TWO HUNDRED NINETY SIXTH REPORT

Role of Highways in Nation Building

(Presented to the Rajya Sabha on 28th July, 2021)
(Laid on the Table of Lok Sabha on 28th July, 2021)
Website:  https://rajyasabha.nic.in
E-mail:  rsc-rr@sansad.nic.in
PARLIAMENT OF INDIA
RAJYA SABHA

DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE ON TRANSPORT, TOURISM AND CULTURE

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RAJYA SABHA SECRETARIAT
NEW DELHI

July, 2021/ Sravana, 1943 (Saka)
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COMPOSITION OF THE COMMITTEE

(2019-20)
(Constituted on 13th September, 2019)

1. Shri T.G. Venkatesh - Chairman

Rajya Sabha

2. Shri Prasanna Acharya
3. Shri Raj Babbar
4. Shri Sambhaji Chhatrapati
5. Dr. Sonal Mansingh
6. Shri Derek O’Brien
7. *Kumari Selja
8. **Shri Tiruchi Siva
9. ***Shri K.C. Venugopal
10. Shri Vinay Dinu Tendulkar

Lok Sabha

11. Shrimati Sumalatha Ambareesh
12. Shri Anto Antony
13. Shrimati Veena Devi
14. Shri Tapir Gao
15. Shri Rahul Kaswan
16. Shri Saumitra Khan
17. Ms. Goddeti Madhavi
18. Shri Ramesh Chandra Majhi
19. Shri Sunil Baburao Mendhe
20. Shri K. Muraleedharan
21. Shri S.S. Palanimanickam
22. Shri Chhedi Paswan
23. Shri Kamlesh Paswan
24. Shri Tirath Singh Rawat
25. Shrimati Mala Roy
26. Shri Rajiv Pratap Rudy
27. Shri Rajbahadur Singh
28. Shri Dushyant Singh
29. Shri Ramdas Chandrabhanji Tadas
30. Shri Krupal Balaji Tumane
31. Shri Dinesh Chandra Yadav

*Kumari Selja ceased to be Member w.e.f. 10th April, 2020
**Shri Tiruchi Siva ceased to be Member w.e.f. 3rd April, 2020 and re-nominated as Member w.e.f. 22nd July, 2020
***Shri K.C. Venugopal nominated as Member w.e.f. 22nd July, 2020
COMPOSITION OF THE COMMITTEE
(2020-21)
(Constituted on 13th September, 2020)

1. Shri T.G. Venkatesh - Chairman

Rajya Sabha

2. Shri Prasanna Acharya
3. *Shri Raj Babbar
4. Shri Sambhaji Chhatrapati
5. Dr. Sonal Mansingh
6. Shri Derek O’Brien
7. Shri Tiruchi Siva
8. Shri Dharmapuri Srinivas
9. Shri Vinay Dinu Tendulkar
10. Shri K.C. Venugopal
11. **Shri Sushil Kumar Modi

Lok Sabha

12. Shri Anto Antony
13. Shri Margani Bharat
14. Shri Tapir Gao
15. Shri Rahul Kaswan
16. Shri Ramesh Chandra Majhi
17. Shri Sunil Baburao Mendhe
18. Shri K. Muraleedharan
19. Shri S.S. Palanimanickam
20. Shri Chhedi Paswan
21. Shri Kamlesh Paswan
22. Shri Sunil Kumar Pintu
23. Shri Prince Raj
24. Shri Tirath Singh Rawat
25. Shrimati Mala Roy
26. Shri Rajiv Pratap Rudy
27. Shri Dushyant Singh
28. Shri Rajbahadur Singh
29. Shri Ramdas Chandrabhanji Tadas
30. Shri Manoj Tiwari
31. Shri Krupal Balaji Tumane
32. Shri Dinesh Chandra Yadav

*Shri Raj Babbar ceased to be a Member w.e.f. 25th November, 2020
**Shri Sushil Kumar Modi was nominated to be a Member w.e.f. 23rd December, 2020
SECRETARIAT

Dr. Shikha Darbari, Joint Secretary & Financial Advisor
Shri P. Narayanan, Director
Shri Dinesh Singh, Additional Director
Shri Rajendra Prasad Shukla, Additional Director
Ms. Catherine John L., Under Secretary
Shri Gaurav Singh Gahlain, Assistant Committee Officer
INTRODUCTION

I, the Chairman, Department-related Parliamentary Standing Committee on Transport, Tourism and Culture, having been authorized by the Committee to present on its behalf, do hereby present this Two Hundred Ninety Sixth Report on 'Role of Highways in Nation Building'.

2. The Committee heard the views of Secretary, Ministry of Road Transport and Highways; Chairman, National Highways Authority of India; and Director, NHIDCL on the subject on 4th November, 2019. The Committee heard the views of the officials of Ministry of Road Transport and Highways, State Government of Andhra Pradesh, State Road Contractors' Association and National Highways Builders' Federation on the subject at Visakhapatnam on 7th January, 2020. The Committee heard the views of the officials of Ministry of Road Transport and Highways, State Government of Maharashtra, State Road Contractors' Association and National Highways Builders' Federation on the subject at Mumbai on 10th January, 2020. The Committee heard the views of the officials of Ministry of Road Transport and Highways, State Government of Goa, State Road Contractors' Association and National Highways Builders' Federation on the subject at Goa on 11th January, 2020. The Committee heard the views of the President, Indian Road Congress; Director, Indian Academy of Highway Engineers; and Secretary General, Indian Construction Equipment Manufacturers' Association on the subject on 7th January, 2021. The Committee heard the views of Secretary, Ministry of Road Transport and Highways; Additional Secretary, Ministry of Finance; and Chairman, National Highways Authority of India on the subject on 19th January, 2021. The Committee heard the views of the officials of Ministry of Road Transport and Highways; National Highways Authority of India; and Union Territory Government of Jammu & Kashmir on the subject at Srinagar on 23rd January, 2021. The Committee heard the views of Secretary, Ministry of Road Transport and Highways; Chairman, National Highways Authority of India; and Managing Director, NHIDCL on the subject on 24th June, 2021. The Committee heard the views of the officials of Ministry of Road Transport and Highways, NHAI, NHIDCL and State Government of Tamil Nadu on ‘Problems of Land Acquisition for Highway Projects’ and ‘Review of CRIF works in Tamil Nadu’ at Chennai on 12th July, 2021. The Committee heard the views of the officials of Ministry of Road Transport and Highways, NHAI, NHIDCL and State Government of Kerala with reference to utilization of CRIF in the State of Kerala at Kumarakom on 16th July, 2021.

3. The Committee wishes to express its thanks to the officers of Ministry of Road Transport and Highways; Ministry of Finance; National Highways Authority of India; NHIDCL; State/UT Governments of Andhra Pradesh, Maharashtra, Goa and Jammu & Kashmir; and other stakeholders for placing before the Committee, the material and information desired in connection with the subject and for clarifying the points raised by the Members.
4. The Committee considered and adopted the Report in its meeting held on the 20th July, 2021.

NEW DELHI;
July 20, 2021
29 Ashadha, 1943 (Saka)

(T.G. Venkatesh)
Chairman,
Department-related Parliamentary Standing Committee on Transport, Tourism and Culture,
Rajya Sabha
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<td>Third Generation</td>
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<td>Asian Development Bank</td>
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<td>Authority Engineer</td>
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<td>ALM</td>
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<td>Bank Guarantee</td>
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EIA    Environmental Impact Assessment
EL     Expected Loss
EOT    Extension of Time
EPC    Engineering, Procurement, Construction
EPFO   Employees' Provident Fund Organisation
FB     Fund Based
FDI    Foreign Direct Investment
FDR    Flood Damage Repair
FI     Financial Institution
FY     Financial Year
GAAP   Generally Accepted Accounting Principles
GAD    General Arrangement Drawing
GBP    Govind Ballabh Pant
GBS    Gross Budgetary Support
GECLS  Guaranteed Emergency Credit Line Scheme
GIS    Geographic Information System
GoI    Government of India
GPRS   General Packet Radio Service
GPS    Global Positioning System
GVA    Gross Value Added
HAM    Hybrid Annuity Model
HPC    High Powered Committee
HQ     Headquarter
IAHE   Indian Academy of Highway Engineers
IAS    Indian Administrative Service
IBA    Indian Banks' Association
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<td>Indian Construction Equipment Manufacturers' Association</td>
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<td>ID</td>
<td>Identity Document</td>
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<td>IDBI</td>
<td>Development Bank of India</td>
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<td>IDC</td>
<td>Interest During Construction</td>
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<td>IDTR</td>
<td>Institute of Driving and Traffic Research</td>
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<td>IE</td>
<td>Independent Engineer</td>
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<td>IEBR</td>
<td>Internal and Extra Budgetary Resources</td>
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<td>IFC</td>
<td>International Finance Corporation</td>
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<td>IFCI</td>
<td>Industrial Finance Corporation of India</td>
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<td>IIFCL</td>
<td>India Infrastructure Finance Company Limited</td>
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<td>IIT</td>
<td>Indian Institute of Technology</td>
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<td>IL&amp;FS</td>
<td>Infrastructure Leasing and Financial Services</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>Infrastructure Investment Trust</td>
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<td>IOB</td>
<td>Indian Overseas Bank</td>
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<tr>
<td>iOS</td>
<td>iPhone Operating System</td>
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<tr>
<td>IPO</td>
<td>Initial Public Offering</td>
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<td>IRAC</td>
<td>Income Recognition and Asset Classification</td>
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<td>IRB</td>
<td>Infrastructure Developers Limited</td>
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<td>IRC</td>
<td>Indian Road Congress</td>
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<td>Insurance Regulatory and Development Authority of India</td>
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<td>IRF</td>
<td>International Road Federation</td>
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<td>IRR</td>
<td>Internal Rate of Return</td>
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<td>ISC</td>
<td>Inter State Connectivity</td>
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<td>ITI</td>
<td>Industrial Training Institute</td>
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<td>Acronym</td>
<td>Full Form</td>
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<td>ITS</td>
<td>Intelligent Transportation System</td>
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<td>Joseph Cyril Bamford</td>
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<td>JICA</td>
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<td>JRA</td>
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<td>KM</td>
<td>Kilometre</td>
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<td>KNT</td>
<td>Karnataka</td>
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<td>L1</td>
<td>Lower One</td>
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<tr>
<td>LA</td>
<td>Land Acquisition</td>
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<td>LEF</td>
<td>Large Exposure Framework</td>
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<td>LiDAR</td>
<td>Light Detection and Ranging</td>
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<td>LIE</td>
<td>Lenders’ Independent Engineer</td>
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<td>LLC</td>
<td>Limited Liability Company</td>
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<td>LWE</td>
<td>Left Wing Extremism</td>
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<td>M&amp;R</td>
<td>Maintenance and Repair</td>
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<td>MCA</td>
<td>Model Concession Agreement</td>
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<td>MCLR</td>
<td>Marginal Cost of Fund-based Lending Rate</td>
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<td>Major District Road</td>
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<td>MOEF</td>
<td>Ministry of Environment and Forest</td>
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<td>MoEF&amp;CC</td>
<td>Ministry of Environment and Forest and Climate Change</td>
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<td>MoRTH</td>
<td>Ministry of Road Transport and Highways</td>
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<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>MP</td>
<td>Member of Parliament</td>
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<td>MRG</td>
<td>Minimum Revenue Guarantee</td>
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</table>
MSME Micro, Small and Medium Enterprises

MSRDC Maharashtra State Road Development Corporation

MZ Mizoram

NA Not Applicable

NBFC Non-Banking Financial Company

NBFC-ND Non-Deposit taking Non-Banking Financial Company

NCLT National Company Law Tribunal

NCT National Capital Territory

NDB New Development Bank

NE North-Eastern

NER North-Eastern Region

NFB Non-Fund Based

NGT National Green Tribunal

NH National Highway

NH(O) National Highways (Original)

NHAi National Highways Authority of India

NHBF National Highway Builders Federation

NHDP National Highways Development Project

NHIDCL National Highway and Infrastructure Development Corporation Limited

NHIIMPL National Highways Infra Investment Managers Private Limited

NHIIP National Highways Interconnectivity Improvement Programme

NIIF National Investment and Infrastructure Fund

NIP National Infrastructure Pipeline

NPA Non Performing Assets

O&M Operation and Maintenance

OECF Overseas Economic Cooperation Fund

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<td>Office Memorandum</td>
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<td>Operate, Maintenance and Transfer</td>
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<td>OR</td>
<td>Ordinary Repairs</td>
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<tr>
<td>OSD</td>
<td>Officer on Special Duty</td>
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<tr>
<td>P&amp;M</td>
<td>Planning and Management</td>
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<td>PAP</td>
<td>Project Affected Persons</td>
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<td>PBFF</td>
<td>Permanent Bridge Bee Fund</td>
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<td>PCA</td>
<td>Prompt Corrective Action</td>
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<td>PCOD</td>
<td>Provisional Commercial Operation Date</td>
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<td>PE</td>
<td>Private Equity</td>
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<td>PF</td>
<td>Pension Fund</td>
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<td>PIPR</td>
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<td>PIU</td>
<td>Project Implementation Unit</td>
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<td>Project Monitoring Group</td>
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<td>Project Monitoring Information System</td>
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<td>Punjab National Bank</td>
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<td>Probability of Default</td>
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<td>Public Private Partnership</td>
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<td>Periodic Renewals</td>
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<td>PRBDB</td>
<td>Punjab, Roads &amp; Bridges Development Board</td>
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<td>Paved Shoulder</td>
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<td>Public Sector Undertaking</td>
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<td>Pollution Under Control</td>
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<td>Public Works Department</td>
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<td>R&amp;D</td>
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<td>Description</td>
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<td>RDTC</td>
<td>Regional Driving Training Centers</td>
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<td>Real Estate Regulatory Authority</td>
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<tr>
<td>SL</td>
<td>Single Lane</td>
</tr>
<tr>
<td>SLAO</td>
<td>Special Land Acquisition Officer</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
</tr>
<tr>
<td>SOR</td>
<td>Schedule of Rates</td>
</tr>
</tbody>
</table>

(xiii)
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPV</td>
<td>Special Purpose Vehicle</td>
</tr>
<tr>
<td>SR</td>
<td>Special Repairs</td>
</tr>
<tr>
<td>SSA</td>
<td>State Support Agreement</td>
</tr>
<tr>
<td>SWAMIH</td>
<td>Special Window for Funding Stalled Affordable and Middle-Income Housing Projects</td>
</tr>
<tr>
<td>TOT</td>
<td>Toll, Operate and Transfer</td>
</tr>
<tr>
<td>TPC</td>
<td>Total Project Cost</td>
</tr>
<tr>
<td>TRSFR</td>
<td>Tripura Road Safety Fund Rules</td>
</tr>
<tr>
<td>TRW</td>
<td>Transport Research Wing</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UP</td>
<td>Uttar Pradesh</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
<tr>
<td>US$</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>UT</td>
<td>Union Territory</td>
</tr>
<tr>
<td>VGF</td>
<td>Viability Gap Funding</td>
</tr>
<tr>
<td>WC</td>
<td>Working Capital</td>
</tr>
</tbody>
</table>
REPORT

INTRODUCTION

The significance of the role played by highways in the economic growth of any modern day nation cannot be overstated. Movement of goods as well as people in India relies heavily on its vast road network. This is reflected clearly by the fact that the share of the transport sector in the Gross Value Added (GVA) for the Financial Year 2018-19 was about 4.6 percent, of which the share of road transport contributed roughly 67 percent (Economic Survey 2020-21, Volume 2). Thus, there is immense need to ensure that the road network in the country is developed at a brisk pace and is maintained in top shape, so as to bolster the economic prospects of the country.

2. India has the second largest road network in the world of about 62.18 lakh km. This comprises National Highways, Expressways, State Highways, Major District Roads, Other District Roads and Village Roads as under:

<table>
<thead>
<tr>
<th>Road Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Highways</td>
<td>1,39,032 km</td>
</tr>
<tr>
<td>State Highways</td>
<td>1,76,818 km</td>
</tr>
<tr>
<td>Other Roads</td>
<td>59,02,539 km</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62,18,389 km</strong></td>
</tr>
</tbody>
</table>

3. Given the remarkable impact of a robust, well-maintained network of highways on the developmental prospects of a country, the Department-related Parliamentary Standing Committee on Transport, Tourism and Culture decided to take up the subject ‘Role of Highways in Nation Building’ for detailed examination and report. The Committee had its deliberation with the Secretary, Ministry of Road Transport and Highways on this subject on 4th November, 2019; 19th January, 2021 and 24th June, 2021. The Committee heard the views of representatives of Ministry of Road Transport and Highways, NHAI, National Highways Builders Federation and State Government of Andhra Pradesh; State Government of Maharashtra; and State Government of Goa on this subject, in its meetings held at Visakhapatnam on 7th January, at Mumbai on 10th January and at Goa on 11th January, 2020 respectively. The Committee also heard the views of officials of Ministry of Road Transport & Highways, NHAI, UT Government of Jammu & Kashmir on this subject, with reference to
the status of National Highways/State Highways in Jammu and Kashmir in its meeting held at Srinagar on 23rd January, 2021. Further, the Committee heard various stakeholders, viz., Indian Roads Congress, Indian Academy of Highway Engineers and Indian Construction Equipment Manufacturers’ Association, on this subject, in its meeting held on 7th January, 2021. The Committee also heard various financial institutions/ public sector banks on, inter alia, ‘Lending aspects of road sector’ in its meeting held on 8th January, 2021. The Committee had its deliberation with the Additional Secretary Department of Financial Services, Ministry of Finance on ‘Lending aspects of Road sector’ on 19th January, 2021. The Committee heard the views of the officials of Ministry of Road Transport and Highways, NHAI, NHIDCL and State Government of Tamil Nadu on ‘Problems of Land Acquisition for Highway Projects’ and ‘Review of CRIF works in Tamil Nadu’ at Chennai on 12th July, 2021. The Committee heard the views of the officials of Ministry of Road Transport and Highways, NHAI, NHIDCL and State Government of Kerala with reference to utilization of CRIF in the State of Kerala at Kumarakom on 16th July, 2021.

4. The Committee also heard the Secretary, Ministry of Road Transport and Highways on ‘Impact of Coronavirus Pandemic on Road Transport Sector’ in its meetings held on 7th October and 13th October, 2020.

5. Since State Governments/Union Territories play a significant role in highway projects and are therefore a key stakeholder, the Committee sought the written views/comments of the State Governments and Union Territories on various issues related to this subject, including on (i) Land acquisition; (ii) Environmental and forest clearance; (iii) Road safety; (iv) Mechanism for coordination with Ministry of Road Transport and Highways; and (v) rehabilitation of project-affected people.

6. The National Highways have a total length of 1,36,440 km, which in totality serve as the arterial network of the country. The development of National Highways is the responsibility of the Government of India. The tasks and responsibilities of the Ministry of Road Transport and Highways encompass, inter alia, construction and maintenance of National Highways (NHs); administration of the National Highways Act, 1956; National Highways Authority of India Act, 1988; National Highways Fee (Determination of Rates and Collection) Rules, 2008; Motor Vehicles Act 1988; and Central Motor Vehicles Rules 1989, as also formulation of broad policies relating to road transport and automotive norms, besides making arrangements for movement of vehicular traffic with neighbouring countries.
7. The Ministry implements the National Highways development programmes through the following agencies:

(i) The State Government (State PWDs/ RCDs, etc.);


(iii) National Highway and Infrastructure Development Corporation Limited (NHIDCL) – 2014;

(iv) Border Roads Organisation (BRO) – Set up in 1960.

8. The development and maintenance works are being implemented on the agency basis. The State Governments (State PWDs/ RCDs, etc.), Border Roads Organisation (BRO), National Highways Authority of India (NHAI) and National Highway and Infrastructure Development Corporation Limited (NHIDCL) are implementing the development and maintenance works on NHs. At present, projects of widening to 4-lane NH configurations or more and Expressways under Bharatmala Pariyojna(Phase-I) and other Schemes have been assigned to the NHAI. The projects of development to 2-lane NH configurations, with or without paved shoulders are primarily being assigned to the State Governments, viz. State PWDs, State Road Construction Departments/Corporations, etc. The Projects under Special Accelerated Road Development Programme for North-Eastern Region (SARDP-NE), including Arunachal Pradesh Package of Roads, are now being primarily assigned to NHIDCL. Further, NHIDCL is also being assigned projects under other Schemes in hill States including States in the North East Region, the three hill states in North-West Region and the Andaman & Nicobar Islands.

9. Some of the Major Programmes/ Schemes being implemented by the Ministry include the following:

(i) National Highway Development Programme (through 7 phases) 1998 to 2017–about 55,000 km;

(ii) Bharatmala Phase-I –about 35,000 km

(iii) SARDP-NE and Arunachal Package – about 10,000 km

(iv) Left Wing Extremism affected areas – about 5500 km

(v) Char-Dham Project – 890 km
IMPLEMENTATION OF ROAD PROJECTS

10. The Ministry, in its background note, informed the Committee about the different modes of implementation of road projects:

**Public Private Partnership (PPP):**

There are three variants of PPP projects, namely, BOT (Toll), BOT (Annuity) and Hybrid Annuity, explained as under:

(i) **BOT (Toll) Projects:** Responsibility for design and development of the Project is vested with the Concessionaire for the Project under this mode. The Concessionaire is also responsible for Operation and Maintenance (O&M) of the Project Section for the entire Concession Period after it is developed and put to Commercial Operation. The Concessionaire has tolling rights during Concession Period after declaration of Commercial Operation of the developed section.

(ii) **BOT (Annuity) Projects:** As in case of BOT (Toll) Projects, responsibility for design, development and O&M of the Project Section for the entire Concession Period is vested with the Concessionaire for the Project. Concessionaire is given Annuity Payments during the O&M period as per provisions of the Concession Agreement. Tolling rights during O&M period vest with the employer after declaration of Commercial Operation of the developed section.

(iii) **Hybrid Annuity Model (HAM):** Under this newly introduced model, 40% of the Project Cost is paid by the Government/Executing Agency as Construction Support/Grant to the private developer and the balance 60% is to be arranged by the successful bidder through a mix of Equity and Grant during the construction period. The Concessionaire is paid back the amount of 60% along with interest, O&M and RoE in the form of 1/2 yearly Annuities over a period of 15 years. While the Concessionaire is responsible for the O&M during this period of 15 years, the traffic risk is taken by the Project Executing Agency/Employer. Tolling rights during the O&M period are vested with the employer after declaration of Commercial Operation of the developed section.

**Public funded Projects:**
(i) Projects as per Engineering-Procurement-Construction (EPC) Contracts: Responsibility for design and development of the Project is vested with the Contractors for the Projects. The Contractor is responsible for maintenance and rectification of defects arising in the Project section during the concurrent maintenance-cum-defects liability period, which is 4 years as per extant policies. The Contracts specify broad project scopes and requirements and does not provide for individual item-wise quantities/rates. There is separate provision for payments for maintenance of the Project section to the Contractors.

(ii) Projects as per Item Rate Contracts: Design responsibility is that of the employer, the Contractor executes the Project as per quantities and rates of individual items specified as per the provisions of the Contract Agreements including variations in such items/changes in scopes etc. allowed subsequently. Contractor is responsible for rectification of defects during the defects liability period, which may vary from one year to three years depending upon the specifications allowed in the Projects.

11. The Committee recommends that the Ministry may review the Model Concessionaire Agreements (MCAs) for the different modes of implementation of road projects from time to time, with inputs from both the concessionaires as well as the lenders, since both play a crucial role in the implementation of projects, especially the ones executed under the PPP model.

12. The Committee notes that the concessionaire is responsible for the Operation and Maintenance (O&M) of the road projects for the entire Concession Period (BOT (Toll) and BOT (Annuity) projects) or 15 years (HAM projects) in PPP projects, but in case of Public funded projects, the contractor is responsible for rectification of defects/maintenance only during the defects/maintenance-cum-defects liability period which varies between one to four years. Since a large number of road projects are Public funded projects, especially the ones that are deemed not to be financially viable for private sector participation, the onus of their maintenance falls on the Ministry/NHAI/State PWDs. In this regard, the Committee feels that the amount of funds allocated for the maintenance of National Highways every year is minuscule given the vast lengths of the National Highways across the country. The Committee strongly recommends that the maintenance of the existing network of National Highways should
be given topmost priority and the same should be reflected in the budgetary allocation made for the same.

13. The Ministry further submitted the following information with regard to the basis of estimation of National Highways works:-

(i) The works are sanctioned under various schemes, such as Bharatmala Pariyojna (Phase-I), development of roads in Left Wing Extremism (LWE) affected areas, Special Accelerated Road Development Programme for North-Eastern Region (SARDP-NE) including Arunachal Pradesh Package of Roads, National Highways Interconnectivity Improvement Programme (NHIIP) under World Bank Loan Assistance, Projects under Asian Development Bank (ADB)/ Japan International Cooperation Agency (JICA) loan assistance etc., Besides, keeping in view annual fund availability, inter-se priority, the annual plans for NH works under National Highways (Original) [NH(O)] are finalized so as to take up works on other NHs not covered under any of the Schemes mentioned above.

(ii) Preparation of Project Reports:- The preparation of Project Reports for road / NH Projects including designs, drawings, estimates, etc., are taken up by appointing Consultants following competitive biddings process through e-tendering, thus ensuring complete transparency in invitation of bids, their evaluations and finalisation of the qualified bidders. The sanction of estimates, invitation of bids, their evaluation, approval of tender based estimates, delegation for approval of various reports (viz. Feasibility Reports, Reports for LA and Clearances, Detailed Project Reports (DPRs), Contract Agreements for Civil Works including Technical Schedules), etc., are governed by the Ministry’s extant policy. The Ministry has stipulated mandatory use of advanced technologies such as LiDAR (Light Detection and Ranging) or any other equivalent technology to bring more accuracy and speed in preparation of projects correctly reflecting existing ground conditions so as to obviate need for large-scale changes in project scopes / time overruns during project implementation.
(iii) **Cost Estimates:** - The Cost Estimates including detailed Bill of Quantities (BOQ) are prepared for the projects as a part of DPR on the basis of the Ministry’s Standard Data Book and current Schedule of Rates (SOR), duly allowing provisions for various centages as per the extant policies.

14. The Ministry, in its background note, presented the following information with regard to the life cycle (various stages) involved in execution of a National Highways Project:-

(i) **Land Acquisition:**

(a) The Ministry takes up development of NHs, both green-field and brown-field projects. Currently, the practice being followed is as under:

   ✔ Pursuant to establishment of the feasibility of a project, the process of Land Acquisition and other pre-construction activities are commenced, followed by decision on mode of execution (BOT/ HAM/ EPC), invitation of bids and award of contracts. ‘Appointed Date’ is declared after joint inspection only after ensuring that majority of land stretch (90% or above) is available in contiguity, estimates for Utility Shifting are prepared, and Stage-1 Forest clearance is obtained.

(ii) **Preparation of Detailed Project Report (DPR):**

The preparation of Project Reports for NH Projects including alignment, RoW, designs, drawings, estimates, etc., are taken up by appointing Consultants following competitive bidding process through e-tendering, thus ensuring complete transparency in invitation of bids, their evaluations and finalisation of the qualified bidders. The sanction of estimates, invitation of bids, their evaluation, approval of tender-based estimates, delegation for approval of various reports (viz. Feasibility Reports, Reports for LA and Clearances, Detailed Project Reports (DPRs), Contract Agreements for Civil Works including Technical Schedules), etc., are governed by the Ministry’s extant policy of 22.08.2016. The Ministry has stipulated mandatory use of advanced technologies such as LiDAR (Light Detection and Ranging) or any other equivalent technology to bring more accuracy and speed in preparation of projects correctly reflecting existing ground conditions so as to obviate need for large-scale changes in project scopes/ time overruns during project implementation. The timeline for DPR preparation has been stipulated as 8 months; further 2 months are allowed for completing the process of scrutiny and approval of the DPRs.
(iii) **Cost Estimates:** The Cost Estimates, including detailed Bill of Quantities (BOQ) are prepared for the projects as a part of DPR on the basis of the Ministry’s Standard Data Book and current Schedule of Rates (SOR), duly allowing provisions for various centages as per the extant policies.

(iv) **Appraisal and Approval of the Schemes / Projects:** The scope of the projects and their mode of implementation are decided based on the viability of the projects as per the outcome of the DPRs. Appraisal and approval of the Cost Estimates of the Schemes/ Projects are done as per the extant policy of the Ministry of Finance. NHAI has been delegated the authority for appraisal and approval of individual projects under Phase-I of Bharatmala Pariyojana as under:

a) All PPP BOT (Toll) projects, irrespective of the size and cost, where no grant (or VGF) is given to the concessionaire and the construction and maintenance is financed by toll revenues, will be appraised and approved by the Board of NHAI.

b) All PPP {BOT (Annuity) or BOT (HAM)} projects costing upto Rs. 2,000 crore (TPC excluding land cost) will be appraised by the SFC chaired by Secretary (RTH) and approved by the Minister (RTH).

c) All EPC projects implemented by NHAI under this program shall be approved by NHAI Board after proper appraisal, within the budgeted financial resources approved under the program. The Board has further authorised the Chairman/ Executive Committee of the NHAI to approve projects entailing civil construction cost of up to Rs. 1,000 crore.

(v) **Invitation of bids and award of works:** Development works on NHs are awarded to the qualified Contractors/ Concessionaires following competitive bidding process. The Ministry has made it mandatory to follow e-tendering process, thus ensuring complete transparency in invitation of bids, their evaluations, finalisation of the qualified bidders and award of projects.

(vi) **Maintenance & Repair (M&R) of NH Network:**

A. Various types of M&R works undertaken on NHs are Ordinary Repairs (OR), Periodic Renewals (PR), Special Repairs (SR) and Emergent/ Flood Damage Repairs (FDRs).
(a) Ordinary Repairs (OR) involve routine maintenance, such as maintenance of culverts, patch/pot-hole repairs, crack sealing, roadside drainage, repairing of shoulders, etc.

(b) Periodic Renewal (PR) involves provision of renewal coat to the wearing surface at a predetermined frequency. This is done to safeguard the road crust and at the same time giving pavement a better riding surface.

(c) Special Repairs (SR) works are urgent works of original nature, such as repairs to culverts, bridges, etc.

(d) Emergent/ Flood Damage Repair (FDR) works are immediate repairs to roads affected by heavy rains/ flood, cyclone, landslides, sand dunes, etc. to restore traffic.

(B) The M&R of NH stretches are carried out for the stretches not covered under any programme or completed stretches where there are no liabilities of contractors to maintain such stretches. Usually, the annual outlay earmarked for M&R of NHs is about 40% of the estimated requirement of funds as per the Ministry’s norms. This leads to the compulsion of thin spreading of available resources. This is one of the main reasons for inability to take up timely maintenance interventions. Efforts are made to keep the NHs in traffic worthiness within available resources as per inter-se priority and traffic density.

(C) For the NH stretches developed on EPC mode (Engineering, Procurement, Construction), the contractor is responsible for remedying the defects and concurrent maintenance of project highway during the four years defect liability period after completion of the work.

(D) For NH stretches developed on BOT mode/ HAM, the Concessionaire is responsible for the maintenance of the project highway during the concession period.

(E) For some of the developed NH stretches through public funding, maintenance contracts have been taken up for a definite time period (4 to 9 years) on Operate,
Maintenance and Transfer (OMT) basis. The maintenance of the project highway under OMT contracts is the responsibility of the Concessionaire.

15. The Committee takes note of the various stages involved in the execution of a National Highways Project. The Committee feels that the Ministry must undertake a holistic review of the DPR preparation stage of road projects. Preparation of DPR should be aided by the latest technology available for the purpose and the inputs of the stakeholders and public representatives, including the local M.P., and the demands and concerns of the local populace should be taken into account during the process of preparation of the DPR. The Committee desires that the Ministry may come up with Rules/ necessary statutory provisions to fix the accountability of the officials/organization responsible for drafting the DPR till a stipulated period of time after the completion of the project, for any negligence on their part, that results in construction of poor quality roads. Forethought may be given at this stage to ensure ample provisions for road safety; mandatory service lanes; avoidance of traffic bottlenecks; and minimization of adverse environmental and heritage impact caused by the project. The Committee further recommends that traffic projections for the long-term must be taken into account while preparing DPR for any road project and where feasible, additional land may be acquired adjacent to the alignment planned at present, so as to enable widening of the highways, when the widening of road is needed at a future date.

16. The Committee reiterates the recommendation made in para 183 of its 287th Report on Demands for Grants (2021-22) of the Ministry of Road Transport and Highways, which is reproduced below verbatim:

*The Committee is of the view that roads across the country require frequent trenching for the purpose of laying of fiber lines, gas pipelines, and other similar amenities. The patchwork done thereafter is often delayed and rarely meets the desired construction quality, thus thwarting the speed of vehicles on the road and acting as a safety hazard. The Committee recommends that the Ministry may consider the inclusion of a provision for dedicated underground utility corridors in its upcoming National Highways projects to prevent frequent trenching. The provision for construction of dedicated underground utility corridor should be included at the DPR stage itself. The extra cost incurred for building the underground utility corridors may be replenished by*
monetizing the constructed utility corridors by charging the Departments and Companies which will benefit from avoidance of frequent trenching of roads. The Committee recommends that the Ministry may create a Special Purpose Vehicle (SPV) for the purpose of monetization of the utility corridors.

17. The Ministry informed the Committee that DPR consultants are appointed on Quality cum Cost Basis System as per the model RFP documents approved by the Ministry for appointment of DPR Consultants. DPR Consultants are engaged for carrying out all project preparation activities including surveying, traffic studies, pre-construction activities including assisting the Authority in land acquisition and procuring various project clearances.

18. The Ministry further submitted that DPR consultants after extensive survey, interactions with all stakeholders arrive at the most feasible alignment factoring in the own ground realities and site requirements. Meetings are held with State Government at the time of finalisation of project alignment and comments, if any, are duly considered while preparing the DPRs. Use of LIDAR has been made mandatory to ensure that ground level situation are capture in the DPR.

19. The Committee recommends that DPRs of National Highways road projects should have provisions for right of way and service roads. The DPRs should be prepared after public consultation and inputs from Members of Parliament of the area. The Committee further recommends that provisions for public amenities such as dhabas, washroom facilities etc. should be included at the DPR stage of NH projects.

20. The Ministry, in its Press Release dated 6th July, 2020 (Annexure-A), has informed about the recent initiative taken by NHAI to undertake performance assessment and ranking of the highways in the country, wherein the assessment parameters are categorized in three main heads: Highway Efficiency (45%), Highway Safety (35%) and User Services (20%). On the basis of outcome of the assessment, the authority will undertake a comprehensive analysis and decide on the level of intervention required to enhance the overall service quality. Additionally, important parameters like operating speed, access control, time taken at toll plaza, road signages, road markings, accident rate, incident response time, crash barriers, illumination, availability of Advanced Traffic Management System (ATMS), functionality of
structures, provision for grade separated intersections, cleanliness, plantation, wayside amenities and customer satisfaction will also be considered while conducting the assessment.

21. The Committee notes that Highway Safety has been given 35% weightage in NHAI’s parameters for assessment and ranking of National Highways. Number of accidents and deaths happening on the particular National Highway must be taken into account while calculating such scores.

22. The Committee recommends that the Ministry may take steps to assign scores to all the National Highways projects, including the ones executed by State Government PWDs, after assessing their quality of construction. A central database may store the scores obtained by the different road projects of each concessionaire/contractor, which may be analyzed to ascertain the quality of work executed by all the concessionaires. The Committee recommends that the quality of previous works carried out by the concessionaires should also be a factor, besides the bid amount, during the awarding process of a road project tender. This would ensure that concessionaires that produce quality roads are not left out of having the opportunity to work on a project because of minor differences in bidding amounts.

23. In the meetings of the Committee held on 4th November, 2019; 19th January, 2021; and 24th June, 2021, one of the Members of the Committee raised the issue of awarding of road contracts to the lowest bidders, which, especially in cases when the project is sub-let by the contractor further, comprised the quality of road projects. He stated that at present, tenders are awarded to the lowest bidder and that there is no room for justifications. He further stated that many such contractors abandon the projects, causing delays.

24. The Ministry, in its written reply, informed the Committee that adequate provisions are there in the contract agreements to ensure that the main contractor, who is fully responsible to employer for the work, complies with the various terms of the agreement irrespective of employment of sub-contractor for the work. However, to strengthen the resources available with the Contractor for execution of the Project, practice of sub-contracting is resorted to. This is admissible under contract.

25. The Committee recommends that the Ministry may consider breaking down big road projects into smaller chunks so as to attract the interest of the small contractors themselves. The Committee feels that provisions should be in place to ensure that there
is a well-defined lower limit, below which bids for a road project would not be accepted. The Committee agrees with the apprehension raised by the Member of the Committee regarding a likely hit on the quality of work that can be carried out by a contractor who bids substantially lower than the approved project cost. The Committee believes that such bids are made with the sole intent of winning the bid and more often than not, it would not be possible for such bidders to do quality work with such low bids. The Committee, therefore, recommends that the Ministry may lay even greater focus on arriving at accurate estimates for the project cost for a given road project and specify an upper and lower limits within which bids can be placed.

26. The Committee further recommends the Ministry to carefully analyze the shortcomings of the existing mechanism for awarding road projects to the lowest bidder, since doing so includes little thought for ensuring quality of the work. The Committee believes that there should be consideration for other importance factors besides the bidding amount, while awarding a project to a concessionaire. A qualitative approach must be formulated for awarding road projects. The Committee recommends that the Ministry may take up with the Central Vigilance Commission (CVC), the shortcomings of the existing system of awarding a project to the lowest bidder, presenting its arguments for modification of the CVC guidelines for awarding of tender in a suitable way to permit an element of qualitative approach in the tender awarding process for road projects. The Committee feels that a criterion may be developed where certain weightage is given to objective parameters such as the awards presently being executed by the contractor, their financial record, and most importantly, the past performance of a contractor, in terms of quality of work and timely execution. The database recommended by the Committee in para 22 of this Report may be useful for such purposes.

27. As per Ministry's policy circular dated 21.08.2018 and as per provisions in Model EPC agreement circulated on 05.03.2019:

- Renewal of wearing course is required due to oxidation of bitumen in the layer after a time gap of 5-6 years.
- Where renewal is required, it has to be done by hot-in-place recycling of entire layer of bituminous concrete wearing course. If this is not feasible, fresh layer of bituminous concrete with 40 mm thick has to be laid.
- Where stretches require improvement of riding quality, it has to be done by laying layer of DBM/BM and BC.

- In cases, where development work for 2/4/6 laning is awarded, Contractor has to maintain at its own cost the existing lanes, no time materially inferior as compared to condition on appointed date.

- Quality checks are to be carried out for each layer of pavement at various stages and as per frequency specified in MoRTH specifications.

- The Contractor is primarily responsible for quality of works, prepares quality assurance plan and set up field laboratory with the approval of Authority's/Independent Engineer.

- The Contractor deploys adequate Plant & Equipment and experienced personnel for testing of material in laboratory.

- The Authority's/Independent Engineer have to witness certain percentage of quality tests as specified in the Contract Agreement.( 10% in Hybrid Annuity Mode contract and 50% as per new EPC Contract document).

- There is also a provision for appointment of external technical auditor by the Authority to conduct an audit of the quality of works.

- Authority Representatives (PIU/ PWD Division/ Regional Offices) may inspect quality of construction during execution and witness certain tests on completion of the work.

The completion certificate is to be issued after satisfying the tests on performance parameters by the Authority's/Independent Engineer with the prior approval of Authority.

28. The Committee recommends that thorough quality checks may be performed before the issuance of completion certificate for any NH project, with special focus on rigorous testing of quality of the construction material used. The frequency of quality checks performed during the construction stage of a project may be increased suitably and independent third party audits may be conducted more often in order to deter the connivance of the Authority’s Engineer with the road contractors. The Committee further desires that extensive quality checks may be performed when the defect liability period of a project is nearing its end, so as to ensure that the issues arising near the end of the defect liability period are addressed by the contractor before their liability for the same is over.
29. The Committee further recommends that the Ministry should look into the authenticity of the quality checks cleared by road projects, which later performed poorly and/or deteriorated at a quick pace, since the same alludes to either the insufficiency of the quality checks in place, or the connivance of the officials/engineers in charge of conducting the quality checks. A suitable mechanism may be put in place to ensure that the IRC guidelines are followed in the execution of road works without fail.

NATIONAL HIGHWAYS AUTHORITY OF INDIA

30. National Highways Authority of India is a statutory body created through an Act of Parliament, namely the NHAI Act 1988 and operationalised in 1995. The rationale for setting up NHAI was primarily to ensure more effective development, maintenance and management of the network of National Highways, while ensuring consistency in the quality of work and level of services. The functioning of NHAI is governed by NHAI Act 1988 and the rules, regulations framed thereunder. NHAI has been envisaged as a body corporate in perpetuity under the Act, subject to Government of India’s (GoI) decisions with regard to entrustment of National Highways to NHAI, funding support, etc., within the parameters set by the Act in particular, and the overall legal framework in general.

31. The following functions are entrusted to NHAI under the National Highways Authority of India Act, 1988:

a) Subject to the rules made by the Central Government in this behalf, it shall be the function of the Authority to develop, maintain and manage the national highways and any other highways vested in, or entrusted to, it by the Government;
b) Survey, develop, maintain and manage highways vested in, or entrusted to it;
c) Construct offices or workshops and establish and maintain hotels, motels, restaurants and rest-rooms at or near the highways vested in, or entrusted to it;
d) Construct residential buildings and townships for its Employees;
e) Regulate and control the plying of vehicles on the highways vested in or entrusted to it for the proper management thereof;
f) Develop and provide consultancy and construction services in India and abroad and carry on research activities in relation to the development, maintenance and management of highways or any facilities thereat;
g) Provide such facilities and amenities for the users of the highways vested in, or
entrusted to it as are, in the opinion the Authority, necessary for the smooth flow of traffic on such highways;

h) Form one or more companies under the Companies Act, 1956 to further the efficient discharge of the functions imposed on it by this Act;

i) Engage or entrust any of its functions to, any corporation or body corporate owned or controlled by the Government;

j) Advise the Central Government on matters relating to highways;

k) Assist, on such terms and conditions as may be mutually agreed upon, any State Government in the formulation and implementation of schemes for highway development;

l) Collect fees on behalf of the Central Government for services or benefits rendered under section 7 of the National Highways Act, 1956, as amended from time to time, and such other fees on behalf of the State Governments on such terms and conditions as may be specified by such State Governments; and

m) Take all such steps as may be necessary or convenient for, or may be incidental to, the exercise of any power or the discharge of any function conferred or imposed on it by this Act.

32. The Committee notes that carrying out research activities in relation to the development, maintenance and management of highways is one of the functions entrusted to NHAI under the NHAI Act, 1988. Research activities are crucial for NHAI to figure out the best methodologies for construction and maintenance of National Highways across the significantly diverse geography present in India. The Committee desires to be apprised of the amount of funds spent by NHAI on carrying out this mandate and recommends that it may lay a much greater focus on its research activities and ensure good budgetary allocation under this head.

Vacancies and Staffing in NHAI

33. During its examination of the Demands for Grants (2021-22) of the Ministry, the Committee has been given to understand that 754 no. of posts in the Technical and Non-technical cadre of NHAI are lying vacant as on 31.12.2020. During 2020-21, advertisements for filling-up of 278 posts (Technical-245 & Non-technical-33) have been issued. Besides
these, fresh advertisement for filling up 172 posts are also issued. In the recruitment processes undertaken during 2020-21, 175 candidates have been selected.

34. The Committee reiterates the recommendation that it made in para 67 of its 287th Report on Demands for Grants (2021-22) of Ministry of Road Transport and Highways, which is reproduced below verbatim:

The Committee is distressed to note that a large number of vacancies are existing in NHAI, which is implementing a large number of National Highways projects in the country. With this shortfall in manpower, the Committee wonders how the NHAI can work effectively and efficiently. The Committee, therefore, recommends that the Ministry should take urgent action to fill up the vacant positions in NHAI at the earliest. The details of NHAI staff posted on deputation basis and how many of them are working on permanent basis may also be shared with the Committee.

35. The Committee further recommends that the Ministry may look into the reasons for the existence of such a large number of NHAI vacancies. The Committee desires to be apprised of the same, alongwith reasons for why the same cannot be filled up on time, since in most cases, the retirement timelines of employees are known well in advance. The Committee fails to understand how NHAI can ensure that its road projects are not delayed and are executed with the best possible quality, when almost one third of its staff requirements is not filled up. The budget granted to NHAI has significantly grown over the last few years. Similarly, the quantity of road projects being taken by NHAI has also witnessed a consistent increase. Only a fully-staffed organization can ensure that the huge amount of funds available with NHAI are optimized optimally in order to push the NH infrastructure in India to greater heights. NHAI may also carry out an extensive study into its present staff requirements, keeping in mind the increased workload being taken by NHAI each year. The Committee recommends that an effective, time-bound plan may be devised to fill these vacancies at the earliest.

