheme	Total Length in km	Length completed up to 31.03.2022 in km	Length completed during 01.04.2022 to 31.12.2022 in km	Length Completed up to 31.12.2022 in km
A. BharatmalaPariyojana Phase-I				
Economic Corridors	9,000	2,165	990	3,155
Inter Corridors & Feeder Roads	6,000	883	498	1,381
National Corridor Efficiency	5,000	1,282	130	1,412
Border & International Road	2,000	1,134	79	1,213
Coastal & Port Connectivity	2,000	69	24	93
Expressways	800	621	158	779
Subtotal	**24,800**	**6,154**	**1,879**	**8,033**
Balance road works under NHDP	10,000	2,788	968	3,756
Grand Total	**34,800**	**8,942**	**2,847**	**11,789**
B. Other Schemes				
SARDP-NE (Phase A+Arunachal Pradesh)	6,418	4,212	261	4,473
LWE (including Vijayawada Ranchi Route)	6,085	5,797	31	5,818
EAP(WB+JICA+ADB)	2,855	1,521	243	1,764

Source:https://www.livemint.com/news/india/india-will-become-world-s-third-largest-economy-by-11681191872156.html;https://www.india-briefing.com/news/indias-national-logistics-policy-key-targets-and-implementation-plan 26020.html/#:~:text=Key%20targets%20of%20India's%20National%20Logistics%20Policy&text=Reduce%20cost%20of%20logistics%20in,incurred%20by%20most%20developed%20economies.;https://www.worldbank.org/en/news/press-release/2023/04/04/indian-economy-continues-to-show-resilience-amid-global-uncertainties#:~:text=The%20overall%20growth%20remains%20robust,half%20of%20FY%2022%2F23.;https://www.pib.gov.in/PressReleasePage.aspx?PRID=1889192; https://pib.gov.in/PressReleasePage.aspx?PRID=1888480; https://www.ibef.org/industry/infrastructure-sector-india; https://www.ibef.org/industry/infrastructure-presentation; https://morth.nic.in/sites/default/files/MoRTH%20Annual%20Report%20for%20the%20Year%202022-23%20in%20English.pdf

7.5 Momentum in Expansion of Roadways

- Highway construction in India increased at 13.1 per cent CAGR between FY2015-22. The pace of National Highways (NH) construction has increased consistently between FY2015 and FY2023 due to the systematic push through corridor-based National Highway development approach. In FY2015, the pace of NH construction was about 12.1 km/ day which increased to about 28.6 km/ day in FY2022.



- The Government of India has allocated INR 111 lakh crore (USD 1.34 trillion) under the National Infrastructure Pipeline for FY2019-25. The roads sector is expected to account for 18 per cent of capital expenditure over FY2019-25.

- In October 2022, Prime Minister of India laid the foundation of road and ropeway projects worth more than INR 3,400 crore (USD 410 million) in Mana, Uttarakhand.

- Government is working towards the development of a national highway network of 2 lakh kilometres by 2025.

7.6 Private Financing under Public Private Partnership (PPP)

The PPP framework was introduced to increase the efficiency of infrastructure projects through long term collaboration between the public sector and private businesses.

- In FY21, there were 125 PPP projects worth USD 23.25 billion in India.

- NHAI targets 450 kilometers of the Build-operate-transfer (BOT) projects in FY2022 and is looking forward to bidding out 600-1000 kilometers of highway stretch under the Build-operate-transfer (BOT) model as of November 2021.

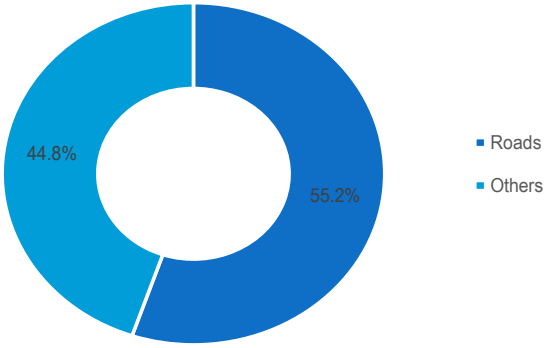
- In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivizing timely work by concessionaires. According to revised norms, the NHAI will have to hand over 90 per cent of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.

- In November 2020, L&T Construction bagged a contract to build India's longest river bridge, across the Brahmaputra River connecting Dhubri in Assam to Phulbari in Meghalaya, valued at INR 2,500-5,000 crore (USD 339.76-679.53 million).

