



Blackspots

(Pilot districts -Indore, Dhar & Datia)

Draft Environment and Social
Management Plan



Madhya Pradesh Rural Road Development Authority

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1. Introduction

1.1. Project Background

The consultant team collected a database of blackspots for three pilot districts (Datia, Dhar, and Indore) from the Home Department, Madhya Pradesh. As per the project scope, a preliminary screening of the blackspots listed in the database was carried out in close consultation with the stakeholders, i.e., MPRRDA, District level Home Departments, MPPWD, MPRDC, PIU MPRRDA. Accordingly, blackspots which fall under the jurisdiction of State Highway, MDR/ODR, PWD, MPRDC and MPRRDA were identified. After due consultation with local key stakeholders in three districts (e.g., home department and PIU MPRRDA) these blackspots were mapped in a GIS tool (e.g., Google Earth) and thereafter, the consultant team had undertaken the safety investigations of these blackspots. Additionally, crash data for last three years were obtained and studied to understand the useability of the same to build inferences about the crashes occurred at blackspots.

The list of the selected blackspots in pilot district is mentioned in below table:

District	Location	Implementing Agency
Dhar	Pagara Phata	MPRDC Dhar
	Pitgarah Phata	MPRDC Ujjain
	Dhar Phata Makhni	
	Village Jetpura	PWD Dhar
	Modi Petrol Pump: Ratanpur Road & Chhokhurd Road	MPRRDA Dhar
Indore	Dewas Naka Chawaraha	IMC
	Lantern Chawraha	
	Bapat Chawraha	
	Ruchi Soya Factory	PWD Indore
	Bihadiya Phata	
Datia	Cheema Bamwa	MPRDC Datia
	Piprauha Chauraha	
	Warehouse Khanjpura Road to Byaspura Road	
	Kutir Essar Petrol Pump to Prabhakar Petrol Pump	

The location of the selected blackspots in pilot districts is shown in the below maps:

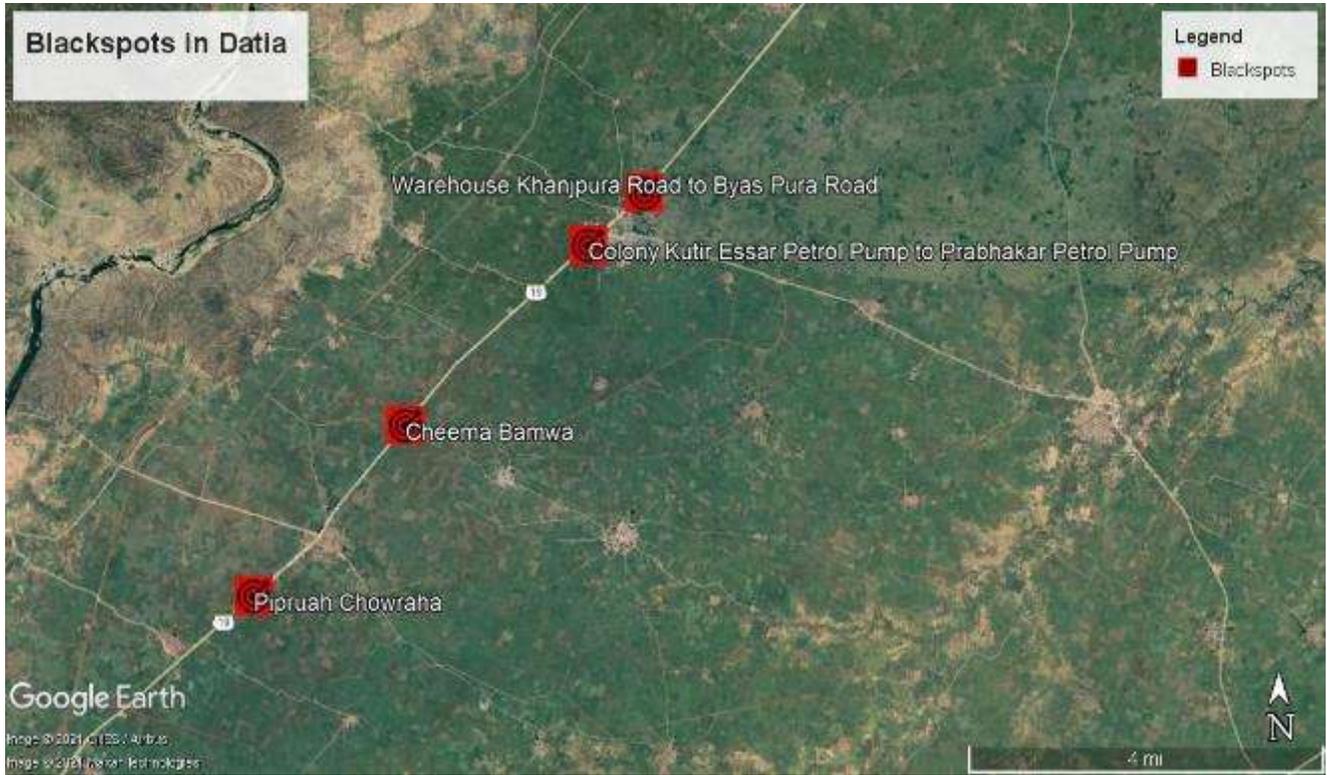


Figure 1: Alignment of the selected blackspots in Datia



Figure 2: Alignment of the selected blackspots in Dhar



Figure 3:Alignment of the selected blackspots in Indore

1.2. Need and Justification

The objective of the study is to improve the safety and operational efficiency of all road users with special focus on pedestrians, local communities including roadside vendors.

1.3. Objectives of ESMP

The Environmental and Social Impact assessment of the project has been carried out to analyze the impact of proposed interventions on the nearby habitants, including shopkeepers, dwellers, residents, and road users including pedestrians, vehicle drivers etc.

1.4. Methodology of preparation of ESMP

For social baseline and impact assessment, various levels of discussions were held with stakeholders including government officials, community representatives and a wide range of road users and roadside dwellers. The main purpose of this approach was to obtain a fair impression on the people's perceptions about the baseline condition and their views on the proposed safety countermeasures along the corridor.

In order to establish the environmental condition baseline within the study area, relevant secondary and primary data was collected and reviewed, a comprehensive field visit was undertaken, and a number of consultations with local people were carried out.

1.5. Structure of ESMP Report

The structure of the report is as follows:

- Chapter 1 of the report includes the introduction of the project including need and justification, methodology followed for the preparation of ESMP along with the objectives.

- Chapter 2 of the report deals with description of the baseline status of the selected corridor and the proposed design countermeasures along the corridor.
- Chapter 3 of the report details out the policies and frameworks which needs to be adhered throughout the project.
- Chapter 4 of the report includes the baseline assessment of the project area including social, physical and biological characteristics.
- Chapter 5 of the report includes the alternatives analyzed during the proposal stage of road safety countermeasures along the corridor.
- Chapter 6 details out the consultations held with key stakeholders at different levels to explain the design proposal and gather their viewpoint along with analyzing the impact of the proposed countermeasures.
- Chapter 7 of the report explains the potential environmental and social impacts of the project if any.
- Chapter 8 of the report includes the detailed environmental and social management plan prepared for the project.
- Chapter 9 of the project covers the institutional arrangements for environmental and social management including the grievance redressal mechanism.

2. Description of Project

2.1. Improvement Proposal and Design Counter Measures

2.1.1. Blackspots in Indore

2.1.1.1. Blackspot 1: Ruchi Soya Factory

- This blackspot is situated on a through segment on one of the major arterial roads of Indore in an industrial area.
- Co-ordinates of the location are 75.916845 E, Longitude: 22.804930 N.
- It's a through segment with adjoining industrial area.
- Based on site observations and analysis of available data the following issues emerged:
 - High volume of heavy vehicles is observed in throughout whole day. Since it is one of the major roads of Indore city, traffic movement is observed throughout the day of mostly commercial vehicles.
 - Lack of Merging and diverging lanes from different industries joining the road segment was observed.
 - Also lack of pedestrian facility for walking and crossing the roads was observed.
 - Median channelization has been done temporarily with the help of RCC barriers
- To reduce accidents at Ruchi Soya Factory, the following improvement measures are suggested:

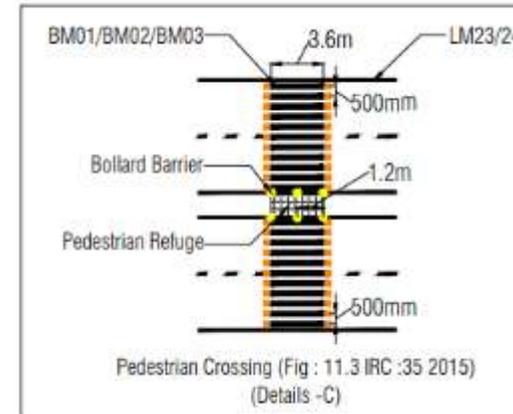
S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
1.	Pedestrian Crossing				

- Despite being an industrial area with large volumes of pedestrian traffic, no pedestrian facilities were maintained. At this location, as per accident records half of the total crashes happened due to the collision of pedestrians and two wheelers whereas the other half of the crashes involved collision of bus and two wheelers.



Very High

- Provide proper facility for crossing with pedestrian refuge islands and bollards as per IRC:99-2018.



- Locations to be implemented are shown in plan.

Essential

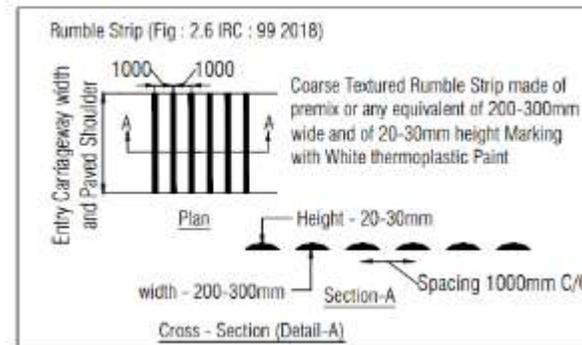
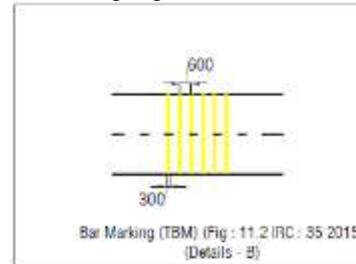
2. Industrial Entry Gate on Main Stretch

- As observed on location, the main gates of factories and Vehicle sheds are connected directly to the main carriageway, which causes conflict on main carriageway.



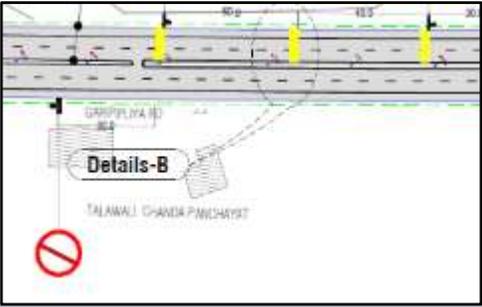
Very High

- To reduce the speed of traffic moving on main stretch near the median opening TBM and Rumble Strips must be implemented. As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), to control their speed of vehicles at median opening and to allow the heavy vehicles to turn at medians TBMs and rumble strips must be implemented, along with its warning sign as shown in below figure.



Essential

3. Accident Prone zone and Solar Blinkers

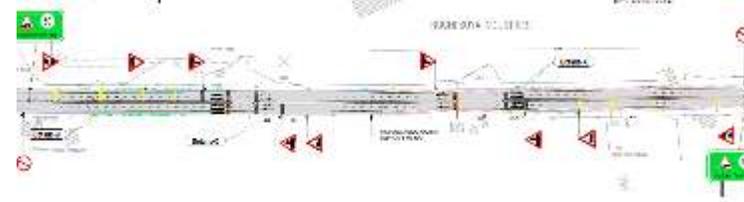
<p>For alerting the drivers about the blackspot, accident prone zone sign board and solar blinkers need to be installed at the start and end of Blackspot.</p>	Very High	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and solar blinkers on both ends to be installed as shown in below figure. <div data-bbox="1070 316 1783 644" style="border: 1px solid black; padding: 5px;"> <p>Gateway Sign : Blackspot Warning Sign as per MoRTH Circular RW/NH-29011/01/2019-5&R (P&B) Sign boards are to be installed at Start of Blackspot Section on Both Sides (Median and Shoulder)</p>  </div>	Essential	
4. Restriction End Sign on both ends				
<p>On blackspot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions.</p>	High	<p>As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally.</p> <div data-bbox="1211 807 1693 1114" style="border: 1px solid black; padding: 5px;">  </div>	Highly Desirable	
5. Road Studs				
<p>The raised pavement markers/ road studs are not present throughout the road.</p>	High	<p>Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019.</p>	Highly Desirable	
6. Road Signs				

Lack of traffic control signs along the road stretch. Only some informatory signs were observed. Thus, some signs have visibility issue.



Very High

- The signs should be kept according to the IRC 67 – 2012.
- Periodic trimming of trees needs to be done.
- Signs includes Blackspot warning signs, median opening signs, speed bumps, pedestrian crossing and restrictions end signs.
- The sign should be placed as a specific distance as per IRC 67 - 2012.



Other signs need to install as per plan.

Essential

7. Road Marking

- Road marking was not maintained on road stretches.

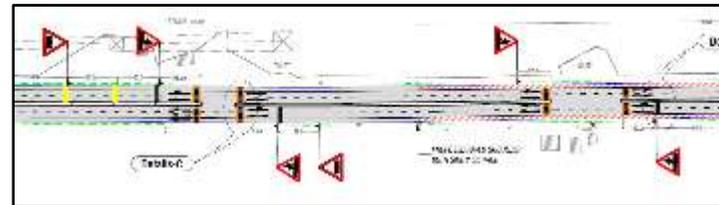


- Arrow road marking were not implemented on median openings.



Very High

Road markings must be implemented as per IRC -35 – 2015.



Essential

8. Geometric Improvements

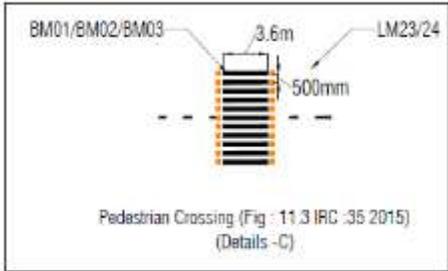
	<ul style="list-style-type: none"> A lot of haphazard movements and contra-flow violations were observed at the site. This has been addressed temporarily by installing Jersey type barriers on the centre of the carriageway. 	Very High	<ul style="list-style-type: none"> In order to have a permanent median channelization and prevent contra-flow violations and head-on collisions, a permanent divider median has to be installed at the entire stretch of the location with median openings near the entrances of the factory and other site businesses In discussion with PWD officials, it was recommended that the following improvements be installed: <ul style="list-style-type: none"> 1 (one) lane concrete widening on both sides for a distance of 460m. The crust to be used: Subgrade 500, CRM 100, DLC 100 and PQC 250 (M40 grade) Hume pipe to be installed on Dewas side on both sides of the road to accommodate drainage. NP4 specification pipe is to be taken 	Essential	
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Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in industrial area, are needed to be implemented at earliest.

2.1.1.2. Blackspot 2: Bihadiya Phata

- This blackspot is situated on MDR and is a road section with horizontal curve on both ends with a minor road making a T junction with main road.
- Co-ordinates of the location are Latitude 75.949980° E, Longitude: 22.646573° N.
- Nearby area is mainly agricultural and residential.
- Based on site observations and analysis of available data the following issues emerged:
 - The road segment caters to low amounts of traffic which are originated from / destined to nearby rural habitations/ establishments
 - Road edge delineation and control measures such as signages and road markings were found limited or missing at the location
 - There is high embankment at south approach towards Rajgarh, which combined with a horizontal curve has the potential to create a hazard for run-off and head-on crashes to occur
- To reduce accidents at BihadiyaPhata, the following improvement measures are suggested below:

S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
1.	Geometric Improvements				

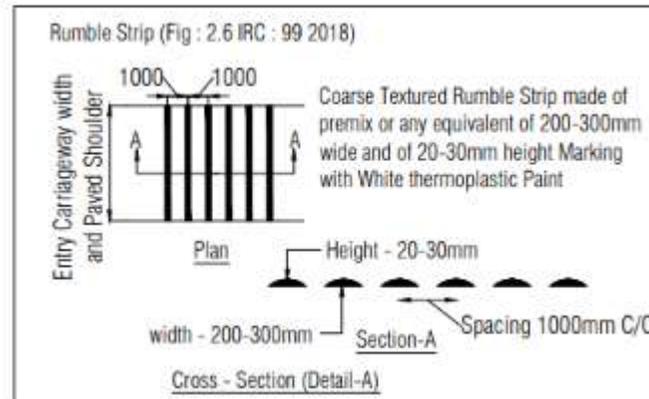
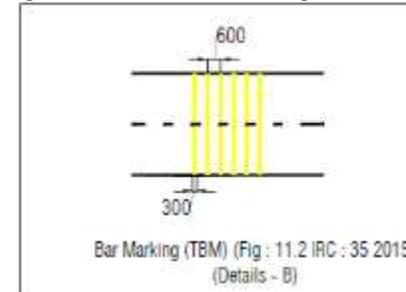
<ul style="list-style-type: none"> The junction area is wide without any channelization. This encourages unsafe turning movements  <ul style="list-style-type: none"> The north approach of the blackspot area has a steep horizontal curve, which causes vehicles to veer off and be involved in run off accidents. 	Very High	<ul style="list-style-type: none"> Provide a left turn channelizing island at the junction that will help in channelizing the right turn movements in and out of the side road and also provide a traffic calming effect at the junction area. During field visit, in discussion with MPRDC officials, the following geometric improvements have been recommended: <ul style="list-style-type: none"> Introduce tapers for a distance of 70m on the north edge and 100m on the south edge on both sides of the minor road at the bell-mouth junction. The crust to be considered for widening is: ERM (15), WMM (250), DBM (50) and BC 30 These geometric improvements will cause relocation of existing electric poles Locations to be implemented are shown in plan 	Essential
2. Pedestrian Crossing			
<ul style="list-style-type: none"> There is a complete absence of pedestrian crossing facilities at the location. 	Very High	<ul style="list-style-type: none"> Provide proper facility for pedestrian crossing as per IRC 35 – 2015.  <p style="text-align: center;">Pedestrian Crossing (Fig : 11.3 IRC :35 2015) (Details -C)</p> <ul style="list-style-type: none"> Locations to be implemented are shown in plan on both sides of junction. 	Essential
3. Traffic Calming Measures (Rumble Strips and Transverse Bar Marking)			

To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic.
 To reduce the speed of vehicles on approach to major road.



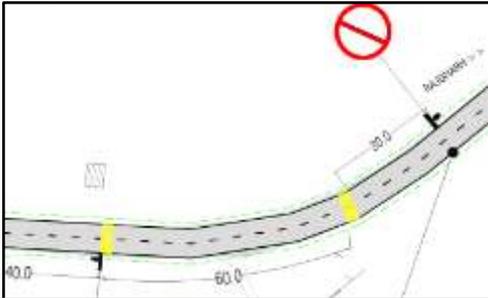
Very High

- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of mainstream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure.



Essential

4. Accident Prone zone and Solar Blinkers

<p>For alerting the drivers about the blackspot warning accident prone zone sign board and solar blinkers need to be installed for making drivers caution.</p>	Very High	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and solar blinkers on both ends to be installed as shown in below figure. <div data-bbox="1115 316 1805 628" style="border: 1px solid black; padding: 5px;"> <p>Gateway Sign : Blackspot Warning Sign as per MoRTH Circular RW/NH-29011/01/2019-5&R (P&B) Sign boards are to be installed at Start of Blackspot Section on Both Sides (Median and Shoulder)</p>  </div> <p>Further where to implement is been shown in plan on both ends of blackspot.</p>	Essential	
5. Restriction End Sign on both ends				
<p>On blackspot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions.</p>	High	<p>As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally.</p> <div data-bbox="1245 852 1733 1150" style="border: 1px solid black; padding: 5px;">  </div>	Highly Desirable	
6. Road Studs				
<ul style="list-style-type: none"> The raised pavement markers/ road studs are not present throughout the road. 	High	<ul style="list-style-type: none"> Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019. 	Highly Desirable	
7. Road marking and Visibility issues due to Overgrown Vegetation				

- Due to Overgrown vegetation around shoulders and turns, visibility was major concern.



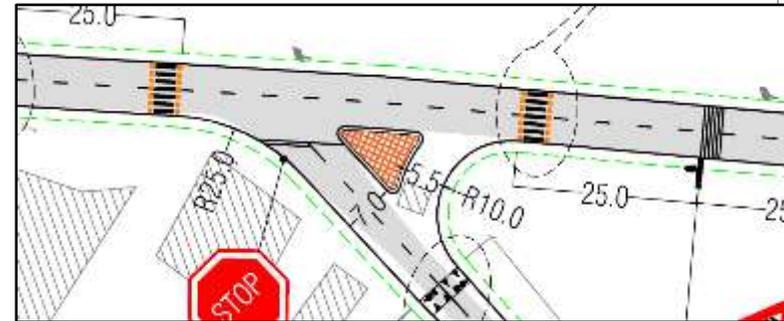
- On curves Lack of through road marking allows drivers to overtake on curves.



- Stop Road Marking needed to be marked when minor road meets major roads.

Very High

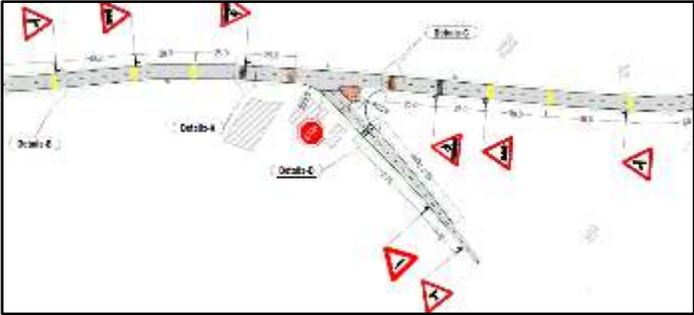
- Periodic trimming on curves must be done under maintenance
- Road markings must be as per implemented and maintained as per IRC -35 – 2015.
- Stop Marking must be painted before the junction as per IRC -35 – 2015.



Further where to implement is been shown in plan

Essential

8. Road Signs

<p>Road Signs are not satisfactory.</p> <ol style="list-style-type: none"> 1. Improper sign of 'No Parking' is placed near the intersection.  <ol style="list-style-type: none"> 2. Junction Ahead sign near the entry point of junction is missing. 3. Speed control signs were missing 4. Along with the 'STOP' road marking there should also be a 'STOP' sign before the junction.  <p>Junction Ahead signs, Speed Bumps, Pedestrian Crossing and Rumble strips signs were not implemented.</p>	<p>Very High</p>	<ul style="list-style-type: none"> • The signs should be kept according to the IRC 67 – 2012. • Periodic trimming needs to be done • The sign should be placed as a specific distance as per IRC 67 - 2012. • Stop sign should be placed in addition to the STOP marking on road.  <ul style="list-style-type: none"> • Other signs need to install as per plan. 	<p>Very High</p>	
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Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in Turns and junction and are needed to be implemented at earliest possible.

2.1.1.3. Blackspot 3: Lantern Chauraha

- This blackspot is situated near center of City. It's a junction joining South Tukoganj to Visheam Colony and NewPalasia to Indore GPO.
- Co-ordinates of the location are Latitude: 75.874213° E, Longitude: 22.724675° N.
- The location is a four-arm Urban signalized junction with four lane divided road approaches.
- The nearby land is mainly Residential and Recreational.
- Based on site observations and analysis of available data the following issues emerged:
 - High vehicle flow and pedestrian flow is observed in peak hours.
 - Also, it is one of the major MDR of Indore city, thus traffic movement is observed throughout the day.
 - Left turn slip lanes are curtailed abruptly, and contra-flow violations were observed. Channelisation has been done by use of RCC jersey barriers
 - Inadequate facilities for pedestrian crossing were observed including absence of refuge island and obstacles on the entry/exit points
- To reduce accidents at Lantern Chauraha, the following improvement measures are suggested below:

S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
1.	Geometric Improvements				

- The junction area was found to be channelised at several approaches for turning movements with the help of Jersey barriers. This is a temporary measure and also prevents construction of pedestrian crossings through them with refuge space



Very High

- Channelization should be implemented as per design standards with permanent kerb and island structures
- During discussions with Indore Municipal Corporation (IMC), it was found that a separate proposal for geometric improvements at the blackspot has been developed. This proposal has channelization, and pedestrian facility improvements and has been incorporated into the study along with other safety improvements being proposed.
- As per discussion, utility relocation due to this construction has been covered, apart from the signing and marking in this study.

Locations to be implemented have been shown in plan.