35A. The Committee recognizes the fact that even though the Highways sector is one of the highest funded sectors in the country, with the amount of funds earmarked for the same increasing every year, crucial senior level posts in NHAI in the Finance cadre from Deputy Manager up to CGM level are lying vacant. It is a
matter of grave concern that majority of posts up to DGM level are vacant since many years, even though several attempts have been made to fill them on deputation. The Committee could understand that such a situation arose due to non-availability of eligible candidates because of different accounting pattern in NHAI & Government (Double entry & single entry accounting), pay scale disparity between NHAI & PSUs at mid level (CDA and IDA) and court cases by internal candidates for promotion.

35B. The Committee takes note that the existing Recruitment Rules equate graduates/ B.com with candidates having professional qualifications such as CA/ICWA/MBA (Finance) and that in the past, recruitment at lower level were done under the existing Rules, resulting in the promotion of persons, who are merely graduates, holding such senior posts. The Committee feels that it is paramount that in a vital organization such as NHAI, only persons who possess required educational qualifications occupy higher posts in specialised cadre like Finance.

35C. Taking into account the above mentioned issues, the Committee suggests that apart from promotion and deputation, NHAI may amend the existing Recruitment Rules for the Finance cadre, by including reasonable percentage of posts on direct recruitment basis for candidates having qualification of CA/ICWA/MBA (Finance) etc. and that at least 30% of posts of senior level, such as Deputy Manager, Manager, DGM etc. may be taken through direct recruitment, which will foster merit and selection of qualified candidates.

35D. The Committee feels that such a modification in the recruitment process will enable NHAI to not only fill up the long pending vacancies, but also improve its operational efficiency. The Committee hopes that a mix mode of recruitment viz., direct recruitment, promotion and deputation for crucial and specialised cadre such as Finance, will provide NHAI with candidates having knowledge and expertise of new taxation laws such as GST, resource mobilisation and InvIT.

Monetization of National Highways through innovative financing models

36. The Ministry, in its background note, informed the Committee that TOT Model has been approved by the CCEA. As per the Model, the right of collection of Toll Fees for operational public funded NH projects is to be assigned for a pre-determined period to
concessionaires (developers/investors) against upfront payment of a lump-sum amount. O&M obligations of such projects shall be with the concessionaire till the completion of the period. First bundle, of 9 project stretches with aggregate length of 680 km, of TOT is already awarded and Concession fee of Rs. 9,681.5 crore has been received in 2018-19. Further, initiatives has been taken to raise about Rs. 5,262 crore from award of TOT Bundle-2 in 2019-20.

37. With regard to Infrastructure Investment Trusts (InvITs), the Ministry, in its Annual Report (2020-21), informed the Committee that in order to enhance NHAI's resource mobilization, the Cabinet has accorded the approval (vide communication 39/CM/2019(i) dated 13.12.2019) authorizing NHAI to set up Infrastructure Investment Trust(s), as per InvIT Guidelines issued by SEBI, to monetize completed National Highways that have a toll collection track record of at least one year. NHAI reserves the right to levy toll on the identified highway and incorporate SPV(s), which are essential and integral part of the entire InvIT structure. Present status of the NHAI InvIT is as under:

   a) SBI Caps has been appointed as transaction advisor.
   b) Trustee has been appointed – IDBI Trustee Services Limited
   c) Company Secretary has been appointed to form SPVs and Trust
   d) Registration application for NHAI InvIT submitted to the SEBI
   e) SPVs have been incorporated
   f) NHAI Board has approved investment in the two newly incorporated SPVs
   g) The Investment Manager of NHAI InvIT has been appointed and accorded the name of “National Highways Infra Investment Managers Private Limited” (NHIIMPL). NHIIMPL has also been incorporated under the Companies Act, 2013. Management Structure of Board of Investment Manager and the appointees thereon have been approved.

38. The Committee takes note of the various innovative financing models being employed by the Ministry/NHAI to monetize its existing assets, to fund the development and maintenance of the NH network across the country. The Committee is of the considered view that the ongoing coronavirus pandemic has impacted the traffic volumes across the country since March, 2020 and might continue to do so in the near future. This is likely to affect the asset monetization plans made by NHAI for the short-term future, since it would lower the interest of private players in BOT projects as well as in TOT mode. The Committee recommends that NHAI should factor in the effect of
the pandemic on its financial plans for the near future. NHAI may take appropriate steps to allay the traffic volume related concerns of the stakeholders by holding constructive dialogue with them, take steps to share the risk caused by the uncertainty of traffic volume, due to such unforeseeable events, among the different parties involved and, if need be, make suitable modifications to this effect, in its Model Concession Agreement (MCAs) and Request for Proposal (RFPs) for the short term.

39. State Bank of India, in its written reply to the Committee, stated that it has put in-place lending policy for financing of InvIT and participated in funding of IRB InvIT and funding of other InvITs is also under evaluation. SBI suggested that the Government policies should be reviewed periodically so that challenges faced by investors are addressed in timely manner.

40. IFCI Limited, in its written reply, opined that minimum investment amount in an InvIT Initial Public Offering (IPO) be reduced from the current floor of Rs.10 lakh to improve wider participation.

41. The Committee recommends that NHAI may consider lowering the minimum investment amount in InvIT IPO to a suitable amount so as to attract participation from a larger number of participants.

42. With regards to InvITs, India Infrastructure Finance Company Limited (IIFCL) suggested that IFCs including IIFCL should also be permitted for lending to InvITs and opined that this shall enhance its role and participation for infrastructure projects by way of easing availability of debt requirement of InvITs.

43. The Committee feels that Infrastructure Finance Companies such as IIFCL play an important role in meeting the huge financial requirements of the road infrastructure sector in India. The Committee therefore desires to know the reasons for not permitting IFCs to lend to InvITs and desires that NHAI may grant such permission to IFCs with suitable limits, if need be, so as to ensure InvITs attract the amount of targeted funds.

Rising debt of NHAI

44. During the examination of the Demands for Grants (2021-22) of the Ministry by the Committee, the Ministry stated that NHAI shall be exploring the possibility of restructuring its existing debt and also planning to procure the bank loan with repayment on ballooning
basis so that the existing debt servicing liability is not stressed further. The Ministry furnished the following details regarding the debt servicing liability of NHAI for the next 3 financial years, based on the debt raised and outstanding as on 31st January, 2021:-

<table>
<thead>
<tr>
<th>FY</th>
<th>Amount (₹ in Cr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021-22</td>
<td>38,997</td>
</tr>
<tr>
<td>2022-23</td>
<td>28,800</td>
</tr>
<tr>
<td>2023-24</td>
<td>29,318</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>97,115</strong></td>
</tr>
</tbody>
</table>

45. The Committee is concerned to note the huge debt servicing liability of NHAI in the coming years. For the ongoing Financial Year 2021-22, NHAI’s debt servicing liability is equivalent to 33% of the overall budgetary allocation of Rs. 1,18,101 crores of the Ministry at the Budgetary Estimates stage of the FY 2021-22. The Committee reiterates the recommendation made in para 72 of its 287th Report on Demands for Grants (2021-22) of the Ministry and recommends that the Ministry/NHAI may undertake earnest measures to ensure that its stuck projects are completed at the earliest and delay is minimized in the ongoing projects, since delays are one of the core reasons behind cost overruns.

46. The Committee enquired from the Ministry about the interest rate of the debts that are to be repaid by NHAI. The Ministry, in its written reply, informed the Committee that NHAI has raised funds from various sources & the Rate of interest is payable as under:

i) Funds raised through 54EC Bonds - 5.25 % - 5.75 % p.a.

ii) Funds raised through other sources/instruments – ranging from 7.02 % - 8.75 % p.a.

47. The Committee enquired from various financial institutions and banks regarding innovative financing models that may be adopted to help address the issue of huge debts being faced by NHAI.

48. SBI, in its written reply, suggested that NHAI set-up an investment vehicle to directly raise funds from following sources:

a) **Foreign Pension Funds**: The foreign pension funds such as Australian Pension / Superannuation funds, Ontario Teachers' Pension Fund etc. have significant quantum of funds for investments. With limited investment options available domestically, these funds are likely to be invested in offshore ventures.
b) **Sovereign Wealth Funds:** They have liabilities of uncertain duration since it is not generally known when they will have to make payments to support the nations that own them. They are particularly active in investing in infrastructure equity.

NHAI, which is viewed as a quasi-sovereign entity may explore ways to directly tap such funds by providing suitable comforts from Govt. of India / regulatory environment.

c) **Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN):** It is Government-Private founded equity provider in Japan focusing on overseas infrastructure investment. It provides funding and Japanese expertise & high-end technology. They invest in greenfield and brownfield projects in transportation & urban infra space. NHAI may identify few road projects under Bharatmala Program for implementation in collaboration with JOIN by setting-up a suitable investment vehicle.

d) **Multilateral Agencies:** NHAI to meet part of its fund requirements from multilateral agencies to finance projects with lower Project IRR (usually project of social / national importance) so that weighted average cost of funds can be minimized.

e) **Securitization / Monetization of Operational Highways:** NHAI to securitise its operational projects directly with domestic Pension Funds, since PF would expect nominal return of around 8-9% (as against higher return expectation 15-18% on pretax basis under Toll-Operate-Transfer model.

49. **IDBI Bank** suggested the following to help address the issue of huge debts faced by NHAI:

   a) NHAI may consider raising fund through Infrastructure bonds/ Tax Saving bonds, Overseas fund raising through Masala Bonds, monetization of assets for a specific concession period.

   b) NHAI may come out with an IPO.

   c) NHAI can issue LCs instead of giving direct funding support to the Projects. The LCs can be discounted by the Project companies / Assignees which also can be rolled over from time to time till maturity. This would help in reducing cost for NHAI.

50. **IFCI Limited**, in its written reply, suggested that NHAI may consider floating its own Infrastructure Investment Trust (InvIT) which may help create an opportunity for asset
monetisation and collecting long term capital. It further opined that a dedicated financing agency for the sector can also be considered on the lines of similar agencies set up for the power sector like the Power Finance Corporation and the Rural Electrification Corporation. It suggested that bond markets should be developed for long-term infra project financing supported by credit enhancement mechanisms. Further, it submitted that life insurance companies and pension funds are well-positioned to address the longer-term capital requirements of this sector. For insurance companies, there is a limit they can invest in the infrastructure sector, such limits can be increased.

51. India Infrastructure Finance Company Limited (IIFCL) suggested that in order to address the issue of huge debts of NHAI, an SPV type of model could be adopted by floating separate SPVs for implementation of large size projects (say projects involving cost in excess of Rs 5000 crore) like the SPV floated for implementing Delhi Mumbai Expressway. IIFCL stated that this requires raising debt in a separate SPV for implementation of the project. NHAI being a sovereign entity, can raise debt at a much cheaper rate, thereby reducing interest burden for the project at the development stage itself. NHAI may also call for equity participation from large funds like insurance and pension funds, if required. Subsequently, once the project becomes operational, NHAI can divest its equity thereby not only reducing debt from its balance sheet, but also gaining premium on divested equity. NHAI can monetize projects which are operational and are generating revenue stream including HAM projects. This will free up its capital and same can be used for retiring debt of higher cost.

52. IIFCL further furnished the following information on its role in increasing fund flow to Road Projects:

<table>
<thead>
<tr>
<th>Permission to IIFCL for Lending by way of Subscribing to the Corporate Bonds</th>
<th>Project bonds are instruments issued by Infrastructure Project SPVs. The main objectives of the bonds would be to ensure and enable the implementation of the infrastructure project. The exposures for both Infra Project loans and Project bonds are similar in nature and would be duly appraised for the attendant risks. Presently, there is a thrust for companies to raise debt from capital market and many project developers are looking to replace their bank loans with bonds in order to reduce their bank exposures. In India, project bonds are issued by Infra SPVs in respect of completed projects. Therefore, such an exposure to project bonds would be without construction risk where project revenues would be easier to predict. Since IIFCL is already providing financial assistance to infrastructure projects by way of term loans, it will only be appropriate to extend this by covering project bonds as well.</th>
</tr>
</thead>
</table>
This will free up banks’ capital and exposure to the developers and will also enable development of the Capital Bond market for Infrastructure Sector.

<table>
<thead>
<tr>
<th>Permission for IIFCL to Invest in InvIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBI vide its circular dt October 14, 2019 has permitted Scheduled Commercial Banks &amp; All India Financial Institution lending to InvITs subject to certain guidelines. However, IIFCL is not mentioned in the aforesaid referred circular. IIFCL is a AAA rated wholly Govt. of India owned company and is registered as a NBFC-ND-IFC with RBI. It is also a systemically important NBFC as defined by the extant RBI Master Directions (viz. RBI/DNBR/2016-17/45, Master Direction DNBR. PD. 008/03.10.119/2016-17 dated 01st September 2016). Currently, various InvITs are being floated by the Infrastructure Companies consisting of infrastructure SPVs/projects. Most of the InvITs are raising funds from the primary market by way of listing on the stock exchanges and/or from the Commercial lenders by way of raising funds at the InvIT level and refinancing existing debt of underlying SPVs. It has been observed that most of the InvITs involves raising sizable funds which is time consuming. IIFCL being an infrastructure financing institution, it will be appropriate for IIFCL to take exposure to InvITs, given its mandate to promote credit flow to the Infrastructure Sector.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allowing IIFCL to directly extend assistance to NHAI &amp; State Authorities outside the purview of SIFTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure projects are of very long term in nature and with the ability &amp; mandate to raise long term funds, IIFCL can directly lend funds to State Govt. &amp; other entities like NHAI, NHIDCL and these Authorities can further utilize these funds for development of road projects on EPC as well as PPP model.</td>
</tr>
</tbody>
</table>

53. PNB opined that re-introduction of schemes like Flexible Restructuring Scheme (5/25), Take out Financing, Issuance of policy guidelines on lending through Hybrid Instruments may help.

54. Canara Bank suggested that an exclusive infrastructure fund can be set up by Government which in turn shall fund commercially viable projects including the stalled projects. Foreign Institutional Investors and other PE fund houses should be allowed the participate and invest in the fund. It further opined that monetization of assets where the positive cash flows has commenced shall be fastened.

55. Central Bank suggested the following innovative financing models that may be adopted to help address the issue of huge debts being faced by NHAI.
a) Through NCDs
b) Govt. Guarantees.
c) Credit Guarantee Enhancement Scheme.
d) Specialized Rates for Road and Hospitality Sector on Expected Loss (EL) and Probability of Default (POD) basis
e) Securitization of Assets of both Sectors.

56. Indian Bank suggested that NHAI may go for issuing papers which are quasi-equity in nature. A separate fund in line with SWAMIH fund established for stalled housing project may also be setup for stalled road projects, which are otherwise viable. It stated that NHAI has already examined plans to leverage its resources to set up an alternative investment fund (AIF), as it aims to ease funding for highway building. Indian Bank further stated that NHAI has some liquid funds of around ₹ 10,000 crore and that NHAI can instead raise more funds against this capital and use it to lend to stalled or greenfield projects. Part of the returns can be used to service the loans and part of it can be reinvested. Indian Bank informed the Committee that NHAI had also given India Infrastructure Finance Co. Ltd (IIFCL) the mandate to prepare a detailed project report to explore the various structures available and that NHAI has plans to convert each road project into a separate SPV and funds will be arranged by that company.

57. Indian Bank further informed the Committee that India Ratings have suggested for enhancing PPP by exploring other variants of BOT models such as MRG (minimum revenue guarantee) structures, sub-ordinated debts, shadow toll payment etc. Furthermore, the stakeholders may also explore the possibility of setting up a dedicated secondary market for road financing and ensure the availability of multiple debt structures (Deferred Principal Payment, Bullet Debt insurances) alongwith securitization structures to achieve low cost financing and diversified investor community.

58. The Committee takes note of the various innovative measures that have been suggested by the different financial organizations and banks in order to tackle the issue of huge debt servicing costs of NHAI. The Committee feels that NHAI should tap into the funds available with insurance companies and pension funds, both Indian and foreign. Securitization of NHAI’s existing assets may be suitable to attract the interest of pension funds since the return targeted by pension funds is on the lower side. The Committee recommends that the Ministry may look into any changes in the existing
provisions that may be needed to allow insurance companies and pension funds to participate in funding road infrastructure sector in the country. Multilateral agencies, Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN), foreign pension funds and sovereign wealth funds may also be approached by NHAI, with suitable assurances/comforts from Government of India.

59. The Committee notes that land acquisition costs form a significant portion of the total road project costs and hopes that NHAI, in coordination with State Governments, take suitable steps to capture the value generated by the implementation of road projects so as to finance the rising land acquisition costs in road sector.

60. The Committee reiterates its recommendation made at para 43 of this Report and desires that suitable steps may be taken to permit IIFCL to play a bigger role in long-term lending to the road infrastructure sector, by way of subscribing to corporate bonds, investing in InvITs, and by allowing IIFCL to lend directly to NHAI and State Departments concerned to finance long-term road projects.

61. The Committee notes that India’s foreign exchange reserves, as per RBI (Annexure-B), have risen substantially in the recent past. The Committee recommends that RBI, with due consideration to the sufficiency of the foreign reserves, may consider the possibility of utilization of surplus funds to finance long-term road infrastructure projects in the country. RBI may also look into the feasibility of utilization of the surplus reserves for the creation of a sovereign wealth fund to finance long-term infrastructural assets.

Keeping a check on possible connivance between contractors and Approving Authorities

62. The Committee enquired from the Ministry regarding the steps being taken by NHAI to break the nexus that sometimes exist between the contractors and engineering wing that monitors the projects. The Ministry, in its written reply, informed the Committee that the Vigilance Division of NHAI conducts CTE type inspections, periodic inspections, joint check with CBI and surprise inspections as preventive measures to monitor irregularities in NHAI projects.

63. The Committee recommends that the Ministry may review the current mechanism in place to deter the connivance of the Authority’s Engineers with contractors/concessionaires. Cases where roads deteriorate shortly after their
completion should be looked into and the basis on which completion certificate for the project had been issued, should be scrutinized. Accountability may be fixed in cases wherein guidelines have been blatantly ignored during execution of road projects.

64. The Committee believes that the level of security and integrity of information provided by decentralized networks such as blockchain can be helpful in affixing accountability in case of sub-standard projects. The Committee, therefore, recommends that NHAI may employ the use of blockchain technology to store data about implementation of road projects – including data about the tests performed to ascertain the quality of material used in the construction, the guidelines followed in the execution of the project, the observations made by the Authority’s Engineers at the time of grant of completion certificate for any given project, etc. Doing so will make such information immutable and remove any possibilities of fudging of records by any corrupt individuals.

65. The Committee recommends that it should be made compulsory to submit video recordings of the specifications of the completed works, wherever possible, confirming that all works have been carried out by the concessionaire/contractors, before the grant of completion certificate of the road project to any concessionaire/contractor. This would ensure that ancillary specifications such as road signs, markings, shoulders etc. are duly completed as per the provisions of the contract.

FACTORS IMPEDING THE PACE OF NH PROJECTS

66. During its examination of Demands for Grants (2021-22) of the Ministry, the Committee was informed about the road projects under the Ministry which have been delayed for a period of more than 5 years (Annexure-C). The State-wise information furnished by the Ministry regarding delayed projects and their quantum is given at Annexure-D.

67. The Ministry, in its written reply, informed the Committee that some National Highway projects are delayed/stuck up due to multiple reasons, such as poor performance of contractor, utility shifting, land acquisition, cash flow problem of the concessionaire/contractor and law & order problems etc. The Ministry further stated that the following steps have been taken by NHAI/Government to expedite the process:

- Streamlining of land acquisition
- Disputes Resolution mechanism revamped
• Award of projects after adequate preparation in terms of land acquisition, clearances etc. Process of obtaining clearances from different Ministries/Department would commence as soon as the alignment is finalized and final feasibility report is submitted.
• Correctly worked out utility estimates is to be obtained at the earliest after the alignment finalization and shall form part of appraisal proposal.
• The process of project appraisal should commence at the earliest on receipt of the Final Detailed Project Report (DPR) and Technical schedules.
• ROBs: The procedure for GAD approved by Railways for ROBs simplified and made online. Maintenance charges which were hampering the progress of many projects stand waivered by railways. Standard design put on website.
• Close coordination with other Ministries and State Governments
• One time fund infusion
• Completion of major portion of land acquisition prior to initiation of bid.
• Regular review at various levels.
• Proposed exit for Equity Investors
• Securitization of road sector loans
• Rationalize compensation for delays attributed to authority
• Notification of Guiding Principles for Resolution of Stuck Projects aiming at foreclosure of projects which are stuck on account of the concessionaire/contractor in NCLT or mutual default of both Authority and Contractor/Concessionaire.

68. The Committee feels that the information furnished by the Ministry regarding road projects delayed for more than 5 years, makes it evident that delays in road projects is one of the most substantial issues being faced by the road sector in India at present. Though the Committee commends the efforts made by the Ministry in increasing the pace of construction of highways in the last several years, the large number of projects that are delayed for a significant period of more than 5 years, is a cause of concern. Such delays are accompanied by significant cost overruns and in case of brownfield projects, cause a lot of discomfort and added traffic times to the existing traffic. The Committee recommends that the Ministry may establish a dedicated mechanism to keep projects on track as far as possible, notice delays at the earliest and take necessary action to proactively tackle factors causing delays in any given project.
68A. Some Members of the Committee informed about the delays in execution of road projects at various highways such as NH-77 near Sonpur, four laning work at NH from Sambalpur to Cuttack, Goa to Karnataka NH, Belgaum to Goa NH, North Goa to Mumbai NH, NH183A near Sabarimala Shrine, NH-29, NH from Nagpur to Bhandara, NH-353C, NH-19, NH-709B from Shamli to Dehradun, Mahi-Thalasery bypass, Kuthiran Tunnel and NH-2 from Banaras to Aurangabad via Chandoli and Sasaram.

68B. The Committee strongly recommends that the Ministry may assess the reasons behind all such delayed road projects across the country and time-bound remedial measures may be initiated at the earliest so as to avoid further delays in the completion of already delayed projects.

Land Acquisition Issues

69. The Ministry, in its background note, informed the Committee that for streamlining land acquisition (LA) under NH Act, 1956 and applicability of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement (RFCTLARR) Act 2013 for LA of NH projects, the Ministry issued comprehensive guidelines on 28.12.2017 in supersession of all previous guidelines/circulars on the issue after obtaining legal advice from learned Attorney General of India. These guidelines have been circulated to all State/UT Governments and all concerned executive agencies of the Ministry. These guidelines cover all possible aspects related to applicability of the RFCTLARR Act, 2013 to the NH Act, 1956, such as determination of market value of land, payment of additional amount, issue regarding multiplication factor, bulk acquisition/purchase of land through consent of land owners, determination of compensation amount by competent authority, disbursement of compensation amount and possession of land, etc. Further, the Ministry has issued Manual of guidelines for land acquisition for NHs under the NH Act, 1956.

70. The Ministry, in its written reply, informed the Committee that the constraints being faced in Land Acquisition are mainly the following:-

(a) Encroachment & public resistance.
(b) Litigation & arbitration.
(c) Delay in declaration of 3G award.
(d) Erroneous/un-updated revenue records leading to issue of incomplete/faulty notifications.
(e) High Cost of land.
(f) Compensation award not in accordance with provisions of NH Act.
(g) Inadequate manpower with the land acquisition units at field level.
(h) Delays due to changes in alignment

71. The Committee observes that land acquisition issues are at the core of delays faced in road projects. The Committee takes note of the guidelines issued by the Ministry to streamline acquisition of land for NH projects in the country and recommends that the Ministry may ensure that these guidelines may be reviewed from time to time, incorporating suitable modifications to simplify the process of land acquisition and ironing out the various constraints faced in land acquisition.

72. The Committee recommends that the Ministry may take immediate steps to ensure that adequate manpower is present with the land acquisition units at the field level across the country. The alignment given for any given project should be finalized only after taking in inputs from all stakeholders and the local population, with due consideration to the future traffic projections, environmental concerns etc. Changing the alignment at a later stage of the project can be a costly affair and should be avoided at all costs, through application of foresight.

73. The Ministry, in its presentation made in the meeting on the subject held on 4th November, 2019, informed the Committee of a Value Capture Mechanism wherein a MoU would be signed between NHAI and the State Government, wherein development of NH rest with NHAI and LA cost with the State. It was further informed that under this mechanism, the State Government will deposit at least 50% of estimated LA cost before publication of notification under Section 3D of the National Highways Act, while NHAI shall contribute the remaining amount for LA, to be reimbursed later by the State Government. Post construction of the NH, the State shall capture the value created in the influence zone, which is defined as the areas within 500 meters on either side of the NH, through suitable mechanisms such as development charges, levy of transaction tax, increase in FAR etc.

74. The Committee desires to be apprised of the present status of the implementation of the Land Value Capture Mechanism. This mechanism may help the Ministry in managing the huge increase in road project costs on account of a significant jump in
land acquisition costs in the past several years. The Committee recommends that the Ministry may consider making the upfront contribution of State Governments flexible, fixing it on the basis of the financial ability of the State Government.

75. The Committee feels that the Ministry may modify the land value capture mechanism in a way that the value captured by the State Government is, in part, be shared with the previous owners of the land. A major reason for the hesitation of landowners to part with their land is that the land is often their only source of livelihood. A mechanism may be worked out where an upfront payment is made to the land-owner and they are guaranteed a payment in the form of annuity for the long-term, financing the same through the land value captured by the State Government. The Committee believes that such a system would lower the frequency of land acquisition matters ending up in litigation, which cause huge delays to the projects, besides causing cost overruns.

76. The Ministry, in its written reply, informed the Committee that the steps being taken to sort out land acquisition issues in coordination with the State Governments are as under:-

(a) Constitution of High Powered Committee under Chief Secretary to monitor the pre-construction activities.
(b) Strengthening of Land Acquisition Units by way of providing manpower and resources.
(c) Effective formal public consultations at the time of project preparation to address the concerns of public.
(d) Introduction of Bhoomi Rashi Portal for on-line publication of notifications under NH Act.
(e) Introduction of Centralized LA Account for efficient monitoring of disbursement of LA compensation.
(f) Monthly meetings with the District Authorities and Nodal Officers of the State Government along with the Competent Authorities.
(g) Periodic monitoring of progress through PMIS, Pragati portal etc.
(h) Adopting light detection and ranging (LiDAR) technology for finalizing alignment.

77. The Committee notes the steps being taken by the Ministry to resolve land acquisition issues in coordination with State Governments. The Committee recommends that the Ministry may analyze the historical data from the PMIS, Pragati Portal and
Bhoomi Rashi portal to figure out the presence of any bottlenecks or bureaucratic delays that might be slowing down the land acquisition process. Steps may then be taken to further streamline the land acquisition process, which, in turn, would help keep the NH projects on track.

78. Public Works Department, Government of Arunachal Pradesh informed the Committee that the required land for Right of Way (RoW) of National Highways is acquired through the concerned District Administration as per section 10 of Jhum Land Regulation 1947. This procedure has been followed for land acquisition of all National Highways in Arunachal Pradesh without any problem.

79. Public works (Building & National Highway) Department, Government of Assam informed the Committee that the land Acquisition for National Highway projects, whenever necessary, are carried out as per Section 3 of the National Highway Act,1956 and compensation to the affected people is disbursed as per “The Right to fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement Act,2013”. The Ministry of Road Transport & Highways has launched BhoomiRashi portal on 01.04.2018 for uploading notifications such as 3a, 3A etc. The MoRT&H has given emphasis on L.A. and all major highway construction projects are being sanctioned after clearing the L.A. as per EOT mode of contract. It submitted that timely sanction of L.A. estimate is necessary as well as Civil Authority’s immediate response to clear the dues of the land owners.

80. The Committee recommends that the Ministry may look into reasons behind delays in sanction of L.A. estimates and address the same.

81. Department of Tourism, Government of Goa informed the Committee that the delay in the handing over of the encumbrance-free land to the contractor generally takes as long as about 30 months. Even when the land is finally made available, still there are some encumbrances which put a constraint on the contractor's capacity to undertake construction work in an un-interrupted and continuous manner. Since encumbrance free site is not made available to the contractors in the initial stages of the project, the contractors delay the mobilization and also consume the mobilization advance. Because of the above reasons, substantial extensions of time are required to be given to the contractors. The Department of Tourism, Government of Goa made the following suggestions for improvement of the land acquisition activity:

- Fast tracking the acquisition process through Legislature cure.
• Strengthening of public consultation process to address the relevant concerns of public related to the project prior to commencement of the construction activities.

• Strengthening of Land Acquisition Units and streamlining the process of clearances related to land acquisition.

• Minimize the requirement of land acquisition during the planning stage.

• Numerous government agencies involved from which clearances/approvals/permissions are required to be obtained before the utilities can be shifted or relocated.

• Expediting the process of Utility shifting (such as existing ROB / RUB, transmission lines, temple shifting, drainages etc.) shall thereby provide a continuous portion of encumbrance free land to the contractor for quick laying of the carriageway.

• Respective departments shall maintain proper records of existing underground utilities like water supply, electrical lines, cables, drainage etc. as these are generally not available and impose extra liability on the developer/contractor.

• Revenue maps should be updated frequently as the acquisition plans are prepared on the basis the revenue maps that are generally not updated.

• Once the award is declared by Special Land Acquisition Officer (SLAO), the award amount is made available with SLAO for its distribution/release to the affected parties for speedy disbursal to the affected parties whose land is acquired for construction of Highway.

82. The Committee recommends that the Ministry may sort out the issues faced by road contractors because of encumbrance on the land, once made available to them after acquisition. Further, the Ministry may urge upon the State Governments to carry out exercises to update their revenue maps periodically, in order to permit the Ministry to prepare more informed acquisition plans for its road projects. The Ministry may urge upon the State Governments to carry out exercises to update their revenue maps periodically, in order to permit the Ministry to prepare well-informed acquisition plans for its road projects.

83. Public Works Department, Government of Karnataka informed the Committee that:-
i. The National Highway Act 1956 read along with National Highways Rules provide for Acquisition of Land under section 3 for Up-gradation/Improvements of National Highways. Whereas Sub Sections under Section 3 provides for acquisition of land by fixation of land price based on the market value. The Act also provides for enhancement of compensation by Arbitration under section 3G(7). But, the Act does not provide for a fixed time frame within which the land losers can prefer an appeal for Arbitration. Hence, suitable mechanism should be introduced to fix the time frame (preferably 90 days) from the day of award to prefer appeal under Arbitration appeal seeking higher compensation.

ii. The Act provides for Land Acquisitions under section 3 of the National Highway Act. This Act/Rules do not provide for repatriation of excess land acquired by oversight and un-utilized for the project. As there is no provision for de-notification of excess land acquired, the land losers will get the benefit of taking compensation for the acquired land as well as he will be in adverse position of the excess land and utilizing the same. Hence, provision for de-notification of the excess land acquired is to be provided in the NH act.

iii. The process for acquiring and taking possession of forest land which is necessary for Development/Improvements of existing/newly declared National Highways is very cumbersome and process of acquisition is time consuming and is causing inordinate delay in implementation of the project within the stipulated time frame. Hence, Policy decision has to be taken to simplify the Acquisition of Forest land to enable completion of the projects within stipulated time in order to avoid financial implication and breach of contractual obligations.

iv. In identified projects, 50% of Land Acquisition cost should be deposited upfront by the State Government in to an Escrow Account and then balance would be deposited by the Ministry. In this regard, a Policy Decision may be taken to grant the entire Land Acquisition cost by Ministry as the State Governments are not in a position to bear 50% of Land Acquisition cost for construction of Ring Roads/Bypasses.

v. In respect of land Acquisition if the land Acquired more than 80% need not have to wait for DPR.

84. The Committee takes serious note of the lack of provision for de-notification of any land that might get identified and acquired for a road project but does not get utilized. While the Committee feels that such instances should be minimized, one cannot
deny that there is still possibility for such occurrences because of oversight or change in alignment. The Ministry may make the necessary changes in the legal provisions for land acquisition to rectify such mistakes. Provision for compensation amount for the period that the land was acquired may be incorporated so as to prevent any undue losses to the landowner for no fault of theirs.

85. **With regard to upfront deposition of 50% cost of land acquisition by the State Government, the Committee reiterates its recommendation made at para 75 of this Report and recommends that the Ministry may frame a policy to accommodate State Governments that might not be financially able to deposit such large amounts upfront.**

86. Public Works Department, Government of Kerala informed the Committee that as far as Kerala is concerned, land acquisition for the Right of way, as per the development manual, is the difficult task due to high population intensity in the state, ribbon developments in the existing highways, high cost of land etc. Hence elevated highways at built up area may be preferred to reduce the impact of acquisition.

87. **The Committee recommends that the Ministry may evaluate the feasibility of construction of elevated highways in areas with high population density where acquisition of land would possibly be a long and tough task.**

88. Public Works Department, Government of Manipur informed the Committee that land acquisition is a sensitive issue in the State, as private lands and cultivable land is very limited not only in the valley (which is about 10% of the total area), but also in the hills due to affinity of the people to their roots to the land, religion and culture. Despite the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013, having made social impact assessment (SIA) the cornerstone of the new regime that seeks to establish a participative, informed, and transparent process of land acquisition, for speedy development and collective welfare of the people, the construction / development of expressway, railways, industrial corridors and highways projects shall be extremely difficult, unless relaxation /exemption in the hill areas of the State (90% of the geographic area of the State) where the tribal people occupies.

89. Public Works Department, Government of Mizoram informed the Committee that at present, most of the Land Acquisition is done through prevailing LA Act through concerned Department viz. Revenue Department. However, for External Aided Funded Project such as World Bank, Asian Development Bank etc, are done by Special Land Acquisition Officer, posted in the Project Implementation Unit (PIU). As there are many Court Cases in
connection with LA Cases in the Department, PWD, Govt. of Mizoram felt necessary to have LA officer posted in the Department who will handle all LA issues in consultation with the implementing Department to speed up and avoid such court cases since Government is losing many of the cases. It further informed the Committee that the MoRTH has taken up development of highway projects of various standards namely 2 lane with paved shoulder (10 m carriageway), 4/6/8 lane both as Greenfield projects as well as brownfield projects. A majority of these NH projects are brownfield i.e. upgradation of the existing roads. Upgradation on project involves (i) acquisition of additional land (ii) Shifting of utilities (iii) Felling of trees, and (iv) Removal of existing structures which fall in the Right of Way (ROW) of the proposed expansion. The policy of the guideline (vide MoRTH No. NH-15017/21/2018-P&M dt. 10.05.2018) stipulates that the project implementation agencies shall undertake additional land acquisition on one side of an existing road to the extent feasible for expansion of existing roads to next level of configurations.

This is not perfectly suitable/feasible in hilly terrain because when land is acquired for new alignment or upgradation (either uphill or downhill side), there is a possibility/tendency of huge quantity of earth spoil, excavated rock-cut debris to fall from uphill to the downside damaging crops and properties at the downhill side.

90. The Committee recommends that the Ministry may review its guideline which stipulates that the project implementation agencies shall undertake additional land acquisition on one side of an existing road to the extent feasible for expansion of existing roads to next level of configurations, in light of the difficulties faced in such implementation in hilly areas.

91. Transport Department, Government of National Capital Territory of Delhi informed the Committee that the provisions in 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' are uniformly applicable for States and UTs like Delhi which is highly urban and have different aspirations for taking up Road Transport Infrastructure Projects. The following comments are offered:

(i) Time Frame: Time frame for carrying out various notifications/activities for land acquisition needs a review, as every stage takes substantial time. Possibility for separate, reduced timelines could be explored for UTs like Delhi to make the projects take off/accomplished in a fast track manner. It is suggested to review and reduce the time lines for the various stages of LA

(ii) Special powers in case of urgency: Special powers in case of urgency to acquire land in certain cases are available in the Act. This needs to be reviewed for UTs like
Delhi making it truly effective for emergent nature of Projects. Example. Construction of elevated road over BarapullahNallah starting from Sarai Kale Khan to MayurVihar (Phase-III) is stuck for quite long because of a small piece of land could not be acquired and end entire project got derailed.

92. The Committee agrees with the suggestion made by the Transport Department, Government of NCT of Delhi and recommends that the Ministry should assign a fixed time-frame for the different processes involved in land acquisition for a project. The Committee feels that doing so would help minimize bureaucratic delays and any delays happening in the process would be spotted quite early.

93. Chief Engineer (National Highways), Punjab PWD informed the Committee that as per Clause 26 of RFCTLARR Act 2013, the market value of land to be acquired is determined by Collector based on registered sale deed/collector rates. The market price determined by this method generally does not represent actual market rate of the land. This results into low compensation amount for the acquired land. The land owners then resort to Arbitration and court cases for enhancement of the compensation amount. This legal procedure goes on for years together causing harassment to land owners and financial loss to the Government. Thus, there is requirement for rationalizing the procedure for determination of market of value of land so that it is more realistic and closer to actual market rates.

94. The Committee takes note of the discrepancies pointed out by the Punjab PWD in the value of land determined at present based on registered sale deed/ collector rates and the actual market rate of the land. The Committee feels that such discrepancy, if present, would invariably cause dissatisfaction among the land owners and the ensuing delays on account of arbitration and legal procedures cost the public exchequer a lot of money due to project cost overruns. The Committee, therefore, recommends that the Ministry may review the accuracy of the provisions existing at present in determining the amount of compensation to be paid to land-owners, as compared to the actual market value of the land. If substantial differences are noticed in the compensation value and the market value in many instances, the Ministry may come up with a suitable mechanism for determination of a more fair value for the land to be acquired.

Environment and Forest Clearance Issues

95. Public works (Building & National Highway) Department, Government of Assam informed the Committee that the procedure for Environmental and Forest Clearance for
National Highway projects are done as per National Environmental Policy, including Highway under Environmental Protection Act, 1986 vide MOEF Notification dt 27.01.1994, and revised EIA notification on 14.09.2006 and further amendments on 01.12.2009. The new National Highway projects and the projects of more than 30 Km length involving widening of the existing alignment through acquisition of more than 20 metre land will require prior environmental clearance. The DPR consultants are engaged for the preparation of necessary proposal for taking prior approval for Environmental and Forest Clearance from the Ministry of Environment & Forest, Govt. of India. The process of Environmental and Forest Clearance has been made online and need to be assessed the progress made by MoEF&CC by proposing Deptt. at all time. The process can be made user friendly.

96. The Committee recommends that the Ministry of Environment, Forest and Climate Change may make the online process for obtaining environmental and forest clearances for road projects, more user friendly.

97. Department of Tourism, Government of Goa informed the Committee that earlier, any developmental/infrastructure project was reviewed only keeping in view the technical feasibility and financial viability of the project. However, with the introduction of the concept of EIA (Environmental Impact Assessment), the environmental considerations have also been included as one of the important factors to be considered while deciding about the feasibility and sustainability of these developmental /infrastructure projects. Further, EIA has also emerged as an established procedure for environmental protection/conservation and its management, thus ensuring that final finite natural resources are utilized within the "carrying capacity" of the system. Tree Cutting is majorly in scope of the authority and the developer / contractor is required to be provided with clear encumbrance free land for road construction. Suggestions for expediting the process of Environmental & forest clearance are:

- There are ambiguities over inclusion of certain local breeds of shrubs and plants in forest cover.
- The clearances and permissions from the Ministry of Environment & Forest (MoEF) is a pre-requisite and takes some time before the trees can be cut and the ROW as per the design is made available to the contractors, thereby the process should be initiated in timely manner.
For all the highway project for length upto 100 kms., all the clearances such as CRZ, Environmental, Forest etc. shall be within the ambit of State level authorities within its jurisdiction.

As far as forest clearance concerned as and when proposal received for construction of road; it is scrutinized and processed as per Forest (Conservation) Act. 1980

98. The Committee recommends that the Ministry may ensure that the application process for obtaining the necessary environment and forest clearances is initiated as soon as the alignment of the project is finalized, in order to avoid any undue delays in obtaining the permission.

99. Public Works Department, Government of Manipur informed the Committee that in a state where forest area covers 78% of the total geographical area (out of 22,327 Sq Km, forest area in the State is 17,418 Sq Km), any sort of development project involves forest land and it is necessary to obtain the forest clearance prior to take-off of any major project. Hence, it is suggested that “Forest loss and Fragmentation” shall be allowed to address by ensuring that only extremely site-specific proposals of State/National importance are accorded clearance after considering all possible alternatives. In such cases such projects shall be allowed to disaggregate further for minimising impacts by rigidly applying the filter of site specificity. For instance, a 100 Km long road project proposal, a linear intrusion in the forest zone can be separated from pit stops and toll plazas which can be located outside.

100. Public Works Department, Government of Mizoram informed the Committee that based on the fragmentary studies as well as from the observations and collection made in the fields, the forest types of the State (Mizoram) based mainly on the altitude, rainfall and dominant species composition as mentioned below:

(a) Tropical Wet Evergreen and Semi-Evergreen Forests-Southern & Western part
(b) Montane Subtropical Forest — 900m to 1500m Eastern part bordering Chin Hill
(c) Temperate Forest : Above 1600m-Lengteng & Phawngpui mountainous ranges
(d) Bamboo Forests
(e) Quercus Forests
(f) Jnumlands

101. PWD, Govt. of Mizoram further submitted that in order to construct/develop highways as greenfield projects, i.e. if proposed alignment passes through Forest land, it is no doubt, a long process to completely fulfill mandatory requirements viz. Notification 3(a),
3(A), 3C, 3D, 3G, etc., as per Land Acquisition act 1894 which in turn delays the overall project completion schedule. Hence, it is suggested that the State Nodal Department be empowered/authorized to execute the development work avoiding the hierarchy of the competency of authority at various stages in order to streamline the long procedure.

102. Public Works Department, Government of Mizoram informed the Committee that while formulating Detailed Project Report, the need for Forest and Environmental clearances are also work out in consultation with the concerned Department. However, the following problems were faced during project implementations:

(a) 1st stage Forest Clearances were usually received without much delay for the project but the final Forest Clearance are delayed which in the later stage of the project created friction between the two departments.

(b) Late issuance of Tree cutting permit often cause become hindrance for the Contractor for claiming extension of time for project completion.

(c) Due to improper protection Of Riverina Forest Reserve, many claims for compensation were received from Private parties claiming that they have land within the Riverine Forest Area.

103. The Committee desires that the Ministry may analyze the suggestions given by Mizoram PWD and if feasible, extend the implementation of the same to other States with high forest coverage. The Committee further recommends that delays faced in obtaining final forest clearance as well as tree cutting permissions may be looked into and resolved on a priority basis, to avoid delays in execution of road projects.

104. Chief Engineer (National Highways), Punjab PWD informed the Committee that the existing procedure for environmental and forest clearance of highway projects is quite workable.

105. Department of Science, Technology and Environment Science, Technology and Environment Branch, Government of Punjab informed the Committee that as per the EIA Notification 14.09.2006 amended from time to time, New National Highways and Expansion of National Highways greater than 100 KM involving additional right of way or land acquisitions greater than 40m on existing alignments & 60m on re-alignments or by-passes falls under Category-A projects. Similarly, all new State Highway Project and all state highways projects & State Highway expansion project in the hilly terrain (above 1,000m AMSL) or ecologically sensitive areas falls under Category-B projects. The Category-A
projects are being appraised by the MoEF&CC, Gol and the Category- B projects by State Environment Impact Assessment Authority (SEIAA) for grant of Environmental Clearance. However, in the absence of an SEIAA, Category B project will be treated as Category-A project. Also, Category ‘B’ will be treated as Category A, if located in whole or part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life (Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries. In the State of Punjab, Highways projects are mostly apprised by MoEF&CC, Gol. No Highway projects has been apprised by SEIAA, Punjab since last 5 years.

106. The Committee feels that the MoEF&CC may coordinate with the various State Governments and ensure that the State Environment Impact Assessment Authority is formed in the different States so as to permit MoEF&CC to focus on assessing the environmental impact of bigger projects. This would help increase the pace at which road projects across the country are assessed in terms of their environmental impact.

Delays in terms of financing of road projects

107. The Committee enquired from various banks/financial institutions as to whether any delays in terms of financing has led to delayed road projects and if so, the possible solutions thereto.

108. SBI, in its written reply, stated that apart from assessing Project specific risk, lenders also evaluate financial and technical capabilities of the Promoter to execute the project. Lenders usually factor its own experience / dealings with Promoter Group while considering any credit proposal. It further added that lenders usually find difficult to support projects which are backed by Promoter with weak financials (high leverage), does not have prior experience in executing similar scale infrastructure project as a developer, promoter entity has delayed servicing of its credit facilities etc. SBI suggested that awarding a high value project to a Promoter with weak financials may be avoided or they may be mandatorily required to bid in consortium with strong financial partner.

