



# Road Safety Workshop

Mumbai, Maharashtra

Tuesday , 21 March 2017

Ministry's Prospectives on Road Safety and Discussion  
on CoRS Directions and Compliance

By

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# Maharashtra: Demography

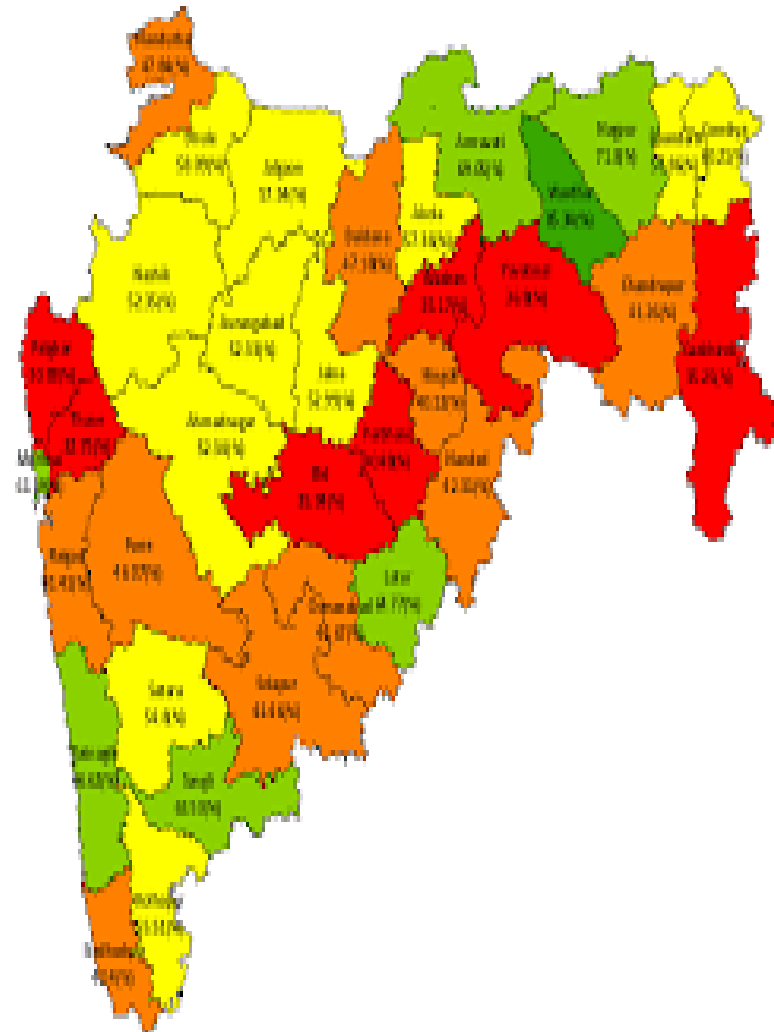
- **Capital: Mumbai**
- **Districts: 36, Gram Panchyats-28000**
- **Area: 307713 sq km**
- **Population: 11.04 Crores**
- **Police Stations: 1054 nos (2011)**
- **Total Road Length: 608140 Kms (Approx. 6.08 lakh)**
- **Total NH Length : 7476.57 Kms (31.3.2016)**
- **PWD: 4017.85**
- **NHAI: 3458.72**



# Districts in Maharashtra

Ahmednagar  
Akola Amravati  
Aurangabad  
Beed  
Bhandara  
Bukdnana  
Chandrapur  
Dhule  
Gadchiroli  
Gondia  
Jalgaon  
Jalna  
Kolkapur  
Latur

Mumbai city  
Suburban  
Nahpur  
Nanded  
Nandurbar  
Nashik  
Osmanabad  
Parbhani  
Pune  
Raigad  
Ratnagiri  
Sangli  
Satatra





## Basic 3 Standards of Road Safety

S. N.	Standard	Responsible Department(s)
1	Vehicle Standard – AIS/BIS Code	Transport
2	Road Standard – IRC Code	PWD/ NHAI/LSG/Transport
3	Road Users Standard	
3.1	Motorized - driving license	Transport/Police
3.2	Non motorized – Education and Awareness with Road Regulations	Health/ Transport/ Police/LSG/NGOs/ Community



## Vehicle Standards/Regulations

- 1 Two types of Standards a) BIS (IS formulated by Bureau of Indian Standard) b) AIS (Automotive Industry Standards)
- 2 As per the law IS (Indian Standard) are necessary, however to speed up the standardization process, initially AIS standards are formulated and later on converted to IS.
- 3 Approximate safety standards : approx 150 includes all IS and AIS.
- 4 IS : BIS is responsible to formulate  
AIS : AISC (Automotive industry Standard Committee) and CMVR-TSC (Central Motor Vehicle Technical Standard committee) responsible to formulate)
- 5 All safety standards are basically derived from European Regulations by adding India specific requirements
- 6 Examples  
Bus code : AIS:52  
Horn : IS:1884  
Tyre: IS:15636, IS:15633, IS:15627.  
Truck Code : AIS:093  
Brakes : IS:11852



## New Initiative in Vehicle Regulation

	Action	Notification	Date
1	Automatic Head Lamp on – two wheelers	188 (E) dt 22.02.16	1 <sup>st</sup> April 17
2	Speed Governor	290 (E) dt 15.04.15	Extended dt 31.01.17
3	Bus Body code	895 (E) dt 20.09.16 846 (E) dt 17.03.2017	Extended to 1.07.2017 for existing models
4	Additional provisions fro M1 vehicles	1014(E) dt 26.10.16	draft
5	Mass Emission Standards for LNG	1066(E) dt 15.11.16	Draft
6	Double Decker Bus	240 (E) dt 14.03.17	Six months from the date of notification.
7	ABS for two wheelers	120(E) 10.02.17	1.04.18



## New Initiative in Vehicle Regulation

	Action	Notification	Date
8	Requirements for behavior of steering mechanism of a vehicle in a Head-on Collision	AIS -096/2008, as amended from time to time ,for the vehicles specified therein.	New Models – 1 <sup>st</sup> October, 2017 All Models- 1 <sup>st</sup> October,2019
9	Protection of occupants in the event of an offset Frontal collision	AIS -096/2008, as amended from time to time ,for the vehicles specified therein	New Models – 1 <sup>st</sup> October, 2017 All Models- 1 <sup>st</sup> October,2019
10	Approval of vehicles with regard to the Protection of Occupants in the event of a Lateral Collision	AIS -096/2008, as amended from time to time ,for the vehicles specified therein	New Models – 1 <sup>st</sup> October, 2017 All Models- 1 <sup>st</sup> October,2019
11	Approval of vehicles with regard to the protection of pedestrian and other vulnerable road users in the event of a collision with the motor vehicle	AIS -100/2010, as amended from time to time ,for the vehicles specified therein	New Models – 1 <sup>st</sup> October, 2018 All Models- 1 <sup>st</sup> October,2020



# IRC & IRC:SP - Standards

- Indian Road Congress(1934) recommends and publishes road standards.
- There are more than 150 IRC standards recommended by IRC.
- Example
  - IRC:067 (Road Signs)
  - IRC:035 (Road Marking)





# Road User Standards

- Non Motorized: Road Regulations, behavior, education and awareness with enforcement.
- Motorized:
  - Knowledge Test
  - Sense Test
  - Skill Test
  - Public Road Test



## Initiatives: Ongoing Scheme of Ministry

S. N.	Activity	Budget Provision	Remarks
1	IDTR	17 cr	10-15 Acre Land
2	RDTC	5 cr	3-5 Acre Land
3	I &C Center	14.40 cr	4000 sqm2
4	HMV Driver Refresher Training	950 /- Per Driver (Amend Amount in pipe line)	Only for RDTC & IDTR or a reputed institution.
5	Road Safety Audit	As per Estimate/demand	-
6	Black Spot Rectification	As per Estimate/demand	-
7	National Highway (NHARSS)	Accident Relief Service with Ministry of Health and Family Welfare	Provide Ambulance/ Crane
8	Enforcement Equipments	As per Estimate/demand	Breath Analyzer and Other Equipments



## Initiatives: Ongoing Scheme of Ministry

S.N.	Activity	Budget Provision	Remark
9	Cashless Treatment	Pilot Project: Gurgaon - Jaipur, Vadodara - Mumbai, Ranchi - Rar Gaon	Entire NH-8 (Pipeline)
10	Capacity Building for Police, Transport, PWD Engineers and Municipal officials training for Road Safety Regarding	Lodging Boarding and Course Fee sponsored by MoRTH. 5 Members from each state.	59 training programs in various institute CIRT, ARAI, IRTE, IIT Delhi, Staff College of Eng. And IAHE.
11	Publicity Measures and Awareness campaign a Road Safety	In Pipeline	NGO and State Govt.
12	National Road Safety Awards	For Individual and other Than Individual Category	Include state Govt. and journalist etc. (Pipeline)