- KKR, a global investment firm, announced to acquire the entire stake of Global Infrastructure Partners in Highway Concessions One (HC1) and seven other highway assets totalling 487 km.

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Total PPP Projects in India (FY2021)



Source: https://www.ibef.org/industry/roads-india

7.7 Evolution of PPP in road sector in India

PPP in the road sector in India has passed through several distinct phases:

- Build- Operate-Transfer:
  It is a form of project financing, wherein a private entity receives a concession from the private or public sector to finance, design, construct, own, and operate a facility stated in the concession contract. This enables the project proponent to recover its investment, operating, and maintenance expenses in the project. But significant improvements in private participation were observed. Private sector participation in BOT projects peaked till Financial Year (FY)12. But a steep decline in PPP participation was observed in FY13 and FY14 with many viable projects unable to attract even a single bid.

- Hybrid Annuity Mode (HAM):
  HAM was introduced to reinvigorate PPP participation in the road sector after interest in BOT projects waned. It has mainly provided advantages to the developers in form of reduction in Initial funding requirements in PPP projects as 60 per cent of the bid project cost is to be arranged by the concessionaire. This reduces the initial equity requirement and encourages participation by mid-sized developers to invest in PPP projects. Further, debt requirements go down from 70 per cent to around 42 per cent of the project cost. The introduction and strong implementation of HAM has seen HAM become the preferred PPP mode in India.

- Toll- Operate- Transfer (TOT)
  TOT is a model for operational national highway projects where investors make a lump sum payment in return for long-term toll collection rights backed by a sound tolling system. Three TOT bundles have been floated by NHAI so far out of which financial closure of one bundle was achieved in August 2018 with the highest bidder bid at least 1.5 times the IECV and for one bundle bid process is ongoing.

  The National Highways Authority of India is looking to tweak the BOT framework as the Government plans to revive the BOT model to make it more attractive to private investors and lenders.

7.8 Policy Initiatives

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- Under the Union Budget 2023-24, the Government of India allocated INR 19,000 (USD 2.37 billion) for Pradhan Mantri Gram Sadak Yojana (PMGSY), which is the same as the budget allocation and revised estimate for 2022-2023. According to recent reports, the number of roads constructed under PMGSY is of total length of 735,683 kms.

- The government of India has set up the India Infrastructure Finance Company (IIFCL) to provide long-term funding for infrastructure projects. Interest payments on external commercial borrowings for infrastructure are now subject to a lower withholding tax of 5 per cent vis-a-vis 20 per cent earlier. Infrastructure debt funds income is exempt from income tax.

- The Bhoomi Rashi portal accelerates the process of publication of notifications for land acquisition. It has been useful in reducing the time taken for providing notification regarding approval and publication of land acquisition.

- In October 2020, a memorandum of understanding (MoU) has been signed with the NHAI by Guru Nanak Dev University (GNDU) to conduct advanced research on various aspects, including highway architecture, protection, and revitalisation, The GNDU will undertake studies on ~137 km length of the National Highways passing through Pathankot, Gurdaspur and Amritsar districts.

- In October 2021, the government announced rules to improve road safety, such as fixed driving hours for commercial truck drivers and a mandate to install sleep detection sensors in commercial vehicles.

- In December 2020, the Ministry of Road Transport and Highways signed an MoU with the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology of the Republic of Austria on technology cooperation in the road infrastructure sector.

- FASTag is an electronic toll collection system, operated by NHAI. A mobile application has been launched for the purchase of tags and top-up of FASTags. Toll collections at national and state highways through FASTag touched INR 50,855 crore in FY2022, the highest yearly figure and 46 per cent more than in FY2021.

- The Indian government launched the Gati Shakti-National Master Plan, which will help lead a holistic and integrated development of infrastructure generating immense employment opportunities in the country. The aim of the plan is to create a digital platform that would enable 16 ministries to collaborate on integrated planning and coordinated implementation of projects. The plan will also bring together departments such as railways, roads & highways and others and implementation will be done with the help of geo-satellite imaging and Big Data, land and logistics. India's Gati Shakti program has consolidated a list of 81 high-impact projects, out of which road infrastructure projects were the top priority. The major highway projects include the Delhi-Mumbai expressway (1,350 kms), Amritsar-Jamnagar expressway (1,257 kms) and Saharanpur-Dehradun expressway (210 kms). The main aim of this program is a faster approval process which can be done through the Gati shakti portal and digitized the approval process completely.

