CHAPTER 7

CONCLUSION & SUGGESTIONS

7.1 CONCLUSION

Road Safety is a multi-sectoral subject which deals with different stakeholders and Agencies. In Ancient India, when non-motorized vehicle was used at that time also drivers had some code of conduct to follow about Road Safety. Rathvidhya was also taught in Mahabharat and Upnishads; this system of Road Transport was actually developed very early in Ancient Indian civilization. With the passage of time, motorized vehicle came into picture, with this required paved, concrete and gravel road was developed. For fulfilling all the Road Transport need, different categories of automobiles were invented, as two wheelers, four wheelers, heavy motor vehicles(Goods and Passengers). For Driving all the manufactured automobiles need of drivers arise who has proper knowledge of road regulations and good driving sense. By the time vehicle population has increased so for identification of vehicles Registration number was provided.

A separate department was constituted for issuing license, registration of motor vehicle, issuing permit for commercial vehicles. Similarly a Road Construction Department was constituted namely PWD, Highway Authorities. The categorization of Road was done as Village Road, other district road, Major district road, State Highways/Motorways, Expressways.

To manage, control and regulate the ongoing and increased traffic regulatory law and enforcement was felt.

In India 1914 Motor vehicle law was enacted first time, then in 1939 another law was introduced. Control and regulation of motor vehicles is presently governed by the Motor Vehicles Act 1988 [Central Act 59 of 1988] and the rules framed there under by the Central Government as well as by the respective State
Governments. The said Act came into force in July 1989 vide notification, dated May 1989 by repealing the earlier Motor Vehicles Act 1939. Rules of the Road Regulation 1989 was enacted by the Central Government. The enforcement of these provisions is to be done concurrently by the Central Government as well as by the State Governments in respect of the areas specified in the Act. The areas in which the State Governments have got exclusive powers have been clearly specified in Entry 56 and 57 of List II [state list] and Entry 35 of List III [concurrent list] vide Article 246 and Seventh Schedule of the Constitution of India. Some of the provisions of the Motor Vehicles Act 1988 have been amended from time to time. This CMVA introduced in on September 2014 by the Ministry of Road Transport and Highways, Government of India, have notified a Draft Bill known as ‘Road Transport and Safety Bill’ with the object of repealing the Motor Vehicles Act 1988 and substituting it by a new Act. The Bill contained 340 sections. It was stated in the object and reasons that, among other things, the Union Government should take Road Transport under its control and from Independent Corporate Bodies in the place of Motor Vehicles Department. On Oct 2014, the national level meeting of National Road Safety Council and Transport Development Committee was held at New Delhi. The Road Transport and Safety Bill was also discussed in the meeting. The bill was vehemently opposed by several States including the States on the ground that the Central Government cannot encroach upon the powers conferred upon the States in Transport Sector by Constitutional provisions. On February 2014, the Ministry of Road Transport and Highways published a revised edition known as “Road Transport and Safety Bill - Version 2” then in Jan 2015 the Ministry of Road Transport and Highways published Version 3 of Road Transport and Safety Bill containing 348 sections. In February 2015 MoRTH another revised Version 4 of the Road Transport and Safety Bill containing 343 sections was issued. There was no change in the stand of the Ministry from the original version of the Bill and the objections of the States were not resolved. Therefore Version 4 of the Bill was also acceptable to the States. In April 2015, the periodical meeting of Southern
States Transport Committee was held at Goa. Hon’ble Union Minister of MoRTH presided over the meeting.

In June 2015, MoRTH published Version 5 of Road Transport and Safety Bill containing 227 sections. The issues raised by the States still remained unresolved and hence Version 5 was opposed by the States. A Group of Ministers (GoM) was formed under which the first meeting of GoM was held at New Delhi with the Transport Commissioners/Secretaries of all States, the second meeting was held at Bangalore, the third meeting was held at Dharmasala, Himachal Pradesh and the fourth meeting was held at Trivandrum, Kerala. As a result of the meeting of GoM, a total number of 22 resolutions were passed, 6 resolutions were taken up for making amendment to the Motor Vehicles Act 1988. In August 2016 on the day of Parliamentary session, the Hon’ble Union Minister MoRTH introduced the Draft Bill Number 214 of 2016 [Motor Vehicles (Amendment) Bill 2016] in the Lok Sabha for consideration and passing. Instead, it was notified that the concurrence of this Excellency the President of India was obtained for introducing the Bill. The Lok Sabha referred the Bill to Parliamentary Standing Committee on Transport, Tourism and Culture for consideration and reporting to Rajya Sabha. On Feb 2017 the Parliamentary Standing Committee submitted its Report No. 243 to the Rajya Sabha. It was laid on the table of Lok Sabha on the same day for consideration.

This bill is dedicated to road safety Its silent features mainly focus on Empowering states, strengthening Enforcement and Improve road safety, Simplification and Citizen facilitation, Automation and computerization, Strengthening Public transport, speedy assistance to Accident Victims, Stricter Penalties to improve deterrence effect, offenses by Juvenile, Dangerous driving defined, Responsibility of OEM / Dealers / Body Builders, responsibility Road construction companies / concessions, Enforcement officers made responsible, Strict Provision for drunken driving, Strict penalties for violation of traffic offence.
Special Provision for divyaang, Simplification of Third party Insurance claim, Compulsory training for driving license, Provisions for aggregators and Provision for making scheme by central government for accident investigation. In this amendment bill global best practices is adopted specially from Australia Motor Vehicle Act, UK Road traffic Act 1988, US California vehicle code, UK Excise and Registration Act 1994, Australia transport Operation (Vehicle standard and safety) Regulation 2010, Canada Transportation Act 1996, Motor Vehicle transport Act 1987, UK local transport act 2008, UK Public passenger vehicle act 1981, Transportation Act 2000, Canada Good Samaritan Act 2001 and UK Road traffic offender Act 1988. Central government since 2014 was not able to pass the bill from Parliament, Meanwhile Hon’ble Supreme Court has given Judgment in case of Dr S. Rajaseekaran Vs Union of India & Ors, WP (Civil) No. 295 of 2012 dated 22 April 2014, Main decision of this Judgment includes Constitution of Supreme Court Committee on Road safety under S. Radhakrishnan alongwith 2 members in it. This committee has issued many directions to State and Union Territories, which have been discussed by me in Chapter 2.


No Speed is calculated for each accident in Scientific Accident investigation method. All the above over-speeding accident data are given on the basis of assumption by police, and so the actual cause of accidents is not identified, still.

In India there is a need of International practices of Crash Investigation Methodolgy.
Road Safety is based on 6 E’s Concept:

Vehicle Engineering is poor in India no crash test provisions are there in the law. No Mandatory provision of safety devices of all Vehicles in India as compared with Global Safety standards like ABS, ESC etc. No work started in the field of ITS based connected vehicle technology like vehicle to vehicle communication, Vehicle to infrastructure and vehicle to environment in India yet. No proper vehicle inspection system adopted in India through automated test lane inspection and certification center. No strict enforcement for ensuring vehicle standard (AIS) at the time of vehicle registration, fitness and Enforcement activity on Roads.

As the highway features and deficiencies in Road environment contribute substantially to road accidents, the traffic engineer must have devices to reduce the accidents through scientific planning, design, construction and maintenance of roads. In addition, traffic management techniques should be effectively used to ensure smooth, safe, efficient and comfortable movement of traffic. In India I found 40% accidents occurred due to unfavorable road condition but According to Road Accident report. In India 2016, 0.3% accident occurred due to engineering fault of the roads. In India there are more then 54 Lac km road and more than 20 Crore vehicle use road. Only 2 % national highway of total road length are present and only 40% traffic use National Highway. Almost 30% accident and 35% death occurred on national highway in 2016. Road Safety Audit work for Exiting Road is not started yet on larger scale in phase manner in India. But for new roads more than 5 Kms road safety audit at design stage is compulsory as per the directions of hon’ble supreme court. Road Construction companies/ concessionaires should have strict provision for any engineering defect.

In India driving education is given by old drivers. There was no driving education concept, even when of issuing license. For every road users should have knowledge about how to use vehicle , how to use road, precautions on road, right
of way, mandatory road signs, road language, road marking, duties of driver. But the present traffic rules and regulation still no mechanism for Road safety education is present.

Road Safety Education is in elementary levels and it has taught as a part of Moral Education and General Knowledge in most of the schools in India. There are few exceptions where it has been introduced separately as part of regular curriculum and proper weightage has also not been given to promote the subject and educate the children. The Government of Rajasthan is one such example where road safety education has been introduced in school curriculum from class 6\textsuperscript{th} to class 10\textsuperscript{th} first time and now more than 10 state board have included this in School curriculum but still CBSE has not inculcated this on its Curriculum.

Unfortunately it has not been thought of to introduce road safety education at higher education. In our country higher education is directly seen in relation with the career opportunities. Unless and until we won’t be propagating career opportunities in the field of Road Transport and Safety, launching or introducing road safety at the higher education levels won’t catch the required number of students.

It is not true that opportunities in the field of road transport, safety and traffic management do not exist in our country. Suitable efforts are required in the right direction such that the opportunities could be explored and re-shaped to meet the demands of the emerging needs of the road transportation in future.

It will not be fruitful to bring in universities, educational institutions and courses at large. First to generate the need the Road Transport and Traffic Universities could be launched in five zones of India viz. East, West, North, South and Central Zone. Later independent universities could be launched at least one in each state.

Now a days construction of roads and road infrastructure demands mixed skill set comprising civil engineering, traffic engineering and IT engineering. To
meet the demand of the all the engineering capabilities the present courses related to civil construction of roads could be updated. In the later stage the engineering colleges could setup road traffic engineering as a separate department in the colleges. Apart from the engineering aspect the road transport also demands proper channel and management of logistics. To address the demand separate courses like Diploma in Logistics Management, MBA in Transport Management and Masters Degree in Transport Economics could also be introduced.

Enforcing use of safety devices in all vehicles Enforcing speed limits on National Highways with the use of ITS, Penalizing use of mobile phones and other distracting measures, removing encroachment from foot-a-paths, Curbing malpractice overcrowding and overloading, Suspending driving license of drunken drivers, Comprehensive test of skills to be tested before issuing driving license, Develop facility on police portal for feeding traffic violation and accident data online Strengthen in traffic police officials for better enforcement, Removing liquor shops from highways are the immediate measures to be undertaken.

At present in India 315 trauma care centers are available out of 683 districts, which is not adequate; each district should posses at least one Trauma care center. Upgradation of trauma care facilities at govt. health care centers, Upgrade activity health care facilities on highways to trauma care centers, Ensuring the availability of trauma care on every 50 km stretch of highway, Introducing a single, uniform toll-free emergency help line in the country, Deploying ambulances and crash rescue vehicles near accident prone spots on state highways, Starting model emergency care on accident prone stretch and check results are also to be undertaken.

Road safety is not considered as social and political issue at the higher level. Reasons behind improper road environment are the lack of knowledge of road users No proper institutional mechanism for capacity building, lack of strict enforcement, noise and air pollution of vehicles play major role for deterioration of road environment.
OUTCOMES FROM EMPIRICAL STUDY

The analysis which has been the part of my empirical research is stated, which forms the basis of my suggestion. The detail questionnaires research methodology as adopted by for arriving at these outcomes has been explained in detail in Appendix.

GENERAL INFORMATION ABOUT ROAD SAFETY

Questionnaire - I

1. Do you understand the difference between learner and Permanent driving license?

2. Do you know the benefit of wearing helmet/seatbelt during driving a car?

3. Do you know what is the meaning of red and green light signal on crossing?
4. Do you know what is the minimum age of getting a driver license?
क्या आप ड्राइविंग लाइसेंस प्राप्त करने की न्यूनतम आयु सीमा जानते हैं?

5. Do you understand all the traffic rules?
क्या आप सभी ट्रॉफिक नियमों को समझते हैं?

6. Do you know about right of way?
क्या आप सड़क पर चलने अधिकार के बारे में जानते हैं?

7. Do you know about language of road?
क्या आप सड़क की भाषा के बारे में जानकारी रखते हैं?
8. Do you know about pedestrian crossing?
क्या आप पैदल यात्री क्रोसिंग के बारे में जानते हैं?

9. Do you know maximum speed limit of different categories of vehicles?
क्या आप विभिन्न क्षेत्रों के वाहनों की अधिकतम गतिमान जानते हैं?

10. Do you know the correct side for overtaking a vehicle?
क्या आप वाहन की ऑवरटोक करने की सही दिशा जानते हैं?

11. Do you know the road safety measures?
क्या आप सड़क सुरक्षा सम्बद्ध उपाय जानते हैं?
12. **Are you aware about the right places of using/not using horn?**
क्या आप यहाँ उपयोग करने और न करने का स्थान जानते हैं?

![Pie Chart for Horn Usage](image)

13. **Are you aware about parking place and parking sense?**
क्या आप पार्किंग स्थल और पार्किंग सेंस के बारे में जानते हैं?

![Pie Chart for Parking](image)

14. **Are you aware of different road safety signs?**
क्या आप विभिन्न सड़क चिन्हों के बारे में जानते हैं?

![Pie Chart for Road Signs](image)

15. **Do you know the difference between traffic signals and road signs?**
क्या आप यातायात संकेतों एवं सड़क चिन्हों के अंतर को जानते हैं?

![Pie Chart for Traffic Signals vs Road Signs](image)
1. What a red traffic light indicates?
   लाल लाइट का मतलब क्या है?

2. What does green traffic light signifies?
   ग्रीन लाइट का मतलब क्या है?

3. What does amber light signifies?
   पीली लाइट का मतलब क्या है?

4. According to you, which among the following causes accidents on road?
   आपके अनुसार इनमें से कौनसा सड़क दुर्घटनाओं का कारण बनता है?

5. If you want to let a vehicle overtake which indicator will you use?
   पीछे वाले वाहन को ऑवरटेक के लिए अनुमति देने हेतु किस साइड के इन्डिगेटर का प्रयोग करेंगे?

6. Which is the right side to drive?
   वाहन चलाने की सही साइड कौनसी होती है?

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**Information About Road Language**

- **Red Traffic Light**
  - Stop: 70%
  - Go: 10%
  - Alert: 20%

- **Green Traffic Light**
  - Stop: 30%
  - Go: 70%
  - Alert: 10%

- **Amber Traffic Light**
  - Stop: 10%
  - Go: 12%
  - Alert: 78%

- **Causes of Accidents**
  - Over Speed: 60%
  - Drink & Drive: 15%
  - Using Cell Phone: 25%

- **Overtaking Indicator**
  - Right Indicator: 80%
  - Left Indicator: 15%
  - Parking Light: 5%

- **Driving Side**
  - Left: 50%
  - Right: 30%
  - Don't Know: 20%
### ATTITUDE

1. **Do you think that your non-responsive behavior may cause harm to other people who are on the road?**
   
   क्या आप यह सोचते हैं कि रास्ते पर आपका मनस्ता रूढ़िवाद दूसरे व्यक्तियों को नुकसान पहुँचा सकता है?