Essential

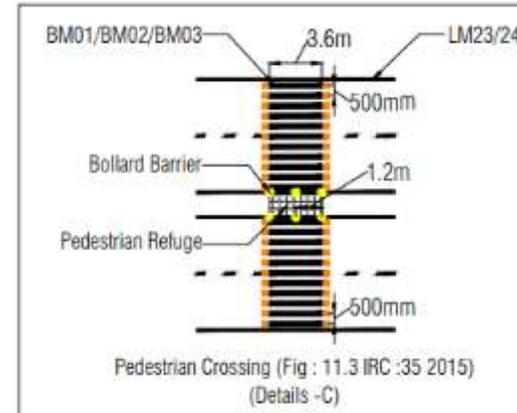
2. Pedestrian Crossing

- High pedestrian volumes were observed; however footpath are not maintained and absence of adequate refuge space for pedestrians is a major concern.



Very High

- Proper facility of pedestrian with pedestrian refuge islands, bollards and kerb ramps should be installed as per IRC:99-2018.



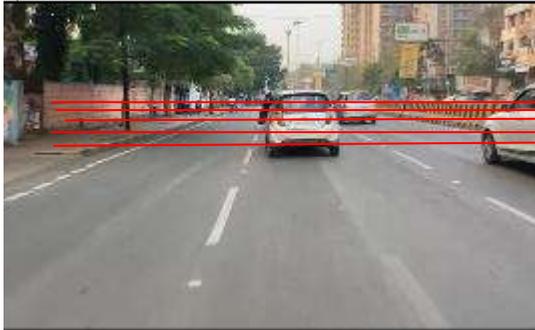
Locations to be implemented have been shown in plan.

Essential

3. Traffic Calming Measures (Rumble Strips and Transverse Bar Marking)

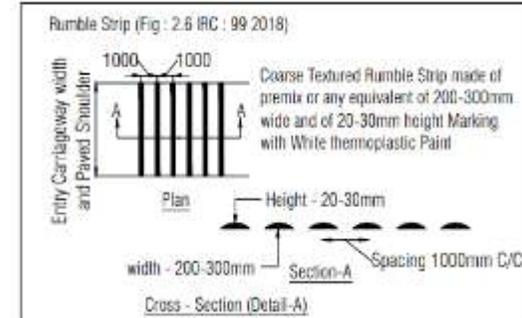
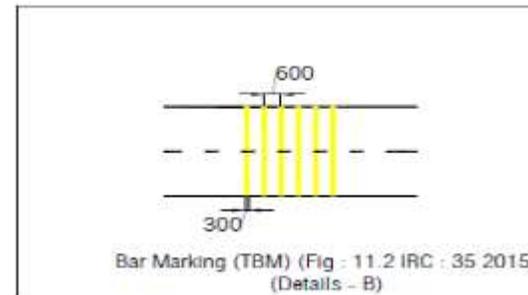
- As per accident records, the highest number of crashes at this location took place due to the collision of two-wheeler and cars. Hence, speeds of vehicles have to be curtailed at the approaches of the junction.

Very High

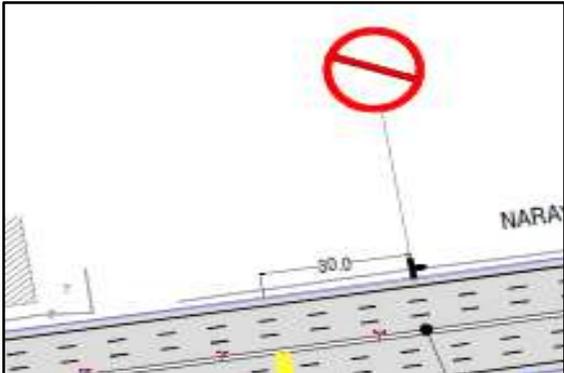


- To reduce the speed of traffic moving on an approach before the junction TBM (Transverse Bar Marking) must be implemented on the approach for reducing speeds of vehicles.
- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of mainstream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure.

Essential



3. Accident Prone zone and Solar Blinkers

<p>Due to large number of crashes between vehicles, drivers have to be alerted about the blackspot,</p>	<p>Very High</p>	<ul style="list-style-type: none"> “Accident prone area” sign board and solar blinkers need to be installed for making drivers aware of the Blackspot.As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and solar blinkers on both ends to be installed as shown in below figure. <div data-bbox="1126 373 1787 675" style="border: 1px solid black; padding: 5px;"> <p>Gateway Sign : Blackspot Warning Sign as per MoRTH Circular RW/NH-29011/01/2019-5&R (P&B) Sign boards are to be installed at Start of Blackspot Section on Both Sides (Median and Shoulder)</p>  </div>	<p>Essential</p>	
<p>4. Restriction End Sign on both ends</p>				
<p>On blackspot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions.</p>	<p>High</p>	<p>As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally.</p> <div data-bbox="1207 852 1771 1225" style="border: 1px solid black; padding: 5px;">  </div>	<p>Highly Desirable</p>	
<p>5. Road Studs</p>				

The raised pavement markers/ road studs are present, but at several places road studs on Pedestrian Crossing were missing.



Very High

- Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019.

Essential

6. Free Left Turns

<ul style="list-style-type: none"> All approaches have free left turn lanes. However, proper channelization is missing 	High	<ul style="list-style-type: none"> Channelization is required with road marking, delineators. At all free left turns proper channelization barriers should be implemented. 	Highly Desirable	
7. Road Signs				
<ul style="list-style-type: none"> Overall, the junction area has inadequate road signs for traffic control. Junction Ahead sign, Pedestrian Crossing, Speed control signs were missing. 	Very High	<ul style="list-style-type: none"> The signs should be installed according to the IRC 67 – 2012. The sign should be placed as a specific distance as per IRC 67 - 2012. Other signs need to be installed as per plan. 	Essential	
8. Road Marking				

- Road Marking were observed to be fading



Very High

- All the road markings should be implemented as per plan in accordance with IRC: 35 – 2015.

Essential

Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in built-up area out of which some measures already been implemented, and many are needed to be implement at the earliest.

2.1.1.4. Blackspot 2: Bapat Chauraha

- This blackspot is situated on MDR 10 meeting Arterial Road.
- Co-ordinates of the location are Latitude: 75.878686° E, Longitude: 22.754971° N.
- The location is a six-arm rotary with one central island and a splitter island for the traffic approach from Vijaynagar.
- The nearby land is mainly Residential and Recreational.
- Based on site observations and analysis of available data the following issues emerged:
 - High volume of vehicles is observed in peak hours.
 - The junction caters to a large amount of city traffic during peak periods of the day. High number of pedestrians were also found using this junction.
 - Lack of Signalization and change in gradients of different approaches were some observed deficiencies.

S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
1.	Pedestrian Crossing				

NOTE:
Utility relocation of chambers and electric poles due to pavement widening

- High vehicular movement with significant pedestrians were observed, but inadequate crossing facilities were observed.

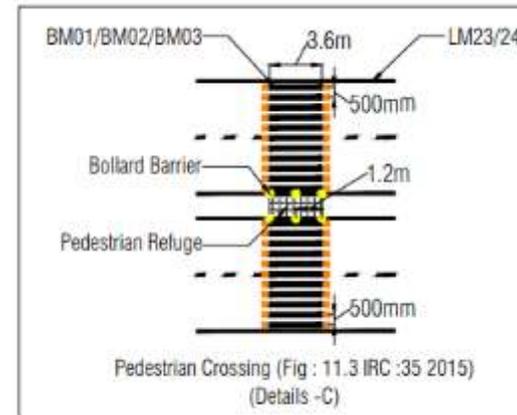


- Encroachment due to vehicular parking and fruit vendors were observed at all approaches of junctions. This forces pedestrians to use the road carriageway for walking which is equally dangerous for drivers as well as pedestrians.



Very High

- Provide proper facility of pedestrian with pedestrian refuge islands, bollards and kerb ramps as per IRC:99-2018.



- Locations to be implemented are shown in plan.
- Removal of encroachment from near junctions must be considered.

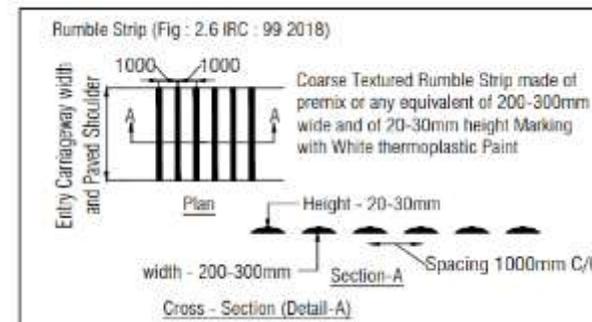
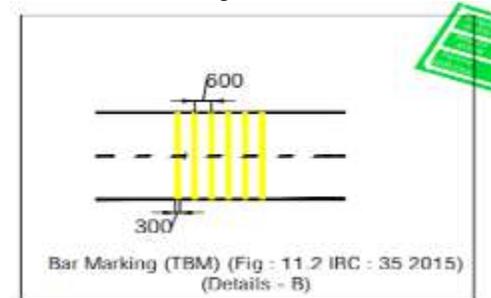
Essential

2. Traffic Calming Measures (Rumble Strips and Transverse Bar Marking)

- As per accident records, highest number of crashes at this location took place due to the collision of car and two wheelers. Hence, it is important for traffic calming measures to be implemented.

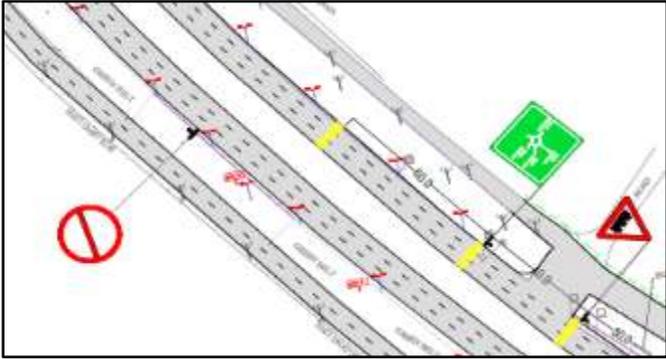
Very High

- To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic. As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of mainstream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure.



Essential

3. Accident Prone zone and Solar Blinkers

<ul style="list-style-type: none"> As per accident records, a large number of crashes at this location took place due to the collision of cars and two wheelers. Hence, drivers need to be alerted at the approaches of the junction 	Very High	<ul style="list-style-type: none"> For alerting the drivers about the blackspot warning accident prone zone sign board and solar blinkers need to be installed for making drivers caution. As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and solar blinkers on both ends to be installed as shown in below figure. <div data-bbox="1128 371 1776 671" style="border: 1px solid black; padding: 5px;"> <p>Gateway Sign : Blackspot Warning Sign as per MoRTH Circular RW/NH-29011/01/2019-S&R (P&B) Sign boards are to be installed at Start of Blackspot Section on Both Sides (Median and Shoulder)</p>  </div>	Essential	
4. Restriction End Sign on both ends				
<ul style="list-style-type: none"> On blackspot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions. 	High	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally. <div data-bbox="1128 882 1794 1241" style="border: 1px solid black; padding: 5px;">  </div>	Highly Desirable	
5. Road Studs				

<ul style="list-style-type: none"> • Raised pavement markers/ road studs are at several locations at the junction but not present consistently. 	High	<ul style="list-style-type: none"> • Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019. 	Highly Desirable	
6. Obstruction in Visibility				
<ul style="list-style-type: none"> • Due to encroachment advertisements on poles near turns, it is hard to predict the traffic from minor roads. <div data-bbox="248 499 833 735" data-label="Image"> </div> <div data-bbox="248 740 833 991" data-label="Image"> </div>	Very High	<ul style="list-style-type: none"> • It is recommended that all advertisement must be removed, and periodic observations must be made at these spots for improving visibility. • Periodic trimming of trees needs to be done. 	Essential	
7. Road Signs				

<p>The road signs were not maintained, and adequate road signs were not observed.</p> 	Very High	<ul style="list-style-type: none"> The signs should be kept according to the IRC 67 – 2012 and IRC-65-2017. Other signs need to installed as per plan. 	Essential	
8. Geometric Improvements				
<p>The north-west corner of MR10 and the side road of MR 9 has a steep gradient that causes vehicles to brake and do sharp maneuvers.</p> 	High	<ul style="list-style-type: none"> Bituminous concrete overlay for a 2m length is recommended at this corner to rectify the gradient and make vehicle maneuvers smoother. This has been shown on the plan. 	Desirable	

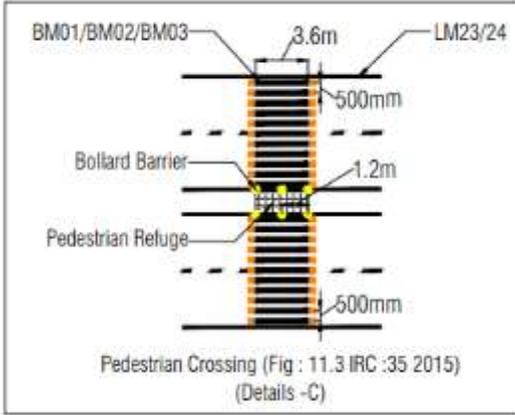
Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in built-up area out of which some measures already been implemented, and many are needed to be implement at earliest.

2.1.2. Blackspots in Dhar

2.1.2.1. Blackspot 1: Pitgarh Phata

- This blackspot is situated on SH - 31 and forms a T-junction with SH - 18 at Pitgarh Village.

- Co-ordinates of the location are Latitude:75.252343°E, Longitude: 23.009203°N.
- Survey shows that the main road has a four-lane divided carriageway with paved shoulders while the minor road is two lane carriageways. The nearby land is mainly Residential and agricultural. Vehicles from Khujava, Ekalara and Sadikpur combine to meet at Fayatpur Village. Vehicle travelling from Bhadnawar on SH – 18 meets at Pitgarh Village.
- Based on site observations and analysis of available data the following issues emerged:
 - Due to an abutting permanent structure at corner of the junction, sight distance is limited for left turning vehicles coming form from SH 18.Turning radius for left turning movement from the side road (SH 18) is inadequate.
 - Although pavement markings are present, majority of it is fading and not properly visible. Pedestrian crossings are present but only for one side of the carriageway
 - Presence of access openings creates conflict points between the vehicles accessing the opening and highway traffic.
- To reduce accidents at Pitgarh Phata location, the following improvement measures are suggested below:

S N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
	<p>1. Junction Improvements</p> <ul style="list-style-type: none"> The junction area was found to be wide and unchannelised for turning movements. As a result, a lot of haphazard movements especially of two-wheelers were observed in the area 	Very High	<ul style="list-style-type: none"> Islands needs to be constructed for left-turn movement from SH-31 to side road and left-turn movement from side road to SH-31 in order to channelize the turning traffic and also slow them In discussions with MPRDC Dhar officials, widening of the major road approach of the junction for a length of 100m and a width of 1.5m in order to make shoulder space and flare for left turning vehicles to the side road. <p>Locations to be implemented have been shown in the plan.</p>	Essential	
	<p>2. Pedestrian Facilities</p> <ul style="list-style-type: none"> Pedestrian Zebra crossing were found to be fading, not complete across the divided carriageway and not visible at nighttime. As per accident records, the highest number of crashes at this location took place due to the collision of pedestrians and two wheelers. For safe movement of pedestrians, pedestrian crossing and pedestrian facilities are required. <div style="display: flex; flex-direction: column; gap: 10px;">   </div>	Very High	<ul style="list-style-type: none"> Provide proper facility for pedestrian with refuge and bollards as per IRC:99-2018. <div style="text-align: center;">  <p>Pedestrian Crossing (Fig : 11.3 IRC :35 2015) (Details -C)</p> </div> <ul style="list-style-type: none"> Locations to be implemented have been shown in the plan. 	Essential	

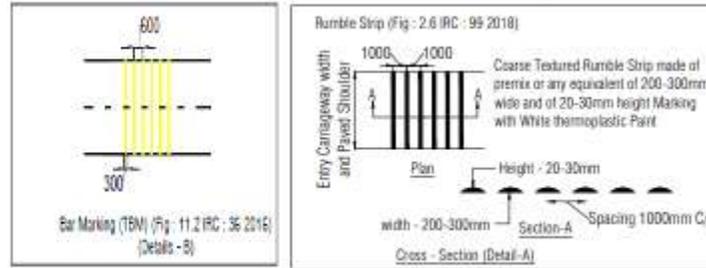
3. Speed Calming Measures (Rumble Strips and Transverse Bar Marking)

- A speed breaker was observed on the side road with faded markings. Apart from this, speed calming and conflict control measures were observed to be missing at the location.



Very High

- To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic as both ribbon development is seen. As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of mainstream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure.



Essential

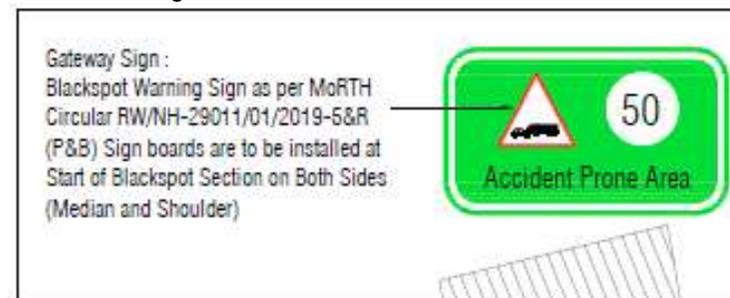
4. Accident Prone zone sign and Solar Blinkers

A currently installed sign is not as per standard.



Very High

- For alerting the drivers about the blackspot warning "Accident Prone Area" signs and Solar Blinkers need to be installed for making drivers caution.
- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends to be installed as shown in below figure.



Essential

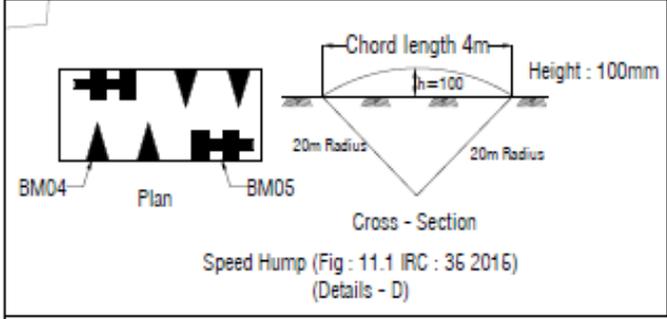
5. Restriction End Sign on both ends

On blackspot section many restrictions are imposed on traffic, drivers without knowing keep following

High

As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make

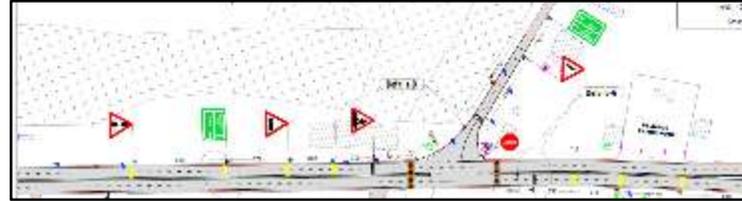
Highly Desirable

<p>same restrictions.</p>		<p>driver aware that after that no more restriction on them, they can travel normally.</p> 		
<p>6. Road Studs</p>				
<ul style="list-style-type: none"> • Raised pavement markers/ road studs are not present throughout the road. 	<p>High</p>	<ul style="list-style-type: none"> • Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019. 	<p>Highly Desirable</p>	
<p>7. Speed Humps</p>				
<ul style="list-style-type: none"> • As per accident records, two-wheelers are the largest proportion of vehicles involved in crashes at this location. Hence, speed humps are required on Minor Road for reducing speed of vehicles approaching the junction. A speed hump is present with fading paint and is not very visible. 	<p>Very High</p>	<ul style="list-style-type: none"> • Speed Humps must be provided as per IRC: 36 2016, on junctions where minor roads meets Major road. 	<p>Essential</p>	
<p>8. Road Signs</p>				
<p>Road Signs are provided on the Blackspot location but need to be supplemented with additional signs</p>	<p>Very High</p>	<ul style="list-style-type: none"> • All signs should be updated and installed according to the IRC 67 – 2012. 	<p>Essential</p>	



Informatory Signs were damaged and not maintained.

- The sign should be placed as a specific distance as per IRC 67 - 2012.
- Stop sign should be placed in addition to the STOP marking on road.
- Others signs need to installed as per plan.



9. Safety Barrier

At the south-west corner of the junction is a dried up pond with a steep embankment. There is also an existing gantry at the junction opening at this location. Both are potential hazards for errant vehicles.



Very High

- A W-beam barrier of 50 length is recommended to be installed at road edge of the south-west corner of the junction for providing roadside protection to run-off vehicles.
- It is recommended that the existing gantry be shifted 10m west on the minor road in order to avoid roadside hazards.

Essential

Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles at junction, out of which some measures already been implemented, and many are needed to be implement at earliest.

2.1.2.2. Blackspot 2: Pagara Phata

- This blackspot is situated on SH-38 and a T-Junction is formed at Fayatpur Village.
- Co-ordinates of the location are Latitude 75.325258° E, Longitude 22.151197° N .
- The nearby land is mainly residential and agricultural.
- It is observed that the presence of a cement factory nearby results in heavy movement of multi-axle trucks which deteriorates the upper layer of road pavement. Also, many of these multi-axle vehicles are observed to be parked on this section of road.
- Based on site observations and analysis of available data the following issues emerged:
 - For Southbound approach, right turning vehicles and for East bound approach, left turning vehicles have limited sight distance due to the presence of permanent structure at the corner of the junction.
 - Side roads of the junction connects to nearby rural habitational settlements that caters primarily NMT modes, 2 wheelers and Light goods vehicles.
 - Limited Speed calming and conflict control measures were found.
 - Except for the centreline marking on SH-38, road markings and pedestrian crossing facilities were found to be missing at the blackspot.
- To reduce accidents at Pagara Phata, the following improvement measures are suggested below.

SN	Safety Concerns & Audit Findings		Recommendations		Client Response
	Description (with Images if any)	Risk	Description (with Images if any)	Priority	
1. Geometric Improvements					
	<ul style="list-style-type: none"> • Currently, the side road with its bell-mouth opening at the main road does not have taper. This makes turning movements in and out of the side road for vehicles difficult. • In addition, conflicts occur in the vicinity of the junction due to buses stopping on both sides of the major road carriageway 	Very High	<ul style="list-style-type: none"> • In discussions with MPRDC Dhar officials, widening of the side road with taper lanes of a length of 50m has been recommended for the side road. • In discussions with MPRDC Dhar officials, it is also recommended that the major road carriageway be widened for a length of 100m on the south edge of the junction to allow smooth vehicular movement during bus stoppage <p style="text-align: center;">Locations to be implemented are shown in plan.</p>	Essential	



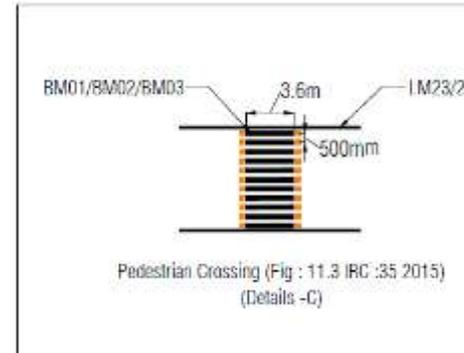
2. Pedestrian facilities

- Pedestrian crossing was not marked which is a safety concern for pedestrian crossing junction.

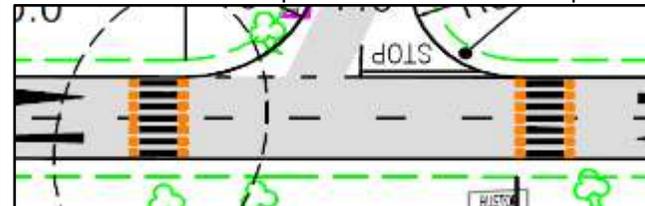


Very High

- Provide proper facility of pedestrians should be installed as per IRC:99-2018.



- Locations to be implemented are shown in plan.



Essential

3. Speed Calming Measures (Rumble Strips and Transverse Bar Marking)

- To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic.

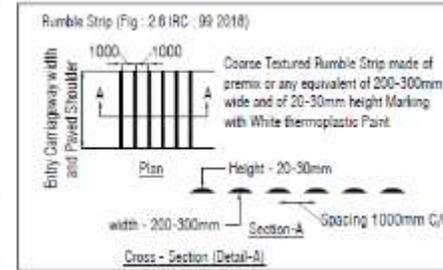
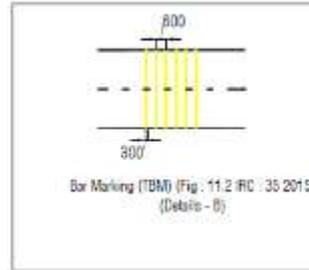
Very High

- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of main stream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in

Essential



below figure.