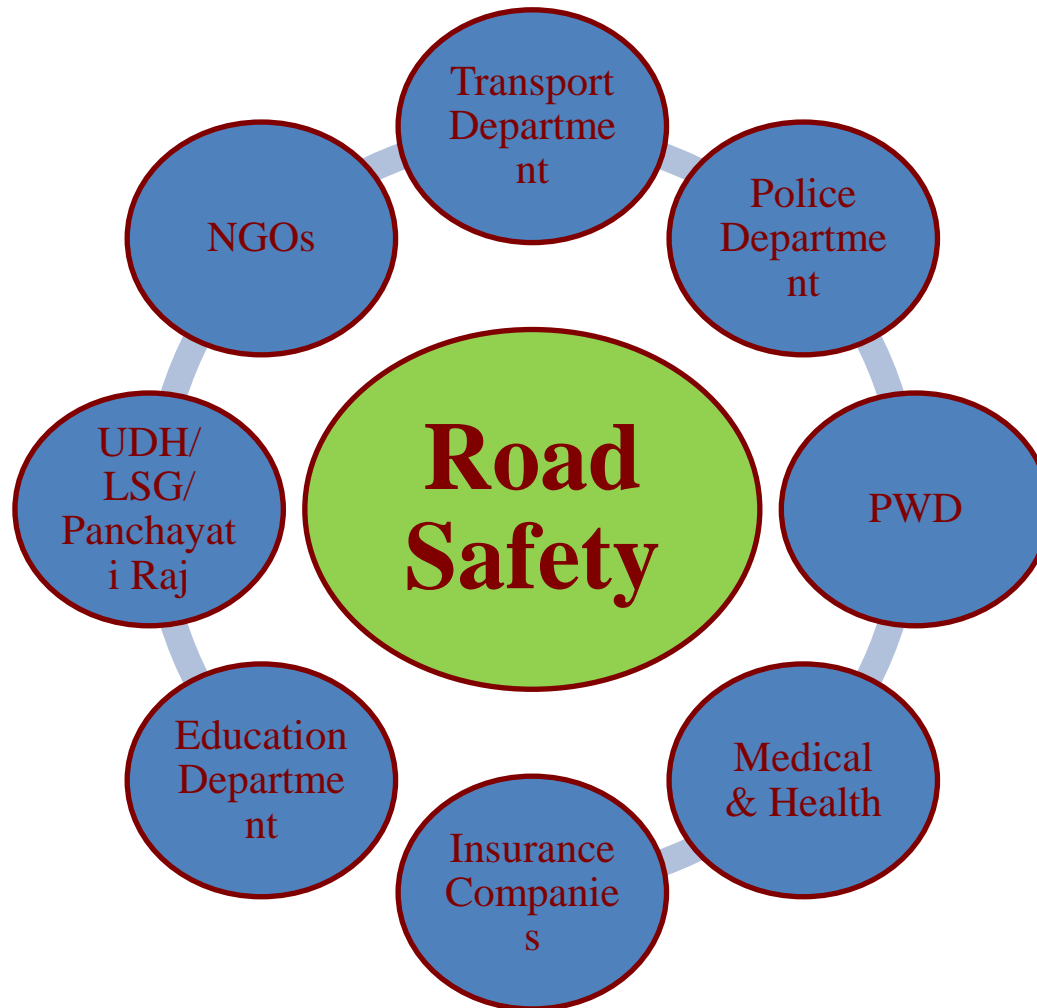


## Black Spots(old Definition)2011-2014

1	State	Maharashtra
2	Code	MH
3	Identified	96
4	Rectified	52



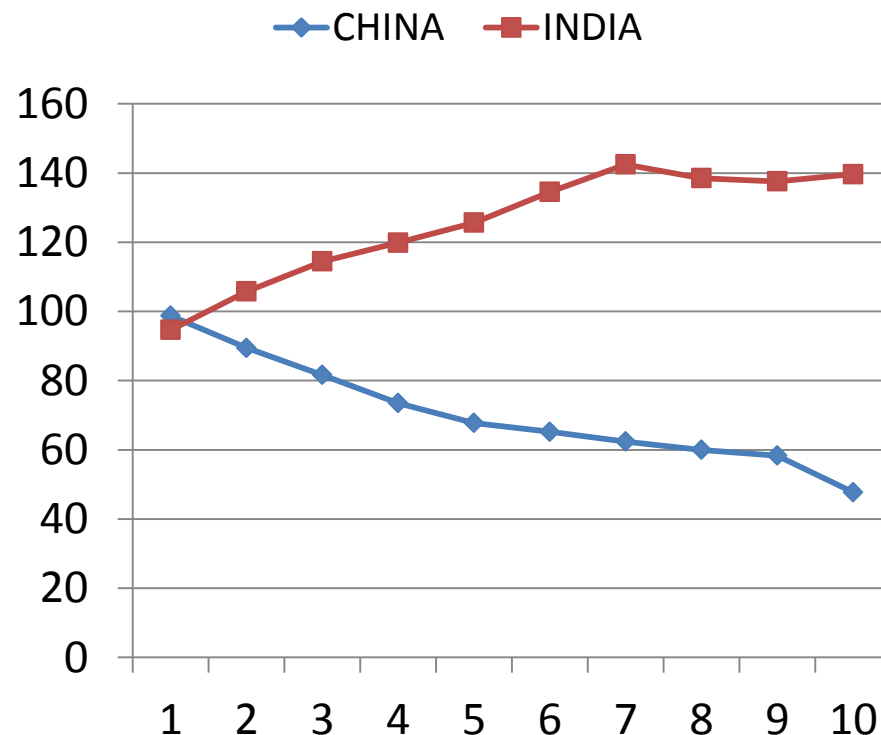
# Road Safety Is A Multi Sectoral Issue Which Involves Several Departments/ Agencies Like





## ACCIDENT DEATH DATA

Sno	Year	CHINA	INDIA
1	2005	98738	94668
2	2006	89455	105749
3	2007	81649	114444
4	2008	73484	119860
5	2009	67759	125660
6	2010	65225	134523
7	2011	62387	142485
8	2012	59997	138528
9	2013	58316	137572
10	2014	47724	139671



Population in 2011  
China: 134 Crores  
India 122 Crores

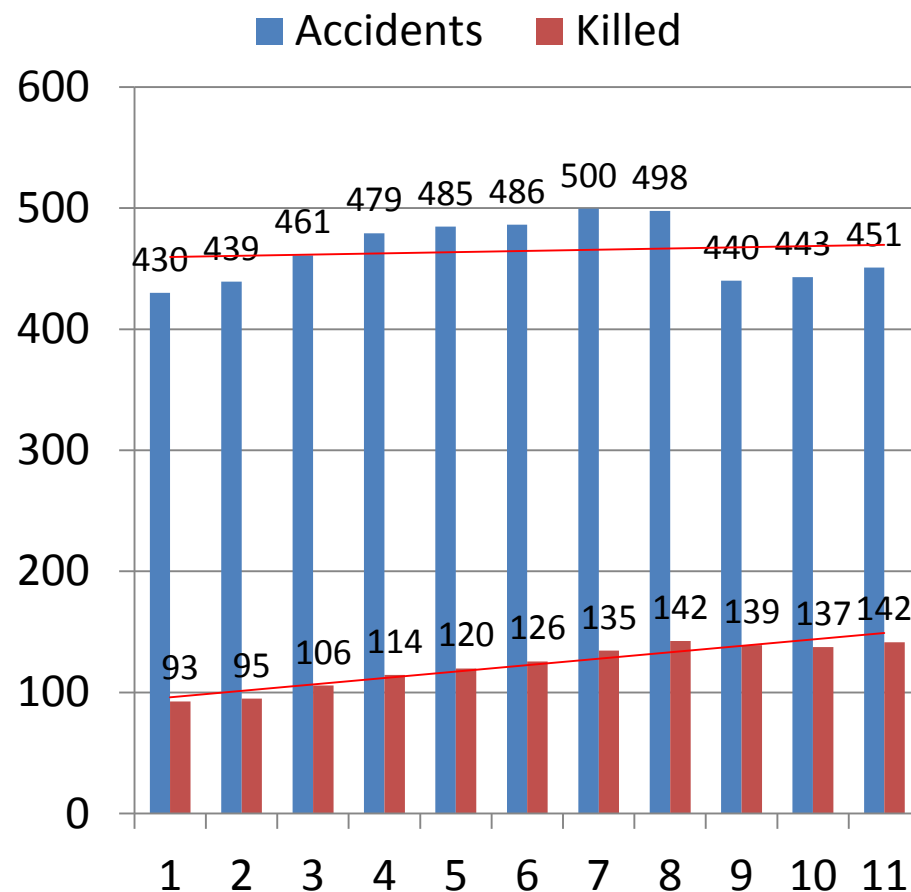
In 2005, China was on the top and  
since 2006, India is on the top in  
the world.