   - **Yes**
   - **No**
   - **Can't Say**

   - **Percentage:** 97%

2. **Do you think that it is important to follow all the road safety measure?**

   क्या आप रास्ते सुरक्षा के उपायों की महत्ता को जानते हैं?

   - **Yes**
   - **No**
   - **Can't Say**

   - **Percentage:** 90%

3. **Do you think that one must have life insurance?**

   क्या आप सोचते हैं कि सभी के पास जीवन बीमा अनिवार्य रूप से होना चाहिए?

   - **Yes**
   - **No**
   - **Can't Say**

   - **Percentage:**
   - Yes: 40%
   - No: 30%
   - Can't Say: 30%
4. Do you find it essential to stop on the red light signal?
क्या आपने कमी सोचा कि लाल लाइट पर रुकना आवश्यक है?

5. You find people on the road often breaking road safety measures?
क्या आपने देखा अधिकांश लोग सड़क सुरक्षा के उपायों की अपहरण करते हुए नजर आते हैं?

6. Do you feel it difficult when someone near you breaks the road signal and traffic rules?
क्या आपने कमी कईतिहाय महसूस की जब कोई आपके पास सड़क पर सिग्नल और नियम तोड़ता है?

7. Do you think life is more important than time (with respect to waiting before road crossing)?
क्या आप सोचते हैं कि जीवन, समय से ज्यादा महत्वपूर्ण (महत्वव्युत्पन्न सड़क पर क्रॉसिंग से पहले रुकना)

8. Do you think that various road sign & symbols helps in reducing accidents?
क्या आप सोचते हैं सड़क पर लगे विभिन्न सड़क रोड सिग्नल और संकेतक सड़क दुर्घटनाओं को कम करने में सहायक होते हैं?

9. According to you who are responsible for road accidents?
आपके अनुसार सड़क दुर्घटना के लिए कौन जिम्मेदार है?

| 65% | 25% | 10% |
| Pedestrian | Lack of Safety Measure | Any Other |
PRACTICE

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How often do you drive?</td>
<td>22% Always, 60% Sometimes, 18% Never</td>
</tr>
<tr>
<td></td>
<td>आप कब–कब वाहन चलाते हैं?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>How often do you visit service centers for periodical inspection / service?</td>
<td>5% Always, 55% Sometimes, 40% Never</td>
</tr>
<tr>
<td></td>
<td>आप कब–कब सर्विस सेंटर पर वाहन लेकर जाते हैं?</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Do you check all the essential components of your vehicle?</td>
<td>15% Always, 25% Sometimes, 60% Never</td>
</tr>
<tr>
<td></td>
<td>क्या आप आपके वाहन के सभी हिस्सों को जोखिम नहीं लेते हैं?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Do you wear helmet/seat belt during driving?</td>
<td>10% Always, 70% Sometimes, 20% Never</td>
</tr>
<tr>
<td></td>
<td>क्या आप वाहन चलाते समय हेलमेट / सीट बेल्ट लगाते हैं?</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Do you follow all the driving and traffic rules?</td>
<td>10% Always, 65% Sometimes, 25% Never</td>
</tr>
<tr>
<td></td>
<td>क्या आप सभी प्रकार के चालक और ट्राफिक का नियमों का पालन करते हैं?</td>
<td></td>
</tr>
</tbody>
</table>
6. Do you stop at traffic signals when it is red?
क्या आप ट्राफिक सिग्नल पर रूकते हैं, जब वहीं लाल लाइट होती है?

7. At what age you started driving?
आपने किस उम्र से ड्राइविंग प्रारंभ की?

8. Do you use cellular phone while driving?
क्या आप वाहन चलाते समय मोबाइल फोन का उपयोग करते हैं?

9. What you do with your mobile while driving?
वाहन चलाते समय फोन के साथ क्या करते हैं?

10. Do you use pedestrian facility for safety?
क्या आप सुरक्षा के लिए पदमार्ग का उपयोग करते हैं?
<table>
<thead>
<tr>
<th>Question</th>
<th>Chart Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Do you follow traffic signals?</td>
<td><img src="chart1.png" alt="Traffic Signals Pie Chart" /></td>
</tr>
<tr>
<td>Do you follow traffic signals?</td>
<td>[Always: 55%, Sometimes: 25%, Never: 20%]</td>
</tr>
<tr>
<td>12. Do you always drive with three people while riding a two-wheeler?</td>
<td><img src="chart2.png" alt="Three People Pie Chart" /></td>
</tr>
<tr>
<td>Do you always drive with three people while riding a two-wheeler?</td>
<td>[Always: 25%, Sometimes: 45%, Never: 30%]</td>
</tr>
<tr>
<td>13. Have you ever attended any specific road safety training?</td>
<td><img src="chart3.png" alt="Specific Training Pie Chart" /></td>
</tr>
<tr>
<td>Have you ever attended any specific road safety training?</td>
<td>[Always: 80%, Sometimes: 15%, Never: 5%]</td>
</tr>
<tr>
<td>14. Do you prefer to drive on the left side of the road every time?</td>
<td><img src="chart4.png" alt="Left Side Pie Chart" /></td>
</tr>
<tr>
<td>Do you prefer to drive on the left side of the road every time?</td>
<td>[Always: 40%, Sometimes: 45%, Never: 15%]</td>
</tr>
<tr>
<td>15. Do you check fuel before starting to ride or drive your vehicle?</td>
<td><img src="chart5.png" alt="Fuel Check Pie Chart" /></td>
</tr>
<tr>
<td>Do you check fuel before starting to ride or drive your vehicle?</td>
<td>[Always: 15%, Sometimes: 25%, Never: 60%]</td>
</tr>
</tbody>
</table>
16. Do you check side mirror reflection while driving?
क्या आप वाहन चलाते समय साइड ग्लास रिफलेक्शन की जाँच करते हैं?

17. Do you check handbrake before driving a car?
क्या आप वाहन चलाने से पहले हैंड ब्रेक की जाँच करते हैं?

18. Do you check side stand before riding a bike?
क्या आप दुपहिया वाहन चलाने से पूर्व साइड स्टैंड की जाँच करते हैं?

19. Do you use head light during riding or driving when light is not sufficient?
क्या आप वाहन चलाते समय हेडलाइट की जाँच करते हैं कि लाइट उपयुक्त है या नहीं?

20. How far in distance do you drive in a day?
एक दिन में कितनी दूरी पर वाहन चलाते हैं?
21. Do you carry driving license and other documents while driving?
क्या आप वाहन चलाते समय ड्राइविंग लाइसेंस और अन्य आवश्यक दस्तावेज साथ रखते हैं?

22. Do you maintain first aid box?
क्या आप वाहन में प्राथमिक सहायता पैक का रखरखाव करते हैं?

23. Have you helped any road accident victim?
पुलिस और डॉक्टर द्वारा अब पुरातात्विक न करने के सुझाव कोट्स के निर्णय के बाद क्या लोगों की सहायता पूर्वक वहाँ घायल व्यक्ति की सहायता करने की धारणा में बदलाव आया है?

![Graph for 21.]
- Always: 40%
- Sometimes: 35%
- Never: 25%

![Graph for 22.]
- Always: 10%
- Sometimes: 15%
- Never: 75%

![Graph for 23.]
- Yes: 65%
- Some Changes: 25%
- Lack of Awareness: 10%
Questionnaire - II

OUT COMES 1E : ENGINEERING OF VEHICLE

1. Do you know about the standards of vehicles being driven in India? क्या आप भारत में चल रहे वाहनों के मानकों से परिचित हैं?

2. Do you know about the safety devices provided in the vehicle you drive? क्या आप अपने वाहन के सुरक्षा उपकरणों के बारे में जानते हैं?

3. Does vehicle engineering play an important role in preventing road accidents? क्या वाहन इंजीनियरिंग सही सुरक्षित साइटों को ध्यान में रखने से महत्वपूर्ण है?

4. Do you feel that the crash data retrieval devices such as black box in the vehicle could be useful? क्या वाहन में डीक्रस बॉक्स जैसे क्राष्ट डेटा रिट्रीव का उपयोग उपयोगी सिद्ध होगा?

5. The vehicle should be delivered only after counselling about road safety by the vehicle dealers. कार्यों में से हमेशा एडवीजरी के साथ सुरक्षा का उपयोग करने के बाद ही कार पहुंचे जाए।

6. The registration of the vehicle must proceed only after it has passed the stipulated crash test. कैंस में चलने के बाद ही वाहन के पूर्व का आत्मा चाहिए।

7. At the time of registration or inspection of the vehicle the inspecting authority must ensure proper training and evaluation of the vehicle owner regarding the safe use of vehicle. वाहन के परीक्षण के दौरान विद्युतकों को सुरक्षित उपयोग की जानकारी दी जानी चाहिए।
9. The age of commercial and non-commercial vehicles must be decided, जिसे एक व्यावसायिक बाहरी की रिपोर्ट पर मिलाया जाना चाहिए।
86 responses

10. The old vehicles after certain years must be compulsorily converted into scrap under some scheme. एक समान्य प्रणाली के तहत के अनुसार पुराने वाहनों को बाकी में परिवर्तित कर दिया जाना चाहिए।
83 responses

11. The vehicle data must be maintained for registration after the vehicle type has been approved by the testing agency. देखा वाहन का मामला में अनुमानित प्रतिशत हेतु रिपोर्ट की जाना चाहिए।
84 responses

12. Manufacturing smart vehicle by implementing Intelligent Transport System is the need of the hour. आधे दी नैतिक अपाधियों साक्षर वाहनों का प्रयोग समय की भांति है।
83 responses

13. Added safety devices should be provided and to minimize the cost of vehicle rebate on excise duty, insurance premium and tax must be provided. देखा रस्सी तथा सौंदर्य संयोजन से पुच्छ वाला का वाहन की वैश्विक क्षेत्र के बड़े हैरान अद्व्युति सुधार उपलब्ध न होने जाने चाहिए।
86 responses

14. The vehicle must be manufactured having maximum speed not more than twenty percent to the set national speed limit on Indian roads. भारत में विशेष रूप से वाहनों के लिए स्थानीय गति सीमा से 20% तक नहीं अधिक गति प्रदान नहीं की जाना चाहिए।
84 responses

15. The stringent guidelines must be issued for vehicle manufacturing and approval. वाहन निर्माताओं पर अनुमानित हेतु स्थान दिया गया मिलाया जाना चाहिए।
86 responses

16. Through intelligent transport system, the vehicles should be manufactured in such a manner so as to control driving behavior (such as over speeding, drunken driving, mobile use etc.) of the driver. इंटेलिजेंट इंटरनेट इन्फ्रास्ट्रक्चर के इस्तेमाल से भारत के समाज में ऐसे मामले पर कार्य, प्रायोगिक तथा स्थानीय जीवन में सुधार करना, और नागरिक तथा स्थानीय जीवन भर सिद्धांतों का निर्माण करने वाले वाहन निर्माता प्रमुख चित्रों जाने चाहिए हैं।
86 responses

17. The mechanical inspection of accident vehicles should be done according to the international best practices. दुर्घटना के बाहरी की ध्वस्तप का आंशिक अंश अंतरराष्ट्रीय मानकों के अनुसार जाना चाहिए।
86 responses

18. The Automotive Industries Standards must be upgraded and publicized. मोटर वाहन उद्योग विभागों का अनुसार कर उछै प्रतियोगिता के बीच प्रतिकृत वाहन चाहिए।
86 responses
OUT COMES 2E: ENGINEERING OF ROAD

1. Road engineering faults constitute about only 1.5% of the total road accidents caused in India. भारत में केवल 1.5% सबक दुर्घटनाओं सबक इंजीनियरिंग से दूसरे में होते हैं?

2. Do you think that 33 lakh kms of road network is adequate to accommodate 20 crores registered vehicles in India? सम्मान 20 मिलियन रावणिक लक्ष्य है तो सबक 33 करोड़ किलोमीटर सबक योग्यता है?

3. The present roads, junctions and flyovers must be audited as per international standards to remove the engineering faults. भारतीय रास्तों, जोड़ें और फायवर्स की वाहनीय तंत्र अंतर्राष्ट्रीय मानकों के अनुसार हाल और शोध किया जाना आवश्यक है?

4. There is an urgent need of expansion of National Highways in India. राष्ट्रीय रास्तों के बढ़ोतरी के लिए आवश्यकता है?

5. Road users are aware about the general standards laid by the Indian Road Congress. रास्ते के लक्ष्य स्थानीय भारतीय रास्ते कार्यकाल द्वारा जाना गए सबक मानकों से परिपूर्ण है?

6. The general road users, road building authorities, enforcement agencies understand all the road signs, signals and markings and the underlying differences. सबक उपयोगकर्ताओं, सबक निर्माण एवं प्रशासन एवं लागु मानकों सबक चिह्न, निर्देश, उपचारी प्रकार या अंतर से जानते है?

7. As per the present scenario the standards laid by the Indian Road Congress needs enhancements. प्रस्तुत स्थिति में भारतीय रास्ते कार्यकाल के सबक मानकों के प्रभाव तत्त्वों में सबक की आवश्यकता है?

8. While investigating the road accidents the presence or absence of road infrastructure must also be recorded. सबक भूमिपत्रण की ताजा पता लगा सबक के चिह्नों से गोत्म हो तो अनुमानित भूमिपत्रण सबक की आवश्यकता है?