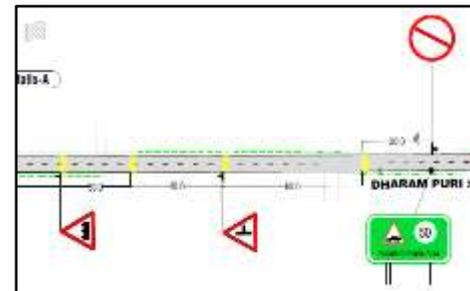
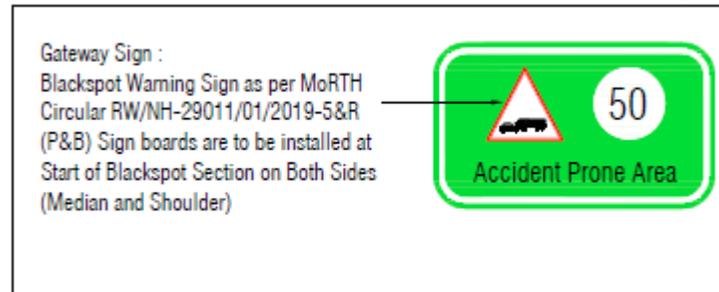
4. Accident Prone zone and Solar Blinkers

- For alerting the drivers about the blackspot warning accident prone zone sign board and Solar Blinkers need to be installed for making drivers caution.

Very High

- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends to be installed as shown in below figure.

Essential



5. Restriction End Sign on both ends					
	<ul style="list-style-type: none"> On blackspot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions ahead also, so to avoid it Restriction End Sign need. 	High	<p>As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally.</p> 	<p>Highly Desirable</p>	
6. Road Studs					
	<ul style="list-style-type: none"> A large proportion of crashes (60%) at this location took place during evening peak to mid night. Hence, it is important that the location at road edge delineation. Raised pavement markers/ road studs are not present throughout the road. 	High	<ul style="list-style-type: none"> Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for night time delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019. 	<p>Highly Desirable</p>	
7. Visibility issues for Signs					
	<ul style="list-style-type: none"> Regulatory sign is obstructed with hoarding, causing difficulty for drivers.  <p>Cautionary and direction signs were observed to be missing at the blackspot location.</p>	High	<ul style="list-style-type: none"> Advertisement and other hoardings need to be removed. Periodic trimming of trees needs to be done. Signs boards need to be installed as per plan shown below, 	<p>Highly Desirable</p>	

8. Road Markings

- Road markings were found inadequate for most of the blackspot location.

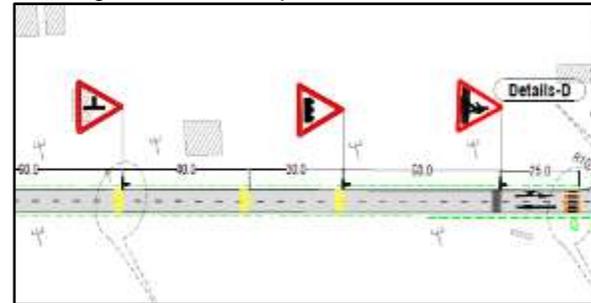


Very High

- Directional Road marking before junctions must be as per IRC: 35 – 2015.



- Marking for pedestrian crossing, speed bumps and Junction Ahead signs must be as per IRC: 135 – 2015.



Essential

Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in built-up area and at junctions which are needed to be implement at earliest.

2.1.2.3. Blackspot 3: Dhar Phata

- This blackspot is situated on SH-31. At the T-junction, SH-31 goes from west towards the south while the east leg is Mhow-Neemuch Road.
- Co-ordinates of the location are 75.296471°E Longitude: 22.791599°N.
- Survey shows that the main road has a four-lane divided carriageway with paved shoulders while the minor road is two lane.
- The nearby land is mainly agricultural and residential.
- Based on site observations and analysis of available data the following issues emerged:
 - Within the junction influence area, significant ribbon developments (with permanent structures) were observed which cater high density commercial activity. Thus, it results in substantial pedestrian movements during peak periods.
 - Presence of trees and permanent buildings at the corners of the junction is acting as a vision obstructor to the vehicles taking turning movements.
 - Limited speed calming and conflict control measures were found.
- To reduce accidents at Dhar Phata, the following improvement measures are suggested below:

S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
4. Geometric Improvements					

- Currently, the side road with its bell-mouth opening at the main road does not have taper. This makes turning movements in and out of the side road for vehicles difficult.



Very High

- In discussions with MPRDC Dhar officials, widening of the side road with taper lanes of a length of 50m is recommended for the side road.

These details are implemented on the plan

Essential

5. Junction Channelisation

- Currently, the junction with the side road has channelizing islands which are inadequate in providing channelization to turning vehicles from all sides



Very High

- Provide new channelization islands at the mouth of the T-junction to provide safe movement for all turning vehicles including left-turn movements in and out of the side road.
- Bus-stand constructed on south-east island has to be dismantled and relocated
- The current left most lane of approach from Manasa is currently being used for parking and as shoulder space. This space has to be formalized as a auxiliary lane for exclusive left turn movement to the side road
- Currently the left-most lane towards Makhani after the junction is being used as a service road with unauthorised parking. The left-turn channelizing island from the junction taper should be merged with the main carriageway separator, such that vehicles making left from the side road towards Makhani merged into this lane and enter the main carriageway from an opening away from the junction

These details are implemented on the plan

Essential

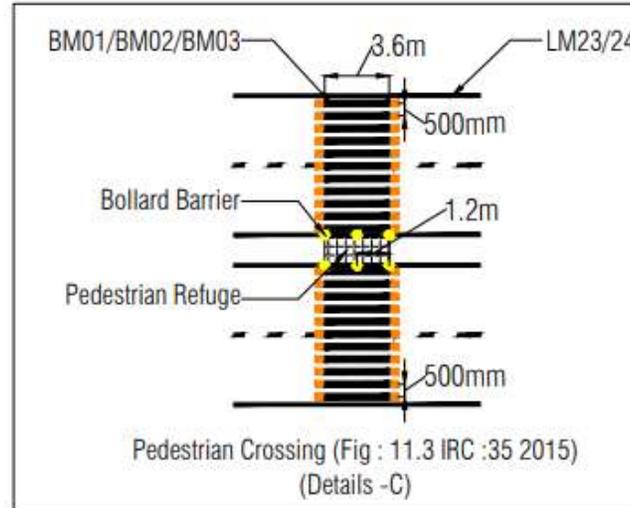
6. Pedestrian Facilities

- Because of high pedestrian movement on major roads and minor roads, pedestrian crossing facility were not adequate.
- Refuge Islands are required on medians for pedestrians for their safety.

Very High

- Provide proper facility of pedestrian with refuge islands and bollards as per IRC:99-2018.

Essential



Further locations to be implemented are shown in plan.

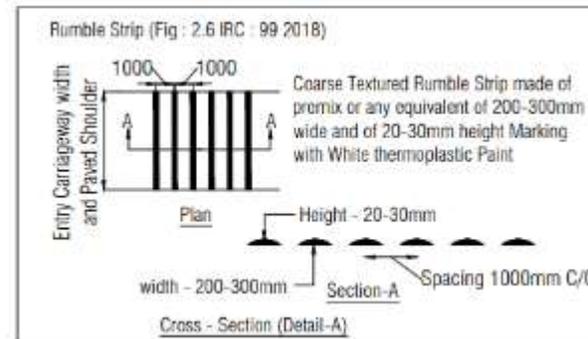
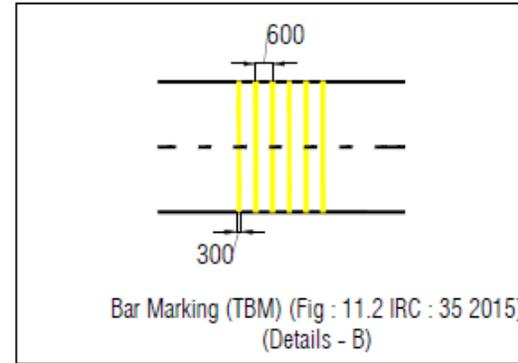
7. Speed Calming Measures (Rumble Strips and Transverse Bar Marking)

- To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic, speed calming measures were observed to be old or missing



Very High

- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of mainstream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure.
- TBM are provided but needs to be maintained.

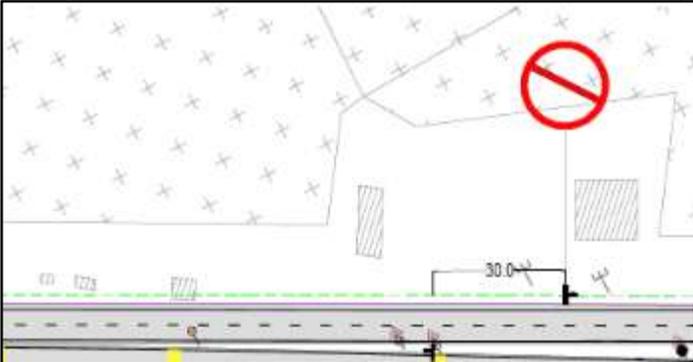


- Further where to implement is been shown in plan.

Essential

9. Accident Prone zone and Solar Blinkers

<p>For alerting the drivers about the blackspot warning accident prone zone sign board and Solar Blinkers need to be installed for making drivers caution.</p>	<p>Very High</p>	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends to be installed as shown in below figure. <div data-bbox="976 332 1659 625" style="border: 1px solid black; padding: 5px;"> <p>Gateway Sign : Blackspot Warning Sign as per MoRTH Circular RW/NH-29011/01/2019-5&R (P&B) Sign boards are to be installed at Start of Blackspot Section on Both Sides (Median and Shoulder)</p>  </div> <p>Further where to implement is been shown in plan.</p>	<p>Essential</p>
<p>10. Restriction End Sign on both ends</p>			

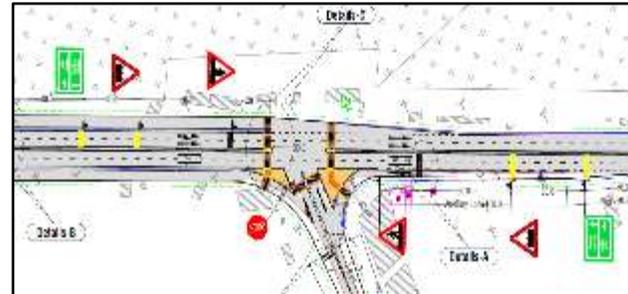
<p>On blackspot section many restrictions are imposed on road users, drivers without knowing keep following same restrictions further also. Thus Restriction End Sign is required.</p>	<p>High</p>	<p>As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel without past imposed driving restrictions.</p>  <p>Placement of the signs should be according to as shown in plan.</p>	<p>Highly Desirable</p>	
11. Road Studs				
<p>The raised pavement markers/ road studs are not present throughout the road.</p>	<p>High</p>	<p>Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019. In discussion with MPRDC officials, it is recommended that road studs be installed on the side road, since pavement markings and road studs are available on major road (state highway) and it is maintained by MPRDC every six months.</p>	<p>Highly Desirable</p>	
12. Road Markings				

Road marking like edge line, median line, stop line on Minor Road, directional arrow marking, ghost island marking were missing on minor road and not maintained on major road.



Very High

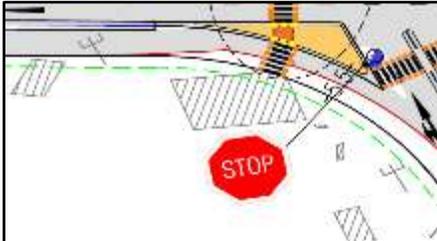
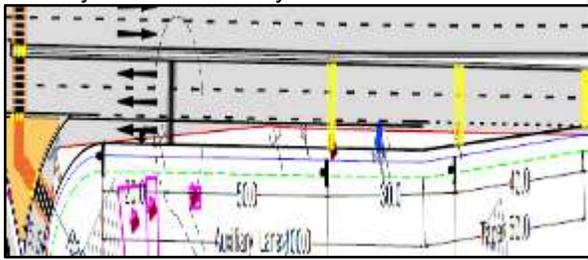
- Road markings must be implemented as per IRC -35 – 2015.
- Placement of road marking must be as per plan.



Pavement Markings and Road studs are available on major road (state highway) and it is maintained by MPRDC every six months. Hence, pavement markings will be installed on the side road.

Essential

13. Road Signs

<ul style="list-style-type: none"> Stop sign along with stop line treatment on minor road is missing  <ul style="list-style-type: none"> Limited amount of road signs and informatory signs are used. 	Very High	<ul style="list-style-type: none"> The signs should be kept according to the IRC 67 – 2012. The sign should be placed as a specific distance as per IRC 67 - 2012. Stop sign should be placed in addition to the STOP marking on road.  <p>Other signs need to install as per plan.</p>	Essential	
14. Removal of Encroachment for Auxiliary Lane				
<p>Lot of encroachment and illegal parking of vehicles was observed on left side of the junction before the junction, which hinders the de-acceleration traffic for left turn.</p> 	Very High	<ul style="list-style-type: none"> Removal of encroachment is must for better visibility and for auxiliary lane. 	Essential	

Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles at junction and are needed to be implement at earliest.

2.1.2.4. Blackspot 4: Gram Jetpura

- This blackspot is situated on ODR. It's a straight road segment. Road Section Diverted from NH- 47 towards Gram Jetpur.
- Co-ordinates of the location are Latitude:75.339442° ° E Longitude: 22.610376°N.
- The nearby land is mainly Residential.
- Based on site observations and analysis of available data the following issues emerged:
 - Presence of trees/objects on side of the curve is posing as vision obstruction and reducing the sight distance.
 - Edge drop is predominant along the road stretch.
- To reduce accidents at Gram Jetpura the following improvement measures are suggested below:

S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
9.	Geometric Improvement				

- Throughout the stretch of the blackspot location there were several roadside issues observed including edge drop of the pavement, roadside encroachment and substantial volumes of pedestrians.



High

- In order to resolve the edge drop issue at several location along the blackspot and also accommodate pedestrians across this stretch, paved shoulder of 1.5m width is recommended on both sides of the location as per guidelines of IRC: SP 73-2018

Highly Desirable

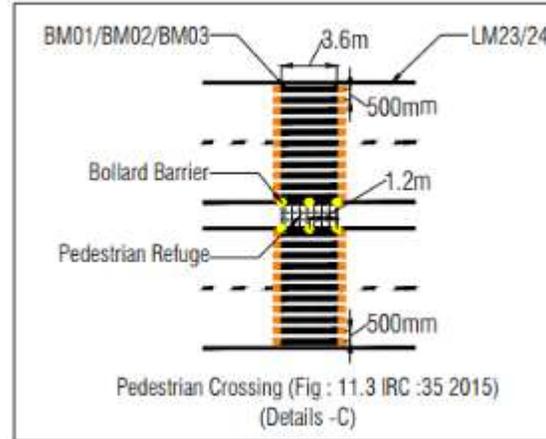
10. Pedestrian Crossing

- Pedestrian Crossing at junctions and at school were not adequate.



Very High

- Provide proper facility of pedestrian for safely crossing the road as per IRC:99-2018.

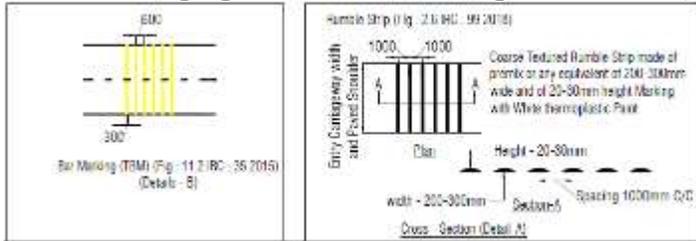


- Further where to implement is been shown in plan.

Essential

11. Speed Calming Measures (Rumble Strips and Transverse Bar Marking)

<p>As per crash records, a large proportion of the crashes involve two-wheelers and pedestrians. It is essential that speed is curtailed along the blackspot location.</p>	<p>Very High</p>	<ul style="list-style-type: none"> To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic. Also, Transverse Bar Marking for reducing speed of vehicles on main Stretch. As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of main stream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure. 	<p>Essential</p>	
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12. Accident Prone zone and Solar Blinkers

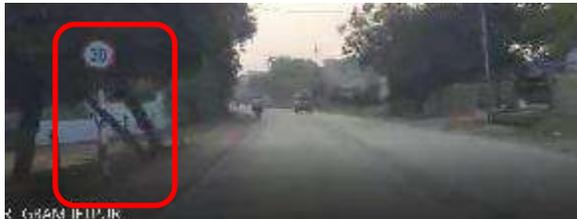
<p>For alerting the drivers about the blackspot warning accident prone zone sign board and Solar Blinkers need to be installed for making drivers caution.</p>	<p>Very High</p>	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends to be installed as shown in below figure. 	<p>Essential</p>	
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13. Road Studs and Road Markings

<ul style="list-style-type: none"> The raised pavement markers/ road studs are not present throughout the road specially on sides as the shoulder and pavement are on same height. This road has a concrete pavement, road markings were not observed or were not maintained. 	High	<ul style="list-style-type: none"> Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for nighttime delineation as per IRC :35 2015, Table No. 9.1 of IRC SP: 84-2019. Road markings are to be implemented as per IRC :35 2015. 	Highly Desirable	
14. Visibility issues for Signs				
<ul style="list-style-type: none"> Hazard marking on structures near carriageway are missing 	Very High	Hazard marking must be implemented at hazardous locations for better visibility at night.	Essential	
15. Road Signs				

- Inadequate road signs were observed.
- Pedestrian Crossing, Speed control signs, Speed Bumps signs, Side Road Ahead signs were missing or not maintained.



Very High

- The signs should be installed according to the IRC 67 – 2012.
- The sign should be placed as a specific distance as per IRC 67 – 2012.
- Signs need to be installed as per plan.

Essential

<ul style="list-style-type: none"> Several small stretch of horizontal curves were observed with isolated installation of Chevron signs 	Very High	<ul style="list-style-type: none"> All horizontal curves will need double sided Chevron sign treatment as recommended by IRC SP 73-2018 	Essential	
				

Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in built-up area out of which are needed to be implemented at earliest.

2.1.2.5. Blackspot 5: Modi Petrol Pump

Short Term Measures

- Semi Reflective Traffic Sign
 - 900 mm equilateral & triangle
 - 900 mm High Octagon
- Road Marking
 - Edge Marking
 - Edge Line Marking

Medium / Long Term Measures

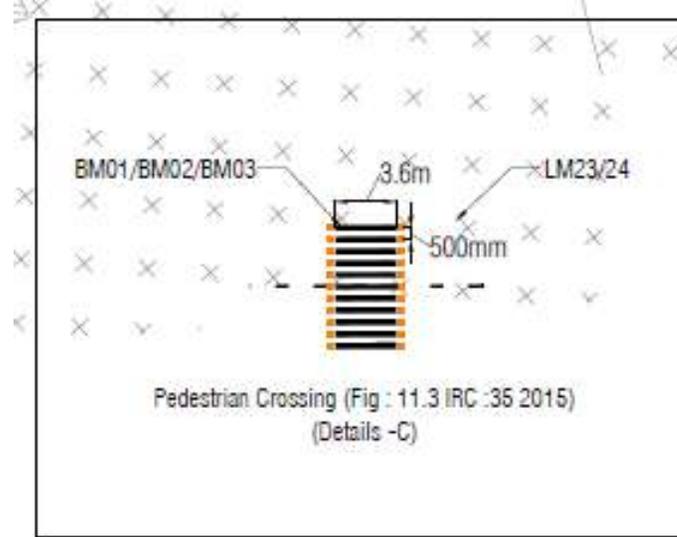
- Improvement of Grade of PMGSY Road on Both legs.
- Shifting of Bus Stop/ Utility Shifting as per site condition

2.1.3. Blackspots in Datia

2.1.3.1. Blackspot 1: Cheema Bamwa

- This blackspot is situated on SH – 01 and a T – Junction is formed with Cheema – Diguwan Road.
- Co-ordinates of the location are Latitude 78.669471° E, Longitude 26.025013°N
- Survey shows the approaches of the junction have single lane carriageway with unpaved shoulder. The nearby land is mainly agricultural. Combined Vehicles from Cheema Village and Diguwan Village merges with SH – 01. A canal is present approximately 100 meters Northeast of Junction.
- Based on site observations and analysis of available data the following issues emerged:
 - Apart from one set of transverse bar markings and edgeline markings on the major road approaches, there is absence of warning and regulatory signs in the entire junction area
 - An unpaved road beside canal is hazardous as vehicles take that road for easy access to highway.
 - The side road has a steep downgrade. In addition, there is vegetational growth at the corner of the junction. Hence, sight visibility is limited for turning vehicles from the side road.
- To reduce accidents at Cheema Bamwa the following improvement measures are suggested below:

S N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
10. Pedestrian facilities					
	<ul style="list-style-type: none"> • For the safe movement of pedestrians at junction a Pedestrian Crossing is required. 	Very High	<ul style="list-style-type: none"> • Provide proper facility of pedestrian zebra crossings as per IRC:99-2018. 	Essential	



- Further where to implement is shown in plan.

11. Traffic Calming Measures (Rumble Strips & Transverse Bar Barking)

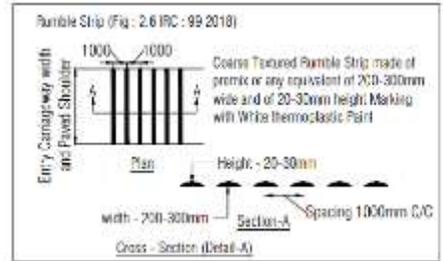
- To reduce the speed of traffic moving on main stretch for ease of movement of minor road traffic.

Very High

- As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for reducing the speed of traffic of mainstream while approaching on junction, Transverse Bar Marking in proper sequence and Rumble strips need to be installed along with its warning sign as shown in below figure.

Essential





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12. Accident Prone Zone Sign & Solar Blinkers

<ul style="list-style-type: none"> For alerting the drivers about the black spot warning accident prone zone sign board and Solar Blinkers need to be installed before starting of blackspot for making drivers caution. 	<p>Very High</p>	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends to be installed as shown in below figure. <div data-bbox="934 893 1627 1226" data-label="Image"> </div>	<p>Essential</p>	
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13. Object Hazard Markers on Parapets of Minor Bridge

<ul style="list-style-type: none"> Object Hazard Marking on Parapet of Minor Bridge were observed to be missing 	<p>Very High</p>	<ul style="list-style-type: none"> It is advisable to install Object Hazard Marking on both ends of parapets of Minor Bridge as Per IRC 35: 2015. 	<p>Essential</p>	
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- Object Hazard Markers should be implemented as shown in plan.



14. Road Studs

- The raised pavement markers/ road studs are not present throughout the road.

High

- Raised pavement markers/ road studs need to be implemented throughout the blackspot and along a major part of the outer edge line other lanes for night time delineation as per IRC :35 2015, Table No. 9.1 of IRC SP : 84-2019.

Highly Desirable

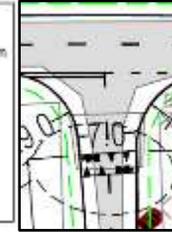
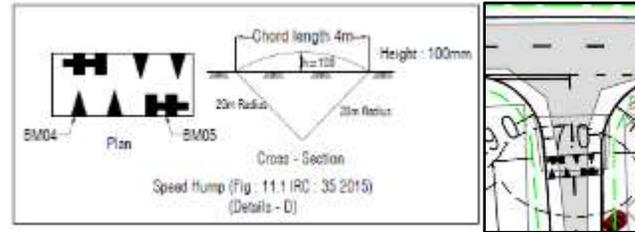
15. Speed Humps

- Requirement of Speed Humps on Minor Road.

High

- For reducing speed of vehicles on minor road, speed humps are required as per IRC -36- 2016.

Highly Desirable



16. Road Signs

Road Signs are not satisfactory.

1. Stop Sign Missing on Minor Road.

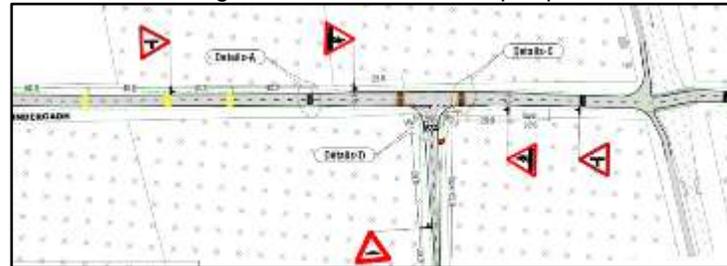


2. Road signs are not maintained and minimal/ Least amount of usage of signs were observed.



Very High

- Periodic Trimming of trees is need to be done
- The signs should be kept according to the IRC 67 – 2012.
- The sign should be placed as a specific distance as per IRC 67 - 2012.
- Junction Ahead sign should be placed as per plan provided.
- Restricted End Signs need to be place on end
- Stop sign should be placed in addition to the STOP marking on road.
- Others signs need to installed as per plan.