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Source: https://www.business-standard.com/article/current-affairs/fastag-collections-hit-rs-50k-crore-up-46-year-on-year-in-2022-123012401078_1.html; http://omms.nic.in/Home/CitizenPage/

7.9 Budgetary Outlay for Roads

- Under the Union Budget 2023-24, the Government of India has allocated INR 2.7 lakh crore (USD 33 billion) to the Ministry of Road Transport and Highways.
- In 2023-24, NHAI is allocated INR 1.62 lakh crore (USD 20 billion), all of which is budgetary support.
- In Andhra Pradesh, 70 projects underway, totaling 2,014 kms and costing INR 33,540 crore (USD 4.09 billion) are currently in progress.
- In March 2023, NHAI has invited bid to help in developing wayside amenities at more than 600 locations on National Highways and expressways by FY2025.
- In February 2023, Mr. Nitin Gadkari has approved the development of a 32 km long 6-lane Access Controlled Greenfield Highway on NH-544G Bengaluru–Vijayawada Economic Corridor in Hybrid Annuity Mode in Andhra Pradesh worth USD 157 million (INR 1,292.65 crores).
- In February 2022, NHAI rolled out a plan to construct 5,795 kilometres of highways that will connect 117 districts. The plan was worth INR 1 trillion (USD 13.09 billion).

7.10 Way Forward (Outlook)

- The market for roads and highways has projected a CAGR of 36.16 per cent during 2016-2025, on account of growing government initiatives to improve transportation infrastructure in the country.
- The Indian Road network is on track to reach world-class standards with widescale expansions and makeovers. Highways are the most integral aspect of a country's functioning, connecting people, goods, and other raw materials.
- The central government's 'Bharatmala' project has helped in vigorously building a solid network of roads, highways, and expressways. India also plans to build at least 26 green expressways by 2025.
- The government's focus has not just been restricted to building premier roads but also aims to connect major industrial towns. The government will also connect every metro, town and village through a robust road connectivity system.

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- India's expanding road and highway network has even reached the neglected and treacherous terrains of the Northeastern and Northern parts of the country.

- The Border Road Organisation has been working overtime to build roads along the Indian border, enhancing the country's military capabilities and road infrastructure is of paramount importance for speedy logistical support.

- The roadmap to India's infrastructure is exciting and the new decade seems to be promising. More and more green and clean initiatives are happening across government bodies in major countries, especially, the Indian government has given the much-needed push to the infrastructure sector in the recent 2023 budget. India is looking at a USD 5 trillion economy dream.

- India's logistics market is estimated to reach USD 410.75 billion in FY2022 and is expected to reach USD 556.97 billion by FY2027, growing at a CAGR of 6.28 per cent.

- India is now at a juncture where a huge investment in research and development for energy-efficient and green fuel is much-needed. Thus, boosting the overall infrastructure.

Source: https://www.ibef.org/blogs/growth-of-infrastructure-sector-a-potential-boost-to-the-indian-economy; https://economictimes.indiatimes.com/industry/transportation/roadways/indian-growth-story-accelerated-by-highway-expansion/articleshow/93945121.cms?from=mdr

8. Valuation Approach

The standard of value used in our analysis is fair value, which is often defined as the price, in terms of cash or equivalent, that a buyer could reasonably be expected to pay, and a seller could reasonably be expected to accept, if the business were exposed for sale on the open market for a reasonable period of time, with both buyer and seller being in possession of the pertinent facts and neither being under any compulsion to act.

There are several commonly used and internationally accepted methods for determining the fair value of companies, which have been considered in the present case, to the extent relevant and applicable. Accordingly, we have carried out valuation of the SPV as on 30 June 2023.

It should be understood that the valuation of any company or its assets is inherently subjective and is subject to certain uncertainties and contingencies, all of which are difficult to predict and are beyond our control. In performing our analysis, we made assumptions with respect to industry performance and general business and economic conditions, many of which are beyond the control of the SPV. In addition, this valuation will fluctuate with changes in prevailing market conditions, the conditions and prospects, financial and otherwise, of the SPV, and other factors which generally influence the valuation analysis.

The application of any particular method of valuation depends on the purpose for which the valuation is done. Although different values may exist for different purposes, it cannot be too strongly emphasized that a valuer can only arrive at one value for one purpose. Our choice of methodology of valuation has been arrived at using usual and conventional methodologies adopted for transactions of a similar nature and our reasonable judgment, in an independent and bona fide manner is based on our previous experience of assignments of a similar nature.