## ACCIDENTS IN INDIA

Numbers in '000

Sno	Year	Accidents	Killed
1	2004	429910	92618
2	2005	439255	94968
3	2006	460920	105749
4	2007	479216	114444
5	2008	484704	119860
6	2009	486384	125660
7	2010	499628	134513
8	2011	497686	142485
9	2012	440042	139091
10	2013	443001	137423
11	2014	450898	141526
12	2015	500279	146133



Data Source: MORTH Transport Research Wing



# Accidents and Fatalities in Maharashtra

Year	Accidents	Fatalities	Injured
2011	68438	13057	45628
2012	66316	13333	43847
2013	63019	13029	41972
2014	61627	12803	40455
2015	63805	13212	39606
2016	39848	12883	35894

Year	Accidents			Fatalities		
	Urban	Rural	Total	Urban	Rural	Total
2014	36473	25154	61627	4091	8712	12803
2015	37506	26299	63805	4254	8958	13212

Percentage Sharing Accidents 12.7%

Percentage Sharing Fatalities 9.0%





## Accidents on National & State Highways in Maharashtra

Year	Accidents			Fatalities		
	NH	SH	Total	NH	SH	Total
2011	12530	13149	25679	3802	4386	8188
2012	11805	12846	24651	3821	4561	8382
2013	11289	12029	23218	3698	4517	8215
2014	10788	11760	22548	3577	4414	7991
2015	10839	11184	22023	3789	4179	7968

## **86.7% of total number of Road Accidents accounted by 13 States (2015)**

S.No.	State	S.No.	State
1	Tamil Nadu (13.8%)	8	Rajasthan (4.8%)
2	Maharashtra (12.7%)	9	Gujarat (4.6%)
3	Madhya Pradesh (11.0%)	10	Telangana (4.2%)
4	Karnataka (8.8%)	11	Chhattisgarh(2.9%)
5	Kerala (7.8%)	12	West Bengal (2.6%)
6	Uttar Pradesh (6.5%)	13	Haryana (2.2%)
7	Andhra Pradesh (4.8%)		

## **83.6% of total number of Persons Killed in Road Accidents accounted by 13 States(2015)**

S.No.	State	S.No.	State
1	Uttar Pradesh (12.1%)	8	Gujarat ( 5.6%)
2	Tamil Nadu (10.7%)	9	Telangana (4.9%)
3	Maharashtra (9.0%)	10	West Bengal (4.3%)
4	Karnataka (7.4%)	11	Bihar (3.7%)
5	Rajasthan (7.2%)	12	Punjab (3.3%)
6	Madhya Pradesh (6.4%)	13	Haryana (3.3%)
7	Andhra Pradesh (5.7%)		



## Directions from Hon'ble Supreme Court CoRS

1. Formulate / adopting a Road Safety Policy.
2. Action Plan for reducing road crash fatalities and injuries
3. Activate State Road Safety council and hold its meetings at least twice in a year.
4. Establish a Lead Agency in the State with adequate dedicated and professional staff to deal exclusively with road safety issues.
5. Establish Road Safety Fund by making available a portion of the fines collected from traffic offences to the Fund and also make adequate provisions in the budget for meeting expenses on road safety
6. Implement directions of the Hon'ble Court on Road Engineering as contained in its Judgement dated 22<sup>nd</sup> April 2014.
7. Rectify immediately all Black Spots identified since 2011.
8. Draw up a protocol and an annual calendar for identifying Black Spots and their removal and further monitoring to see the effectiveness of the action taken.
9. Carry out road safety audits during design, construction and operation of roads and implement recommendations of the Audit
10. Undertake construction of road beyond Rs. 10.00 Crore only after design audit is completed and its recommendations implemented.
11. Adopt traffic calming techniques at locations where accidents are occurring due to over speeding.
12. Suspend driving license for not less than 3 months under section 19 of MV Act and Rule 21 of CMVR for over speeding, red light jumping, use of mobile phones while driving and over loading.
13. Make use of helmet compulsory both for main and pillion riders.
14. Tighten procedure for issue of permanent driving licenses. Commence action in a time bound manner for establishing sensor based computerized driving tracks to eliminate human intervention of issue of permanent driving licenses.



## Status of the States....

### 1. Formulating/adopting a road safety policy

**States:** Twenty two States have notified a road safety policy. The states of Assam, Chhattisgarh, Delhi, Jammu and Kashmir, Meghalaya, Nagaland, Rajasthan and Tripura are in the process of notifying.

**Maharashtra :** Yes, Formulated & adopted.

### 2. Constitute/activate State Road Safety Council and hold its meetings at least twice in a year to deliberate and monitor all road safety measures:

**States:** State Road Safety Council (SRSC) has been constituted in all States. Meetings are also being held by these councils.

**Maharashtra :** Yes, Road Safety Council has been constituted in 2015. Two meeting has been held in 2016



## Status of the States...

### 3. Fix annual targets for reduction of road accidents and deaths till 2020 and prepare Action Plan to achieve the targets

States: A Draft Action Plan based on the six pillars of road safety recommended by the United Nations was prepared by the Ministry and was circulated to all the States in December 2013. These six pillars are:

**Pillar 1:** Road Safety Management – Institutional Mechanism and Capacity Building

**Pillar 2:** Safer Roads and Mobility

**Pillar 3:** Safer Vehicles

**Pillar 4:** Improvement in Enforcement of Traffic Regulations

**Pillar 5:** Education

**Pillar 6:** Emergency Care.

4 The action plans submitted by the states have been examined by the Ministry and CoRS and it seen that they need to be made more specific in terms of fixing a time bound target for fatality reduction, constitution of empowered and functional lead agency and allocation of resources for implementing the identified measures. The Ministry will work with the states to revise and finalise the Action Plan to minimise road accidents and related deaths and injuries by 31<sup>st</sup> March 2017.

Maharashtra : Yes



## Status of the States

### 5. Establish a Lead Agency in the State with adequate dedicated and Professional staff to deal exclusively with road safety issues.

**States:** All states except Bihar, Punjab and Mizoram have designated lead agencies for dealing with road safety issues. The designation of lead agency in these states is under process. However, to be effective, these agencies will need to put in place dedicated manpower who will work full time on road safety related issues.

**Maharashtra :** Under process. It has been decided to entrust the task of the Lead Agency to the office of Transport Commissioner, Mumbai

### 6. Establish Road Safety Fund by making available a portion of the fines collected from traffic offences to the Fund and also make adequate provisions in the budget for meeting expenses on road safety

**States:** 11 States have created the Dedicated Road Safety Fund. The states of Andhra Pradesh, Arunachal Pradesh, Assam, Delhi, Goa, Haryana, J&K, Jharkhand, Karnataka, Manipur, Meghalaya, Mizoram, Punjab, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand and W.B. are in process for establishing of Road Safety Fund by making available a portion of the fines collected from traffic offences.

**Maharashtra :** Yes, The Maharashtra Motor Vehicle (Taxation of Vehicles) Act, 1958 has been amended to provide for the Road Safety Fund.





## Status of the States

### 7. Implement directions of the Hon'ble Supreme Court on Engineering measures as ordered in its judgement dated 22<sup>nd</sup> April 2014. In WP (C) 295/2012.

**States:** Most of the states have issued necessary directions to the concerned agencies. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Supreme Court.

**Maharashtra :** Yes, Action is being taken .

### 8. Prepare Action Plan for rectification of all Black Spots identified since 2011 and commence action thereon

**States:** Rectification of Black Spots is in progress in all the states. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Supreme Court.

**Maharashtra :** Yes, identified Total =96 and 44 out of which have been rectified. 35 on NH uncertified and 17 spots on State Highways will be rectified by March 2017.

### 9. Draw up a protocol and an annual calendar for identifying Black Spots and their removal and further monitoring to see the effectiveness of the action taken

**States:** Most states have formulated the protocol and calendar for identification and rectification of Black Spots or have adopted the guidelines issued by the Road Safety Engineering Cell of the Ministry. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Supreme Court.

**Maharashtra :** Not implemented, Action is being taken





## Status of the States....

### 10. Prepare Action Plan for carrying out road safety audits of all the roads and commence action thereon

**States:** Most states have started Road Safety Audits of all roads as per the guidelines of Ministry. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Court.

**Maharashtra :** Not implemented and instructions have been issued to concerned authorities

### 11. Undertake construction of road beyond Rs.10 crores only after Design Audit is completed and its recommendations implemented

**States:** Most of the states have issued necessary directions to the concerned agencies. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Court.

**Maharashtra :** Instructions have been issued in this regard.

### 12. Adopt traffic calming techniques at locations where accidents are occurring due to over-speeding

**States:** Most States have partially implemented the necessary traffic calming measures and work is under progress. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Court.

**Maharashtra :** Partially implemented and rest of works are being worked out.



## Status of the States....

### 13. Suspend driving licence for not less than 3 months under Section 19 of Motor Vehicle Act and Rule 21 of Central Motor Vehicles Rules for over speeding, red light jumping, use of mobile phones while driving and over loading

**States:** Most States have started to suspend Driving Licence as directed by the CoRS. Mechanism is being framed by the States to regularize the process.

**Maharashtra :** Yes, in this regard direction has been issued to all enforcement agencies and from Jan. 2016 & August, 2016 total 3,80,371 driving licenses have been suspended.

### 14. Make use of helmet compulsory both for main and pillion riders

**States:** Most States have notified rules for making wearing of helmet compulsory both for main and pillion riders. However, enforcement is weak in most states.

**Maharashtra:** Yes, strictly implemented and also instructed to dealers to provide two helmets to two wheelers purchaser.