Essential

17. Road Markings

1. The road marking was missing or washed off along the length of route.

Very High

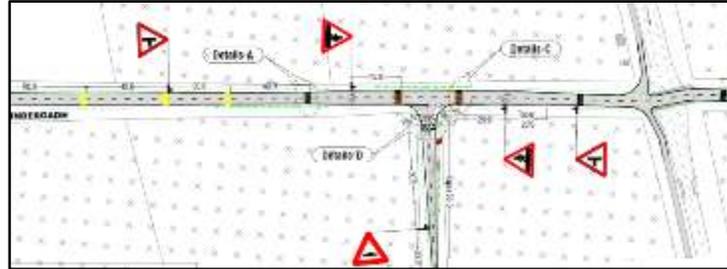
- As per IRC: 35 2015 clause 4.6.5, road marking needed to be implemented and its periodic

Essential

2. Also, stop marking and stop line on Minor junctions were not maintained.



maintenance is required.

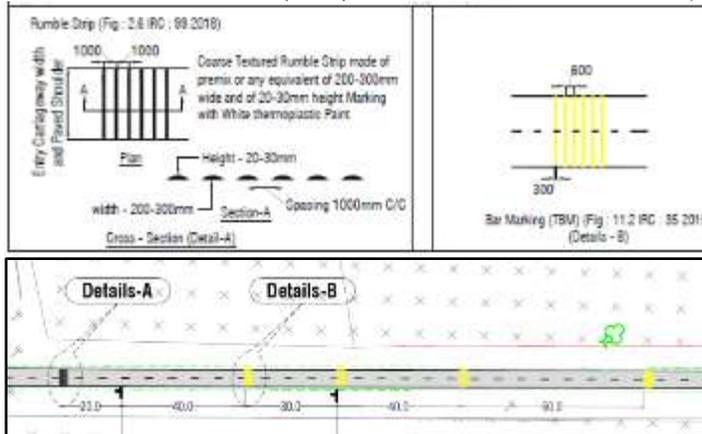


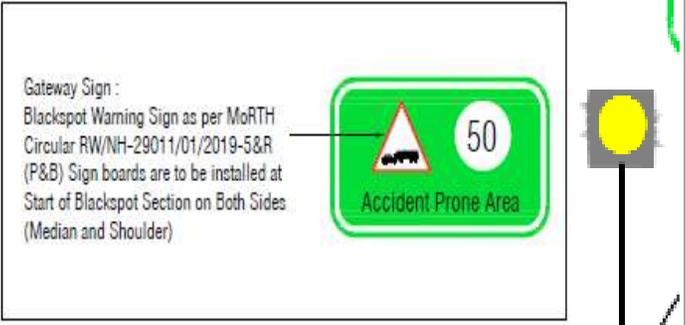
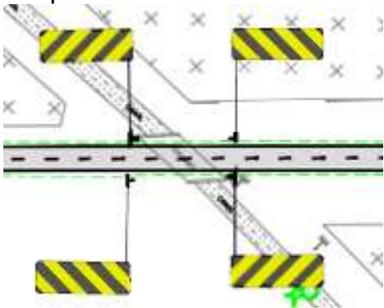
18. Safety Barriers

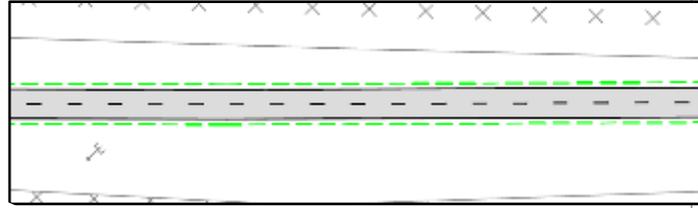
Improvement Measures: The above-mentioned measures will be effective for speed reduction and reduction of safety hazards in this Blackspot Road section.

2.1.3.2. Blackspot 2: Piprauha Chauraha

- This blackspot is situated on SH – 01 between Sagwan and Thret.
- Geo-Location Co-ordinates are 263967.00 m E, 2877609.00 m N.
- Survey shows majority of the approaches have single lane carriageway with unpaved shoulder. The nearby land is mainly agricultural.
- Based on site observations and analysis of available data the following issues emerged:
 - Other than one set of transverse bar markings on one approach of SH-01, the entire junction area lacks signs, markings, stop line treatment on side roads and traffic calming measures
 - There is a culvert present over canal. Here there is uneven rise and fall in Road Geometry causing difficulty in visibility.
- To reduce accidents at Piprauha Chauraha the following improvement measures are suggested below:

SN	Safety Concerns & Audit Findings		Recommendations		Client Response
	Description (with Images if any)	Risk	Description (with Images if any)	Priority	
9. Traffic Calming measures (Rumble Strips & Transverse Bar Barking)					
	<ul style="list-style-type: none"> High speed traffic movement found on main stretch. 	Very High	<ul style="list-style-type: none"> As per IRC:99-2018 Cl. 2.3.3.4 TBM of 300mm wide 15mm height at 1000mm need to be implement at both side before approaching to bridge. Before approaching to bridge to reduce the speed rumble strips need to be implemented just before approaching to bridge as per MoRTH circular RW-NH-29011/01/2019-S&R(P&B) 	Essential	
10. Accident Prone Zone Sign & Solar Blinkers					
	<ul style="list-style-type: none"> For alerting the drivers about the black spot, warning accident prone zone sign boards required for alerting drivers. 	Very High	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends need to be installed as shown in below figure. 	Essential	

			<p>Gateway Sign : Blackspot Warning Sign as per MoRTH Circular RW/NH-29011/01/2019-5&R (P&B) Sign boards are to be installed at Start of Blackspot Section on Both Sides (Median and Shoulder)</p> 		
11. Object Hazard Marking on Parapets of Minor Bridge					
	<ul style="list-style-type: none"> Parapets on the minor bridge are of very small height and do not offer protection to errant vehicles Object Hazard Markers were missing at the end of the parapets 	Very High	<ul style="list-style-type: none"> RCC Parapets have to be constructed for the minor bridge on both sides of the It is Advisable to implement Object Hazard Markers at both ends of parapets of Minor Bridge as Per IRC 35: 2015. Object Hazard Markers should be implemented as shown in plan. 	Essential	
12. Road Markings					
	<ul style="list-style-type: none"> Pavement edge line, lane separation, no overtaking marking, etc. are in faded condition. 	High	<ul style="list-style-type: none"> As per IRC: 35 2015 clause 4.6.5, road marking already been implemented but it's periodic maintenance is required. 	Highly Desirable	



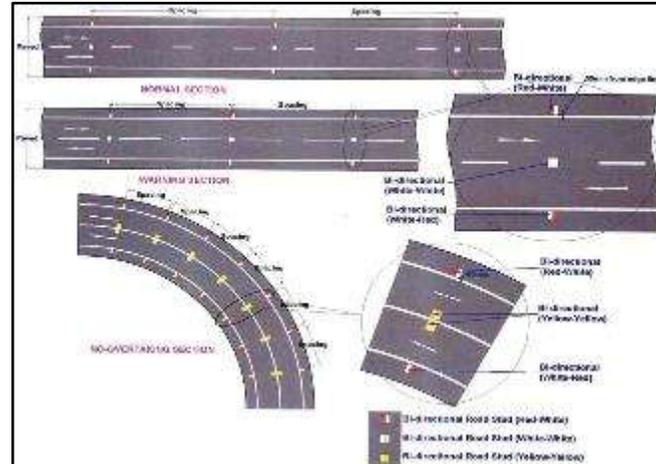
13. Road Studs

- For Better Night Visibility Road Studs need to be installed.

Very High

- Raised pavement markers/ road studs along a major part of the outer edge line, and lane lines for night time delineation as per IRC 35 2015 need to be installed.

Essential



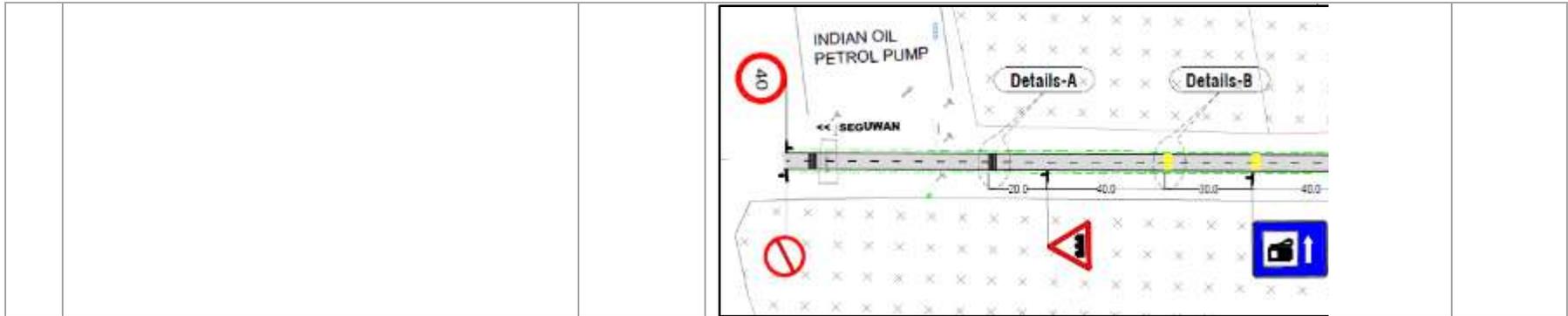
14. Regulatory and Informatory Signs

- As both ends of this stretch have Fuel Station, Signs for speed control and Informatory signs for fuel pumps are missing.

High

- It is recommended to provide Necessary signs as per IRC.

Highly Desirable

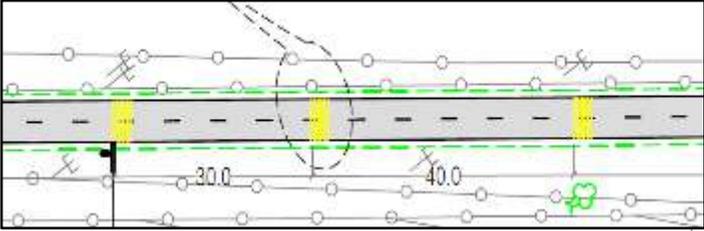
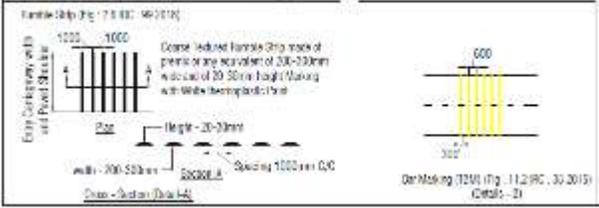
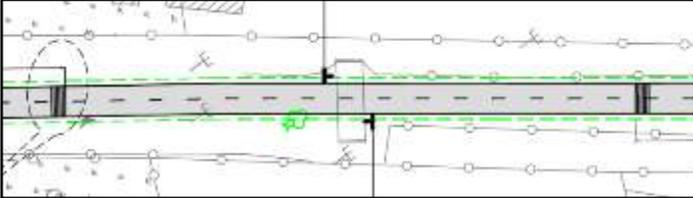


Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles while approaching on this road section.

2.1.3.3. Blackspot 3: Warehouse Khanjapura Road to Byaspura Road

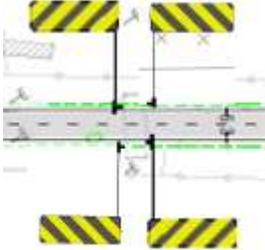
- This blackspot is situated on SH – 92, Northeast of Bhaguapura Village.
- Geo-Location Co-ordinates are Latitude 78.712802 E, Longitude 26.061657 N.
- Survey shows majority of the approaches have single lane carriageway with High embankment. The nearby land is mainly agricultural and commercial.
- Based on site observations and analysis of available data the following issues emerged:
 - Road stretch has missing edgeline delineation, high embankment at several places and there is a high risk of run-off accidents in low visibility conditions
 - The entire area lacks signs, markings and traffic calming measures
 - Vehicles approaching from side road have less visibility due to high embankment of SH.
 - Very narrow and unpaved shoulder is available which can cause errant vehicles to run off the road for inattentive drivers and in low visibility conditions
- To reduce accidents at Warehouse Khanjapura Road to Byaspura Road the following improvement measures are suggested:

S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
3. Pedestrian Crossing					
	<ul style="list-style-type: none"> • Pedestrian Crossing are missing near school area for children to cross the road. 	Very High	<ul style="list-style-type: none"> • Provide proper pedestrian crossing facility as per IRC:99-2018. • Further where to implement is been shown in plan. 	Essential	
4. Traffic Calming measures					

	<ul style="list-style-type: none"> From past accident data it found that most of accidents are occurred due to overspeeding of vehicles. 	<p>Very High</p>	<ul style="list-style-type: none"> As per IRC:99-2018 Cl. 2.3.3.4 TBM of 300mm wide 15mm height at 1000mm apart, should be implement on climbs and drops of the blackspot section shown in plan. 	<p>Essential</p>	
			<p>a) Before approaching to junction to reduce the speed rumble strips need to be implemented just before approaching to junction as per MoRTH circular RW-NH-29011/01/2019-S&R(P&B)</p>  	<p>Highly Desirable</p>	

9. Road Marking

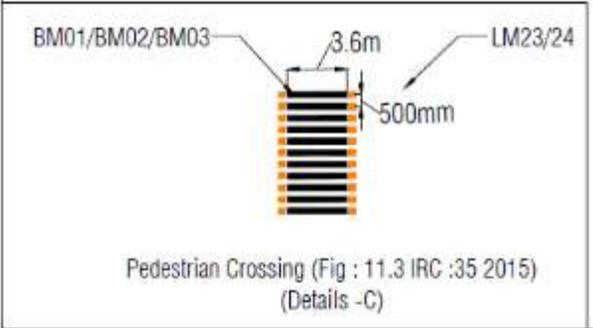
<ul style="list-style-type: none"> Pavement edge line, lane separation, pedestrian crossing, no overtaking marking, etc were missing. 	High	<ul style="list-style-type: none"> Road marking must be followed as per IRC 35:2015 	Highly Desirable	
10. Road Studs				
<ul style="list-style-type: none"> The raised pavement markers/ road studs are needed to be placed for alerting drivers on major part of the outer edge line, and lane lines for nighttime delineation as per IRC 35 2015. 	High	<ul style="list-style-type: none"> As per IRC 35 2015 raised pavement markers/road studs must be included for the blackspot location section. 	Highly Desirable	
				
11. Restriction End Sign on both ends				
<ul style="list-style-type: none"> On black spot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions. Thus, for their knowledge these signs are required on the end of blackspots. 	High	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally. 	Highly Desirable	
				
12. Object Hazard Markers on Culverts				

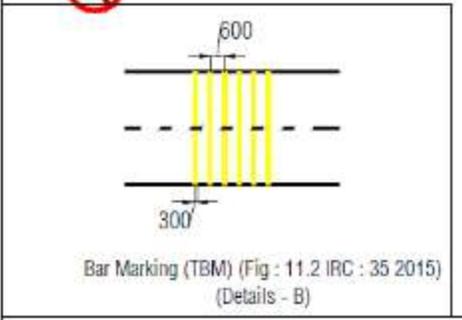
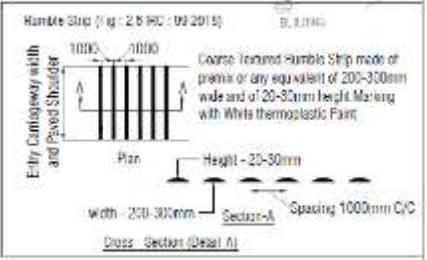
	<ul style="list-style-type: none"> Hazard Marking sign is required at end of structures and other hazardous objects on shoulders. 	<p>Very High</p>	<ul style="list-style-type: none"> Object Hazard Markers on both the ends of Culverts are required as per IRC 35: 2015. 	<p>Essential</p>	
<p>13. Accident Prone Zone Sign & Solar Blinkers</p>					
	<ul style="list-style-type: none"> For alerting the drivers about the blackspot, warning accident prone zone sign boards and Solar Blinkers required for making drivers caution. 	<p>Very High</p>	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar on both ends need to be installed as shown in below figure. 	<p>Essential</p>	

Improvement Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in built-up area and are needed to be implemented at earliest.

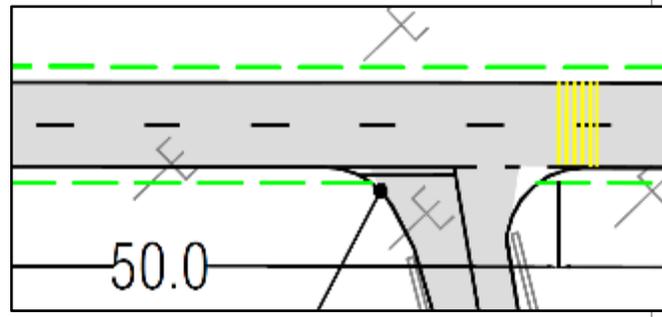
2.1.3.4. Blackspot 4: Kutir Essar Petrol Pump to Prabhakar Petrol Pump

- This blackspot is situated on SH – 92.
- Geo-Location Co-ordinates are 270141.00 m E, 2883623.00 m N.
- Survey shows majority of the approaches have single lane carriageway with unpaved shoulder. The nearby land is mainly agricultural and residential.
- Based on site observations and analysis of available data the following issues emerged:
 - The entire area lacks signs, markings, edgeline delineation, pedestrian facilities and traffic calming measures
 - Vehicles of both the approaches slows down on main lane to turn towards petrol pump or to take a U-turn, causing confusion among other road users.
- To reduce the accident at Kutir Essar Petrol Pump to Prabhakar Petrol Pump the following improvement measures are suggested below:

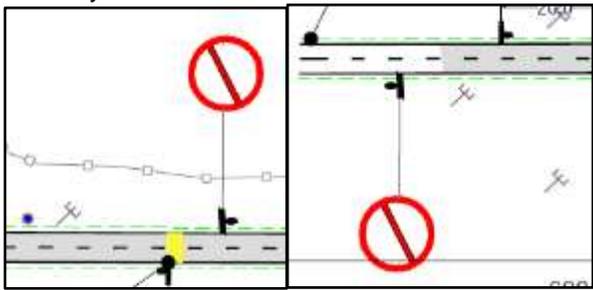
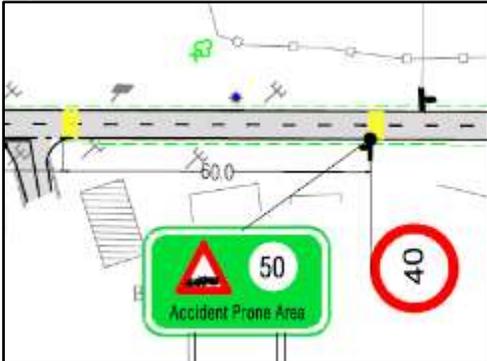
S. N	Safety Concerns & Audit Findings	Risk	Recommendations	Priority	Client Response
8. Pedestrian Crossing					
	<ul style="list-style-type: none"> • Pedestrian Crossing are missing from both the junctions where minor road meets major roads. 	Very High	<ul style="list-style-type: none"> • Provide proper facility of pedestrian crossing as per IRC:99-2018. • Further where to implement has been shown in plan.  <p>Pedestrian Crossing (Fig : 11.3 IRC :35 2015) (Details -C)</p>	Essential	
9. Traffic Calming measures					

	<ul style="list-style-type: none"> From past accident data it found that most of accidents occur due to overspeeding of vehicles during merging of lanes at junctions. 	<p>Very High</p>	<ul style="list-style-type: none"> As per IRC:99-2018 Cl. 2.3.3.4 TBM of 300mm wide 15mm height at 1000mm apart, should be implemented on climbs and drops of the blackspot section shown in plan.  <p>Bar Marking (TBM) (Fig : 11.2 IRC : 35 2015) (Details - B)</p>	<p>Essential</p>
		<p>Very High</p>	<p>b) Before approaching to junction to reduce the speed rumble strips need to be implemented just before approaching to junction as per MoRTH circular RW-NH-29011/01/2019-S&R(P&B)</p>  <p>Rumble Strip (Fig : 2.8 IRC : 09 2015) B. 2.1740</p> <p>Coarse Textured Rumble Strip made of premix or any equivalent of 200-300mm wide and of 20-30mm height. Marking with White thermoplastic Paint.</p> <p>Plan: Spacing 1000mm C/C</p> <p>Section-A: Height - 20-30mm, Width - 200-300mm</p> <p>Cross Section (Detail A)</p>	<p>Essential</p>

15. Road Marking

<ul style="list-style-type: none"> Pavement edgeline, lane separation, pedestrian crossing, no overtaking marking, etc. were missing or not maintained. 	<p>High</p>	<ul style="list-style-type: none"> Road markings must be implemented as per IRC -35 – 2015. 	<p>Highly Desirable</p>	
<p>16. Road Studs</p>				
<ul style="list-style-type: none"> The raised pavement markers/ road studs are needing to be place for alerting drivers on major part of the outer edge line, and lane lines for nighttime delineation as per IRC 35 2015. 	<p>High</p>	<ul style="list-style-type: none"> As per IRC 35 2015 raised pavement markers/road studs is already been installed by authority. 	<p>Highly Desirable</p>	
<p>17. Accident Prone Zone</p>				

<ul style="list-style-type: none"> For alerting the drivers about the black spot warning accident prone zone sign board and Solar Blinkers need to be installed for making drivers caution 	<p>Very High</p>	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), for alerting the driver accident prone zone sign board and Solar Blinkers on both ends are to be installed as shown in below figure. 	<p>Essential</p>
<p>18. Restriction End Sign on both ends</p>			
<ul style="list-style-type: none"> On black spot section many restrictions are imposed on traffic, drivers without knowing keep following same restrictions. 	<p>High</p>	<ul style="list-style-type: none"> As per MoRTH circular RW-NH-29011/01/2019-S&R(P&B), Restriction end signs on both ends need to be installed to make driver aware that after that no more restriction on them, they can travel normally. 	<p>Highly Desirable</p>
<p>19. Stop Sign on Minor Road of junction</p>			

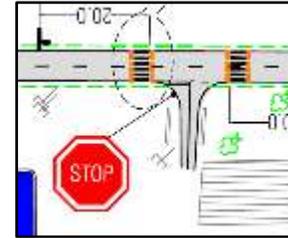


Along with the 'STOP' road marking there should also be a 'STOP' sign before the junction on minor road.



High

- Provision of signs should be made according to IRC: 67 – 2021.



Highly Desirable

20. Encroachment on Shoulders and around the Junctions

<p>A lot of encroachment was observed at the junctions (shops) and along the carriageway on shoulders.</p>  	<p>High</p>	<ul style="list-style-type: none"> • Encroachment should be removed for better visibility and space on carriageway and shoulders. 	<p>Highly Desirable</p>	
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Improvements Measures: The above-mentioned measures will be effective for speed reduction of high-speed vehicles in built-up area and are needed to be implemented at the earliest.

2.2. Manpower Requirement

There are approximately 50 persons who are employed as supervisor, Skilled and semi-skilled labor during construction work.

2.3. Project Implementation Schedule

The construction of project is of about approximately 15 days for each project.