109. IDBI, in its written reply, suggested the following to avoid delays in road projects due to delays in financing thereof:
a) Substantial Promoter contribution say 50% should be taken upfront. NHAI Grant shall be on pro-rata basis with Bank funding and Equity by Promoters in HAM Projects and others where Viability Gap Funding is envisaged.

b) The Concession Agreements should have a provision for enhancing grant from the project authority for infusing additional need based funds wherever there is a change in scope, delay due to force majeure reasons, lower cashflows than envisaged, etc.

110. IIFCL informed the Committee that NHAI is providing around 150 days of time for achieving Financial Closure for HAM projects and 180 days for BOT Toll projects. While, larger group with credit rating of ‘A’ (i.e. A, AA, AAA) and above are managing to achieve Financial Closure within in stipulated timelines, smaller groups which are new to the sector and are having credit rating of BBB or lower are not able to tie up for the funds. This results in delayed road projects. The concept of underwriting of debt by private lenders has been introduced, but it is often seen that lenders are not disbursing the debt till the time they further downsell their exposure. This results in further delay in project completion. IIFCL proposed the following possible solutions:

| Awarding Projects with pre achieved Financial Tie Up by Authority | Before awarding a project, Concessioning Authority can arrange for in-principal approval from lenders which can be offered to road developers. Presently, there are many developers whose accounts are NPA with Banking System and bidding and receiving the award of the projects due to aggressive bidding. However, due to lack of financial assistance from Banks, projects couldn’t be executed and many get delayed due to the same. The proposal for submission of bids with fully tied up finance would reduce the project lead time, eliminate non-serious bidders and avoid aggressive bidding by ensuring participation |
| Ensuring Compliance by Concessioning Authority | Many road projects, particularly under Public Private Partnership (PPP) framework have suffered owing to reasons viz. non availability of requisite land, delay in approvals viz. Forest & Environmental Clearances by concerned Authorities, delayed and/or short payment of grants by the Concessioning Authority. Such reasons are obligations on part of the Concessioning Authority and are beyond the control of project developer or the lenders. Due to unfavorable past experience in road sector, lenders are shying away from assisting road projects and as a result this has resulted in huge delays in achievement of Financial Closure in a time bound manner. Before awarding a project, Authority should ensure availability of land in particular and all applicable clearances in general to regain the confidence among lending community. |
### Priority Sector Status for financing Road Projects

As per the regulatory requirement, Banks in India are required to mandatorily lend to certain sectors viz. Agriculture, Education etc which are categorized as Priority Sector Lending. This ensures channelizing flow of a minimum part of total loans by a lender to be such sectors which plays huge role in the development of the sector and for the Country in whole.

RBI may grant Priority Sector Status for financing Road Projects which will nudge Banks to enhance lending to the sector.

### Need for Road Sector Regulator

Road sector is one of the largest private investments destinations and have many Private Financiers, Pension Funds, Institutional Financers. Banks & FIs have made large investments in this sector. The Indian road sector is the largest PPP market in the world. However, the sector lacks independent regulation at present. For instance, NHAI acts both as a Regulator and Concessioning Authority, which often leads to conflict of interest. In order to attract more domestic and international private funding of road infrastructure, a more robust regulatory environment with an independent regulator, is essential. An independent regulator would ensure that disputes between Concessioning Authority and Developers are resolved in a fair and transparent manner thus reducing delay in project completion.

### Separate Asset Classification Norms by RBI

Infrastructure sector, inter alia including road projects are prone to majorly two kind of risks, i) Development risk & ii) revenue risk. Since road project involve implementation period ranging from 2 to 3 years and further operational period of 15 to 25 years, a project sees various cycles of economic fluctuations in comparison to retail loans or other industrial projects. Accordingly, having same asset classification norms for retail loans and also for road project loans is not judicious. RBI may consider granting relaxation in Asset Classification (IRAC) norms.

111. Canara Bank opined that no such delay in terms of financing has led to delayed road projects. It further submitted that delay in approvals has caused delay in completing the road projects. Clearances are required to be obtained from multiple administrative level. To mitigate the same, Single Window Clearance shall be made available and to the extent possible this shall be available upfront i.e., at the pre-bidding level itself. Definitive timelines for approvals to be pronounced. Certainty in availability of approvals at the pre-finance stage will provide lot of comfort in appraising the project.

112. The Committee recommends the Ministry to work upon the different suggestions put forth by the financial institutions/banks for avoiding delays in road projects on account of delays in terms of financing.

113. The Committee feels that given the immense role played by good road connectivity in the economic growth of the country, the Ministry should request RBI to...
grant the Priority Sector tag to the road infrastructure sector in order to encourage financial institutions and banks to lend higher amounts to supplement the maintenance and growth of the NH network in the country.

114. The Committee recommends that in order to avoid delays in financing of road projects in case a consortium of banks is considering the grant of loans for a given project, RBI may look into defining a reasonable time limit for the consortium to make its decisions regarding the financing of the road projects.

Disputes Resolution Mechanism

115. The Ministry, in its written reply, informed the Committee that NHAI has entered/entering into various type of Contract with the Contractors/Concessionaires/Consultants for implementing the Highway Projects in various modes i.e. Item rate, BOT(Toll), BOT (Annuity), Hybrid Annuity, EPC, OMT etc. Each said Contracts/Agreements contains the relevant Clause of the Dispute Resolution Mechanism, thus both the parties to the said agreement are bound to comply/proceed accordingly. Further, in terms of the said mechanism, time has already been prescribed in the Contract/Agreement. If the amicable settlement process fails, the matter may be referred further for Arbitration, in terms of the said Contract/Agreement, to adjudicate the disputes between the parties. With regard to the costs and time to resolve the disputes by way of Arbitration, the same shall be in terms of the Arbitration & Conciliation Act 2015, as amended from time to time.

116. Besides that, to save the time and costs, NHAI has also constituted /established Conciliation Committees of Independent Experts (CCIEs) under the provisions of Part-III of the Arbitration & Conciliation Act inviting all claimants to resolve / settle the disputes of claims at initial stages, post arbitral award or for arbitral awards under challenge. The CCIEs are mandated to resolve and settle the claims with a period of 5 months. So far out of 59 cases referred to CCIE; 20 cases are resolved/settled, 8 failed and 31 are in progress. Authority is encouraging resolution/settlement of more such cases through such Conciliation.

117. The Ministry further stated that the Government has amended the Arbitration and Conciliation Act, 1996 by way of amendment Act 2015 and thereafter in 2019. According to the amendment, Government has notified the Institutional Arbitration in-spite of ad-hoc Arbitration, so that the awards can be passed by the specialized Arbitrators within stipulated
time. NHAI along with National Highway Builders Federation (NHBF) has established a Society named Society for Affordable Redressal of Dispute (SAROD) under Society Registration Act 1860 on 25.10.2013 and having its own Rules and panel of Arbitrators. Further, SAROD is trying to enter into a MOU with some institutional Arbitration Centre of excellence to improve functioning of SAROD and quality Arbitration.

118. Further, recently the Cabinet has approved the proposal of NITI Aayog to review construction sector by involving the authority to seek DOLA views before filing appeal in the arbitrate award. By relaxing the condition of providing interest on bank guarantees on deputed amounts in such appeals by concessionaires will unlock capital with player to executes projects. The CCEA considered the proposal of NITI Aayog in its meeting held on 20th November, 2019 and approved the following:

i) With respect to arbitral awards decided in favour of the contractors/concessionaires, the concerned Government entity will take the decision to initiate proceedings for setting aside of the arbitral award, and any appeal (s) thereto, with the opinion of a Law Officer-Attorney General of India/ the Solicitor-General of India/The Additional Solicitor-General of India-in consultation with the Department of Legal Affairs (DOLA) at the Ministry of Law and Justice as per the procedure laid down in this respect. DOLA is to ensure that the aforementioned process of soliciting and communicating the opinion of Law Officer to the concerned Government Entity is completed within 30(Thirty) days of the receipt of request.

ii) In case where the Government entity has challenged the arbitral award, and, as a result, the amount of the arbitral award has not been paid, 75% of such award will be paid by the Government Entity to the contractor/concessionaire against a Bank guarantee only for the said 75% and not for its interest components. With respect to the interest payable to the Government Entity, should the subsequent Court order require refund of the said 75%, payment of the same will be as per the Court order, non-compliance of which by the contractor/concessionaire would be a contempt of Court. And, the concerned Government Entity will have the right to recover the said interest by way of legal/judicial remedies. In cases where bank guarantees for the interest components has already been submitted by the contractor/concessionaire, the same will be returned by the concerned
Government entity. Should the court order prescribed the rate of interest, the same will prevail.

119. The Committee takes note of the mechanism existing at present for arbitration and resolution of disputes. Disputes between the concessionaire and the authority is one of the core reasons behind delays in road projects and having effective mechanisms in place to minimize the delay resolution time is crucial. The Committee desires the Ministry to thoroughly examine the efficacy of the current arbitration and dispute resolution mechanism in settling disputes between the involved parties, helping avoid litigation processes to the maximum possible extent. Effective efforts may be made to address any bottlenecks causing delays in such arbitrations.

120. The Committee notes that despite the best efforts at arbitration, many disputes between concessionaires and NHAI still end up in courts, which sometimes takes years to finally settle the dispute. In light of this, the Committee recommends that amicable resolution should be the priority of the Ministry to the extent possible and the cost of taking the matter to courts should be considered both in terms of delays as well as cost overruns. The Committee desires that the Ministry may request fast-track hearing of its cases in courts, since delays in delivery of verdict in such cases directly takes a toll on the public exchequer. Further, the Ministry may request the Government and the judiciary to empower a panel of retired judges having expertise in infrastructural litigations in order to enable quicker judgements in case of disputes with concessionaires, thereby helping minimize delays in execution of road projects.

MAINTENANCE OF NATIONAL HIGHWAYS

121. Maintenance of National Highways is one of the foremost responsibilities of the Ministry. The Committee enquired about the repair and maintenance norms for National Highways laid down by the Government. In its written reply, the Ministry informed the Committee that in projects under Operation & Maintenance (O&M), the Concessionaire / contractor is required to follow the relevant specifications with clearly laid down timelines for different activities e.g. filling of potholes, repairing the shoulders etc. In order to ensure the riding comfort, the roughness index is not allowed to exceed the prescribed limit. The repair and maintenance activities are supervised by Independent Engineer/Authority Engineer /Supervision Consultant on day to day basis. There are also local field units at Project
Implementation Unit (PIU) and Regional Office (RO) level to ensure strict compliance of the norms. As regards quality control, development and construction works are executed as per the provisions of MoRTH Specifications for Road and Bridge works, IRC/ BIS guidelines. In order to monitor the quality of work, the Authority Engineer/Independent Engineer are engaged during construction, operation & maintenance period of National Highways projects. Besides, officers also inspect works from time to time.

122. The Committee feels that maintenance of the existing road network is an area which is not given enough attention to, by the Ministry. Maintenance of the existing NHs is essential not only from economic aspects, but also to reduce the number of road accidents that take place due to potholes, poor quality of roads, damaged roads due to floods, etc. The Committee, therefore, recommends that the Ministry make extensive use of network survey vehicles and latest technological innovations such as drones to regularly assess the quality of the existing NH network in the country and to figure out the stretches that need to be worked upon. The maintenance requirements thus analyzed should be prioritized on the basis of potential safety hazards posed by the poor quality, the traffic volume on the stretch, and other relevant factors. The Committee believes that carrying out a task of such scale on the vast NH network in the country requires significant funds and recommends that the Ministry may request funds for the same in the coming financial years.

123. The Committee observes that special focus must be laid on high quality maintenance of roads in flood-prone regions. Specialized techniques may be used to ensure that the maintenance work carried out in such regions is long lasting and that sufficient provisions for drainage are included in the project.

124. The Ministry informed the Committee about NHAI’s Sukhad Yatra mobile application, which has been prepared to empower the Highway user. The key feature of the app includes provision for the user to enter road quality-related information or to report any accident or pothole on the highway. It also provides users with real-time data related to waiting time expected at Plazas and various facilities like points of interest, highway nest/nest mini, etc., available across the highway. The app can also be used by the users to purchase the FASTag and further facilitate the highway user experience.

125. The Committee is distressed to note the poor feedback received by the Sukhad Yatra application on the Play Store for Android devices, where it is rated 2.7 stars out
of a maximum possible 5 star user rating. Similarly, the app has received poor ratings on the App Store for iOS devices. The Committee feels that this depicts that the Sukhad Yatra app, although brilliant in concept and its scope of use, is failing to achieve its intended goal of allowing users to enter road quality related information and to report accidents and potholes on the highways. The Committee recommends that NHAI may work out an intuitive user interface for the app. The poor feedback received by the application from its users should be seriously looked into and addressed at the earliest. Further, once the application is improved and well-received by its users, NHAI should promote the usage of the application through social media as well as signages on the NHs.

126. The Committee may be briefed about the highlights of the data received by NHAI through the submission of information by the users of the Sukhad Yatra app, alongwith details regarding the number of road quality/pothole related issues raised by the app users and the time taken by NHAI to address the same.

LENDING ASPECTS OF ROAD SECTOR

127. The Committee heard the representatives of various banks and financial institutions on lending aspects of road sector in its meeting held on 8th January, 2021. In another meeting held on 19th January, 2021, the Committee heard the views of the Secretary, Ministry of Road Transport and Highways on, inter alia, lending aspects of road sector.

128. State Bank of India, in its written submission on the subject, informed the Committee that around 40-42% of the awards in FY2022 are expected to through the HAM route, while the balance award is expected mainly through EPC mode as the BOT (toll) mode may have only a few takers due to the uncertainty in traffic growth on account of COVID-19 restrictions and muted economic activity. Various modifications have been made in Model Concession Agreement for Hybrid Annuity projects aimed at protecting developers’ returns and easing their cashflows during construction period, major being interest payment linked to average 1-year MCLR of top five banks instead of RBI bank rate, release of NHAI grant in 10 milestones of 4% each, as against five installments of 8% earlier. Similarly, modifications have been made in MCA for BOT projects to reinstate developer interest in the model, major being handing of over 90% Right of Way (RoW) prior to Appointed date, testing of shortfall in projected traffic years as against once in a project life tested earlier. It was further
informed that the Bidder eligibility criteria has been reduced for HAM project (minimum net
worth of 15% of Project Cost as against 25% earlier) and EPC projects (1x of project cost)
which would promote entry of smaller players.

129. IDBI Bank, in its written submission on the subject, informed the Committee that the
Government has taken various measures / initiatives to alleviate the impediments being faced
by the Road Sector and also to boost the investment sentiments in the Sector viz.

(i) Revision in Model Concession Agreement for BOT projects which envisages (a) that
the Work Order for Highway projects will be issued only when 90% of the land Right
of Way (RoW) is acquired and the same will form part of Condition Precedent (CP).
Besides, the Private Developer (Concessionaire) has to submit a letter satisfying that
90% of the land has been acquired before taking over the project.

(ii) NHAI has formed the Conciliation Committees of independent Experts (CCIE) of 3
members each. The CCIE is headed by senior retired officials from Judiciary, experts
from Public Administration and Private Sectors.

(iii) 100% FDI has been allowed in the Sector under automatic route.

130. The Committee takes note of the various initiatives taken by the Ministry to
boost investment and lending in road sector.

131. Union Bank, in its written note furnished to the Committee, presented the following
comparative analysis of the different models of financing road projects in the country being
employed at present:

<table>
<thead>
<tr>
<th>Types</th>
<th>Description</th>
<th>Revenue Stream</th>
<th>Concession Period</th>
<th>Award Criteria</th>
<th>Risks borne by Concessionaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT (Toll)</td>
<td>Private party builds roads, undertakes O&amp;M and collects toll</td>
<td>Toll</td>
<td>~20-25 years</td>
<td>Highest revenue sharing bid or lowest grant</td>
<td>✔   ✔   ✔</td>
</tr>
<tr>
<td>BOT (Annuity)</td>
<td>Private party builds roads,</td>
<td>Annuity payment</td>
<td>~20-25 years</td>
<td>Lowest annuity</td>
<td>✔   ✔   ✗</td>
</tr>
<tr>
<td>Hybrid Annuity</td>
<td>Private party builds roads, undertakes O&amp;M and collects annuity, Construction Support 40% from Authority</td>
<td>Annuity + interest + O&amp;M</td>
<td>15 years post construction</td>
<td>Lowest bid project cost and O&amp;M cost</td>
<td>✓</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>--------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>EPC</td>
<td>Private party builds roads (money spent by government)</td>
<td>Contract amount</td>
<td>Not required</td>
<td>Lowest tariff requested</td>
<td>✓</td>
</tr>
</tbody>
</table>

132. In its written note on the subject, Canara Bank stated that HAM model introduced by NHAI and other agencies has given a level playing on both sides and that the bank has introduced a board approved policy for financing HAM projects that are technically feasible, financially viable and bankable projects undertaken by both public sector and private sector undertakings. Canara Bank further observed that infrastructure financing poses some unique risk on the credit and liquidity fronts on account of long-gestation period involved and that appraising the credit proposal of infrastructural project in terms of necessary skill sets is distinctly different from credit appraisal of other types of loans that banks normally provide.

133. The Committee agrees with the observation made by Canara Bank regarding the necessary skill sets for appraising credit proposal of infrastructural project being distinctly different from credit appraisal of other types of loans. The Committee recommends that the public sector banks must ensure that only qualified people with
experience in appraising infrastructural proposals should be allowed to make decisions in this regard.

134. Indian Bank, in its written note on the subject, stated that the toll based projects have suffered the most during the COVID-19 pandemic, on account of traffic restrictions which impacted the revenue and that annuity based projects fared better. It further opined that investments in state roads and rural roads will be hit because of fund diversion to the health and social sectors. It informed the Committee of the various steps initiated by the bank vis-à-vis lending in road sector viz. financing InvIT Trusts based on RBI guidelines; providing restructuring facility, wherever warranted, under COVID-19 framework; and extending sanction of additional facility under GECLS 2.0. The Indian Bank stated that its financial benchmarks are more relaxed than the Kamath Committee recommendations, enabling it to consider proposals under stress in a leveraged way.

135. The Committee agrees with the apprehensions raised by Canara Bank regarding impact of Coronavirus pandemic on investments in State roads and rural roads on account of fund diversion to the health and social sectors. State roads and rural roads provide last-mile connectivity to crores of people in the country, besides being of great economic importance to countless industries requiring raw materials to be transported from small towns and villages. The Committee, therefore, recommends that the Ministry may consider extending a one-time financial assistance to State Governments to help ensure that State roads and rural roads are maintained in motorable conditions.

136. Indian Overseas Bank, in its written note on the subject, stated that given the challenges in lending in road infrastructure sector, rating agency CRISIL expects investments in the roads sector to contract marginally by 7-9% in fiscal 2021 in the base case, after witnessing a healthy growth of ~17% in fiscal 2020. National Highways and State roads make up more than 90% of these investments. It further informed that as per CRISIL’s analysis, Rs 10,000 Crore of debt of under-construction hybrid annuity model (HAM) projects is at risk. 30% of under-construction HAM projects that have scheduled completion date due by September 2020, may face delay in execution.

137. The Committee desires that the Ministry may take remedial measures to address the apprehensions raised by the rating agency CRISIL regarding the debt of under-construction HAM projects being at risk because of delays in execution.
138. Punjab National Bank, in its written note on the subject, informed the Committee that it has financed directly /indirectly to concessionaire and authority in Infra-Road sector through various alternate modes for development and growth of road. Some of the measures that have been set in place are as under:

a) Bank funded Various Concessionaire for development of Road project under both BOT (Toll, Annuity) and HAM model, through Senior Debt and Subordinate Debt.
b) Bank funded Various Sponsor Companies i.e. EPC contractor, Working Capital Facility (Funded & Non funded) for construction of Road under EPC model.
c) Bank also funded through Asset securitization mode for completed Road Project to various Concessionaire. Create future cash inflows by selling those future inflows to an investor as securities. Through securitization banks unlock their capital, rebalance risks and coped with their asset–liability management.
d) Bank also participated through long term Bond route floated by Concessionaire.
e) Credit Enhancement: banks to offer partial credit enhancements to corporate bonds issued by private entities and Special Purpose Vehicles (SPVs) for financing infrastructure projects.
f) Funded also the Authority i.e. NHAI for development of Road Project through unsecured/Secured Loan.
g) For early recognition and time bound resolution of stresses Road sector Assets, bank using Prudential Framework for resolution of these assets

139. The Committee takes note of the various measures taken by PNB to finance the concessionaires in road infrastructure sector,

Challenges faced by lenders in financing road projects

140. SBI listed the following challenges/ issues faced by lenders that need to be addressed:

a) Land Acquisition Issues: Status of land acquisition should be made available to all bidders at tendering stage. Appointed Date shall be issued only when compensation is paid to landowners for 80% of the Project length for HAM projects and 90% for Toll projects.
b) De-scoping: Land not handed over by NHAI within 180 days from Appointed date may be automatically de-scoped (deemed de-scoped provision).
c) Large funding requirement for road sector: To meet investment envisaged in NIP, a dedicated development finance institution for financing infrastructure projects may be established.

d) Take-out financing / refinancing: Government may mandate institutions like NIIF to establish a fund for facilitating take-out financing for operational projects which will create additional headroom for Banks to fund fresh projects.

e) Stressed Asset Fund for Road Sector: Under construction stressed projects attract lower valuation in case of sale and have limited takers. Hence, stressed asset fund may be created to complete the project and then considered for asset sale as it may evince greater interest from investors.

f) Stuck Road Projects: NHAI pays lenders an amount equal to the lower of (a) value of work done; or (b) 90% of Debt Due. However, the payment is held till settlement of claims with Concessionaire. We suggest, payment to lenders should not linked to settlement process and concurrence of concessionaire should not be required.

g) Fixed Concession Period (Toll): Concession Agreement to allow fixed Operation period rather than fixing Concession Period as any delay in construction reduces operational period which affects project viability.

h) Termination Payment shortfall risk: The Project cost assessed by Authority and Concessionaire / lenders shall be harmonized and termination payment shall be linked to revised repayment schedule for refinancing cases.

i) Traffic Risk: If actual traffic is lower than anticipated, the Concession Agreement to provide higher cap of upto 30% for increasing Concession Period (as against existing cap of 20%)

j) Delay in receipt of approval: A suitable mechanism may be developed for providing single window clearance for all approvals required for executing a project.

k) Termination payment in refinancing/ restructuring cases: Refinancing / restructuring of Project loan involves extension of repayment period based on revised cash flows projections by utilising longer available tail period. However, NHAI does not consider termination payment / Debt Due as per revised repayment schedule. No termination payment is available to lenders beyond maturity date of original loan. This result in shortfall in termination payment and loan will be classified as unsecured exposure.

141. SBI, in its written reply, further proposed the following steps that need to be taken to
resolve the issues faced by financiers:

a) Group exposure limit may be a challenge to Banks: Many of large business groups e.g. Tata, L&T, Large PSUs etc. have substantial exposures with Banks. RBI’s Large Exposure Framework (LEF) limits Group exposure to 25% of the Banks’ Total Capital Funds. We suggest additional 5% to 10% window may be made available for funding of infrastructure projects.

b) Concession Agreement: Any amendment to provisions of Concession Agreement should be done only with prior approval of Lenders (illustration: in one case Delhi Agra Tollways the escrow waterfall mechanism was modified, and supplementary concession agreement was executed without approval of lenders).

c) Land Acquisition Issues: Large number of projects experience delays due to non-availability of required land for completion of relevant project stretch. Government has already agreed to provide 80% (for HAM projects) / 90% (for Toll projects) land on Appointed Date. We suggest land where compensation has been paid-off to landowners shall be treated as available on Appointed Date rather than treating issuance of Notification for ‘acquisition’ of land as ‘availability of land’. An Independent Regulatory authority may also be established in road sector to speed-up resolution of contractual disputes / counter claims.

d) Arbitration: Once arbitration is awarded in favor of Concessionaire; it should not be challenged further in courts and Authority to release funds promptly to settle lenders dues.

e) NHAI Right to set-off from Termination payment: NHAI has introduced a new provision in Model Concession Agreement which enables it to deduct any payment due towards NHAI such as premium payment, penalties from Termination payment and only balance amount is released to lenders. Lenders should get their 90% or 100% of debt dues as per eligibility. Any such deduction should be recovered from the Concessionaire / adjusted against his claims.

142. The Committee takes note of the information furnished by SBI with regard to the various challenges faced by lenders in road sector, alongwith its proposed solutions
to the same. The Committee recommends that the Ministry may ensure transparency regarding the status of land acquisition for a given project, starting from its tendering stage, for public scrutiny as well as to help bidders and lenders be more aware of the progress being made in the same. The Committee agrees with SBI’s suggestion to make provisions for automatically de-scoping the portion of land which is not handed over by the Ministry/NHAI to the concessionaire within a defined period of time.

143. The Committee recommends that NHAI may timely settle the amount it claims to be due, to the lenders, in case the project goes to arbitration and dispute resolution, and not wait till the settlement process is over. Any additional amount that may be needed to be paid, can be settled after the settlement process. This would help free up lenders’ capital for financing other road projects, while lowering the adverse impact of long-drawn arbitration/settlement processes on the lenders.

144. The Committee believes that infrastructure lending poses a unique challenge to banks in terms of the heavy amounts that need to be sanctioned for a long duration of time, with the investment being subject to several risks that might hamper the successful execution of a given road project. Innovative financing methods such as take-out financing can permit increased participation of banks since the duration of time for which the funds lent by the bank are locked up decreases significantly, thereby also reducing the risk faced by the banks in their investments made to the road infrastructure sector. The Committee agrees with SBI’s suggestion and recommends that the Government may consider mandating institutions like NIIF and the upcoming Development Finance Institution announced in Budget Session, 2021 by the Hon’ble Finance Minister, to establish a fund for facilitating take-out financing for operational projects so as to create additional headroom for Banks to fund fresh projects. The Committee recommends that the necessary framework for take-out financing may be put in place. The Ministry may also look into the creation of a special Stressed Asset Fund for road sector to fund the completion of stuck road projects, which might otherwise have limited takers.

145. The Committee recommends that the Ministry may develop a suitable mechanism for providing single window clearance for all approvals required for executing a project, with timelines being fixed for taking decisions regarding such approvals, where possible, so as to minimize delays on account of obtaining necessary
approvals.

146. The Committee desires that RBI may look into the feasibility of SBI’s suggestion to provide an additional 5% to 10% window to the existing group exposure limit of 25% of the Banks’ Total Capital Funds under its Large Exposure Framework limits. In this regard, RBI may consider placing slightly increased exposure limits in case of business groups which are considerably large and are in financially sound condition, since the existing limits might be too low, especially for smaller banks, which might not have enough funds to diversify their long-term infrastructure investments beyond a certain point.

147. The Committee recommends that in cases where arbitration is awarded in favor of concessionaire, the Ministry/NHAI may assess the soundness of its claims and whether it is felt that these claims have reasonable chances for being considered to be valid by courts. The Ministry/NHAI should not make it an unwritten rule to challenge arbitration decisions in courts when these are not awarded in its favor, and the possible resultant delays in the project on account of court proceedings may be duly considered before reaching upon a decision regarding whether to appeal the award in courts.

148. Central Bank informed the Committee that the major issues faced while lending to Road Sector are:

a) Inherent problems such as mismatch between the tenor of deposits that banks can raise and the duration of the loans required for long gestation, capital intensive infrastructure projects.

b) Project implementation issues like cost overruns which is caused due to the following reasons:
   - Delay in Land acquisition.
   - In ability/delay in obtaining commitment from lenders for financing the project.
   - Delay in obtaining necessary approvals like environmental clearances, access to project site etc.,
   - Inadequate project viability studies carried out by Govt. / implementing authority.
   - Various legal issues intervene during implementation stage of the project which may lead to stall the project.
   - Issues in construction phase:
     i) Project design
ii) Delay in construction due to change in construction parameters such as project specification, requirement of additional material.

iii) Failure/delay in obtaining the regulatory approvals.

- Issues concerning NHAI:
  i. Rigidity in Concessionaire Agreement of NHAI to engage in re-negotiations of terms of Concessionaire Agreement
  ii. Overleveraged Balance Sheet causing inability to pump in promoter capital or obtain refinancing to fund cost overruns

149. Central Bank suggested that there should be a one-stop window for all approvals.

150. The Committee notes the issue pointed out by Central Bank regarding project delays on account of delay in obtaining commitment from lenders for financing a given road project. In this regard, the Committee recommends that provisions may be included in bidding requirements to ensure that only serious bidders who can raise the amount necessary for execution of the project, should it be awarded to them, are allowed to place a bid. This may be implemented by way of requirement of a certificate from an institution stating that they’d be willing to finance the concessionaire/contractor in case the project is awarded to them. The Committee feels that doing so would help eradicate delays caused by financially inept bidders from winning bids and causing delays later on when they are unable to get lenders to finance them to execute the project.

151. IDBI Bank, in its written note, furnished the following details of various issues faced by the sector and the possible solutions thereto:

a) Lot of Gap in the Original project cost and Actual cost.
   - Reasonable assessment of the Project cost shall be carried out in detail and shall be accepted by the authority, before commencement of the Project. Bank funding shall be availed based on the cost approved by the authority and the difference, if any, shall be funded by the Promoter through Equity upfront.
   - Banks shall stick to the Project cost as approved by the authority without any increase.

b) Lot of Mismatch in Financial Progress and actual progress.
   Certification of the progress (both Physical and Financial) shall be furnished by authority / Owners Engineer from time to time to the Banks. Further, Authority shall also vet fund requirement for the next 3 months. Based on the above, Lenders Independent Engineer
(LIE) shall submit confirmation to the Banks for release of further funding. In other words, Lenders Independent Engineer and Authority shall agree to the same Physical and Financial progress.

c) Project Monitoring, a big challenge.
   • Project Monitoring report of the Authority / Owners Engineer / third party shall be furnished to LIE. LIE shall quickly review and submit to Banks.

d) Gap in envisaged and actual cashflows from the Projects.
   • Authority / Contractor shall amicably resolve the issue after analyzing the reasons for such shortfall in cashflows.
   • Authority shall pay the compensation or unsustainable debt to the Banks and the same could be recovered by the Authority over the concession period, as the case may be.
   • Create a provision for Special Grant / funding from Authority for meeting such shortfall.

e) Authorities not approving increased cost leading to dispute and Arbitration. Court litigation.
   • Contracts shall be very clear without any ambiguity or scope for different interpretation. Wherever discretion / scope for interpretation is there it would lead to dispute.
   • Arbitration (other than where recent Niti Ayog Guidelines are applicable) and Court Litigation are very long drawn process. Therefore, all the projects awarded shall have a set process for dispute resolution.
   • Further, design change, if any, should get approved (Instances of delay in approval for design changes are also prevalent) along with the final cost for the proposed changes.
   • Arbitration/ Court litigation blocks the BG limits sanctioned by the Banks.
   • SoP (for all sorts of contracts) to be put-in place to approve any changes and associated costs within a time bound period.

f) There is no set procedure for deciding on Arbitration in respect of projects granted by State Govt Authorities.
   • There should be a proper procedure (similar to Niti Ayog Guidelines) for the Projects awarded by the State Government Departments, Undertakings and Others.

g) WC limits are getting blocked in the stalled projects. BGs are being en-cashed by Authorities:
   • Niti Aayog or similar Central Govt Ministry to issue SoP to all Depts. / Agencies, not to en-cash BGs of stalled projects. Instead Corporate Guarantees of Contractors can be obtained by authorities and Banks BGs shall be released.
Further, there are many instances, where even after completion of Defects Liability Period (DLP), BGs are getting extended due to non-settlement / approval of final bills. SoP may incorporate that Authority shall not seek BG extension, after DLP irrespective of status of bill settlement / approval.

h) In stalled projects, Banks are forced to renew the BGs (without payment of commission) to avoid invocation and further stress in the companies.

i) On implementation of any project, Authority is getting the physical assets post implementation of the Projects, contractors are earning profit. The anomaly is, in case of stalled projects Banks are unduly getting affected.

j) Banks are ultimately carrying all the associated risks of stalled projects.

k) For each Project being executed with Bank’s support viz., BGs obtained, Loans extended, a mechanism of recognizing Bank’s claims / dues, on priority, to be put-in place. This, to some extent, may alleviate concerns of Banks as well as remove any scope for diversion of compensations / awards to Contractors.

l) Banks may move away from generic WC loans to Project specific loans, with ring fencing of project cash flows

m) Companies are seeking enhancement in limits. 50% of construction companies are below investment Grade. Banks are not comfortable to sanction / release limits.

n) Banks shall finance only companies with minimum BBB and above rating.

o) No fresh funding to existing below investment Grade companies.

p) For accounts with below investment grade, suitable credit enhancements like Guarantee from funds like National Investment and Infrastructure Fund (NIIF) or similar longterm funding agencies, may be put in place.

q) In case of default by the Borrower, there is no fall back for the Banks, as there is no tangible security other than Project cash flows, loosing the total sanctioned amount.

r) Industry shall come up with a solution on what sort of security it could offer as a fall back arrangement.

s) Monitoring Utilization of WC limits is a big challenge. Agency for Specialized Monitoring (ASM) is mainly Chartered Accountants (may be hiring Engineers on part time). Having no Knowledge on Technical issues.

t) IBA may prescribe guidelines on minimum number of Chartered Accountants and Engineers (on permanent basis) to be associated in the Agency for Specialized Monitoring (ASM) assignment based on the Project complexity / turnover.
152. IDBI, in its written reply, further suggested that the following steps need to be taken to resolve the issues faced by financiers:

a) Claims filed by project implementation companies need to be processed expeditiously to ease the cash flows during implementation/operations.

b) Usually claims arise primarily on triggering of certain events as per Concession Agreement such as delay in right of way as well as change in scope during project implementation or de-scoping certain stretch of land due to non-receipt of Govt./environmental/forest clearances etc.

c) A separate dispute resolution body may be constituted of retired judges/technical experts/ Bankers exclusively in respect of Road projects which are in dispute with NHAI/Central Government/State Governments. Resolution suggested by such Body shall be implemented in a time bound manner.

d) This will result in time bound resolution and provide way forward for the Developers/banks and FIs.

153. The Committee takes note of the apprehensions raised by the IDBI Bank regarding a lot of gap in the original project cost and actual cost. A reasonable assessment of the estimated project cost should be made by the authority. Provisions should be made to make necessary re-assessment of the project cost approved by the authority, in case substantial delays occur on account of reasons other than the concessionaire, factoring in present raw material costs, effect of inflation etc. The Committee agrees with the IDBI Bank’s suggestion that the bank funding should be availed based on the cost approved by the authority and the difference, if any, should be funded by the promoter through equity upfront.

154. The Committee notes the observation of IDBI Bank regarding there being a lot of mismatch in the financial progress and actual progress of road projects. The Committee recommends that a mechanism may be put in place to ensure that the progress made in a project is assessed periodically and where possible, proof of the progress achieved so far may be recorded through drone shots or other technology. The information regarding the physical progress of the project may be uploaded on a public platform, so as to allow public scrutiny of the progress achieved, as well as to permit banks to release further funds based on the actual progress made in the project on ground.
155. The Committee recommends that the Ministry may coordinate with State Governments to help establish well-defined procedures for arbitration and settlement for the projects awarded by State Government Departments, Undertakings etc.

156. The Committee notes the very valid observations of IDBI Bank that in case of default by the Borrower, there is no fallback for the Banks, as there is no tangible security other than project cashflows, causing a high level risk of losing the amount Banks lend to Borrowers. Banks face this inherent problem of lack of tangible security while lending to road projects. The Committee recommends that an in-depth study may be made by the Ministry with regard to the possible solutions to the same. Having some sort of security to fall back on would solve a major pain-point faced by banks and financial institutions while lending to the road sector, and allow them to make more credit available to fund the road infrastructure projects.

157. The Committee notes the issue mentioned by IDBI Bank regarding the challenges faced in monitoring utilization of Working Capital limits through Agency for Specialized Monitoring (ASM). The Committee recommends that the Indian Banks’ Association may make it mandatory for ASMs to have experienced Engineers on-board, besides Chartered Accountants, so that the ASM has knowledge regarding technical issues of road projects as well, which will substantially aid it in monitoring the utilization of working capital limits in road sector lending.

158. The Committee desires the Ministry to look into the creation of a dedicated dispute resolution body comprising of retired judges/ technical experts/ bankers exclusively to settle disputes pertaining to road infrastructure projects.

159. IFCI Limited informed the Committee of the various challenges faced in lending in the Highway sector:

- Land Acquisition: Delay in acquisition of land is the major cause of stress in the road sector.
- Substantial cost overrun: Due to delays in obtaining timely clearances/approvals, land acquisition/ROW issues
- Traffic Risk: Many roads do not realize the envisaged traffic, which skews the financial viability for the developer.
- Stalled Projects: Developers are not in a position to infuse equity into stalled project,
which hampers tie-up of debt.

- Weak Financial Strength of Concessionaire: In HAM projects, 40% of the project cost is funded by NHAI and rest has to be funded through debt and equity. Bid Eligibility criteria has been revised from the min Net worth criteria from earlier 25% of EPC Cost to 15% of EPC Cost. As a result, some very small companies can participate in the bidding and may not have enough technical/financial wherewithal to complete the project. Banks may also not be inclined to fund leading to overall delay in the process.

- Subdued capital market: There haven’t been major IPOs / FPOs of major road developers in the recent past, which restricts their access to equity capital and thereby their ability to take up new projects.

160. IFCI suggested the following possible solutions for resolving the funding constraints in the road infrastructure sector:

- Refinancing: Refinancing of loans extended by banks and NBFCs themselves.
- 5:25 Scheme
- Take out financing: Frees up capital for banks and helps manage ALM.
- Revival of DFI: DFIs have access to long term low cost funds, the benefits of which can be passed on to projects.

161. The Committee desires that the Ministry may look into solutions proposed by IFCI for resolving the funding constraints in the road infrastructure sector.

162. India Infrastructure Finance Company Limited (IIFCL), in its written reply furnished to the Committee, threw light on various issues faced by lenders in financing road projects, along with its suggestions for the same:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Issue</th>
<th>Suggestions</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Lack of Tripartite Agreement between Lenders, Concessionaire and the Concessioning Authority</td>
<td>PPP concession agreements are executed among the Concessioning Authority and the private sector developer. Lenders are unable to pre-empt any unilateral action even when ~70% of project cost is provided by them.</td>
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<tr>
<td><strong>2</strong></td>
<td>Expediting remittance of termination payment</td>
<td>Receiving termination payment has witnessed significant delays thereby making accounts as NPA. The process needs to be expedited. At least 75% of the claimed amount should be paid immediately, and in case of disputes, arbitration process may continue.</td>
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<tr>
<td><strong>3</strong></td>
<td>Implementation of MoRTH Circular on stuck projects</td>
<td>At present, there are multiple Guidelines and policies of MoRTH which need to be considered by the parties involved. In case of BOT Toll/Annuity projects, during the construction phase, there is no security available to the lenders in case the project is terminated before achieving COD. MoRTH has issued an Office Memorandum dt March 9, 2019 for the resolution of such stuck projects. The circular should be implemented by all central / state level authorities. Termination payments should be paid based on the loan disbursed/ physical completion. (In many cases lenders disburse the funds based on the physical completion and to meet IDC to keep the account being standard pending release of grant / VGF by NHAI.)</td>
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<td><strong>4</strong></td>
<td>Expediting Arbitration Process</td>
<td>Huge delays are being observed in completion of arbitration process resulting in low recovery for lenders and accounts turning into NPA. Presently, NHAI does not have any grievances redressal time except SAROD which is almost non-functional and no awards have been received till date through SAROD mechanism. Greater transparency is needed in the sector by putting the hearing details / orders in the public domain</td>
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<td><strong>5</strong></td>
<td>Right of Way(RoW)</td>
<td>Appointed Date should only be declared on acquisition of at-least 90% of unhindered RoW which is presently 80% as per the Concession Agreement. Delay in handing over of land results in project getting stuck. Balance land should strictly be made available within 180days of Appointed Date as per the provisions of Concession Agreement.</td>
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<td><strong>6</strong></td>
<td>Approvals/ Clearances</td>
<td>All approvals and clearances must be obtained by the NHAI before award of the project or declaring Appointed Date. Most of the road projects in the past have suffered either due to non-availability of ROW and/or approvals like GAD for Railway Over Bridge, Forest, Environmental Clearances not being in place. Time-Bound approval for important matters such as cost overrun, time overrun, granting of PCOD/COD, approval for toll collection, remedial action in terms</td>
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of prevention of leakage of traffic, corrective/punitive steps in case of instances of diversion of toll, extension of concession period etc. should be in a time bound manner

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<td>7</td>
<td>Extension of Time and Confirmation for non-lapse of annuity</td>
<td>NHAI is issuing EOT to HAM projects getting delayed owing to various reasons. However, with grant of EOT it shall be desirable if NHAI also mentions the fate of annuities due to the delay in DCCO. It is important for lenders to be sure that annuities shall not get lapsed on account of granting EOT to a project.</td>
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<td>8</td>
<td>Change of Scope (CoS)</td>
<td>Any CoS to be given by NHAI should be approved within a definitive time frame from the Appointed Date and the amount of CoS should also be limited based on the Bid Project Cost.</td>
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<td>9</td>
<td>Limited number of projects should be awarded to a single developer</td>
<td>It has been observed that a single developer with limited resources is obtaining large number of projects. This not only results in delayed Financial Closure but also projects getting stuck due to non-availability/ limited availability of resources with such developers. NHAI may limit the projects to a single developer based on the analysis of their resources viz man, machinery, financial strength etc. and their past track record.</td>
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<td>10</td>
<td>No Back dated Appointed Date</td>
<td>In some cases it is observed that ante dating of Appointed Date has been declared by NHAI which impacts the projects viability and dampens the confidence of lenders. It should be ensured that the Appointed Date issued to any project should not be back dated.</td>
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<td>11</td>
<td>Benchmarking of O&amp;M Cost</td>
<td>NHAI should provide a benchmark for O&amp;M cost based on factors such as state-wise input cost, terrain etc. which may be updated on half-yearly basis. NHAI should evaluate first year O&amp;M component quoted by the bidders as part of the Bid against these benchmarks to ensure adequacy of O&amp;M payment for O&amp;M of the project.</td>
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<td>12</td>
<td>Availability of Independent Engineer (IE) report</td>
<td>IE report should be made available to the Lead Bank on regular basis. IE report may also be made available online for easy accessibility by lenders.</td>
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<td><strong>Delayed decision making</strong></td>
<td>It has been observed that NHAI takes time in decision making which causes abnormal delays to the project particularly with respect of release of grant, annuity, revenue shortfall loan, change of scope, claims for utility shifting / tree cutting, etc.</td>
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<td><strong>Meeting Obligations</strong></td>
<td>All stakeholders in a project must fulfill their duties and obligations in a timely manner. It has been observed that NHAI has often failed to fulfill its obligations which has resulted in the projects losing their financial viability and lenders have been the main sufferer in both Toll and Annuity projects. NHAI should be advised to meet its obligations under the Concession Agreement.</td>
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<td><strong>Rationalized compensation</strong></td>
<td>Projects wherein delay in implementation is on account of delay in handing over of requisite RoW / defaults attributable to Authority and hence resulted in cost and time overrun should be compensated by the Authority through suitable extension in the Concession period or restoration of the lapsed Annuities as per the existing policy.</td>
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<td><strong>Cost Overrun Funding</strong></td>
<td>NHAI should recognize funding of Cost Overrun for calculation of Termination Payment.</td>
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<td><strong>Project Report Preparation Activities</strong></td>
<td>Project reports prepared by NHAI before bidding for inviting RFP vary with ground realities in terms of Bill of Quantities (BoQ) of works to be executed and traffic projections. These lead to projects facing cost overrun and time overrun and therefore adversely affect the viability of the projects during implementations. There is a need to strengthen the Detailed Project Report (DPR) so that fully prepared projects come for appraisal to the Lenders. Further, the cost estimation in the DPR should be close to the actual value.</td>
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<td><strong>Quoted annuity amount to be credited in escrow account</strong></td>
<td>NHAI should release quoted Annuity amount without any set-off / deduction in escrow account and dues owed, if any, to NHAI shall be paid following waterfall mechanism in terms of Escrow Agreement.</td>
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<td><strong>Increase in Time for Financial Closure</strong></td>
<td>Considering lockdown in the Country and COVID 19 situation, time frame of 150 days for achievement of Financial Closure may be increased to 180 or 210 days.</td>
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<td>21</td>
<td>Compliance by Concessioning Authority</td>
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<td>Pending Termination Payments must be settled in a defined timeframe to protect the interest of lenders and developers by the Authority.</td>
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<td>Many road projects, particularly under Public Private Partnership (PPP) framework have suffered owing to reasons including non-availability of requisite land, delay in approvals like Forest &amp; Environmental Clearances by concerned Authorities, delayed and/or short payment of grants by the Concessioning Authority. Such reasons are obligations on part of the Concessioning Authority and are beyond the control of project developer or the lenders.</td>
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<td>At present, there is a lack of fair distribution of penalties imposed in case of default by the developers and/or concessioning authority. For instance, in case of NHAI’s concession agreements, the concessionaire bears almost double the penalty for a default, as compared to the penalty charged on the concessioning authority in case of similar default.</td>
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<td>In many of the road projects, requisite Right of Way (ROW), land and clearances are not handed over to the SPV on or before appointed date or even after elapse of substantial time.</td>
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<td>Lack of a mechanism in the road sector which ensures that disputes between Concessioning Authority and Developers re resolved in a fair and transparent manner.</td>
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<th>Asset Classification Norms by RBI</th>
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<td>Since road project involve gestation period ranging from 2 to 3 years and further operational period of 15 to 25 years, a project sees various cycles of economic fluctuations in comparison to retail loans or other industrial projects.</td>
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<td>Accordingly, having same asset classification norms for retail loans and also for road project loans is not judicious.</td>
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163. The Committee feels that lenders play a critical role in successful execution of PPP projects in the road sector. The Committee notes the apprehension of IIFCL regarding the lack of a tripartite agreement between the Concessioning Authority, the Concessionaire and the Lenders. The Committee recommends that the Ministry/NHAI
should frame Tripartite Agreements for its PPP projects, so as to provide some protection to the lenders, clearly listing the rights and remedies available to all the parties involved in the agreement.