### 15. Tighten procedure for issue of permanent driving licences. Commence action in a time bound manner for establishing sensor based computerized driving tracks to eliminate human intervention for issue of permanent driving licences.

**States:** Most of the states have started action for setting up computerized driving tracks to eliminate human intervention for issue of permanent driving licences. The Ministry is also supporting them in this. However, specific details are awaited from the states. The same are being obtained and will be submitted to the Hon'ble Court.

**Maharashtra :** Established two centre at CIRT Pune and Baramat and decisions have been taken the same model may be implemented to all offices.



# Targets Proposed to States

The states have been given target to bring down the fatality rate by the end of 2020 and which is as follows:

S.No	Financial Year	Target for Reducing Accident and Deaths	Reducing accident and Death after achieving target
1	2017-18	10%	90%
2	2017-19	12%	78%
3	2017-20	13%	65%
4	2020-21	15%	50%

State can further distribute to district and district road safety can distribute target police station wise on the basis of past year data



## Proposed Institutional Mechanism

SR	Name	Headed By	Member	Meetings in an Year	Work Area	Time period
1	Cabinet Sub-Committee on Road Safety	Home Minister	Minister for PWD, Transport, DoIT, Home, Health, Local Self Government Department (Rural & Urban)	2	Review and monitor all road safety activities	Constitute Up to 2017-18
2	State Road Safety Council	Transport Minister	Stakeholder departments and institutions	2	Collect suggestions, discuss, and take decisions and compliance	Reconstitute up to end of year 2017-18 (included divisional commissioner/NGOs and meeting should be held twice in a year)
3	State Level Traffic & Road Safety Management Committee	Chief Secretary	Senior officer of stake holder departments with finance department	2	Take decision and implement on road safety and traffic management issues.	Constitute up to end of year 2017-18

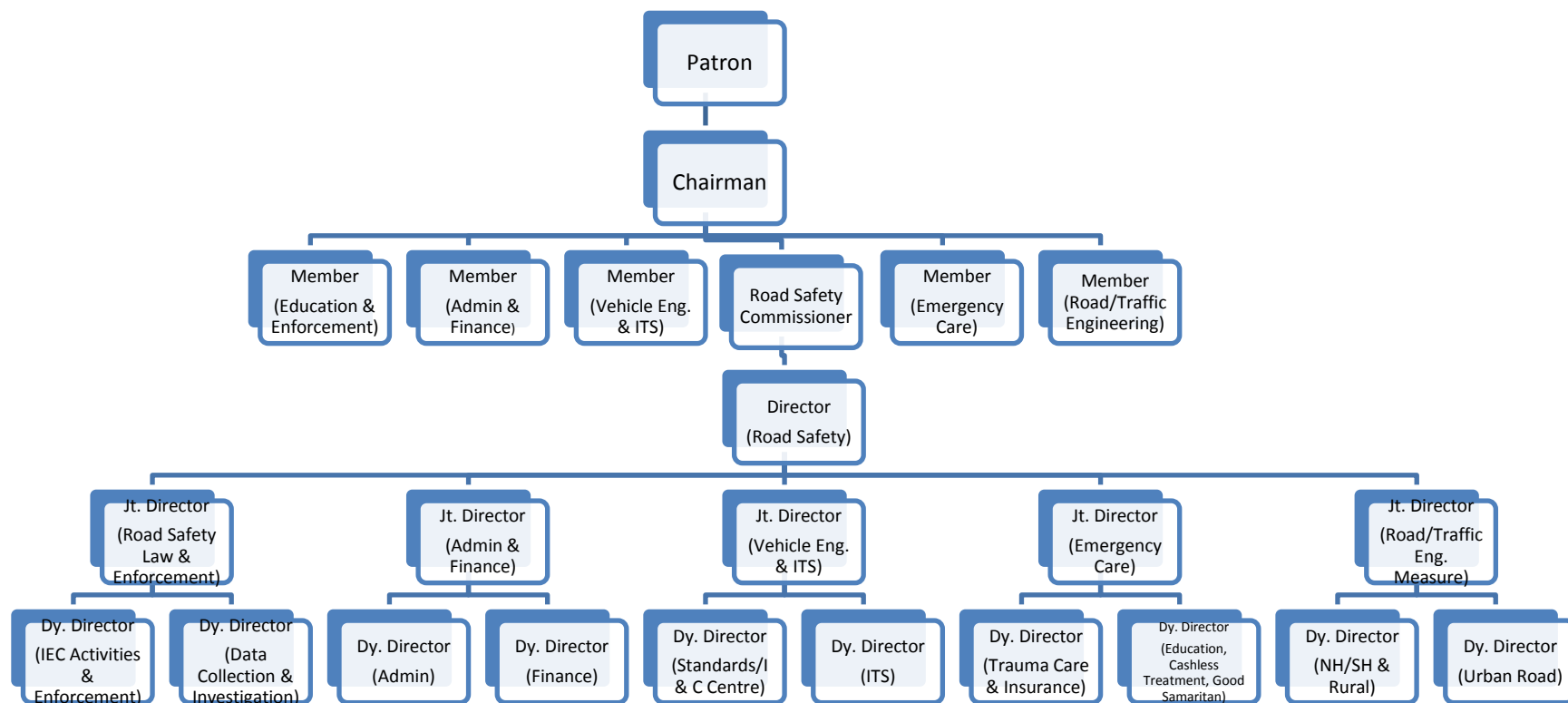


## Proposed Institution Mechanism

SR	Name	Headed By	Member	Meeting s in an Year	Work Area	Time period
4	(District Name) Road Safety Committee / Society	Member of Parliament & Acting Chairman- District Collector	MLAs and all DLOs of stake holder departments and institutions	2	Take decision, implement, Evaluation and compliance from all stake holder departments	Constitute up to year 2017- 2018
5	District level Traffic Management & Road Safety Committees	District Collector	Collector and all DLO of stake holder departments and institutions	4	Take decision and compliance from all stake holder departments.	Constituted (ensure four meetings in a year)
6	Sub Divisional Level Road Safety Committees	Sub Divisional Magistrate	SDO and all SDLO of stake holder departments and institutions	12	Take decision and implement police station wise in a cluster.	Constituted.
7	Gram Panchayat/Munici pal Ward Level	Sarpanch/Ward Parshad	Stake Holders posted in the area. Social workers and NGO.	12	Awareness and take decision in their jurisdiction.	2017-18



## Proposed Lead Agency: State Road Safety Authority or State Road Safety & Traffic Management Board





## Structure of State Road Safety Authority or State Road Safety & Traffic Management Board

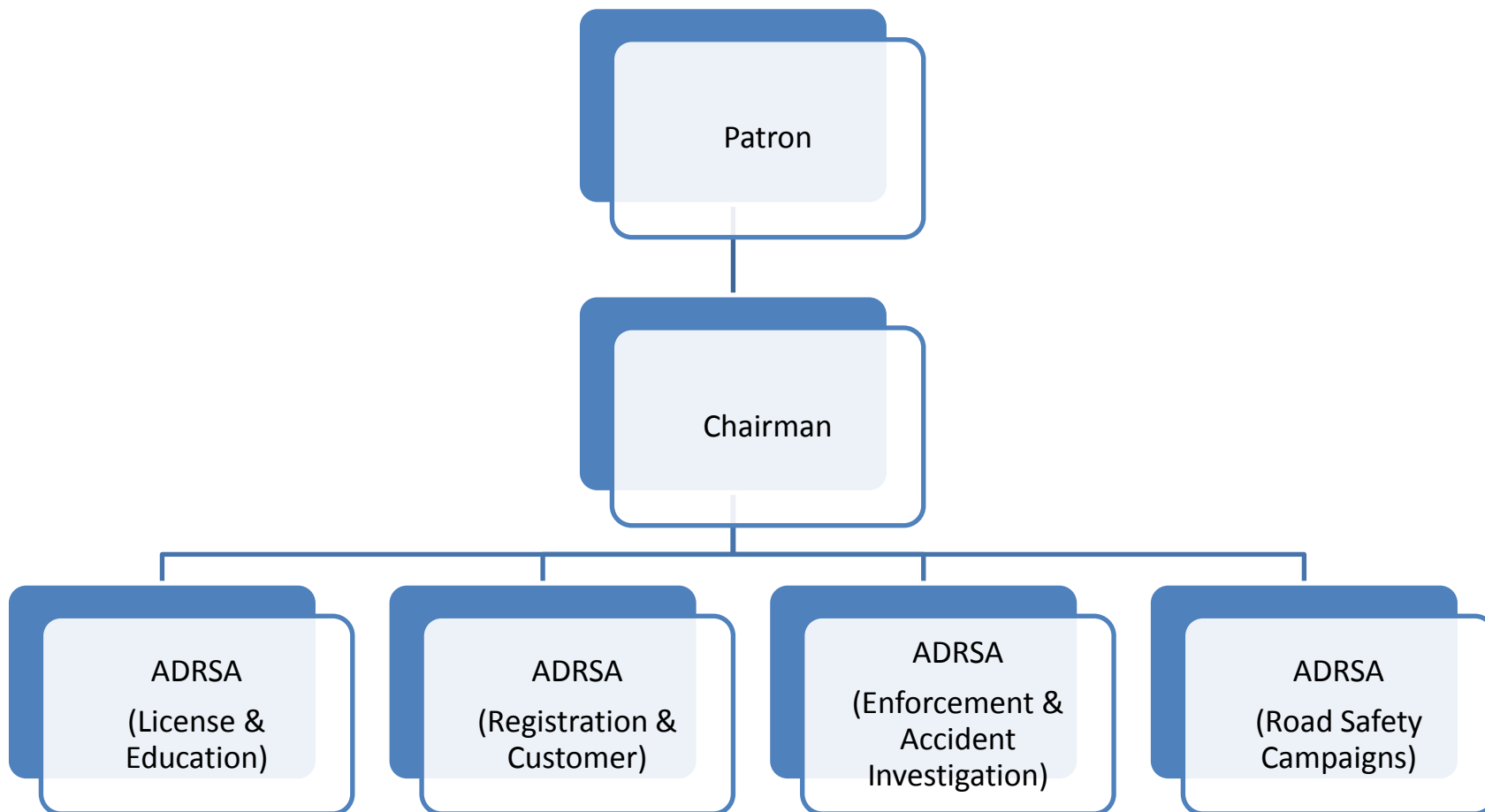
### Levels of the members of the State Road Safety Authority:

- Patron – Chief Secretary/Transport Minister.
- Chairman – Level of Principal Secretary of State.
- Member – Level of Secretary of State.
- Director (Road Safety) – Additional Transport Commissioner Level/Jt. Secretary Level of State Govt.
- Jt. Director – Jt. Director / Jt. T.C. Level/ Dy. Secretary Level of State Govt.
- Dy. Director – Dy. Commissioner/RTO/Asst. Secretary Level of State Govt.





## Proposed Lead Agency: District Road Safety Authority







# Composition of District Road Safety Authority

- **Levels of the members of the State Road Safety Authority:**
- Patron – District Collector.
- Chairman – Regional Transport Officer of Additional Collector Level/Dy. Director/Dy. Transport Commissioner.
- 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 – Dy.SP. (Traffic) Level, PWD – X.En. Level, Medical & Health – Sr. Medical Officer, Local Self Government Rural – ACEO Level/Urban – Assistant Director Level.
- Minimum Two Road Safety Expert.
- The Dy. Director/RTO/Dy. TC as a Chairman District Road Safety Authority must have minimum 14 years 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 Asst. Director must have minimum 10 years 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 Assistant District Road Safety Authority at Sub Divisional Level shall be at level of minimum Motor Vehicle Inspector.



# 1E: Engineering of Vehicle

- **Role of MVD Ensure Vehicle Standards (AIS) at the time of permission for registration as per prototype, at the time of inspection for registration. At the time of inspection of fitness. At the time of law enforcement.**
- All sort of safety devices.
  - Seat Belt
  - Air Bag
  - ABS (Anti Lock Braking System)
  - ESC (Electronic Stability Control)
  - AEBS (Advanced Emergency Braking System)
  - BSD (Blind Spot Detection)
  - CMS (Collision Mitigation System)
  - FCW (Forward Collision Warning)
  - LCL (Lane Change Assist)
  - LDW (Lane Departure Warning)
  - LKS (Lane Keeping Support)
  - ACC (Adaptive Cruise Control)
  - AEB (Autonomous Emergency Braking, Stopped Vehicle)



## 2E: Engineering of Road

- Understanding of Road Engineering Measures: Road Signage, Road Marking, All Road Furniture.
- Traffic Calming and Speed Management
- Black Spot Definition:
- Black Spot Identification and Rectification
- *'Road accident black spot is a stretch of National Highways of about 500m in length in which either 5 road accidents (in all three years put together involving fatalities /grievous injuries) took place during the last three calendar years or 10 fatalities (in all three years put together) took place during the last three calendar years'.*
- Road construction is to be done under surveillance of Traffic Engineer
- Compulsory Road Safety Audit (New Road)
  - Feasibility Stage
  - Draft Design Stage
  - Complete Design Stage
  - Construction Stage
  - Pre Opening to Public
- Compulsory Road Safety Audit (Existing Roads)
  - Through International Road Safety Auditor
  - Existing Roads, Fly Over, Junctions, Black Spots



# Why Road Safety Audit



Wrong Speed Limit & Keep Left Sign  
At NH 8, Ajmer



Actual Speed Limit & Keep Left Sign



## 3E: Education

- School Education from 6<sup>th</sup> to 8<sup>th</sup>
- School Education from 9<sup>th</sup> to 10<sup>th</sup>
- School Education 11<sup>th</sup> to 12<sup>th</sup>
- Requirement of Traffic University / University of Road Safety
- Certificate and Diploma Course in Open University
- Education to Public Through Road Safety Awareness Campaign
- Other Advertising Media
- Education in Every Government Department and Compulsory 3 Session of Training in other Training Institutes like OTS, RPA, PTS & others.



# Capacity building course in road safety

***A traffic university should be established in each state and following courses should be offered:-***

- *Certificate and diploma courses in road safety(distance and regular)*
- *Three year diploma/degree/P.G. degree course in traffic engineering*
- *U.G. and P.G. course in transportation science*
- *U.G. and P.G. course in transportation economics*
- *B.C.A. and M.Sc. In intelligent transport system*
- *M.B.A. in road safety and traffic management*
- *Diploma and degree course in accident analysis and reconstruction of road crashes*
- *PHD. In road safety*

***And a transportation research institute should be opened in every government universities of each state.***



- Technology is updating continuously in automobile sector and To cope with new technology we need to initiate following technical course:-  
B.E./B.Tech. in road safety techniques and devices.  
Degree(four year programme)in traffic engineering.





# Target Group for Road Safety

- School & College Students
  - Activities like quiz, essay, debate, rangoli, plays & skits etc.
- Driver's Training
  - Refresher Training, Hazardous Goods Transportation.
- General Public
  - Awareness Programs, Fairs & Carnivals
- Traffic Offenders
  - 2 to 3 Hours Training on Road Safety





# Capacity Building

- Certified scientific accident investigator and reconstructionist team
- Certified Road Safety Teacher
- Certified Road Safety Auditor Team
- Certified Road Safety Trainer
- First Aid Training
- Driver Training
- Licence Applicant Training
- Traffic Offender Training
- Student Training
- Community Training
- Staff Training



# THREE RULES OF THE ROAD

## 1. ROAD SIGNALS

**SIGNAL IS A ROAD LANGUAGE**

**FOUR TYPES OF ROAD SIGNALS**

- Driver Hand Signals
- Vehicle Indicator Signals
- Traffic Police Signals
- Traffic Light Signals

## 2. ROAD SIGNS

**THREE TYPES OF ROAD SIGNS**

- Mandatory
- Cautionary
- Informatory

## 3. ROAD SENSE

**SENSE DURING DRIVING**

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**SENSE DURING DRIVING**



# Signal by Driver

## Indicators signals

Indicators inform other drivers what you want to do so they can make adjustments accordingly.

Use your indicators, brake lights or hand and arm signals to signal before turning, changing lanes, slowing down, leaving the road or coming out of a parking area. Give the correct indication well before your maneuver and ensure other drivers can see it.

Check that the way is clear before you act — giving indication does not mean the road is clear

### Driving through intersections/crossings

Slow down as you get close to intersections and look carefully for traffic, signs (yield sign, stop sign, traffic light, constable manning the crossing), cyclists and pedestrians.



## Hand Signals by Drivers : Arm signals

For use when direction indicator signals are not used, or when necessary to reinforce direction indicator signals and stop lights.



I intend to  
move in to the  
left or turn left



I intend to move  
out to the right or  
turn right



I intend to stop.



I intend to  
slow down



Indicating the car following you to overtake.



## Traffic Light Signals



### Red - To stop the traffic

Bring your vehicle to a complete halt behind the stop line or cross walk. Wait until the light turns green



### Green - Go on

Go through the crossing carefully. You can turn in the direction of the arrow by giving indicator.

### Amber - Caution



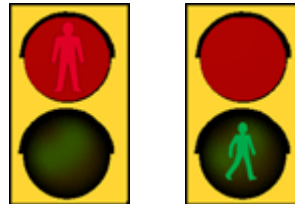
If you have entered the intersection and the light turns to amber, move on very carefully. If you see the amber light before entering the crossing, stop the vehicle behind the stop line or cross walk.



### Flashing signals

A flashing red signal means you should come to a complete stop and move through the intersection where it is safe to do so.

A flashing amber signal warns to drive with caution.



### Pedestrian signals

These signals help pedestrians cross intersections safely. If you face a steady red human figure, do not enter the road. If the signal starts flashing, cross the road quickly if you are already on the road. Stop, if you are about to join the road.

Walk cautiously if you face a steady green human figure.



## HAND SIGNALS by Traffic Police

If police constables are directing traffic, follow their instructions even if they are different from traffic lights or signs. There might be an emergency situation.

Bring your vehicle to a complete stop when a police official signals you to stop.

Walk cautiously if you face a steady green human figure.