In respect of going concerns, certain valuation techniques have evolved over time and are commonly in vogue. These can be broadly categorised as follows:

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Market Price (MP) Method

The market price of an equity share as quoted on a Stock Exchange is generally considered as the value of the equity shares of that company where such quotations are arising from the shares being regularly and freely traded in, subject to the element of speculative support that may be inbuilt in the value of the shares.

Equity shares of the SPV is not listed on any stock exchange. Hence, this method has not been considered for the purpose of valuation.

Comparable Companies Market Multiple ("CCM") Method

Under this method, the value of the equity shares of a company/ business undertaking is arrived at by using multiples derived from valuations of comparable companies, as apparent through stock market valuations of listed companies. This valuation is based on the principle that market valuations, taking place between informed buyers and informed sellers, incorporate all factors relevant for the assessment of the value of the company.

Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances. We have not considered this method in our valuation analysis in the absence of closely comparable listed companies having similar geographical locations, stage of growth, size, terms and profitability.

Comparable Companies Transaction Multiple ("CTM") Method

Under the CTM method, the value of the equity shares of a company/ business undertaking is arrived at by using the prices implied by reported transactions/ deals of comparable companies.

Relevant multiples need to be chosen carefully and adjusted for differences between the circumstances.

We have not been able to identify any comparable company to the SPV for which a transaction has taken place in the last one year. We believe that the older transactions are not relevant for our valuation considering share price movements and changes in the macro-economic situation in India. Also, transactions multiples as times tend to be biased due to premium which may be embedded in the price for strategic benefits and synergies which an acquirer may perceive in the target. Accordingly, we have not applied the Comparable Transactions Multiple Method for the valuation of the SPV.

Net Asset Value (NAV) Method

The asset-based valuation technique is based on the value of the underlying net assets of the business either on a book value basis or realisable value basis or replacement cost basis. The cost approach assumes that a prudent investor would pay no more for an entity than the amount for which he could replace or re-create it or an asset with similar utility. Under a going-concern premise, the cost approach usually is best suited for use in valuing asset-intensive companies, such as investment or real estate holding companies, or companies with unstable or unpredictable earnings.

In the present case of valuing the SPV, we have not considered this method as the underlying earnings are fairly stable, and a going concern business plan has been provided by the Management.

Discounted Cash Flows (DCF) Method

Under the DCF method, the projected free cash flows to the firm are discounted at the weighted average cost of capital. The sum of the discounted value of such free cash flows is the value of the firm.

Using the DCF analysis involves determining the following:

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Estimating future free cash flows:

Free cash flows are the cash flows expected to be generated by the company that is available to all providers of the company's capital — both debt and equity.

Appropriate discount rate to be applied to cash flows, i.e., the cost of capital:

This discount rate, which is applied to the free cash flows, should reflect the opportunity cost to all the capital providers (namely shareholders and creditors), weighted by their relative contribution to the total capital of the company. The opportunity cost to the capital provider equals the rate of return the capital provider expects to earn on other investments of equivalent risk.

The value so computed by discounting the cash flows to the firm is adjusted for net borrowings, surplus asset including investments, minority interests, equity instruments granted as part of the share-based payment, and other matters to arrive at an aggregate equity value of the company.

In the present case, we have been provided with the financial projections of the SPV. As such, we have considered this method for valuing the SPV.

9. Valuation Analysis

Discounted Cash Flow Method (Free Cash Flows to Firm)

Using the DCF analysis involves determining the following:

Estimating future free cash flows:
Free cash flows are the cash flows expected to be generated by the SPV and available to the capital providers in SPV has been estimated based on projected financial information provided by the Management. Projections provided by the Management are only the best estimates of SPV's growth and sustainability of profitability margins. Although we have reviewed the financial forecast provided by the Management for consistency and reasonableness, we have not specifically validated these financial projections and have relied on the estimates provided by the Management.

Appropriate discount rate to be applied to cash flows i.e., the cost of capital:
This discount rate, which is applied to the free cash flows, should reflect the opportunity cost to all the capital providers (namely shareholders and creditors), weighted by their relative contribution to the total capital of SPV. The opportunity cost to the capital provider equals the rate of return the capital provider expects to earn on other investments of equivalent risk.

Arriving at equity value from enterprise value:
The fair value basis of equity of the SPV for this purpose has been determined after taking into consideration all the factors and methodologies mentioned hereinabove. As explained above, we have given 100% weightage to the DCF methodology to arrive at the equity value of the SPV.