164. The Committee recommends that the Ministry may work on resolving the issues causing delays in remittance of termination payment. In case of disputes, the minimum amount agreed upon by both the Concessioning Authority and the Concessionaire may be released immediately, so as to minimize the impact caused by delays in arbitration processes on the lenders and the concessionaire.

165. The Committee desires that the Ministry may put in place provisions to ensure that all necessary approvals and clearances for a given road project are obtained before the declaration of its Appointed Date, so as to eradicate the delays faced by concessionaires on account of delays in obtaining such approvals.

166. The Committee recommends that NHAI may issue clarification regarding the fate of annuities in cases where Extension of Time (EOT) is issued in HAM projects facing delays.

167. The Committee takes strong note of the observation made by IIFCL regarding large number of projects being awarded to a single developer with limited resources. The Committee feels that such carelessness on account of NHAI/Concessioning Authority while awarding road projects would inevitably lead to road projects getting delayed on account of the concessionaire’s inability to make simultaneous progress on multiple projects with limited resources. The Committee, therefore, recommends that a Central Database may be maintained by the Ministry to keep track of the various awards presently being carried out by a bidder. Alternatively, submission of such information may be made mandatory for the bidder. The database thus created by the Ministry may be updated as soon as a bid is awarded, so that the other bids made by the bidder reflect that they are already working on that project and an informed decision can be made regarding whether the bidder would be capable of working on another project. Clear limits may be defined for concessionaires regarding the number/size of projects that can be awarded to a concessionaire, based on the resources viz. labor, machinery, financial strength etc. available with them.

168. The Committee recommends that the reports furnished to the Ministry by Independent Engineer (IE) should be made available online to the lenders involved in the project. This information would be crucial for the lender to make decision regarding the further release of funds for the road project.
On its potential role in increasing flow of funds to road projects, IIFCL stated that its financial assistance has led to the development of around 28,000 Kms of roads, which constitutes around 16% of India’s National Highway Capacity. IIFCL has provided gross sanctions of over ₹ 51,000 Crore and disbursements of over ₹ 26,000 Crore to Road Sector under its Direct Lending and Takeout Finance Schemes. IIFCL is also the largest lender to HAM Projects with disbursements of around ₹ 10,000 Crore to around 60 Projects of NHAI. However, in order to increase its support to the road sector in a manner that is presently required, and to suitably adapt to the changing market conditions, the following modifications in IIFCL’s Scheme SIFTI, are considered necessary:

a) Reduction of minimum door to door maturity to 5 years, from present limit of 10 years
b) Reduction of minimum borrowing tenor to 1 year from present 10 years, suited to manage the Assets and Liabilities of the Company.
c) Permission for IIFCL to Invest in InvITs and Project Bonds
d) Allowing IIFCL to assist NHAI & State Authorities.

The Committee takes note of the important role played by IIFCL in financing road infrastructure sector projects and recommends that the Ministry may consider granting permission to IIFCL to invest in InvITs and project bonds and to assist NHAI and State Authorities in financing road projects.

Indian Overseas Bank, in its written note furnished to the Committee, listed the following risks faced by lenders in the road sector:

- Change of scope of work
- Land acquisition delay
- Poor preliminary soil information and investigations
- Schedule delay caused by rejection of unqualified materials

IOB shared the following problems faced by bank in lending and recovery in the road infrastructure sector:

- Delay in servicing the debt is mainly due to stretched liquidity position on account of lower than envisaged toll revenues
- Borrowers requesting for extension concession agreements based on traffic study which is subject to NHAI scrutiny which is getting delayed
- Low traffic on the project stretch in the current fiscal due to the slowdown and lockdown on account of global pandemic COVID 19
- Lower than expected Toll collection, impacting the cash flow. Termination of
projects

- State Governments exempting toll for certain vehicles and not compensating the concessionaire in spite of continuous follow up.

- Subsequent to completion of the project, State Highways have developed roads parallel to NHAI road resulting in diversion of traffic

- Projects are not completed due to various issues like handing over of land, clearance from various offices, local public issues delay in PCOD/COD.

- Cost overrun loans by lenders in order to complete the project affected the viability of the project.

- Major Maintenance Work every five years diverts the toll collection amount resulting in default

- NHAI without consulting lenders unilaterally withheld Annuities for the disputes with concessionaire.

- Though Hybrid Annuity model appears to be assured recovery source for lenders compared to toll collection due to delay, non-maintenance of road etc., NHAI delays/refuses to disburse Annuity.

- Based on concession agreement whenever lenders opt for termination of the contract there was undue delay in releasing the eligible amount to lenders

- Authorities not accepting cost overrun loans for arriving claim amount at the time of termination.

- While processing termination of claim lenders, NHAI deducts various counter claims without proper justification/consultation with lenders.

- In some incomplete projects instead of engaging L1 concessionaire, NHAI authorizes existing concessionaire to complete the work with escalation {clause out of the Annuity amount withheld. Banks are mute spectators and have to bear the loss for concessionaire's failure to complete the project.

- Since securities are toll collection which is intangible, the scope for resolution through NCLT is bleak.

173. IOB threw light upon the following issues it is facing with NHAI:

- Loss in operation in FY 13 due to drop in commercial traffic due to bifurcation of state of Andhra Pradesh and ban on sand mining in the region. Company has claimed compensation from NHAI on account of change in law to recover losses and has requested for deferral of revenue share. NHAI has not accepted the claim due to
differences in claim computation methodology. Request for reversal of Revenue share was also rejected. Under Arbitration with NHAI. Verdict of Tribunal holds the key

- NHAI suspended toll collection and operating rights of the company. The toll collection by NHAI will continue to be deposited in an escrow account maintained with the lead lender and the said funds will be utilised for servicing debt as per the escrow mechanism. The company has filed case against the action of the NHAI in the Delhi High Court.

174. IOB further briefed the Committee about the regulatory support required by the banks to improve lending in road infrastructure sector. In this regard, it suggested the following:

- Special Restructuring mechanism is to be implemented for Road sector without changing the asset classification.
- Any change in repayment programme should not be treated as Restructuring as Road projects are depending on the toll collections which may differ from initial projections
- Provision requirement in Road sector should be relaxed for certain period.
- Extension of COD should be permitted based on the actual basis, without restrictions on number of times. (presently max two times).
- When resolution plan is accepted and implemented as per guidelines, the account upgradation and reversal of provisions to be allowed.

175. The Committee recommends that the Ministry may thoroughly examine the issues mentioned by Indian Overseas Bank and take effective steps to address the same.

176. Indian Bank informed the Committee about the following issues faced in lending in road sector:

- Inability or delay in getting the required land for the road project lead to partial completion based on the land availability, and delay in declaring COD/PCOD due to non-availability of land to the extent required as per concession agreement result in account being declared as NPA. There must be a provision to declare PCOD based on the completion of the project if the delay is beyond the control of the concessionaire.
- Lower level of Traffic and diversion of traffic due to parallel roads developed subsequently resulting in lower revenues affecting the repayment capacity in toll projects.
Now under HAM model land availability is ensured and Government will bear traffic risk as the developer receives annuity payment.

Non acceptance of the increase in the overall project cost at the time of sanction / execution vis-à-vis the cost accepted by the authorities at the time of conceiving the project resulting in dispute in the settlement in case of termination of the concession agreement. Risks related to increase in raw material cost. This is largely mitigated in the HAM model as the project cost is adjusted for inflation at regular intervals during construction period.

Delay due to COVID.

177. The Committee reiterates the recommendation it made in para 153 of this Report and desires that steps may be taken to ensure that project cost is revised to factor in inflation as well as changed raw material costs, in case of project delays which are caused by reasons other than the concessionaire’s sub-optimal performance.

178. PNB informed the Committee that long-term loans sanctioned to Road sector are turning into non-performing assets (NPAs) due to various reasons:-

a) Financial difficulties inherent in Road project such as acquisition of long segment Right of Way (RoW), environmental clearance and associated with resettlement issues as well as unforeseen weather and geological condition. As a result due to project delay increase both cost and time overrun.
b) Lack of dispute resolution is one of the major hurdles in clearing stressed or delayed projects
c) Substantial risk associated with unpredictability of revenue and toll receipt due to competing route, unexpected revision of toll rates, waiver of toll fee for certain segments and availability of connecting roads.
d) Non infusion / delayed infusion of promoter contribution
e) Delay in approval and release of funds in case of Change of Scope (COS) / utility shifting and delay also in decision making at various level.
f) Shortage of skilled manpower and equipment in large number of projects. Poor quality Detailed Project Report (DPR)
g) Recently Awarded project under HAM address the issue in certain extent.
179. The Committee recommends that the Ministry may take appropriate steps to ensure training facilities to tackle the shortage of skilled manpower in road projects. Assessment may be made regarding the present shortfall in terms of human resources in road infrastructure sector and a detailed plan may be made to address the same.

180. The Committee desires the Ministry to look into the issue of delay in approval and release of funds in case of Change of Scope/ utility shifting, as well as in delay caused in road projects due to delays in decision making at various levels. The Committee recommends that the Ministry may prescribe reasonable but fixed timelines for decision-making by the Concessioning Authority at different levels.

181. Union Bank furnished the following list of issues faced by the banks in financing road projects:

   A. Data not available on site of the authority/company financials: At the time of assessment of credit limits, banks have to rely on the data submitted by the company. There is no validation of the same from the authority.

   B. Excessive dependence on outside agencies: Infrastructure projects are highly technology driven and becoming more and more complex in nature in view of rapid changes in technology. Banks run the risk of excessive dependence on outside agencies to evaluate the techno economic viability of the projects.

   C. Delay in achieving financial closure in HAM projects: With a few issues like low equity requirements on the part of the developer under the HAM model, financial closures have become difficult, thus explaining the over 10-month delay. Some bidders have won a disproportionate number of projects and as a result they now have orders that add up to over three times their annual revenue, creating difficulties in achieving financial closure.

   D. No clear policy for redressal of complaints: There are delays in redressal of complaints/grievances by authority. Clear policy at NHAI, HQ level in dealing with contractual disputes to be in place.

182. Union Bank submitted the following general suggestions to improve funding towards Road Projects:

   a) Increase in promoters’ contribution and corporate guarantees of sponsors to be stipulated to improve skin in the game in HAM projects.
b) Setting up of Infrastructure Debt Funds (investment vehicles which can be set up as NBFCs and are used for investments in infrastructure projects) to overcome the sectorial ceiling issues being faced by Banks.

c) Banks are not involved in Bid Document stage and allotment of contracts. The Bidding criteria mainly focus on meeting the bidding parameters rather than capacity of the bidders in completion of the project. A qualitative approach may be adopted in bidding stage.

d) Recently revised Model Concession Agreement guidelines by MORTH may address this issue to a greater extent.

e) A National Level Infra Authority (like RERA) may also be considered for the purpose of redressal of complaints/grievances.

f) Provision should be made for signing of Supplementary Agreement for balance works and issue Completion Certificate to avoid inordinate delay in identifying and sanction of Change of Scope (COS) / Extension of Time (EOT).

g) Indian government has set up a PMG (Project Monitoring Group) in January, 2013 to oversee and ensure speedy implementation of large value infrastructure projects that are of national importance. The project funding Banks and FIs though are one of the key stakeholders, currently they are not part of the PMG. It is suggested that these Banks and FIs may be included in the PMG meetings as observers/invitees.

h) Sharing information on line in public domain of projects along with the reasons for the costs and time overruns. This mechanism will lead to greater accountability by fixing responsibility on the concerned stake holders and reduce the delays in project implementation.

i) Automation of all toll plazas to capture the toll revenue collections effectively by the banks, avoiding diversion of funds.

j) Project site inspections at periodical intervals by banks and financial institutions should also include NHAI and other related government agencies so that the collective responsibility of all stake holders in project review and monitoring is reflected in letter and spirit.

183. The Committee takes note of the issue faced by Union Bank wherein it has to rely on the data submitted by the company alone, at the time of assessment of credit
limits. The Committee strongly recommends the creation of a well-maintained central database keeping track of the projects executed by different concessionaires across the country. The database may have important details like the present status of the current projects being executed by a concessionaire, the quality of their past works, financial liabilities (if any) of the Concessionaire as per the Concessioning Authorities. The Committee feels that having such a database would not only help bankers make more informed decisions while lending in the road sector, but it would also help Concessioning Authorities to take a more nuanced approach while considering bids submitted by the concessionaire for any given road project.

184. The Committee desires the Ministry to look into the delays being faced in achieving financial closure in HAM projects and make suitable amendments to the MCA for the HAM projects, if necessary. The Committee further feels that the Ministry should review its current tender awarding methodologies and include safeguards to ensure that the number and size of projects awarded to concessionaires are reasonable enough with their financial capabilities, present annual revenue etc.

185. The Committee recommends that the Ministry may set up Infrastructure Debt Funds and consider providing some special tax benefits to attract investment from the general public in the road sector.

186. Department of Financial Services, in its written note, informed the Committee that the following challenges are faced by Banks and Financial Institutions in the Road Sector, particularly in BOT:

a) Land Acquisition Issues:
   - **Non-Availability of Land or details thereof** – The detailed status of land acquisition is not made available to all bidders at tendering stage, to enable it to assess construction risk and factor in the same in the Bidding Cost. In several instances, project construction gets delayed due to non-availability of land for actual construction purpose.
   - **Right of Way (RoW)** – Right of Way is the total land area acquired for the construction of the roadway. Delays in land acquisition have led to non-availability of contiguous stretch for construction and thereby resulting in time and cost overruns in the project. All stakeholders suffer due to lack of preparedness with respect to 100% contiguous encroachment free and required clearances, before initiating the bidding process.
- **Land de-scoping in a project**: Appointed Date (ADs) in projects, has in the past been given when a significant part of the land was not available. In case, balance land is not made available to the concessionaire (developers), concession agreement provides for descoping (removing from the scope of work) of the same from Project. However, banks have informed that the process of getting balance land descoped is cumbersome owing to delays in approval from project authority, disputes between the developer and project authority, which hampers the viability of the project.

- **Delay in receipt of approval**: Concessionaire is required to seek separate approvals for mining and installation of Plant & Machinery from respective state governments. Delay in receipt of approval restriction on sand mining, soil excavation affects project completion timelines.

b) **Traffic Risk**: Developers / Lenders remain wary of investing in toll projects, given the high-risk factors associated with estimating toll collection and changing traffic flows on account of new roads / expressways coming-up nearby. Prospective Revenue generation estimate are not in line with estimates based on Actual status (Traffic Vertical Study Estimate) which effects the toll collection and puts the project under stressed condition. There have been instances wherein there was over 30% gap in actual toll collection and assumed toll collection at the time of bid, leading to loan defaults.

c) **Fixed Concession period**: In BoT Projects, any delay in construction period reduces operation / tolling period by same duration thereby impacting the Project viability vis-à-vis., increased project cost and increases the debt burden leaving the project totally unviable for all the stakeholders. Hence in line with HAM, in case of BOT projects also, the operation period should start on the project becoming operational.

d) **Termination Payment Shortfall Risk**: Detailed Project Report (DPR) prepared by the project authority does form not part of the tender documents and at times, it is 12 months older. The project authority recognizes the project cost based on the DPR which does not factor in the latest cost of construction, traffic estimates etc. The lenders fund the project based on the project cost assessed by them based on actual cost of construction, which leads to variation in NHAI project Cost and Lender’s Project cost. In case of termination, as the payments are linked to NHAI assessed Project costs which are generally substantially lower than the actual project costs, it leads to a high under-recovery for debt and equity during termination.

e) **Termination Payment for refinancing cases**: In case BOT model, if the lender’s debt has been refinanced/ restructured, which involves extension of repayment period based on revised cash flows projections, NHAI does not consider termination payment as per revised repayment
schedule. No termination payment is available to lenders beyond maturity date of original loan. This result in shortfall in termination payment and classification of loan as unsecured exposure.

f) Arbitration: In case of arbitration, even after award of arbitration in favor of concessionaire, it is observed that NHAI invariably appeals against the arbitration award in high court, which leads to delay in payment of lender’s dues.

g) Stuck Road Projects: In case of stuck projects i.e. project termination prior to achieving COD, MoRTH has policy to pay value of work or 90% of debt due whichever is lower. However, no payment is made until arbitration matter is settled with SPV. Thus, lenders do not benefit from the policy. Hence, payment to lender should be linked to settlement of arbitration claims with lenders.

h) Bank Guarantees (BGs) issued by Banks – It is observed that in case of stalled projects, authorities encash the BGs or seek extension of BG beyond Defects Liability Period (DLP) due to non-settlement / approval of final bills. As BGs, also form part of the exposure of the lenders, any encashment or extension of BG affects the cash flows of the already stressed projects, thereby increasing lender’s stressed debt.

187. DFS stated that some of the abovementioned challenges in the BOT Projects have been substantially addressed by HAM Model. However, the Banks/FIs have informed that the Concessionaire/Developers are facing following challenges in HAM Projects which need to be addressed by MoRTH:-

a) Interest rate on annuities in HAM projects: Model Concession agreement of HAM project has been amended to change the interest rate on annuities from the erstwhile Bank rate + 3% to Average MCLR + 1.25%. However, the same has been effected only for new HAM projects, whereas the steep decline in Bank rate over last 2-3 years, has resulted in many existing projects becoming unviable. Further, the Interest Rate on annuities linked to MCLR may be fixed for a period of say 5 yrs, to enable the Lender’s factor in the same while assessing the project cost.

b) Land Acquisition & De-scoping of Land – Project Authority declare the appointed date even when the 80% of the land is not fully acquired. It may be ensured that 80% of the land is fully acquired with clear title and free from any encumbrances before declaring Appointed Date. Further, even though there is a provision that allows for descooping of the unavailable land from the overall project and issuing a partial completion date if the developer completes the project on the available land, disputes between the developer and the government often hinder a quick resolution. Quick reassessment and approval of revised bid project cost post descooping of the
unavailable land poses a challenge from a credit perspective as delays in the former can result in deferral in term debt disbursement by lenders and in turn impede project progress.

188. DFS further stated that apart from the above, following issues may also be addressed by MoRTH :-

a) Lack of alternative funding sources: Long tenor financing from non-conventional funding sources are subject to various limitations including several regulatory requirements, like IRDAI (Investment) Regulations, Investment guidelines for EPFO and other PF trusts, rating requirements like minimum “AA” credit rating on a standalone basis or with Government support for raising bonds, higher interest rates and high carry cost during project implementation stage etc. Thus, MoRTH may consider having a Scheme for Credit Guarantee in this regard to facilitate bond issuing companies/ PE investors to participate in road sector financing.

b) Introduction of Insurance Product for Termination Payments in Infrastructure Projects may be considered to address issue of payment in stuck projects in consultation with IRDA.

c) Lack of a Tripartite Agreement between Lenders, Concessionaire and the Concessioning Authority – Lender being providers of about 70% of the project cost, are the major financial stakeholders in an infrastructure project. However, PPP concession agreements are executed among the concessioning authority and the private sector developer. Therefore, lenders are unable to pre-empt any unilateral action adversely affecting them. Thus, there is a need for Tripartite Agreements between Lenders, Concessionaire and the Concessioning Authority. Such a system is followed in countries like the UK and Australia. This would provide comfort to domestic lenders. This would also act as fulfilment of a basic condition for enabling the overseas lenders to participate.

d) Lenders to be a part of Project Monitoring Group (PMG) - The Project Monitoring Group (PMG) is an institutional mechanism set up for the expedited resolution of issues and regulatory bottlenecks in projects with investments upwards Rs.500 crores in India. It seeks to enlist the unresolved project issues in respect of all mid and large sized Public, Private and PPP Projects and takes up fast-tracking of approvals, sectoral policy issues and removal of bottlenecks in expeditious commissioning. Lenders are not part of said group. Inclusion of Lenders, which are the largest financial stakeholders in any project, in the PMG would go a long way in enhancing the confidence of lenders in supporting such projects.

189. The Committee takes note of the plethora of challenges faced by Banks/ Financial Institutions in the road sectors, as shared by the Banks/FIs and DFS. The
Committee is of the considered view that lenders play an integral role in allowing PPP projects in road sector. The Committee, therefore, recommends that the Ministry may hold periodic meetings with the lenders to learn about the issues they are facing and address the same to the extent possible by making suitable amendments to the existing provisions. In this regard, an effective coordination mechanism may be established with the lenders, the concessionaires, RBI as well as the Ministry of Finance.

190. The Committee observes that many banks and financial institutions raised several issues regarding the present provisions for termination payment. The Committee, therefore, recommends that NHAI may review its current provisions for termination payments in consultation with the concessionaires and the lenders, and work out a mechanism to assess a fair value to be paid in case of termination of a road project. Doing so would help reduce the number of cases that go to arbitration and litigation, thereby resulting in minimization of delays on account of disputes arising out of termination payments.

NPAs in Road Sector

191. SBI further informed the Committee that the total outstanding of Banks to road sector is Rs. 1,94,921 crore, of which SBI’s share is about Rs. 55,941 crore i.e. 29% of total outstanding. As on June 30, 2020, total exposure of SBI to road sector is Rs.71,546 Cr (outstanding Rs.55,941 Cr). The road exposure of SBI increased from Rs.51,904 Cr (June-19) to Rs.71,546 Cr (June-20) with growth of 38%. SBI has extended credit facilities to 170 entities in road sector and major exposure in its portfolio includes NHAI (~Rs.37,000 Cr), Nagpur Mumbai Super Communication Expressway of Maharashtra road development corporation (Rs.8,000 Cr) and operational road projects viz. IRB Mumbai Pune Expressway (Rs.5,000 Cr), third TOT bundle of Cube Highways (Rs.3,500 Cr) first TOT bundle of Macquarie (Rs.2,000 Cr),) and MSRDC Sealink (Rs.1,650Cr). Total stressed assets of SBI in Roads sector is around Rs.7,500 Cr and NPAs stood at Rs.4,077 Cr as on 30.06.2020 which is about 7% of outstanding credit to the road sector. SBI has put in-place well-defined lending policy for financing NHAI HAM Projects. Till date, SBI has sanctioned 7 HAM projects having aggregate Project Cost of Rs.10,493 Cr with total debt requirement of Rs.4,490Cr (SBI share: Rs.3,779 Cr). The Bank is in discussions with NHAI / State Authorities for funding of large-scale greenfield projects such as Delhi Mumbai Expressway, Ganga Expressway etc. To ensure adequate supply of
credit to road sector, SBI has recently increased its internal exposure ceiling for Road Sector by Rs. 24,500 Cr.

**Exposure of Banks to Road Sector:**

Source: SBI Note on Role of Highways in Nation Building

192. The Committee notes the exposure of SBI to the road sector and applauds the recent increase made by SBI in its internal exposure ceiling for road sector by Rs. 24,500 crores. The data shared by SBI, however, points to the dwindling lending figures of the Banking Sector as a whole, wherein if one were to exclude SBI, the banking sector’s exposure to road sector has declined from Rs. 1,45,326 crores in June, 2018 to Rs. 1,38,980 crores in June, 2020. The Committee feels that lending institutions play an indispensable role in financing the road infrastructure sector in the country and desires that the Ministry may take strong note of this. The Ministry may address the issues faced by lenders in the road sector, many of which have been shared by them with the Committee, to ensure their support in funding the future growth of the road sector in the country.

193. The Committee notes that SBI’s stressed assets in road sector are about Rs. 4,077 crores as on 30th June, 2020, which is about 7% of the bank’s overall outstanding credit to the road sector. This is the best figure in terms of NPAs in road sector, as compared to the data regarding NPAs furnished to the Committee by the other banks/financial institutions. The Committee recommends that other banks/financial institutions should look into the methodologies followed by State Bank of India while extending loans to concessionaires in road infrastructure sector, and apply the same in their own institution in order to bring their respective NPA levels down.
194. In its written note on the subject, Central Bank of India submitted the following reasons for slowdown in financing fresh road projects by the bank:

i. Central Bank is under PCA. So there is restriction in fresh financing related to external rating, internal rating and risk weight.

ii. NPA percentage in Road sector is very high compared to other sectors and a limited exposure is being taken judicially as the sector is under ‘Watch List’ as per our Risk Management policy.

iii. Scarcity of Capital: The existing capital is being used for promoting Retail and MSME.

iv. In order to mitigate the issue of ALM mismatch of the tenor of deposits and the duration of infrastructure loans, the sale of long-term infrastructure bonds had been permitted by RBI, but few banks had exercised the option. RBI is expected to minimize certain “regulatory pre-emptions” to nudge banks into raising more long-term resources.

v. Why accounts became NPA in past?:
   a. Delay in acquisition of land and right of way.
   b. Delay in shifting utilities
   c. Construction of roads running parallel to the highways, thereby impacting the toll revenue.
   d. Delay in encroachment removal & slum rehabilitation
   e. Delay in approval of design and drawings by the project authority
   f. Various legal issues intervene during the implementation stage of the project which may lead to stall the project.
   g. Getting clearances from various authorities. (Environment clearance, tree cutting, shifting of utilities)
   h. Delay in getting approval from Railways for Rail over Bridge.
   i. The need for infrastructure financing in the country is huge. However, the non-bank sources (such as bond financing) have made insignificant contribution in this respect, forcing the banks to shoulder a large part of the burden of the financing needs.

195. Central Bank further stated that despite various measures taken by Govt. to push investments in Road Sectors, road construction so far in the current financial year has been lagging, attributable in large measure to the lockdown led disruptions, mainly, the
displacement of labour. The total projects announced in road sectors in the past 6 months have been the lowest.

(Rs. in Crore)

<table>
<thead>
<tr>
<th>Year ending</th>
<th>31-03-2019</th>
<th>31-03-2020</th>
<th>30-11-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure</td>
<td>5287.00</td>
<td>4328.00</td>
<td>4773.00</td>
</tr>
<tr>
<td>NPA</td>
<td>2681.00</td>
<td>2316.00</td>
<td>2297.00</td>
</tr>
<tr>
<td>NPA%</td>
<td>50.71%</td>
<td>53.51%</td>
<td>48.13%</td>
</tr>
</tbody>
</table>

*Road Sector Exposure of Central Bank of India*

196. The Committee is alarmed by the high level of NPA in Central Bank of India’s road sector exposure, which has been at such highs even before the start of the COVID-19 pandemic. The Committee feels that this might point to grant of loans without high quality in-depth analysis of the inherent risk in extending the loans, and should be looked into on priority basis by the bank so as to prevent this from snowballing into a bigger problem in the future.

197. Canara Bank submitted the following details regarding the NPAs in road sector before and Coronavirus pandemic and after it:

<table>
<thead>
<tr>
<th>Rs. In Crore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector</td>
</tr>
<tr>
<td>Road</td>
</tr>
</tbody>
</table>

198. On the issue of NPAs in road infrastructure sector, Canara bank stated that NPA in the industry is primarily on account of the Company not being able to generate cash flows as originally envisaged at the time of starting the project. Project cash flows depend upon various factors including traffic / foot fall. Loans are sanctioned as per the risk appetite of individual Banks. Bank considers various aspects while examining the projects under Road Sector which includes

- Credit profile of the Concessionaire
- Execution capability of the Concessionaire
- Financial flexibility of the Concessionaire
- Commitment to support the project in exigencies
- Track record for completing the projects within envisaged time and cost parameter and signing of fixed price EPC contract with reputed EPC contractor or sponsor having good creditworthiness.
• Availability of Right of Way (RoW)
• Status of clearances including forest clearance
• Complexity of the project road in terms of presence of structural work and terrain
• Stage of project progress and current project progress against stipulated progress
• Sponsor support undertaking to fund cost overrun and any cash deficit during under construction phase (including due to delay in release of grant)
• Corporate guarantee of sponsor till COD and receipt of first annuity
• Creation of Debt Service Reserve Account (DSRA) especially prior to commercial operations date (COD)

199. Canara Bank further submitted that it has adopted Board approved policies on financing MSMEs and Corporates (including project finance), and appraisal of such projects is done based on amount and complexity by specialized departments. Also, there are certain benchmarks which have to be adhered for considering a particular proposal, in normal course, and powers to permit deviations in such benchmarks are vested with certain delegated authorities. Hence, Bank normally exercises the required credit prudence while handling such proposals. Besides, NPA may also be registered on account on non-realization of book-debts, failure in managing the business efficiently by promoters, internal and external demographic factors, natural phenomenon, regulatory reasons etc.

200. IDBI Bank, in its written note on the subject, informed the Committee that it has sanctioned loans to various companies from time to time in the Road Sector and presently has exposure in 36 accounts with outstanding of about Rs.7911 crore [FB-Rs.7701 crore, NFB-Rs.210 crore]. Of the above, 15 accounts are NPA with Gross Principal FB Outstanding of about Rs.5719 crore [FB-Rs.5719 crore, NFB-Rs.0.04 crore]. IDBI further stated that the Bank is under PCA framework from May 2017. In view of the same, it is not taking any additional exposure in any companies, other than small exposures upto Rs.25 crore, as per the relaxations granted by RBI. Reasons for the accounts becoming NPA, inter-alia, include the following:

• Liquidity continues to be a major challenge for the developers / contractors;
• Delay in land acquisition / environmental clearances are leading to delays in project implementation;
• Lot of Gap in the Original project cost and Actual cost;
- Gap in envisaged and actual cash flows from the Projects;
- Delay in grant of various approvals like Extension of Time, Change of Scope, Extension of Concession Period, etc.
- Authorities not approving increased cost leading to dispute and Arbitration, Court litigation. There is no set procedure for deciding on Arbitration in respect of projects granted by State Govt Authorities
- WC limits are getting blocked in the stalled projects. BGs are being en-cashed by Authorities.
- Large amount of receivables of developers stuck in various stages of litigation;
- Delay in monetization of existing completed projects by the Developers.
- 50% of construction companies are having below investment grade credit ratings.

201. IFCI Limited, in its written reply furnished to the Committee, informed that as per the current book of IFCI, out of the total outstanding exposure of Rs.1094 crore in road sector, sub-standard assets amounts to Rs.671 crore, which is 61% of the total road assets, which looks inflated primarily due to exposure to the IL&FS road projects being classified as NPA.

202. IFCI informed the Committee that there has not been any new NPA in the road sector post the Coronavirus pandemic for IFCI. On need basis, RBI’s 1st and 2nd moratorium (which was a good 6 months period) was extended and road projects financed by IFCI were able to recover in that period.

203. The Committee is concerned to note that 61% of the outstanding exposure of IFCI is NPA. The Committee is not convinced by IFCI’s justification that the figure looks inflated due to exposure to IL&FS road projects. The Committee recommends that RBI may look into the matter and consider issuing guidelines limiting the extent to which a financial institution/bank can lend the funds to a particular infrastructure company.

204. IIFCL, in its written reply, stated that there is no adverse effect of COVID-19 on NPAs in Road sector, as far as IIFCL is concerned, only one account slipped to NPA under Road Sector during the pandemic period. This is in view of the regulatory forbearances such as the moratorium, the standstill on asset classification and restructuring allowed in the context of the COVID-19 pandemic.
205. Indian Bank informed the Committee that due to COVID-19 relief measures initiated by RBI by way of moratorium, funding of interest during moratorium period etc, no fresh NPA added in Road and Hospitality sector and remained at the same level before and after pandemic. Indian Bank furnished the following information regarding its NPAs in Road Sector:

NPA in Road Sector: as on 31.12.2020 (Rs in crores)

<table>
<thead>
<tr>
<th></th>
<th>STANDARD</th>
<th>NPA</th>
<th>TOTAL</th>
<th>% of NPA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FB</td>
<td>NFB</td>
<td>Total</td>
<td>FB</td>
</tr>
<tr>
<td></td>
<td>7140</td>
<td>30</td>
<td>7170</td>
<td>1678</td>
</tr>
</tbody>
</table>

206. Indian Overseas Bank (IOB) furnished the following details regarding their exposure in the road sector:

IOB’s Experience: (As on 31.03.2020)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Gross Exposure</th>
<th>Outstanding</th>
<th>NPA</th>
<th>NPA as % to Credit Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads&amp; Ports*</td>
<td>Rs.8709 Cr</td>
<td>Rs.6244.06 Cr</td>
<td>Rs. 1776.31Cr</td>
<td>28.45%</td>
</tr>
</tbody>
</table>

*Sector details for Road not available separately. As per BSR code, both Roads & Ports sectors are available together.

207. PNB furnished the following details regarding its exposure to lending for Infrastructure – Road & Port:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Sept-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding(Rs in Cr)</td>
<td>30400</td>
</tr>
<tr>
<td>% of gross credit in the Industry</td>
<td>3.82%</td>
</tr>
<tr>
<td>Ceiling of our Bank</td>
<td>6.00%</td>
</tr>
<tr>
<td>Amount of NPA in Industry</td>
<td>4464.20</td>
</tr>
<tr>
<td>% of total advance in the Industry</td>
<td>16.91%</td>
</tr>
</tbody>
</table>

208. PNB further informed the Committee that during the FY 2019-20, it has Sanctioned Rs.9877 Cr in Infra- Road sector. Similarly in FY 2020-21, PNB has sanctioned up to
Rs.2800 Cr in this sector till Dec 20. It furnished the following details regarding the NPAs in road sector before the Coronavirus pandemic and after it:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>As on 31.12.2019 (Before Pandemic)</th>
<th>As on 31.12.2020 (After Pandemic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Of Accounts</td>
<td>52</td>
<td>56</td>
</tr>
<tr>
<td>Amount</td>
<td>5338.96 Cr</td>
<td>5304.39 Cr</td>
</tr>
</tbody>
</table>

PB stated that long-term loans sanctioned to Road sector are turning into non-performing assets (NPAs) due to various reasons:-

- Financial difficulties inherent in Road project such as acquisition of long segment Right of Way (RoW), environmental clearance and associated with resettlement issues as well as unforeseen weather and geological condition. As a result due to project delay increase both cost and time overrun.
- Lack of dispute resolution is one of the major hurdles in clearing stressed or delayed projects
- Substantial risk associated with unpredictability of revenue and toll receipt due to competing route, unexpected revision of toll rates, waiver of toll fee for certain segments and availability of connecting roads.
- Non infusion / delayed infusion of promoter contribution
- Delay in approval and release of funds in case of Change of Scope (COS) / utility shifting and delay also in decision making at various level.
- Shortage of skilled manpower and equipment in large number of projects. Poor quality Detailed Project Report (DPR)
- Recently Awarded project under HAM address the issue in certain extent.

PNB submitted the following suggestions to improve lending in road infrastructure sector:

- Delay in land acquisition/ Right of Way as encumbrance free land is not made available to the concessionaire during the initial stages of the project. Land acquisition has proved to be a time consuming process. Further, clearances and permissions from the Ministry of Environment and Forests is a pre-requisite and take
considerable time. In such cases, sufficient extension of time is required to be given to the concessionaire.

- In many accounts, PCOD/ COD have not been achieved due to various reasons. In these stuck projects, the authority i.e. NHAI/ PWD should compensate an equivalent amount of value of work done at the project site as full and final settlement immediately and the requisite clause should be incorporated in Model Concession Agreement.

- MoRTH has issued guidelines on 09.03.2019 vide office memorandum for the resolution of stuck projects and these guidelines are applicable on NHAI NHIDCL or State PWD (i.e. Authority). Guidelines be effectively implemented for timely settlement between lenders, concessionaire and Authority.

- The delay in construction leads to a large gap between the estimated project cost and actual expenditure on the road construction. The Authority should consider the cost overruns and revise their estimate accordingly in case of delayed projects so that the compensation is paid on realistic basis.

- If tolling is stopped by effect of any order of court/ authority, then the Authority should compensate the lenders promptly.

- It has been observed that Arbitration process takes approx. 4-5 years or more for completion of the settlement process. Arbitration process should be speedy and should be completed in a time bound manner. Authority should not challenge arbitration awards routinely and usually honour the same.

- Further Funding issues of the Industry can be sort out by developing bond market for long-term infra project financing supported by credit enhancement mechanisms to improve the credit ratings of the bonds which in turn will ease out the financial constraints in the sector.

- Increasing availability of finance by creating dedicated institutions and providing viability gap funding helps to meet large scale funding requirement.

- Our country needs to take the external assistance from the various sources like AIIB, ADB, NDB and OECF to accelerate the growth of the Road network.

211. PNB further submitted that non-servicing of installments within 90 days renders the account NPA which has severe impact in the financials of the banking industry which attracts additional provisioning on such sub standard assets.

212. Union Bank stated that the bank (Amalgamated Entity) has funded 127 Toll/Annuity based projects. Details are as under:
<table>
<thead>
<tr>
<th>Asset Classification</th>
<th>No. of Accounts</th>
<th>Limit (Rs. in crore)</th>
<th>% in total portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>98</td>
<td>22016.95</td>
<td>83%</td>
</tr>
<tr>
<td>Sub-Standard</td>
<td>2</td>
<td>550.00</td>
<td>2%</td>
</tr>
<tr>
<td>Doubtful</td>
<td>24</td>
<td>3546.07</td>
<td>14%</td>
</tr>
<tr>
<td>Loss</td>
<td>3</td>
<td>366.50</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>127</strong></td>
<td><strong>26479.52</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

213. According to Union Bank, the main reasons for stress observed in its loans to the road sector are:

- Many projects awarded in the past hit a road block due to delay in land acquisition and clearances.
- Also, in cases of projects which saw completion there was a wide gap between actual traffic and initial estimates due to alternate routes, low maintenance.
- Sluggish growth industrial activity. There is a high correlation between growth in industrial activity and growth in road traffic.

214. On the query regarding why promoters with failed projects still get financed by the banks, Canara Bank stated that Banks examine the performance/status of all the projects of the group before examining any new proposal to the group. Fresh loans will be considered only after thoroughly examining the reasons for project failure earlier.

215. IIFCL suggested the following measures for controlling NPAs in road sector:

<table>
<thead>
<tr>
<th>Preventing slippage in the existing standard asset portfolio</th>
<th>A more stringent risk assessment approach for projects and identification of early warning signals that could lead to potential default have been adopted. The learning points have been generated based on analysis of existing portfolio of NPA/Stressed Assets. The learnings are being used for enhanced due diligence and to strengthen the appraisal, disbursement and monitoring processes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expediting Resolution/Recovery in NPA/Stressed Accounts</td>
<td>Focused recovery actions for each project inter-alia includes optimum recovery solutions by referring to NCLT under IBC 2016, pursuing termination payments, resorting the legal actions against the Borrower/Authorities, expediting the settlements under stuck project circulars, addressing the delays in Arbitrations.</td>
</tr>
<tr>
<td>Aggressive</td>
<td>IIFCL has been making provisioning towards the stressed assets as well as NPAs.</td>
</tr>
</tbody>
</table>
provisioning / technical write-off | has adopted the Ind-AS accounting standards which mandates higher provisioning than the GAAP as well as RBI norms. Further, IIFCL has also stringent policies and direction of the Board for making the provisioning as well as resorting to technical write-offs well ahead of other lenders.

Increasing the Book size by building quality assets | At present, IIFCL’s portfolio is concentrated mainly on road and power sectors. IIFCL is proposing to scale up its assistance to other sectors and also to venture into new Infrastructure sectors so as to diversify risk and build quality assets to minimize the risks arising from the asset concentration.

216. The Committee is happy to note that Covid-19 pandemic has not had any worsening impact on the NPAs in road sector. This points to the efficacy of the Covid-19 relief measures initiated by RBI as well as the Ministry. Despite the minimal effect of COVID-19 on worsening the road infrastructure sector loan assets of the banks, however, the Committee notes that most public sector banks have been carrying a substantial percentage of NPA assets in the road sector since before the onset of the pandemic. The Committee feels that this is a cause of grave concern and would act as a deterrent to the banking sector from lending more funds to the road sector going forward. The Committee, therefore, recommends that the Ministry may take serious notice of the issues and challenges faced by the financial institutions and take effective steps to address them to the extent possible, aiming for a desirable level of sharing of risks between the Ministry, the concessionaire and the lending institution.

217. The Committee sought to know from the various financial institutions and Public Sector Banks regarding how the NPA figures in the road sector for their institution compare with that of their peers and in case their institution fared poorly in this regard, the Committee desired to know the reasons for the same. In the written replies received regarding this query, the Committee was informed that the Banks did not have the sector-wise NPA details of the other Banks are not available in the public domain. The Committee feels that sector-wise exposure information, at least in respect of public sector banks, should be made available in the public domain to permit more transparency and public scrutiny. The Committee recommends that RBI must analyze the reasons behind substantial variations in the percentage of sub-standard assets of NPAs in different Public Sector financial institutions/banks and come up with stricter rules and regulations that must be followed while sanctioning long-term loans to the infrastructure sector.
218. The Committee further recommends that the financial institutions/banks with more than acceptable level of NPAs in the road sector should also undertake a study into the possible inefficacy of their existing mechanism to analyse the financial soundness as well as project execution capabilities of the concessionaire. The Committee strongly recommends that the financial institutions/banks should revisit their policies in this regard, while also having strong checks in place to ensure that there is no connivance between the bank’s officials responsible for assessing the loan proposals received from the concessionaire, and the concessionaire themselves.

219. It has come to the notice of the Committee that in certain cases, the loan sought by the concessionaire is against a substantially higher project cost, as compared to the Total Project Cost approved by NHAI for the project which already includes provisions for contractor’s/concessionaire’s margin and the financing cost for raising the amount needed to execute the project as well. The Committee recommends that the banks should treat proposals with such higher estimated project cost with great caution and make its own in-depth study into the estimated project cost, or hire an independent third party consultant for this purpose. The Ministry/NHAI should communicate with the banks the procedure followed by them to arrive at the Total Project Cost for any given project. While sanctioning any loans for a project while considering estimated cost to be substantially higher than the Ministry/NHAI's approved TPC, the banks may record its reasons in writing regarding why they feel that the higher project cost, against which the loan is being sanctioned, is justified.

220. The Committee notes the submission made by PNB that non-servicing of installments within 90 days renders the account NPA, which attracts additional provisioning on such sub-standard assets. The Committee recommends that RBI may look into the possibility of setting a higher limit for long-term infrastructure projects, since unfortunately as for now, delays of several months is not too uncommon in infrastructure projects in India, often for no fault of the concessionaire.

221. The Committee feels that the banks should give due importance to a concessionaire's performance in similar projects in the past. In this regard, the Committee recommends that the Ministry, in coordination with State PWDs, may
maintain a database of all road contractors and concessionaires with details regarding their performance in past projects, the quality of work etc. Such a database may be made public so as to make it easy for the financial institutions and banks to analyse the past performance of their prospective borrowers. The Committee believes that doing so would help prevent the banks from lending to poorly performing contractors/concessionaires.

Loss of revenue due to construction of parallel roads

222. During the meeting of the Committee held on 8\textsuperscript{th} January, 2021 on lending aspects of road sector, various financial institutions raised the issue of construction of parallel highways which hampers the toll revenue of the existing highway project, which depending upon the mode of implementation of the project, impacts NHAI, the concessionaire as well as the financiers.

223. In this regard, SBI, in its written reply, informed the Committee that various State Road Development Corporation / State nodal agencies, as part of their plan, develop new or augment existing state roads which acts as a parallel route to National Highways resulting in traffic leakage / reduction in initial toll revenues estimates thereby affecting project viability. State Support Agreement should be implemented in letter and spirit to avoid such issues. State Government may be required to offer suitable monetary compensation to developers for loss in revenue on account of parallel route or suitable extension in concession period should be offered to ensure project viability at the time of original due-diligence state remain intact. In many cases, there may not be a direct parallel road for a small stretch as per the definition provided under the Concession Agreement/ State Support Agreement, but when observed over a long distance, the impact is found significant. For example, a new road between two Metro Cities which are more than 1000 kms apart, may permanently divert the traffic from small stretches that are financed by lenders. SBI stated that in its experience, the significant revenue contributors are long distance vehicles, and once diverted, the toll revenue drops significantly. NHAI may have to take lenient view while charging/demanding its share in the form of premium payments in these projects, unless repayment of lender’s debt is assured. To mitigate traffic related risks which are posed by parallel roads or competing infrastructure, NHAI has come-up with Hybrid Annuity Projects which have predetermined cash-flows in form of inflation adjusted annuities. For toll projects, large TOT bundles also provide risk
diversification to lenders and additional comfort is available in the form of adequate termination payments.