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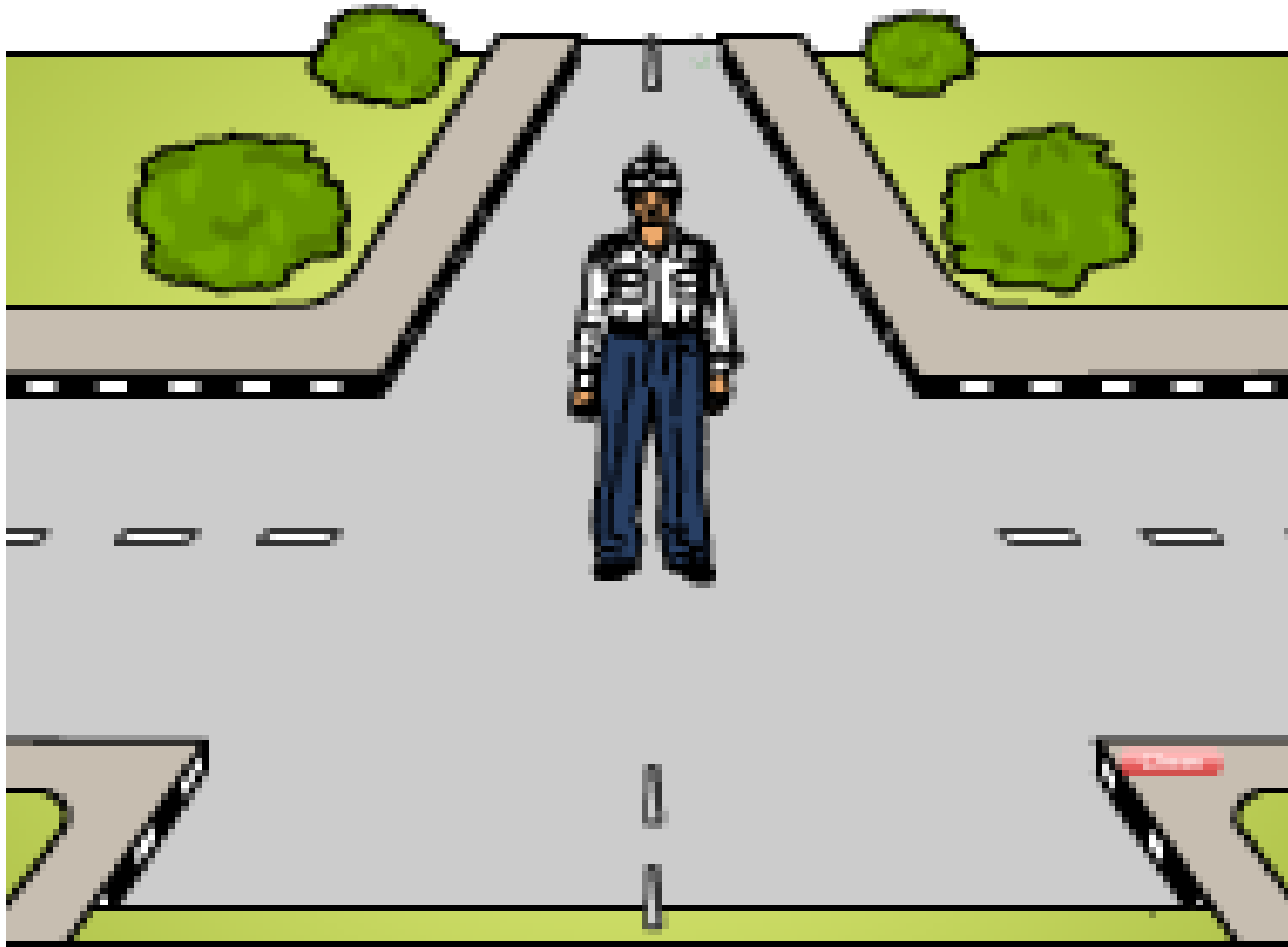
Close



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# Signals Use at Intersections

## Controlled intersections

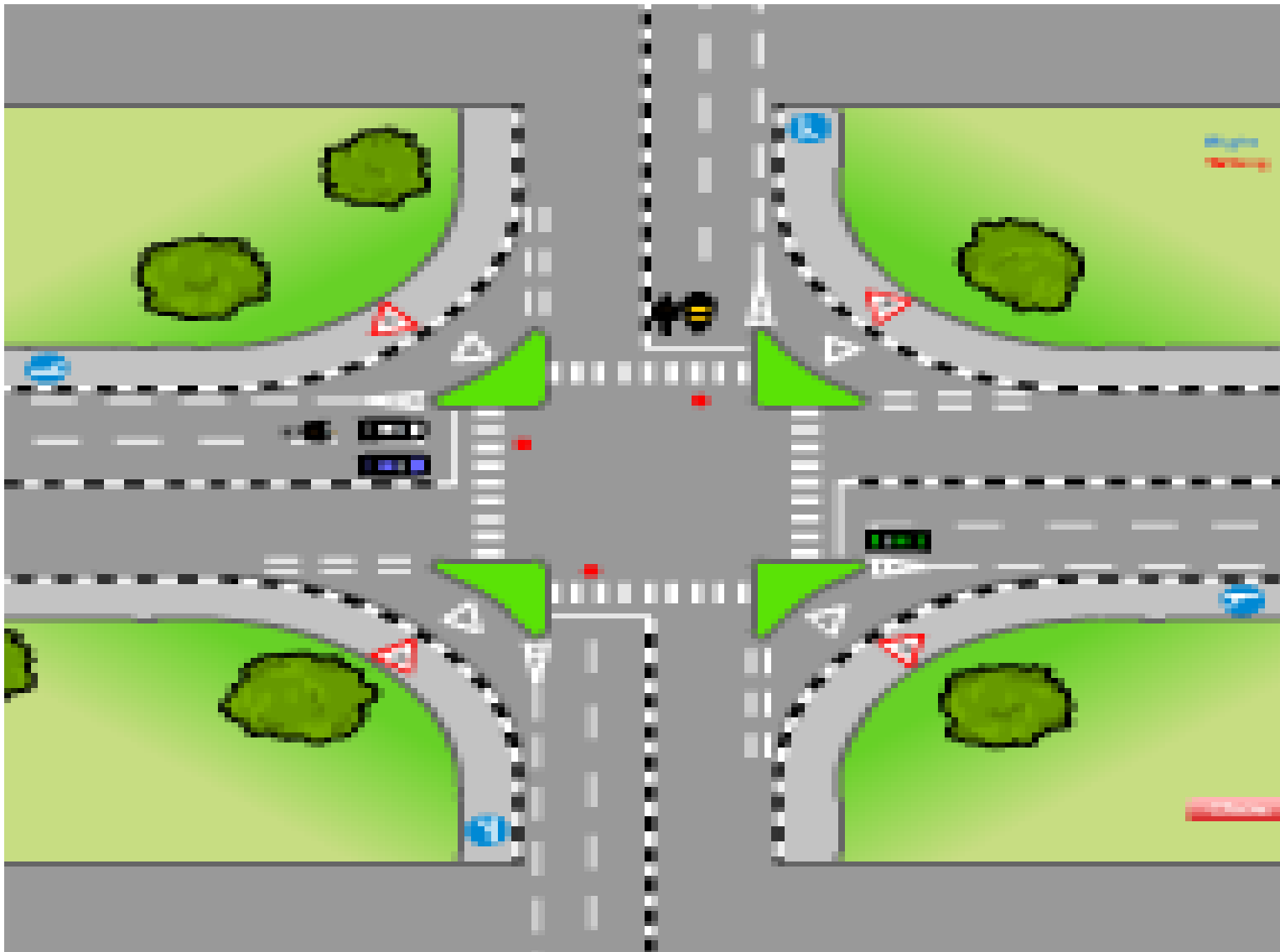
## Uncontrolled intersections

### Controlled intersections

Controlled intersections have traffic lights, round-about, yield signs or stop signs to control traffic. If you get green light, drive carefully through the intersection at a steady speed. If the light has been green for quite some time, you should get prepared to stop if the light turns yellow. If you have crossed the stop line when the light gets yellow, drive through the intersection with caution. When your light turns red, bring your vehicle to a complete stop.