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9. New comprehensive plans and policies are required in order to remove the black spots identified by the police in all the states of India. सभी राज्यों में पुराने स्थान के चिह्नित किए गए दहीं स्थानों के सुधार लिए नीतियों एवं योजनाओं का लागू होना जरूरी है।

10. Guidelines must be formed for commercial activities carried alongside National Highways and State Highways. राष्ट्रीय एवं राज्य राजमार्गों के सामने स्थानीय निगमों/मालनिकों/अन्य संस्थाओं द्वारा अनुच्छेद 8.8 लागू होना जरूरी है।

11. Proper road light must be installed on all the populated areas adjoining the highways. भर्ती राजमार्गों के समीप अब्दुल्ला स्ट्रीट जैसे स्थलों पर यातायात के लिए उपयोगी आधुनिक रोडलाइट को इस्तेमाल करना जरूरी है।

12. For 4-6-8 laned National Highways the lane system must be established according to the category of vehicle and maximum speed limit. 4-6-8 लाइन राजमार्ग वाले राजमार्गों पर वाहन के प्रकार के अनुसार लेन सिस्टम निर्मित किया जाना चाहिए।

13. The National Highways must be cordoned with guardrails from either side. In addition, hoardings and other distracting things must be removed. राष्ट्रीय राजमार्ग के दोनों ओर मार्गदर्शन हेतु सत्रोत समेत दीर्घकाय झुकाए दीवार को निरस्त करना जरूरी है।

14. The Road Safety Audit at must be made compulsory for existing and newly constructed roads. पुरानी बातार बनी हुई वाहनों के लिए पुराने सुरक्षा अभियान का आयोजन निर्देशित किया जाना चाहिए।

15. In tune with the European countries, the construction and audit of the roads in India must be done by the Traffic Engineer instead of Civil Engineer. यूरोपीय देशों की तरह भारत में सड़कों का संरचना एवं अध्ययन इंजीनियर के बजाय ट्राफिक इंजीनियर द्वारा किया जाना चाहिए।

16. The enforcement of National and State Highways should be automated. राष्ट्रीय एवं राज्य राजमार्गों पर वाहनकार्य का व्यवस्थापन आयोजित किया जाना चाहिए।

17. On every road, separate lanes must be built for cycle and non motorized vehicles, हर सड़क पर दायीं एवं नामान्तर वाहन के लिए पूर्व कोर की व्यवस्थाओं का अनुसरण करना जरूरी है।

18. A dedicated Road Safety Engineering Cell should be made for improvement and monitoring of road construction agencies. सड़क सुरक्षा अभियान के लिए व्यवस्थाओं को सुधार साधने के लिए एक विशेष सड़क सुरक्षा एंजिनीयरिंग टीम में चर्चा करना जरूरी है।
19. There must be proper measures for speed control at junctions, residential and accident prone areas to control the speed of the vehicles. (67 responses)

20. Lay bays should be made at every 20 and every 10 kilometers on National Highways for commercial and passenger vehicles respectively. (56 responses)

21. There is a need to build zero accident corridors in every state as pilot project. (56 responses)

22. In 6-8 lanes National Highway, dedicated lanes must be provided for Public Transport vehicle. (56 responses)

23. For existing and newly constructed roads, a Star Rating Concept (1 to 5) in tune with the developed countries should be implemented in a phased manner. (56 responses)

OUTCOMES 3E: EDUCATION

1. In India more than 95% of road users are not aware about the road rules and regulations. (65 responses)

2. Road users in India must be educated at from primary to higher classes by adding road safety as a compulsory subject in academic curriculum. (75 responses)

3. Is lack of awareness and education is a major cause of increasing road accidents in India? (65 responses)

4. In tune with National Talent Hunt a National Competition Road Safety Quiz for Junior and Senior students must be organized every year at national level. (65 responses)

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5. The Road Safety curriculum must be introduced as Value Education for Primary to 12th Standard. Should the curriculum be standardised so that schools and teachers are clear about the content and importance of road safety? 75 respondents

6. Is a dedicated Traffic and Road Safety University to be established in every state? 80 respondents

7. Trained and certified Road Safety Teachers should be nominated in educational institutions. Should the training be standardized so that students are clear about what they will learn? 78 respondents

8. Traffic Park and Road Safety Centre should be established at all Municipalities and Gram Panchayat Levels. Should the training be standardized so that students are clear about what they will learn? 73 respondents

9. The Road Safety Activities and Campaigns must be organized regularly. Should such activities be standardized so that students are clear about what they will learn? 70 respondents

10. Road Safety Awareness must be highlighted through short films in Cinema Halls, Railway Stations, Airports and Government Office Premises. Should the training be standardized so that students are clear about what they will learn? 70 respondents

11. Do you agree that electronic media and print media sensitization programs must be organized from time to time for promoting road safety? Should such programs be standardized so that students are clear about what they will learn? 83 respondents

12. Driving Training Research Institute and Road Safety Skilled Driving ITI must be opened in every District Head Quarters and Tehsil level respectively under Prime Minister Skill Development Scheme. Should such training be standardized so that students are clear about what they will learn? 67 respondents

13. The general mass must be look for synonyms about Road Safety through Fairs, Cultural Activities, Music, Films and Competitions. Should such events be standardized so that students are clear about what they will learn? 87 respondents

14. Road Safety Training must be made compulsory for all state and central govt employees. Should such training be standardized so that students are clear about what they will learn? 87 respondents
OUT COMES 4E : ENACTMENT OF LAW AND ENFORCEMENT

15. For improved coordination among government departments concerned with road safety, an autonomous State and District Road Safety Authority must be formed. Sections of the Act should have specific provisions for effective implementation of the law. The Act must be enforced by the police.

16. Programs like Road Safety Capability Building, Road Safety Trainer, Investigation and Audit should be organized in Gram Panchayat and Ward Level in cities. Janta and Janta Panchayats should be involved in the formulation of the law.

17. A dedicated Road Safety Cell must be established in every department related to Road Safety having separate team for Awareness and Education programs. This cell will be responsible for creating awareness among the public about road safety.

18. Questions related to Road Safety should also be asked in Central/State Education Board, University and competitive exams conducted Service Commission. Question papers should also include road safety questions.

19. A candidate having certificate, diploma or degree in road safety must be honoured bonus marks in competitive exams. This will encourage more people to pursue road safety courses.

20. To set the road user standards minimum education or minimum training must be made compulsory. The government should also consider including road safety as a part of the curriculum in schools and colleges.

1. Present Motor Vehicle Act 1988 and related rules have no provision for non-motorized vehicles. The 1988 Act is not applicable to e-rickshaws or other non-motorized vehicles.

2. The Motor Vehicle Act 1988 has failed to control road accidents in India. For effectiveness and accountability, a new bill must be introduced or necessary amendments should be made in the present law. The act needs to be more stringent and stricter enforcement is required to enforce the law.
3. India will be able to achieve the target to reduce road accident deaths by 50% in 2020 according to United Nation's Decade of Action 2011-2020. संयुक्त राष्ट्र से विकास के लिए एक शेष कार्यक्रम के अनुसार, 2020 तक जानलैंग की मृत्यु में 50% कम हो जाएगा।

5. With the automated enforcement system through the use of ITS the enforcement could be made effective? अट्टालिका एनएचएफ का इस्तेमाल करके नियमन प्रणाली का प्रभाव बढ़ाने की क्षमता बना सकता है?

7. Revenue collection as a priority for Transport & Traffic Police adversely affects the actual enforcement. Therefore transparent and comprehensive enforcement system needs to be established. राजस्व बहुत आवश्यक है और इसके नियमन प्रणाली का सम्पूर्ण नियमन प्रणाली बनाने के लिए एक ही प्रतिकूल प्रणाली बना सकता है?

9. Is licensing system should be unified in the country? क्या पूरे देश में एक दक्ष लागू होगा या नियमन प्रणाली विभाजित करने की आवश्यकता है?

11. Provisions should be made to enhance institutional mechanism by introducing the advisory organizations for Road Safety. सड़क सुरक्षा के लिए सलाह देने वाला नियमन प्रणाली बनाने के लिए सलाह के लिए सलाहकार संगठन शुरू करने की आवश्यकता है?

4. Is the penalty imposed for traffic offences is sufficient according to the present scenario? कारणों विभाजित और नियमन प्रणाली के अनुसार, प्रतिकूल प्रणाली के लिए लागू करने की क्षमता बना सकते हैं?

6. The way the enforcement officers stops a vehicle during enforcement may pose a serious threat to the enforcement staff and the other vehicles around the vehicle? प्रतिकूल प्रणाली के अनुसार, प्रतिकूल प्रणाली के लिए लागू करने की क्षमता बना सकते हैं?

8. A point based system should be established to stop traffic offences. बातचीत अपराधों पर अनुसूचित लगाने हेतु अपराधों की प्रवृत्ति के अनुसार पॉइंट बेस्ट सिस्टीम बनाई जानी चाहिए?

10. Is there should be a Unified Registration System to store vehicle’s records and traffic offences? क्या एक सामन्त संरक्षण प्रणाली के द्वारा महत्व के प्रभाव के स्वतंत्र पॉइंट बेस्ट सिस्टीम बनाई जानी चाहिए?

12. Annual Targets must be decided for police stations, concerned departments and organizations by formulating an Action Plan in order to minimize the road accident casualties. राजस्व और संरक्षण संगठनों के लिए एक कार्यक्रम बनाने के लिए एक अभियंता पर स्थापित योजना बनाना चाहिए जो अनुसूचित और नियमन प्रणाली के लिए दोनों के हिस्से के उद्देश्य से उपयोग वाली प्रणाली बनाने के लिए कार्यक्रम बनाने की क्षमता बना।
13. Road Safety Awareness and Intensive Traffic Enforcement Campaigns must be executed simultaneously for effective and transparent enforcement. सड़क सुरक्षा और सड़क परिवहन के क्षेत्र में विनम्रता और सामान्यता के लिए एकत्रित पाठक एवं सड़क परिवहन के क्षेत्र में सामान्यता के लिए समान संबंध बना लेना चाहिए।

43 responses

14. In addition to enhancing the penalty provision of service community must also be added for traffic offences. नुसरत ताबाही के लिए सेवा समुदाय को भी लागू किया जाना चाहिए।

51 responses

15. The enforcement of safety devices must be done by technically qualified personnel. सुरक्षा उपकरणों का प्रयोग स्थापित सुरक्षा उपकरणों की अनुशंसा के ही परमाणु चाहिए।

51 responses

16. The Big Vehicle Syndrome (fault of big vehicle) has to be eradicated by introducing scientific accident investigation. बड़े वाहनों की गलती को दूर करने के लिए वैज्ञानिक वातावरण की गलती दूर करना होगा।

51 responses

17. Due to lack of technically skilled professionals the scientific investigation and reconstruction of road accidents does not take place. सड़क खत्मी करने को लेकर वैज्ञानिक अध्ययन एवं वातावरण का एकत्रण नहीं हो रहा है।

51 responses

18. The Crime and Traffic Offence according to their nature should be treated by two separate cells. सामाजिक एवं वातावरण अपराधों के अनुसार दो अलग-अलग अयोग्यताओं को दो अलग-अलग संस्थाओं में सामाजिक एवं वातावरण अपराधों के अनुसार दो अलग-अलग संस्थाओं में दूर किया जाना चाहिए।

51 responses

19. Like Crime Police Stations there should be separate Traffic Police Stations that could even work for accident investigation. अपराधी अपराधी अपराधों के अनुसार दो अलग-अलग अयोग्यताओं के अनुसार दो अलग-अलग संस्थाओं में दूर किया जाना चाहिए।

51 responses

20. Like America, the surveillance for crime and traffic offences should be done with separate cameras. अमेरिका के तरीके अपराधी अपराधी अपराधों के अनुसार दो अलग-अलग संस्थाओं में दूर किया जाना चाहिए।

51 responses

OUT COMES 5E : EMERGENCY CARE

1. Road accident is the second major cause in India for untimely death of youth between 15 to 29 years. भारत में 15 से 29 वर्ष के लोगों की मृत्यु का आधा हिस्सा सड़क हादसों से होता है।

51 responses

2. A Central Trauma Care Policy must be introduced in all the states and trauma care systems should be implemented from level 1 to level 4. सदियों तक के सेवक त्रायाम वायोलेंटिया अपराध की गलती दूर की जाती है तथा सेवक 1 से सेवक 4 तक दूर करने वाला त्रायाम वायोलेंटिया अपराध की गलती दूर की जाती है।

51 responses
3. The hospitals should be developed as a model where the treatment should be initiated based on the trauma level of the victim. अग्रणी इंजीनियरिंग के अनुसार, अनुरोधात्मक मात्र में ट्रायमा के लिए उपचार के लिए केंद्रीय निदेशात्मक कार्य का प्रयोग किया जाना चाहिए।

4. The present trauma care system is not adequate for handling road accident injury cases. सर्वजनिक डॉक्टर व रघु व्यवस्था इसमें ठीक से नहीं चल रही है।

5. Are the road accident victims getting treatment within one hour of road accident? क्या सड़क दुर्रोगी में हादसे से उपचार को एक घटे के भीतर उपचार उपलब्ध हो रहा है?

6. There must be proper trauma care facility at every 25 kilometers on highways. राजमार्ग पर हर 25 किलोमीटर पर डॉक्टर कार्यालय होना चाहिए।

7. In accident prone areas, ambulances and other crash prevention facilities should be available. घायली क्षेत्रों में, एम्बुलेंस एवं अन्य सुरक्षा सुविधाएं उपलब्ध होनी चाहिए।

8. The medical staff should be specially trained for treating road accident victims. दूर दर्द शोधन के समय डॉक्टर को उपचार के लिए विशेष तैयार होना होगा।

9. The claim amount for Hit and Run cases covered under Section 161 of the Motor Vehicle Act 1988 must be revised. 1988 के अनुसार, हिट एंड रन मामलों में मांग की आमिरण करना चाहिए।

10. The commercial drivers should also be given training for First Aid and basic life support. व्यवसायिक ड्राइवर्स को भी पहली राहत एवं आवश्यक ज्ञान का समावेश किया जाना चाहिए।

11. The people are not able to help accident victims due to lack of awareness and knowledge. The population around highways must be trained for first aid and basic life support. जनसंख्या के अभाव में अभ्यास के कारण लोग भी अपनी आत्म-प्रतिकूलता का निष्ठागत दृष्टि में सहायता नहीं कर सकते।

12. The trained people in trauma care should be added to a list and must be traceable through a GPS based mobile app. ट्रायमा कार्य का प्रशिक्षित व्यक्ति को लिस्ट में जोड़ा जाना चाहिए तथा उसे ग्राहकों के लिए स्पार्क से मार दिया जा सके।
13. Do you agree that 88% people do not help accident victims due to the fear of harassment by the police? If yes, what is the main reason behind this fear?

14. The Hon'ble Supreme Court of India gave a verdict in case of Save Life Foundation v/s Union of India on 30 March 2016 that the accident victim must be attended immediately and the person helping the accident victim must not be harassed by any agency. Do you believe this decision is helpful for saving victim's life?

15. The Supreme Court recommended and MORTH has issued directions for Department of Health and Public Welfare that hospitals would not demand any kind of payments from the person helping the victim. According to the verdict in Pt. Parmanand Katara v/s Union of India and Others (1989) 4 ACC 286, the victim must be given immediate treatment. 

16. The govt. drivers and conductors must be given training on Road Safety and First Aid. Rajkumar Sengupta, a famous and popular actor of the 1980s, 90s, and 2000s, was killed in a road accident in 1991. 

17. There should be a uniform central emergency toll free number across the country like 911 in USA. 

18. Level 3 and Level 4 trauma care centres should be established in villages near the highways. 

19. The person helping the accident victim must be rewarded by the police, Transport Department and Health Department and it should be maintained in records. 

20. Introducing a nationwide cashless scheme for the road accident victims will be helpful in reducing down the fatality rate in India. 