224. IDBI Bank, in its written reply, suggested that a provision for providing interim grant by authority may be included in the concession agreement in lieu on extension of concession agreement in the event of shortfall in traffic. This will help the concessionaire to tide over the cash flow shortfall. It further stated that claims due to triggers (such as alternate road) as per the Concession Agreements lodged by project companies need to be processed expeditiously, so that cash flows are not impacted. IDBI Bank opined that integrated planning approach [among NHAI, Morth, State Government, Local Authorities] towards development of local roads at the time of designing the Highways/ Expressways would resolve the issue.

225. IFCI Limited, in its written reply, informed the Committee that parallel toll free roads are generally constructed by the State Governments, despite having signed the state support agreement with NHAI and the private road developer while building national highways. As a solution, it must be made mandatory for the states to take approval from NHAI regarding any development/expansion of roads, to the extent that such roads are not competing with any national highway under PPP mode in that region.

226. IIFCL suggested the following steps to mitigate the risks arising out of construction of roads parallel to existing highway projects:
   a) Honouring of State Support Agreement (SSA) in true spirit.
   b) Wherever, SSAs are not being honoured, appropriate deductions for that particular should be made from the common central pool account.
   c) Project could be terminated with suitable compensation to the developer and the lenders.

227. Indian Bank opined that the commitment of not building parallel road is most important characteristic of the agreement after State Support in Land acquisition. The reduction in traffic estimates is a discouraging factor for the concessionaire. In many cases these parallel roads may already be in usage by the locals before the construction of new tollways. State Highway Authorities generally maintain such roads. The Bank suggested that a proper traffic study will help avoid such issues before building such parallel load. The agencies which build such parallel road should either compensate the revenue loss or share revenue.

228. The Committee feels that the construction of roads parallel to an existing road stretch with toll plazas, points to lack of foresight and coordination between the Ministry and the State Governments. Construction of such parallel roads causes a loss
of revenue to the concessionaire without any fault of their own. The Committee recommends that the Ministry should come up with guidelines that may be enforced across the country to avoid such construction to the maximum extent possible. In the event where construction of such parallel road is not avoidable, efforts may be taken to ensure that the concessionaire does not face losses on account of decrease in traffic volume for no fault of their own. This would act as a confidence building measure and would help attract higher bids for the Ministry/NHAI’s future plans for monetization of the existing road assets.

229. The Committee feels that the suggestion furnished by Indian Bank, regarding making the agency responsible for the construction of parallel road pay for the losses faced in revenue of the existing road, seems to be a feasible solution to this problem. The Committee, therefore, recommends that the Ministry may implement this with introduction of appropriate rules/laws in order to deter construction of parallel roads, and in cases such thing is unavoidable, paying compensation to the concessionaire.

Close monitoring of awarded road projects

230. One Member of the Committee pointed out that the contractors often sublet their works to a smaller contractor who further sublets it to even smaller contractors, with each contractor taking their own cut, thus leading to sub-standard road quality. He was of the view that banks and financial organizations that extend loans to contractors, should have monitoring authorities to keep a check on such activities, and that banks should have financing system for smaller contractors as well. He further opined that the present practice of awarding the road construction contract to the lowest bidder should be done away with.

231. On the issue of contractors subletting to others who do sub-standard work and lenders not monitoring the same, Canara Bank stated that proper mechanism is put in place to monitor the progress of the projects funded. Further besides appointment of Lenders Independent Engineer, Banks also appoint Agencies for Specialized Monitoring as well. Releases are made after receipt of project progress certificate, certificate for contribution of promoter’s equity etc. to ensure progress in the project as envisaged. It further stated that it monitors the progress of work done in respect of term loans granted by obtaining PIPR (Project Implementation progress report), LIE certificate (Lender’s Independent Engineer) certificate etc. and Bank guarantee progress reports, in case of Bank Guarantees issued. Further, the government departments verify the progress of the
project by involving engineers appointed by them.

232. The Committee recommends that the Ministry should break down big road projects into smaller stretches, making it optional for interested parties to choose the number of stretches for which they are willing to bid upon. This would encourage smaller contractors to participate in the bidding process, while also not dissuading big players from bidding for the entire project.

233. The Committee further desires that the Ministry may incorporate provisions for more frequent quality checks in road projects that are sub-let by the main contractor, since the earning margin available with the sub-contractors in such cases is much thinner, making these projects more prone to lapses in quality of materials used as well as failure to follow established guidelines for construction.

BHARATMALA PARIYOGANA

234. The Cabinet Committee on Economic Affairs approved the implementation of an umbrella programme for the National Highways – “Bharatmala Pariyojana Phase-I” in its meeting held on 24th October 2017, for construction/ up-gradation of National Highways of 34,800 kms length over a period of 5 years (2017-18 to 2021-22) at an estimated outlay of Rs. 5,35,000 Crore. The programme focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International Connectivity roads, Coastal and Port Connectivity roads and Green-field expressways. Multi-modal integration is also built into this program. Special attention has been paid to fulfilling the connectivity needs of backward and tribal areas, areas of economic activity, places of religious and tourist interest, border areas, coastal areas and trade routes with neighbouring countries.

235. The Ministry, in its written note, informed the Committee that the scope of Phase-I of Bharatmala Pariyojana includes development of:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Scheme</th>
<th>Length (km)</th>
<th>Cost (Rs. crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Economic Corridors</td>
<td>9,000</td>
<td>120,000</td>
</tr>
<tr>
<td>2</td>
<td>Inter-Corridors &amp; feeder roads</td>
<td>6,000</td>
<td>80,000</td>
</tr>
</tbody>
</table>
3. National Corridor Efficiency improvement  5,000  100,000
4. Border & International connectivity roads  2,000  25,000
5. Coastal & port connectivity roads  2,000  20,000
6. Expressways  800  40,000

Sub Total  24,800  3,85,000
7. Ongoing Projects, including NHDP*  10,000  1,50,000

Total  34,800  5,35,000

*-balance works under various phases of National Highways Development Project (NHDP) shall be fully subsumed under the proposed Bharatmala Pariyojana, to remove overlap and undertake comprehensive development. Balance works under NH(O), SARDP-NE, EAP & LWE schemes would continue under relevant schemes.

236. The Financing Plan indicating the source of Fund upto 2021-22 for Phase-I of Bharatmala Pariyojana and other schemes for development of roads/ NHs are as follows:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Source</th>
<th>Estimated fund (Rs. Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CRF earmarked for NH</td>
<td>2,37,024</td>
</tr>
<tr>
<td>2</td>
<td>GBS (SARDP, EAP Counter Part etc.)</td>
<td>59,973</td>
</tr>
<tr>
<td>3</td>
<td>Expected monetisation of NHs through TOT (Toll-Operate-Transfer)</td>
<td>34,000</td>
</tr>
<tr>
<td>4</td>
<td>PBFF (Toll- NHAI)</td>
<td>46,048</td>
</tr>
<tr>
<td>5</td>
<td>Market Borrowings</td>
<td>2,09,279</td>
</tr>
<tr>
<td>6</td>
<td>Private Investment (PPP)</td>
<td>1,06,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>6,92,324</td>
</tr>
</tbody>
</table>

237. Expenditure / Release during the last five years and current year for NHDP/ Bharatmala Phase-I:-

<table>
<thead>
<tr>
<th>Year</th>
<th>CRF</th>
<th>Toll</th>
<th>TOT</th>
<th>Out of</th>
<th>Total</th>
<th>IEBR</th>
<th>Total</th>
<th>Pvt. Sector</th>
<th>Grand</th>
</tr>
</thead>
</table>

Amount in Rs. crore
<table>
<thead>
<tr>
<th>Year</th>
<th>Cess</th>
<th>Remittances</th>
<th>Remittances</th>
<th>NH(O) Fund</th>
<th>(GBS) Raised</th>
<th>Budgetary Investment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-15</td>
<td>9,565</td>
<td>5,448</td>
<td>600</td>
<td>15,613</td>
<td>3,343</td>
<td>23,225</td>
<td>19,232</td>
</tr>
<tr>
<td>2015-16</td>
<td>21,018</td>
<td>6,500</td>
<td>370</td>
<td>27,888</td>
<td>23,281</td>
<td>70,583</td>
<td>29,770</td>
</tr>
<tr>
<td>2016-17</td>
<td>7,410</td>
<td>7,500</td>
<td>5,389</td>
<td>20,299</td>
<td>33,118</td>
<td>79,578</td>
<td>16,029</td>
</tr>
<tr>
<td>2017-18</td>
<td>15,429</td>
<td>8,462</td>
<td>3,900</td>
<td>27,792</td>
<td>50,533</td>
<td>87,071</td>
<td>16,501</td>
</tr>
<tr>
<td>2018-19</td>
<td>16,567</td>
<td>9,570</td>
<td>9,682</td>
<td>35,819</td>
<td>61,217</td>
<td>97,819</td>
<td>20,618</td>
</tr>
<tr>
<td>2019-20</td>
<td>15,733</td>
<td>10,600</td>
<td>5,000</td>
<td>1,150</td>
<td>32,483</td>
<td>74,988</td>
<td>1,07,471</td>
</tr>
<tr>
<td>2020-21*</td>
<td>7,379</td>
<td>3,875</td>
<td></td>
<td>11,254</td>
<td>6,750</td>
<td>18,004</td>
<td>3,448</td>
</tr>
</tbody>
</table>

*Till July, 2020

238. The Ministry, in its written note, furnished the following information regarding the status of appraisal and award of Projects under Bharatmala Pariyojana:

(a) **Status of appraisal and award – Mode of Implementation-wise:**

In Bharatmala Pariyojana, 60% projects on Hybrid Annuity Mode, 10% projects on BOT(Toll) Mode and 30% projects on EPC mode have been envisaged respectively. Total of 543 nos. road projects with an aggregate length of 19,062 km have been approved & awarded till date under Bharatmala Pariyojana (including 117 nos. of residual NHDP works of aggregate length of 5,087 kms) with Total Capital Cost as Rs. 5,51,078 cr. Out of the total approved 543 nos. projects, 358 nos. of projects covering an aggregate length of 10,972 kms have been approved on EPC mode, 181 nos. of projects covering an aggregate length of 7,749 kms on HAM mode and 4 Nos. of projects covering an aggregate length of 341 kms on BOT (Toll) mode [EPC: HAM: BOT:: 58%:41%:2%].
Details are as follows (as on 17th June, 2021):

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Mode of Implementation</th>
<th>Bharatmala &amp; Residual NHDP - Awarded</th>
<th>Bharatmala &amp; Residual NHDP - Approved – To be Awarded</th>
<th>Bharatmala &amp; Residual NHDP – Awarded and Approved</th>
<th>Capital Cost (Rs. Cr.)</th>
<th>% Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of Projects</td>
<td>Length (km)</td>
<td>No. of Projects</td>
<td>Length (km)</td>
<td>No. of Projects</td>
</tr>
<tr>
<td>1.</td>
<td>EPC</td>
<td>337</td>
<td>10,34</td>
<td>21</td>
<td>627</td>
<td>358</td>
</tr>
<tr>
<td>2.</td>
<td>HAM</td>
<td>147</td>
<td>6,657</td>
<td>34</td>
<td>1,092</td>
<td>181</td>
</tr>
<tr>
<td>3.</td>
<td>BOT Toll</td>
<td>4</td>
<td>341</td>
<td>4</td>
<td>341</td>
<td>6,814</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>488</td>
<td>17,343</td>
<td>55</td>
<td>1,719</td>
<td>543</td>
</tr>
</tbody>
</table>

(b) Status of appraisal and award:

Out of the 24,800 km approved under Bharatmala Pariyojana Phase-I, total of 488 projects of length 17,343 km have been awarded till date. Similarly, out of the residual NHDP component to be completed Bharatmala Phase-I, a total of 116 projects covering 5,077 km length have been awarded till date. The details are as under:

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Type of Corridor (approved length &amp; amount)</th>
<th>Awarded</th>
<th>Appraised but Pending for Award</th>
<th>Total</th>
<th>Completed Length (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of Projects</td>
<td>Length (km)</td>
<td>No. of Projects</td>
<td>Length (km)</td>
</tr>
<tr>
<td>1</td>
<td>Economic Corridors</td>
<td>162</td>
<td>4,975</td>
<td>20</td>
<td>636</td>
</tr>
<tr>
<td>2</td>
<td>Inter Corridor Routes</td>
<td>41</td>
<td>1,613</td>
<td>10</td>
<td>323</td>
</tr>
<tr>
<td>3</td>
<td>Feeder Routes</td>
<td>13</td>
<td>446</td>
<td>3</td>
<td>107</td>
</tr>
<tr>
<td>4</td>
<td>National Corridor</td>
<td>52</td>
<td>1,411</td>
<td>4</td>
<td>169</td>
</tr>
<tr>
<td>5</td>
<td>National Corridor Efficiency Improvement</td>
<td>25</td>
<td>705</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Expressway</td>
<td>59</td>
<td>1,666</td>
<td>17</td>
<td>474</td>
</tr>
<tr>
<td>7</td>
<td>Border Roads</td>
<td>14</td>
<td>1,282</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Coastal Roads</td>
<td>2</td>
<td>77</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
239. The Committee enquired from the Ministry about the reasons for huge cost overrun in Bharatmala Pariyojana Phase I, with the revised estimates being substantially higher than the approved budget. The Ministry, in its written reply, informed the Committee that an overall financial outlay of Rs. 5,35,000 crores had been approved by the CCEA for estimated project expenditure based on the prevalent Land Acquisition and Civil Construction Cost in the year 2017. However, the actual cost of Land Acquisition is about 3.5 times the estimated cost and the prevailing costs of civil construction are 40% more than the estimated cost at the time of approval of CCEA. Details of the same are presented below:

<table>
<thead>
<tr>
<th>Component</th>
<th>Total Civil Cost including percentages (Rs. Crore per km)</th>
<th>Land Acquisition &amp; Pre-Construction Expenses (Rs. Crore per km)</th>
<th>Total Capital Cost (Rs. Crore per km)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As per actual</td>
<td>As per CCEA approval</td>
<td>As per actual</td>
</tr>
<tr>
<td>Bharatmala</td>
<td>20.1</td>
<td>13.7</td>
<td>6.4</td>
</tr>
<tr>
<td>Residual NHDP</td>
<td>15.9</td>
<td>-</td>
<td>5.7</td>
</tr>
<tr>
<td>Grand Total</td>
<td>19.0</td>
<td>-</td>
<td>6.2</td>
</tr>
</tbody>
</table>

240. The Committee notes that significantly higher cost of land acquisition has been listed as the main reason by the Ministry for the huge cost overruns in Bharatmala Pariyojana Phase-I. While the exact cost of land acquisition cannot be precisely estimated especially in such long-term projects, the Committee feels that the Ministry
should factor in the average rate of growth of land prices in its estimates, alongwith the effect of inflation to arrive at more accurate project estimates, which, in turn, would allow the Ministry to be proactive in terms of managing its finances.

241. The Committee believes that the significant delays in the execution of Phase-I is also one of the main reasons behind the cost overruns. The Committee recommends that the Ministry/NHAI may proactively monitor all road projects and any deviation from the targeted timeline for each project should be dealt with on an urgent basis in order to minimize the delays, and thus, the cost overruns.

DEVELOPMENT OF NATIONAL HIGHWAYS IN NORTH-EASTERN REGION

242. The Ministry, in its Annual Report (2020-21), has stated that it has been paying special attention to the development of NHs in the North-Eastern Region and 10 per cent of the total budget allocation is earmarked for NE region. The total length of National Highways in North-East is 13,658 Km and these are being developed and maintained by four Agencies - the state PWDs, BRO, NHAI and NHIDCL. Of the total length of 13,658 Km, about 12063 Km is with the NHIDCL and respective state PWDs, 864 Km is with NHAI and 731 Km is with BRO.

243. The Ministry, in its written note, informed the Committee that the Special Accelerated Road Development Programme for North-Eastern region (SARDP-NE) including Arunachal Pradesh Package of Roads, has been envisaged to be taken up under three parts as under:-

(i) **Phase ‘A’** of SARDP-NE approved by the Government envisages improvement of about 4,099 km length of roads (3,014 km of NH and 1,085 km of State roads). However actual length as per DPR is 4007 km. Out of 4,007 km 3,610 km roads has been approved for execution and balance 397 km is yet to be awarded. Till May, 2021, 2,783 km of road has been completed. The SARDP-NE Phase ‘A’ is expected to be completed by March, 2024..

(ii) **Phase ‘B’** of SARDP-NE, covers 3,723 km (2,210 km NHs and 1,513 km of State roads) of road. Phase ‘B’ SARDP-NE shall be taken up after completion of Phase ‘A’.

(iii) **Arunachal Pradesh Package**: The Arunachal Pradesh Package for Road & Highways involving development of about 2,319 km length of road (2,205 km of
NHs & 114 km of State / General Staff / Strategic Roads) has also been approved by the Government. Projects on 776 km are to be taken up on BOT (Annuity) mode and the remaining are to be developed on EPC mode / Item Rate Contract as per Ministry’s extant policy. However actual length as per DPR is 1991 km. Till May, 2021, projects in total length of about 1,991 km have been awarded out of which 1,163 km has been completed. The entire Arunachal Pradesh package is targeted for completion by March, 2024.

An amount of Rs. 41,341 crore has been spent in SARDP-NE including Arunachal Pradesh Package of roads.

243A. The Committee observes that in view of the strategic location of Arunachal Pradesh, good road connectivity is of crucial importance for the smooth movement of Forces guarding the border, on account of National Security. The Committee, therefore, desires that the Ministry may explore the possibility of taking up the SARDP-NE Phase-B, along with SARDP-NE Phase-A.

244. The Committee noted that the proposed target date of completion for sanctioned road stretches of Phase A was March, 2015 and the entire Arunachal Pradesh package was targeted for completion by March, 2017. The Committee enquired from the Ministry the reasons for the delays which led to the expected completion date for both the projects being fixed for March, 2024. In its written reply, the Ministry furnished the following reasons for the same:-

(i) In general completion of projects/Scheme is delayed mainly due to following:
   ~ Land Acquisition
   ~ Less working season
   ~ Non-availability of local Agencies,
   ~ Scarcity of good quality quarry materials/ Aggregates
   ~ Termination of contract for poor progress by Agency

(ii) In order to fast track implementation in areas including hilly terrain, following steps have been taken to remove the bottlenecks and to complete the work early:
~ Set up and operationalized a new corporate entity namely NHIDCL, dedicated exclusively to the task of fast pace constructing/upgrading/widening of National Highways in NER & Hilly region.

~ Close monitoring of the projects at field level as well as in Ministry level

~ Sanctioning of project after completion of at least 80 % Land acquisition

~ Upfront shifting of utilities, environment/forest clearance in close coordination with State Government.

~ Streamlining of LA acquisition through Bhumi Rashi portal.

As of now, Scheme (SARDP-NE Phase-A, Arunachal Pradesh Package of SARDPNE) is targeted to be completed by March, 2024.

245. The Committee is not satisfied with the reasons furnished by the Ministry behind the huge delays in the completion of the road projects under SARDP-NE Phase A and Arunachal Pradesh package. The Committee feels that most of the reasons behind the delays in the execution of the projects could have been preempted and proactive measures should have been taken to minimize the delays caused due to them. The Committee hopes that the present timeline for completion of the projects have been made realistically and is met without any further delays.

246. The Committee feels that construction of roads in difficult terrains such as North-East regions requires skilled contractors with prior experience of road construction in hilly regions. The Committee recommends that the Ministry may ensure that due care is taken not to award the road projects to contractors who have a history of construction of below-par quality of roads.

247. The Committee further recommends that the Ministry may allocate funds to carry out research for best construction techniques in the North-East regions, with focus on the hilly nature of the region as well as the frequent rains and floods. The Committee desires that NHIDCL may lay special focus on ensuring sufficient provisions for road safety in the projects carried out in the region.
SCHEME FOR DEVELOPMENT OF ROADS IN THE LEFT WING EXTREMISM AFFECTED (LWE) AREAS

248. The Government has approved a scheme for development of about 1,177 km of NHs and 4,276 km of State Roads in Left Wing Extremism (LWE) affected areas as a Special Project with an estimated cost of about Rs. 7,300 Crore. As on 31st May, 2021, the detailed estimates for 5,436 km length have been sanctioned at an estimated cost of Rs. 8,946 Crore, out of which, works on 5,436 km length costing Rs. 8,996 Crore have been awarded. Development in 5,012 km length has been completed and cumulative expenditure incurred so far is Rs. 8,161 Crore.

249. Development of Vijayawada Ranchi route: Out of 1,622 km long LWE affected Vijayawada - Ranchi route, development of 600 km (net length 592 km) of State Roads in Odisha (549 km Newly declared NH and 43 km SH), not covered in any Central or State Scheme has been approved by the Government at a cost of Rs 1,200 crore on 4th November, 2010. So far, the detailed estimates for all the 9 packages in an aggregate length of 592 km have been sanctioned at an estimated cost of Rs. 1,347 crore and works were awarded. The development on 583 km has been completed at a cumulative expenditure of Rs. 1,112 crore..

250. The Committee enquired from the Ministry regarding the steps taken to ensure the required security for carrying out maintenance and construction of NHs in the LWE affected areas. In its written reply, the Ministry informed the Committee that for Maintenance and Construction of National Highways in the LWE affected areas under the jurisdiction of NHAI, no security issues are involved. LWE works on National Highways (NHs) are almost complete in Chhattisgarh. Security camps are already established on the stretches to aid in maintenance work. Security for LWE works is dealt by the State Government. At present, Govt. of Chhattisgarh is providing security at work sites based on availability of central security forces. The procedure being followed by the State Govt. is that upon completion of works stretch, the security camps are shifted to the next works site based on priority accorded by the Govt. of Chhattisgarh from security point of view.

251. The Committee takes note of the progress made in the various road projects in the LWE affected areas. The Committee believes that these road projects would have a highly positive effect on the developmental avenues of the LWE affected areas and hopes that the Ministry is able to complete the remaining length of these projects at the
earliest.

RESEARCH AND TRAINING IN ROAD INFRASTRUCTURE SECTOR

252. The Ministry, in its written reply, informed the Committee that NHAI has a full-fledged SRD&Q Division at its HQ. Its mandate on R&D related activities is as under:

a) To track and introduce new technological developments
b) To track and introduce international best practices
c) To facilitate design consistency and standardization
d) To undertake R&D activities
e) To formulate technical manuals, standards and specifications
f) To advise the technical divisions on the matters relating to standards and specifications for all stages of contract management
g) To interact with organizations involved in R&D activities/ standardization in highway sector
h) To study best practices in various countries and encourage concessionaires to use upcoming techniques and material in India which will help in reducing cost and time period of road construction
i) To track and introduce testing procedures and technology upgradation

253. The Ministry further submitted that the scope/ objectives, methodology, interim/ final conclusions etc. of the research studies are reported to the Highway Research Board of the Indian Roads Congress from time to time. NHAI had entrusted the following studies to research/ academic institutes.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Research area</th>
<th>MoU with</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Development of High Modulus Asphalt (HiMA) Mixes for Indian Highways</td>
<td>IIT, Kharagpur</td>
<td>Ongoing</td>
</tr>
<tr>
<td>2</td>
<td>Laboratory and Field investigations on Panelled Cement Concrete Pavements for Highways</td>
<td>IIT, Kharagpur</td>
<td>Ongoing</td>
</tr>
<tr>
<td>3</td>
<td>Performance of Geogrid and Geocell Reinforced Pavement for low bearing soils</td>
<td>IIT, Hyderabad</td>
<td>Ongoing</td>
</tr>
<tr>
<td>4</td>
<td>Utilization of Municipal Solid Waste at Ghazipur for embankment construction in proposed widening of NH-24</td>
<td>CRRI, Delhi</td>
<td>Completed</td>
</tr>
</tbody>
</table>

254. The Ministry stated that no specific budget allocation has been made to the Division during the last five years. However, the same is planned for the current year.

255. The Committee is disappointed to note that despite having a dedicated NHAI division with an extensive mandate for carrying out research activities, no specific budget allocation has been made to the division during the last five years. The Committee feels that this points to the lackadaisical attitude of the Ministry towards carrying out research activities in the road sector. The geographical diversity of the country, the often poorly-informed drivers and the large number of road accidents that take place on the National Highways are all crucially important matters that can be resolved by carrying out serious R&D activities regarding the same. The Committee, therefore, recommends that the Ministry may ensure that sufficient funds are available with the SRD&Q Division of NHAI.

**Indian Roads Congress**

256. The IRC was formally registered as a Society on 24<sup>th</sup> September, 1937 under the Societies Registration Act of 1860 for periodical holding of road conferences to discuss issues related to road construction, maintenance & development. IRC has over 16,850 registered members comprising engineers & professionals of all Stakeholders of the road sector, from Central and State Governments; Public Sector; Research Institutions; Academic Institutions, Local bodies; Private sector; Concessionaires; Contractors; Consultants; Equipment manufacturers; Machinery manufacturers; Material producers & suppliers; Industrial Associations; and Multilateral & Institutional organizations like World Bank, ADB, JICA, JRA, IRF etc.

257. In its written note, IRC informed the Committee that it is a pivotal society of Highway Engineers which provides a common platform for pooling of wisdom of highway engineers and practitioners from all over the country which is being used in development of Standards, Specifications, Code of Practices, Guidelines, research-based State of Art Reports, etc.
various aspects of road and bridges. These Standards are of great help in planning, designing, implementation of road construction and maintenance programmes both on National Highways as well as for other categories of Roads. So far, IRC has developed/ revised over 245 nos. of standards, Codes, Guidelines, Manuals, etc on: the subjects dealing with the construction and maintenance of roads; bridges; tunnels and road transportation including technology, equipment, machinery, research, planning, finance, safety, environment, ITS, organization, etc and all connected policy issues, which form the backbone for the various activities related to road/ highway works across India. IRC is also moving on the path of growth and development of codes, guidelines of innovative technology, green technologies, faster construction technology viz use construction and demolition waste/mining and industrial waste, waste plastic, tyre rubber waste, warm mix asphalt, chemical stabilization, Recycling of Bituminous Pavements — etc. in road & bridge construction.

258. IRC has stimulated interest in research by publishing articles in the Journals and by providing a forum for discussion on research activities during the Annual Sessions of the Congress. In addition, Highway Research Board of IRC fix priorities and schedules for research, evaluate and interpret research findings, digest wealth of information from research currently going on abroad and tailor the results to the needs of the country, act in an advisory capacity to the Central and State Governments for suggesting priority road research to undertake, act as a forum for discussions, disseminate research knowledge and publish research findings. In order to guide and support Central & State road departments to construct 2/4/6 lane Highways & Expressways, IRC published exclusive Manuals for 2 laning, 4 laning, 6 laning & Expressways which are part of their contract documents. 3.5 With aim to allow the industry to take early advantages of the latest developments in the field of highway design and construction, IRC has evolved a mechanism, wherein, any entrepreneur, developer, promoter, etc. can seek accreditation from IRC for any new know-how, technology, material, equipment, etc. These accredited new materials/ technologies are being used on trial basis by various state & central government road departments with aim to judge its performance and later on successful materials/ technologies incorporate in IRC documents in generic manner.

259. In the meeting of the Committee held on 7th January, 2021, President, IRC informed the Committee that IRC has a small staff, but most of the Engineers, Superintending Engineers and Chief Engineers from the States and the Centre, who are Council members,
work voluntarily for this organization. Briefing the Committee about the challenges being faced by the Indian Roads Congress, Secretary General, IRC stated that IRC has no funds at all and that the salary of their staff is paid out of the membership fees received from the State and Centre Governments. He stated that every code made by IRC should be based on local research done in India and that IRC is facing difficulties in that since IITs and NITs are not coming out with such researches because of lack of funding. He pressed upon the urgent need to provide liberal funding to the academic and research institutions for carrying out research in the country. He informed the Committee that the Council of IRC has set an agenda to have one code for the nation for Highways and one unified code for bridges and that the services of professionals would need to be engaged in order to carry it out.

260. During its presentation before the Committee in the meeting held on 7th January, 2021, Indian Roads Congress highlighted the need for capacity building and skill development of road departments, consultants, contractors, construction workers and equipment operators.

261. The Committee takes note of the extensive role played by Indian Roads Congress in development of Standards, Specifications, Code of Practices, Guidelines, research-based State of Art Reports, etc. on various aspects of road and bridges. The Committee is distressed to note the fund crunch being faced by Indian Roads Congress despite playing such an important role in research-led development in the road sector in the country. The Committee, therefore, recommends that the Ministry may urgently look into the budgetary requirements of this important organization so as to fuel research in important subjects pertaining to the road sector and to permit the framing of a single code for Highways, and for bridges across the nation.

262. The Committee recommends that the Ministry may set up capacity building and skill development programmes for State Road Departments, consultants, contractors, construction workers and equipment operators. This would ensure that guidelines framed by IRC are duly followed during construction of roads.

263. During its meeting held on 7th January, 2021, one of the Members of the Committee raised the issue of roads being damaged due to lack of drainage provisions in flood-prone reasons.

264. In this regard, IRC informed the Committee that it has published following documents
on this subject:

a. IRC:34-2011 ‘Recommendations for Road Construction in Areas Affected by Water Logging, Flooding and/or Salts Infestation’ (First Revision)
b. IRC:SP:113-2018 ‘Guidelines on Flood Disaster Mitigation for Highway Engineers’

265. The Committee desires to be apprised as to whether the IRC’s documents are being followed by the Ministry in the flood-prone regions of the country. The frequent damage caused by floods to NHs in such regions means that either the existing recommendations/guidelines in this regard are not being implemented, or the documentation in question needs to be updated to develop more effective norms. The Committee recommends that the Ministry may take necessary action to work out this issue at the earliest, since connectivity is of utmost importance in flood-hit regions.

Indian Academy of Highway Engineers

266. Indian Academy of Highway Engineers (IAHE), in its written note furnished to the Committee on the subject ‘Role of Highways in Nation Building’, informed the Committee that it is a registered Society under the administrative control of Ministry of Road Transport & Highways, Government of India. A collaborative body of the Central and State Governments, IAHE was set up in the year 1983 with the primary objective of fulfilling the longstanding need for training of Highway Engineers at the entry level and during the service at all levels. IAHE is the premium national training institute of the country for sharing of knowledge and pooling of experience on the entire range of subjects dealing with design, construction, operation & maintenance of roads; bridges; tunnels and road transportation including technology, equipment, research, planning, finance, taxation, organization and all connected policy issues.

267. In the meeting of the Committee held on 7th January, 2021, Director, IAHE informed the Committee that IAHE is governed by a Governing Council, where Minister of Road Transport and Highways is the President, Minister of State for RT&H is the Senior Vice-President and Secretary, MoRTH is the Vice-President of the council. He further informed the Committee that IAHE runs a foundation course for newly recruited officers of the Ministry, NHAI, BRO and various State PWD departments. He further stated that IAHE
conducts refresher courses at various levels and orientation courses are also conducted for officers who are on deputation to various organizations in order to familiarize them with their requirements and needs. He informed that besides key personnel, contractors and consultants also participate in the training courses conducted by IAHE.

268. The Committee appreciates the training programmes conducted by IAHE for officers of the Ministry, NHAI, BRO, various State PWD departments as well as contractors and consultants. The Committee hopes that the curriculum of the training programmes is refreshed periodically to reflect the latest developments in the road infrastructure sector.

269. The Committee enquired from IAHE about the changes required in the existing rules regarding construction of NHs in the country. IAHE, in its written reply, suggested that in order to improve the quality of construction, contract provisions may be changed so as to make the training at IAHE etc. compulsory for all highway professionals in the country.

270. The Committee agrees with the suggestion made by IAHE and recommends that the Ministry may make it mandatory for all highway professionals in the country to attend relevant training programmes at IAHE.

ROAD SAFETY

271. The Ministry, in its background note, informed the Committee that high priority has been accorded for identification and rectification of black spots (accidents prone spots on National Highways). Concerted efforts towards improvement of road safety through engineering measures on National Highways have been made. 789 black spots have been identified and notified with unique ID numbers assigned to each of the spots. Guidelines have been prepared and notified for investigation and rectification of the road accident black spots on National highways. 129 black spots are under State Government. It was decided to install immediate cautionary measures to alert and caution the road users about road accident black spot through signs, solar blinkers and speed reduction measures till black spots are rectified through long term permanent measures. NHAI has rectified 307 nos. of Black Spots out of 510 spots on NH network with NHAI through long term measures such as construction of flyovers, service roads, VUPs and PUPs etc., 174 nos. of Black Spots are under rectification. 26 nos. of Black Spots are in bidding stage and 3 nos. of Black Spots are being taken up. Out of total 150 road accident
black spots on NH stretches under jurisdiction of State PWDs, 136 are already rectified, 12 have been awarded and are in progress and 2 are in bidding stages. 129 spots are on State Roads which are not under the jurisdiction of MoRT&H. Further, a World Bank funded Road safety study for the Ministry has been completed; recommendations of these will be implemented in a phased manner with the support of all important stakeholders.

272. The Committee notes the efforts made by the Ministry by means of identification and rectification of black spots on NHs across the country. The Committee appreciates the work done so far in this regard but feels that a large number of black spots still remain unidentified, given the extremely high number of road accidents that take place in India each year. The Committee recommends that the Ministry may conduct an extensive study to identify as many bottlenecks as it can, and rectify the same at the earliest. Latest technology and data science tools may be employed in this process, in order to utilize the data gathered by the Ministry regarding road accidents, in order to identify black spots across the country. Topmost priority should be given to rectification of black spots, once identified. Preventive measures must be immediately taken at such black spots, till the time the rectification process can be completed.

273. The Committee desires to be apprised of the number of black spots identified on NHs across the country in the last five years, alongwith details regarding the number of black spots rectified each year. The Committee recommends that findings from the black spot identification and rectification process may be looked into as a whole, to gain insights into how to avoid the black spots in the future road projects of the Ministry. The Committee further desires that all the NH projects should be minutely examined right from the DPR stage to their completion, eliminating geometrical design errors that compromise the safety of the road users.

274. The Committee recommends that the black spot identification and rectification process may be streamlined so as to remove delays in the decision-making process, by implementing provisions for delegation of powers to carry out rectification measures with due urgency.

274A. As per the information available on NHAI’s website regarding status of rectification of black spots as on June, 2021 (Annexure-E), 348 black spots have been
rectified so far i.e. 69.18 percent of the total 503 black spots identified during the period 2011-14. Out of these 348 rectified black spots, the rectification measures on 101 black spots are of short-term nature. As for the status of the 3996 black spots identified during the period 2015-18, 2254 black spots i.e. 56.4% have been rectified while work for 536 black spots i.e. 13.4% is still under DPR stage.

274B. The Committee is anguished to note that even after passing of 7-10 years after identification of black spots during the period 2011-14, long-term rectification measures have been carried out only on 247 out of the 503 identified black spots i.e. less than even 50%. The Committee strongly recommends that the Ministry may make it mandatory for both NHAI and State Departments concerned, to rectify black spots within a fixed time-frame. Delays in the rectification of black spots directly leads to more lethal road accidents continuing to happen at such spots, which cannot be permitted at any cost. The Committee also desires to know the status of the black spots identified by the Ministry/NHAI since 2018 and reasons for not updating the status of the same on the website.

275. The Ministry, in its written reply informed the Committee regarding the following steps taken by NHAI to prevent road accidents on NHs:

a) NHAI is taking several road engineering/traffic calming measures to curb speed on minor roads/NHs as per the codal provisions (IRC:99-2018, Guidelines for traffic calming measures in urban and rural areas) such as

   i. rumble strips or bar marking at the approaches of the major junctions on NHs,
   ii. speed limit signs at desired locations of NHs network,
   iii. speed breaker and associated signage on side roads,
   iv. flashing amber beacons for traffic approaching a junction or a mid-block median opening of NHs.

b) Road Markings, Sign Boards, Blinkers, Reflectors are provided by Concessionaire/Contractor for the Safety of the road users as per IRC guidelines.

c) In addition, as per contract provisions road safety audit is being conducted during design/construction/operation stage.

d) Road Safety Consultants are appointed for projects for conducting Safety Audits and to deal with the road safety issues. The Road Safety Audit recommendations
submitted by Safety Consultants are being communicated to concerned
Concessionaires for ensuring and adopting these recommendations.
e) Speed calming measures on approaching roads at junctions and necessary sign
boards provided to follow lane discipline etc.
f) Roadside Safety Crash barriers are installed at roadside hazards as per provisions
mentioned in “Manual of specifications and standards for 2/4/6-lane highways”.
Provision of crash barriers at all the required locations is an integral part of NH
development/improvement project.
Further, Road Safety Week is conducted every year to create Safety Awareness among
the road users and also in various Schools, Villages/Local public, and Eye check-up
camps for drivers etc., to reduce and prevent accidents.

276. The Committee recommends that the Ministry may ensure that the codal
provisions prescribed to enhance road safety on highways should be periodically
updated from time to time, to reflect international best practices in this regard.

277. The Committee feels that the Ministry should lay much more emphasis on
its road safety awareness initiatives. Social media may be utilized for this purpose.
The Committee desires that the Ministry may, in coordination with Ministry of
Education, introduce information pertaining to road safety, basic road etiquettes,
action to be taken in case of an accident, etc. in school curriculum across the
country.

278. The Ministry further stated that the following steps have been taken by NHAI
to ensure timely treatment to the road accident victims:

a. Incident Management System is provided on NH through the contract/concession
agreement of the Contractor/Concessionaire. The facilities of patrol vehicle, recovery
crane and ambulance with trained paramedics are provided.
b. Further, as per concession agreement, concessionaires have provided highway
patrolling vehicles to check the road conditions and assist in diverting the flow of
traffic during the repair and maintenance works. Further, these vehicles are used to
provide assistance in case of any road user emergency. These vehicles are
provisioned near the NHAI fee plazas.
c. There is no establishment for Highway Patrol, however NHAI is doing incident
management with the following on-road units:
i. Ambulances : 466
ii. Patrol Vehicles : 509
iii. Tow-away Cranes: 443

d. Further, the tender invited for incident management services on all India level has the following features:
i. 203 Ambulances
ii. 203 Highway Surveillance vehicles

Central command center for integration of the existing on-road units and the new to be deployed units with GIS mapping and tracking of the vehicles and Computer Aided Dispatch.

279. The Committee feels that the number of ambulances, patrol vehicles, tow-away cranes available with the Ministry are not commensurate with the extensive size of the National Highway network in India. The Committee recommends that the Ministry may steadily increase this number to ensure that help is made available within a short and reasonable time of any accident taking place on the NHs.

280. The Ministry further informed the Committee about a toll-free number, 1033, which enables users to report an emergency condition, or highway-related feedback, across the highway. The service has also integrated with various ambulance/tow away services along the road to ensure rapid response time in emergency. The service is supported by a multi-lingual support and user location tracking features to provide the user with accurate and responsive complaint resolution.

280A. The Committee feels that the knowledge that such a helpline number exists and should be called in case of an accident, is very limited among people and awareness drives must be carried out in the form of signages and billboards on National Highways, and through the usage of social media, to ensure that NH users are aware of this emergency number. The Committee further recommends that the Ministry may work on tying up this emergency number with the number 112, i.e. the Emergency Response Support System, since people cannot be expected to remember too many numbers, especially in high-panic situations such as road accidents.

281. The Ministry, in its written reply, informed the Committee that the Government has issued a notification G.S.R 634(E) dated 23.06.2017 mandating Motor Vehicles (Driving) Regulations, 2017 which provides for guidance on various factors
including driving techniques. For smooth traffic flow as well as to avoid road accidents, drivers are guided through a number of cautionary/warning signboards along NHs such as sharp curves, no overtaking zone, speed limit etc. Further, Ministry has been working in association with States, Vehicle manufactures and NGOs for strengthening the driving training. Scheme for setting up of Institute of Driving training and Research (IDTRs), Regional Driving Training Centers (RDTCs) has been implemented by the Ministry for establishing model Driving Training Centers in the States/UTs with state of art infrastructure. Ministry has also launched a scheme for creating Driving Training Centers (DTC) in all the districts of the country with the objective to provide quality training to commercial vehicle drivers to improve road and environment safety and strengthen overall mobility on roads.

282. The Committee observes that driving habits in India need to be improved upon drastically and the most effective way to do is by way of training people to drive better. Therefore, IDTRs and RDTCs should be present in every district of the country. The Committee recommends that the Ministry may chalk out a plan to create such training infrastructure across the country and thereafter, make it mandatory to attend a driving training course of a sufficient duration in order to obtain a driving licence.

283. While making its presentation before the Committee in the meeting held on 7th January, 2021, Indian Roads Congress suggested that a Highway Protection force should be created, in line with the Railway Protection Force.

284. One of the members of the Committee suggested that companies and organizations involved in the road infrastructure sector, including banks and financial organizations, should allocate their CSR funds towards road safety, so as to decrease the number of road accidents that take place in the country. Canara Bank informed that no CSR funds have been allocated to the road sector to aid the training of drivers and reduce the number of road accidents.

285. The Committee recommends that the Ministry may reach out to the private sector with proposals to invest their CSR funds into road safety initiatives such as training of drivers, road safety awareness drives, developing infrastructure for quickly reaching out to road accident victims etc., which will undoubtedly save many lives each year, across the country.
The Committee sought to know IRC’s suggestions on solving the problems causing road accidents. IRC, in its written reply, suggested the following measures to minimize road accidents:

i) By stricter enforcement on speed control of vehicles plying on roads.
ii) By stricter enforcement on use of seatbelts and airbag-equipped vehicles.
iii) By stricter enforcement on use of helmets by motorcyclists.
iv) Making vehicles more visible with the provision of reflectors in its body and roadside lighting wherever possible.
v) By separating local and through traffic on different roads, or by separating slow and fast traffic on the same road.
vi) by providing convenient and safe road crossing facilities along highways to vulnerable road users.
vii) by facilitating and use of traffic-calming techniques, roundabouts, and the provision of pedestrian facilities &bicycle lane facilities in urban areas.
viii) by reserving adequate space for non-motorized modes on all roads where they are present.
ix) by construction of service lanes along all4-lane, 6 lane highways for use by low speed and non-motorised traffic.
x) by establishing safety departments within all road agencies by Modern knowledge
xi) Pre-hospital care should be made widely available with training of specialists in trauma care in the hospital setting.

The Committee recommends that the Ministry may implement the various suggestions made by Indian Roads Congress to make the NHs safer for people.

Below is the State-wise number of persons killed in accidents, as per the Ministry’s Report on Road Accidents in India – 2019:
### State Wise number of persons killed in accidents and their ranking in accident related deaths during 2015-2019

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>States/UTs</th>
<th>State/UT-Wise Total Number of Persons Killed in Road Accidents during</th>
<th>change in 19 over 18</th>
<th>% change in 19 over 18</th>
<th>Rank of States/UTs in Total Number of Persons killed in road accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>8,297</td>
<td>8,541</td>
<td>8,060</td>
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</table>
The Committee feels that the State-wise data available with the Ministry can be put to great use by analyzing the trend of road accidents and death caused thereby, in the past few years. The Committee recommends that in case of such well-performing States, the Ministry may analyze the measures taken by the departments concerned of such States and to see how these compare with the States that are showing a consistent increase in the number of road accidents taking place each year.

Public Works (Building & National Highway) Department, Government of Assam informed the Committee that all major works projected under SARDP-NE, NH(Original) & Periodical Renewal have provisions for inclusion of road safety measures such as centre line/Edge line marking, mandatory signs, cautionary/informatory signs, over head signs, delineators, road studs, tree reflector, guard post etc. which are sanctioned along with the sanctioned jobs under respective head. In EPC Contract, the safety audit shall be carried out by the Safety Consultant in respect of all such design details that have a bearing on safety of Road Users. There is a policy of MoRT&H to provide crash barriers in the high embankment and bridge approaches on different NHs to ensure better safety to the high speed traffic of the National Highways. Awareness programme on the rules and regulations of road safety can reduce accidents on Highways.