The key assumptions under the DCF Method

For the DCF analysis, we have relied on the projected financials of the SPV provided by the Management based on their best estimates on the growth and sustainability of profitability margins of the SPV. Please note that though we have reviewed the financial forecast provided by the Management for consistency and reasonableness based on data available in public domain and traffic consultant reports provided by the Management of SPV, we have not independently investigated or otherwise verified the data and key inputs estimated by the Management for SPV. Nothing has come to our attention to indicate that the information provided by the Management had material mis-statements or would not afford reasonable grounds upon which to base our Report. The

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Free Cash Flows to Firm ("FCFF") have been calculated for SPV as on the Valuation Date based on the Financial Projections.

The key assumptions and the basis for the valuation are explained in detail below:

Discounting Factor

The discount rate considered for arriving at the present value of the free cash flows to the firm is the Weighted Average Cost of Capital ("WACC"). The WACC for the SPV as on the Valuation Date is derived as follows:

WACC= (ke x we) + (kd x (1 – t) x wd)
where,
we = weight of equity in the capital structure

wd = weight of debt in the capital structure

ke = cost of equity

kd = cost of debt, and

t = effective tax rate

Cost of Equity ("ke")

The cost of equity is computed using the Capital Asset Pricing Model (CAPM) as shown below:

ke = rf + β (rm-rf) where

ke = Cost of Equity,

rf = Risk Free Return,

β = Beta, a measure of Market Risk

rm = Market Return

Cost of Equity is estimated using the following factors:

- Risk Free Return (rf) – The risk free rate (rf) is the return on an investment with zero risk where actual returns are equal to the expected return. Rf at 7.10% has been considered for SPV based on the 10 Year normalized Wholesale Debt Market Zero Coupon Bond Yield as of the Valuation Date

- Beta (β) – Beta has been computed by re-levering the average asset beta of companies in the construction and engineering segment and having more than 50% revenues from the road infrastructure. Beta has been considered based on 1 year daily trailing Beta of comparable companies, relevered for the SPV specific debt to equity ratio and effective taxes. Refer Appendix X for a list of comparable companies

- Debt to Equity Ratio (DER) – The DER of peers displays significant variation owing to difference in the stage of operations and maturity. Accordingly, DER was concluded based on management input for debt-to-equity ratio of SPV over the projected period.

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- Income Tax – Effective tax rate has been applied after considering 80IA and 35AD benefits and applicable MAT credit (if any) in the projected period as represented to us by the Management for SPV.

- Equity Risk Premium (ERP) – ERP is considered at 7.5% for SPV.

- Alpha - Alpha premium for the SPV is based on the valuer's assessment of idiosyncratic risks. Idiosyncratic risks considered are combination of operational parameters like construction phase and credit parameters like credit rating.

Cost of Debt ("kd")

Marginal cost of raising debt for the SPV is considered based on Management input. Management has represented that the debt can be refinanced at in the range of 8.65% p.a.

Other notes

- Mid-year convention in arriving at the present value of free cash flows is considered appropriate
- Management has represented that the probability of devolvement of contingent liabilities is insignificant and accordingly no adjustment was required to be carried out in the valuation of the SPV.

10. Valuation of the SPV

10.1 IGEPL

Key Inputs in Projections:
The key inputs of the projections provided by the Management supported by independent traffic as follows:

a) Revenue

Revenue is expected to grow at a CAGR of ~10% in the steady state forecasted period based on financial plan provided by management which is based on traffic study.

b) Traffic Volume

Traffic volume as received from the Management supported by traffic study report carried out by GMD consultants dated June 2023 are considered.

c) Toll rates

- Toll rates notification for levy and collection of Fee shall be issued from time to time by the Authority and/ or HGCL in term of Nehru Outer Ring Road, Hyderabad (Toll) Rules, 2012, Amendment to Nehru Outer Ring Road, Hyderabad (Toll) Rules 2012 issued vide GOMs. No 5 dated 12 January 2023 [published by Municipal Administration & urban Development (Plg.II) Department] and any further amendment still bid due date (the "Fee Notification"), substantially in the form set forth in Schedule M.

- WPI has been projected to grow by 5% for the projected period.

d) Periodic Maintenance & Routine Maintenance Costs

Estimates for projected Periodic Maintenance & Routine Maintenance cost from the Management are considered

DCF Method:

- The key assumptions and other key inputs, mentioned on the previous paragraphs, as provided by the Management are considered in the projections.

- The projections provided by the Management, based on Independent traffic, are only the best estimates of growth and sustainability of profitability margins. The financial forecast provided by the Management were reviewed for consistency and reasonableness and have relied on them.

- The explicit period has been considered from 01 July 2023 to 31 July 2054.