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OUT COMES 6E : ENVIRONMENT

1. Drivers honk unnecessarily and spread noise pollution. यहाँ दाकक वैवाह होने वाली राहत प्रदान फैलता है।
   - Agree - 94.1%
   - Disagree - 5%
   - 50 responses

2. Do we need to develop a clean, safe and healthy driving culture in India. मगर हमें भारत में रुचाई, सुरक्षा और स्वस्थ रूढ़िवाद संस्कृति बिकलित करने की आवश्यकता है?
   - Agree - 100%
   - Disagree - 0%
   - 50 responses

3. In India the road user’s behaviour is influenced by factors like enforcement? सड़क उपयोगकर्ताओं का व्यवहार पर्यावरण जैसे कारणों से ही प्रभावित होता है?
   - Agree - 98.7%
   - Disagree - 1.3%
   - 50 responses

4. The age of every vehicle must be confined to 15 years. After the stipulated time such vehicle should be used for other purposes according to the set policies. तहत उसका उपयोग किया जाना दिया जाएगा?
   - Agree - 100%
   - Disagree - 0%
   - 50 responses

5. To promote public transport in India the fare should be subsidized by 50% for local mass. सड़क पर्यावरण को बढ़ावा देने हेतु किया गया 50% की लाइटल ही जानी माफी।
   - Agree - 107%
   - Disagree - 0%
   - 50 responses

6. By the end of the year 2020 we must out-drive the Euro Norms at par with the European countries. यह 2020 के अंत तक हमें यूरोपीय देशों के साथ मात्र बुखार से आते लिमिट जाना जाएगा।
   - Agree - 100%
   - Disagree - 0%
   - 50 responses

7. The private and non-commercial vehicles must also be entitled for fitness like commercial vehicles. वैदेशिक और राजाल वाहनों को भी वैदेशिक वाहनों की तरह फिटनेस के लिए नियम किया जाना चाहिए?
   - Agree - 56%
   - Disagree - 44%
   - 50 responses

8. The pollution test for vehicles older than one year should be done in every three months. एक साल से अधिक पुराने वाहनों के लिए प्रदूषण परीक्षा हर तीन महीनों में किया जाएगा?
   - Agree - 87%
   - Disagree - 13%
   - 50 responses

9. Transit of goods should be done in closed containers to prevent pollution by implementing a uniform policy to prevent the environment. परिवहन संरचना एवं दुकानों की स्रोत कानून में सड़क परिवहन तरीक़े के अन्तर्गत बदलने में ही सारा परिवहन किया जाना चाहिए?
   - Agree - 100%
   - Disagree - 0%
   - 50 responses

10. Awareness about vehicular pollution must also be taught in schools in addition to air and noise pollution. यहाँ होने वाला प्रदूषण, कारों तथा पर्यावरण पर्यावरण के बाद में अन्याय का हेतु हमें कब्जे में इंटरेस्ट करने का सपना जाना चाहिए?
    - Agree - 87%
    - Disagree - 13%
    - 50 responses

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11. The road environment is polluted due to several reasons including the motorized, non motorized vehicles and stray animals on the road. The concerned agencies must look into the matter to avoid such abrupt conditions. पर्यावरण कारणों जैसे वाहन, निवासी वाहन और अनान्य प्रमाणों के कारण पर्यावरण होता है। संबंधित निगमों का ऐसी आवश्यकता है कि वे स्थिति के लिए साफ़ करना चाहिए।

12. The public representatives must raise voice to save the environment? जनसभा सदस्यों को भी बातचीत के लिए आवाज़ उठानी चाहिए?

13. The issue of road safety must be added compulsorily in the election manifesto. सड़क सुरक्षा के मुद्दे को चुनावी प्रणाली में अनिवार्य रूप से जोड़ा जाना चाहिए।

14. There are issues being reported in Pollution Test Centres. Computerized centres linked to a central server should be launched for enhanced transparency. प्रदूषण प्रदर्शन केंद्रों में कई समस्याएं हो रही हैं। उन्हें साफ़ करने के लिए कंप्यूटरिकल केंद्रों का उपयोग करके मध्यस्थ करना चाहिए।

15. The general public should be sensitized about threats of pollution. आम लोगों को प्रदूषण के खतरों के बारे में अवधारणा बनाना चाहिए।

16. Do you agree that in order to overcome the issue of pollution, the decisions taken by NGT are justifiable and are for the good health of the nation? क्या आप सहमत हैं कि प्रदूषण के मुद्दे पर न्यायिक आयोग द्वारा लिए गए निर्णय योग्य हैं और देश के लायक हैं?

17. An autonomous Vehicle Pollution Act is the need of the hour. प्रभावी वाहन प्रदूषण अधिनियम के समय की मांग है।
7.2 SUGGESTIONS

After going through all the aspects of the research of my topic and further the empirical data and all other related issues led me towards following suggestions which of considered under the different aspects as mentioned below can be help in Road Safety.

7.2.1 Institutional aspects   7.2.2 Technical aspects
7.2.3 Legal aspects   7.2.4 Civic aspects
7.2.5 Other aspects

7.2.1 Institutional aspects

7.2.1.1 Creation of Separate Dedicated Road Safety Fund

Budget is the first necessity to implement any concept. Road safety is a large-scale concept for India to insure safety for human beings. Every development depends on budget. Road safety is a curriculum there the problem of development is separate fund. The center government is not creating any kind of separate dedicated road safety fund to improve road safety programmes like. Road safety education and awareness, road safety awareness camps mobile launched, mobile van, Mass programmes at grass root. The separate fund must be created for Metropolitan authority and it must be unified.

7.2.1.2 Creation of Effective Lead Agency as National/State/District Road Safety and Traffic Management Board/Authority

There must be effective lead agencies in three layer's not only advice but to carry out from top to grass route. There is no national board for road safety and traffic management to ensure and advice center, state and district. Since 2007 the recommendations of national board as suggested by S. Sundar Committee has not been constituted yet. It was again directed by Hon'ble Supreme Court Committee on Road Safety still pending. This is only lack of political will. There are various political parties in India and they are in politics to get government only none of this never been assigned road safety as welfare in their election manifesto.
### Setting up Institutional Mechanism for Road Safety at Center / State / Division / District / Sub-divisional / Gram Panchayat Level to Root Level

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Headed By / Chairman</th>
<th>Member</th>
<th>Minimum meetings in a Year</th>
<th>Terms of Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Union Cabinet Sub-Committee on Road Safety</td>
<td>Prime Minister</td>
<td>Minister of Home affairs, HRD, MoRTH, Health, Local Self Govt. Department (Rural &amp; Urban), Niti Ayog (Transport Wing)</td>
<td>1</td>
<td>To review and monitor all road safety activities</td>
</tr>
<tr>
<td>2.</td>
<td>Union Traffic &amp; Road Safety Management Committee</td>
<td>Cabinet Secretary</td>
<td>Senior officer of stake holders departments and finance department</td>
<td>2</td>
<td>Take decision and implement on road safety and traffic management issues</td>
</tr>
<tr>
<td>3.</td>
<td>State Cabinet Sub-Committee on Road Safety</td>
<td>Home Minister</td>
<td>Minister for PWD, Transport, DoIT, Home, Health, Local Self Govt. Department (Rural &amp; Urban)</td>
<td>2</td>
<td>To review and monitor all road safety activities</td>
</tr>
<tr>
<td>4.</td>
<td>State Level Traffic &amp; Road Safety Management Committee</td>
<td>Chief Secretary</td>
<td>Senior officer of stake holders departments and finance department</td>
<td>2</td>
<td>Take decision and implement on road safety and traffic management issues.</td>
</tr>
<tr>
<td>5.</td>
<td>Divisional Level Road Safety Committee</td>
<td>Divisional Commissioner</td>
<td>All Collector and all Stakeholders</td>
<td>4</td>
<td>To review and maintain all road safety activities in this jurisdiction district</td>
</tr>
<tr>
<td>6.</td>
<td>Sub Divisional Level Road Safety Committees</td>
<td>Sub Divisional Magistrate</td>
<td>SDO and all SDLOs of stake holder departments and institutions</td>
<td>12</td>
<td>Take decision and implement police station wise in a cluster.</td>
</tr>
<tr>
<td>7.</td>
<td>Gram Panchayat/Municipal Ward level Road Safety Committee</td>
<td>Sarpanch/Ward Members</td>
<td>Members from Stakeholder Departments &amp; Volunteers / institutions</td>
<td>12</td>
<td>Take decision and implement Gram Panchayat/ Ward level</td>
</tr>
</tbody>
</table>

Note: The details of the agenda, minutes of the meeting, action taken report, etc. may be uploaded on the respective website within one month from the date of the meeting.
b) Constitution a Separate Fully Empowered Lead Agency for Road Safety at Center, State and District Level

To establish one stake holder department, preferably Transport Department, as the Lead Agency Department on road safety at the Center / State/District/Block level with resources and authority to implement measures. Well experienced personnel in the subject of their field and professional may be appointed /recruited / engaged within the Department in the Lead Agency. Constitution of a separate fully Empowered Lead Agency with a specific defined role which is adequately, dedicated and professional staff to be appointed at the Center, State, District & Block level as per the chart given below: -

Center Level

Central Board / Authority of Road Safety & Traffic Management would act as a regulatory agency to advise on road safety activities in the country to improve road safety scenario in line with the National Road Safety Policy. The Policy will provide a broad framework for the Government both at the Central and the State level, to take measures for improvement of road safety scenario in the country.

Levels of the members of the Central Board / Authority National Road Safety and Traffic Management:

- Patron – Secretary, Ministry for Road Transport and Highways / Minister for Road Transport and Highways.

- Chairman – Level of Additional Secretary of Central Government.

- Member – Level of Joint Secretary of Central Government.

- Director (Road Safety) – Additional Transport Commissioner Level / Director / Deputy Secretary Level of Central Government.
Recruitment of Chairman, Members and Director of the Central Board / Authority of Road Safety and Traffic Management

- Board / Authority of Road Safety and Traffic Management Authority called as the Lead Agency for Road Safety of Central shall be formed under the Ministry of Road Transport and Highways which will be the Nodal Ministry for Road Safety in Central.

- Board / Authority of Road Safety and Traffic Management can be a fully empowered technically sound body having dedicated fund with PD account may be formed through a bill/act by parliament.

- Budgetary provisions should also be done for meeting all expenses including meetings of the Board / Authority and directorate of the lead agency.

- A person having the appropriate experience and expertise in any 2E’s out of 6E’s may be considered for Chairman through Selection Committee headed by Cabinet Secretary. The members of the Selection Committee may be Secretary Ministry of Road Transport and Highway, Home affairs, HRD, Health, Niti Aayog, Personal Ministry and Secretary (Ministry of Road Transport and Highways) will be the Member Secretary of the Board / Authority.
A person having appropriate experience and expertise in any one E’s out of 6E’s may be considered for selection as member through the Selection Committee headed by Secretary, Ministry for Road Transport and Highways and The members of the Selection Committee may be Joint Secretary, Home affairs, HRD, Health, Personal Ministry, Advisor (Transport) Niti Aayog, Joint Secretary (Ministry of Road Transport and Highways) will be the Member Secretary of the Board / Authority.

There shall be at least three and maximum six members at any time in the Board / Authority except Chairman. The minimum tenure of the members will be for five years and could be selected only for one next tenure.

For Member (Admin & Finance) the candidate could be selected having Masters in Business Administration/Finance/Economics/Law or should have at least appropriate experience in Central / State Government Ministry / Department such like Finance or Personnel.

Including the Chairman and at least fifty percent Members compulsorily should be taken from the Government Officers (in service or retired) in stake holder department like Home, Transport, CPWD / PWD and Medical & Health etc. having appropriate experience and qualified in any of one ‘E’ out of respective E’s. The maximum age could be 65 years.

The Member once selected in the Board / Authority cannot move back to Ministry / Department.

The Chairman and the Members shall be persons of ability, integrity and standing and with special knowledge or professional experience which in the opinion of the Central Government will be useful for the Board / Authority to render its functions and fulfill its objectives.
• To assist all the Members a technically qualified Personal Secretary at minimum level of Under Secretary of Central Government would be appointed having qualification of relevant area.

• All Directors of Board / Authority will be head of the particular subject having minimum 20 years professional experience of relevant subject from different Stake Holder's Department of the States / Union Territory by special selection / incentives schemes.

**Terms of Reference for Central Board / Authority of Road Safety and Traffic Management**

1. It shall be the Lead Agency of the Central Government for Road Safety and shall work as the Advisory Body for Central and State Government.

2. It shall work as the secretariat for National Road Safety Council (advisory body), Cabinet Sub-committee on Road Safety, any other Committee on Road Safety and Traffic Management.

3. It will ensure time bound compliance of the directions/order issued by Hon'ble Supreme/High Court, and Hon'ble Supreme Court Committee on Road Safety.

4. It will coordinate and visit all stake holder Ministry of the Union Government and State Government and concerning agencies.

5. It will ensure compliance of provisions of National Road Safety Policy through formulation and implementation of target oriented Action Plan.

6. It will ensure holding of the regular meeting of National / State / District Road Safety Council, Cabinet Sub-committee.

7. To ensure and advice road safety standards like BIS, AIS – Vehicle Standards, IRC – Road Standards and Road User Standards.
8. Planning and strengthening public transport in rural, highways and cities as per requirement in India.

9. To ensure and advice Intelligent Transport System gradually in road, traffic and all transport systems.

10. Ensure road engineering measures in a phased manner – road safety audit, traffic calming, black spot identification and rectification through protocol and calendar-wise, monitoring and accident data collection, analysis, research and crash investigation, and reconstruction.

11. Ensure comprehensive, effective, transparent and strict enforcement in rural, highways and cities. Advice ITS based enforcement in phased manner.

12. Ensure enforcement campaign for general ITS enforcement and technical manual enforcement for technical safety devices.

13. Up-gradation and ensuring of trauma care and protection of Good Samaritan/bystander.

14. Ensure conduction of IEC activities, workshops and seminars on road safety. Distribute awards on road safety for more and more participation of the community.

15. Open Transport Planning Research & Development Center and State.

16. Planning of requirement of public transport according to the traffic volume and general population.

17. Ensure and advice to establish Driving Training Institute at level of tier 1,2 and 3 on population of 10 lakh.

18. Any other matter related to road safety laws, standards, rules and regulations regarding to Central and State Government.
State Road Safety Authority or State Road Safety & Traffic Management Board:

- **Patron**
- **Chairman**
  - Member (Education & Enforcement)
  - Member (Admin & Finance)
  - Member (Vehicle Eng. & ITS)
  - Road Safety Commissioner
  - Member (Emergency Care)
  - Member (Road/Traffic Engineering)
- **Director (Road Safety)**
  - Jt. Director (Road Safety Law & Enforcement)
  - Jt. Director (Admin & Finance)
  - Jt. Director (Vehicle Eng. & ITS)
  - Jt. Director (Emergency Care)
- **Dy. Director (Road Safety)**
  - Dy. Director (Data Collection & Investigation)
  - Dy. Director (Admin)
  - Dy. Director (Vehicle Eng. & ITS)
  - Dy. Director (Emergency Care)
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Recruitment of Chairman, Members of the State Road Safety Authority and Officers of the Directorate Under the Authority

- Authority called as the Lead Agency for Road Safety of a state shall be formed under the Transport Department which is the nodal department for road safety in the state.

- State Road Safety Authority can be a fully empowered technically sound body having dedicated fund with PD account may be formed through a bill/act by state legislative assembly.

- To create a dedicated road safety fund. 50 percent of the compounding fee collected under section 200 of MV Act by enforcing agencies (police and transport). The amount to be deposited in the PD account.