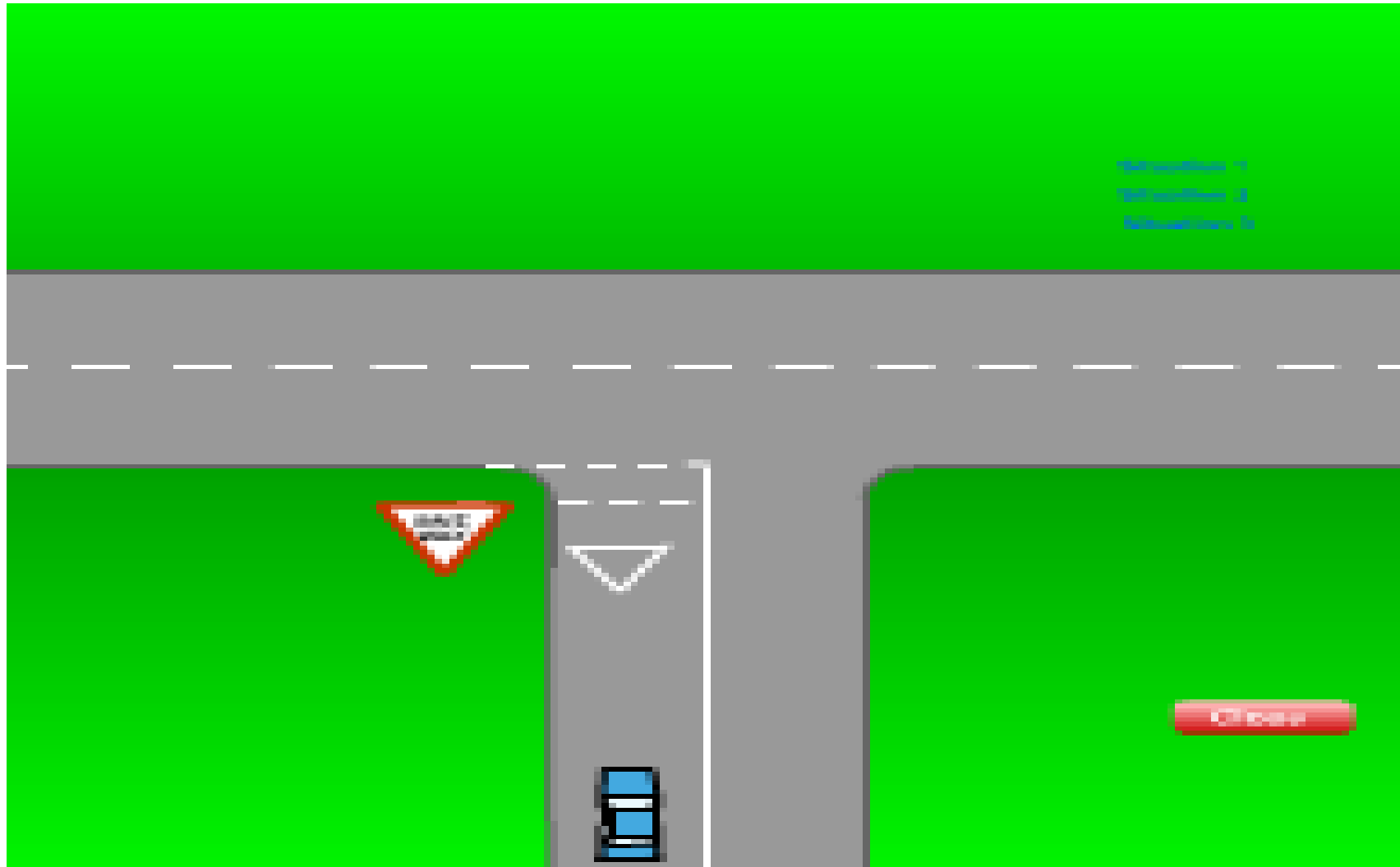
Slow down or stop at yield sign and wait for the way to get clear before you drive through the intersection.

Bring the vehicle to a complete stop if you face a stop sign. Drive through the intersection only when the way is clear.





Uncontrolled intersections have no signs or traffic lights. They are usually found in areas where there is less traffic. Be cautious while going through intersections.

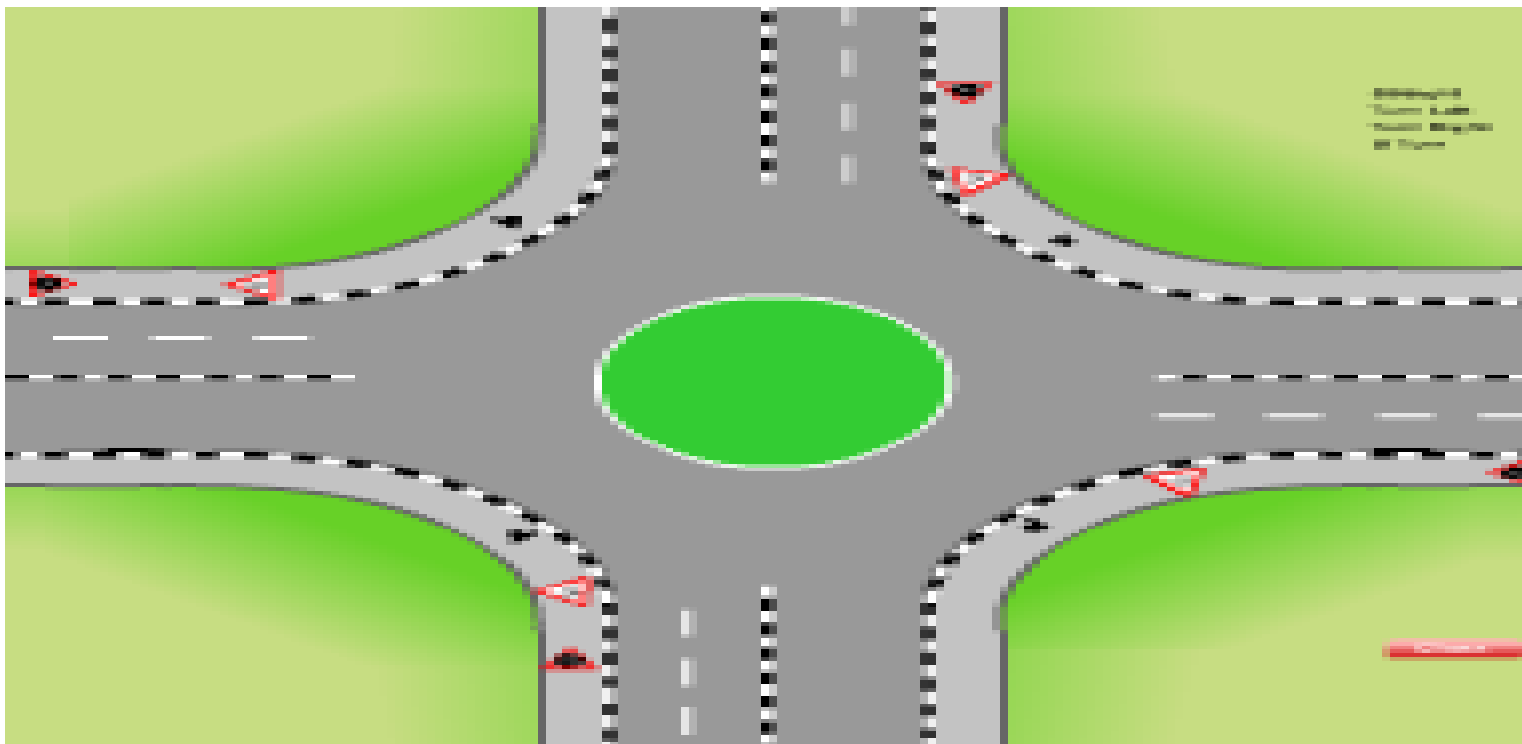




## Round -abouts

**On entering a roundabout:** Before entering a roundabout, you must indicate a left or right-hand turn for at least five seconds if you intend making a turn from the roundabout.

**On leaving a roundabout:** When leaving a roundabout, whether you are turning left, right or going straight ahead, you must always indicate when you are about to exit.





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# TRAFFIC SIGNS



# TRAFFIC SIGNS

Traffic signs are divided into 3 main categories

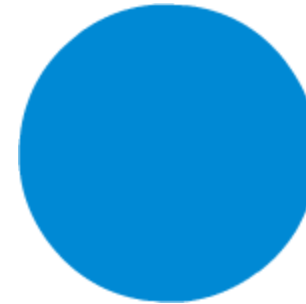
1. Mandatory/Regulatory signs 2. Cautionary signs 3. Information signs



Red circle instructs what should not be done.



Triangle cautions



Blue circle instructs what should be done.







**STOP SIGN:** This sign is used on roadways where traffic is required to stop before entering a major road. The vehicle shall proceed past the stop line only after ascertaining that this will not cause any damage to traffic on the main road.