3. Policy, Legal and Regulatory Framework

3.1. Legal Framework

Below mentioned are the applicable policies and regulations at Central and state level and of World Bank:

Table 1: Applicable Policies and Regulations

Sl. No.	Act, Policy	Provisions	Applicability to the Project
1	The Constitution of India (Articles 15, 16 and 46, 338, 243M, 243ZC, 244-330, 332, 243D and 340T 65th Amendment	The Indian Constitution (Article 15) prohibits any discrimination based on religion, race, caste, sex, and place of birth and also contains a clause allowing the union and state governments to make any special provision for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and Scheduled Tribes. Article 16 refers to the equality of opportunity in matters of public employment. Article 46 directs the state to promote with special care the educational and economic interests of the weaker sections of the people, particularly of the Scheduled Castes and the Scheduled Tribes and also directs the state to protect them from social injustice and all forms of exploitation. Article 338 provides for Setting up of National Commission for STs Articles 243M, 243ZC, 244 provide for reservation of seats for the Local Self-Governments bodies Article 330 provides for Reservation of seats for SCs in the Lok Sabha is provided under, Article 332 provides for in the State Assemblies under and Articles 243D and 340T provides Reservation of seats for the Local Self-Governments bodies under. Sixty-fifty amendment constituting national commission for SC and ST	Relevant as the provisions under the Constitution ensure the access, equity and inclusiveness of the vulnerable groups in the Program particularly as the state as population of SC, ST in many districts
2	Article 366(25) of the Constitution of India Article 244(1) of Constitution	Article 366(25) refers to Scheduled Tribes as those communities, who are scheduled in accordance with Article 342 of the Constitution, wherein communities shall be declared as such by the President through an initial public notification or through a subsequent amending Act of Parliament. The Fifth Schedule under Article 244(1) of Constitution defines "Scheduled Areas" as such areas as the President may by order declare to be Scheduled Areas after consultation with the Governor	Relevant as some of the project interventions would be in tribal dominated areas, besides in other areas where tribal population is dispersed

		<p>of that State. Defines following essential characteristics, for a community to be identified as Scheduled Tribes are.</p> <ul style="list-style-type: none"> • Indications of primitive traits. • Distinctive culture. • Shyness of contact with the community at large. • Geographical isolation; and • Backwardness. <p>The criteria for declaring any area as a "Scheduled Area" under the Fifth Schedule are (a) preponderance of tribal population, (b) compactness and reasonable size of the area, (c) a viable administrative entity such as a district, block or Taluka, and (d) economic backwardness of the area as compared to the neighboring areas.</p>	
3	Right to Information Act, 2005	<p>provides for setting out the practical regime of right to information for citizens to secure access to information under the control of Public Authorities. The act sets out obligations of public authorities with respect to provision of information; requires designating of a Public Information Officer; process for any citizen to obtain information/disposal of request, etc.; provides for institutions such as Central Information Commission/State Information Commission</p>	<p>Relevant as all program related information would need to be disclosed</p>
4	Panchayats (Extension to Scheduled Areas) Act (PESA, 1996)	<p>The salient feature of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (PESA) and the modalities worked out to grant rights to tribals in the country are</p> <ol style="list-style-type: none"> I. Legislation on Panchayats shall be in conformity with the customary law, social and religious practices and traditional management practices of community resources. II. Habitation or a group of habitations or a hamlet or a group of hamlets comprising community and managing its affairs in accordance with traditions and customs; and shall have a separate Gram Sabha. III. Every Gram Sabha to safeguard and preserve the traditions and customs of people, their cultural identity, community resources and the customary mode of dispute resolution. V. The Gram Sabhas have roles and responsibilities in approving all development works in the village, identify beneficiaries, issue certificates of utilization of funds; power to control institutions and functionaries in all social sectors and local plans. <p>Gram Sabhas or panchayats at</p>	<p>Relevant as there are scheduled areas in the state, where in project proposes roads – upgrading to BT standards and multiple connectivity links</p>

		<p>appropriate level shall also have powers to manage minor water bodies; power of mandatory consultation in matters of land acquisition; resettlement and rehabilitation and prospecting licenses/mining leases for minor minerals; power to prevent alienation of land and restore alienated land; regulate and restrict sale/consumption of liquor; manage village markets, control money lending to STs; and ownership of minor forest produce.</p> <p>The provisions of Panchayat with certain modification and exceptions have been extended to the Schedule V areas viz. the ten States where the Panchayats exist in the country. Gram Sabhas have been constituted in every State as per the Panchayat Raj Act/PESA Rules of the concerned State</p>	
5	Involuntary Resettlement (OP4.12)	<p>This policy covers direct economic and social impacts that both result from Bank-assisted investment projects, and are caused by</p> <p>(a) the involuntary taking of land resulting in</p> <p>(i) relocation or loss of shelter.</p> <p>(ii) loss of assets or access to assets; or</p> <p>(iii) Loss of income sources or means of livelihood, whether or not the affected persons must move to another location. In the event of inadequate land width to construct the road specifically in habitation sections need for taking land may arise.</p>	<p>Not relevant. There shall be no land acquisition</p> <p>Further, provision is being made to screen and identify such locations and avoid any land take through design modifications. All land take would be sourced through voluntary donation.</p>
6	Indigenous People (OP4.10)	<p>The scheduled Caste and Scheduled Tribe population are present in the state and project districts. Some of the project roads are likely to provide new connectivity to habitations with scheduled caste and scheduled Tribe population.</p> <p>The policy requires a social assessment by the borrower.</p> <p>(a) a process of free, prior, and informed consultation with the affected Indigenous Peoples' communities at each stage of the project, and particularly during project preparation, to fully identify their views and ascertain their broad community support for the project;</p>	<p>Relevant. A Vulnerability Framework is provided outlining the process of screening the sub projects for presence of Scheduled caste and Scheduled tribe Population in the habitations to be connected, ensuring their participation in the transect walk process and consultations during DPR preparation to ascertain their views and broad support for the project, and Extending additional support</p>

			to them and other vulnerable people adversely affected by the project. Disclosure of project information at the community level in a culturally appropriate way and local language "Hindi".
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Apart from compliance to the above policies, the project will comply with the bank procedure, BP17.50 in respect of Disclosure shall be carried out at all stages of the project as at planning stage, prioritization stage, project preparation stage and implementation stages. Consultations shall be conducted with the community and the PRI at project preparation and implementation stage.

3.2. Applicable national and State Environmental, Social and Labor regulations

Some major labour laws applicable to establishments engaged in building and other construction work:

- (a) **Employees Compensation Act 1923**: The Act provides for compensation in case of injury, disease or death arising out of and during the course of employment.
- (b) **Payment of Gratuity Act 1972**: gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death at the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- (c) **Employees P.F. and Miscellaneous Provision Act 1952 (since amended)**: The Act provides for monthly contribution by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) Payment of P.F. accumulation on retirement/death etc.
- (d) **Maternity Benefit Act 1961**: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- (e) **Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013**: This Act defines sexual harassment in the workplace, provides for an enquiry procedure in case of complaints and mandates the setting up of an Internal Complaints Committee or a Local Complaints Committee
- (f) **Contract Labour (Regulation & Abolition) Act 1970**: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.
- (g) **Minimum Wages Act 1948**: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- (h) **Payment of Wages Act 1936**: It lays down the mode, manner and by what date the wages are to be paid, what deductions can be made from the wages of the workers.
- (i) **Equal Remuneration Act 1976**: The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- (j) **Payment of Bonus Act 1965**: The Act is applicable to all establishments employing 20 or more employees. Some of the State Governments have reduced this requirement from 20 to 10. The Act provides for payments of annual bonus subject to a minimum of 8.33% of the wages drawn in the relevant year. It applies to skilled or unskilled manual, supervisory, managerial, administrative, technical or clerical work for hire or reward to employees who draw a salary of Rs. 10,000/- per month or less. To be eligible for bonus, the employee should have worked in the establishment for not less than 30 working days in the relevant year. The Act does not apply to certain establishments.

- (k) **Industrial Disputes Act 1947:** the Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations, a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- (l) **Trade Unions Act 1926:** The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- (m) **Child Labour (Prohibition & Regulation) Act 1986:** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in the Building and Construction Industry.
- (n) **Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979:** The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home up to the establishment and back, etc.
- (o) **The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996 (BOCWW Cess Act):** All the establishments who carry on any building or other construction work and employ 10 or more workers are covered under these Acts. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be notified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as Canteens, First – Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- (p) **Factories Act 1948:** the Act lays down the procedure for approval of plans before setting up a factory engaged in manufacturing processes, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power.
- (q) **Bonded Labour System (Abolition) Act, 1976:** The Act provides for the abolition of bonded labour system with a view to preventing the economic and physical exploitation of weaker sections of society. Bonded labour covers all forms of forced labour, including that arising out of a loan, debt or advance.
- (r) **Employer's Liability Act, 1938:** This Act protects workmen who bring suits for damages against employers in case of injuries endured in the course of employment. Such injuries could be on account of negligence on the part of the employer or persons employed by them in maintenance of all machinery, equipment etc. in healthy and sound condition.
- (s) **Employees State Insurance Act 1948:**The Act provides for certain benefits to insured employees and their families in case of sickness, maternity and disablement arising out of an employment injury. The Act applies to all employees in factories (as defined) or establishments which may be so notified by the appropriate Government. The Act provides for the setting up of an Employees' State Insurance Fund, which is to be administered by the Employees State Insurance Corporation. Contributions to the Fund are paid by the employer and the employee at rates as prescribed by the Central Government. The Act also provides for benefits to dependents of insured persons in case of death as a result of an employment injury.

- (t) **The Personal Injuries (Compensation Insurance) Act, 1963**: This Act provides for the employer's liability and responsibility to pay compensation to employees where workmen sustain personal injuries in the course of employment.
- (u) **Industrial Employment (Standing Order) Act 1946**: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- (v) Any other applicable law, if any

Some of the major laws that are applicable for protection of environment:

1. **The Environment (Protection) Act, 1986 and as amended**: This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
2. **State Tree Preservation Acts as may be in force**: These provide for protection of trees of important species. Contractors will be required to obtain prior permission for full or partial cutting, uprooting, or pruning of any such trees.
3. **The Wildlife (Protection) Act, 1972, and as amended**: This provides for protection of wildlife through notifying National Parks and Sanctuaries and buffer areas around these zones; and to protect individuals of nationally important species listed in the Annex of the Act.
4. **The Biological Diversity Act, 2002**: This provides for conservation of biological diversity, sustainable use of components of biological diversity, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto.
5. **The Public Liability Insurance Act, 1991 as amended and The Public Liability Insurance Rules, 1991 as amended**: These provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986 and exceeding such quantity as may be specified by notification by the Central Government.
6. **The Ancient Monuments and Archaeological Sites and Remains Act, 1958 and the Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010**, (applicable for chance finds as there is no archaeological) These provide for conservation of cultural and historical remains found in India. Accordingly, area within the radii of 100m and 300m from the "protected property" are designated as "protected area" and "controlled area" respectively. No development activity (including building, mining, excavating, blasting) is permitted in the "protected area" and development activities likely to damage the protected property is not permitted in the "controlled area" without prior permission of the Archaeological Survey of India (ASI) or the State Departments of Art and Culture or Archaeology as applicable.
7. **The Environmental Impact Assessment Notification, 2006 and as amended**: This provides for prior environmental clearance for new, modernization and expansion projects listed in Schedule 1 of the Notification. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any environmental management plan stipulated as per the permission under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
8. **The Water (Prevention and Control of Pollution) Act, 1974 as amended, and the Water (Prevention and Control of Pollution) Rules, 1975 as amended**: These provide for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such

contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates wastewater, and observe the required standards of establishment and operation of these items of work or installations; as well as install and operate all required wastewater treatment facilities.

9. **The Water (Prevention and Control of Pollution) Cess Act, 1977 and The Water (Prevention and Control of Pollution) Cess Rules, 1978:** These provide for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution under the Water (Prevention and Control of Pollution) Act, 1974.
10. **The Air (Prevention and Control of Pollution) Act, 1981 as amended, and the Air (Prevention and Control of Pollution) Rules, 1982:** These provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates air pollution such as batching plants, hot mix plants, power generators, backup power generation, material handling processes, and observe the required standards of establishment and operation of these items of work or installations.
11. **Noise Pollution (Control and Regulation) Rules, 2000, and as amended:** This provides for standards for noise for day and night for various land uses and specifies special standards in and around sensitive receptors of noise such as schools and hospitals. Contractors will need to ensure compliance to the applicable standards and install and operate all required noise control devices as may be required for all plants and work processes.
12. **Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996:** This provides for Requirement of preparation of on-site and off-site Disaster Management Plans for accident-prone areas.
13. **The Explosives Act 1884 and the Explosives Rules, 2008:** These provide for safe manufacture, possession, sale, use, transportation and import of explosive materials such as diesel, Oil and lubricants etc.; and also, for regulating the use of any explosives used in blasting and/or demolition. All applicable provisions will need compliance by the contractors.
14. **The Petroleum Rules, 2002:** This provides for safe use and storage of petroleum products and will need to be complied by the contractors.
15. **The Gas Cylinder Rules 2004 and amendments:** This provides for regulations related to storage of gas, and possession of gas cylinder more than the exempted quantity. Contractors should comply with all the requirements of this Rule.
16. **Manufacture, Storage and Import of Hazardous Chemical Rules of 2000 and as amended:** These provide for use and storage of hazardous material such as highly inflammable liquids like HSD/LPG. Contractors will need to ensure compliance to the Rules; and in the event where the storage quantity exceeds the regulated threshold limit, the contractors will be responsible for regular safety audits and other reporting requirements as prescribed in the Rules.
17. **Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016:** These provide for protection of general public from improper handling storage and disposal of hazardous waste. The rules prescribe the management requirement of hazardous wastes from its generation to final disposal. Contractors will need to obtain permission from the State Pollution Control Boards and other designated authorities for storage and handling of any hazardous material; and will ensure full compliance to these rules and any conditions imposed in the permit.
18. **The Bio Medical Waste Management Rules, 2016:** This provides for control, storage, transportation and disposal of bio-medical wastes. As and where the contractor has any first aid facility and dispensaries, established in either temporary or permanent manner, compliance to these Rules is mandatory.

19. **Construction and Demolition Waste Management Rules, 2016:** This provides for management of construction and demolition waste (such as building materials possible to be reused, rubble and debris or the like); and applies to all those waste resulting from construction, re-modelling, repair or demolition of any civil structure. Contractor will need to prepare a waste disposal plan and obtain required approval from local authorities, if waste generation is more than 20 tons in any day or 300 tons in any month during the contract period; and ensure full compliance to these rules and any conditions imposed in the regulatory approval.
20. **The E-Waste (Management) Rules, 2016:** This provides for management of E-wastes (but not covering lead acid batteries and radio-active wastes) aiming to enable the recovery and/or reuse of useful material from e-waste, thereby reducing the hazardous wastes destined for disposal and to ensure the environmentally sound management of all types of waste of electrical and electronic equipment. This Rule applies to every manufacturer, producer, consumer, bulk consumer, collection centers, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational.
21. **Plastic waste Management Rules, 2016:** This provides for control and management of the plastic waste generated from any activity. Contractors will ensure compliance to this Rule.
22. **The Batteries (Management and Handling) Rules 2001:** This provides for ensuring safe disposal and recycling of discarded lead acid batteries likely to be used in any equipment during construction and operation stage. Rules require proper control and record keeping on the sale or import of lead acid batteries and recollection of the used batteries by registered recyclers to ensure environmentally sound recycling of used batteries. Contractors will ensure compliance to this Rule.
23. **The Ozone Depleting Substances (Regulation and Control) Rules, 2000 and as amended:** This provides for regulation of production and consumption of ozone depleting substances in the country, and specifically prohibits export to or import from countries not specified in the Rules, and prohibits unless specifically permitted, any use of ozone depleting substance.
24. **The Coastal Regulation Zone Notifications, 1991 and as amended:** This provides for regulation of development activities within the 500m of high tide line in coastal zone and 100m of stretches of rivers and estuaries influenced by tides. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any plan stipulated as per the permission under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
25. **The Motor Vehicle Act 2019 as amended (and State Motor Vehicle Acts as may be in force) and the Motor Vehicle Rules and as amended (and State Motor Vehicle Rules as may be in force):** To minimize the road accidents, penalizing the guilty, provision of compensation to victim and family and check vehicular air and noise pollution. Contractors will be required to ensure full compliance to these rules.
26. **Easement Act, 1882:** This provides for the rights of landowners on groundwater. Contractors will need to ensure that other landowners' rights under the Act is not affected by any groundwater abstraction by the contractors.
27. **State Groundwater Acts and Rules as may be in force and the Guidelines for Groundwater Abstraction for drinking and domestic purposes in Notified Areas and Industry/Infrastructure project proposals in Non-Notified areas, 2012:** These provide for regulating extraction of ground water for construction/industrial and drinking and domestic purposes. Contractors will need to obtain permission from Central/State Groundwater Boards prior to groundwater abstraction through digging any bore well or through any other means; and will ensure full compliance to these rules and any conditions imposed in the permit.
28. **The Mines Act, 1952 as amended; the Minor Mineral and concession Rules as amended; and the State Mineral (Rights and Taxation) Acts as may be in force:** These provide for for safe and sound mining activity. The contractors will procure aggregates and other building materials from quarries and borrow areas approved under such Acts. In the event the contractors open any new quarry and/or borrow areas, appropriate prior permission from the State Departments of Minerals and Geology will need to be obtained. Contractors will also need to ensure full compliance to these rules and any conditions imposed in the permit.

29. **The Insecticides Act, 1968 and Insecticides Rules, 1971 and as amended:** These provide for regulates the manufacture, sale, transport, distribution, export, import and use of pesticides to prevent risk to human beings or animals, and for matters connected therewith. No one should import or manufacture; sell, stock or exhibit for sale; distribute, transport, use: (i) any misbranded insecticides, (ii) any insecticide the sale, distribution or use of which is for the time being prohibited under the Act; and (iii) any insecticide except in accordance with the condition on which it was registered under the Act.
30. **National Building Codes of India, 2005 and as amended:** This provides guidelines for regulating the building construction activities in India. The code mainly contains administrative regulations, development control rules and general building requirements; stipulations regarding materials, structural design and construction; and building and plumbing services. Contractors will be required to comply with all Bureau of Indian Standards Codes dealing with: (i) use and disposal of asbestos containing materials in construction; (ii) paints containing lead; (iii) permanent and temporary ventilations in workplace; (iv) safety, and hygiene at the workplace; (v) prevention of fire; (vi) prevention of accidents from faulty electrical gadgets, equipment and accessories; and all other such codes incidental to the Contract.
31. Any other applicable law, if any.

3.3. Applicable World Bank Safeguard Policies

Table 2: Applicable World Bank Environmental Safeguard Policies

Sr.No.	World Bank Policy	Applicability Due to	How Project Address Policy Requirements?
1.	Environmental Assessment OP4.01	Project is likely to have impacts on environmental components such as on ambient air quality water bodies, existing slopes in on embankment, trees along the road, etc.	Preparation and application of environmental Codes of Practice for addressing environmental issues.
2.	Natural Habitats OP 4.04	Some rural roads are likely to be in/close to sensitive natural habitats.	Avoidance measures, including non-inclusion of such sub-projects in the project.

3.4. IRC Codes, MORTH Clauses, and other guidelines Applicable

All the applicable clauses are mentioned below:

- IRC 35: 2015: Code of practice for Road Markings (with paints)
- IRC 67:2012: Code of practice for Road Signs
- IRC 69-1977: Space standards for roads in urban areas
- IRC 103-2012: Guidelines for pedestrian facilities
- IRC 99-2018.

4. Baseline Conditions

4.1. Baseline Environment and Social Conditions

4.1.1. Blackspots in Indore

4.1.1.1. Corridor of Impacts (COI) and Project Influence Area (PIA)

Based on the proposed mitigation designs a preliminary assessment of impacts was done. The project influence area was taken to 10 m. from center line on either side of the project road. Titleholders along the project corridor are not impacted, even in this buffer zone.

4.1.1.2. Topography and Physiography

The selected corridor is urban with plain terrain.

4.1.1.3. Drainage Pattern

There are no major water bodies crossing the Corridor.

4.1.1.4. Soil Types

The soil of Indore area is medium black soil.

4.1.1.5. Water Environment

There is no major source of contamination for surface and ground water along the project road.

4.1.1.6. Climatic Conditions

Temperature

The average daily temperature during the year varies between 32.7°C and 19.0°C. The district experiences pleasant winters and hot and rainy summers. The hot season extends from March to May, during which the daily maximum temperature often shoots up to 41.1°C.

Rainfall

The average annual rainfall recorded in the district is 1033 mm

4.1.1.7. Ambient Air Quality

The existing project road is a part of Aerodrome Road with four lane divided carriageway. The nearest Air Quality monitoring station is in the city of Indore. The AQI Index = 127 is recorded on 30th May 2022, as per the data from the monitoring station. Such level is considered as moderately unsafe

4.1.1.8. Noise Environment

The major source of noise pollution is vehicular traffic.

4.1.1.9. Biological Environment

Forest

There is no forest land diversion involved in the project and there are no forest sections in the near vicinity of the project corridor.

Protected Area

There are no notified National parks and Wildlife sanctuary identified.

Wild Fauna

There are no endangered, critically endangered, and threatened categories of fauna in the nearby vicinity of the project corridor.

4.1.2. Blackspots in Dhar

4.1.2.1. Corridor of Impacts (COI) and Project Influence Area (PIA)

Based on the proposed mitigation designs a preliminary assessment of impacts was done. The project influence area was taken to 10 m. from center line on either side of the project road. Titleholders along the project corridor are not impacted, even in this buffer zone.

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The selected corridor is urban with plain terrain.

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There are no major water bodies.

4.1.2.4. Soil Types

The soil of the area is medium black soil.

4.1.2.5. Climatic Conditions

Temperature

The variation in the maximum temperature during the year ranges from 41.10C to 28.20C and minimum from 16.30C to 28.40C. The district experiences pleasant winters and hot and rainy summers. The hot season extends from March to May, during which the daily maximum temperature often shoots up to 41.10 C.

Rainfall

The average annual rainfall recorded in the district is 833.6 mm.

4.1.2.5.1. Ambient Air Quality

The existing project road is a part of State Highway 38 with two lanes without paved shoulder. The nearest Air Quality monitoring station is located near Pithampur. The AQI Index = 131 is recorded on 19th May 2022, as per the data from the monitoring station.

4.1.2.5.2. Noise Environment

The major source of noise pollution along the corridor is vehicular traffic.

4.1.2.5.3. Biological Environment

Forest

There is no forest land diversion involved in the project and there are no forest sections in the near vicinity of the project corridor.

Protected Area

There are no notified National parks and Wildlife sanctuary identified.

Wild Fauna

There are no endangered, critically endangered, and threatened categories of fauna in the nearby vicinity of the project corridor.

4.1.3. Blackspots in Datia

4.1.3.1. Corridor of Impacts (COI) and Project Influence Area (PIA)

Based on the proposed mitigation designs a preliminary assessment of impacts was done. The project influence area was taken to 10 m. from center line on either side of the project road. Titleholders along the project corridor are not impacted, even in this buffer zone.

4.1.3.2. Topography and Physiography

The selected corridor is urban with plain terrain.

4.1.3.3. Drainage Pattern

There are no major drains.

4.1.3.4. Soil Types

The soil of the area is alluvial soil.

4.1.3.5. Water Environment

The construction will have minimal to no impact on the water quality of the area.

4.1.3.6. Climatic Conditions

Temperature

The variation in the temperature during the year ranges from 47°F to 106°F. The district experiences pleasant winters and hot and rainy summers. The hot season extends from April to June, during which the daily maximum temperature is often above 99°F.

Rainfall

The average annual rainfall recorded in the district is about 842 mm.

4.1.3.7. Ambient Air Quality

The nearest Air Quality monitoring stations are in Jhansi and Gwalior. The AQI Index = 30 is recorded on 13th July 2022, as per the data from the monitoring station. Such level is considered as fair.

4.1.3.8. Noise Environment

The major source of noise pollution along the corridor is vehicular traffic.

4.1.3.9. Biological Environment

Forest

There is no forest land diversion involved in the project and there are no forest sections in the near vicinity of the project corridor.

Protected Area

There are no notified National parks and Wildlife sanctuary identified.

Wild Fauna

There are no endangered, critically endangered, and threatened categories of fauna in the nearby vicinity of the project corridor.

5. Analysis of Alternatives

5.1. “With” and “Without” Scenario

The blackspots carry both passenger and freight traffic. The no action scenario will allow an increase in accidents and a deteriorating road safety condition throughout the stretch.

As a part of blackspot rectification, the road safety assessment has been completed to propose road safety measures for improving the safety along the selected stretch. All the safety deficient locations were examined at site for the nature of the safety problems and a set of recommendations have been provided for implementation in respect of each such location to improve the road safety throughout the corridor.

6. Consultation with key Stakeholders

6.1. Definition of stakeholders

Project stakeholders are defined as individuals, groups or other entities who:

- (i) are impacted or likely to be impacted directly or indirectly, positively or adversely, by the Project (also known as 'affected parties')
- (ii) may have an interest in the project including individuals or groups whose interests may be affected by the project and who have the potential to influence the project outcomes in any way.

6.2. Objective of Stakeholders consultations

The objective of stakeholder consultation is to look into the likely impacts of road improvement on the communities, and the likely mitigation aspects of the impacts.

6.3. Types and categories of stakeholders

6.3.1. Institutional

The institutional stakeholder of the project includes the government authorities involved in the project including Madhya Pradesh Road Development Corporation, Madhya Pradesh Industrial Development Corporation, Indore Municipal Corporation, Public Works Department, Police, World Bank, Madhya Pradesh Rural Road Development Authority & project management consultancy.

6.3.2. Road Users

All the categories of road users including pedestrians, bus drivers, 2-wheeler drivers, four-wheeler drivers truck operators as well as the communities living along the stretch including the female residents were involved in the consultations

6.3.3. Vulnerable groups

There are no vulnerable groups who are impacted because of the proposed interventions in the project.