- Budgetary provisions should also be done for meeting all expenses including meetings of the authority and directorate of the lead agency.

- A person having the appropriate experience and expertise in any 2E’s out of 6E’s may be considered for Chairman through Selection Committee headed by Chief Secretary. The members of the Selection Committee may be Principal Secretary of Department of Home, Transport, PWD, Medical & Health, Personnel, Finance. Principal Secretary (Transport) will be the Member Secretary of the authority.

- A person having appropriate experience and expertise in any one E's out of 6E’s may be considered for selection as member through the Selection Committee headed by Chief Secretary. The members of the Selection Committee may be Principal Secretary of Department of Home, Transport, PWD, Medical & Health, Personnel, Finance.

- There shall be at least three and maximum five members at any time in the authority except chairman. The minimum tenure of the members will be for five years and could be selected only for one next tenure.

- For Member (Admin & Finance) the candidate could be selected having Masters in Business Administration/Finance/Economics/Law or should
have at least appropriate experience in Government department such like Finance or Personnel.

- Including the Chairman and at least fifty percent Members compulsorily should be taken from the Government Officers (in service or retired) in stake holder department like Home, Transport, PWD and Medical & Health etc. having appropriate experience and qualified in 1E. The maximum age could be 65 years.

- The Member once selected in the Authority cannot move back to department.

- The Chairman and the Members shall be persons of ability, integrity and standing and with special knowledge or professional experience which in the opinion of the State Government will be useful for the Authority to render its functions and fulfil its objectives.

- To assist all the Members a technically qualified Personal Secretary at minimum level of Assistant Secretary of State Government would be appointed having qualification of relevant area.

- Transport Commissioner would work as Road Safety Commissioner and as Member Secretary/an ex-officio member of State Road Safety Authority.

- Director Road Safety will be head of the directorate of the authority under the Road Safety Commissioner.

- The Director must have appropriate experience (testing, inspection and enforcement) in Transport Department and minimum qualification specified in sec 213(4) through gazette notification of central government and having expertise in 1E out of Vehicle Engineering/Law and Enforcement.

- The Jt. Director must have appropriate experience as prescribed by States in relevant departments and minimum qualification specified by norms of the stake holders’ departments. Like Engineering Degree in PWD and MBBS in Medical & Health Department.
• The selection of Director and Jt. Director by the selection committee headed by the Chief Secretary.

• The Dy. Director must have appropriate experience as prescribed by States in stake holders department and minimum qualification specified by norms of the stake holders departments and having expertise in 1E out of 6E's.

• The selection of Dy. Director will be done through a selection committee headed by the Principal Secretary Transport, PWD, Medical & Health and Personnel Department and Road Safety Commissioner as a Member Secretary.

• All directorate the posts of the Directorate may be selected through Special Selection Rule/Direct Recruitment under the department/on deputation or contract basis whichever is convenient by the state government.

• Under each Joint Director a dedicated Expert/Technical Consultant having expertise in the relevant field will be appointed. Additional staff could also be appointed according to the requirement.

• To assist the functioning separate IT, statistical and clerical and MTS work professional could be appointed according to the requirement.

• A consultancy agency for road safety audit, crash investigation, ITS and other initiatives or expert team could be hired as required.

**Terms of Reference for State Road Safety Authority**

1. It shall be the Lead Agency of the State for Road Safety and shall work as the Executive Body.

2. It shall work as the secretariat for State Road Safety Council (advisory body), Cabinet Sub-committee on Road Safety, any other Committee on Road Safety and Traffic Management headed by Chief Secretary.

3. It will ensure time bound compliance of the directions/order issued by Hon'ble Supreme/High Court, and Hon'ble Supreme Court Committee on Road Safety.

4. It will coordinate with all stake holder departments and concerning agencies and stake holder departments on road safety and their nodal officers.
5. It will ensure compliance of provisions of State Road Safety Policy through formulation and implementation of target oriented Action Plan.

6. It will prepare proposal for budget allocation and judicious expenditures of road safety measures.

7. It will ensure holding of the regular meeting of State Road Safety Council, Cabinet Sub-committee and any other state level committee headed by Chief Secretary.

8. To ensure road safety standards like BIS, AIS – Vehicle Standards, IRC – Road Standards and Road User Standards.

9. Planning and strengthening public transport in rural, highways and cities as per requirement.

10. Introduce Intelligent Transport System gradually in road, traffic and all transport systems.

11. Ensure road engineering measures in a phased manner – road safety audit, traffic calming, black spot identification and rectification through protocol and calendar-wise, accident data collection, analysis, research and crash investigation, and reconstruction.

12. Ensure comprehensive, effective, transparent and strict enforcement in rural, highways and cities. Start ITS based enforcement in phased manner.

13. Ensure enforcement campaign for general ITS enforcement and technical manual enforcement for technical devices.

14. Up-gradation of trauma care and protection of Good Samaritan/ bystander.

15. Ensure conduction of IEC activities, workshops and seminars on road safety. Distribute awards on road safety for more and more participation of the community.

16. Ensure compliance, execution, control and monitoring of all directions by the District Road Safety Authority.

17. Open Transport Planning Research & Development Centres in state.

18. Planning of requirement of public transport according to the traffic volume and general population.

19. Develop Driving Training Institute at level of tier 1,2 and 3 according to the driver population.

21. To ensure introduction of road safety in school and higher education curriculum.

22. Continuous publicity through electronic and print media with media sensitization programs.

23. Conduct district and state level mass level competitions and road safety carnivals.

24. To ensure grant of compensation to the road accident victims with hit and run case from the insurance companies.

25. Ensure counselling on road safety and safe vehicle use for new vehicle purchase, applicants of new driving license.

26. any committee at sub divisional level and compliance of decision taken

2. District Road Safety Authority:

Composition of District Road Safety Authority
Levels of the members of the State Road Safety Authority:

a. Patron – District Collector.


c. Member (called as ADRSA) – Additional Regional Transport Officer/Asst. Transport Commissioner/Asst. Director (Licensing Authority, Registering Authority, Enforcement Authority, Road Safety Awareness). Other members from the stake holder departments (Police – DSP (Traffic) Level, PWD – Exe. Level, Medical & Health – Sr. Medical Officer, Local Self Government Rural – ACEO Level/Urb – Assistant Director Level.

d. Minimum Two Road Safety Expert.

e. The Dy. Director/RTO/Dy. TC as a Chairman District Road Safety Authority must have must have appropriate experience as prescribed by States (testing, inspection and enforcement) in Transport Department and minimum qualification specified in sec 213(4) through gazette notification of central government and having expertise in 1E out of Vehicle Engineering/Law and Enforcement.

f. The Asst. Director must have must have appropriate experience as prescribed by States (testing, inspection and enforcement) in Transport Department and minimum qualification specified in sec 213(4) through gazette notification of central government and having expertise in 1E out of Vehicle Engineering/Law and Enforcement.

g. The Assistant District Road Safety Authority at Sub Divisional Level shall be at level of minimum Motor Vehicle Inspector.

3. Additional/Assistant District Road Safety Authority

Levels of the members of the Additional/Assistant Road Safety Authority:

i. Patron – Sub Divisional Magistrate

ii. Additional District Road Safety Authority – Additional Regional Transport Officer at Transport District Head Quarter within the Administrative District.
iii. Assistant District Road Safety Authority – Assistant Regional Transport Officer/Motor Vehicle Inspector at Sub Divisional Transport Office within the Transport/Administrative District.

iv. Member – Representative of All stake holder departments (Police, PWD, Medical & Health, Local Self Government Rural/ Urban).

v. Minimum one road safety expert.

4. Other Necessary Requirement for institution management:

i. The Road Safety Cell is to be formed under the Transport Commissioner cum Road Safety Commissioner.

ii. Separate Road Safety Cell also to be formed at each stake holder department in the state and the district/ block level.

iii. Develop an Action Plan for Road Safety with specific performance targets and identified resources.

5. To Create Dedicated Road Safety Fund

i. Setting up and allocation of road safety fund. 50% of the compounding fee (Part of fines) collected from traffic offences by enforcement agency (police & transport department) to go Road safety fund for lead agency at state/district/block level. This fund should be separately and dedicated with PD account of lead agency.

ii. It is will also make adequate provisions in the budget for meeting expenses and other work on road safety

iii. This fund will be created anyhow end of the year 2018-19.

6. Setting up Agency to Conduct Scientific Accident Investigation and Research

i. Set up road accident scientific crash investigation unit cum traffic police station up to year 2023 yearwise as below (minimum of ¼ of crime police station of state)
### S. No | Year | Target | Remark
--- | --- | --- | ---
1 | 2019-20 | 5% of total crime police station of state | Scientific crash investigation unit cum traffic police station at minimum of ¼ of total crime police station of state
2 | 2020-21 | 6% of total crime police station of state
3 | 2021-22 | 7% of total crime police station of state
4 | 2022-23 | 9% of total crime police station of state

### ii. Setting up Accident Recording & Reporting System:

The system of automated GIS based accident recording & reporting should be strengthened police station wise which will be recorded the actual data in the prescribed Data provided by MoRTH. If the Accident Investigation Unit is established, then it will work the work of analysing the data relating to recording/reporting alongwith the investigation.

**Third party audit of driving schools by CIRT, IDTR, RITES, IITs etc.**

It should be ensured that third party audit of all existing motor driving schools of state will be conducted within the time frame.

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<tr>
<th>S. No</th>
<th>Year</th>
<th>Target</th>
<th>Remark</th>
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<tbody>
<tr>
<td>1</td>
<td>2019-20</td>
<td>10% of total motor driving schools of state</td>
<td>1. Audit start by competent agency in financial year 2019 -20.</td>
</tr>
</tbody>
</table>
| 2 | 2020-21 | 30% of total motor driving schools of state
| 3 | 2021-22 | 30% of total motor driving schools of state | 2. Finished the work of online all motor driving schools in this year 2022-23
| 4 | 2022-23 | New and remaining total motor driving schools of state |
Online Motor Driving schools:

After third party audited to connect all motor driving schools through online Transport Department/Lead agency within given time period:

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<th>S. No</th>
<th>Year</th>
<th>Target</th>
<th>Remark</th>
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<tbody>
<tr>
<td>1</td>
<td>2019-20</td>
<td>30% motor driving schools of state</td>
<td>1. All Motor driving schools online Start by competent agency in finance</td>
</tr>
<tr>
<td>2</td>
<td>2020-21</td>
<td>30% motor driving schools of state</td>
<td>2. Finished the conducting of audit of all motor driving schools in this year</td>
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<tr>
<td>3</td>
<td>2021-22</td>
<td>40% motor driving schools of state</td>
<td></td>
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<tr>
<td>4</td>
<td>2022-23</td>
<td>New and remaining total motor driving schools of state</td>
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Establish Driving training institute tier-1, tier-2 & tier-3

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<tr>
<th>S. No</th>
<th>Year</th>
<th>Target</th>
<th>Remark</th>
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<tbody>
<tr>
<td>1</td>
<td>2018-19</td>
<td>Number of institute establish on basis of 10% HMV drivers of state</td>
<td>1. To Establish Driving Training Research Institute (IDTR) each state level.</td>
</tr>
<tr>
<td>2</td>
<td>2019-20</td>
<td>Number of institute establish on basis of 30% HMV drivers of state</td>
<td>2. To Establish Regional Driving Training Centre (RDTC) at Regional Head Quarter all over nation.</td>
</tr>
<tr>
<td>3</td>
<td>2020-21</td>
<td>Number of institute establish on basis of 30% HMV drivers of state</td>
<td>3. To Establish Driving Training (DDTC) at all 683 districts.</td>
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<tr>
<td>4</td>
<td>2021-22</td>
<td>Number of institute establish on basis of 30% HMV drivers of state</td>
<td>4. To Establish and Promote Local Driving Training Institutes Including Private Institutes The Government should provide a particular place to increase betterment of driving skills.</td>
</tr>
<tr>
<td>5</td>
<td>2022-23</td>
<td>Number of institute establish on basis of new and remaining HMV drivers of state</td>
<td></td>
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7.2.1.3 Strengthening Subsidiary Public Transport System in Urban, Rural Areas and Highway

The insufficient management of public transport system on Indian road causes an enormous imbalance in the day to-day lives of humanity as a whole. This leaves to influx of private vehicle, consumption of extra fuel excessive environment pollution, traffic jams, road accident etc. Till date of the implementation of motor vehicle act the government was issuing permits to vehicles but services turned into an industrial venture. The need of hour is strengthening of the public transport system by making it more attractive, convent, safe and acceptable to the commuters.

7.2.1.4 Integrated Public Transport System in Each Mega City

Transportation assumes great significance in urban areas with the growing problems of congestion and pollution in the Mega City of India. There is an urgent need to improve public transport so that users of personal vehicle can be motivated to use public transport. This would not only health in reducing the number of vehicle on the roads but would also help mitigate the rapidly growing means of vehicular emission. Currently the government fixes the fares. There is neither an agreed formula for the automatic enhancement of fares with increases in the price of critically inputs like diesel nor a periodic reassessment of the need for any increases in fares.

7.2.1.5 National Permit System for Passenger Vehicles

Any vehicle which is to be used for carrying goods on passengers for Commercial purpose essentially requires the permission (permit) of State Govt. under the provisions of M.V. Act, 1988 and rules framed there under. Permits are issued by State Transport authorities to control and to regulate operation of commercial vehicles.

- Auto Rickshaw and Taxi permits
- Maxicab
- Contract Carriage Buses Permits (Chartered Buses)
- Stage Carriage Permits
- Temporary Permits
- Phat Phat Sewa
- DLY/DLZ (ALL India Tourist Permits Cab)
- Rent-A-Cab Permits
- Institution / School Buses
- Interstate Stage Carriage Permit
- All India Tourist Permit (AITP)

There is no permit system at national level for passenger vehicle it is to be established urgently for unified registration system.

7.2.1.6 Traffic Park cum Training Center in Each Gram Panchayat/ Town/City

The first cause for accident is bad driving. A bed driving is having region behind that we are learning not from a training institute. The fund release by ministry of road transport and highways for few purposes which not included Traffic park and training centers. The traffic parks cum training centers are basic requirement from grass root. It is a need to established traffic cum training center at gram panchayat, town, city level.

7.2.1.7 National/State/District Level Road Safety Award Scheme

To increase good traffic census among road users there must be an award scheme. The state government or district level administrative agencies can start promotional scheme for established good habit. The award scheme include various kind of safety major i.e. helmet practice, don't drink and drive, awareness campaigns no traffic rule breaking scheme, traffic seminars in school, colleges and safety conferences among road users.

7.2.1.8 Strategy for reducing accident and fatalities could be adopted at district state or national level

In our country we have mechanism for road safety there are center government with ministry of road transport and highways, state governments with state transport ministries, district level regional transport officers and to maintain
law and order we have police department but we are facing road accidents because of a poor implementation of road safety law.