- The tax has been calculated as per the provisions of the Income Tax Act, 1961. The interest expense is adjusted in the same for arriving at the tax computation under FCFF.

- The assumptions for Weighted average cost of capital is as follows:

WACC calculation		
		Basis
Risk free rate of return	*7.1%*	10yrs ZCYC as at 30 June 2023
India risk premium	*7.5%*	Incwert Analysis
Beta	0.9	Peer median of 1 yr daily beta
Alpha	*0.5%*	Valuer judgement
Cost of Equity	***14.0%***	
Cost of Debt	*8.7%*	Management input
Tax Rate	*25.2%*	Rates as per IT Act as applicable here
After Tax Cost of Debt	***6.5%***	
Debt/Equity	194.1%	Management input
Debt to Capital %	*66.0%*	
Equity to Capital %	*34.0%*	
Weighted Average Cost of Capital	***9.0%***	
Marginal tax rate	*25.2%*	MAT rates as per IT applicable here

- The Business/ Enterprise Value of IGEPL as on 30 June 2023 is arrived at INR 5,216.8 crores

Discounted cash flow															
INR crores	**FY2024** 9 months	**FY2025** 12 months	**FY2026** 12 months	**FY2027** 12 months	**FY2028** 12 months	**FY2029** 12 months	**FY2030** 12 months	**FY2031** 12 months	**FY2032** 12 months	**FY2033** 12 months	**FY2034** 12 months	**FY2035** 12 months	**FY2036** 12 months	**FY2037** 12months	**FY2038** 12months
Net Revenue	431.2	734.4	814.7	902.9	1,004.0	1,113.1	1,214.7	1,353.0	1,493.6	1,656.0	1,802.0	1,975.6	2,156.0	2,354.6	2,583.9
yoy growth	*n/a*	*67.4%*	*11.1%*	*11.0%*	*11.0%*	*11.3%*	*9.2%*	*11.4%*	*10.3%*	*10.9%*	*9.0%*	*9.9%*	*9.2%*	*9.3%*	*9.8%*
EBITDA	**382.9**	**608.0**	**630.7**	**661.1**	**750.7**	**688.3**	**779.0**	**905.7**	**1,033.5**	**1,346.1**	**1,480.3**	**1,255.3**	**1,421.4**	**1,608.9**	**1,824.8**
EBITDA margin	*89%*	*83%*	*77%*	*73%*	*75%*	*62%*	*64%*	*67%*	*69%*	*81%*	*82%*	*64%*	*66%*	*68%*	*71%*
Depreciation	33.4	55.9	62.7	70.1	75.4	83.3	88.2	94.9	107.5	120.8	133.2	146.3	161.2	176.3	193.0
EBIT	349.5	552.1	568.0	591.0	675.3	605.0	690.9	810.8	926.1	1,225.3	1,347.1	1,109.0	1,260.2	1,432.7	1,631.8
EBIT margin	*81%*	*75%*	*70%*	*65%*	*67%*	*54%*	*57%*	*60%*	*62%*	*74%*	*75%*	*56%*	*58%*	*61%*	*63%*
Less: tax on EBIT	(88.0)	(139.0)	(142.9)	(148.7)	(170.0)	(152.3)	(173.9)	(204.1)	(233.1)	(308.4)	(339.0)	(279.1)	(317.2)	(360.6)	(410.7)
Change in working capital	(248.5)	(8.9)	1.1	(58.6)	57.3	(10.3)	(36.8)	(52.1)	(39.1)	17.7	57.2	13.8	1.4	15.4	15.4
Capex	(8,120.7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Free cash flows to the Firm	**(8,074.3)**	**460.1**	**488.8**	**453.7**	**638.0**	**525.7**	**568.4**	**649.5**	**761.4**	**1,055.4**	**1,198.5**	**990.0**	**1,105.6**	**1,263.7**	**1,429.5**
Continuing value															
Discounting period (mid-period)	0.38	1.25	2.25	3.25	4.25	5.25	6.25	7.25	8.25	9.25	10.25	11.25	12.25	13.25	14.25
Discount factor	0.97	0.90	0.82	0.75	0.69	0.63	0.58	0.53	0.49	0.45	0.41	0.38	0.35	0.32	0.29
Present value of cash flows as at 30 June 2023	**(7,815.3)**	**412.8**	**402.2**	**342.4**	**441.6**	**333.7**	**330.9**	**346.8**	**372.8**	**473.9**	**493.5**	**373.9**	**382.9**	**401.4**	**416.4**