6.4. Stakeholder Consultations

6.4.1. Blackspots in Indore

Social Impact Assessment was carried out for the project roads. The SIA study looked into the likely impacts of road improvement on the communities, and the likely mitigation aspects of the impacts. The SIA findings are summarized into (i) analysis of outcome of consultations of the various stakeholders and (ii) analysis of data/information finally put forth as how these outcomes have been incorporated into designs and Action Plans.

Table 3 : Stakeholder consultation matrix

S No.	Location	Issues Discussed	Steps Suggested by Participants	Remarks
1	Bihadi Ph	There is adequate space available on the side of road, but at present	Utilize the space available, as the road authority currently has no right of way for 5-6 m of land	Paved shoulder of 1.5 m is proposed at about 5 km section of the project corridor. So, the need for additional space for movement is catered to.

	ata	, there is difficulty for pedestrian to walk due to inadequate space. The space is extremely important for safe driving.		
		Overspeeding is a major issue, especially with two-wheeler drivers hence it has to be addressed as a priority.	Speed breakers near the cross-section, would ensure that the speed of vehicles multiplying on this road would be kept under check.	At important locations on the stretch where overspeeding has been observed to be a cause of accident including black spot locations. Thus, for improving black spot speed breakers/rumble strips/transverse bar markings have been proposed in the design.
		Unmaintained road shoulder.	Road shoulder needs to be maintained.	Paved or paver block shoulders have been proposed in selected built-up areas including locations with pedestrian guard rail to make safe walking for pedestrians.
		An abandoned waiting hall is obstructing visibility.	An abandoned waiting hall is obstructing visibility and needs to be removed.	The abandoned waiting hall is in dilapidated condition, and it will be demolished to increase the visibility.
		Two-wheeler drivers slip at areas where there is a drop in pavement from the earthen shoulders, it results in grievous injuries, especially when the rider is not wearing a helmet.	Ensure that when overlay is done every year, it should be accompanied with earthwork for keeping the level of junction roads as well as the nearby areas same as that of road.	Paved shoulders along with provision of earthen shoulders and hard shoulders have been done to ensure such incidents do not occur.
2	Dewas Naka	Red light should be installed at Right place	Red light should be installed in such a way that visibility is not obstructed	Red light will be installed providing more visibility
		Needed proper speed breaker	Proper speed breaker is needed. Vehicle does not control the speed due to improper speed breaker	Suitable speed breakers as per IRC specification will be constructed.
		A gap median is required in Dewas Naka to Mangalia Road	In 1.00 km from Dewas Naka to Mangalia Road. There is no gap median, therefore people prefer to take the wrong side	The provision of gap median has been provided at two places
		Accumulation of rainwater	Accumulation of rainwater due to which many accidents happen.	Provision of drainage has been provided for seamless flow of rainwater.

		EP pole is installed at Niranjapur side	An EP pole is installed at Niranjapur side, due to which there arises possibility of accident.	Provision has been made to shift the EP
3	Ruchi Soy a Factory	There should be adequate space on the side of road, but at present, there is no space at all. The space is extremely important for safe driving.	Make space available, as the road authority currently has enough right of way for 5-6 m of land to be available.	Paved shoulder of 1.5 m is proposed at about 5 km section of the project corridor. So, the need for additional space for movement is catered to.
		Appropriate Speed breaker is not provided	Proper Speed breaker is needed so that the vehicle speed can be controlled.	Suitable speed breakers as per IRC specification will be constructed.
		Bus stops are required to be installed at the right locations.	Bus Stops should be strategically placed at places where it should be utilized or required.	Existing Bus Stops along the project road are considered in the design for upgradation and new bus stops at critical locations of urban area and major junctions are also proposed for convenient access and safe use.
		There is no divider on the road	Divider are required .and in the absence of it people tend to use wrong side.	Provision of divider has been taken on the road
		Over speeding is a major issue, especially with two-wheeler drivers hence it has to be addressed at priority.	Speedbreakers throughout the cross-section, would ensure that the speed of vehicles plying on this road would be kept under check.	At important locations on the stretch where over speeding has been observed to be a cause of accident including blackspot locations, speed breakers/ rumble strips/ transverse bar markings have been proposed in the design.
		The big trailers coming out of cement factory are major cause of accident as the junction is too steep for them to turn onto the main carriageway.	There should be some arrangementlike stopping the traffic at the time when the trailers are coming out.	Junction improvement is proposed in accordance with the MORT&H specifications and therefore, the issue of visibility of incoming vehicles is mitigated in the provisions. In addition to engineering improvement, specialcampaign programsare proposed forcommercial traffic on road safety.

4	Bap at Cho ura ha	Two-wheeler drivers slip at areas where there is a drop in pavement from the earthen shoulders, it results in grievous injuries, especially when the rider is not wearing helmet.	Ensure that when overlay is done every year, it should be accompanied with earthwork for keeping the level of junction roads as well as the nearby areas same as that of road.	Paved shoulders along with provision of earthen shoulders and hard shoulders have been done to ensure such incidents do not occur.
		Over speeding is a major issue, especially with two-wheeler drivers hence it has to be addressed at priority.	Speed breakers throughout the cross-section, would ensure that the speed of vehicles plying on this road would be kept under check.	At important locations on the stretch where over speeding has been observed to be a cause of accident including blackspot locations, speed breakers/ rumble strips/ transverse bar markings have been proposed in the design.
		Appropriate Speed breaker is not provided	Proper Speed breaker is needed so that the vehicle speed can be controlled.	Suitable speed breakers as per IRC specification will be constructed.
		Bus stops are required to be installed at the right locations.	Bus Stops should be strategically placed at places where it should be utilized or required.	Existing Bus Stops along the project road are considered in the design for upgradation and new bus stops at critical locations of urban area and major junctions are also proposed for convenient access and safe use.
5	Lant ern Cho wra ha	Appropriate Speed breaker is not provided	Proper Speed breaker is needed so that the vehicle speed can be controlled.	Suitable speed breakers as per IRC specification will be constructed.
		Provisions of paved footpath should be made, for pedestrian commuting.	If any provisions for footpath is made, it should be paved.	Paved or paver block shoulders have been proposed in select built-up areas including locations with pedestrian guard rail to make safe walking for pedestrians.

	There should be adequate space available on the side of road, but at present, there is no space at all. The space is extremely important for safe driving.	Make space available, as the road authority currently has enough right of way for 3-4 m of land to be available.	Paved shoulder of 1.5 m is proposed at about 5 km section of the project corridor. So, the need for additional space for movement is catered to.
	Red light should be installed in right place	Red light should be installed at the right place so that everyone can see it easily.	Red light will be installed in the right place

Focus Group Discussion

A community consultation was held after obtaining verbal consent to the given letter of information for conducting community consultation. As many of the people are shopkeepers, one-on-one meetings were also held because they were the first to witness accidents and fatalities. The community worked together to assess the social impact of the identified stretch. Since the majority of the work will be done on the road and shoulders. As a result, no potential social impact was identified, and there is no issue of project affected people or availability of land. The community appreciated the efforts made by the World Bank and MP governments for implementing such project.

Focus group discussion with shopkeepers, villagers, community, farmers, and road users was held near the identified black spots. The main goal of the discussion was to inform the community about the upcoming Black Spot improvements. The teams discussed the causes of accidents and seek suggestions for improvement work.

The number of heavy, light, and vulnerable road users is highest on this road because the road is nearing to Indore district headquarters. The shoulders are unmaintained and inadequate, over speeding, over taking are a major source of accidents. There are crossroads, and visibility is limited from a distance. During the focus group discussion, people shared the horrifying accidents that took place on this road and provided their viewpoints on how to reduce the risk. Due to lack of road awareness among the people and many defects on this road, the situation of accidents is being created. Abandoned structure - a waiting hall is obstructing the visibility and is suggested to remove by the community. Proper marking appropriate speed breaker at suitable location and dividers, signage's were suggested to be put on road to avoid accidents. The campaign agent conducted awareness campaigns in the identified spots.



Figure 4: Snapshots of consultations carried out at Bihadiya Phata





Figure 5: Snapshots of consultations carried out at Dewas Naka





Figure 6: Snapshots of consultations carried out at Ruchi Soya factory





Figure 7: Snapshots of consultations carried out at Lantern Chauraha





Figure 8: Snapshots of consultations carried out at Bapat Chauraha

6.4.2. Blackspots in Dhar

SNo.	Location	Issues Discussed	Steps Suggested by P participants	Remarks
1	Pagara Phata	The shoulders are very narrow. There is adequate space available on the side of road, so proper utilization of available space is extremely important for pedestrian movement.	Utilize the space available, for constructing shoulders.	Paved shoulder of 1.5 m is proposed at about 500m section of the project corridor. So, the need for additional space for movement is catered to.
		Over speeding is a major problem, especially among two-wheeler drivers, and needs to be addressed at priority.	Speed breakers at the required sections, will be provided as it would help calming the speed.	At important locations on the stretch where over speeding has been observed to be a cause of accident particularly at black spot locations, provision of speed breakers /rumble strips/ transverse bar markings have been proposed in the design.
		Unmaintained road shoulder.	Road shoulder needs to be maintained.	Paved or paver block shoulders have been proposed in selected built-up areas including locations with pedestrian guard rail to make safe walking for pedestrians.
		There is no indication for junction which is the main cause for accidents.	Proper indication needs to be installed at junction	Yellow light will be installed at junction for slow traffic movement
		In the current situation, the shoulders are narrow, and buses stop at the roads to unload passengers, causing congestion. There is adequate space available on the side of road, so proper	Bus Stops should be strategically placed at places where it should be utilized or required. There is enough space available to make a proper shoulder	Existing Bus Stops along the project road are considered in the design for up-gradation and new bus stops at critical locations of urban area and major junctions are also proposed for convenient Access and safe use.

SNo.	Location	Issues Discussed	Steps Suggested by Participants	Remarks
		utilization of available space is extremely important for safe driving.		
2	Village Jetpura	The shoulders are very narrow. There is adequate space available on the side of road, so proper utilization of available space is extremely important for safe driving.	Utilize the space available, for constructing shoulders.	Paved shoulder of 1.5 m is proposed at about 500m section of the project corridor. So, the need for additional space for movement scattered to.
		Needed proper speed breaker	Proper speed breaker is needed. Vehicles do not control the speed due to improper speed breaker	Suitable speed breakers as per IRC specification will be constructed.
		There is a blind curve obstructing the visibility creating the spots for accidents. There are no road signs or caution boards for blind curves at present.	Proper signage should be in place	In order to avoid accidents, speed breakers will be provided to slow down the speed. Proper signage will be placed along the road
3	Dhar Fata Makni	A SH road is intersecting at the NH. Over speeding vehicles often cause accidents on the NH since the SH is not visible from the NH.	Proper Speed breaker is needed so that the vehicle speed can be controlled.	Suitable speed breakers as per IRC specification will be constructed.
		Over speeding is a major problem, especially among two-wheeler drivers, and needs to be addressed at priority.	Speed breakers at the required sections, will be provided as it would help calming the speed.	At important locations on the stretch where over speeding has been observed to be a cause of accident including black spot locations, provision of speed breakers /rumble strips/ transverse bar markings have been proposed in the design.

SNo.	Location	Issues Discussed	Steps Suggested by Participants	Remarks
		There are no road signs or caution boards for blind curves at present.	Yellow light should be installed at junction	Yellow light will be installed at junction for slow traffic movement
4	Pitgara Phata	Over speeding is a major problem, especially among two-wheeler drivers, and needs to be addressed at priority.	Speedbreakers at the required sections, will be provided as it would help to calming the speed.	At important locations on the stretch where over speeding has been observed to be a cause of accident including black spot locations, provision of speedbreakers/rumblestrips / transverse bar markings have been proposed in the design.
		Appropriate Speed breaker is not provided	Proper Speed breaker is needed so that the vehicle speed can be controlled.	Suitable speed breakers as per IRC specification will be constructed for calming the speed.
		The local villagers have no access to the service road. Overspeeding vehicles often cause accidents on the NH since the SH is not visible from the NH. On both sides of the junction, there is plenty of unutilized space.	Utilize the available space, as there is enough land of about 4-5 meters available.	As per the IRC guidelines, service roads are proposed along approximately 500 metres of the project corridor, so additional movement space is catered to.
		The local villagers have no access to a service road. Heavy farm products and bus passengers need to stop at the junction to enter the village road. But over speeding vehicles on the NH are causing accidents due to the lack of service roads. There is a pond near the intersection of the SH and the NH.	In order to avoid accidents, the community requires a long service road. The community requires the construction of a protection wall for safety reasons.	On both sides service road of 100m will be provided near to the junction. Retaining Wall will be constructed

Focus Group Discussion

A letter for conducting the community consultation specifying the subject for discussion was provided to the councilor prior to the consultation. Thereafter a community consultation was held after obtaining verbal consent. The team also conducted one-on-one meetings with the persons, who were the first to witness accidents and fatalities. These people were identified as emergency volunteers under the CPRSP projects – Road Safety

Campaign Plan. The team along with the community worked together to assess the black spot in the identified stretch. Since the majority of the work will be done on the road and shoulders. As a result, no potential social impact was identified, and there is no issue of project affected people or availability of land. The community appreciated the efforts made by the World Bank and MP governments for implementing such project were every life matters.

Focus group discussion with shopkeepers, villagers, community, farmers, and road users was held near the identified black spots. The main goal of the discussion was to inform the community about the upcoming Black Spot improvements and to see that any structure or people are affected. Besides that, the team discussed the causes of accidents and seeks suggestions for rectification of black spots. The number of heavy, light, and vulnerable road users is highest on this road because the road is nearing to Indore district headquarters. The shoulders are unmaintained, over speeding, over taking are a major source of accidents. There are crossroads, and visibility is limited from a distance. During the focus group discussion, people shared the severe accidents that took place on this road. The people shared their viewpoints on how to reduce the risk. Due to lack of road awareness among the people and lack of safe road design, many accidents occur at this spot. Proper marking appropriate speed breaker at suitable location and dividers, signages were suggested to be put on road to avoid accidents.



Figure 9: Snapshots of consultations carried out at Pagara Phata



Figure 10: Snapshots of consultations carried out at Jetpura



Figure 11: Snapshots of consultations carried out at Dhar Phata Makni



Figure 12: Snapshots of consultations carried out at Pitgara Phata

6.4.3. Blackspots in Datia

Table 4: Stakeholder consultation matrix

S.no	Location	Observation and finding	Impact	Issue	Suggestion
1	Pipraua Choraha – SH-19 Indergarh to Seondha	<ul style="list-style-type: none"> Piparua Black Spot is near Milestone 110 on SH-19. The first-sight observation related to causing road accidents and fatalities in the identified spot were due to T Junctions, obstruction in visibility and insufficient speed breakers. Two PMGSY roads on RHS and LHS are respectively intersecting at the Black Spot located at Piparua and Bara Pachera village. The T junction is the main source of accidents. There are no speed breakers on the roads leading to the villages. The encroachment on the shoulder by a grocery and puncture shop 	<p>Due to the improper junction and lack of speed limit signage, speed breaker, and obstruction caused due to extension of a temporary tin shed the driver who comes from a long distance does not see clearly, due to which the condition of the accident is created.</p> <p>Making it an accident-prone area</p>	<ul style="list-style-type: none"> High speed Darkness during night The absence of speed breakers on rural roads. Absence of cross marking Removal of extended Tin shed installed on the shoulders 	<ul style="list-style-type: none"> Reducing speed. Provision of light at night. Speed breakers should be made on rural roads. Widening the width of the road. Proper markings to cross the road Removal of extended Tin shed installed on the shoulders to increase the visibility. The shop owner had provided verbal consent to remove the extended tin shed. But did not agree to give in writing.

S.no	Location	Observation and finding	Impact	Issue	Suggestion
		<p>on LHS obstructs the visibility.</p> <ul style="list-style-type: none"> • White paint strips are provided on SH-19 but while driving it is invisible from a distance. • Speed limit and junction signages are not provided. • There is no provision for streetlights. 			
2	Cheema Bamba (SH-19)	<ul style="list-style-type: none"> • There is a high embankment at the spot of this road. • The PWD road connects to the main Cheema village road. • The PWD road is situated at a low level having a slope. So the visibility to the main road is less. • Adjacent to the spot (SH-19) there is an EP, Paan shop, waiting room, and tree on the road shoulder in RHS. • The encroached paan shop is not in use and only the structure is there, causing a severe visibility obstruction. • Likewise, the unused waiting room is also causing a severe visibility obstruction. • The road shoulder is very narrow. • There is a temporary bus stop where every 15-20 minutes the 	Due to the slope on the PWD road connecting to the main road, the vehicle driver needs to increase the speed to get to the main road leading to a dangerous spot for the accident.	<ul style="list-style-type: none"> • High embankment. • No signages on the Rural Road slope. • Due to excessive slope on the road, an accident situation is created. • The presence of EP, Paan shop, waiting room, and trees on the road shoulder, obstructs the visibility. 	<ul style="list-style-type: none"> • Proper signages are needed to be placed • Maintaining speed by reducing road gradient • Demolishing the unused waiting room and pruning trees. • Sifting of EP and paan shop for more visibility. • Construction of a safety wall to prevent erosion of the shoulder or other suitable techniques to prevent erosion. • Speed limit, junction signage, and road edge marking. • Road safety awareness programs should be regularly

S.no	Location	Observation and finding	Impact	Issue	Suggestion
		incoming and outgoing buses stop for the passengers.			<p>conducted for road users and the general public.</p> <ul style="list-style-type: none"> A sign board – drive slowly is needed in the residential area.
3	Essar Petrol pump to Prabhakar petrol pump (SH-19)	<ul style="list-style-type: none"> About one kilometer on both sides of the road. There is a less populated residential area in RHS. The road shoulders have been encroached upon by people about 500-700 meters in the LHS of the road. Due to unmaintained shoulders on the road, children and animals are using the paved road. Heavy vehicles are facing difficulty in crossing due to narrow shoulders at certain spots. There is no proper signage and crossing marking on the road. Over speeding of vehicle Vehicles are excessively overloaded with passengers. There is no streetlight. 	<ul style="list-style-type: none"> Most of the road shoulder is being used by the residents for their personal purpose such as herding animals, placing bricks and stacking construction materials, storing cow dung, parking vehicles, and animals on the roads. Accidents are created due to overspending on the road. 	<ul style="list-style-type: none"> Due to habitation areas children and animals are on the road. Absence of road shoulder, even if it is not in use due to bushes. Having construction materials on the road shoulder. Unable to overtake heavy vehicles due to lack of road shoulder. No marking on both sides of the road Over speeding of vehicles 	<ul style="list-style-type: none"> The road shoulder needs to be maintained. There is a need for dividers on the road. Regular road Safety Awareness needs to be conducted to keep the roads free from obstruction that creates visibility obstruction and hazards by encroaching roads for personnel use. There is a need for proper signage and marking on the road so that vehicles can overtake easily. Measures need to be taken to reduce the speed on this stretch. Streetlights are required

S.no	Location	Observation and finding	Impact	Issue	Suggestion
					as it is a residential area.
4	Vyaspura to Khanjapura Warehouse (SH-19)	<ul style="list-style-type: none"> There are narrow shoulders on the street. There is no proper signage and crossing marking on the road. Vehicles are running at over speed on the road. Frequent movement of stray animals 	<ul style="list-style-type: none"> Accident situation is being created due to over speed and stray animals. 	<ul style="list-style-type: none"> Maintenance of shoulder and uncleared bushes. No road markings and furniture 	<ul style="list-style-type: none"> The road shoulder needs to be maintained. Proper road marking and signage are required.

Focus Group Discussion

Focus group discussion with shopkeepers, villagers, farmers, and road users was held near the identified black spots. The main goal of the discussion was to inform the community about the upcoming Black Spot improvements. The teams discussed the causes of accidents and seek suggestions for improvement work.

The number of heavy, light, and vulnerable road users is highest on this road because the district headquarters is 30-40 kilometres away and people prefer to use this road because it is the shortest route. The shoulders are unmaintained, over speeding, over taking are a major source of accidents. There are crossroads, and visibility is limited from a distance. During the focus group discussion, people shared the horrifying accidents that took place on this road and provided their viewpoints on how to reduce the risk. Due to lack of road awareness among the people and many defects on this road, the situation of accidents is being created. In few places people have encroached the road by extending a tin shed and they have provided verbal consent to remove the extended temporary extension. Abandoned waiting hall is obstructing the visibility and is suggested to remove by the community. Proper marking appropriate speed breaker at suitable location and dividers, signage's were suggested to be put on road to avoid accidents.





RHS Pipraua PMGSY Road



LHS Bara Pachera PMGSY Road

Figure 13: Snapshots of consultations carried out at Pipraua Chauraha



Figure 14: Snapshots of consultations carried out at Cheema Bamwa



Figure 15: Snapshots of consultations carried out at Essar Petrol pump to Prabhakar petrol pump (SH-19)



Figure 16: Snapshots of consultations carried out at Vyaspura to Khanjapura Warehouse (SH-19)

7. Potential Project Impact

7.1. Identified Environmental and Social issues and Impacts

The project impacts during various phases of the implementation on the environment along with the mitigation measures are discussed in this chapter.

7.1.1.1. Climate

Anticipated Environmental Impacts

During construction, air quality along the project road alignment will be adversely impacted at major settlements and junctions. These areas will be impacted by air emissions like oxides of sulphur, oxides of Nitrogen, Carbon monoxide and hydrocarbon from construction vehicles. Dust from stone crushing unit operations at stone quarries and handling and storage of aggregates and sand at batching plants; construction activities like loading and unloading of raw materials; cutting and filling. Emissions from the hot mix plants from where hot mix is procured will also impact on the air quality at hot mix plant locations. However, construction activity in this project is rather limited and all materials can be procured from existing crushers operating in the area.

Operation stage impacts on air quality will be reduced as the project proposals are aimed at facilitating the easy movement of vehicles by widening of the existing narrower carriage way; segregation of traffic by median construction; realignment to make the entry and exit of the traffic perpendicular to the main carriage way. Pedestrian safety will be ensured by proposing raised pedestrian crossings across the major junctions. In addition, these proposals will discipline the road users and reduces unnecessary application of accelerations along the highway reducing impact on the air quality.

Mitigation Measures

- Consent for Establishment (CFE) and Consent for Operation (CFO) shall be obtained for construction establishments such as hot mix plants, batching plants and stone crushers from the SPCB. In case the contractor is procuring the materials from third party, he has to ensure that they are procured from approved sources only.
- All vehicles and construction equipment operating for the contractor and the consultant shall obtain "Pollution Under Control" (PUC) Certificates. Good maintenance of all vehicles and machines used in construction activities must be conformed to the National standards.
- Vehicles deployed for borrow material, sand and aggregate haulage shall be covered with tarpaulins to be spillage proof.
- Location of all construction establishments such as hot mix plants, WMM plants, crusher plants, construction camps and offices shall be located at least 1 km away from the human habitations and preferably on the leeward side ensuring all legal requirements and standards.
- In order to curb the increased fugitive dust emissions in the area due to excavations, loading, unloading, vehicular movement and raw material transport, provisions shall be made for periodical sprinkling water on all the haul roads on a regular basis during the entire construction period.
- Pollution control devices such as cyclone separators /scrubbers shall be installed to control emissions from hot mix plants, crushing units and concrete batching plants. Height of the stacks shall be as per the statutory requirements.
- Construction labours shall be provided with nose masks and other personnel protective equipment.
- LPG or low sulphur diesel shall be used in the diesel generator sets and DGs are fitted with the chimney stack of required height.
- To ensure the efficacy of the mitigation measures suggested, all operational areas (work sites, haul roads, hot mix plants, quarries, borrow sites and disposal sites) under the road construction works are to be regularly monitored for air quality parameters so that suitable mitigation measures can be taken up if any of the parameters exceed the prescribed limit.
- During operation stage of the project, vehicular emissions of pollutants (SPM, RSPM, CO, SO₂, NO_x and Pb) shall be monitored for sensitive locations upon the instruction of engineer concerned. Regular monitoring of air quality along the project area should help to ensure air pollutants within permissible limits.

7.1.1.2. Noise Environment

Anticipated Environmental Impacts

Various activities of road construction will increase noise levels at junction improvement locations along the project corridor. The construction activities such as excavation and grading of the site and movement of heavy vehicles, loading, transportation and unloading of construction materials contributes for the increase in noise levels. Impact of increase in noise levels will be pronounced especially at junctions.

Although increase in noise levels depends on many key factors such as traffic intensity, type and condition of the vehicles plying on the road, acceleration/deceleration/gear changes by the vehicles depending on the level of congestion and smoothness of road surface, the proposed measures for the project corridor will reduce the noise levels during operational phase.

Mitigation Measures

The adverse impacts from the increase of noise during construction phase on the nearby community will be reduced by several construction phase mitigation plans. All possible mechanical and administrative controls shall be practiced reducing the adverse impacts on the workers.