Transport Department, Government of Assam informed the Committee that highways are extremely important in the matter related to Road safety. As per statistics, a large number of accidents occur on National Highways. Proper and scientific design can reduce the accidents in the road to a great extent. Following are some important points which the NHAI/NHIDCL may take up to improve the Road safety scenario of Assam.

a) All the Roads under Highways may be designed and constructed as per guidelines of MoRTH and IRC standards.
b) Single Lane Highway is one of the major cause of accidents and high rate of fatality. As such all Highways may be converted to double or multiple Lane.

c) Junction points of Highways and other smaller grade road are also major area of concern where number of accidents occurs. All important junction point may be covered with Over Bridge, underpasses etc.

d) Illegal parking of vehicles on Highways causes a number of accidents. To avoid the occurrence of illegal parking on NH, wayside amenities, including parking spaces, at regular intervals should be included in the design of Highways.

e) Proper signage should be provided at all important locations and accident prone areas.

f) Non availability of proper speed calming measures and insufficient sight distance at junction points is also one of the reasons for accident. The accident at junction points may be minimised if the design of Highways includes the same too.

g) Construction of service lane and lane for non-motorised vehicles can improve the road safety scenario on Highways.

h) Emergency care facility should be upgraded to a large extent. There should be a provision of ambulance at an interval of 50 Kms. And all the Ambulances should be linked with a common emergency number.

i) All accident prone areas, vulnerable stretches and black spots etc. should be rectified by taking appropriate road safety measures.

j) Over speeding detection system and overload of goods vehicles checking system may be incorporated on highways.

292. The Committee agrees with the various suggestions put forth by the Transport Department, Assam and recommends that the Ministry may work to ensure that all the highways projects are in conformation with the guidelines of IRC and the Ministry itself. The Ministry may make concerted efforts to curb the menace of overloading and overspeeding on National Highways, since both pose a significant risk to the safety of the commuters.

293. Ports & Transport Department, Government of Gujarat informed the Committee that Gujarat has been working diligently on Road Safety over the years and its resultant effect is that percentage of number of accident could be brought down by 39% in the year 2019 as compared to the data of the year 2012. As such, it is envisioned to reduce number of accidents and fatalities to 50% by the year 2030.

Accidents on National and State Highways in Gujarat
It was stated that Gujarat has robust road connectivity of 99.87% which includes National/State Highways, Major District Roads etc. On the other hand, number of registered transport and non-transport vehicles in the State are 2.72 crore which indicates a huge increase of 45% in the last five years. It makes Road Safety a very challenging task. As such, following comments are offered to ensure Road Safety on Highways. The road accidents occurring on National/State Highways tend to cause more fatalities. Therefore, constructions of new Highways, widening of existing Highways, construction of fly overs are very necessary.

General causes of Accidents on Highways, as submitted by the Ports & Transport Department, Government of Gujarat

Drivers
- Over speeding, rash driving, violation of traffic rules, non-wearing of helmets, seat belts, etc.

Pedestrian
- Carelessness, illiteracy, crossing at wrong places

Passengers
- Illegal traveling by goods carriers, catching a running bus, projecting their bodies outside Vehicle

Vehicles
- Overloading, projecting loads, poor fitness
Road conditions

Pot holes, damaged road, damaged connection of rural roads with highways, diversions, illegal speed breakers, unauthorised gap in median, inadequate traffic calming measures at junctions at the points where lower hierarchy roads meet higher hierarchy roads, lack of/inadequate barricading on hilly roads/water bodies, lack of proper Work Zone Traffic Management Plans, vulnerable road segments/black spots etc.

The intensive enforcement for wearing helmets, seat belts, prevention of illegal movement of passengers in goods vehicles, over speeding, wrong lane driving/over taking, drunken driving etc. have been done by the State’s traffic Police and Transport Department. However, road engineering has also a significant role to play and hence, following suggestions are worth considering:-

- Proper Traffic Calming Measures must be ensured at the spots/junctions where lower hierarchy roads join higher hierarchy roads. There must not be any difference in surface level of approach roads joining highways.
- Closure of unauthorised Gap-in-Median must be ensured.
- There must be adequate pedestrian safety on routes where religious Padyatras take place often. As such, Zebra crossings, Pedestrian Access (Safe Passages) with "Delineators, Crash Barriers, Reflective Lights, Cat Eye, etc. should be provided.
- Installation of signages, and crash barriers at hilly locations and water bodies’ area, road marking must be done during construction and its maintenance must be done periodically.
- Removal of unauthorized speed breakers and make new speed breakers as per IRC standards with cat eye and road marking must be made priority.
- Implementation of Work Zone Traffic Management Plan as per IRC guidelines at work sites and installation of barricades, signages and give proper diversion with proper signages must be done scrupulously and its supervision should be done by senior official of road owning department.
- Road side amenities like lay by, rest areas, refreshments, parking of heavy vehicles etc. must be the responsibilities of the Concessionaire/Contractor and the road owning department/agency.
• There must be inbuilt provision in an award of contract (also condition in tender document) to the Concessionaire/Contractors regarding installation of Solar Street lights at locations of habitats/Educational Institutions alongside Highways.

• In large projects of Highways, it must be mandatory for Concessionaires /Contractors to provide for well-equipped Ambulances at strategic locations to extend emergency care on an urgent basis.

• It must be made mandatory for Concessionaires / Contractors to provide for a few JCB / Crains in hilly areas and at bridges over large rivers/ reservoirs.

• National Highway Authority of India and Public Works departments of the States must have well trained and dedicated Engineers for road safety to enhance sensitivity for road safety.

• Training should be imparted to the officials of all levels of the Stake holder Departments periodically regarding road safety for better compliance of road safety measures in their States/UTs.

294. The Committee appreciates the efforts made by the Government of Gujarat and the Ministry, in order to bring down the number of road accidents by 39% in the year 2019 as compared to the data of the year 2012. The Committee hopes that the reduction seen in the deaths caused due to road accidents in the State is commensurate with the reduction in the number of accidents.

295. The Committee takes note of the reasons furnished by the Ports & Transport Department, Government of Gujarat, behind the road accidents. In this regard, the Committee recommends that the Ministry may work in coordination with the State Governments to encourage stricter implementation of traffic laws, while working in tandem to improve the quality of roads, both in terms of construction and design, in order to bring the number of accidents significantly down.

296. The Committee strongly recommends that special attention may be given to the design and implementation of approach roads and entry & exit ramps on highways, since poor design and construction of these stretches inevitably leads to road accidents.

297. The Committee desires that the Ministry may ensure that road safety audits are conducted across the entire National Highways stretch in the country, for projects executed by both the Ministry itself, as well as the State Government PWDs. The findings arrived upon by conducting such audits must be carefully analyzed and acted upon urgently.
Department of Tourism, Government of Goa informed the Committee that according to a 2018 report by the Ministry of Transport and Highways, India ranks first out of 199 countries in the number of road accident deaths. The largest number of all deaths in the country happen not because of war or epidemics, but due to road accidents. Over 1.5 lakh deaths and 4.5 lakh injuries due to road accidents were reported in 2018. Two-wheeler drivers constitute over 30 per cent and working age people, between 18-60 years, account for 82 per cent of all deaths. The report also states that 62 per cent of deaths happen on National and State highways, which comprise 5 per cent of road network of India. In light of the above, following are the suggestions for improvement of road safety:

- As most of the deaths are caused due to traffic violations thereby strict traffic laws are required.
- However, the value of fines imposed for traffic violations were increased by the Union government through the Motor Vehicle Act, 2019, still strict implementation is required to enhance safety on road.
- Also, the design of pavements should be strictly as per the IRC guidelines to enhance the quality of the finished ROW.
- Operations & Maintenance of the finished carriageway is required on continuous basis.
- The speed limits defined for the highways should be re-visited and should be strictly as per the design speed of the carriageway.
- A designated road safety wing at State level and RO level need to be formed for immediate re-dressal and continuous monitoring of road safety related issues.

The Committee notes the findings of the 2018 MoRTH Report shared by the Government of Goa and observes that the findings are direct evidence of the devastating effect road accidents have on lakhs of families in the country, often causing the death of the sole earning member of the family, very likely impacting the financial health of the family, besides the emotional trauma. The Committee, therefore, recommends that the Ministry may enhance its focus on maintenance of the NHs in a good condition and implement road safety measures across the entire network, on a war footing. The Committee desires that the Ministry may form designated road safety wing at State level and RO level for immediate redressal of road safety related issues, as suggested by the Government of Goa.
The Committee desires to know the present status of the Bharat New Vehicle Safety Assessment Program (BNVSAP) for testing the safety performance of new vehicles in India, which was expected to be implemented several years ago. The Committee also may be apprised of the steps taken by the Ministry for introduction of safety standards and technologies in two-wheelers manufactured in the country, since a large number of the road accidents on Indian roads involve two-wheelers.

Public Works Department, Government of Karnataka informed the Committee that the road accident scenario in Karnataka causes a great concern as more than 10000 persons die every year due to road accidents. While fatal accidents cause loss of invaluable human life, all accidents cause pain, grief and misery as well as economic loss. The increasing number of accidents, loss of lives and resources necessitate the State Government to frame policy on Road Safety. Accordingly, the Government of Karnataka has formulated Road Safety Policy, 2015 which will act as a guide to the concerned stake holders department and to the public to take concerted measures to control the incidents of road accidents and to ensure safe travel for all road users. The objectives of the policy are as under:

- Improving road engineering and design, increasing awareness, providing emergency care and strict enforcement on road.
- Design, develop and implement an Accident Information System to enable crash management in the State in the next two years.
- Provide a framework for undertaking coordinated actions and corrective measures by all concerned stake holder departments.
- Provide the basis for accountability, evaluation, funding and research.
- To reduce the road accidents by 25% and fatalities by 30% by the year 2020.
- Supporting and building capacity by working with the road safety community with better tools to support Road Safety Programs.

One of the main reasons for accidents is inadequacy in road geometric or non fulfillment of safety standards as per the codal provisions. Considering all the above facts, recommendations and directions of the Supreme Court Committee on Road Safety constituted by the Hon’ble Supreme Court of India and to implement the Karnataka Road Safety Policy, 2015, the standard operating procedure (SOP) and protocol has been designed for identification of black spots, preparation of a time bound action plan for implementing the rectification measures. A G.O. to that effect has been issued vide G.O. No. PWD:42:EAP:2017, Bengaluru dt:4-4 2017. As per the protocol, a black spot is a stretch of
road of about 500 m in length in which either (a) FIVE Road Accidents (in all three years put together involving fatalities/grievous injuries) took place during the last THREE calendar years or (b) TEN Fatalities (in all three years put together) took place during the last THREE calendar years during the last 3 consecutive calendar years. In Karnataka 942 black spots have been identified which come under different departments / authorities. 215 black spots come under Karnataka Public Works Department out of which 58 black spots have already been rectified, rectification is being carried out in 89 black spots and action is being taken to invite tenders for the remaining 69 black spots. 569 nos. of vulnerable locations have been identified on State Highways and it is proposed to take up traffic calming measures at the above locations in a phased manner during 2021-22 and 2022-23. Similarly, to ensure safety on hilly roads, near water bodies and other vulnerable locations numbering 1108 throughout the State on SH and MDRs, action plan is being drawn.

301. The Committee notes the steps being taken by the Government of Karnataka to reduce the number of road accidents in the State and hopes that the black spots identified by Karnataka PWD are rectified as soon as possible.

302. Public Works Department, Government of Manipur informed the Committee that roads should be designed for the safety of all road users, which means ensuring adequate facilities for pedestrians, cyclists and motorcyclists. Traffic in Imphal and other District HQs have to address the sudden growth in traffic which requires measures such as separate footpaths, cycling lanes, safe crossing points including Foot Over Bridge (pedestrian bridge, pedestrian overpass) and traffic calming measures are critical to reducing the risk of injury among these road users. Potholes, a nuisance for accidents needs to be mended / repaired on priority basis which demands adequate maintenance budgetary support and constant monitoring and supervision.

303. Transport Department, Government of Tripura informed the Committee that as per direction of Supreme Court Committee on Road Safety (CoRS), Transport Department in State Government has taken various effective measures to reduce the accidents and save the lives of the people of the State :-

- State Government re-published the Motor Vehicle (Amendment) Act, 2019 in Tripura Gazette on 9 September, 2019 which is presently in force in the State.
- State Road Safety Policy- 2017 has been notified on 29th May, 2017.
- State Road safety Fund has been constituted from the 50% of fund collected from enforcement, fines etc.
• Tripura Road Safety Fund Rules (TRSFR)- 2017 has been notified on 29th May, 2017.
• Wearing of helmet has been done compulsory for both errant and pillion riders of two wheelers.
• Wearing of Seat Belt for the drivers and the person occupying the front seat of all four wheeler vehicles (including Govt. vehicles drivers) has been done mandatory.
• State Road Safety Action Plan as per prescribed format of MoRTH has been prepared and forwarded to CoRS.
• ‘Standard Operating Procedure’ for protection of Good Samaritans who save lives of road accident victims has been notified.
• Mandatory fitment of Speed Governor in commercial vehicles has been notified.
• All Liquor Shops has been shifted 100 meter away from National Highways of the State.
• The Trauma Centre has been started at AGMC and GBP hospital and commissioned from 12-12-2017. Trauma Care Centre in Kulai, Dharmanagar, Gomati&Shantirbazar District Hospital is under process.
• 30 (thirty) nos road safety awareness hoarding has been erected beside the road side of NH from Amtali to Garjee. 30 another hoarding will be erected from Garjee to Sabroom very soon.
• There is State Road Safety Council headed by the Hon’ble Minister as the chairman of the Council.
• State Road Safety Committee under the chairmanship of Principal Secretary, Transport is reviewing the Road Safety issues quarterly in presence of the representatives of stakeholding Departments like Police (SP,Traffic), DIG, PWD(NH), PWD(R&B), Health, Fire Service, Education etc. Department and devising work plan/ way forward on road safety.
• Further, there are District Level and Sub-Division Level Road Safety Committee who are reviewing the road safety issues at District & Sub-Division level.

304. The Committee takes note of the various steps taken by the Transport Department, Government of Tripura to reduce the number of road accidents in the State.
305. Public Works Department, Government of Mizoram informed the Committee that National Highways historically are declared through upgradation of lower category roads like
State Highways, Major District Roads etc and are being developed in stages considering traffic, resources, availability of land etc. Lack of road safety education, lack of enforcement etc are contributing to the present high rate of accidents on NHs. Road Safety Audits of the National Highways at different stages like feasibility, design, construction, pre-opening stage and also carrying out road safety audits of existing NHs is a systematic way of critically examining and identifying such safety concerns with the objective of adopting feasible remedial measures. IRC:SP-88-2010 contains salient aspects of carrying out the road safety audits at different stages. Additional aspects which have not been covered in the above IRC publication could be brought out into the terms of reference of these audits (refer OM.RW/NH-15017 /120/2015/P&M dated 09.11.2015). For improvement of locations prone to accidents on the road network, a systematic approach is required which includes a common definition for road accident black spots on NHs and a sequence of actions with time frame for removal of those black spots. For this purpose, the protocol for identification and rectification of road accident black spots on NHs vide OM dated 28.10.2015 :-

a) Definition of road accident black spot : A stretch of about 500m in which either 5 road accident took place during the last 3(three) calendar years or 10 fatalities took place during the last 3 calendar years.

b) Forwarding the road accident data on NHs to TRW of MOoRTH : No of accidents involving fatalities/grievous injuries, number of fatalities if any during a calendar year are to be forwarded by Police authorities/National Crime Records Bureau so as to reach Transport Research Wing of MoRTH by 31st March of the subsequent calendar year.

c) Forwarding of compiled road accident black spot data on NHs by TRW to Road Safety Cell (Engineering) of MoRTH : TRW compile/analyze accident data and furnish black spot details to Road Safety Cell (engineering) of MoRTH by 31st May of the subsequent calendar year.

d) Remedial measures for rectification of road accident black spots.

This is very important subject. In compliance to above Ministry’s instruction, the Department had invited quotation to carry out independent road safety audit for suggesting rectification measures for black spots identified by the Ministry. However, as most of the projects entrusted to the State are small projects only with scattered locations, may be the works are not big enough to attract independent auditors from out state, hence there was no bidder within the time frame as the quotation/tenders are small in amount and the location of accident black spots are scattered. These result in Quotation/tenders re- invitations for same works, which is hampering the start and progress of the whole projects.
306. Public Works Department, Government of Mizoram informed the Committee that while framing the Project Report for road project, provision for some items of road safety work such as Road Marking, Road Signages and Crash-Barriers are usually included and are found to be very beneficial for initial safety features of the road. However, Road Safety Audit is now becoming more or less essential to further strengthen the road safety feature after opening to the public for various road users, under such circumstances it is felt important to provide some percentage of the project cost for Road Safety Audit and its implementation which may be from 3% to 5% depending on the type of road.

307. The Committee notes that the Mizoram PWD is facing issues in attracting bids for carrying out independent road safety audits in the State audit for suggesting rectification measures for black spots identified by the Ministry. The Committee strongly feels that rectification of black spots cannot be delayed because of lack of interest in bidding for this purpose. The Committee, therefore, recommends that the Ministry/NHAI may step up to help Mizoram PWD through its expertise in rectification of black spots on the NHs. If the reason for the lack of interest in bidding for the projects is ascertained to be the small scale of the overall project, the Ministry may invite bids to conduct such an audit in multiple North-Eastern States together.

308. The Committee agrees with the suggestion of PWD, Government of Mizoram regarding making specific budgetary provisions for conducting road safety audits in the project cost itself. Any new NH project implemented by the Ministry/State PWDs should be duly audited in terms of road safety before opening it to the public and time-bound plan must be made for conducting road safety audits to cover the existing NH network as well.

309. Commerce & Transport Department, Government of Odisha informed the Committee that in Odisha, NH comprises of about 2% of the total Road Network whereas SH comprises near about 1.5% of the total road network, but still it contributes more than 50% of the road accidents and road accident fatalities. It was stated that road improvement in the country has been taken up on a large scale with the launching of National Highway Development Project (NHDP) / National Highway Authority of India under its various phases and State Governments are having their own programmes for improvement of state roads. The Commerce & Transport Department found that though signs and markings are provided on these improved roads, they are still far from being the appropriate system to meet the intended requirements of safe and efficient travel. Now that the objective is to develop the
National Highway System to a world class standard, it is essential that all the roads including these which are under improvement / up gradation are provided with a detailed system of traffic signs and pavement markings. The following points can be considered in Road Safety point of view in Highways.

a) Traffic Signs
The traffic signs and markings for promoting highway safety and efficiency have to be effective and should meet the following basis requirements objectively:-

- Fulfill-specific needs as per the site situation.
- Command attention from all categories of road users.
- Convey a clear, precise meaning in a simple form.
- Command respect from road users and for this, they should be appropriately sited, visible/ readable and uniform throughout.
- Prominent to attract attention of the drivers and should be readable from sufficiently far away to be read without diverting the line of sight through too great an angle.
- Placed such that they are not hidden by other objects or vegetation and no huddle has taken place.
- Road markings should be clear and visible during the hours of darkness (luminous/ reflective) so that drivers can see them clearly in time to position themselves correctly.

b) Safety Standards
The objective of Safety Standards is to provide safe travel to the drivers of vehicles plying on the Project Highway at all time, say, throughout the year and provide protection to the Project Workers when they are at work. The guiding principles for safety measures shall include:-

- Warning to the drivers unambiguously and sufficiently in advance of the situation on the highway.
- Providing clear demarcation for movement of vehicles.
- Providing devices to guide the drivers and their movements through construction zones/ lane closures/ traffic diversions etc.

c) Traffic Management Planning
- Warn the road user clearly and sufficiently in advance.
- Provide safe and clearly marked lanes for guiding users.
- Provide adequate measures that control driver behavior through construction zones

d) Black spot identification & Rectification Measures
Black Spots identification as per the criteria
Vulnerable locations /accident prone zones to be identified
Rectification measures to be taken as per the requirement.
Monitoring of the rectification measures undertaken frequently.
Checking of the efficacy in the accident prone spots after rectification.

310. Department of Transport, Government of Punjab informed the Committee that in the State of Punjab the following steps have been initiated to monitor & look after the road safety issues in an efficacious manner as under:

- In the Transport Department, Punjab the Punjab State Road Safety Council has been constituted under the Chairmanship of the Hon'ble Transport Minister, Punjab.
- Two meetings of the Punjab State Road Safety Council are held in a calendar year to deliberate upon the road safety issues to implement them in a proper & rightful manner.
- In compliance to the directions issued by the Supreme Court Committee on Road Safety, the Lead Agency to the Punjab State Road Safety Council has been constituted vide notification No.4/119/2010- 2T2/313 dated 4.12.2020 headed by the Director General (a retired IAS Officer who had worked as Additional Chief Secretary or the Principal Secretary to Govt. of Punjab) with official members, Member Secretary & Non Official Members on full time basis for effective coordination of Road Safety measures and to continuously monitor the implementation of the directions issued by the Supreme Court Committee on Road Safety and the Govt. of India. The post of Director General is filled up.
- Road Safety fund has been created to facilitate the proper execution of road safety issues.
- Currently there is an amount of about Rs.40.52 Crore as road safety fund for the road safety issues.
- The Chief Engineer, Punjab, Roads & Bridges Development Board (PRBDB) has been nominated as the Chief Engineer, Road Safety for the purpose of strong & effective coordination with the Police Department (Traffic) to settle the road safety issues in a rapid & faster way.
- 32 Black Spots have been identified on the vulnerable roads out of which 10 Black Spots have been examined by the Chief Engineer, PRBDB and for their rectification funds are being released from the road safety funds.
• The Executive Engineers (PWD) have been nominated as the Executive Engineers (Road Safety) at the District Level.
• At the District Level too Road Safety Committees have been constituted to monitor & look after the road safety issues in an effective manner.

311. Chief Engineer (National Highways), Punjab PWD informed the Committee that there is need for a formulating comprehensive manual for drivers to strictly follow the traffic rules. Further the traffic rules, if, so required may also be reframed in accordance with SOP for the drivers. Dedicated funds should be provided to States for execution of Road Safety projects on State Roads.

312. The Committee takes note of the initiatives taken by Department of Transport, Government of Punjab to enhance road safety on the road network in the State and hopes that it makes optimal utilization of the Road Safety Fund available with it, for resolution of road safety related issues.

313. The Committee recommends that the Ministry may look into the fund crunch faced by State Departments in execution of road safety related projects and to consider developing an incentive based funding scheme wherein a part of the funds spent by the State Government on road safety projects and activities for State roads, may be reimbursed by the Ministry.

CHAR DHAM PARIYOJANA

314. The Ministry has taken up the connectivity Improvement Program for Char-Dham (Kedarnath, Badrinath, Yamunothri & Gangothri) in Uttarakhand. The program includes projects of improvement /development of 889 km length of NHs at total estimated cost of about Rs. 12,070 crore. The projects include provisions like widening of existing narrow & geometrically deficient NHs to 2-Lane NH standards with paved shoulders, protection of landslide prone zones, construction of bypasses, long bridges, tunnels, bus /truck lay bye /rest area and elevated corridors. The program was initially targeted for completion by March 2020. However, it has been delayed due to petitions filed by NGOs in NGT and Supreme Court. The Hon’ble Supreme Court passed an order on 08.08.2019, directing MoEF&CC to constitute a High Powered Committee (HPC) to submit a report within 4 months as per Terms of Reference prescribed by the Hon’ble Supreme Court. The HPC has submitted the final report in July 2020.
Out of total 53 civil works covering the entire length under Chardham project, 40 civil works of total project cost amounting to Rs. 9,474 crore (including cost of pre-construction works amounting to Rs. 491 cr.) in a length of 673 km have been sanctioned. 38 works in a length of 647 km amounting to Rs. 8,379 cr. have been awarded out of which 27 works amounting to Rs. 7,011 cr. in length of 543 km are ongoing and 11 works amounting to Rs. 1,368 cr. in a length of 104 km have completed. Out of total 889km length, projects in 514 km length has been completed. Balance 2 nos. works amounting to Rs. 604 cr. in a length of 25 km are in tender stage. Physical progress on ongoing works is 79% with the total expenditure of Rs. 5,400 crore. The program is targeted for completion by December 2023.

The Committee feels that the Char Dham Pariyojana is of immense importance because of the pilgrimage tourism aspects of the region. Completing this project at the earliest should thus be accorded high priority by the Ministry.

The Committee notes the delays caused in the project on account of the petitions filed by NGOs in the NGT and Supreme Court. The Committee desires to be apprised of the progress made in this regard.

The Committee further recommends that the region being highly sensitive in ecological terms, the Ministry must undertake every possible measure to minimize the environmental impact caused by its projects in such regions. If need be, consultants specializing in the same may be hired for the purpose of minimizing the adverse impacts of the projects on environment. This would help address the issues raised by the NGOs regarding such projects as well.

IMPACT OF CORONAVIRUS PANDEMIC ON ROAD TRANSPORT SECTOR

The Committee heard the Secretary, Ministry of Road Transport and Highways on the impact of Coronavirus pandemic on road transport sector, in its meetings held on 7th October and 13th October, 2020. The Ministry, in its written note, informed the Committee of the various measures taken by it as part of the Atmanirbhar Bharat campaign to ease the cash flows of the contractors and concessionaires and help the construction industry cope with the shocks of the economic downturn:-

a) Retention money (which is a part of the Performance Security till construction period) is to be released in proportion to work executed and further retention money from the period from 03 months to upto 06 months are not to be deducted
from the Contractors’ Bills. For HAM/ BOT Contracts, Performance Guarantee can be released on pro-rata basis of that as provided in the Contract, if Concessionaire is not in breach of the Contract.

b) Extension of Time to Contractor/ Concessionaire for meeting their obligation under the Contract for 03 months to upto 06 months depending on site conditions.

c) Relaxation in Schedule H to provide monthly payments to the Contractors for the works done and accepted for EPC/HAM Contracts.

d) Direct payment to approved Sub-Contractor through Escrow Account.


f) To allow Extension of Time to Consultants i.e. I.E/ A.E, for 03 months to upto 06 months depending on site condition. During this Force Majeure Event, they may be considered as if they were on duty.

g) BOT/ TOT Concessionaire: Before CoD, the concession period of BOT contracts shall be extended by a period of 03 months to upto 06 months. Further for loss in collection of user fee, the concession period shall be extended by a period in accordance with the Contract till the time daily collection is below 90% of the average daily fee.

h) For all National Highway Tolling Contracts, loss in collection of fee (remittances) shall be compensated.

320. The Ministry further furnished the following summary of relief granted under the above measures:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Relief Given to Contractors / Concessionaires due to COVID 19 pandemic</th>
<th>No. of Applications received under the category</th>
<th>No of Projects Covered so far</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retention money (which is a part of the Performance Security till construction period) is recommended to be released in proportion to the work already executed in accordance with the Contract specification and further retention money from the period from 03 months to upto 06 months</td>
<td>1,253</td>
<td>1,155</td>
<td>Rs. 3,527.07 crore released to contractors</td>
</tr>
</tbody>
</table>
may not be deducted from the Bills raised by the Contractor. For HAM/ BOT Contracts, Performance Guarantee can be released on pro-rata basis of that as provided in the Contract, if Concessionaire is not in breach of the Contract

2

Extension of Time to Contractor/ Concessionaire for meeting their obligation under the Contract for 03 months to upto 06 months depending on site conditions

207 196

3

Relaxation in Schedule H to provide monthly payment to the Contractor for the work done and accepted as per the specification of the contract during the month EPC/HAM Contract.

863 774

Rs. 6,562.18 crore payment made

4

Direct payment to approved Sub-Contractor through Escrow Account

21 19

Rs. 241.10 crore payments made

5


17 17

321. The Ministry furnished the following information to the Committee regarding the award and construction of Highways in the last few years.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Year</th>
<th>Award (km)</th>
<th>Construction (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2014-15</td>
<td>7,972</td>
<td>4,410</td>
</tr>
<tr>
<td>2.</td>
<td>2015-16</td>
<td>10,098</td>
<td>6,061</td>
</tr>
<tr>
<td>3.</td>
<td>2016-17</td>
<td>15,948</td>
<td>8,231</td>
</tr>
</tbody>
</table>
4. 2017-18  17,054  9.829  
5. 2018-19  5,494  10,855  
6. 2019-20  8,948  10,237  
7. 2020-21  10,964*  13,327*  
8. 2021-22*  663  1,470  

# - Surpassed award and construction targets and recorded highest annual NH construction of 37 km/day

*As on 31.05.2021

322. The Committee appreciates the various steps taken by the Ministry to help the road construction industry cope with the adverse impact of the Coronavirus pandemic. The Committee is happy to note that despite the pandemic and the ensuing lockdown in the Financial Year 2020-21, the Ministry managed to achieve an impressive pace of construction of 37 kilometers highways per day. The Committee hopes that the Ministry takes necessary action to keep up this pace of construction and minimizes delays in its road projects in the coming years to ensure optimal utilization of allocated funds.

COORDINATION OF THE MINISTRY WITH STATE GOVERNMENTS

323. On the query of the Committee regarding any help extended by the Ministry/NHAI to the State Departments, the Ministry, in its written reply, informed the Committee that the NH works are executed as per specifications/guidelines laid by MoRTH and IRC. Further, these documents are updated from time to time based on inputs received from various stake holders including the officers of State Government. These specifications are also to be followed by State PWDs in their highway/road projects. Through training programme of IAHE, officers from Selection Grade are being given exposure to new technology and best practices of contract and construction management.

324. The Committee takes note of the training programmes conducted by IAHE for officers from State Governments. The Committee recommends that the NHAI may proactively extend its technical expertise with the State Government departments, to help them utilize their funds in a better way, while ensuring a better state of construction and maintenance for the State Highways, as well as the
National Highways network maintained by State PWDs.

325. While making its presentation before the Committee in the meeting held on 7th January, 2021, Indian Roads Congress suggested that financial assistance should be provided to State Governments for maintenance and upgradation of their road network other than NHs from the CRF fund.

326. The Committee observes that State Highways and local roads play a significant role in the economic growth of our country and thus, need allocation of sufficient funds for their maintenance. The Committee recommends that the Ministry may seriously consider IRC’s suggestion to provide financial assistance to State Governments for the maintenance of Highways and roads under their control, from the CRF fund.

327. Office of the Director of Tourism, Government of Assam informed the Committee that a coordination mechanism is needed for Tourism Department with Ministry of Transport and Highways for parallel development of Highways and Tourist Destinations in Assam.

328. Department of Tourism, Government of Goa informed the Committee that post Covid-19, road travel has seen a rise as it provides a personal space to tourists travelling to various destinations in India. Thereby as part of the planning exercise, representatives from the tourism departments should also be part of the Committee meetings so as to provide relevant suggestions.

   a. Director (tourism) should be invited to be part of the committee meetings chaired by Joint Secretary.

   b. A special officer from MORTH may be placed at State Level for Screening of Project proposals before submission to the Ministry. The said officer shall act as Liaison Officer between the state and MORTH for taking up any issues related to state pertaining to National Highway.

329. The Committee agrees with the suggestions put forth regarding the need for the Ministry of Road Transport and Highways to have a coordination mechanism with the Tourism Departments of State Governments. Tourism can give impetus to economic growth of any region. Excellent road connectivity to existing tourist attractions as well as potential tourist sites is a prerequisite for the same. The Committee, therefore, recommends that the Ministry may hold
periodic meetings with the Ministry of Tourism as well as State Tourism Departments, and devise a time-bound Master Plan to enhance road connectivity to tourist places across the country, in order to bolster both domestic and foreign tourism.

330. Public Works Department, Government of Karnataka informed the Committee that the Chief Engineer, National Highways Zone will co-ordinate and liaison with Ministry of Road Transport and Highways to resolve the issues. Further, a High Power Committee under the Chairmanship of the Chief Secretary to Government of Karnataka has been constituted to resolve the issues related to Project implementation of National Highways.

331. Public Works Department, Government of Kerala informed the Committee that regional office of MoRTH headed with a Superintending Engineer is functioning along with CE (NH) for liaising with MoRTH. State PWD is responsible for arranging works sanctioned under MoRTH heads for NH(O) and M&R, from inviting bids to award of contract. Though the State PWD is signing the contract with the contractor as the Authority, no powers delegated to State PWD by MoRTH for granting extension of time for any delay in completion of project in case of delay due to reasons other than from Contractor or making any essential change of scope.

332. The Committee recommends that the Ministry may consider Kerala PWD’s suggestion to permit State PWDs to grant extension of time for delays in completion of project in case of delay due to reasons other than from Contractor, if it is felt that delegating such a power would allow road projects executed by State PWDs to be executed more smoothly with lower delays due to paperwork.

333. Public Works Department, Government of Manipur informed the Committee that MoRT&H’s role is crucial in states with hilly terrains not only for economic relevance but also for strategically significance due to proximity to international borders and defence establishments.. An Officer on Special Duty (OSD) is proposed to be appointed to link and communicate directly with MoRT&H officials and Ministry to expedite sanction process and execution of projects.

334. Public Works Department, Government of Mizoram informed the Committee that State PWD coordinate mainly for National Highway and CRIF (i.e. CRF/ISC/EI) works only. The State Government request for early clearance/release of fund and early award of Contract work in view of short working season in the NE region.
335. Public Works Department, Government of Mizoram informed the Committee that as of now, unresolvable issues have not been encountered. However, it is suggested that if the appropriate authority from the Ministry for making decision as and when needed on the spot visit the construction site more frequently especially during rainy season which will bring fruitful outcome. Due to limited practical knowledge of the terrain especially unstable hilly terrain like North East, there seems to be unwillingness from the Ministry to invest huge amounts in the projects and limited understanding of the problem face in the actual work.

336. The Committee recommends that the Ministry may ensure that clearances, release of funds and award of contract work for NH projects in NE regions are mindful of the short working season in the region. Procedural delays should not hamper the timely completion of projects in North-Eastern region.

337. The Committee desires that the Ministry may look into the observations made by Mizoram PWD regarding unwillingness of the Ministry to invest large amounts in projects in the North East and having limited understanding of the problems faced in the actual work. Coordination mechanism with the State Government of Mizoram may be strengthened so as to resolve the issues being faced by it in execution of road projects in the State.

338. Transport Department, Government of National Capital Territory of Delhi informed the Committee that there is good co-ordination between Delhi with MoRTH. Many of the National Highways pass through Delhi. The city roads including National Highways are being maintained by Govt. of Delhi. There is need for more and significant contribution from MoRTH in planning and upgradation of the NHs of Delhi.

339. The Committee recommends that the Ministry may look into possibilities for upgradation of NHs in Delhi that may help the region to tackle the issues of traffic and pollution.

340. The Committee, in its meeting held on 7th January, 2020 in Visakhapatnam, was informed by the representative of the Ministry of Road Transport and Highways that out of the overall network of 132,500 kms of National Highways across the country, Andhra Pradesh has a NH network spanning over 6,859 km. Out of total 433 black spots identified on NHs in Andhra Pradesh by Ministry of Road Transport and
Highways and NHAI, 76 have been rectified, 41 are yet to be rectified and rectification work is yet to be taken up at 316 spots. It was informed that 41 projects of Ministry of Road Transport and Highways through State PWD and 12 projects of NHAI are presently under implementation in Andhra Pradesh, with a cost of Rs. 9,500.53 crores and Rs. 12,601.39 crores respectively.

341. Principal Secretary, Department of Transport, Roads and Buildings informed the Committee that land acquisition is a core issue involving a lot of litigations, and that to overcome the same, a special bench has been formed. He further stated that they are in regular touch with the concerned Regional Officer and Project Directors to resolve the points. He submitted that a lot of accidents take place on the Rajahmundry Bypass and requested NHAI to take necessary measures to minimize the occurrence of road accidents. The Committee also noted the need of upgradation of State Highways into National Highways. During the meeting, Hon’ble Minister of Roads & Building, State Government of Andhra Pradesh informed the Committee that the flyover constructed at Benz Circle, Vijayawada by NHAI is not able to cater large traffic and requested laying another lane. He also asserted the need for Amaravati Express Highway. The representatives of the State Road Contractors’ Association stated that the contracts for road construction and maintenance should be investment friendly.

342. The Committee takes note of the status of the ongoing road projects in Andhra Pradesh and desires that the Ministry may analyze the need of upgradation of suitable State Highways in Andhra Pradesh into National Highways.

343. The Committee recommends that NHAI may ensure that urgent necessary action is taken to reduce the accidents taking place on the Rajahmundry Bypass. NHAI may also assess the need for addition of another lane on the flyover constructed at Benz Circle, Vijayawada.

344. In the meeting of the Committee held on 10th January, 2020 in Mumbai, the representative of Ministry of Road Transport and Highways informed the Committee that 35 black spots have been identified in Maharashtra, for which improvement measures, such as localized curve improvement, junction improvement, extra wide signages, line marking, blinkers, crash barriers, rumble strips etc., have been taken. As part of long term measures, localized widening / divider construction, curve improvement / extra widening through land acquisition etc., are incorporated in 4/6
laning widening projects.

345. The representatives of the Government of Maharashtra also briefed the Committee about the NH projects under implementation through PWD and MSRDC in Maharashtra, including the status of major corridor improvement projects going on, Mumbai-Goa Road NH-66 and Kalyan-Nirmal Road NH-61. It was informed that the major reasons for delay in ongoing works are delays in acquisition of land, joint measurement survey, tree-cutting permission, approval of proposal of forest land diversion, approval of estimates for utility shifting and financial issues with contractors.

346. The Committee takes stock of the ongoing road projects in the State of Maharashtra. The Committee desires that the Ministry may take effective steps in close coordination with PWD and MSRDC, to resolve the issues causing delay in the execution of road projects in Maharashtra.

347. The Committee, in its meeting held on 11th January, 2020 in Goa, was briefed by the representatives of the Ministry regarding the status of the road projects in Goa ongoing at the time. The representatives informed the Committee that the State of Goa has a National Highway network of 293.1 kilometers, out of which 244.2 km length is with the State Government, while 48.9 km length is with NHAI. Another 108.5 km length has been declared as In Principal NH in Goa, out of which 100.5 km section has already been awarded. The Committee was informed that 22 NH projects with a sanctioned cost of Rs. 5687 crores, are presently under implementation in Goa. The Committee was also briefed about the important NH(O) projects in Goa. The representatives of Government of Goa informed the Committee that two NH projects have been completed in the year 2019-20 in Goa, including the construction of a high level new Khandepar bridge with a cost of Rs. 355.44 crores. Thereafter, the Committee was apprised of the ongoing and upcoming NH projects of PWD, Government of Goa. The representatives of State Roads’ Contractors Association submitted that workshops should be arranged for engineers, contractors and other stakeholders involved in the construction of NHs before the Ministry to bring out its model contract document. They further submitted that the present provisions for first payment being made to contractors only after 25% completion of a project is a cause of concern in case of large size projects, as money invested by the contractors, to the tune of hundreds of crores of rupees, is paid to them after over an year of awarding of the project. The representatives also raised the issue of absence of cash flow in the
present market, with banks issuing notices for repayment of loans before payment is released to the contractors by the State Government.

348. The Committee recommends that the Ministry may reconsider its provisions regarding first payment being made to contractors only after 25% completion of a project, in case of large size projects.

349. In their presentation made before the Committee in the meeting held in Srinagar on 23rd January, 2021, the officials of the Ministry of Road Transport and Highways apprised the Committee of the upgradation of of NH 144-A to 4-lane, with the paved shoulder of Jammu Akhnoor road section in the region to be executed on EPC basis, alongwith widening and 2- lanning of NH 244, with shoulder configuration and geometric improvement. The representatives of NHIDCL shared the progress of construction of 83 Km long Bi- directional tunnel between Khellani-Kishtwar which would improve connectivity between the regions and reduce travel time. The Committee also noted the status of the projects in UTs of J&K and Ladakh, with special reference of Srinagar ring road (42 Km) project targetted to be awarded by March, 2021. The officials of NHAI apprised about the current status of Zozila tunnel for connectivity to Kargil, Drass and Leh, which is likely to be completed by September, 2026.

350. The Committee notes the status of the ongoing projects in the UT of J&K and Ladakh. The Committee may recommends that the Ministry may lay special focus on road safety aspects of projects in the region, giving due significance to minimizing the ecological impact caused by the NH projects in the ecologically sensitive region.

MISCELLANEOUS

Issues faced in transport of heavy goods on National Highways

351. During the meetings of the Committee on the subject, some of the Members raised the issue of overloaded vehicles causing damage to the roads which are not built to withstand such heavy vehicles. It was stated that the damages caused because of the same takes very long to be rectified and leads to contractors going into arbitration stating that their design is not for such heavy loads.
The Committee strongly feels that overloaded vehicles not only cause severe damage to the roads, but also pose a significant safety risk to other vehicles plying on the road. The Committee strongly recommends that the Ministry may take immediate measures to install weigh-in motion system at all its toll plazas across the country to detect vehicles which are carrying more weight than their prescribed limits. Hefty fines should be charged on vehicles not abiding by the limits. The usage of weigh-in motion system to issue automated challans/ penalty would eliminate the possible collusion of corrupt officials with the heavy vehicle owners. The Ministry further recommends that the Ministry may consider charging toll on the basis of tonnage of the vehicles.

In its written note furnished to the Committee, All India Transporters’ Welfare Association highlighted the need to work on the following parameters in order to enable reliable movement of goods on road in a predictable manner:

- **Maintenance**: The construction of good roads have to be followed up by good maintenance. A pot hole on an express highway is much more dangerous than on a city road. The vehicles move at a high speed and are not prepared for any strong jerk due to potholes.

- **Intervention free**: There are a number of interventions, especially, for goods trucks on highways. Unauthorized policemen and taxmen hold up the vehicles in the guise of checking. Most of these checking are only to extract some money and not on valid grounds. Government should take action about this. A truck driver is only driving the vehicle and he is not responsible in any error in documents or any malafide intention of any consignor/consignee, yet he has to suffer in the hands of these officers.

- **Respect the driver**: For no reason, a truck driver is treated with contempt on road. Policemen often abuse them and sometimes manhandle them. In general, no one appreciates his contribution to the national economy; even though he is the backbone of national economy. Government gives lot of respect to soldiers and farmers; but hardly recognizes the contribution of truck drivers, who live an equally hard life, away from their family. During the pandemic, the US President Donald Trump invited the truckers to White House and praised their contribution during pandemic. They were handed over awards for their role in nation building. Such a thing was missing in India. It should be appreciated that when the lockdown was declared in the month of March, 2020; lakhs of drivers got
marooned on highways. All the eateries were closed and they were left to survive of their own as the movement of vehicle was stopped by State Governments. There was no reference of contribution of a driver in any of the speeches or celebrations of the leaders of the country. Truck drivers were denied the essential Covid insurance which was given to other Corona warriors. If a country cannot honor its truck drivers, the highways will always remain incomplete in its progress.

- Safety & Security: Safety and Security of road users is of utmost importance. Unexpected entry of animals on high-speed roads can cause big calamities. Roads have to be fully fenced. There should not be any direct entry and exit on highways; all such things should be properly guided and should be through exclusive exit and entry chutes.

- Infrastructure: Infrastructure on all highways is highly needed. Sufficient number of eateries, toilets, motels are needed at proper distances. Stand alone Telephone booths are needed for the highway users. For heavy vehicles drivers, there should be affordable rest houses where they can get sleep, rest and toilet facilities. Absence of such facilities forces truck drivers to continue driving until he reaches where he gets a break; fatigue caused due to overdriving becomes the reason of accidents on highways. Fire brigade and ambulance are required for quick action on highways. Internationally helicopters are kept standby to airlift the accident victims to the nearest pre-decided hospitals for addressing the crisis during golden hours. Indian certainly can afford such facilities.

- Civic Awareness: Finally, a massive civic awareness programme is desired through electronic media. People who do not drive very often on highways, they do not understand the importance. Unaware drivers drive their cars in the high speed lane at low speed. The awareness program should use animations to train about the lane discipline on highways. It has been noted on few National highways that highways are divided by flower beds. These flower beds are watered by slow speed watering vans in the high speed lanes. These slow speed vehicles can become a source of accident in high speed lane.

354. The Committee takes note of the various issues faced by heavy vehicle owners/transporters. The Committee feels that the installation of weigh-in motion systems at
toll plazas on National Highways across the country would be very helpful in saving the truck drivers from harassment and illicit demands from corrupt officials.

355. The Committee recommends that the Ministry may work on development of eateries, toilets, rest house etc. on National Highways, to allow truck drivers more comfort while travelling long distances. This would also help them be more concentrated while driving and would thus lead to lesser road accidents.

**Standardization of construction equipments used for road development**

356. While deposing before the Committee on the subject in its meeting held on 7th January, 2021, Senior Vice President, Indian Construction Equipment Manufacturers’ Association (ICEMA) informed that ICEMA is a 71-year old industry body comprising 70 construction equipment manufacturers in the country. He stated that the construction equipment intensity, which is defined as the investment in construction equipment per thousand dollars of investment in infrastructure, is low in India – at about 5 dollars per thousand dollars of infrastructure, as compared to 20-40 dollars of equipment per 1000 dollars of infrastructure. He was of the view that this points to the low level of mechanization in the country. He opined that the road infrastructure contracts should be specific in terms of mechanization to used since it has a lot of advantages in terms of quality.