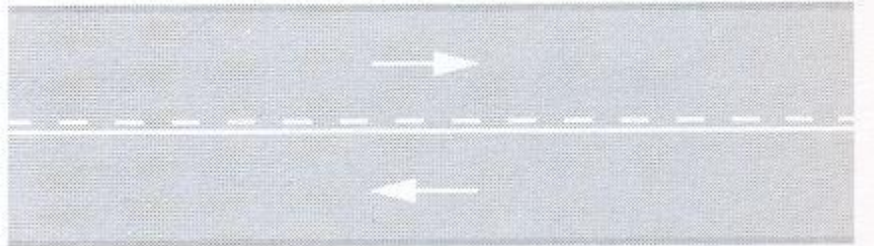
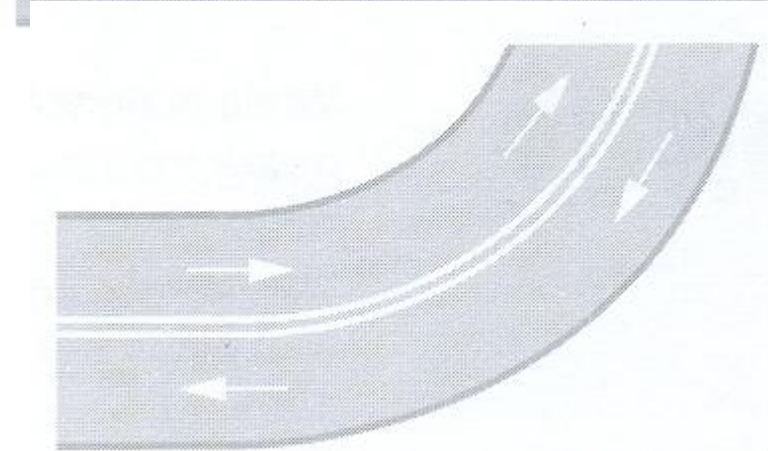
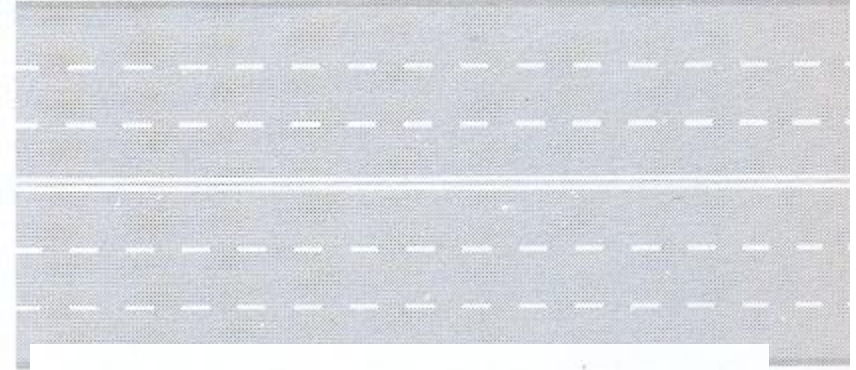
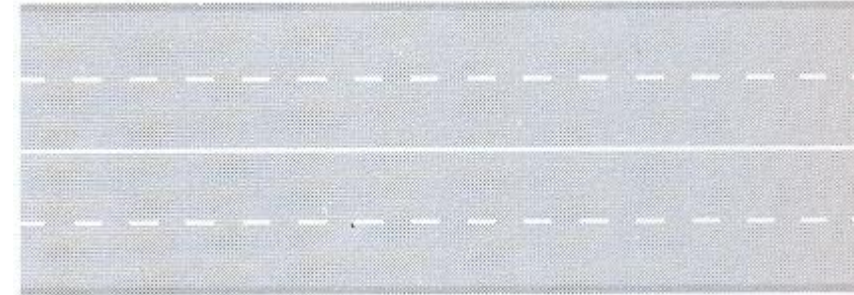
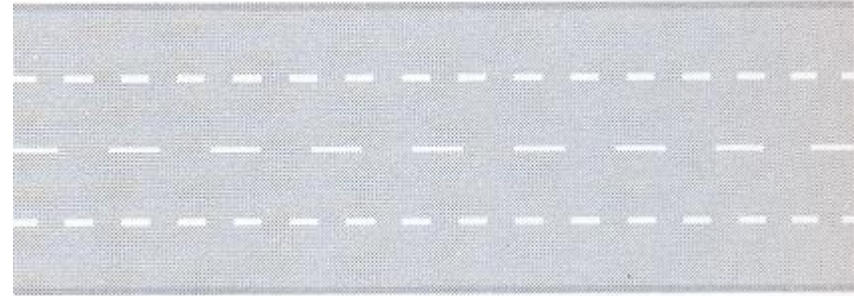


**GIVE WAY SIGN:** This sign is used to assign right-of-way to traffic on certain roadways and intersections, the intention being that the vehicles controlled by the sign must give way to the other traffic having the right-of-way.

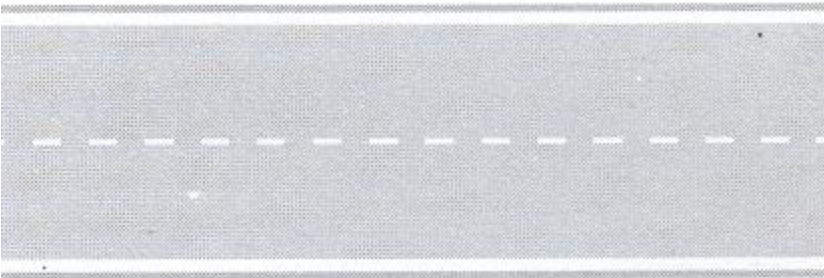
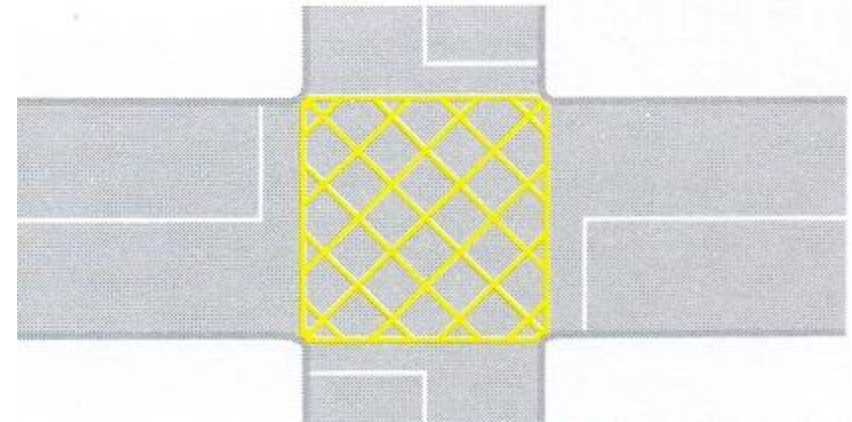
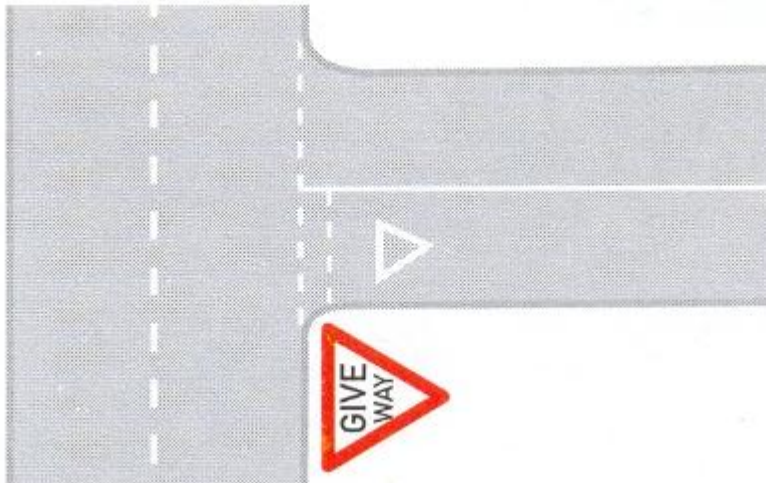
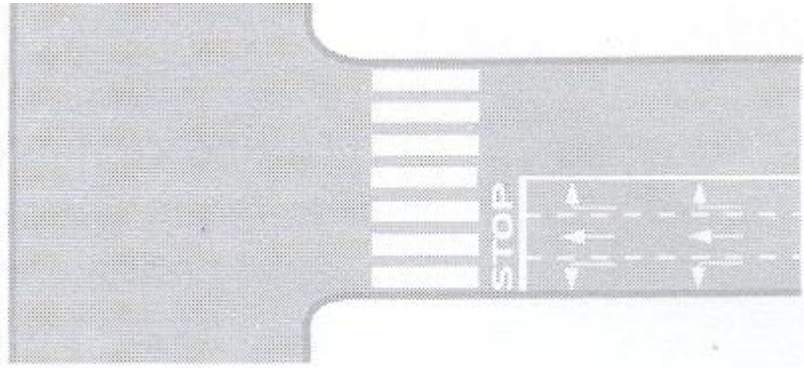




# Road Markings







# Mobile Van For Road Safety Awareness in Rajasthan

## Schools & Gram Panchayats Program (July 2013 to December 2016)

No. of Sessions

1898

Benefited Participants

192495







# Model Design of Mobile Van





## 4E: Enactment of Law & Enforcement

- General Enforcement (Manual)
  - Like Seat Belt, Helmet, Overloading/Overcrowding
- Technical & Comprehensive Enforcement
  - Safety Devices such as ABS, Speed Governors and to ensure that fitment is as per the prescribed norms or not.
- Automated Enforcement System
  - With the use of new technology like Registration Plate Detection System, Speed Guns and process of eChallaning.
- Scientific Crash Investigation & Reconstruction



## 5E: Emergency Care

- Helping Road Accident Victims, Supreme Court Ruling (Good Samaritan Law)
- National Highway Accident Relief Service Scheme.
- Emergency Medical Service, 108 Medical facilities, Trauma Care.
- Follow the rule of ABC.
  - A) Airway
  - B) Breathing
  - C) Circulation





## 6E: Environment

- According to Indian Culture.
- Detrimental Effects of Traffic on Environment.
  - Safety
  - Noise
  - Jam & Congestion
  - Air Pollution
  - Degrading the Aesthetics



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# THANKS