Inspite of all this the not having any strategy to achieve target considered road length as basis, road should be divided in stretch (district wise) under district road safety committee and lead agency for road safety. All the above department should work with this strategy to achieve target. The methodology we should be followed:

**Base line survey** : For knowing the behavior of road users, Base line survey of specified stretch is done with respect to traffic offences.

**Traffic volume survey** should be done of slot to identify the category of vehicle and population of vehicle in that stretch.

Collection of fetal accident and the fatality data from the police station for identification of accidental trend of last 5 years.

Operational Road Safety audit by road safety auditor and stakeholders for road safety (transport, PWD, NHAI and Police) for identifying engineering defect of that stretch.

Feedback analysis by road users nearly villagers. The causes of road accidents could be identified of that particular stretch.

Conducting stakeholders meeting at block and district level for discussion on above collected data.

Specific continuous drive of education, health, enforcement and engineering should be operated.

For checking the reduction in accident fatality and behavioural change of road users endline or impact survey should be done.

This above strategy should be followed is every 6 months in all the stretches in phase manner monitored and revived state lead agency and state road safety council.

There is a need of responsible and liable target based programme for this action plan the government have to fix year wise target for all stakeholders / institutions to reduced road accidents and fertility.
7.2.2 Technical aspects

7.2.2.1 Intelligent Transport System

In order to cover the large number of vehicles to be on forced it is suggested that we should move on to the automated enforcement technique with the use of Intelligent Transport System, (ITS) It will introduce transparency in the system. Surveillance camera, speed guns, Breath analyzers, Interceptors should be used for the purpose. It will offer multi-faceted benefits in the enforcement system such as:

a) Evidence will be recorded for the offender and he will not remain in the state of argument with the official involved in the enforcement work.

b) A database of the offences, vehicle involved and the driver details may be recorded. Involvement of the same vehicle or repetition of the offence may subsequently be checked up, which make the enforcement more stringent.

c) Bring transparency in the enforcement system.

Some ITS Based Applications

- Advanced Traveler Information System (ATIS)
- Advanced Transport Management System (ATMS)
- IT Enabled Transportation Pricing System
- Advanced Public Transportation System (APTS)
- Vehicle-To-Infrastructure Integration (VII)
- Vehicle-To-Vehicle Integration (V2V)

Necessary steps to Develop ITS in India

- Forming a national ITS Advisory Group
- Establishing ITS National policy (ITS Development Plan)
- Incorporating ITS into the mainstream transportation planning
• Adopting the national standard for ITS (ETC, etc.)
• Encouraging private sector ITS development
• Establishment of ITS Center every 50 Km.
• For effective, transparent, comprehensive enforcement through ITS based automated enforcement system
• The present institutions/engineering college should start courses to introduce Traffic Engineering/ITS Engineering/M Sc in ITS as a part of the curriculum.
• Formation of District Road Safety Authority – Addl. District road safety authority (registration, licensing, road safety, enforcement) – ITS center- Traffic Police Station

Intelligent transportation systems (ITS) are advanced applications which, without embodying intelligence as such, aim to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, more coordinated, and 'smarter' use of transport networks.

**Intelligent transportation technologies**

Intelligent transport systems vary in technologies applied, from basic management systems such as:

**Wireless communications**

Traffic monitoring gantry with wireless communication dish antenna Various forms of wireless communications technologies have been proposed for intelligent transportation systems. Radio modem communication on UHF and VHF frequencies are widely used for short and long range communication within ITS.

**Vehicle Detection & Tracking System**

Vehicle detection and tracking applications play an important role for civilian and military applications such as in highway traffic surveillance control, management and urban traffic planning. Vehicle detection process on road are used for vehicle tracking, counts, average speed of each individual vehicle, traffic
analysis and vehicle categorizing objectives and may be implemented under different environments changes. In this review, we present a concise overview of image processing methods and analysis tools which used in building these previous mentioned applications that involved developing traffic surveillance systems.

Electronic Toll Collection

Electronic toll collection (ETC) aims to eliminate the delay on toll roads by collecting tolls electronically. ETC determines whether the cars passing are enrolled in the program, alerts enforcers for those that are not, and electronically debits the accounts of registered car owners without requiring them to stop.

Electronic toll collection has facilitated the concession to the private sector of the construction and operation of urban freeways. Also, it has made feasible the improvement and the practical implementation of road congestion pricing schemes in a limited number of urban areas to restrict auto travel in the most congested areas.

Parking Management System

Human mobility is a necessity in today’s world. It has a significant impact on both quality of life and the economy of modern societies. Transport systems are, therefore, a key element in developed or developing nations. One of the causes of this excessive amount of time spent on the road in private road transport is the need to spend time looking for free parking spaces. Solutions based on infrastructure investment are expensive and implementation is slow. Technology-based solutions have been proposed as an alternative with lower costs and faster implementation. This information may be communicated to drivers to facilitate their search for a parking space and to authorities so that they may take steps to control traffic when congestion is detected.

Advance Travel Information and Transit System in Public Transport

Advanced Public Transportation System consists of three related technologies: A Digital Geographic Database (DGD), An Automated Trip
Scheduling System (ATSS), and Automated Vehicle Location Equipment (AVLE). However, because the commercial vehicles and indeed almost all the vehicles in the study area are not installed with AVLE, this aspect of APTS is not included in the developed software package.

**V2V, V2I, V2E Information System**

In V2I, the infrastructure plays a coordination role by gathering global or local information on traffic and road conditions and then suggesting or imposing certain behaviors on a group of vehicles. One example is ramp metering, already widely used, which requires limited sensors and actuators (measurements of traffic density on a highway and traffic lights on ramps). In a more sophisticated scenario, the velocities and accelerations of vehicles and inter vehicle distances would be suggested by the infrastructure on the basis of traffic conditions, with the goal of optimizing overall emissions, fuel consumption, and traffic velocities. Suggestions to vehicles could be broadcast to drivers via road displays or directly to vehicles via wireless connections. Looking further ahead, in some cases suggestions could be integrated into the vehicle controls and implemented semi automatically (always taking onto account the restrictions on automatic vehicle driving imposed by the Vienna Convention on Road Traffic, discussed later). Some experts predict that the first V2I systems may be developed and deployed in the 2015—2020 time frame.

The figure on the left shows two different traffic situations. In the left panel, traffic density is low and the central infrastructure based controller acts to improve fuel efficiency and reduce emissions of individual vehicles, smoothing accelerations and decelerations; in the right panel, due to greater congestion, the infrastructure control is primarily concerned with depleting queues at intersections with an eye toward global fuel economy and emissions reduction.

V2V, more difficult to realize because of its decentralized structure, aims at organizing the interaction among vehicles and possibly developing collaborations among them. At this level, information is interchanged and decisions are made on a “local” basis (that is, among a group of vehicles in proximity to each other). The introduction of such information interchange
requires an agreement among car manufacturers and suppliers in terms of communication technology, protocols, and the like, and efforts are under way in this direction (the CAR2CAR Consortium). The communication technology is based on IEEE 802.11, also known as Wireless LAN. A frequency spectrum in the 5.9-GHz range has been allocated on a harmonized basis in Europe in line with similar allocations in the U.S. (although the systems are not yet compatible). In the V2V concept, when two or more vehicles or roadside stations are in radio communication range, they connect automatically and establish an ad hoc network enabling the sharing of position, speed, and direction data. Every vehicle is also a router and allows sending messages over multi hop to more distant vehicles and roadside stations. The routing algorithm is based on the position of the vehicles and is able to handle fast changes of the network topology. Control technology comes into play at local and higher layers of the architecture. Uncertainties, delays, partial measurements, safety and performance objectives, and other aspects must be considered, and the system must be capable of making automatic or semiautomatic decisions, providing warnings/ information and potentially effecting actions.

Vehicle-to-vehicle (V2V) communications comprises a wireless network where automobiles send messages to each other with information about what they’re doing. This data would include speed, location, direction of travel, braking, and loss of stability. Vehicle-to-vehicle technology uses dedicated short-range communications (DSRC), a standard set forth by bodies like FCC and ISO. Sometimes it’s described as being a WiFi network because one of the possible frequencies is 5.9GHz, which is used by WiFi, but it’s more accurate to say “WiFi-like.” The range is up to 300 meters or 1000 feet or about 10 seconds at highway speeds (not 3 seconds as some reports say).

V2V would be a mesh network, meaning every node (car, smart traffic signal, etc.) could send, capture and retransmit signals. Five to 10 hops on the network would gather traffic conditions a mile ahead. That’s enough time for even the most distracted driver to take his foot off the gas.
On the first cars, V2V warnings might come to the driver as an alert, perhaps a red light that flashes in the instrument panel, or an amber then red alert for escalating problems. It might indicate the direction of the threat. All that is fluid for now since V2V is still a concept with several thousand working prototypes or retrofitted test cars. Most of the prototypes have advanced to stage where the cars brake and sometimes steer around hazards.

Traffic signals or other stationary devices are called V2I, or vehicle to infrastructure. Often they’re just rolled into the V2V umbrella to avoid too many TLAs (three-letter acronyms). Some automakers have their own terms for V2V such as Car-to-X, which encompasses other vehicles and the infrastructure. There’s also a push for the term “internet of cars” playing off “internet of things” as well as the broader term “connected car” which covers telematics as well and the popular-press term “talking car.” V2V seems to be the phrase that’s winning out.

Display of Speed Limit as Per Requirements

Speed limit enforcement is the action taken by appropriately empowered authorities to check that road vehicles are complying with the speed limit in force on roads and highways. Methods used include roadside speed traps set up and operated by the police and automated roadside ‘speed camera’ systems, which may incorporate the use of an automatic number plate recognition system. Traditionally, police officers used stopwatches to measure the time taken for a vehicle to cover a known distance. More recently, radar guns and automated in-vehicle systems have come into use.

Speed limits were originally enforced by manually timing or "clocking" vehicles travelling through "speed traps" defined between two fixed landmarks along a roadway that were a known distance apart; the vehicle's average speed was then determined by dividing the distance travelled by the time taken to travel it. Setting up a speed trap that could provide legally satisfactory evidence was usually time consuming and error prone, as it relied on its human operators.

There must be a device that semi-automates the timing and average speed calculation of the original manually operated "speed trap". An observer on the
Automatic number plate recognition (ANPR) systems that use a form of optical character recognition read the vehicle's licence or registration plate. A computer system reads vehicle registration plates at two or more fixed points along a road, usually hundreds of meters or even kilometers apart, then uses the known distance between them to calculate a vehicle's average speed. From the mean value theorem, we know that the vehicle's speed must equal its average speed at some time between the measurements. If the average speed exceeds the speed limit, then a penalty is automatically issued.

Police in some countries like France have been known to prosecute drivers for speeding, using an average speed calculated from timestamps on toll road tickets.

### 7.2.2.2 Improving Vehicle Safety Standard As Per Global Standard

We can hope that India will inspire and facilitate increased cooperation, innovation and commitment to preventing road traffic crashes as per global standard. Road traffic crashes are predictable and therefore preventable. In order to combat the problem, though, there needs to be close coordination and collaboration, using a holistic and integrated approach, across many sectors and many disciplines. While there are many interventions that can save lives and limbs, political will and commitment are essential and without them little can be achieved. The time to act is now. Road users everywhere deserve better and safer road travel. I made some suggestion to improve vehicle safety standards i.e.

- Identify a lead agency in government to guide the national road traffic safety effort
- Assess the problem, policies and institutional settings relating to road traffic injury and the capacity for road traffic injury prevention in each country
  
  Prepare a national road safety strategy and plan of action
- Allocate financial and human resources to address the problem
- Implement specific actions to prevent road traffic crashes, minimize injuries and their consequences and evaluate the impact of these actions
- Support the development of national capacity and international cooperation

### 7.2.2.3 Improving Road Engineering Safety Standard as Per Global Standard

Study on the road and ability of that road to carry an adequate number of vehicles with the minimum delay and in convent depends to a large extent on the quality of the road network. The roads are required to provide serviceability compatible with the traffic conditions. The geometric element of the road and intersections are important quality parameters. The geometric features such as adequate width of the carriage way, good payments, adequate with of sidewalk with suitable surface, adequate width of solders with proper maintenance, uniform traffic control devices, better road lighting, medium island, channelization island should be provided according to the road users needs. The prevailing traffic conditions and road user behaviour in the country different from region to region, however, the region findings serve as a good guide in the selection of a suitable engineering measure for the problematic area to ensure safe and efficient flow to traffic.

### 7.2.3 Legal aspects

#### 7.2.3.1 Unified Licensing and Registration System

In most of the developed countries the process of issuing a driving license is stringent. There are stages where the license seeker is first trained, tested and then issued a license of a prescribed category. For example, the stages of obtaining a driving license in New South Wales, Australia which is referred to as “The Graduated Licensing Scheme”, it takes 36 months of experience and passing four tests to become a final graduate to obtain a full license.

The scheme is based on extensive research in Australia and overseas and uses sophisticated methods and the latest technology to prepare inexperienced drivers for a lifetime of safe and efficient driving. New drivers will have at least 36 months of experience and have passed four tests before finally graduating to a full licence. On the other hand, in one country, the person who has possessed geed
a learner’s driving license, can obtain the permanent license, after one month and that too without any formal training of driving.

Besides, this loophole in our licensing system there exists another cliché. Most of the commercial drivers travel across states and when caught during any enforcement drive, produce & hand over the driving license but never return to collect the same. The reason is that they obtain multiple driving licenses from Transport Authorities from different States. They keep one genuine license in their custody and rotate the other duplicate licenses which they have obtained by presenting forge documents or through private licensing agents.

Also a Unified Registration System should be implemented where the Unique Registration Number should be stored and history of the violators would be established across the country.

7.2.3.2 Separation of Crime and Traffic Regulation

In a major police reform in the India, the police stations must soon to have separate sub inspectors in charge of traffic offences and regulations other than crime investigation and law & order enforcement. There must an action plan to assign two Sub-Inspectors under SHOs (Station House Officers), with separate charges of traffic offences and regulations crime investigation and law & order.

This plan can be active if there is a direction from hon'ble supreme court, or directions by center government as well state governments. This mechanism is a important part to regulate road safety laws in India for the betterment of road safety.

At present, the policemen at any stations in the state have to deal with both traffic offences and regulations with law & order situation and crime investigation. Many police officers point out that parallel assignment of law & order duty hinder a proper investigation into any crime, and brings delay in concluding investigations on time. It is to ensure speedy, effective and professional investigation in both sectors however, no gestures were made in that direction until recently. Meanwhile, an acute shortage in the number of policemen in the state is out to adversely affect the implementation of the new mechanism with effective and proper knowledge.
7.2.3.3 Revised Target Based National Road Safety Policy

The legal system of road traffic and safety should be strengthen and revamped. The insurance law should be change to health the road scenario. There should be appropriate regulations with target for road safety. Presently, the management of road safety is entrusted to various department like police transport, highways, public works and corporations. Many private cooperative bodies are involve. The lake of target based system with coordination among these agencies should be legally removed.