357. The Committee believes that the usage of modern machinery for construction can lead to improved road quality, while saving time as well. The Committee recommends that the Ministry may look into the feasibility of the suggestion made by ICEMA to specify the details of mechanization to be used in the execution of a road project, in the road construction contract. A decision may be taken in this regard with due consideration to the benefits of prescribing such a mandate and the financial ability of the road contractors in India to purchase/rent such machinery.

**Promotion of usage of electric vehicles**

358. The Ministry, in its written reply to a query of the Committee regarding electric vehicles, informed that the number of registered electric vehicles in the country is 5,11,910 as on 28th January, 2021, as per the VAHAN database.
359. The Committee notes from the Annual Report (2020-21) of the Ministry that the total number of registered vehicles in India is 29.57 crores, according to the provisional data for the year 2019, with a CAGR of 9.91 percent for the years 2009 to 2019. The percentage of electric vehicles in the country thus comes out to be somewhere around 0.17 percent of the total vehicles plying in the country. The Committee is disappointed to note the very slow adoption of electric vehicles in India, with several countries across the world already having share of electric cars in double digits. The Committee desires that concrete measures are taken by the Ministry to enact policies to aid much faster growth of adoption of electric vehicles in the country. The Committee recommends that the Ministry, in coordination with Ministry of Power and automobile manufacturers may come up with a time-bound plan to create a robust vehicle charging infrastructure across the entire National Highways network in the country. Such infrastructure is critical to give a boost to the adoption of electric vehicles in the country, which would lead to considerable environmental benefits and help resolve the issue of pollution to some extent.

360. Further, the Committee strongly recommends that the Ministry may exempt electric vehicles from registration charges and toll tax. Financial incentives are necessary to create a spurt in the adoption of electric vehicles in the country, which, in turn, will increase the pace at which infrastructure is being created for the shift to such vehicles. The Committee recommends that the Ministry may undertake an in-depth analysis of the policies adopted by countries across the world which have succeeded in enabling mass adoption of the electric vehicles in the country, and come with an effective time-bound plan with well-defined targets for electric vehicle adoption in India.

GPS based tolling

361. The Ministry, in its background note, informed the Committee that the RFP for pilot project of this new technology of distance based tolling is culminated into award to M/S RT-Invest Transport Systems LLC. The tolling will be done by GPS and GPRS technology without any Physical Tolling Infrastructure on ground. Pilot project is under Indian SPV/ Company M/s Rustintelsys is under progress.
362. The Committee also takes note of the statement given by the Hon’ble Minister of Road Transport and Highways regarding the removal of all toll plazas across the country within the next one year. He had informed that toll charges will instead be collected through the global positioning technology. A camera will record the vehicle details at the point of entry to the toll section as well as exit from the toll section. The user will be charged only for the segment of the toll road used.

363. The Committee appreciates the initiatives being taken by the Ministry with regard to the introduction GPS based tolling in the country, which will remove the need for physical tolling infrastructure on ground. The Committee hopes that implementing this country-wide would eliminate the delays faced by people at toll booths and thus would shorten the journey times on National Highways, while saving fuel as well. The Committee recommends that the fee collection system may be designed in such a way so as to link the fee deduction with the bank account of the vehicle owner, so as to remove the need for frequent recharge of FASTags. This would be of great help to people who are not well versed with technology to recharge their FASTags online themselves.

Re-habilitation of project affected people

364. Public Works (Building & National Highway) Department, Government of Assam informed the Committee that re-habilitation of project affected people is covered under NH Act, 1956. Transport Department, Government of Assam informed the Committee that the Government of Assam had announced Relief package for boatman, restaurant etc. affected due to opening of Dhola- Sadiya and Bogibeel Bridge in the year 2019-2020.

The statement of expenditure and nos. of beneficiaries is given below:-

2019-2020

- Budget provision = Rs. 500.00 Lakh
- Expenditure = Rs.330.80 Lakh
- No. of beneficiaries people = 935 Nos.

2020-21

- Budget provision =Rs. 190.00 Lakh
Expenditure = Rs.16.65 Lakh

No. of beneficiaries people = 46 Nos.

Proposal has been moved to Finance department for releasing the amount of Rs.66.95 lakh for 178Nos. beneficiaries for the current financial year 2020-21.

365. Department of Tourism, Government of Goa informed the Committee that in the absence of clear guidelines on providing compensation in special cases (including landowners with unclear titles or more than one owner), the settlement process takes a much longer time. In addition to the above, the reasons for delay in resettlement are as follows:

- Delay in finalization of the alignment and corridor of impact during project preparation stage.
- Delay in identification and finalization of the list of displaced persons. The list of title holders gets finalized after the declaration of award by the competent authority.
- The alternative land for relocation during preparation stage is not firmed up.
- Clear & transparent communication between the affected people and the authority to reduce conflicts and enhance rehabilitation process.

366. Public Works Department, Government of Kerala informed the Committee that the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 is being followed for land acquisition and rehabilitation of PAP.

367. Public Works Department, Government of Manipur informed the Committee that the Governing Authority need to give special attention to the population getting affected by such projects/plants to protect their rights, minimise their losses and to help them to restore a secure means of livelihood by establishing and maintaining few resources inter alia Mobile Health Clinics, Market Centres and Greenfield Industrial Training Institutes (ITI) to facilitate a sustained source of income to the newly inhabitants to ease the problem faced by the poor people inhabited in rural areas, when they undergo development-induced resettlement due to the current practices concerning the environmental impact assessment (EIA) of a roadway project, that changes the social fabric of the affected communities as well as the consequences faced due to forced rehabilitation.

368. Public Works Department, Government of Mizoram informed the Committee that the State Government gives compensation for the land, crops building and any
other properties belonging to the affected families or persons for the State projects and NH Projects. But for the Externally Aided Projects, Social Safe Guard guidelines are followed for which, apart from the above stated compensation, shifting charges, rental charges during construction of new buildings were reimbursed/paid to the affected families or person. However, such type of assistance for the State Government is found difficult to implement due to shortage of fund.

369. The Committee takes note of the mechanism in place to facilitate the rehabilitation of people who have to let go of their land for the development of road projects. The Committee observes that the land is the only source of income for many people in India and acquisition of the same directly and desires that the Ministry may come up with solutions to provide sustained source of income to the people who were solely dependent on their land for their livelihood. Land value capture mechanism may be employed to capture value from the land nearby National Highways and a part of the same may be shared with the previous landowners. The Committee further recommends that the Ministry may look into the feasibility of employing the project-affected people to operate/provide roadside facilities such as rest house/rooms, eateries, etc.

Implementation of more stringent Pollution Checks

370. The Committee takes note of media reports pointing to falsification of emission data at emission testing centers for issuance of Pollution-Under-Control Certificates to vehicles. This poses a serious threat to the environment and air, thus having a direct detrimental effect on public health. The Committee recommends that the Ministry may devise ways to prevent such cases. Feasibility of making video recording of the emission tests mandatory for issuance of PUC certificates may be evaluated. The Ministry may implement provisions to ensure that the emission testing equipments used by the testing centers are evaluated from time to time to check their accuracy of emission data.

Planting of trees by NHAI

371. One Member of the Committee raised the issue of planting of saplings by NHAI to replace the trees that are to be cut for clearing load for construction of
roads. He stated that all such saplings get vanished after a month or so after being planted.

372. The Committee strongly recommends that it must be ensured that the saplings planted by NHAI are looked after in their formative years and that the land be regularly watered and looked after. Suitable provisions may be introduced to ensure that the trees planted are of a suitable specific height and are looked after well, once planted. The Committee desires to know the existing mechanism in this regard, alongwith the reasons the same is failing at present.

Ensuring elimination of hindrances on waterways

373. During its study visit to Chennai and Kochi during July, 2021, the Committee took note of the issue of road bridges constructed across rivers causing obstruction to boats and ships because of insufficient height of the bridges.

374. The Committee feels that the development of waterways across the country will bring significant benefits to the Tourism sector as well as the Shipping sector. The Committee, therefore, recommends that strict guidelines may be framed and implemented by the Ministry across the country to ensure suitable clearance for boats and/or ships, keeping in mind the present as well as future scope for waterways – both National waterways and other inland waterways, while building road bridges over water bodies. In this regard, the Ministry should work in close coordination with the Ministry of Ports, Shipping & Waterways and the concerned Department of the State Government.

Allocation of funds under CRIF

375. During its meetings on utilization of CRIF works in Tamil Nadu and Kerala, held on 12th July and 16th July, 2021 at Chennai and Kumarakom respectively, the Committee was informed that the funds under CRIF are allocated based on 30% weightage to fuel consumption and 70% weightage to geographical area of the States/UTs. The Ministry apprised the Committee that the total cost of the schemes to be approved for a State is to be limited to the Bank of Sanctions
(BOS), which is generally three times of the annual allocation/accrual of CRIF for a State, while for hilly and North-Eastern states, this is limited to four times.

376. The Committee is of the view that the existing mechanism of bank of sanctions is causing a visible lack of clarity between the State Government Departments concerned and the Ministry of Road Transport & Highways, regarding the amount that the State is yet to be awarded. The Committee recommends that the Ministry may look into the issue and come up with suitable guidelines to ensure that there is no confusion among the State Government Departments and the Ministry, regarding the share of funds to be received by the State, in any particular year, after factoring in the Bank of Sanctions.
RECOMMENDATIONS/OBSERVATIONS - AT A GLANCE

IMPLEMENTATION OF ROAD PROJECTS

The Committee recommends that the Ministry may review the Model Concessionaire Agreements (MCAs) for the different modes of implementation of road projects from time to time, with inputs from both the concessionaires as well as the lenders, since both play a crucial role in the implementation of projects, especially the ones executed under the PPP model.

(Para 11)

The Committee notes that the concessionaire is responsible for the Operation and Maintenance (O&M) of the road projects for the entire Concession Period (BOT (Toll) and BOT (Annuity) projects) or 15 years (HAM projects) in PPP projects, but in case of Public funded projects, the contractor is responsible for rectification of defects/maintenance only during the defects/maintenance-cum-defects liability period which varies between one to four years. Since a large number of road projects are Public funded projects, especially the ones that are deemed not to be financially viable for private sector participation, the onus of their maintenance falls on the Ministry/NHAI/State PWDs. In this regard, the Committee feels that the amount of funds allocated for the maintenance of National Highways every year is minuscule given the vast lengths of the National Highways across the country. The Committee strongly recommends that the maintenance of the existing network of National Highways should be given topmost priority and the same should be reflected in the budgetary allocation made for the same.

(Para 12)

The Committee takes note of the various stages involved in the execution of a National Highways Project. The Committee feels that the Ministry must undertake a holistic review of the DPR preparation stage of road projects. Preparation of DPR should be aided by the latest technology available for the purpose and the inputs of the stakeholders and public representatives, including the local MP, and the demands and concerns of the local populace should be taken into account during the process of preparation of the DPR. The Committee desires that the Ministry may come up with Rules/ necessary statutory provisions to fix the accountability of the officials/
organization responsible for drafting the DPR till a stipulated period of time after the completion of the project, for any negligence on their part, that results in construction of poor quality roads. Forethought may be given at this stage to ensure ample provisions for road safety; mandatory service lanes; avoidance of traffic bottlenecks; and minimization of adverse environmental and heritage impact caused by the project. The Committee further recommends that traffic projections for the long-term must be taken into account while preparing DPR for any road project and where feasible, additional land may be acquired adjacent to the alignment planned at present, so as to enable widening of the highways, when the widening of road is needed at a future date.

(Para 15)

The Committee reiterates the recommendation made in para 183 of its 287th Report on Demands for Grants (2021-22) of the Ministry of Road Transport and Highways, which is reproduced below verbatim:

The Committee is of the view that roads across the country require frequent trenching for the purpose of laying of fiber lines, gas pipelines, and other similar amenities. The patchwork done thereafter is often delayed and rarely meets the desired construction quality, thus thwarting the speed of vehicles on the road and acting as a safety hazard. The Committee recommends that the Ministry may consider the inclusion of a provision for dedicated underground utility corridors in its upcoming National Highways projects to prevent frequent trenching. The provision for construction of dedicated underground utility corridor should be included at the DPR stage itself. The extra cost incurred for building the underground utility corridors may be replenished by monetizing the constructed utility corridors by charging the Departments and Companies which will benefit from avoidance of frequent trenching of roads. The Committee recommends that the Ministry may create a Special Purpose Vehicle (SPV) for the purpose of monetization of the utility corridors.

(Para 16)

The Committee recommends that DPRs of National Highways road projects should have provisions for right of way and service roads. The DPRs should be prepared after public consultation and inputs from Members of Parliament of the area.
The Committee further recommends that provisions for public amenities such as dhabas, washroom facilities etc. should be included at the DPR stage of NH projects.

(Para 19)

The Committee notes that Highway Safety has been given 35% weightage in NHAI’s parameters for assessment and ranking of National Highways. Number of accidents and deaths happening on the particular National Highway must be taken into account while calculating such scores.

(Para 21)

The Committee recommends that the Ministry may take steps to assign scores to all the National Highways projects, including the ones executed by State Government PWDs, after assessing their quality of construction. A central database may store the scores obtained by the different road projects of each concessionaire/contractor, which may be analyzed to ascertain the quality of work executed by all the concessionaires. The Committee recommends that the quality of previous works carried out by the concessionaires should also be a factor, besides the bid amount, during the awarding process of a road project tender. This would ensure that concessionaires that produce quality roads are not left out of having the opportunity to work on a project because of minor differences in bidding amounts.

(Para 22)

The Committee recommends that the Ministry may consider breaking down big road projects into smaller chunks so as to attract the interest of the small contractors themselves. The Committee feels that provisions should be in place to ensure that there is a well-defined lower limit, below which bids for a road project would not be accepted. The Committee agrees with the apprehension raised by the Member of the Committee regarding a likely hit on the quality of work that can be carried out by a contractor who bids substantially lower than the approved project cost. The Committee believes that such bids are made with the sole intent of winning the bid and more often than not, it would not be possible for such bidders to do quality work with such low bids. The Committee, therefore, recommends that the Ministry may lay even greater focus on arriving at accurate estimates for the project cost for a given road project and specify an upper and lower limits within which bids can be placed.

(Para 25)
The Committee further recommends the Ministry to carefully analyze the shortcomings of the existing mechanism for awarding road projects to the lowest bidder, since doing so includes little thought for ensuring quality of the work. The Committee believes that there should be consideration for other importance factors besides the bidding amount, while awarding a project to a concessionaire. A qualitative approach must be formulated for awarding road projects. The Committee recommends that the Ministry may take up with the Central Vigilance Commission (CVC), the shortcomings of the existing system of awarding a project to the lowest bidder, presenting its arguments for modification of the CVC guidelines for awarding of tender in a suitable way to permit an element of qualitative approach in the tender awarding process for road projects. The Committee feels that a criterion may be developed where certain weightage is given to objective parameters such as the awards presently being executed by the contractor, their financial record, and most importantly, the past performance of a contractor, in terms of quality of work and timely execution. The database recommended by the Committee in para 22 of this Report may be useful for such purposes.

(Para 26)

The Committee recommends that thorough quality checks may be performed before the issuance of completion certificate for any NH project, with special focus on rigorous testing of quality of the construction material used. The frequency of quality checks performed during the construction stage of a project may be increased suitably and independent third party audits may be conducted more often in order to deter the connivance of the Authority’s Engineer with the road contractors. The Committee further desires that extensive quality checks may be performed when the defect liability period of a project is nearing its end, so as to ensure that the issues arising near the end of the defect liability period are addressed by the contractor before their liability for the same is over.

(Para 28)

The Committee further recommends that the Ministry should look into the authenticity of the quality checks cleared by road projects, which later performed poorly and/or deteriorated at a quick pace, since the same alludes to either the insufficiency of the quality checks in place, or the connivance of the officials/engineers
in charge of conducting the quality checks. A suitable mechanism may be put in place to ensure that the IRC guidelines are followed in the execution of road works without fail.

(Para 29)

NATIONAL HIGHWAYS AUTHORITY OF INDIA

The Committee notes that carrying out research activities in relation to the development, maintenance and management of highways is one of the functions entrusted to NHAI under the NHAI Act, 1988. Research activities are crucial for NHAI to figure out the best methodologies for construction and maintenance of National Highways across the significantly diverse geography present in India. The Committee desires to be apprised of the amount of funds spent by NHAI on carrying out this mandate and recommends that it may lay a much greater focus on its research activities and ensure good budgetary allocation under this head.

(Para 32)

Vacancies and Staffing in NHAI

The Committee reiterates the recommendation that it made in para 67 of its 287th Report on Demands for Grants (2021-22) of Ministry of Road Transport and Highways, which is reproduced below verbatim:

The Committee is distressed to note that a large number of vacancies are existing in NHAI, which is implementing a large number of National Highways projects in the country. With this shortfall in manpower, the Committee wonders how the NHAI can work effectively and efficiently. The Committee, therefore, recommends that the Ministry should take urgent action to fill up the vacant positions in NHAI at the earliest. The details of NHAI staff posted on deputation basis and how many of them are working on permanent basis may also be shared with the Committee.

(Para 34)

The Committee further recommends that the Ministry may look into the reasons for the existence of such a large number of NHAI vacancies. The Committee desires to be apprised of the same, alongwith reasons for why the same cannot be filled up on
time, since in most cases, the retirement timelines of employees are known well in advance. The Committee fails to understand how NHAI can ensure that its road projects are not delayed and are executed with the best possible quality, when almost one third of its staff requirements is not filled up. The budget granted to NHAI has significantly grown over the last few years. Similarly, the quantity of road projects being taken by NHAI has also witnessed a consistent increase. Only a fully-staffed organization can ensure that the huge amount of funds available with NHAI are optimized optimally in order to push the NH infrastructure in India to greater heights. NHAI may also carry out an extensive study into its present staff requirements, keeping in mind the increased workload being taken by NHAI each year. The Committee recommends that an effective, time-bound plan may be devised to fill these vacancies at the earliest.

(Para 35)

The Committee recognizes the fact that even though the Highways sector is one of the highest funded sectors in the country, with the amount of funds earmarked for the same increasing every year, crucial senior level posts in NHAI in the Finance cadre from Deputy Manager up to CGM level are lying vacant. It is a matter of grave concern that majority of posts up to DGM level are vacant since many years, even though several attempts have been made to fill them on deputation. The Committee could understand that such a situation arose due to non-availability of eligible candidates because of different accounting pattern in NHAI & Government (Double entry & single entry accounting), pay scale disparity between NHAI & PSUs at mid level (CDA and IDA) and court cases by internal candidates for promotion.

(Para 35A)

The Committee takes note that the existing Recruitment Rules equate graduates/B.com with candidates having professional qualifications such as CA/ICWA/MBA (Finance) and that in the past, recruitment at lower level were done under the existing Rules, resulting in the promotion of persons, who are merely graduates, holding such senior posts. The Committee feels that it is paramount that in a vital organization such as NHAI, only persons who possess required educational qualifications occupy higher posts in specialised cadre like Finance.

(Para 35B)
Taking into account the above mentioned issues, the Committee suggests that apart from promotion and deputation, NHAI may amend the existing Recruitment Rules for the Finance cadre, by including reasonable percentage of posts on direct recruitment basis for candidates having qualification of CA/ICWA/MBA (Finance) etc. and that at least 30% of posts of senior level, such as Deputy Manager, Manager, DGM etc. may be taken through direct recruitment, which will foster merit and selection of qualified candidates.

(Para 35C)

The Committee feels that such a modification in the recruitment process will enable NHAI to not only fill up the long pending vacancies, but also improve its operational efficiency. The Committee hopes that a mix mode of recruitment viz., direct recruitment, promotion and deputation for crucial and specialised cadre such as Finance, will provide NHAI with candidates having knowledge and expertise of new taxation laws such as GST, resource mobilisation and InvIT.

(Para 35D)

Monetization of National Highways through innovative financing models

The Committee takes note of the various innovative financing models being employed by the Ministry/NHAI to monetize its existing assets, to fund the development and maintenance of the NH network across the country. The Committee is of the considered view that the ongoing coronavirus pandemic has impacted the traffic volumes across the country since March, 2020 and might continue to do so in the near future. This is likely to affect the asset monetization plans made by NHAI for the short-term future, since it would lower the interest of private players in BOT projects as well as in TOT mode. The Committee recommends that NHAI should factor in the effect of the pandemic on its financial plans for the near future. NHAI may take appropriate steps to allay the traffic volume related concerns of the stakeholders by holding constructive dialogue with them, take steps to share the risk caused by the uncertainty of traffic volume, due to such unforeseeable events, among the different parties involved and, if need be, make suitable modifications to this effect, in its Model Concession Agreement (MCAs) and Request for Proposal (RFPs) for the short term.

(Para 38)
The Committee recommends that NHAI may consider lowering the minimum investment amount in InvIT IPO to a suitable amount so as to attract participation from a larger number of participants.

(Para 41)

The Committee feels that Infrastructure Finance Companies such as IIFCL play an important role in meeting the huge financial requirements of the road infrastructure sector in India. The Committee therefore desires to know the reasons for not permitting IFCs to lend to InvITs and desires that NHAI may grant such permission to IFCs with suitable limits, if need be, so as to ensure InvITs attract the amount of targeted funds.

(Para 43)

Rising debt of NHAI

The Committee is concerned to note the huge debt servicing liability of NHAI in the coming years. For the ongoing Financial Year 2021-22, NHAI’s debt servicing liability is equivalent to 33% of the overall budgetary allocation of Rs. 1,18,101 crores of the Ministry at the Budgetary Estimates stage of the FY 2021-22. The Committee reiterates the recommendation made in para 72 of its 287th Report on Demands for Grants (2021-22) of the Ministry and recommends that the Ministry/NHAI may undertake earnest measures to ensure that its stuck projects are completed at the earliest and delay is minimized in the ongoing projects, since delays are one of the core reasons behind cost overruns.

(Para 45)

The Committee takes note of the various innovative measures that have been suggested by the different financial organizations and banks in order to tackle the issue of huge debt servicing costs of NHAI. The Committee feels that NHAI should tap into the funds available with insurance companies and pension funds, both Indian and foreign. Securitization of NHAI’s existing assets may be suitable to attract the interest of pension funds since the return targeted by pension funds is on the lower side. The Committee recommends that the Ministry may look into any changes in the existing provisions that may be needed to allow insurance companies and pension funds to
participate in funding road infrastructure sector in the country. Multilateral agencies, Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development (JOIN), foreign pension funds and sovereign wealth funds may also be approached by NHAI, with suitable assurances/comforts from Government of India.

(Para 58)

The Committee notes that land acquisition costs form a significant portion of the total road project costs and hopes that NHAI, in coordination with State Governments, take suitable steps to capture the value generated by the implementation of road projects so as to finance the rising land acquisition costs in road sector.

(Para 59)

The Committee reiterates its recommendation made at para 43 of this Report and desires that suitable steps may be taken to permit IIFCL to play a bigger role in long-term lending to the road infrastructure sector, by way of subscribing to corporate bonds, investing in InvITs, and by allowing IIFCL to lend directly to NHAI and State Departments concerned to finance long-term road projects.

(Para 60)

The Committee notes that India’s foreign exchange reserves, as per RBI (Annexure-B), have risen substantially in the recent past. The Committee recommends that RBI, with due consideration to the sufficiency of the foreign reserves, may consider the possibility of utilization of surplus funds to finance long-term road infrastructure projects in the country. RBI may also look into the feasibility of utilization of the surplus reserves for the creation of a sovereign wealth fund to finance long-term infrastructural assets.

(Para 61)

Keeping a check on possible connivance between contractors and Approving Authorities

The Committee recommends that the Ministry may review the current mechanism in place to deter the connivance of the Authority’s Engineers with contractors/concessionaires. Cases where roads deteriorate shortly after their completion should be looked into and the basis on which completion certificate for the
project had been issued, should be scrutinized. Accountability may be fixed in cases wherein guidelines have been blatantly ignored during execution of road projects.

(Para 63)

The Committee believes that the level of security and integrity of information provided by decentralized networks such as blockchain can be helpful in affixing accountability in case of sub-standard projects. The Committee, therefore, recommends that NHAI may employ the use of blockchain technology to store data about implementation of road projects – including data about the tests performed to ascertain the quality of material used in the construction, the guidelines followed in the execution of the project, the observations made by the Authority’s Engineers at the time of grant of completion certificate for any given project, etc. Doing so will make such information immutable and remove any possibilities of fudging of records by any corrupt individuals.

(Para 64)

The Committee recommends that it should be made compulsory to submit video recordings of the specifications of the completed works, wherever possible, confirming that all works have been carried out by the concessionaire/contractors, before the grant of completion certificate of the road project to any concessionaire/contractor. This would ensure that ancillary specifications such as road signs, markings, shoulders etc. are duly completed as per the provisions of the contract.

(Para 65)

FACTORS IMPEDING THE PACE OF NH PROJECTS

The Committee feels that the information furnished by the Ministry regarding road projects delayed for more than 5 years, makes it evident that delays in road projects is one of the most substantial issues being faced by the road sector in India at present. Though the Committee commends the efforts made by the Ministry in increasing the pace of construction of highways in the last several years, the large number of projects that are delayed for a significant period of more than 5 years, is a cause of concern. Such delays are accompanied by significant cost overruns and in case of brownfield projects, cause a lot of discomfort and added traffic times to the existing traffic. The Committee recommends that the Ministry may establish a dedicated
mechanism to keep projects on track as far as possible, notice delays at the earliest and take necessary action to proactively tackle factors causing delays in any given project.

(Para 68)

The Committee strongly recommends that the Ministry may assess the reasons behind all such delayed road projects across the country and time-bound remedial measures may be initiated at the earliest so as to avoid further delays in the completion of already delayed projects.

(Para 68B)

Land Acquisition Issues

The Committee observes that land acquisition issues are at the core of delays faced in road projects. The Committee takes note of the guidelines issued by the Ministry to streamline acquisition of land for NH projects in the country and recommends that the Ministry may ensure that these guidelines may be reviewed from time to time, incorporating suitable modifications to simplify the process of land acquisition and ironing out the various constraints faced in land acquisition.

(Para 71)

The Committee recommends that the Ministry may take immediate steps to ensure that adequate manpower is present with the land acquisition units at the field level across the country. The alignment given for any given project should be finalized only after taking in inputs from all stakeholders and the local population, with due consideration to the future traffic projections, environmental concerns etc. Changing the alignment at a later stage of the project can be a costly affair and should be avoided at all costs, through application of foresight.

(Para 72)

The Committee desires to be apprised of the present status of the implementation of the Land Value Capture Mechanism. This mechanism may help the Ministry in managing the huge increase in road project costs on account of a significant jump in land acquisition costs in the past several years. The Committee recommends that the Ministry may consider making the upfront contribution of State Governments flexible, fixing it on the basis of the financial ability of the State Government.
The Committee feels that the Ministry may modify the land value capture mechanism in a way that the value captured by the State Government is, in part, be shared with the previous owners of the land. A major reason for the hesitation of landowners to part with their land is that the land is often their only source of livelihood. A mechanism may be worked out where an upfront payment is made to the land-owner and they are guaranteed a payment in the form of annuity for the long-term, financing the same through the land value captured by the State Government. The Committee believes that such a system would lower the frequency of land acquisition matters ending up in litigation, which cause huge delays to the projects, besides causing cost overruns.

The Committee notes the steps being taken by the Ministry to resolve land acquisition issues in coordination with State Governments. The Committee recommends that the Ministry may analyze the historical data from the PMIS, Pragati Portal and Bhoomi Rashi portal to figure out the presence of any bottlenecks or bureaucratic delays that might be slowing down the land acquisition process. Steps may then be taken to further streamline the land acquisition process, which, in turn, would help keep the NH projects on track.

The Committee recommends that the Ministry may look into reasons behind delays in sanction of L.A. estimates and address the same.

The Committee recommends that the Ministry may sort out the issues faced by road contractors because of encumbrance on the land, once made available to them after acquisition. Further, the Ministry may urge upon the State Governments to carry out exercises to update their revenue maps periodically, in order to permit the Ministry to prepare more informed acquisition plans for its road projects. The Ministry may urge upon the State Governments to carry out exercises to update their revenue maps periodically, in order to permit the Ministry to prepare well-informed acquisition plans for its road projects.
The Committee takes serious note of the lack of provision for de-notification of any land that might get identified and acquired for a road project but does not get utilized. While the Committee feels that such instances should be minimized, one cannot deny that there is still possibility for such occurrences because of oversight or change in alignment. The Ministry may make the necessary changes in the legal provisions for land acquisition to rectify such mistakes. Provision for compensation amount for the period that the land was acquired may be incorporated so as to prevent any undue losses to the landowner for no fault of theirs.

With regard to upfront deposition of 50% cost of land acquisition by the State Government, the Committee reiterates its recommendation made at para 75 of this Report and recommends that the Ministry may frame a policy to accommodate State Governments that might not be financially able to deposit such large amounts upfront.

The Committee recommends that the Ministry may evaluate the feasibility of construction of elevated highways in areas with high population density where acquisition of land would possibly be a long and tough task.

The Committee recommends that the Ministry may review its guideline which stipulates that the project implementation agencies shall undertake additional land acquisition on one side of an existing road to the extent feasible for expansion of existing roads to next level of configurations, in light of the difficulties faced in such implementation in hilly areas.

The Committee agrees with the suggestion made by the Transport Department, Government of NCT of Delhi and recommends that the Ministry should assign a fixed time-frame for the different processes involved in land acquisition for a project. The Committee feels that doing so would help minimize bureaucratic delays and any delays happening in the process would be spotted quite early.
The Committee takes note of the discrepancies pointed out by the Punjab PWD in the value of land determined at present based on registered sale deed/collector rates and the actual market rate of the land. The Committee feels that such discrepancy, if present, would invariably cause dissatisfaction among the land owners and the ensuing delays on account of arbitration and legal procedures cost the public exchequer a lot of money due to project cost overruns. The Committee, therefore, recommends that the Ministry may review the accuracy of the provisions existing at present in determining the amount of compensation to be paid to land-owners, as compared to the actual market value of the land. If substantial differences are noticed in the compensation value and the market value in many instances, the Ministry may come up with a suitable mechanism for determination of a more fair value for the land to be acquired.

(Para 94)

Environment and Forest Clearance Issues

The Committee recommends that the Ministry of Environment, Forest and Climate Change may make the online process for obtaining environmental and forest clearances for road projects, more user friendly.

(Para 96)

The Committee recommends that the Ministry may ensure that the application process for obtaining the necessary environment and forest clearances is initiated as soon as the alignment of the project is finalized, in order to avoid any undue delays in obtaining the permission.

(Para 98)

The Committee desires that the Ministry may analyze the suggestions given by Mizoram PWD and if feasible, extend the implementation of the same to other States with high forest coverage. The Committee further recommends that delays faced in obtaining final forest clearance as well as tree cutting permissions may be looked into and resolved on a priority basis, to avoid delays in execution of road projects.

(Para 103)

The Committee feels that the MoEF&CC may coordinate with the various State Governments and ensure that the State Environment Impact Assessment Authority is
formed in the different States so as to permit MoEF&CC to focus on assessing the environmental impact of bigger projects. This would help increase the pace at which road projects across the country are assessed in terms of their environmental impact.

(Para 106)

Delays in terms of financing of road projects

The Committee recommends the Ministry to work upon the different suggestions put forth by the financial institutions/banks for avoiding delays in road projects on account of delays in terms of financing.

(Para 112)

The Committee feels that given the immense role played by good road connectivity in the economic growth of the country, the Ministry should request RBI to grant the Priority Sector tag to the road infrastructure sector in order to encourage financial institutions and banks to lend higher amounts to supplement the maintenance and growth of the NH network in the country.

(Para 113)

The Committee recommends that in order to avoid delays in financing of road projects in case a consortium of banks is considering the grant of loans for a given project, RBI may look into defining a reasonable time limit for the consortium to make its decisions regarding the financing of the road projects.

(Para 114)

Disputes Resolution Mechanism

The Committee takes note of the mechanism existing at present for arbitration and resolution of disputes. Disputes between the concessionaire and the authority is one of the core reasons behind delays in road projects and having effective mechanisms in place to minimize the delay resolution time is crucial. The Committee desires the Ministry to thoroughly examine the efficacy of the current arbitration and dispute resolution mechanism in settling disputes between the involved parties, helping avoid litigation processes to the maximum possible extent. Effective efforts may be made to address any bottlenecks causing delays in such arbitrations.
The Committee notes that despite the best efforts at arbitration, many disputes between concessionaires and NHAI still end up in courts, which sometimes takes years to finally settle the dispute. In light of this, the Committee recommends that amicable resolution should be the priority of the Ministry to the extent possible and the cost of taking the matter to courts should be considered both in terms of delays as well as cost overruns. The Committee desires that the Ministry may request fast-track hearing of its cases in courts, since delays in delivery of verdict in such cases directly takes a toll on the public exchequer. Further, the Ministry may request the Government and the judiciary to empower a panel of retired judges having expertise in infrastructural litigations in order to enable quicker judgements in case of disputes with concessionaires, thereby helping minimize delays in execution of road projects.

MAINTENANCE OF NATIONAL HIGHWAYS

The Committee feels that maintenance of the existing road network is an area which is not given enough attention to, by the Ministry. Maintenance of the existing NHs is essential not only from economic aspects, but also to reduce the number of road accidents that take place due to potholes, poor quality of roads, damaged roads due to floods, etc. The Committee, therefore, recommends that the Ministry make extensive use of network survey vehicles and latest technological innovations such as drones to regularly assess the quality of the existing NH network in the country and to figure out the stretches that need to be worked upon. The maintenance requirements thus analyzed should be prioritized on the basis of potential safety hazards posed by the poor quality, the traffic volume on the stretch, and other relevant factors. The Committee believes that carrying out a task of such scale on the vast NH network in the country requires significant funds and recommends that the Ministry may request funds for the same in the coming financial years.

The Committee observes that special focus must be laid on high quality maintenance of roads in flood-prone regions. Specialized techniques may be used to
ensure that the maintenance work carried out in such regions is long lasting and that sufficient provisions for drainage are included in the project.

(Para 123)

The Committee is distressed to note the poor feedback received by the Sukhad Yatra application on the Play Store for Android devices, where it is rated 2.7 stars out of a maximum possible 5 star user rating. Similarly, the app has received poor ratings on the App Store for iOS devices. The Committee feels that this depicts that the Sukhad Yatra app, although brilliant in concept and its scope of use, is failing to achieve its intended goal of allowing users to enter road quality related information and to report accidents and potholes on the highways. The Committee recommends that NHAI may work out an intuitive user interface for the app. The poor feedback received by the application from its users should be seriously looked into and addressed at the earliest. Further, once the application is improved and well-received by its users, NHAI should promote the usage of the application through social media as well as signages on the NHs.

(Para 125)

The Committee may be briefed about the highlights of the data received by NHAI through the submission of information by the users of the Sukhad Yatra app, alongwith details regarding the number of road quality/pothole related issues raised by the app users and the time taken by NHAI to address the same.

(Para 126)

LENDING ASPECTS OF ROAD SECTOR

The Committee takes note of the various initiatives taken by the Ministry to boost investment and lending in road sector.

(Para 130)

The Committee agrees with the observation made by Canara Bank regarding the necessary skill sets for appraising credit proposal of infrastructural project being distinctly different from credit appraisal of other types of loans. The Committee recommends that the public sector banks must ensure that only qualified people with experience in appraising infrastructural proposals should be allowed to make decisions in this regard.
The Committee agrees with the apprehensions raised by Canara Bank regarding impact of Coronavirus pandemic on investments in State roads and rural roads on account of fund diversion to the health and social sectors. State roads and rural roads provide last-mile connectivity to crores of people in the country, besides being of great economic importance to countless industries requiring raw materials to be transported from small towns and villages. The Committee, therefore, recommends that the Ministry may consider extending a one-time financial assistance to State Governments to help ensure that State roads and rural roads are maintained in motorable conditions.

The Committee desires that the Ministry may take remedial measures to address the apprehensions raised by the rating agency CRISIL regarding the debt of under-construction HAM projects being at risk because of delays in execution.

The Committee takes note of the various measures taken by PNB to finance the concessionaires in road infrastructure sector,

Challenges faced by lenders in financing road projects

The Committee takes note of the information furnished by SBI with regard to the various challenges faced by lenders in road sector, alongwith its proposed solutions to the same. The Committee recommends that the Ministry may ensure transparency regarding the status of land acquisition for a given project, starting from its tendering stage, for public scrutiny as well as to help bidders and lenders be more aware of the progress being made in the same. The Committee agrees with SBI’s suggestion to make provisions for automatically de-scoping the portion of land which is not handed over by the Ministry/NHAI to the concessionaire within a defined period of time.

The Committee recommends that NHAI may timely settle the amount it claims to be due, to the lenders, in case the project goes to arbitration and dispute resolution, and not wait till the settlement process is over. Any additional amount that may be
needed to be paid, can be settled after the settlement process. This would help free up lenders’ capital for financing other road projects, while lowering the adverse impact of long-drawn arbitration/settlement processes on the lenders.

(Para 143)

The Committee believes that infrastructure lending poses a unique challenge to banks in terms of the heavy amounts that need to be sanctioned for a long duration of time, with the investment being subject to several risks that might hamper the successful execution of a given road project. Innovative financing methods such as take-out financing can permit increased participation of banks since the duration of time for which the funds lent by the bank are locked up decreases significantly, thereby also reducing the risk faced by the banks in their investments made to the road infrastructure sector. The Committee agrees with SBI’s suggestion and recommends that the Government may consider mandating institutions like NIIF and the upcoming Development Finance Institution announced in Budget Session, 2021 by the Hon’ble Finance Minister, to establish a fund for facilitating take-out financing for operational projects so as to create additional headroom for Banks to fund fresh projects. The Committee recommends that the necessary framework for take-out financing may be put in place. The Ministry may also look into the creation of a special Stressed Asset Fund for road sector to fund the completion of stuck road projects, which might otherwise have limited takers.

(Para 144)

The Committee recommends that the Ministry may develop a suitable mechanism for providing single window clearance for all approvals required for executing a project, with timelines being fixed for taking decisions regarding such approvals, where possible, so as to minimize delays on account of obtaining necessary approvals.

(Para 145)

The Committee desires that RBI may look into the feasibility of SBI’s suggestion to provide an additional 5% to 10% window to the existing group exposure limit of 25% of the Banks’ Total Capital Funds under its Large Exposure Framework limits. In this regard, RBI may consider placing slightly increased exposure limits in case of business groups which are considerably large and are in financially sound condition, since the
existing limits might be too low, especially for smaller banks, which might not have enough funds to diversify their long-term infrastructure investments beyond a certain point.

(Para 146)

The Committee recommends that in cases where arbitration is awarded in favor of concessionaire, the Ministry/NHAI may assess the soundness of its claims and whether it is felt that these claims have reasonable chances for being considered to be valid by courts. The Ministry/NHAI should not make it an unwritten rule to challenge arbitration decisions in courts when these are not awarded in its favor, and the possible resultant delays in the project on account of court proceedings may be duly considered before reaching upon a decision regarding whether to appeal the award in courts.

(Para 147)

The Committee notes the issue pointed out by Central Bank regarding project delays on account of delay in obtaining commitment from lenders for financing a given road project. In this regard, the Committee recommends that provisions may be included in bidding requirements to ensure that only serious bidders who can raise the amount necessary for execution of the project, should it be awarded to them, are allowed to place a bid. This may be implemented by way of requirement of a certificate from an institution stating that they’d be willing to finance the concessionaire/contractor in case the project is awarded to them. The Committee feels that doing so would help eradicate delays caused by financially inept bidders from winning bids and causing delays later on when they are unable to get lenders to finance them to execute the project.

(Para 150)

The Committee takes note of the apprehensions raised by the IDBI Bank regarding a lot of gap in the original project cost and actual cost. A reasonable assessment of the estimated project cost should be made by the authority. Provisions should be made to make necessary re-assessment of the project cost approved by the authority, in case substantial delays occur on account of reasons other than the concessionaire, factoring in present raw material costs, effect of inflation etc.. The Committee agrees with the IDBI Bank’s suggestion that the bank funding should be
availed based on the cost approved by the authority and the difference, if any, should be funded by the promoter through equity upfront.

(Para 153)

The Committee notes the observation of IDBI Bank regarding there being a lot of mismatch in the financial progress and actual progress of road projects. The Committee recommends that a mechanism may be put in place to ensure that the progress made in a project is assessed periodically and where possible, proof of the progress achieved so far may be recorded through drone shots or other technology. The information regarding the physical progress of the project may be uploaded on a public platform, so as to allow public scrutiny of the progress achieved, as well as to permit banks to release further funds based on the actual progress made in the project on ground.

(Para 154)

The Committee recommends that the Ministry may coordinate with State Governments to help establish well-defined procedures for arbitration and settlement for the projects awarded by State Government Departments, Undertakings etc.

(Para 155)

The Committee notes the very valid observations of IDBI Bank that in case of default by the Borrower, there is no fallback for the Banks, as there is no tangible security other than project cashflows, causing a high level risk of losing the amount Banks lend to Borrowers. Banks face this inherent problem of lack of tangible security while lending to road projects. The Committee recommends that an in-depth study may be made by the Ministry with regard to the possible solutions to the same. Having some sort of security to fall back on would solve a major pain-point faced by banks and financial institutions while lending to the road sector, and allow them to make more credit available to fund the road infrastructure projects.

(Para 156)

The Committee notes the issue mentioned by IDBI Bank regarding the challenges faced in monitoring utilization of Working Capital limits through Agency for Specialized Monitoring (ASM). The Committee recommends that the Indian Banks’ Association may make it mandatory for ASMs to have experienced Engineers on-board,
besides Chartered Accountants, so that the ASM has knowledge regarding technical issues of road projects as well, which will substantially aid it in monitoring the utilization of working capital limits in road sector lending.

(Para 157)

The Committee desires the Ministry to look into the creation of a dedicated dispute resolution body comprising of retired judges/ technical experts/ bankers exclusively to settle disputes pertaining to road infrastructure projects.

(Para 158)

The Committee desires that the Ministry may look into solutions proposed by IFCI for resolving the funding constraints in the road infrastructure sector.

(Para 161)

The Committee feels that lenders play a critical role in successful execution of PPP projects in the road sector. The Committee notes the apprehension of IIFCL regarding the lack of a tripartite agreement between the Concessioning Authority, the Concessionaire and the Lenders. The Committee recommends that the Ministry/NHAI should frame Tripartite Agreements for its PPP projects, so as to provide some protection to the lenders, clearly listing the rights and remedies available to all the parties involved in the agreement.

(Para 163)

The Committee recommends that the Ministry may work on resolving the issues causing delays in remittance of termination payment. In case of disputes, the minimum amount agreed upon by both the Concessioning Authority and the Concessionaire may be released immediately, so as to minimize the impact caused by delays in arbitration processes on the lenders and the concessionaire.

(Para 164)

The Committee desires that the Ministry may put in place provisions to ensure that all necessary approvals and clearances for a given road project are obtained before the declaration of its Appointed Date, so as to eradicate the delays faced by concessionaires on account of delays in obtaining such approvals.

(Para 165)
The Committee recommends that NHAI may issue clarification regarding the fate of annuities in cases where Extension of Time (EOT) is issued in HAM projects facing delays.

(Para 166)

The Committee takes strong note of the observation made by IIFCL regarding large number of projects being awarded to a single developer with limited resources. The Committee feels that such carelessness on account of NHAI/Concessioning Authority while awarding road projects would inevitably lead to road projects getting delayed on account of the concessionaire’s inability to make simultaneous progress on multiple projects with limited resources. The Committee, therefore, recommends that a Central Database may be maintained by the Ministry to keep track of the various awards presently being carried out by a bidder. Alternatively, submission of such information may be made mandatory for the bidder. The database thus created by the Ministry may be updated as soon as a bid is awarded, so that the other bids made by the bidder reflect that they are already working on that project and an informed decision can be made regarding whether the bidder would be capable of working on another project. Clear limits may be defined for concessionaires regarding the number/size of projects that can be awarded to a concessionaire, based on the resources viz. labor, machinery, financial strength etc. available with them.

(Para 167)

The Committee recommends that the reports furnished to the Ministry by Independent Engineer (IE) should be made available online to the lenders involved in the project. This information would be crucial for the lender to make decision regarding the further release of funds for the road project.

(Para 168)

The Committee takes note of the important role played by IIFCL in financing road infrastructure sector projects and recommends that the Ministry may consider granting permission to IIFCL to invest in InvITs and project bonds and to assist NHAI and State Authorities in financing road projects.
The Committee recommends that the Ministry may thoroughly examine the issues mentioned by Indian Overseas Bank and take effective steps to address the same.

(Para 175)

The Committee reiterates the recommendation it made in para 153 of this Report and desires that steps may be taken to ensure that project cost is revised to factor in inflation as well as changed raw material costs, in case of project delays which are caused by reasons other than the concessionaire’s sub-optimal performance.