- Use of enclosures, walls, installation of mufflers around noisy equipment and the noise sources reduce noise generated during construction.
- Substituting quieter equipment or construction methods; minimizing time of operation and locating equipment farther from sensitive receptors.
- Timing of noisier construction and demolition activities to between 6 AM and 10 PM would reduce construction noise impacts during night.
- Detouring construction trucks away from noise-sensitive areas such as schools and hospitals would eliminate construction truck noise from those areas.
- Personnel Protective Equipment (PPE) such as ear plugs, and earmuffs shall be provided to the workers operating or working near noise generating machines.
- Turning off construction equipment during the prolonged periods of nonuse eliminates noise from construction equipment during those periods.
- Regular maintenance of all equipment and training to equipment operators would reduce noise levels and increase efficiency of equipment.
- Locating stationary equipment away from sensitive receptors would decrease noise considerably.

7.1.1.3. Water Environment

Anticipated Environmental Impacts

During construction, if the water required for construction is drawn from the community water resources it will impact the community for the duration of construction.

Mitigation Measures

- No construction waste shall be disposed of into the water bodies.
- The construction vehicles are prohibited from entering the water bodies for any purpose (including for cleaning) other than any legitimate requirements to avoid major pollution points due to oils and lubricants used in vehicles and construction equipment.
- All the water resources and water supply connections such as bore wells, taps, water cisterns, and pipelines being impacted by the project shall be relocated in such a manner that it should not hamper the access to drinking water. Relocation of bore wells shall be done with consent of concerned water supply authority or the owner.
- Water for construction shall not be tapped from the surface water resources like non-perennial rivers, lakes and water tanks which are being utilized for drinking purposes.
- Appropriate location should be sited for the construction camp, workers camp, etc. to prevent the wastewater from entering these water resources and prevent incidence of spreading of communicable diseases through water. Provision for treatment of wastewater shall be made.
- Cleaning of construction vehicles and construction equipment shall be prohibited at water bodies along the demonstration corridor.

7.1.1.4. Land environment

Anticipated Environmental Impacts

The impact on the land environment will be minimal as the construction materials like murrum, aggregate, sand, and asphalt required for the project proposals are very less. The major land use in the project area is extensive agriculture and existence of settlements at locations of Bakaner, Tawlai, Tonki, Azandiman, Thangaon, and Zhirvi with commercial and economic activity along the roadside.

At secondary construction sites like borrow areas, quarry sites and water resource points land use will be impacted depending upon the demand for material availability. These activities will cause disturbance to the nearby agricultural area, human habitations, etc.

Mitigation Measures

- Special transport facilities are required to transport bituminous material from the refineries to work sites, as these require special measures to control accident spills, as these materials are highly inflammable.
- Proper protection measures need to be worked out for the minimizing the impacts during the haulage of borrow materials.

7.1.1.5. Biological Environment – Flora and Fauna

Mitigation Measures

- No tree shall be cut down.

7.2. Negative Impacts

The negative social impacts and risks during the operation and maintenance phase are mostly associated with noise and road accidents. The ESMP, mentioned earlier, includes measures to address the above impacts, including a chance finds procedure for archaeological, historical and sacred sites. In addition, to address any impacts on the vulnerable groups that exist in the area, the ESMP plan proposes appropriate mitigation measures to be implemented during the construction as well as O&M phases.

7.3. Adverse Social Impacts

Adverse social risks and impacts during the construction phase include vehicle congestion on road due to temporary restriction on using the shoulders. The construction activities are not required in the entire stretch and the needed location of construction sites have been already identified. At a time, the entire stretch will not be affected but only the identified location will be treated and renovated as per the laid specification. Therefore, in doing so there will be minimal adverse social risk impact. The contractor will follow all the road safety guidelines and do not hamper the accessibility to schools and healthcare facilities. The potential labor influx and the conduct of road workers during construction will be taken care of by the contractor and will be monitored by MPRDC/IMC/PWD district officials.

8. Environmental and Social Management Plan

8.1. Outline of ESMP

The Environmental and Social Management Framework (ESMF) is created to serve as a tool for guiding Implementing Agencies in carrying out appropriate environmental and social safeguards during project design and execution.

The primary goal of this document is to offer specifics on the environmental and social obligations, management, and monitoring standards that must be met by project contractors during the projects to achieve the following.

1. Try to avoid or reduce any possible negative environmental or social consequences of Project implementation.
2. To implement a mitigation hierarchy to foresee and mitigate risks and repercussions to employees, affected communities, and the environment, or to minimise impacts where prevention is not practicable and compensate or offset impacts where they persist.
3. Maximize good outcomes while reducing unavoidable negative impacts to a level that is acceptable to the receiving environment and communities.
4. Satisfy environmental and social commitments and measures, as well as applicable policies and management systems.
5. Conform with national regulations as well as World Bank ESMF Policy and Standards.

8.2. Environmental and Social Management Plan for construction Stage

The ESMP envisages the plans for the proper implementation of management measures to reduce the adverse impacts arising out of the project activities. The proposed work has been subjected to a regulatory application study, which considered the construction/improvement methods, material requirements, sourcing, and timing. The mode of transportation, waste creation, and the circumstances of the recipient environment are all factors to consider.

Table 5: Environmental and Social Management plan for Construction stage

Project Activities	Potential Issues	Mitigation Measures	Location
A. Detailed Design & Pre-construction			
Appropriate drainage provisions	<ul style="list-style-type: none"> ▪ Raised embankment and inadequate drainage facilities causes water logging, which damage pavement and obstructs movement of people and vehicles. ▪ Natural hazards such as flooding 	<ul style="list-style-type: none"> ▪ Provision of adequate no. of cross drainage structures. ▪ Increase (vent and height) in waterway of existing structures. ▪ Provisions of roadside drains with suitable outfalls. ▪ Drainage system including surface and subsurface drains shall be provided as per IRC Codes. ▪ All culverts have been designed for 50 years HFL return period and bridges designed for 100-year HFL return period ▪ Embankment height to be raised along low 	Entire stretch

Project Activities	Potential Issues	Mitigation Measures	Location
		lying/ potential waterlogged areas	
Safety Arrangement prior to start of construction	<ul style="list-style-type: none"> Inadequate safety arrangements in pre-construction stage results increased risk in both preconstruction and construction phase Visibility loss of the construction area during the night hours 	<ul style="list-style-type: none"> Safety barriers shall be provided where high embankment (> 3.0 m) and deep trenches (>1.5 m) are to be constructed. Provision of retro-reflective warning sign boards near school, hospital, and religious places Signs and marking viz., cat's eyes, delineators, object markers, hazard markers, safety barriers at hazardous locations Horizontal and vertical geometry as per IRC Specification 	Entire stretch
Tree Felling	<ul style="list-style-type: none"> Loss of trees Pruning of tree Loss of habitat of avifauna 	<ul style="list-style-type: none"> Tree clearing to be restricted to construction width only in adequate manner. Trees to be felled shall be clearly marked. Obtain prior tree felling permission from State Forest Department as per applicable rules. Stacking, transport and storage of the wood will be done as per the relevant norms. Systematic corridor level documentation for the trees to be felled and those saved will be maintained by the MPRDC. 	Entire stretch Number of affected trees= 145
Sitting of Project infrastructure: Construction Camps	Inappropriate location such (near settlements or eco-sensitive zones, biodiversity hotspots and human settlements) can lead to conflicts with community or potential impacts on natural habitats	Camps to be established with prior permission from authority. Camps to maintain minimum distance from following: # 500 m from habitation, water bodies and traffic route #1000 m from Eco-sensitive zones #500 from community reserves/conservation areas	All camps
Sitting of Project infrastructure: Plant & Machinery	Potential impact from air pollution on natural habitats and resources located in sensitive areas legally	<ul style="list-style-type: none"> Batching, WMM, HMP and crushers at downwind (1km) direction from nearest town and 500 m from villages. Location of the plants should be based on State Pollution Control Board guidelines. Consent To Establish (CTE) must be obtained from State pollution control board before setting up of plant. 	All plant sites
Procurement of machinery	Potential sources of impacts on air and noise environment	<ul style="list-style-type: none"> Procure/ Hire machinery which complies with the Emission Standards suggested by CPCB. All diesel generators procured or hired for the project to comply with the standards prescribed by CPCB 	All machineries
Location of Quarry Sites	Potential impacts on natural habitats and resources located in sensitive areas legally	<ul style="list-style-type: none"> Only existing or new approved sites (having necessary statutory clearances) to be considered for procurement of quarry material Crushers to obtain Consent to establish from SPCB Only waste land to be used for dumping of debris, no agricultural land shall be used even for temporary dumping 	All Quarries
Location of borrow areas		Location in area with Stable soil and preferably away from agricultural land	All borrow areas

Project Activities	Potential Issues	Mitigation Measures	Location
		<ul style="list-style-type: none"> ▪ Non-productive, barren lands, upland shall be used for borrowing earth with the necessary permissions/consents. ▪ Follow IRC recommended practice for borrow area (IRC:SP:108:2015) for identification of location, ▪ Should be sited away from inhabited areas. 	
Cultural Heritage (Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010)	Construction and excavation Activity would be damaging the aesthetic view of the site	<ul style="list-style-type: none"> ▪ Before start of construction, joint inspection by contractor and Implementing Agency IA, of site ▪ Workplan will be prepared to ensure no direct/indirect impact from work. ▪ Labour interference or labour access to the site will be prohibited ▪ ASI rules for visit to site or any other regulation will be strictly adhered to ▪ Training and awareness of labour to cover protection of site provisions from the act. ▪ However intangible cultural heritage aspects will be addressed under ESMP where applicable. 	Impacts to cultural heritage at all stages of the project cycle

8.3. Clause for Nonconformity to ESMP

The project has no non-confirmatory action because it is now functioning on the existing route with certain specific measures that require no more land and no work with an environmental impact. There are no long-term effects from the activity, but there may be short-term consequences during construction, which are addressed by making adequate arrangements on the site.

In addition, the contractor is required to understand and adhere to labour safety, traffic speed, and safety markings on the job site, and the labourers are periodically updated on the safety measures. Environmental certification of vehicles issued by the Pollution Control Board, has been ensured. Also, no dust problem during construction in the community, it has been verified that water sprinkling is done.

Shifting of electric poles coming into the road shoulder and relocating them properly is required, as well as hazard marking colour on them. The contractor must ensure that the machinery are retained and the site is returned to its original condition when the work is completed, and that all construction and demolition waste from the site is properly removed.

8.4. Performance Monitoring Indicators

The relevant / applicable sections of following acts, policy guidelines, regulations and legislations framed by the Government of India / Government of Maharashtra for environmental safeguards are to be followed:

- Environment (Protection) Act and Rules, 1986
- EIA Notification, 14th September 2006, and its subsequent amendments
- The Water (Prevention and Control of Pollution) Act and Rules, 1974, 1975
- The Air (Prevention and Control of Pollution) Act, Rules, and Amendment, 1981, 1982, 1983, 1987
- Noise Pollution (Regulation & Control) Rules, 2003 and amended in 2010
- Forest (Conservation) Act, 1980 and its amendments
- The Schedule Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Amendment Rules, 2012
- Wildlife (Protection) Act, 1972 and its amendments
- Solid Waste Management Rules, 2016 and amendments
- Construction and Demolition Waste Management Rules, 2016
- Hazardous and Other Waste (Management and Trans-boundary Movement) Rules, 2016
- Plastic Waste Management Rules, 2016, as amended, 2021-2022

- Chemical Accident (Emergency Planning, Preparedness and Response) Rules, 1996
- Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010
- The Motor Vehicles Act, 1988
- The Motor Vehicles (Amendment) Bill, 2015
- The Explosive Act, 1984
- Public Liability Insurance Act, 1991
- The Mines Act. 1952

The physical, biological, and social components identified to be particularly significant in affecting the environment at critical locations have been suggested as Performance Indicators. The Performance Indicators shall be evaluated under three heads as:

- a) Environmental condition indicators to determine efficiency of environmental management measures in control of air, noise, water, waste, and soil pollution.
- b) Environmental management indicators to determine compliance with the suggested environmental management measures.

Operational performance indicators that have been devised to determine efficiency and utility of the proposed mitigation measures.

Table 6: Performance Monitoring Indicators

S.N.	Details	Indicators	Stage	Responsibility
A.	Pre-Construction Stage: Environmental Management Indicators and Monitoring Plan			
1.	The location of construction camps must be determined, and environmental parameters in the vicinity must be documented.	Construction camp	Pre-construction	Contractor
2.	Borrowing areas must be finalized, and environmental factors in the region must be documented.	Borrow areas	Pre-construction	Contractor
3.	Location of Quarry and Stone Crusher sites have to be finalized and parameters indicative of environment in the area has to be reported.	Quarry and Stone Crusher sites	Pre-construction	Contractor
4.	Locations for Debris Disposal Site must be identified and parameters indicative of environment in the area has to be reported.	Debris Disposal Site	Pre-construction	Contractor
5.	Progress of tree removal marked for cutting is to be reported	Site clearing	Pre-construction	Contractor
B.	Construction Stage: Environmental Condition Indicators and Monitoring Plan			
1.	The parameters to be monitored as per frequency, duration & locations of monitoring specified in the Environmental Monitoring Program prepared	Air quality	Construction	Testing should be doing through NABL approved monitoring lab.
		Noise level	Construction	
		Ground Water quality	Construction	
		Surface Water quality	Construction	
		Soil quality	Construction	
2.	Progress of measures suggested as part of the strategy is to be reported	Tree plantation	Construction	Contractor
3.	Contractor shall report implementation of the measures suggested for topsoil conservation	Topsoil Conservation	Construction	Contractor
4.	Contractor shall report implementation of the measures suggested for slope stabilization and sediment control	Slope Stabilization and Sediment Control	Construction	Contractor

S.N.	Details	Indicators	Stage	Responsibility
5.	Contractor shall report implementation of the measures suggested for waste management	Waste Management Plan	Construction	Contractor
6.	Contractor shall report implementation of the guideline to ensure worker's safety during construction	Worker's Safety during Construction	Construction	Contractor
C. Operation Stage: Management & Operational Performance Indicators				
1.	The number of trees surviving during each visit will be compared with the number of saplings planted	Survival rates of trees	Operation	Environmental Specialist up to construction period
2.	Environmental Specialist will undertake joint site visit with the Contractor to determine whether the Borrow areas, Quarry areas, Debris disposal site have been rehabilitated in line with Guidelines	Rehabilitation of Borrow areas, Quarry area, Debris Disposal site	Operation	Environmental Specialist

8.5. Environmental and Social Management Plan for Operation Stage

The ESMP for operation stage is mentioned below:

Table 7: Environmental and Social Management Plan for Operation Stage

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
Operation stage				
Clearing and Grubbing	<ul style="list-style-type: none"> ▪ Impact on Roadside Vegetation ▪ Dumping of debris can affect the quality of the soil if dumped on agricultural land 	<ul style="list-style-type: none"> ▪ No tree shall be felled without the permission of the forest department. ▪ Debris should not be placed on agricultural land even temporarily. Debris to be placed on designated disposal sites only ▪ Debris should be used for backfilling ▪ The root stump shall not be placed on the edge of the carriageway as it would pose hazard for both the local community and the traffic 	All stretches	Contractor
Dismantling of existing culverts and structures if any	<ul style="list-style-type: none"> ▪ Dumping of debris on drainage will result flooding ▪ Diversions of drainage channel can affect normal flow ▪ Quality of the soil would degrade if debris dumped on agricultural land 	<ul style="list-style-type: none"> ▪ None of the debris should be placed inside any drainage channel ▪ Provision of diversion channels and/or scheduling construction of culverts preferably in dry months ▪ Debris shall be dumped only at specified dumping area 	All culvert locations	Contractor
Traffic diversion	<ul style="list-style-type: none"> Loss of vegetation Loss of topsoil 	<ul style="list-style-type: none"> ▪ No trees would be cut down for the creation of diversions without appropriate permissions. ▪ The topsoil shall be removed and stored separately for reclamation of the diversion road. 	Places requiring traffic diversion	Contractor
B02 (i)	<ul style="list-style-type: none"> ▪ Wastewater & 	<ul style="list-style-type: none"> ▪ Water pollution control measures 	All	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
Worker's Camp Operation of Construction Camp	<p>runoff from Camp will cause contamination of receiving water bodies</p> <ul style="list-style-type: none"> Runoff from camp contaminating surface water body Contamination of soil and ground water from oil Indiscriminate dumping of Solid waste from construction map will lead to contamination of nearby agricultural fields. 	<p>to be provided: i.) adequate number of toilets and bathrooms to be provided ii) soak pits and septic tank to be provided; iii) no wastewater to flow out of the camp</p> <ul style="list-style-type: none"> Runoff from camp routed through i) peripheral drain ii) sedimentation tank All oil and bitumen to be stored i) on impervious platform ii) storage areas to be bunded and iii) runoff from the areas to be routed through oil-water separator The i) Camp shall be fenced; ii) Access to Camp to be restricted Composing facilities to be provided for biodegradable waste; non-biodegradable waste to be recycled to maximum possible extent and remaining waste should either be disposed at approved disposal ground or through licensed waste operators 	Construction camps, laydown areas, material storage yards etc	
B02 (ii) Worker's Camp Camp Facilities	<p>Inappropriate facilities for workers lead to unsafe working conditions, which may affect health of workers.</p>	<ul style="list-style-type: none"> The location, layout and basic facility provision of each labor camp will be submitted to IE for approval. The contractor will maintain necessary living accommodation and ancillary facilities in functional and hygienic manner. Adequate water and sanitary latrines with septic tanks with soak pits shall be provided. To provide first aid facility for workers and emergency response system. To conduct workshop on HIV / AIDS for all laborers at camps at least twice a year To conduct biannual health check-ups of all laborers through registered medical practitioner Waste disposal facilities such as dust bins must be provided, and regular disposal of waste must be carried out. To take all precautions to protect the workers from insect and pest bites to reduce health risk. However, use of insecticides should comply with local regulations, if any. LPG should be used as fuel source in construction camps instead of wood 	All camps	Contractor
B03 (i) Materials	<ul style="list-style-type: none"> Illegal Procurement of 	<ul style="list-style-type: none"> The Borrow Areas to obtain requisite licenses and permission 	All Borrow areas in the	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
Borrow Areas Operation	<ul style="list-style-type: none"> ▪ Soil ▪ Loss of topsoil ▪ Formation of stagnant water pools due to borrowing/quarrying ▪ Particulate emission from excavation ▪ Safety of the adjoining private or Public Property 	<ul style="list-style-type: none"> ▪ The topsoil shall be removed and stored separately for reclamation of the diversion road. ▪ Excavation operations to adopt measures: i) consider the wind direction during operation ii) reducing drop height during loading iii) water sprinkling depending on water availability. ▪ The extent of borrow areas should be sited away from settlements. ▪ Depths of borrow pits to be regulated and sides not steeper than 25%. ▪ At least 10% of the acquired area shall be kept for stockpiling of fertile topsoil. The piles shall be covered with gunny bags / tarpaulin. ▪ Slope of stockpile shall not exceed 1:2 (V:H) and edge of pile shall be protected by silt fencing ▪ Borrow areas shall be leveled with salvaged material or other filling materials which do not pose contamination of soil. Else, it shall be converted into fishpond. 	project	
B03 (ii) Materials Quarry Operation (Stone and Sand) including stone crusher	<ul style="list-style-type: none"> ▪ Illegal Procurement of Stones ▪ Noise and Vibrations from Blasting resulting in damages ▪ Air pollution from Stone crushers ▪ Erosion of sediments from the Stacked material 	<ul style="list-style-type: none"> ▪ Consent to Operate (CTO) must be obtained from State Pollution control board for crusher units ▪ The conditions of CTO must be complied and regular reported to RSPCB as per the stipulations ▪ In case of exiting quarry, the same must be obtained from the owners. ▪ The charge of the blasting to be decided in conformity with DGMS circular. ▪ Air quality & noise levels should be within the stipulated standards ▪ Dry and Wet method of dust suppression should be placed ▪ Erosion control measures to prevent sediment being washed to nearby properties 	All new and existing quarry	Contractor
B03 (iii) Material Transport	Deterioration of Air Quality due to: i) Dust emission from Haul roads ii) Fugitive emission from trucks	<ul style="list-style-type: none"> ▪ Water sprinkling on haul roads (in case of water scarcity dust suppressant may be used) ▪ Speed of the truck on haul roads not to exceed 15 kmph ▪ All truck carrying a) excavated soil, b) sand, c) cement shall be covered with tarpaulin sheets 	All materials	Contractor
B03 (iv) Material Handling (Soil, Aggregates Bitumen, Oils)	<ul style="list-style-type: none"> ▪ Fugitive emission from loose material deteriorating air quality 	<ul style="list-style-type: none"> ▪ Storage against wind break and windrow in the direction of the wind ▪ Cement to be stored in closed area 	All Borrow areas and during procurement of material	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
	<ul style="list-style-type: none"> ▪ Erosion from stockpiling causing sedimentation ▪ Contamination of surface and ground water from oil and bitumen ▪ Health & Safety concerns of workers ▪ Risk of injury from vehicle and equipment 	<ul style="list-style-type: none"> ▪ All stockpile to have garland drains along with sedimentation tank ▪ All oil and bitumen to be stored i) on impervious platform ii) storage areas to be bunded and iii) runoff from the areas to be routed through oil-water separator ▪ Workers involved in material transport should be provided with PPE's 		
B04(i) Earthwork Operation of Equipment and Machinery	<ul style="list-style-type: none"> ▪ Compaction of the agricultural land ▪ Emission resulting in air quality deteriorations ▪ High noise levels ▪ Accidental spillage of fuel and machine oils ▪ Risk of Injury to workers ▪ Safety of the public 	<ul style="list-style-type: none"> ▪ Restrict the equipment and machinery within the designated work site ▪ All vehicle to have "Pollution Under Control" Certificates; ▪ Regular Maintenance of Equipment and Vehicle ▪ Safety measures for workers e.g. i) posting of flagman ii) reverse alarm on vehicles iii) reflective jackets and high reflective material to be work by workmen ▪ Contractor to prepare traffic management and dust suppression plan duly approved by AE ▪ Water Sprinklings for dust suppression as necessary ▪ Safety Measures e.g. i) Traffic Marshals (Flagman) to control traffic ▪ Batching, WMM, HMP and crushers at predominant downwind (1km) direction from the nearest settlement. ▪ All plants shall be used after obtaining Consent to Operate (CTO) from RSPCB and compliance to stipulated conditions must be adhered to. ▪ Crusher Plant should have a combination of dry and wet type control system to minimize deterioration air quality ▪ Construction equipment and machinery to be fitted with silencers and maintained properly. ▪ Near School, noisy construction activities shall be carried out after closing of school and in the weekends / holidays only ▪ Manage smooth traffic flow to avoid traffic jams and honking. ▪ Restrict construction activities near built up areas during day time. 		Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
		<ul style="list-style-type: none"> ▪ Noise limits for construction equipment such as compactors, rollers, front loaders, concrete mixers, cranes (moveable) etc. shall not exceed 75 dB(A) at a distance of 11 m from its source ▪ To avoid soil contamination Oil-Interceptors shall be provided at wash down and refuelling areas. ▪ Waste oil and oil soaked cotton / cloth shall be stored in containers labelled 'Waste Oil' and 'Hazardous' sold off to MoEF / RSPCB authorized vendors ▪ Workers involved should be provided with PPE's 		
B04(ii) Earthwork Excavation	<ul style="list-style-type: none"> ▪ Discharge of water from excavation increasing sediment ▪ load in receiving water body ▪ Erosion of Cut Slopes ▪ Public safety issues 	<ul style="list-style-type: none"> ▪ Water to be routed through sedimentation tank before discharge, ▪ Feasibility of reusing the water for construction ▪ Slope stabilization measures as seeding, mulching & bio-engineering techniques ▪ Safety Measures e.g. i) barricading of worksites ii) dedicated walkways and crossover points ii) illumination of work area in settlement ▪ Un-used non-bituminous wastes to be dumped in borrow pits with the concurrence of landowner and covered with a layer of topsoil conserved from opening the pit. ▪ Bituminous wastes (if any) will be disposed-off in an identified dumping site approved by the State Pollution Control Board ▪ Other applicable emission control mechanisms mentioned in EMP Matrix (refer Point B04 (i) above) 	All stretches involving excavation	Contractor
B04(iii) Earthwork Embankment Construction	<ul style="list-style-type: none"> ▪ Erosion causing impact on embankment/slope stability ▪ Contamination of water bodies/ water courses 	<ul style="list-style-type: none"> ▪ Encroachment into any water body is discouraged. ▪ Slope stabilization measures as seeding, mulching & bio-engineering techniques. ▪ Construction of temporary erosion control structures as per requirements ▪ Control measures as silt fencing, vegetative barriers ▪ Avoiding disposal of liquid wastes into natural water courses ▪ Side slopes of all cut and fill areas will be graded and covered with stone pitching, turfing. Care should be taken that the slope gradient shall not be greater than 	All Embankment locations	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
		2:1. <ul style="list-style-type: none"> The earth stockpiles to be provided with gentle slopes to soil erosion. Other applicable emission control mechanisms mentioned in EMP Matrix 		
B04(iv) Earthwork Culvert and Minor Bridge Works	<ul style="list-style-type: none"> Interruption of flows Pollution of water channel during construction Debris contaminating the soil and water Occupational Health and safety of workers Community Health and safety 	<ul style="list-style-type: none"> Diversion channels to prevent stoppage of the flow of water Construction wastewater or water in excavation to be disposed through sedimentation tank Batching plant and Transit mixer wash waste i) not to be disposed on agricultural land ii) to be reused in paving of roads PPE to be provided to workers involved in bar bending and casting operations Traffic Marshall to guide traffic during the movement of transit mixers in and out of the casting site. Other applicable emission control mechanisms mentioned in EMP Matrix 	All culverts and bridge location	Contractor
B05(i) Surfacing Bituminous Surfacing	<ul style="list-style-type: none"> Deterioration of air quality Contamination of Soil from Bituminous Waste Worker's safety Community Safety 	<ul style="list-style-type: none"> Air Pollution Control Measures: i) No open burning of wood / burned for bitumen works; ii) Hot- mix plants to have air pollution control Bitumen waste and off-spec material not to be thrown on agricultural land PPE's to be provided to workers Traffic Marshall to guide traffic during the movement of vehicle carrying hot mix to and from the surfacing site Other applicable emission control mechanisms mentioned in EMP Matrix 	Entire stretch having flexible pavement	Contractor
B05(i) Surfacing Concrete Surfacing	<ul style="list-style-type: none"> Contamination of soil and water from concrete Stress on water resources in water scarce areas 	<ul style="list-style-type: none"> Batching plant and Transit mixer wash waste i) not to be disposed on agricultural land ii) to be reused in paving of roads Construction wastewater to be used for curing Admixture to be used for reducing water requirement in curing 	Entire stretch having rigid pavement	Contractor
B06(i) Shoulder Shoulder Protection	Erosion of adjoining areas leading sedimentation of water bodies	Erosion control measures of shoulders especially in areas with higher slopes.	Entire stretch	Contractor
B06(ii) Shoulder Plantation	<ul style="list-style-type: none"> Shifting sand dunes affecting infrastructure Impact on Species Diversity 	<ul style="list-style-type: none"> Stabilization of Sand Dunes using vegetative cover (grasses and Trees) Selection of local species drought resistant species 	Rural stretches	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
		<ul style="list-style-type: none"> Green belt development in surplus land of existing right of way 		
B06(iii) Shoulder Signage	<ul style="list-style-type: none"> Safety of local population and traffic Collision with Wildlife 	<ul style="list-style-type: none"> Safety Features to be included as per Traffic Study findings. Road Signage to be provided as per IRC Code Safety features to be included considering the outcomes of the Wildlife Surveys 	All traffic junctions and wildlife crossings	Contractor
Post Construction Decommissioning				
C01 Clearing of Construction Camps	<ul style="list-style-type: none"> Debris Contaminating the Soil and Water Loss of productive land 	<ul style="list-style-type: none"> All Debris to be removed and disposed at designated sites All construction zones including riverbeds, culverts, road-side areas, camps, hot mix plant sites, crushers, batching plant sites and any other area used/affected by the project will be left clean and tidy Reutilization of debris for strengthening of the shoulder of approach roads Restoration of conserved Topsoil 	Entire Stretch, and lands used by camps, plant sites borrow & quarry areas etc.	
Vulnerable Groups	<ul style="list-style-type: none"> Impacts on Vulnerable Groups 	<ul style="list-style-type: none"> The use of access roads should be planned in a way that does not jeopardize the travel safety of shuttle vehicles in villages with bussed training, and traffic measures (warning signs, speed limits, and information about settlements and schools for the periods when large and dangerous goods will be transported) should be taken. Passages should be structured to allow safe passage of humans and animals. When bovine and ovine are not under shepherd management and children are not under adult supervision, measures should be taken to prevent entry into the railway route. Occupational health and safety measures should be taken at the construction sites and construction activities. Construction Impacts Management Plan and Pollution Prevention Plan should be implemented, taking waste management and health controls into consideration. Necessary measures should be taken for the safety of maintenance and repair activities, teams and local people. 	Throughout the stretch	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
		<ul style="list-style-type: none"> ▪ The grievance mechanism should be actively and efficiently operated. 		
Labor and Working Conditions	<ul style="list-style-type: none"> ▪ Impacts on Labor and Working Conditions 	<ul style="list-style-type: none"> • All workers, direct, contracted and others in the supply chain should have the right to organize. In this regard, grievance mechanism have an important part. A secure grievance mechanism system should be established that workers of all levels can benefit from. A fair and transparent employment procedure should be adopted. Positive discrimination should be practiced for disadvantaged groups. In case all measures are taken, remaining impact would be negligible. • Ensure compliance with Workers' accommodation: processes and standards for accommodation; including clean and safe areas that ensure the minimum space requirements, air-conditioning and ventilation that is appropriate for the existing climatic conditions, gender based accommodation facilities, etc.) • Ensure compliance with Workers' accommodation: processes and standards for onsite facilities (canteen, sanitary facilities, adequate amenities for socialization and resting, etc.). • Survey accommodation facilities to be provided off-site (if any) and ensure they are also in compliance with Project standards. • Ensure drinking and utility water to be supplied meet the requirements of the Turkish Regulation on Water Intended for Human Consumption and WHO Guidelines for Drinking Water Quality. • Provide all accommodation sites with sufficient emergency response equipment such as first aid kits and fire-fighting equipment and conduct periodic checks to ensure they are in working condition. • Provide trainings to personnel on general waste management, housekeeping, first aid practices and communicable diseases. 	all stages of the project cycle	Contractor