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Discounted cash flow

INR crores	FY2039 12months	FY2040 12months	FY2041 12months	FY2042 12months	FY2043 12months	FY2044 12months	FY2045 12months	FY2046 12months	FY2047 12months	FY2048 12months	FY2049 12months	FY2050 12months	FY2051 12months	FY2052 12months	FY2053 12months	FY2054 4months
Net Revenue	2,818.2	3,069.1	3,328.1	3,625.6	3,970.2	4,312.2	4,662.7	5,068.1	5,496.5	5,990.6	6,472.7	7,012.8	7,580.7	8,238.9	8,899.0	3,224.6
yoy growth	*9.1%*	*9.0%*	*8.5%*	*9.0%*	*9.6%*	*8.7%*	*8.3%*	*8.8%*	*8.5%*	*9.0%*	*8.0%*	*8.3%*	*8.1%*	*8.7%*	*8.0%*	*-63.8%*
EBITDA	**2,431.7**	**2,667.7**	**2,678.2**	**2,960.8**	**3,289.6**	**3,614.2**	**4,185.7**	**4,574.0**	**4,454.0**	**4,926.7**	**5,392.8**	**5,913.2**	**6,991.8**	**7,626.7**	**7,861.4**	**2,867.0**
EBITDA margin	*86%*	*87%*	*80%*	*82%*	*83%*	*84%*	*90%*	*90%*	*81%*	*82%*	*83%*	*84%*	*92%*	*93%*	*88%*	*89%*
Depreciation	212.4	234.2	256.0	280.0	305.9	333.3	364.0	397.8	434.0	473.7	512.8	551.7	596.5	649.9	698.0	252.6
EBIT	2,219.3	2,433.5	2,422.1	2,680.8	2,983.7	3,280.9	3,821.8	4,176.2	4,020.0	4,453.0	4,880.1	5,361.5	6,395.3	6,976.8	7,163.4	2,614.4
EBIT margin	*79%*	*79%*	*73%*	*74%*	*75%*	*76%*	*82%*	*82%*	*73%*	*74%*	*75%*	*76%*	*84%*	*85%*	*80%*	*81%*
Less: tax on EBIT	(558.5)	(612.5)	(609.6)	(674.7)	(750.9)	(825.7)	(961.9)	(1,051.1)	(1,011.8)	(1,120.7)	(1,228.2)	(1,349.4)	(1,609.6)	(1,755.9)	(1,802.9)	(658.0)
Change in working capital	15.1	(4.1)	17.1	17.1	17.1	138.2	76.0	-	-	-	-	-	-	-	(473.8)	(250.3)
Capex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Free cash flows to the Firm	**1,888.3**	**2,051.1**	**2,085.7**	**2,303.2**	**2,555.8**	**2,926.7**	**3,299.9**	**3,523.0**	**3,442.2**	**3,806.0**	**4,164.6**	**4,563.8**	**5,382.2**	**5,870.7**	**5,584.7**	**1,958.7**
Continuing value																
Discounting period (mid-period)	15.25	16.25	17.25	18.25	19.25	20.25	21.25	22.25	23.25	24.25	25.25	26.25	27.25	28.25	29.25	29.92
Discount factor	0.27	0.25	0.22	0.21	0.19	0.17	0.16	0.15	0.13	0.12	0.11	0.10	0.09	0.09	0.08	0.08
Present value of cash flows as at 30 June 2023	**504.5**	**502.5**	**468.7**	**474.6**	**483.0**	**507.3**	**524.5**	**513.6**	**460.2**	**466.7**	**468.3**	**470.7**	**509.1**	**509.2**	**444.3**	**147.1**

Valuation Conclusion	
Present value of cash flows	5,164.0
Present value of terminal value	-
Release of WC at the end of concession period	54.4
Enterprise value	**5,218.4**
Less: Debt	-
Less: Debt like items	(1.6)
Add: Cash & cash equivalents	0.0
Add: Investments & other surplus assets	-
Value of 100% interest in equity	**5,216.8**

Note: Debt like items includes: Interest free unsecured loan from related party

11. CONCLUSION

11.1.1 Based on the foregoing, and on a consideration of all the relevant factors and circumstances as discussed and outlined hereinabove, we have computed the following value:

- Fair market value of 100% interest in equity of IRB Golconda Expressway Private Limited as of 30 June 2023 is determined to be **INR 5,216.8 crores** and each credited and fully paid-up equity share in IRB Golconda Expressway Private Limited as of 30 June 2023 is determined to be **INR 10,43,368.94/- (Indian Rupees Ten Lakhs Forty-Three Thousand and Three Hundred Sixty-Eight Point Nine-Four Only) (face value per equity share: INR 10/-).**