(Para 177)

The Committee recommends that the Ministry may take appropriate steps to ensure training facilities to tackle the shortage of skilled manpower in road projects. Assessment may be made regarding the present shortfall in terms of human resources in road infrastructure sector and a detailed plan may be made to address the same.

(Para 179)

The Committee desires the Ministry to look into the issue of delay in approval and release of funds in case of Change of Scope/ utility shifting, as well as in delay caused in road projects due to delays in decision making at various levels. The Committee recommends that the Ministry may prescribe reasonable but fixed timelines for decision-making by the Concessioning Authority at different levels.

(Para 180)

The Committee takes note of the issue faced by Union Bank wherein it has to rely on the data submitted by the company alone, at the time of assessment of credit limits. The Committee strongly recommends the creation of a well-maintained central database keeping track of the projects executed by different concessionaires across the country. The database may have important details like the present status of the current projects being executed by a concessionaire, the quality of their past works, financial liabilities (if any) of the Concessionaire as per the Concessioning Authorities. The Committee feels that having such a database would not only help bankers make more informed decisions while lending in the road sector, but it would also help Concessioning Authorities to take a more nuanced approach while considering bids submitted by the concessionaire for any given road project.

(Para 183)
The Committee desires the Ministry to look into the delays being faced in achieving financial closure in HAM projects and make suitable amendments to the MCA for the HAM projects, if necessary. The Committee further feels that the Ministry should review its current tender awarding methodologies and include safeguards to ensure that the number and size of projects awarded to concessionaires are reasonable enough with their financial capabilities, present annual revenue etc.

(Para 184)

The Committee recommends that the Ministry may set up Infrastructure Debt Funds and consider providing some special tax benefits to attract investment from the general public in the road sector.

(Para 185)

The Committee takes note of the plethora of challenges faced by Banks/Financial Institutions in the road sectors, as shared by the Banks/FIs and DFS. The Committee is of the considered view that lenders play an integral role in allowing PPP projects in road sector. The Committee, therefore, recommends that the Ministry may hold periodic meetings with the lenders to learn about the issues they are facing and address the same to the extent possible by making suitable amendments to the existing provisions. In this regard, an effective coordination mechanism may be established with the lenders, the concessionaires, RBI as well as the Ministry of Finance.

(Para 189)

The Committee observes that many banks and financial institutions raised several issues regarding the present provisions for termination payment. The Committee, therefore, recommends that NHAI may review its current provisions for termination payments in consultation with the concessionaires and the lenders, and work out a mechanism to assess a fair value to be paid in case of termination of a road project. Doing so would help reduce the number of cases that go to arbitration and litigation, thereby resulting in minimization of delays on account of disputes arising out of termination payments.

(Para 190)
NPAs in Road Sector

The Committee notes the exposure of SBI to the road sector and applauds the recent increase made by SBI in its internal exposure ceiling for road sector by Rs. 24,500 crores. The data shared by SBI, however, points to the dwindling lending figures of the Banking Sector as a whole, wherein if one were to exclude SBI, the banking sector’s exposure to road sector has declined from Rs. 1,45,326 crores in June, 2018 to Rs. 1,38,980 crores in June, 2020. The Committee feels that lending institutions play an indispensable role in financing the road infrastructure sector in the country and desires that the Ministry may take strong note of this. The Ministry may address the issues faced by lenders in the road sector, many of which have been shared by them with the Committee, to ensure their support in funding the future growth of the road sector in the country.

(Para 192)

The Committee notes that SBI’s stressed assets in road sector are about Rs. 4,077 crores as on 30th June, 2020, which is about 7% of the bank’s overall outstanding credit to the road sector. This is the best figure in terms of NPAs in road sector, as compared to the data regarding NPAs furnished to the Committee by the other banks/financial institutions. The Committee recommends that other banks/financial institutions should look into the methodologies followed by State Bank of India while extending loans to concessionaires in road infrastructure sector, and apply the same in their own institution in order to bring their respective NPA levels down.

(Para 193)

The Committee is alarmed by the high level of NPA in Central Bank of India’s road sector exposure, which has been at such highs even before the start of the COVID-19 pandemic. The Committee feels that this might point to grant of loans without high quality in-depth analysis of the inherent risk in extending the loans, and should be looked into on priority basis by the bank so as to prevent this from snowballing into a bigger problem in the future.

(Para 196)

The Committee is concerned to note that 61% of the outstanding exposure of IFCI is NPA. The Committee is not convinced by IFCI’s justification that the figure
looks inflated due to exposure to IL&FS road projects. The Committee recommends that RBI may look into the matter and consider issuing guidelines limiting the extent to which a financial institution/bank can lend the funds to a particular infrastructure company.

(Para 203)

The Committee is happy to note that Covid-19 pandemic has not had any worsening impact on the NPAs in road sector. This points to the efficacy of the Covid-19 relief measures initiated by RBI as well as the Ministry. Despite the minimal effect of COVID-19 on worsening the road infrastructure sector loan assets of the banks, however, the Committee notes that most public sector banks have been carrying a substantial percentage of NPA assets in the road sector since before the onset of the pandemic. The Committee feels that this is a cause of grave concern and would act as a deterrent to the banking sector from lending more funds to the road sector going forward. The Committee, therefore, recommends that the Ministry may take serious notice of the issues and challenges faced by the financial institutions and take effective steps to address them to the extent possible, aiming for a desirable level of sharing of risks between the Ministry, the concessionaire and the lending institution.

(Para 216)

The Committee sought to know from the various financial institutions and Public Sector Banks regarding how the NPA figures in the road sector for their institution compare with that of their peers and in case their institution fared poorly in this regard, the Committee desired to know the reasons for the same. In the written replies received regarding this query, the Committee was informed that the Banks did not have the sector-wise NPA details of the other Banks are not available in the public domain. The Committee feels that sector-wise exposure information, at least in respect of public sector banks, should be made available in the public domain to permit more transparency and public scrutiny. The Committee recommends that RBI must analyze the reasons behind substantial variations in the percentage of sub-standard assets of NPAs in different Public Sector financial institutions/banks and come up with stricter rules and regulations that must be followed while sanctioning long-term loans to the infrastructure sector.

(Para 217)
The Committee further recommends that the financial institutions/banks with more than acceptable level of NPAs in the road sector should also undertake a study into the possible inefficacy of their existing mechanism to analyse the financial soundness as well as project execution capabilities of the concessionaire. The Committee strongly recommends that the financial institutions/banks should revisit their policies in this regard, while also having strong checks in place to ensure that there is no connivance between the bank's officials responsible for assessing the loan proposals received from the concessionaire, and the concessionaire themselves.

(Para 218)

It has come to the notice of the Committee that in certain cases, the loan sought by the concessionaire is against a substantially higher project cost, as compared to the Total Project Cost approved by NHAI for the project which already includes provisions for contractor’s/concessionaire’s margin and the financing cost for raising the amount needed to execute the project as well. The Committee recommends that the banks should treat proposals with such higher estimated project cost with great caution and make its own in-depth study into the estimated project cost, or hire an independent third party consultant for this purpose. The Ministry/NHAI should communicate with the banks the procedure followed by them to arrive at the Total Project Cost for any given project. While sanctioning any loans for a project while considering estimated cost to be substantially higher than the Ministry/NHAI's approved TPC, the banks may record its reasons in writing regarding why they feel that the higher project cost, against which the loan is being sanctioned, is justified.

(Para 219)

The Committee notes the submission made by PNB that non-servicing of installments within 90 days renders the account NPA, which attracts additional provisioning on such sub-standard assets. The Committee recommends that RBI may look into the possibility of setting a higher limit for long-term infrastructure projects, since unfortunately as for now, delays of several months is not too uncommon in infrastructure projects in India, often for no fault of the concessionaire.

(Para 220)

The Committee feels that the banks should give due importance to a concessionaire's performance in similar projects in the past. In this regard, the
Committee recommends that the Ministry, in coordination with State PWDs, may maintain a database of all road contractors and concessionaires with details regarding their performance in past projects, the quality of work etc. Such a database may be made public so as to make it easy for the financial institutions and banks to analyse the past performance of their prospective borrowers. The Committee believes that doing so would help prevent the banks from lending to poorly performing contractors/concessionaires.

(Para 221)

Loss of revenue due to construction of parallel roads

The Committee feels that the construction of roads parallel to an existing road stretch with toll plazas, points to lack of foresight and coordination between the Ministry and the State Governments. Construction of such parallel roads causes a loss of revenue to the concessionaire without any fault of their own. The Committee recommends that the Ministry should come up with guidelines that may be enforced across the country to avoid such construction to the maximum extent possible. In the event where construction of such parallel road is not avoidable, efforts may be taken to ensure that the concessionaire does not face losses on account of decrease in traffic volume for no fault of their own. This would act as a confidence building measure and would help attract higher bids for the Ministry/NHAI’s future plans for monetization of the existing road assets.

(Para 228)

The Committee feels that the suggestion furnished by Indian Bank, regarding making the agency responsible for the construction of parallel road pay for the losses faced in revenue of the existing road, seems to be a feasible solution to this problem. The Committee, therefore, recommends that the Ministry may implement this with introduction of appropriate rules/laws in order to deter construction of parallel roads, and in cases such thing is unavoidable, paying compensation to the concessionaire.

(Para 229)
Close monitoring of awarded road projects

The Committee recommends that the Ministry should break down big road projects into smaller stretches, making it optional for interested parties to choose the number of stretches for which they are willing to bid upon. This would encourage smaller contractors to participate in the bidding process, while also not dissuading big players from bidding for the entire project.

(Para 232)

The Committee further desires that the Ministry may incorporate provisions for more frequent quality checks in road projects that are sub-let by the main contractor, since the earning margin available with the sub-contractors in such cases is much thinner, making these projects more prone to lapses in quality of materials used as well as failure to follow established guidelines for construction.

(Para 233)

BHARATMALA PARIYOJANA

The Committee notes that significantly higher cost of land acquisition has been listed as the main reason by the Ministry for the huge cost overruns in Bharatmala Pariyojana Phase-I. While the exact cost of land acquisition cannot be precisely estimated especially in such long-term projects, the Committee feels that the Ministry should factor in the average rate of growth of land prices in its estimates, along with the effect of inflation to arrive at more accurate project estimates, which, in turn, would allow the Ministry to be proactive in terms of managing its finances.

(Para 240)

The Committee believes that the significant delays in the execution of Phase-I is also one of the main reasons behind the cost overruns. The Committee recommends that the Ministry/NHAI may proactively monitor all road projects and any deviation from the targeted timeline for each project should be dealt with on an urgent basis in order to minimize the delays, and thus, the cost overruns.

(Para 241)
DEVELOPMENT OF NATIONAL HIGHWAYS IN NORTH-EASTERN REGION

The Committee observes that in view of the strategic location of Arunachal Pradesh, good road connectivity is of crucial importance for the smooth movement of Forces guarding the border, on account of National Security. The Committee, therefore, desires that the Ministry may explore the possibility of taking up the SARDP-NE Phase-B, along with SARDP-NE Phase-A.

(Para 243A)

The Committee is not satisfied with the reasons furnished by the Ministry behind the huge delays in the completion of the road projects under SARDP-NE Phase A and Arunachal Pradesh package. The Committee feels that most of the reasons behind the delays in the execution of the projects could have been preempted and proactive measures should have been taken to minimize the delays caused due to them. The Committee hopes that the present timeline for completion of the projects have been made realistically and is met without any further delays.

(Para 245)

The Committee feels that construction of roads in difficult terrains such as North-East regions requires skilled contractors with prior experience of road construction in hilly regions. The Committee recommends that the Ministry may ensure that due care is taken not to award the road projects to contractors who have a history of construction of below-par quality of roads.

(Para 246)

The Committee further recommends that the Ministry may allocate funds to carry out research for best construction techniques in the North-East regions, with focus on the hilly nature of the region as well as the frequent rains and floods. The Committee desires that NHIDCL may lay special focus on ensuring sufficient provisions for road safety in the projects carried out in the region.

(Para 247)
SCHEME FOR DEVELOPMENT OF ROADS IN THE LEFT WING EXTREMISM AFFECTED (LWE) AREAS

The Committee takes note of the progress made in the various road projects in the LWE affected areas. The Committee believes that these road projects would have a highly positive effect on the developmental avenues of the LWE affected areas and hopes that the Ministry is able to complete the remaining length of these projects at the earliest.

(Para 251)

RESEARCH AND TRAINING IN ROAD INFRASTRUCTURE SECTOR

The Committee is disappointed to note that despite having a dedicated NHAI division with an extensive mandate for carrying out research activities, no specific budget allocation has been made to the division during the last five years. The Committee feels that this points to the lackadaisical attitude of the Ministry towards carrying out research activities in the road sector. The geographical diversity of the country, the often poorly-informed drivers and the large number of road accidents that take place on the National Highways are all crucially important matters that can be resolved by carrying out serious R&D activities regarding the same. The Committee, therefore, recommends that the Ministry may ensure that sufficient funds are available with the SRD&Q Division of NHAI.

(Para 255)

Indian Roads Congress

The Committee takes note of the extensive role played by Indian Roads Congress in development of Standards, Specifications, Code of Practices, Guidelines, research-based State of Art Reports, etc. on various aspects of road and bridges. The Committee is distressed to note the fund crunch being faced by Indian Roads Congress despite playing such an important role in research-led development in the road sector in the country. The Committee, therefore, recommends that the Ministry may urgently look into the budgetary requirements of this important organization so as to fuel research in
important subjects pertaining to the road sector and to permit the framing of a single code for Highways, and for bridges across the nation.

(Para 261)

The Committee recommends that the Ministry may set up capacity building and skill development programmes for State Road Departments, consultants, contractors, construction workers and equipment operators. This would ensure that guidelines framed by IRC are duly followed during construction of roads.

(Para 262)

The Committee desires to be apprised as to whether the IRC’s documents are being followed by the Ministry in the flood-prone regions of the country. The frequent damage caused by floods to NHs in such regions means that either the existing recommendations/guidelines in this regard are not being implemented, or the documentation in question needs to be updated to develop more effective norms. The Committee recommends that the Ministry may take necessary action to work out this issue at the earliest, since connectivity is of utmost importance in flood-hit regions.

(Para 265)

Indian Academy of Highway Engineers

The Committee appreciates the training programmes conducted by IAHE for officers of the Ministry, NHAI, BRO, various State PWD departments as well as contractors and consultants. The Committee hopes that the curriculum of the training programmes is refreshed periodically to reflect the latest developments in the road infrastructure sector.

(Para 268)

The Committee agrees with the suggestion made by IAHE and recommends that the Ministry may make it mandatory for all highway professionals in the country to attend relevant training programmes at IAHE.

(Para 270)
ROAD SAFETY

The Committee notes the efforts made by the Ministry by means of identification and rectification of black spots on NHs across the country. The Committee appreciates the work done so far in this regard but feels that a large number of black spots still remain unidentified, given the extremely high number of road accidents that take place in India each year. The Committee recommends that the Ministry may conduct an extensive study to identify as many bottlenecks as it can, and rectify the same at the earliest. Latest technology and data science tools may be employed in this process, in order to utilize the data gathered by the Ministry regarding road accidents, in order to identify black spots across the country. Topmost priority should be given to rectification of black spots, once identified. Preventive measures must be immediately taken at such black spots, till the time the rectification process can be completed.

(Para 272)

The Committee desires to be apprised of the number of black spots identified on NHs across the country in the last five years, alongwith details regarding the number of black spots rectified each year. The Committee recommends that findings from the black spot identification and rectification process may be looked into as a whole, to gain insights into how to avoid the black spots in the future road projects of the Ministry. The Committee further desires that all the NH projects should be minutely examined right from the DPR stage to their completion, eliminating geometrical design errors that compromise the safety of the road users.

(Para 273)

The Committee recommends that the black spot identification and rectification process may be streamlined so as to remove delays in the decision-making process, by implementing provisions for delegation of powers to carry out rectification measures with due urgency.

(Para 274)

The Committee is anguished to note that even after passing of 7-10 years after identification of black spots during the period 2011-14, long-term rectification measures have been carried out only on 247 out of the 503 identified black spots i.e. less than even 50%. The Committee strongly recommends that the Ministry may make it
mandatory for both NHAI and State Departments concerned, to rectify black spots within a fixed time-frame. Delays in the rectification of black spots directly leads to more lethal road accidents continuing to happen at such spots, which cannot be permitted at any cost. The Committee also desires to know the status of the black spots identified by the Ministry/NHAI since 2018 and reasons for not updating the status of the same on the website.

(Para 274B)

The Committee recommends that the Ministry may ensure that the codal provisions prescribed to enhance road safety on highways should be periodically updated from time to time, to reflect international best practices in this regard.

(Para 276)

The Committee feels that the Ministry should lay much more emphasis on its road safety awareness initiatives. Social media may be utilized for this purpose. The Committee desires that the Ministry may, in coordination with Ministry of Education, introduce information pertaining to road safety, basic road etiquettes, action to be taken in case of an accident, etc. in school curriculum across the country.

(Para 277)

The Committee feels that the number of ambulances, patrol vehicles, tow-away cranes available with the Ministry are not commensurate with the extensive size of the National Highway network in India. The Committee recommends that the Ministry may steadily increase this number to ensure that help is made available within a short and reasonable time of any accident taking place on the NHs.

(Para 279)

The Committee feels that the knowledge that such a helpline number exists and should be called in case of an accident, is very limited among people and awareness drives must be carried out in the form of signages and billboards on National Highways, and through the usage of social media, to ensure that NH users are aware of this emergency number. The Committee further recommends that the Ministry may work on tying up this emergency number with the number 112, i.e. the Emergency Response Support System, since people cannot be expected to remember too many numbers, especially in high-panic situations such as road accidents.
The Committee observes that driving habits in India need to be improved upon drastically and the most effective way to do is by way of training people to drive better. Therefore, IDTRs and RDTCs should be present in every district of the country. The Committee recommends that the Ministry may chalk out a plan to create such training infrastructure across the country and thereafter, make it mandatory to attend a driving training course of a sufficient duration in order to obtain a driving licence.

The Committee recommends that the Ministry may reach out to the private sector with proposals to invest their CSR funds into road safety initiatives such as training of drivers, road safety awareness drives, developing infrastructure for quickly reaching out to road accident victims etc., which will undoubtedy save many lives each year, across the country.

The Committee recommends that the Ministry may implement the various suggestions made by Indian Roads Congress to make the NHs safer for people.

The Committee feels that the State-wise data available with the Ministry can be put to great use by analyzing the trend of road accidents and death caused thereby, in the past few years. The Committee recommends that in case of such well-performing States, the Ministry may analyze the measures taken by the departments concerned of such States and to see how these compare with the States that are showing a consistent increase in the number of road accidents taking place each year.

The Committee agrees with the various suggestions put forth by the Transport Department, Assam and recommends that the Ministry may work to ensure that all the highways projects are in conformation with the guidelines of IRC and the Ministry itself. The Ministry may make concerted efforts to curb the menace of overloading and overspeeding on National Highways, since both pose a significant risk to the safety of the commuters.
The Committee appreciates the efforts made by the Government of Gujarat and the Ministry, in order to bring down the number of road accidents by 39% in the year 2019 as compared to the data of the year 2012. The Committee hopes that the reduction seen in the deaths caused due to road accidents in the State is commensurate with the reduction in the number of accidents.

(Para 294)

The Committee takes note of the reasons furnished by the Ports & Transport Department, Government of Gujarat, behind the road accidents. In this regard, the Committee recommends that the Ministry may work in coordination with the State Governments to encourage stricter implementation of traffic laws, while working in tandem to improve the quality of roads, both in terms of construction and design, in order to bring the number of accidents significantly down.

(Para 295)

The Committee strongly recommends that special attention may be given to the design and implementation of approach roads and entry & exit ramps on highways, since poor design and construction of these stretches inevitably leads to road accidents.

(Para 296)

The Committee desires that the Ministry may ensure that road safety audits are conducted across the entire National Highways stretch in the country, for projects executed by both the Ministry itself, as well as the State Government PWDs. The findings arrived upon by conducting such audits must be carefully analyzed and acted upon urgently.

(Para 297)

The Committee notes the findings of the 2018 MoRTH Report shared by the Government of Goa and observes that the findings are direct evidence of the devastating effect road accidents have on lakhs of families in the country, often causing the death of the sole earning member of the family, very likely impacting the financial health of the family, besides the emotional trauma. The Committee, therefore, recommends that the Ministry may enhance its focus on maintenance of the NHs in a good condition and implement road safety measures across the entire network, on a war footing. The Committee desires that the Ministry may form designated road safety wing
at State level and RO level for immediate redressal of road safety related issues, as suggested by the Government of Goa.

(Para 299)

The Committee desires to know the present status of the Bharat New Vehicle Safety Assessment Program (BNVSAP) for testing the safety performance of new vehicles in India, which was expected to be implemented several years ago. The Committee also may be apprised of the steps taken by the Ministry for introduction of safety standards and technologies in two-wheelers manufactured in the country, since a large number of the road accidents on Indian roads involve two-wheelers.

(Para 299A)

The Committee notes the steps being taken by the Government of Karnataka to reduce the number of road accidents in the State and hopes that the black spots identified by Karnataka PWD are rectified as soon as possible.

(Para 301)

The Committee takes note of the various steps taken by the Transport Department, Government of Tripura to reduce the number of road accidents in the State.

(Para 304)

The Committee notes that the Mizoram PWD is facing issues in attracting bids for carrying out independent road safety audits in the State audit for suggesting rectification measures for black spots identified by the Ministry. The Committee strongly feels that rectification of black spots cannot be delayed because of lack of interest in bidding for this purpose. The Committee, therefore, recommends that the Ministry/NHAI may step up to help Mizoram PWD through its expertise in rectification of black spots on the NHs. If the reason for the lack of interest in bidding for the projects is ascertained to be the small scale of the overall project, the Ministry may invite bids to conduct such an audit in multiple North-Eastern States together.

(Para 307)

The Committee agrees with the suggestion of PWD, Government of Mizoram regarding making specific budgetary provisions for conducting road safety audits in the project cost itself. Any new NH project implemented by the Ministry/State PWDs
should be duly audited in terms of road safety before opening it to the public and time-bound plan must be made for conducting road safety audits to cover the existing NH network as well.

(Para 308)

The Committee takes note of the initiatives taken by Department of Transport, Government of Punjab to enhance road safety on the road network in the State and hopes that it makes optimal utilization of the Road Safety Fund available with it, for resolution of road safety related issues.

(Para 312)

The Committee recommends that the Ministry may look into the fund crunch faced by State Departments in execution of road safety related projects and to consider developing an incentive based funding scheme wherein a part of the funds spent by the State Government on road safety projects and activities for State roads, may be reimbursed by the Ministry.

(Para 313)

CHAR DHAM PARIYOJANA

The Committee feels that the Char Dham Pariyojana is of immense importance because of the pilgrimage tourism aspects of the region. Completing this project at the earliest should thus be accorded high priority by the Ministry.

(Para 316)

The Committee notes the delays caused in the project on account of the petitions filed by NGOs in the NGT and Supreme Court. The Committee desires to be apprised of the progress made in this regard.

(Para 317)

The Committee further recommends that the region being highly sensitive in ecological terms, the Ministry must undertake every possible measure to minimize the environmental impact caused by its projects in such regions. If need be, consultants specializing in the same may be hired for the purpose of minimizing the adverse impacts of the projects on environment. This would help address the issues raised by the NGOs regarding such projects as well.
IMPACT OF CORONAVIRUS PANDEMIC ON ROAD TRANSPORT SECTOR

The Committee appreciates the various steps taken by the Ministry to help the road construction industry cope with the adverse impact of the Coronavirus pandemic. The Committee is happy to note that despite the pandemic and the ensuing lockdown in the Financial Year 2020-21, the Ministry managed to achieve an impressive pace of construction of 37 kilometers highways per day. The Committee hopes that the Ministry takes necessary action to keep up this pace of construction and minimizes delays in its road projects in the coming years to ensure optimal utilization of allocated funds.

COORDINATION OF THE MINISTRY WITH STATE GOVERNMENTS

The Committee takes note of the training programmes conducted by IAHE for officers from State Governments. The Committee recommends that the NHAI may proactively extend its technical expertise with the State Government departments, to help them utilize their funds in a better way, while ensuring a better state of construction and maintenance for the State Highways, as well as the National Highways network maintained by State PWDs.

The Committee observes that State Highways and local roads play a significant role in the economic growth of our country and thus, need allocation of sufficient funds for their maintenance. The Committee recommends that the Ministry may seriously consider IRC’s suggestion to provide financial assistance to State Governments for the maintenance of Highways and roads under their control, from the CRF fund.

The Committee agrees with the suggestions put forth regarding the need for the Ministry of Road Transport and Highways to have a coordination mechanism with the Tourism Departments of State Governments. Tourism can give impetus to economic growth of any region. Excellent road connectivity to existing tourist attractions as well as potential tourist sites is a prerequisite for the same. The Committee, therefore, recommends that the Ministry may hold periodic meetings with the Ministry of
Tourism as well as State Tourism Departments, and devise a time-bound Master Plan to enhance road connectivity to tourist places across the country, in order to bolster both domestic and foreign tourism.

(Para 329)

The Committee recommends that the Ministry may consider Kerala PWD’s suggestion to permit State PWDs to grant extension of time for delays in completion of project in case of delay due to reasons other than from Contractor, if it is felt that delegating such a power would allow road projects executed by State PWDs to be executed more smoothly with lower delays due to paperwork.

(Para 332)

The Committee recommends that the Ministry may ensure that clearances, release of funds and award of contract work for NH projects in NE regions are mindful of the short working season in the region. Procedural delays should not hamper the timely completion of projects in North-Eastern region.

(Para 336)

The Committee desires that the Ministry may look into the observations made by Mizoram PWD regarding unwillingness of the Ministry to invest large amounts in projects in the North East and having limited understanding of the problems faced in the actual work. Coordination mechanism with the State Government of Mizoram may be strengthened so as to resolve the issues being faced by it in execution of road projects in the State.

(Para 337)

The Committee recommends that the Ministry may look into possibilities for upgradation of NHs in Delhi that may help the region to tackle the issues of traffic and pollution.

(Para 339)

The Committee takes note of the status of the ongoing road projects in Andhra Pradesh and desires that the Ministry may analyze the need of upgradation of suitable State Highways in Andhra Pradesh into National Highways.

(Para 342)
The Committee recommends that NHAI may ensure that urgent necessary action is taken to reduce the accidents taking place on the Rajahmundry Bypass. NHAI may also assess the need for addition of another lane on the flyover constructed at Benz Circle, Vijayawada.

(Para 343)

The Committee takes stock of the ongoing road projects in the State of Maharashtra. The Committee desires that the Ministry may take effective steps in close coordination with PWD and MSRDC, to resolve the issues causing delay in the execution of road projects in Maharashtra.

(Para 346)

The Committee recommends that the Ministry may reconsider its provisions regarding first payment being made to contractors only after 25% completion of a project, in case of large size projects.

(Para 348)

The Committee notes the status of the ongoing projects in the UT of J&K and Ladakh. The Committee may recommends that the Ministry may lay special focus on road safety aspects of projects in the region, giving due significance to minimizing the ecological impact caused by the NH projects in the ecologically sensitive region.

(Para 350)

MISCELLANEOUS

Issues faced in transport of heavy goods on National Highways

The Committee strongly feels that overloaded vehicles not only cause severe damage to the roads, but also pose a significant safety risk to other vehicles plying on the road. The Committee strongly recommends that the Ministry may take immediate measures to install weigh-in motion system at all its toll plazas across the country to detect vehicles which are carrying more weight than their prescribed limits. Hefty fines should be charged on vehicles not abiding by the limits. The usage of weigh-in motion system to issue automated challans/ penalty would eliminate the possible collusion of corrupt officials with the heavy vehicle owners. The Ministry further recommends that the Ministry may consider charging toll on the basis of tonnage of the vehicles.
(Para 352)

The Committee takes note of the various issues faced by heavy vehicle owners/transporters. The Committee feels that the installation of weigh-in motion systems at toll plazas on National Highways across the country would be very helpful in saving the truck drivers from harassment and illicit demands from corrupt officials.

(Para 354)

The Committee recommends that the Ministry may work on development of eateries, toilets, rest house etc. on National Highways, to allow truck drivers more comfort while travelling long distances. This would also help them be more concentrated while driving and would thus lead to lesser road accidents.

(Para 355)

Standardization of construction equipments used for road development

The Committee believes that the usage of modern machinery for construction can lead to improved road quality, while saving time as well. The Committee recommends that the Ministry may look into the feasibility of the suggestion made by ICEMA to specify the details of mechanization to be used in the execution of a road project, in the road construction contract. A decision may be taken in this regard with due consideration to the benefits of prescribing such a mandate and the financial ability of the road contractors in India to purchase/rent such machinery.

(Para 357)

Promotion of usage of electric vehicles

The Committee notes from the Annual Report (2020-21) of the Ministry that the total number of registered vehicles in India is 29.57 crores, according to the provisional data for the year 2019, with a CAGR of 9.91 percent for the years 2009 to 2019. The percentage of electric vehicles in the country thus comes out to be somewhere around 0.17 percent of the total vehicles plying in the country. The Committee is disappointed to note the very slow adoption of electric vehicles in India, with several countries across the world already having share of electric cars in double digits. The Committee desires that concrete measures are taken by the Ministry to enact policies to aid much faster
growth of adoption of electric vehicles in the country. The Committee recommends that the Ministry, in coordination with Ministry of Power and automobile manufacturers may come up with a time-bound plan to create a robust vehicle charging infrastructure across the entire National Highways network in the country. Such infrastructure is critical to give a boost to the adoption of electric vehicles in the country, which would lead to considerable environmental benefits and help resolve the issue of pollution to some extent.

(Para 359)

Further, the Committee strongly recommends that the Ministry may exempt electric vehicles from registration charges and toll tax. Financial incentives are necessary to create a spurt in the adoption of electric vehicles in the country, which, in turn, will increase the pace at which infrastructure is being created for the shift to such vehicles. The Committee recommends that the Ministry may undertake an in-depth analysis of the policies adopted by countries across the world which have succeeded in enabling mass adoption of the electric vehicles in the country, and come with an effective time-bound plan with well-defined targets for electric vehicle adoption in India.

(Para 360)

GPS based tolling

The Committee appreciates the initiatives being taken by the Ministry with regard to the introduction GPS based tolling in the country, which will remove the need for physical tolling infrastructure on ground. The Committee hopes that implementing this country-wide would eliminate the delays faced by people at toll booths and thus would shorten the journey times on National Highways, while saving fuel as well. The Committee recommends that the fee collection system may be designed in such a way so as to link the fee deduction with the bank account of the vehicle owner, so as to remove the need for frequent recharge of FASTags. This would be of great help to people who are not well versed with technology to recharge their FASTags online themselves.

(Para 363)
Re-habilitation of project affected people

The Committee takes note of the mechanism in place to facilitate the rehabilitation of people who have to let go of their land for the development of road projects. The Committee observes that the land is the only source of income for many people in India and acquisition of the same directly and desires that the Ministry may come up with solutions to provide sustained source of income to the people who were solely dependent on their land for their livelihood. Land value capture mechanism may be employed to capture value from the land nearby National Highways and a part of the same may be shared with the previous landowners. The Committee further recommends that the Ministry may look into the feasibility of employing the project-affected people to operate/provide roadside facilities such as rest house/rooms, eateries, etc.

(Para 369)

Implementation of more stringent Pollution Checks

The Committee takes note of media reports pointing to falsification of emission data at emission testing centers for issuance of Pollution-Under-Control Certificates to vehicles. This poses a serious threat to the environment and air, thus having a direct detrimental effect on public health. The Committee recommends that the Ministry may devise ways to prevent such cases. Feasibility of making video recording of the emission tests mandatory for issuance of PUC certificates may be evaluated. The Ministry may implement provisions to ensure that the emission testing equipments used by the testing centers are evaluated from time to time to check their accuracy of emission data.

(Para 370)

Planting of trees by NHAI

The Committee strongly recommends that it must be ensured that the saplings planted by NHAI are looked after in their formative years and that the land be regularly watered and looked after. Suitable provisions may be introduced to ensure that the trees planted are of a suitable specific height and are looked after
well, once planted. The Committee desires to know the existing mechanism in this regard, along with the reasons the same is failing at present.

(Para 372)

Ensuring elimination of hindrances on waterways

The Committee feels that the development of waterways across the country will bring significant benefits to the Tourism sector as well as the Shipping sector. The Committee, therefore, recommends that strict guidelines may be framed and implemented by the Ministry across the country to ensure suitable clearance for boats and/or ships, keeping in mind the present as well as future scope for waterways – both National waterways and other inland waterways, while building road bridges over water bodies. In this regard, the Ministry should work in close coordination with the Ministry of Ports, Shipping & Waterways and the concerned Department of the State Government.

(Para 374)

Allocation of funds under CRIF

The Committee is of the view that the existing mechanism of bank of sanctions is causing a visible lack of clarity between the State Government Departments concerned and the Ministry of Road Transport & Highways, regarding the amount that the State is yet to be awarded. The Committee recommends that the Ministry may look into the issue and come up with suitable guidelines to ensure that there is no confusion among the State Government Departments and the Ministry, regarding the share of funds to be received by the State, in any particular year, after factoring in the Bank of Sanctions.

(Para 376)

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ANNEXURES
ANNEXURE-A

Ministry of Road Transport and Highways Press Release dated 6th July, 2020

Ministry of Road Transport & Highways

NHAI to Rank Roads for Quality Service

Posted On: 06 JUL 2020 3:03PM by PIB Delhi

In its effort to improve the quality of roads, the National Highways Authority of India (NHAI) under the Ministry of Road Transport and Highways has decided to undertake performance assessment and ranking of the highways in the country. The assessment audit and ranking of the NHs is aimed to take corrective recourse, wherever needed, to improve the quality and provide higher level of service to highway commuters.

The assessment parameters are based on different international practices and studies for benchmarking highway performances in Indian context. The criteria for the assessment have been broadly categorised in three main heads: Highway Efficiency (45%), Highway Safety (35%) and User Services (20%). On the basis of outcome of the assessment, the authority will undertake a comprehensive analysis and decide on the level of intervention required to enhance the overall service quality.

Additionally, important parameters like operating speed, access control, time taken at toll plaza, road signages, road markings, accident rate, incident response time, crash barriers, illumination, availability of Advanced Traffic Management System (ATMS), functionality of structures, provision for grade separated intersections, cleanliness, plantation, wayside amenities and customer satisfaction will also be considered while conducting the assessment.

The score obtained by each Corridor in each of the parameter will provide a feedback and corrective recourse for higher standards of operation, better safety and user experience to improve existing highways. This will also help in identifying and filling gaps of design, standards, practices, guidelines and contract agreements for other NHAI projects.

The ranking of the corridors will be dynamic and the concessionaire/ contractor/ operator will get the opportunity to improve upon their ranking by improving the services on that corridor. Apart from overall ranking of all the corridors, separate ranking for BOT, HAM and EPC projects will also be done. This process of ranking will bring out operational efficiency and ensure high quality maintenance of roads.

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RCJ/MS

(Release ID: 1636770)
## India’s Foreign Exchange Reserves as on June 11, 2021

### 2. Foreign Exchange Reserves

<table>
<thead>
<tr>
<th>Item</th>
<th>As on June 11, 2021</th>
<th>Variation over</th>
<th></th>
<th></th>
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<tr>
<td>1 Total Reserves</td>
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<td>608081</td>
<td>25066</td>
<td>3074</td>
<td>223132</td>
<td>31097</td>
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<td>1.1 Foreign Currency Assets</td>
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<td>563457</td>
<td>21216</td>
<td>2567</td>
<td>191967</td>
<td>26764</td>
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<tr>
<td>1.2 Gold</td>
<td>278330</td>
<td>38101</td>
<td>3790</td>
<td>496</td>
<td>30607</td>
<td>4220</td>
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<td>1.3 SDRs</td>
<td>11048</td>
<td>1512</td>
<td>-2</td>
<td>-1</td>
<td>184</td>
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<td>1.4 Reserve Position in the IMF</td>
<td>36572</td>
<td>5011</td>
<td>62</td>
<td>11</td>
<td>374</td>
<td>86</td>
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</tbody>
</table>

* Difference, if any, is due to rounding off

† Source: Reserve Bank of India - Weekly Statistical Supplement (rbi.org.in)
<table>
<thead>
<tr>
<th>S. No.</th>
<th>State Name</th>
<th>Name of Project</th>
<th>Original Cost (₹ in crs)</th>
<th>Revised Cost (₹ in crs)</th>
<th>Total Length (in km)</th>
<th>Delayed Period (in Year)</th>
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<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>Kudapa-Mydkukur-Kurnool</td>
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<td>Six Laning of Nellore-Chilkaluripet</td>
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<td>NA</td>
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<td>3</td>
<td></td>
<td>Nalbari to Bijnī(AS-7)</td>
<td>208</td>
<td>230</td>
<td>27.3</td>
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<td>4</td>
<td>Assam</td>
<td>Construction of new 2- lane road with paved shoulders of Dhaleshwari Bypass from km. 0.00 - 3.500 of NH-154. SARDP-NE/NH-154/PWD/AS/2011-12/187</td>
<td>53.15</td>
<td>79.22</td>
<td>3.5</td>
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<td>2 laning of Goalpara- Solmari road (Job No. SARDP-NE/Goalplara-Solmari/ AS/PWD/2011-12/189)</td>
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<td>NA</td>
<td>7.9</td>
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<td>Construction of proposed North Lakhimpur Bypass from existing km. 338.924 to 349.213. Job No.-052-AS-2011-12-099</td>
<td>127.24</td>
<td>NA</td>
<td>12.514</td>
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<td>7</td>
<td>Bihar</td>
<td>Patna- Muzzaffarpur</td>
<td>671.3</td>
<td>2367</td>
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<td>Patna - Bakhtiarpur</td>
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<td>4 Laning of Chappra-Hajipur(Approved Length 153 Km)</td>
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<td>2 Laning of Muzzaffarpur–Sonbarsa(Approved Length 89 Km)</td>
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<td>Gujarat</td>
<td>Gujarat/Maharashtra Border-Surat - Hazira Port Section</td>
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<td>Gujarat/Maharashtra</td>
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<td>Panipat - Jalandhar (Six lane)</td>
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<tr>
<td>S. No.</td>
<td>State Name</td>
<td>Name of Project</td>
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<td>Revised Cost ( ₹ in crs)</td>
<td>Total Length ( in km)</td>
<td>Delayed Period (in Year)</td>
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<td>18</td>
<td>Jammu &amp; Kashmir</td>
<td>Srinagar to Banihal</td>
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<td>Jharkhand/West Bengal</td>
<td>Six-laning of BarwaAdda-Panagarh</td>
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<td>1665</td>
<td>122.88</td>
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<td>Kerala</td>
<td>Six lanning of Vadakkancherry - Thrissure section</td>
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<td>Indore-Jhabua-Gujrat/MP (Approved Length 168)</td>
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<td>Pune – Satara(Approved Length 145)</td>
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<td>Odisha</td>
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<td>Widening to 2-lane and improvement of Chitrakonda-Janval-Papermetla Road (MDR-105) from Km 0/0 to 29/50 in Orissa under LWE scheme</td>
<td>35.75</td>
<td>53.8</td>
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<td>Widening to 2 lane and improvement in Km 0/0 to 45/35 of Govindapalli Salimi Mahupadar road including bridge across Chakabuka Nala in Km</td>
<td>80.54</td>
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<tr>
<td>S. No.</td>
<td>State Name</td>
<td>Name of Project</td>
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<td>Revised cost ( ₹ in cr)</td>
<td>Total Length ( in km)</td>
<td>Delayed Period (in Year)</td>
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<tr>
<td>31</td>
<td>Chhatisgarh</td>
<td>45/0 in Malkangiri District under LWE Scheme</td>
<td>191.08</td>
<td>195.38</td>
<td>94.2</td>
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<td>32</td>
<td>Chhatisgarh</td>
<td>W/I SL to 2L of Chitalnar-Marigudam Road km 0 to 65.0 i/c 4MB &amp; 87 CDs (existing 3 km WBM), (SH)</td>
<td>78.11</td>
<td>NA</td>
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<td>W/I SL to 2L of Antagarh-Bedma (Km.0 to 35.0) i/c 1MB &amp; 36 CDs (existing BT) (MDR)</td>
<td>52.38</td>
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<td>Widening to two lane and improvement from km. 0.00 to 52.400 of Nelasnar-kodoli-gangaloor road</td>
<td>73.08</td>
<td>NA</td>
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<td>36</td>
<td>Chhatisgarh</td>
<td>C/o 2L CC Pavement of Kalgaon-Koyelbidea (Km.6.0 to 22.6) i/c 5 MB &amp; 18 CDs , (MDR)</td>
<td>30.79</td>
<td>NA</td>
<td>16.60</td>
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<td>W/I SL to 2L of Bhanupratappur-Pakhanjur-Bande-PV-109 km.27.0 to 118.6 i/c 7 MB &amp; 127 CDs (existing BT) , (SH)</td>
<td>147.38</td>
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<td>Chhatisgarh</td>
<td>W/I SL to 2L of Bijapur-Awapalli-Jagargunda Road km 0 to 70.0 i/c 8 MB &amp; 120 CDs (existing 21 km BT), (SH)</td>
<td>166.51</td>
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<td>W/I SL to 2L of Dornapal-Chintalnar-</td>
<td>116.88</td>
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<td>S. No.</td>
<td>State Name</td>
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<td>Original Cost (₹ in crs)</td>
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<td>41</td>
<td>Chhatisgarh</td>
<td>Jagargunda Road Km 0 to 56(CC Pav.) i/c 9 MB &amp; 101 CDs (existing 8 km BT), (SH)</td>
<td>41.00</td>
<td>83.46</td>
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<td>W/I SL to 2L of Chhotedongar-Orchha (Km.0 to 31.0) i/c 4 MB &amp; 66 CDs (existing 10 km BT &amp; 21 KM BM), (MDR)</td>
<td>42.82</td>
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<td>W/I SL to 2L of Injaram-Bheji Road Km 0 to 20 i/c 26 CDs (existing 3 KM BT), (MDR)</td>
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<td>NA</td>
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<td>W/I SL to 2L of Narayanpur-Sonpur-Maroda (Km. 0 to 78.0) i/c 11 MB &amp; 189 CDs (existing 7 KMBT &amp; 20 KMWBM &amp; balance forest ), (SH)</td>
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<td>W/I SL to 2L of Palli-Barsur Km. 219.6 to 258.0 i/c 17 MB &amp; 80 CDs (existing 9 KMBT &amp; 6 KMWBM), (SH)</td>
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<td>W/I SL to 2L of Km. 0 to 44.0 of Konta Golapalli road i/c 7 MB &amp; 98 CDs (existing 34 km pagdandi), (MDR)</td>
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<td>W/I SL to 2L of Km. 20.0 to 47.8 of Bheji Chintaqupha road i/c 3 MB &amp; 90 CDs (existing 15 Km WBM), (MDR)</td>
<td>48.52</td>
<td>NA</td>
<td>27.80</td>
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<td>48</td>
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<td>Construction of 2 lane from km 0.00 to km 8.00 of Golapalli-Paidgudem road in the State of Chhattisgarh under LWE Scheme.</td>
<td>11.09</td>
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<td>49</td>
<td>Mizoram</td>
<td>Widening to 2 lane, re-alignment and geometric improvement from Km 11/00 to Km 114/618 of NH-44A in Mizoram under Phase A of SARDP-NE</td>
<td>624.41</td>
<td>713.50(R1) 992.67(R2)</td>
<td>98.33</td>
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<tr>
<td>S. No.</td>
<td>State Name</td>
<td>Name of Project</td>
<td>Original Cost (₹ in crs)</td>
<td>Revised cost (₹ in cr)</td>
<td>Total Length (in km)</td>
<td>Delayed Period (in Year)</td>
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<tr>
<td>50</td>
<td>Mizoram</td>
<td>(Job No. SARDP-NE/NH-44A/MZ/PWD/2010-1-169) Construction of a new 2-lane Highway from km 0.00 (on NH-54 near Lawngtlai) to km 38.00 (Length=38.00 Km) in Mizoram to support Kaladan Multi-Modal Transit Transport (Job No. SARDP-NE/State Road/MZ/PWD/2010-1/161)</td>
<td>195.04</td>
<td>253.12(R1) 377.99(R2)</td>
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<td>Construction of a new 2-lane highway from km 38/00 to 71/00 in Mizoram to support Kaladan Multi Modal Transit Transport Project in Phase 'A' of SARDP-NE ( Package MM-I)</td>
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<td>207.05(R1) 305.61(R2) 322.24(R3)</td>
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## ANNEXURE-D

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**Total** | 888   | 27,665.3 | 3,15,373.3 |
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## State-wise Report on MoRTH Identified Blackspots (2015-18) on NHs with NHAI

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