7.2.3.4 Make Annual and Target Based Road Safety Action Plan at National/State/District/Police Station Level

A dedicated action plan should be prepare with structure and road map for attending the objectives of road safety. It is required to be importance UN decades of action 2011-2020. It must be supported by road safety fund provided by the center / state government. Certain statutory provisions are felt insufficient for affective management of road safety. These provisions need amendments in existing laws.

7.2.3.5 Formulation/Revision of Target Based State Road Safety Policy

The center government should direct the state governments to strengthen the state motor vehicle department and in doing so shall takes into consideration the vehicle population, human population, road length, number of accident etc. I suggest that the testing officers license authorities, registering authorities, should possess technical qualification. It is must be target based so that in every six months they have to submit their data to the lead authority of center government.

7.2.3.6 Protection of Good Samaritan and First Responder

There is need of protection for Good Samaritan. A Good Samaritan shall not incur any civil or criminal liability for any health while providing emergency care to an injured person. Good Samaritan may voluntary provide name and address, time and place. An injured person at the time of injury incapable to give consents so Good Samaritan will not forced to do so.
7.2.3.7 Scientific Accident Investigation and Reconstruction

Accident investigation and accident reconstruction are commonly heard terms, but what exactly are they. The following discussion will attempt to shed some light on these processes. The police will investigate an accident with the intention of determining if any criminal action took place in the accident. Some of the things the police look for are speeding, hours-of-service violations, mechanical violations, alcohol use, drug use, etc. For example, if a truck driver is exceeding his hours of service and causes a serious accident because he fell asleep at the wheel, he will likely be criminally charged. If that accident results in a fatality, the charge will likely be homicide.

Independent investigators are normally hired by the insurance companies or attorneys of the parties involved in an accident. The job of the independent investigator is to analyze the causes of the accident so that liability and/or financial responsibility can be determined. These independent investigators are often off-duty police officers, retired police officers, automotive technologists, or engineers. However, investigators from many other backgrounds are also common. An accident investigation can consist of many aspects. However, the investigation usually starts with an inspection of the accident site. At the site, measurements are taken of evidence left by the vehicles such as point of impact, final resting positions, skid marks, scrub marks, and gouge marks. These measurements are usually taken using electronic surveying equipment. With this equipment, a computer-generated scale diagram can be produced and may be used to reconstruct the accident.

Vehicle inspections are another typical part of the accident investigation. These inspections will usually include measuring the amount of damage and damage profile of the vehicles. This information will be useful if an accident reconstruction is performed. The mechanical components of the vehicles such as brakes, steering, tires, suspension, lights, etc. may also be inspected and tested to determine if the condition of these components was a causative factor in the accident. The investigation might also include looking at driver qualifications, auditing logbooks, or reviewing other motor carrier compliance related materials.
With the accident investigation complete, an accident reconstruction can be performed. Reconstruction is the process of using physics to determine the speeds of the vehicles, and/or their relative positions at different times during the accident sequence. Information such as pre- and post-impact direction of travel, length of pre-impact skid marks, post-impact distances moved, friction values for the various surfaces the vehicles traveled over, point of impact, impact angles, and weights of the vehicles are all used as inputs into the equations used to reconstruct an accident.

There are many types of accident scenarios such as head-on, rear-end, right-angle, or roll-over. Each of these different scenarios requires a different method to reconstruct. However, generally speaking, an accident reconstruction will determine how much of a vehicles speed is lost in each part of a collision sequence. Take, for example, a vehicle that skids off the road and strikes a tree. A reconstruction of this accident would use the vehicles damage profile to calculate the speed at which the vehicle struck the tree and combine that with the amount of speed lost while the vehicle was skidding to determine the pre-braking speed of the vehicle.

7.2.3.8 Separate Crash Data Registration and Synchronization by Police, insurance and Health Department

The Government did not make proper efforts for co-ordination among the various committees involved with road safety activities. Government did not make concerted efforts to co-ordinate the activities of the various committees involved in road safety activities. Shortage of enforcement officers and lack of equipment and training diluted the enforcement of rules and regulations. There was no mechanism to identify habitual offenders of traffic rules and to impose penalties. Road safety awareness programmes lacked sufficient planning. Delays in road restoration works increased the risk of road accidents.

Government should review the multiplicity of committees in the field of road safety should be given adequate financial and executive powers for ensuring proper co-ordination between the various concerned agencies. Enforcement of the provisions of the Motor Vehicles Act and Rules should be strengthened by
deploying sufficient and dedicated manpower in the Transport and the Police Departments. A centralised database of accident details should be created by State Crime Records Bureau and the Transport Department with a provision for sharing the data among the other regulating agencies. Government should frame a trauma care policy and create facilities for emergency management. A common hotline facility should be provided to the Transport Department and the Police Department to receive information on road rage, over speeding, other violations, occurrence of accidents, etc. from the public and the hotline number should be displayed prominently on the rear side of all public transport vehicles.

7.2.3.9 Police Station/District/State Wise Accident Scientific Data Analysis

National reports published annually by Transport Research Wing of the Ministry of Road Transport & Highways and National Crimes Records Bureau of Ministry of Home Affairs, Government of India describe national statistical trends and normalized indicators of road accidents, injuries & fatalities. This article highlights trends, indicators, interstate comparisons and the latest characteristics of road traffic accidents in India. While the official road traffic fatality data may be close to the actual number, the injury data are gross underestimates. As per bibliometric analysis, India contributed only 0.7 per cent papers on road traffic injuries and had less than one article on road traffic injuries per 1,000 road traffic related deaths. To be effective, policies on injury prevention and safety must be based on local evidence and research. Health professionals and their professional bodies across wide disciplines need to take an initiative for the same with active commitment.

7.2.3.10 The Consumer Right to Safety

Consumers have a universal right to be safe. The United Nations has declared there should be minimum safety standards for vehicles in all countries. The Brasilia Declaration on Road Safety, adopted by the UN in April 2016, encourages governments to:
'Promote the adoption of policies and measures to implement United Nations vehicle safety regulations or equivalent national standards to ensure that all new motor vehicles meet applicable minimum regulations for occupant and other road users protection, with seat belts, air bags and active safety systems such as anti-lock braking system (ABS) and electronic stability control (ESC) fitted as standard.'

**Primary Safety Features**

Electronic stability control (ESC), Electronic brake-force distribution (EBD), Brake assist (BA), Autonomous emergency braking (AEB) and collision avoidance systems.

**Secondary Safety Features**

Seatbelts, Airbags, Head restraints, unfortunately, many governments around the world are yet to sufficiently regulate car safety. Consumers need to ensure the vehicles they buy provide an adequate level of protection.

**7.2.3.11 Road Safety Technical Law by Technical Authority**

In order to implement uniform Road Safety policies and plans across the country there is stringent need to develop an unvarying institutional mechanism at all the administrative levels. At present there exist an apex body that govern the planning and policy preparation. The main role of the present institutional structure covers administration, reviewing and monitoring. There are councils that exist at all levels of the administrative structure such as National Road Safety Council, State Road Safety Council. In addition, for coordination among the different stakeholder departments a Committee of Union Ministers is required to be formulated which shall be responsible for stipulating and issuing notifications and orders at the national level. The following institutional framework is required to be developed for appropriate policy preparation, execution and monitoring of road safety activities uniformly in the entire country.
Implementation of Section 135

Currently there is no provision to study and analyze the scientific evidence of accidents in place which is a cause of not being able to define clear suggestions to reduce accidents.

While it is mentioned in Section 135 of the Motor Vehicle Act 1988 that the State Government may, by notification make a scheme to provide for in-depth study on causes and analysis of motor vehicle accidents.

The current scenario is the practice is that the police constable (who is a non-technical person) follows the rule that the bigger vehicle is the cause of the accident and no study on the cause of the accident is practiced. Also there is no evidence collected for the cause of the accident scene within the international practice limit of 30 minutes by the technical team. No mapping of the accident scene is prepared, point of impact, final resting position, skid marks, scrub marks, gauge marks are not getting recorded, calculation of speed and direction of vehicles are not available.

A team of professionals like Road Engineers (who has completed Road Safety Auditor), Automobile Engineer (with certification of Crash Investigation), IT Engineers (with ITS), Photographers, Videographers, who would be a part of the Crash Investigation team. The Crash Investigation team would be a part of the Crash Investigation Cell/Unit which should be setup in phased manner in the Police Stations (or Traffic Police Stations) in districts across the country. The funding for this cell/unit should be made by the transport department.

Equipments like 3D Laser Scanner, metal and gas cutter, traffic diversion related devices and other equipment should be provided to this team which would record and reconstruct the accident scene and upload the data in time for professionals to work on analyzing the accident. Recording and reporting of the accident would be collected in a professional manner with established standards which would be the basis of standards across the country. Crash Data Retrieval a device similar to the black box in the aircraft should be deployed in the vehicles to
reconstruct the crash data, speed, direction, etc. of the accident are made available almost instantaneously for analysis.

A separate place for keeping the crashed vehicles should also be established. In this regard it is recommended to ask the Central Government to define standards to study, reconstruct and analyze road accidents inline of what is followed by the airline industry. While it is understood that the count of air accidents are much less than that of road accidents yet those standards could be considered to form a baseline.

**Implementation of Section 213**

There has been an initiative which has been undertaken that all states should have Motor Vehicle Department (some states have Transport Department) as per the guidelines of the Motor Vehicles Act 1988, appoint motor vehicles officers in the department but there are some states which are lagging behind in this regard.

Some states which have the officers deployed have not complied with the required qualification as prescribed by the act. To elaborate, they have appointed general officers in place of the technical officers which is defeating the purpose of setting up the act as that is resulting in a compromise of the act for safety standards. It is not right to say that these states are not following the guidelines deliberately but could be as a result of different interpretation of the act defined by the Central Government, hence better enforcement could have better results. We need to update the minimum qualifications as per the Motor Vehicle Act 1988 for better results.

**7.2.4 Civic aspects**

**7.2.4.1 Comprehensive and Effective Road Safety Awareness Campaign**

There must be comprehensive and effective road safety awareness campaign in India. There is lack of awareness in mass regarding road safety. Despite the success of Indian economy growing at an annual average rate of about
7.6 percent over the last few years, the road safety scenario has deteriorated to a great extent. This has been contributed by rising number of vehicles on the road (around 20 Crore). Growing traffic increases the threat of exposure to road accidents. India unfortunately, ranks on top in terms number of road accidents and fatalities which was close to half a million with more than 1,46,000 fatalities in 2015.

The United Nations General Assembly adopted a resolution in 2010 that led to the establishment of the Decade of Action for Road Safety (2011–2020). The road accidents are the leading cause of death among young people aged between 15 and 29 years which cost government approximately 3% of GDP of the nation. A review meeting held in Brazil in Nov 2015. India has ensured in Brasilia Declaration that by the end of 2020 it will be reduced down to fifty percent. Hon'ble Supreme Court Committee on Road Safety has also directed to reduce the road accidents and deaths by fifty percent by the end of 2020. Keeping in view the directions of Hon'ble Supreme Court a comprehensive Action Plan on Road Safety is being formed.

We must set a goal to reduced road traffic deaths and injuries by 50% by 2020. This reflects that the growing recognition of the contribution of road safety to health, development and broader environmental objectives and the potential for action. The Honorable Supreme Court Committee on road safety also gave direction to reduce road accident by 50% by end of 2020.

Apart from of Engineering and Enforcement, Road Safety Education plays an important role in shaping the attitude and behavior of children and young people. There are around 100 crore road users in India and there is a strong need to inculcate sensible user behavior by educating the mass at large. Thus, we need to ensure that they become responsible drivers, passengers, pedestrians and cyclist in the time to come. We all need to learn to use the road responsibly. Road Safety education in school curriculum has not yet included in all states. Above 5 years each person need to be taught importance of road safety.
We have to create a mission which must be Swachh-Bharat, Surakshit-Bharat, Swasth-Bharat. The idea behind launching this theme is to develop a clean, safe and healthy road user environment where each commuter shall be educated, trained and aware about the road safety and traffic rules.

**Meaning of Swachh Bharat**

Here Swachh Bharat signifies clear and cleaner environment by building a healthy road environment. The defect free roads for seamless movement in the country will help commuters to develop clean India.

**Meaning of Surakshit Bharat**

In Surakshit Bharat people will first learn road safety rules and then follow them strictly to develop a road safer India.

**Meaning of Swasth Bharat**

A healthy road environment shall be envisaged where people by abiding all road safety rules shall provide

**Campaign of Education and Awareness Through Mobile Van**

To address the issue of imparting Road Safety Awareness among school children and public at large, a unique National Road Safety Education and Awareness Mission shall be launched which will educate various target groups. This mission or project could be segregated through a cluster of police stations present in the nation.

India has around 15,000 police stations. If a cluster in a state made such that around 150 police stations gets clubbed forming a cluster then it would require one Road Safety Mobile Van per 150 police stations. Thus, around 100 mobile vans would be enough to cover the entire country for the nationwide campaign. In any area or region if the number of police stations exceeds 75 it may be deemed as a separate cluster or unit. The states across the country have been
divided in five different zones namely East Zone, North East Zone, North Zone, South West Zone and West Central Zone.

**Prospect of Campaign**

If safety awareness is imparted in childhood, safety will become a habit and a way of life. The objectives of RSE scheme are:

- The theme behind this mission is to develop a new road culture by building up clean-India (swachh-bharat), safe-India (surakshit-bharat) and healthy-India (swasth-bharat).

- Right from the urban areas through this project penetration shall be made in the remote areas to spread awareness about road safety.

- To create an environment in the nation about road safety. A person who gets aware about the issue shall speak to others and spread its advantages to others.

- The literature and study material on road safety doesn't reach to general public. Through this project it will delivered to all the road users from urban to remote areas.

- To provide the necessary framework for the acquisition and percolation of safety knowledge and skills. These include decision-making skills, and the identification and assessment of risks and strategies to reduce these risks.

- Decision-making skills that will enable citizens to make choices and to take responsibility for their own safety and that of others.

- Reduction in accident and accidental death numbers.

- Knowledge and understanding of the causes and consequences of road accidents.

- Necessary knowledge, understanding and skills to travel safely in or on a vehicle, while showing consideration for others.
• Appropriate survival skills necessary for the safe use of the road environment.

• Better understanding of the behaviour and attitudes that have influence on road safety.

7.2.4.2 Compulsory Road Safety Education from Play School to Senior Secondary Level

**Education, Awareness & Capacity Building:** Developing a sensible road user is the need of the hour. Road Safety is yet to be included in school curriculum and higher education as well. Professional courses can also be introduced in universities keeping the future requirement in view.

**Proposed Syllabus of Road Safety Education for Students of std 6TH TO 9TH**

**The syllabus:**

• Impart basic knowledge of the term “TRAFFIC”

• Make them understand the “Road” & different Types of the road.

• Explain the need of Road Safety (based on the need at their level).

• Traffic- A Universal Language (a mode of self defense)

• Meaning and application of three colors in Traffic. **Red, Amber and Green.**

• Teach Basic five shapes of Traffic Signs

• Explain Compulsory, Warning & Informative Traffic Signs with examples

• Educate about Different Road Markings

• Cultivate the habit of observing Traffic signs & Markings on the road.