Computation of fair value of the equity of the Trust

Valuation approach	Method	Equity value (INR crores)	Value per share	Weight (%)	Weighted average Equity value (INR crores)
Income approach	Discounted cash flows	5216.8	10,43,368.94	100%	5,216.8
Market approach	Comparable companies method	n/a	n/a	n/a	n/a
Cost approach	NAV	n/a	n/a	n/a	n/a
Value of 100% interest in equity				**100%**	**5,216.8**
Number of units outstanding					50,000
Value per unit					**10,43,368.94**

Note: n/a = Not applicable
Source - Management information; Publicly available information; proprietary databases and Incwert analysis

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11.1.2 Accordingly, the value of each credited and fully paid-up equity shares of IRB Golconda Expressway Private Limited as of 30 June 2023 to be INR 10,43,368.94/- (Indian Rupees Ten Lakhs Forty-Three Thousand and Three Hundred Sixty-Eight Point Nine-Four Only) (face value per unit: INR 10/-).

Respectfully submitted,



Sunit Khandelwal
Registered Valuer under Companies (Registered Valuers and Valuation) Rules, 2017
IBBI Registration No. IBBI/RV/05/2018/10426
Asset class: Securities or Financial Assets
Date: 17 July 2023
Place: Gurgaon

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12. Annexures

Additional procedures to be complied with in accordance with SEBI InvIT Regulations
List of Disclosures

Additional procedures to be complied with in accordance with SEBI InvIT regulations as per Schedule V of the SEBI InvIT Regulations:

a) List of one-time sanctions/approvals which are obtained or pending along with up to date/overdue periodic clearances

As given by the Management, being a TOT project one-time sanctions/approvals are not applicable.

b) Statement of assets

Management has represented that all assets and liabilities of the SPV till the date of transfer of assets to InvIT would be taken over by the Trust.

c) Estimates of already carried as well as proposed major repairs & improvements

Past major repairs and improvements as on the Valuation Date

Management has represented that major repairs and improvements are not applicable.

Future estimate of major repairs and improvements as on the Valuation Date

Future estimates of major repairs and improvements as on the Valuation Date																
	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	FY2037	FY2038
	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths
INR crores	Audited	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	-	-	-	-	-	-	161.1	161.1	161.1	161.5	-	-	386.2	387.2	386.2	386.2

Future estimates of major repairs and improvements as on the Valuation Date																
	FY2039	FY2040	FY2041	FY2042	FY2043	FY2044	FY2045	FY2046	FY2047	FY2048	FY2049	FY2050	FY2051	FY2052	FY2053	FY2054
	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	12mths	4.0months
INR crores	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	-	-	235.4	235.4	235.4	236.1	-	-	531.0	532.5	531.0	531.0	-	-	404.5	138.0

d) Revenue pendencies including local authority taxes associated with InvIT asset & compounding charges

Management has represented that there are no revenue pendencies including local authority taxes pending to be payable to the Government authorities with respect to SPV.

e) On-going material litigations including tax disputes in relation to the assets

As represented by the Management, there are no material litigation.

f) Vulnerability to natural to induced hazards that may not have been covered in town planning/building control

Management has represented that there are no such natural or induced hazards which have been not considered in town planning/building control with respect to the SPV.

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g) Site Visit Photographs

Site visit of the SPV was conducted. Photographs taken during the site visit have been included in earlier sections in the Report.

Caveat to Disclosures in Annexures:

The Valuer has not independently verified the documents related to the disclosures mentioned in the Annexures and have relied on the representation by the Management for the same.

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12.1 Annexure I IGEPL – Table 1: List of one-time sanctions/approvals

Nil

12.2 Annexure II IGEPL – Table 2 List of ongoing material litigations or litigations where financial implication cannot be ascertained

Nil

12.3 Annexure III – Comparable companies' description

List of comparable companies
Sadbhav Engineering Limited
MEP Infrastructure Developers Limited
IRB Infrastructure Developers Limited
Ashoka Buildcon Limited

12.4 Annexure IV – Parties to the InvIT

- IRB Infrastructure Trust ("the Trust")
- IRB Infrastructure Developers Limited (in its capacity as "Sponsor" of the Trust)
- MMK Toll Road Private Limited (in its capacity as "Investment Manager" of the Trust) &
- IDBI Trusteeship Services Limited (as the "Trustee" of the Trust)

**********END OF REPORT**********

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