• Meaning of “FOOTH_PATH”.
o Explain the exact methods of “How to walk on the Foot-Path”

o How to hold the hand of small children while walking.

o Technique to cross the road from the foot-path.

o **Stop…Look…Listen… Think…& Go if Safe.**
  
  - Explain the meaning of **Zebra Crossing** and the technique of using it with demonstration.(observation and speed)

  - **Trying to cross the road** while coming out between two parked vehicles could be dangerous. Explain **Safe Technique** through demonstration. (observation)

  - Explain the potential **fear by the animals on the road** and techniques to keep safe from them.

  - Explain the need and the job of a **Traffic Police Constable** at the cross roads. Teach different hand signals shown by Traffic Police and how to obey them. Explain how to take help of Police in case of an emergency.

  - Importance of the term “**SEE & BE SEEN**” while using the road.

  - Importance of visibility at night and early morning, During Winter, Monsoon

  - Explain the **safety measures while sitting on a two wheeler** as a pillion rider, importance of Helmet and importance of Seat Belt in the car (even at the rear seat).

  - **Motivate students** who take active part in the discussion.

  - **Conduct different competitions** on the subject of Road Safety throughout the year.

  - Drawing competition, Photography Competition, Quiz on Traffic subject, Street Plays on Traffic, Making songs and poems on Road Safety, Safe Bicycle Riding competition, Debates can be organized.
Try to prepare a team of volunteers from the students to manage the traffic nearby the school while shift start & end times.

Inspire students to spread the message of Road safety among their family and friends.

1. Theory Exams

**Duration of the course:**

About 5 sessions of one hour each required to complete the above mentioned syllabus. The marks obtained in Traffic Exams may be considered in the final result to ensure that students pay full attention towards the subject.

**Material required per school:**

- Syllabus book on the subject and subject related short films
- A complete chart indicating all related traffic signs
- A chart indicating all Road Markings
- A chart displaying lay out of Cross Roads, Round About, Lanes on the road
- A chart showing stop line and zebra crossing
- Training of Teachers
- List of Activities
- Materials for Different activities
- Multimedia facilities for education through Power Point Presentation
- Set of Question Papers

**Proposed Syllabus of Road Safety Education for Students of std 8th & 9th**

**The syllabus:**

**Day:1**

- Impart basic knowledge of the term “TRAFFIC”
- Make them understand the “Road” & different Types of the road.
• Explain the need of Road Safety (based on the need at their level).

• Traffic- A Universal Language (a mode of self defense)

• Meaning and application of three colors in Traffic. Red, Amber and Green.

Homework: write an article on “At the cross roads”

Day: 2 Recap

• Teach Basic five shapes of Traffic Signs

• Explain Compulsory, Warning & Informative Traffic Signs with examples

• Educate about Different Road Markings

• Cultivate the habit of observing Traffic signs & Markings on the road.

Homework: Write a funny poem on Signs & Markings in a group

Day: 3 Recap

Meaning of “FOOTH_PATH”.

  • Explain the exact methods of “How to walk on the Foot-Path”

  • How to hold the hand of small children while walking.

  • Technique to cross the road from the foot-path.

  • Stop…Look…Listen… Think…& Go if Safe.

• Explain the meaning of Zebra Crossing and the technique of using it with demonstration.(observation and speed)

• Trying to cross the road while coming out between two parked vehicles could be dangerous. Explain Safe Technique through demonstration. (observation)
**Homework:** write your experience of crossing the road and prepare a detailed write-up on How to cross the road.

**Day:4 Recap**

- Explain the potential **fear by the animals on the road** and techniques to keep safe from them.

- Explain the need and the job of a **Traffic Police Constable** at the cross roads. Teach different hand signals shown by Traffic Police and how to obey them. Explain how to take help of Police in case of an emergency.

- Importance of the term **“SEE & BE SEEN”** while using the road.

- Importance of visibility at night and early morning, During Winter, Monsoon

- Explain the **safety measures while sitting on a two wheeler** as a pillion rider, importance of Helmet and importance of Seat Belt in the car (even at the rear seat)

**Homework:** Make a drawing of a policeman controlling the traffic.

**Day:5 Recap**

- **17. “In Case of An Accident”** Explain the responsibility as a citizen and a procedure to be followed to help the victim. Explain the LAW.

- **Motivate students** who take active part in the discussion.

- **Conduct different competitions** on the subject of Road Safety throughout the year.

- Drawing competition, Photography Competition, Quiz on Traffic subject, Street Plays on Traffic, Making songs and poems on Road Safety, Safe Bicycle Riding competition, Debates can be organized.
Try to prepare a team of volunteers from the students to manage the traffic nearby the school while shift start & end times & inspire students to spread the message of Road safety among their family and friends.

Homework: Prepare a skit in road safety in a group of 5 students.

Day: 6

18. Theory Exams 20 question –objective type

Duration of the course:

5 sessions of one hour each required to complete the above mentioned syllabus. The marks obtained in Traffic Exams may be considered in the final result to ensure that students pay full attention towards the subject. Teachers must be motivated to participate actively as without their support, this project will have no impact.

Material required per school:

- Syllabus book on the subject and subject related short films.
- A complete chart indicating all related traffic signs.
- A chart indicting all Road Markings
- A chart displaying lay out of Cross Roads, Round About, Lanes on the road
- A chart showing stop line and zebra crossing
- Training of Teachers (syllabus)
- List of Activities during the year
- Materials for Different activities like drawing, art, drama etc.
- Multimedia facilities for education through Power Point Presentation
Set of Question Papers

SYLLABUS FOR SCHOOL CHILDREN FROM SATNDARD 9TH TO 12TH & ONWARDS

• **Quick revision** of the syllabus designed for small children.

• Explaining important traffic signs and road markings in detail with the use of Photographs and films to retain student’s interest in the class.

• Detailed information on **STOP** and **GIVE WAY** signs with proper examples and drawings.

• **Licensing process** & documents.

• Explain the “**Rules of the Road**” in detail.

• Techniques of how to ride bicycle with safety on the road. Negotiating at **Turn & Cross roads**.

• Explain how riding two bicycles one besides another could create danger on the road?

Importance of **Stop-Line**.

• Importance of **HELMET** while riding bicycle and two wheelers.

• Importance of **REFLECTORS & SAFETY DEVICES** on bicycles & vehicles.

• **Meaning of an Accident**, reasons and remedies to be discussed by using examples and teacher’s own experiences. Students may also share their experiences.

• Explain how to **show respect** to other road users.

• Explain correct methods of **Parking** and problems arising out of wrong parking.
• Helping others in case of an Accident

• Safety measures to use the public transport.

• Explain the importance of SEAT-BELT with exact functioning of it and share Information on the subject.

• Basic knowledge about FIRST-AID.

• Take an OATH to be a Good Road User.

7.2.4.3 National Road Safety Talent Competition of Different Activities Each Year

The root of India is youth and school youngster. The younger are the future of India. The center government, state governments, district governments through the help of central board of education or with the help of state boards of education can start a campaign to promote road safety. It can be start in a form of competitions. It is important to involve all road users in those type of competitions or other activities.

7.2.4.4 Identification, nomenclature and audit-correction of Black Spot with coding system

Black Spots are such locations on roads where accident occur frequently over a number of year due to poor road geometric or any other causes. In India there are several spots known as accidental zone but they are defined and identified but road users are not aware. Neither, Central Governments nor State Government has data regarding Black Spot. The lists provided by states are not made by proper data analysis because many of them are reduced due to new road highways or any other reason and many other spots became new accident zones are notified. There is a need of identification, correction and nomenclature of those black spots.
### Description Nomenclature for Black Spot Identification

- **State Code (2 Characters)**
- **District Code (2 Characters)**
- **Road Category Code (2 Characters)**
- **Starting Stretch Kilometre Stone Number (3 Character)**
- **Road Owning Agency (3 Characters)**
- **Month and Year of Identification (4 Character)**
- **Sr. No. (3 Characters)**

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<th>State Code (2 Characters)</th>
<th>District Code (2 Characters)</th>
<th>Road Category Code (2 Characters)</th>
<th>Starting Stretch Kilometre Stone Number (3 Character)</th>
<th>Road Owning Agency (3 Characters)</th>
<th>Month and Year of Identification (4 Character)</th>
<th>Sr. No. (3 Characters)</th>
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</thead>
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<td>As per define by MoRTH</td>
<td>As per define by State Government</td>
<td>As per define by Ministry of Road Authority</td>
<td>500 Meters from Kilometre Stone in 3 character (First 2 digit Kilometers stone and second one character for stretch multiple by 100 in meters.)</td>
<td>The road making agency</td>
<td>The black spots Identified in year and month (Identify by 4 characters first 2 for month and last 2)</td>
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<td>01(Ajmer) 55 Gurgaon</td>
<td>EW (Express Way)</td>
<td></td>
<td>NHA (NHAI) PWD BRO, NHDCIL, Others</td>
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<td>NH (National Highway)</td>
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<td>NH 79 (Ajmer-Indore) 49.3*</td>
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<td>MD (Major District Road)</td>
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<td>OD (Other District Road)</td>
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<td>VR (Village Road)</td>
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<td>CR (City Road)</td>
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NA (Not Available) / NAC () for Black Spot where not availability of any of above
7.2.4.5 Improving Road User Standard as Per Global Standard

In India there is a requirement to improve road users standards as per global standards. The world has become global village and we are using the foreign method and culture so it also requirement for an equal standard for improving road safety. I suggests that it can be achieved by some activities, i.e. promote road safety ownership and accountability among road authorities, road engineers and urban planners, promote the needs of all road users as part of sustainable urban planning, transport demand management, and land use management, promote safe operation, maintenance and improvement of existing road infrastructure, promote the development of safe new infrastructure that meets the mobility and access needs of all users, encourage capacity building and knowledge transfer in safe infrastructure; encourage research and development in safer roads and mobility.

7.2.4.6 Prepare and Distribute Driving or Road Using Manual for All Road Users (2W, 4W, HV and Others)

There must be Road Safety Manual to explain rules of the road in an easy to understand manner. Manual should be available in every Indian language for easy to access. The manual will work for expertise the road users about safe driving practices guiding the new driving license seekers about the required procedures developing a testing tool to check the knowledge level of the road users. The manual must contains Road Safety Code, a set of rules for guiding and regulating the conduct of different classes of road users (drivers of motor vehicles, cyclists and pedestrians) on roads and in road-related areas (footpaths and parking area) to ensure order and improve safety. The rules include the knowledge of road signs, markings and signals.
7.2.4.7 Safe Transportation for school children

A school bus is a type of bus specifically designed and manufactured for students transport, carrying students to and from school and school events. It is the collective duty of state, parents and schools to ensure fullest safety of our children. A flap of 240 mm diameter (showing stop sign) should be incorporated so that it can eject upon opening of the door. This will give stop warning mainly to, 2 wheelers approaching on left side. A sign showing a school bus boy and girl must be painted or fixed on the rear and front of the school Bus. A retractable footstep should be installed which would emerge at the lower level when the door is open. Seats must be provide grips for children. Top edges of the seat bars must be adequately cushioned to minimize head injury in case of impact. Behind the seat 2 soft handles at a convenient height must be provided for the children to grip when necessary. Door grab-rail as per design should be installed on the right side of bus entrance for easy embarking and disembarking.

7.2.5 Other aspects

In India, the safety of passengers in cars is generally measured by the presence of seat belts, airbags, crumble zone and shock absorbing capacity. But it is important to note that more than 50% of the total weight of an average vehicle, globally is of Steel. And if this Steel is not galvanized, which prevents vehicle from corrosion and rust, the safety of the passengers is a big issue. Indian car manufacturers use bare cold-rolled steel and its variants, while abroad, it is mandatory for auto companies to use galvanized steel bodies.

Helmet is very important safety equipment for two wheeler riders but it is not a mandatory item of Beuaro of Indian Standard and there is no control of enforcement agencies over sub-standard and non ISI helmet. Helmet must be link with Vahan 4.0 software with unique identification number. There is a need of user friendly helmet e.g. light weight, air ventilated and low cost. There is a requirement of a strict penal provision for vehicle manufactures to provide two
helmets at the time of selling two wheeler and helmet should manufacture as per Indian speed and road environment.

**Establishment of Scientific Accident Investigation Unit cum Separate Traffic Police Station**: The traditional collision investigation has not the same level of resourcing as investigation into other types of unlawful homicide such as murder. They investigation relating to any other crime is different from investigation of an accident occurred at road investigation the circumstance thoroughly and impartially, recording and documenting all information and if possible the accident must reconstruct. The government must provide scientific equipments regarding investigation. For the investigation there must be separate unit in traffic police station with technical experience.

**Establishment of Institutional Mechanism National/State/District/Block/Gram Panchayat/Municipal Ward Level**: There is a need of institutions, board or committees specifically for roads safety. We don't have any lead agency for road transport with adequate working institution. It is not only necessary at the level of center it must be compulsory from grass root. The lowest level of administration in India is a small village having administrative body name gram panchayat. The mechanism of road safety including all aspects like awareness, helmet practice, school, mass campaigning must be start from the gram panchayat level. So, government should established and institute for all standards from center level to gram panchayat.

**Establish Road Safety University**: Established institutes and central / state universities may start courses for graduation / post graduation or certification courses on road safety to build-up man power in the field of road safety teaching and research. Education is entering in new era from last few years UGC is interested to established mono universities like law universities, forensic science universities, yoga, police etc. It is a concept that where should be a university for traffic road and road safety which include courses to prepare road safety staff,
research and development. It can be help to insured the road safety department become scientific and trained staff.

The Dedicated Mobile Application for Emergency Care: Now days every individual is equipped with Android or iOS mobile smart phone. A nationwide dedicated mobile app could be developed that could help people saving the life of an injured. The app must show the following information which one need to offer help to the accident victim. It must share the GPS location of the user, where the accident has happened. There must be option to notify the administration about the accident. It must also have the option to share the picture of the place. It must also show the location of the nearest police station, quick trauma care centre, ambulance and the first responder. The user must be able to send notification to all the listed sources.

Strengthening Trauma Care System: A network of emergency services for the accident victims transport to hospital by ambulance and well equipped trauma care hospitals should be developed across the whole country. Higher technology automatic sector should be promoted. Now a days, there are so many changes in transport technology and improve techniques in motor vehicle management. The trauma care facilities must be in multi level i.e. national, state, district, panchayat and village level.

Use of alternative fuels: The power that propels automobiles comes from combustion. In this combustion chamber fuel mixes with air. Ideally, oxygen in the air should convert all the hydrogen in fuel into carben-di-oxide. One of the important concerns about convention petroleum based fuels is about their exhaust products during come combustion in engine. There are several alternative fuels which have gained importance recently i.e. alcohol fuels, compressed natural gas, liquefied petroleum gas, biogas, vegetable oil etc. It is also important to save environment.

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