Project Activities	Potential Issues	Mitigation Measures	Location	Implementation
		<ul style="list-style-type: none"> • Conduct visual checks on site to ensure proper housekeeping. • Ensure proper first aid equipment is kept on site, at various related locations. • Conduct periodic medical checks for personnel and provide vaccination and/or other mitigating measures when required. • Establish adequate medical rooms at the camp sites, provide sufficient human resources and keep a suitable patient transport vehicle on site. 		

8.6. Environmental Management-Budget

The environmental budget will comprise itemized estimate of trees, various water structure and water source improvements, drainages with footpath etc. The quantity of environmental protection is assessed based on this estimate by adding it to the amount of road construction. Based on these estimates the consultant shall prepare a request for funds and submit the same through the Project Director. The World Bank's loan will be available for costs such as works, purchase of goods, and, if required.

Project Management provides budget towards afore-mentioned items/activities covering:

- (i) PMU coordination of E&S activities by the Implementing Agencies of the project, supported by an Engineering and Management Consultant
- (ii) Hiring of E&S experts on a contractual basis
- (iii) PMU will provide adequate budget for preparation and implementation of all safeguard instruments from the counterpart funding, besides for conducting trainings, exposure visits and capacity building events.
- (iv) ESMF budget has been estimated about 3% of the total project costs and will be used by contractor with the consent PMU however, the budget amount may vary based on the need of the project. Costs of ESMP implementation would be included within each dam ESMP and their break-up would depend on the nature of activities, extent of impacts and proposed mitigation measure. World Bank's funding will be available for costs such as works, purchase of goods and services, where required.

9. Institutional Arrangement

9.1. Institutional arrangements for environmental and social management

Institutional arrangements are intended to achieve certain level of quality in the project during implementation of various project components.

The Environment Management Plan has been prepared for the construction and operation phases of the project. The Environmental issues or aspects, measures for mitigation of impacts and responsibilities during execution and supervision have been allocated in the EMP.

9.2. Grievance Redressal Mechanism

A Grievance Redressal Mechanism (GRM) has been established to help record, assess, and resolve grievances and complaints during the implementation of the proposed project.

The GRM prepared for the proposed project is based on key principles that protect the rights and interest of affected stakeholders, ensure that their concerns are addressed in a prompt and timely manner, and that entitlements are provided in accordance with ESS policies. These safeguards units of implementation agencies will ensure that communities directly affected by the Project have a full understanding of the GRM and ways to access it especially on: (i) the concept of compensation for any involuntary acquisition of land and/or assets; and (ii) ensuring environmental and social mitigation measures in this ESMP's are implemented as planned.

Already during the community consultation phase the GRC have been constituted and the community was made aware of the process of addressing the grievances. The GRM procedures to be followed have been translated and it will be prepared in local language as needed so that they are easily accessible to all stakeholders and made available by the MPRDC/IMC/PWD. Information on the steps to be followed in handling grievances has been incorporated into the consultation process with local community.

- Grievances registered related to delivery of project benefits that are addressed.
- Grievances responded and/or resolved within the stipulated service standards.
- Project-supported organization(s) publishing periodic report on GRM and how issues were resolved (including resolution rates);

Annexures

PMCS-18902

सामुदायिक चर्चा में उपस्थित प्रतिनिधि

एम.पी.आर.आर.डी.ए. द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी. आर.एस.पी. प्रोग्राम में चिन्हित ब्लॉक स्पोर्ट पर सामुदायिक चर्चा आज दिनांक 01/08/2023 को ब्लॉक स्पोर्ट शिवपुरी कि.मी./घनेज शिवपुरी जिला शिवपुरी पर PMC/PIC टीम द्वारा किया गया जिसमें निम्न प्रतिनिधि सम्मिलित हुए।

स.क्र.	नाम	महिला /पुरुष	व्यवसाय	सामाजिक वर्ग	हस्ताक्षर / मोबाइल नं.
1	जगदीश सिंह कुशवाह	m	मजदूरी	OBC	जगदीश सिंह
2	पुष्पेन्द्र सिंह जाख	m	—	SC	पुष्पेन्द्र सिंह
3	सीधू	m	—	SC	सीधू
4	डेवी कुमार जाख	m	—	SC	डेवी कुमार
5	प्रमोद	m	कृषि	SC	प्रमोद 7354 244
6	वलवर जाख	m	मजदूरी	SC	वलवर
7	भोलाराम कुशवाह	m	पुआन	OBC	8435761893
8	शिवू भाई	m	पुआन	OBC	7389102810
9	उमा पाराशर	F	बी.वी.मि.रु.सी	GNL	
10	दिठाराम जाख	m	कृषि	SC	9753142206
11	उत्तम सिंह	m	—	SC	9926211824
12	दिलीप वैधल	m	पुआन	OBC	9354076846

सामुदायिक चर्चा में उपस्थित प्रतिनिधि

एम.पी.आर.आर.डी.ए. द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी. आर.एस.पी. प्रोग्राम में चिन्हित ब्लैक स्पॉट पर सामुदायिक चर्चा आज दिनांक 14/03/2021 को ब्लैक स्पॉट पुकारा, कस्तूर कि.मी./चैनेज जिला झारखण्ड पर PMCPIC टीम द्वारा किया गया जिसमें निम्न प्रतिनिधि सम्मिलित हुए।

स.क्र.	नाम	महिला / पुरुष	व्यवसाय	सामाजिक वर्ग	हस्ताक्षर / मोबाइल नं.
1	लोकेश धनगर	M	नोकरी	OB.C	
2	भोलु	M	---	..	
3	तुकाराम शंकर	M		SC	पुकारा, कस्तूर
4	देवेसिंह	M	मजदूरी	URM	देवेसिंह
5	केलाश मोहन	M	डुकान	ST	केलाश
6	सुरेश	M	मजदूरी	SC	
7	लिकेश	M	सरपंच	ST	
8	बाबू पाल	M	मजदूरी	OB.C	
9		M			
10	तेज सिंह	M	---	ST	तेज सिंह
11	बाबल भाषल	M	मजदूरी	ST	बाबल भाषल
12	नरकु सिंह	M	..	ST	अरवि
13	दिनेश	M	..	SC	दिनेश 9009650452
14	शंकर सिंह	M	मजदूरी	URM	शंकर सिंह
15	धर्मद	M	नोकरी	ST	
16		M			

सहयोग एवं समस्या निवारण समिति

एमपीआरआईए द्वारा संचालित एमपीआरसीपी वरिष्ठोच्च के अंतर्गत सीपीआरएसपी क्रोडम में विभिन्न ब्लॉक स्पोर्ट फ़ोरमों में जिला थार पर समुदायिक वर्क के दौरान सहयोग एवं समस्या निवारण समिति का गठन आज दिनांक 14/02/2025 को किया गया। जिसमें ब्लॉक स्पोर्ट ट्रीटमेंट का कार्य सुझा एवं विवाद रहित तरीके से संभाले हों, इसके लिए सदस्यता से निम्न सदस्यों को मंजूर किया गया :-

स.क्र.	मंजूरित सदस्य	नाम	मोबाईल नं.	हस्ताक्षर
1	अध्यक्ष (वार्ड चार्ज)	विकास ठाकुर	911114219	
2	सचिव	मेहरा लक्ष्मी	62601-49886	
3	सहायक प्रबंधक, पीआईए	तेजपाल कौर		
4	सदस्य (महिला)	निर्मला कर्मा	7697630391	
5	सदस्य (महिला)	गमता कुमारा पाल	9903593902	गमता
6	सदस्य	सुमेश पाल	9753223892	सुमेश
7	सदस्य	तेर सिंह चौधान	8864870977	तेर सिंह

विकस ठाकुर
 अध्यक्ष
 वार्ड चार्ज के हस्ताक्षर एवं सदस्यता

नोट :- समिति द्वारा सुझाए संशोधन केवल वही अनुभवों एवं सुझावों पर ही किया गया जो योजनाकर्मिता पर विभिन्न सदस्यों का निरंतर समिति के पास दर्ज हों, तथा एनटी विकसण अर्थात् 19 किया हों।

सदस्यता की शर्तें
<ul style="list-style-type: none"> समिति में सदस्यों की अधिकतम संख्या पांच से कम होगी एवं संशोधन वार्ड चार्ज द्वारा समिति का कार्य अंजल होगा। समिति में कम से कम 20 प्रतिशत महिला के रूप में संयोजनीयता/समस्याओं का कार्य/एनटी/अन्य पर अन्य महिला का कार्य किया जा सकता है। यदि एक संख्या से अधिक, इस समिति में शामिल सदस्यों में से किसी एक अध्यक्ष/अन्य सदस्यीय स्तर के प्रशासकों को शामिल किया जा सकता है। समूदाय यदि से क्षेत्र के किसी अन्य व्यक्ति को भी समिति/सदस्य के रूप में शामिल कर सकता है।

कार्यालय महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण परियोजना क्रियान्वयन इकाई क्र. 3
114, प्रकाश नगर धार (म.प्र.) फोन नं. 07292-236142
E-Mail ID : piudhar3@rediffmail.com

क्रमांक
प्रति,

/या.स.वि./तक/2023

धार, दिनांक

सरफर्य महोदय
ग्रामस्थो पगारा
जन-पंचायत धरमपुरी जिला धार

विषय :- ब्लेक स्पॉट के सुधार कार्य हेतु सामुदायिक चर्चा करने बाबद।

महोदय,

म.प्र.ग्रामीण सड़क विकास प्राधिकरण द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी.आर.एस.पी. प्रांचाय में चिह्नित ब्लेक स्पॉट पर सामुदायिक चर्चा करना अनिवार्य है।

अतः सामुदायिक चर्चा करने हेतु दिनांक 15/03/2023 एवं समय 11-04/2023 प्रस्तावित है।

आपसे अनुरोध है कि समुदाय से उनकी सफलता सुनिश्चित करके टेलीफोन द्वारा अवगत करावें।

सुगठिापुर
अध्यक्ष
आ.पं. पगारा
आ.पं. धरमपुरी धार


महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण
परि. क्रिया, इकाई क्र. 3 धार (म. प्र.)

कार्यालय महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण परियोजना क्रियान्वयन इकाई क्र. 3
114, प्रकाश नगर धार (म.प्र.) फोन नं. 07292-236142
E-Mail ID : piudhar3@rediffmail.com

क्रमांक
प्रति,

/शा.स.दि./तक/2023

धार दिनांक

सरपंच महोदय
शा.स. पंजाब
जन पंचायत धरमपुरी जिला-धार

विषय :- ब्लेक स्पॉट के सुधार कार्य हेतु सामुदायिक चर्चा करने बाबद।

महोदय,

म.प्र.ग्रामीण सड़क विकास प्राधिकरण द्वारा संवाहित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी.आर.एस.पी. प्रोग्राम में चिन्हित ब्लेक स्पॉट पर सामुदायिक चर्चा करना अनिवार्य है।

अतः सामुदायिक चर्चा करने हेतु दिनांक 11/04/23 एवं समय 10:57 AM प्रस्तावित है।

आपसे अनुरोध है कि समुदाय से उनकी उपलब्धता सुनिश्चित करके टेलीफोन द्वारा अवगत करावे।

दृ.गठियाकर
सरपंच
शा.स. पंजाब
जन पंचायत धरमपुरी धार


महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण
परि. क्रिया इकाई क्र. 3 धार (म. प्र.)

सामुदायिक चर्चा में उपस्थित प्रतिनिधि

एम.पी.आर.आर.डी.ए. द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी. आर.एस.पी. प्रोग्राम में चिन्हित ब्लैक स्पॉट पर सामुदायिक चर्चा आज दिनांक 14/03/2023 को ब्लैक स्पॉट धारपुरा - कि.मी./चौनेज _____ जिला धार पर _____ टीम द्वारा किया गया जिसमें निम्न प्रतिनिधि सम्मिलित हुए।

स.क्र.	नाम	महिला / पुरुष	व्यवसाय	सामाजिक वर्ग	हस्ताक्षर / मोबाइल नं.
	अमित त्रिपाठी	M	-	कृषि	9425046649
	सुरेश साहू	M	-	कृषि	967295380
	मदन साहू	M	-	कृषि	9285292836
	शशिना शर्मा	F	मोबाइल	कृषि	7566139891
	कुशिकर जाट	M	-	कृषि	7509050783
	रंजीत सिंह जाट	M	कृषि	कृषि	
	मांगु गीरी	M	-	"	
	राम लाल	M	-	"	
	किरण साहू	F	छात्रा		9871550
	पुष्कर साहू	M	कृषि		825
	क्षेम फलील साहू	M	कृषि		9871550
	अनुराधी दिवाया	M	कृषि		825
	देवक्या लोहार	F	व्यापार		देवक्या
	जतापई	F	कर्मचारी		क.मि

वरदीवाड़
सरपंच
ग्राम पंचायत जेतपुरा
ज.पं. धार जिला धार (M.P.)
मो. 8871005896

सहयोग एवं समस्या निवारण समिति

एनपीआर.आर.टी.ए. द्वारा संचालित एनपीआर.सी.पी. परियोजना के अंतर्गत सीपीआर.एनपी. प्रोग्राम में विभिन्न ब्लॉक स्पोर्ट ^{पुनर्पुरा} जिला द्वार पर समुदायिक चर्चा के दौरान सहयोग एवं समस्या निवारण समिति का ^{अठल} आज दिनांक 14/03/2023 को किया गया। जिसमें ब्लॉक स्पोर्ट ट्रीटमेंट का कार्य सुगम एवं विवाद रहित तरीके से संपन्न हो, इसके लिए सहभागिता से निम्न सदस्यों को मनोनीत किया गया :-

स.क्र.	मनोनीत सदस्य	जन्म	मोबाईल न.	हस्ताक्षर
1	अरुणदा (अन-पार्षद)	करीम काई लखन		
2	सवित्रा	सुहा सोलंकी		
3	सहा प्रबंधक, पीआईए	तेजपाल सिंहकरी		
4	सदस्य (महिला)	गीता भागवीम	7223853717	<i>Gita</i>
5	सदस्य (महिला)	रविना शशीर	7566139891	<i>Ravina</i>
6	सदस्य	अनूपसोह सिंघावा	789100316	<i>Anup Singh</i>
7	सदस्य	जगदिश.डावट	9255193912	<i>Jagdish</i>

**उरदीवाड़
सरपंच**

एन पीआर.सी.पी.ए. एवं पटमुदा
क.प. बी.डि.ए. (N.P.)
नं. 087 1008898

नोट :- समिति द्वारा दुरुस्त संबंधित क्षेत्र की समस्याओं एवं मुद्दों पर ही ध्यान दिया जायेगा। अन्य समस्याओं पर समिति कार्यवाही नहीं करेगी।

सदस्यों की शर्तें

- समिति में सदस्यों की अधिकतम संख्या पांच होनी चाहिए एवं समिति कार्य करते हुए समिति का कार्य अवरुद्ध नहोना
- समिति में कम से कम 33 प्रतिशत महिला के रूप में 25% मनोनीत/समस्याओं को कार्यवाही एवं समाधान एवं अन्य महिला का कर्तव्य होगा एवं संभव है।
- यदि एक संभव हो सके, इस समिति में एकल सदस्यों में से किसी एक सदस्य अलग समर्पित समुदाय के प्रकाशनात्मक को शामिल किया जा सकता है।
- समुदाय को कि दोष को किसी अन्य व्यक्ति को भी समिति-सदस्य के रूप में शामिल कर सकता है।

कार्यालय महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण परियोजना क्रियान्वयन इकाई क्र. 3
114, प्रकाश नगर धार (म.प्र.) फोन नं. 07292-236142
E-Mail ID : piudhar3@rediffmail.com

क्रमांक 360 / प्रा.स.वि. / तफ / 2023
प्रति.

धार, दिनांक / 2

सरपंच, धेतपुरा
जिला - धार

विषय :- ब्लेक स्पॉट के सुधार कार्य हेतु सामुदायिक चर्चा करने बाबद।

महोदय,

म.प्र.ग्रामीण सड़क विकास प्राधिकरण द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी.आर.एस.पी. प्रोग्राम के विहित ब्लेक स्पॉट पर सामुदायिक चर्चा करना अनिवार्य है। अतः आपसे अनुरोध है कि समुदाय से चर्चा करने हेतु प्रस्तावित दिनांक एवं समय अतिशीघ्र सूचित करें।

वरपिवाई
सरपंच
ग्राम पंचायत जेतपुरा
ज.प. धार जिला धार (M.P.)
नं. 8871008886


महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण
परि. क्रिया. इकाई क्र. 3 धार (म. प्र.)

सामुदायिक चर्चा में उपस्थित प्रतिनिधि

एम.पी.आर.आर.डी.ए. द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी. आर.एस.पी. प्रोग्राम में चिन्हित ब्लॉक स्पोर्ट पर सामुदायिक चर्चा आज दिनांक 15/03/23 को ब्लॉक स्पोर्ट शाहवाली कि.मी./चैनेज जिला हार पर टीम द्वारा किया गया जिसमें निम्न प्रतिनिधि सम्मिलित हुए।

स.क्र.	नाम	महिला /पुरुष	व्यवसाय	सामाजिक वर्ग	हस्ताक्षर / मोबाइल नं.
①	जितेंद्र जैन	M	व्यवसाय	BCA	9424030010
②	शिवशंकर चौधरी	M	—	—	9754108337
③	धर्मराम रामा	M	—	—	9170117717
④	शक्ति सिंह	M	—	—	8424004780
⑤	शक्ति जैन	M	—	—	9669834232
⑥	संजय राठोर	M	—	—	9713875531
⑦	संजय जायसवाल	M	—	—	9009300599
⑧	निर्मल सिंह जी	M	—	—	9977312285
⑨	रवि जैन	M	—	—	8770294604
⑩	सोपिन जैन	M	—	—	9425968833
⑪	अरुण पटेल	M	—	—	9755072342
⑫	अजय दास	M	—	—	9424029127
⑬	हरनाथ चौधरी	—	—	—	9589111203
⑭	संजय चौधरी	—	—	—	9981708688
⑮	वक्लू वैश्वानर	—	—	—	9617108140
⑯	शक्ति जयसवाल	—	—	—	9981684401

सहयोग एवं समस्या निवारण समिति

एम.पी.आर.आर.टी.ए. द्वारा संघटित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी.आर.एस.पी. प्रोग्राम में विभिन्न ब्लैक साइट छार फोटा जिला छार पर सामुदायिक चर्चा के दौरान सहयोग एवं समस्या निवारण समिति का गठन आज दिनांक 15/03/23 को किया गया। जिसमें ब्लैक साइट ट्रीटमेंट का कार्य सुगम एवं विवाद रहित तरीके से संपन्न हो, इसके लिए सर्वसम्मति से निम्न सदस्यों को मनोनीत किया गया :-

स.क्र.	मनोनीत सदस्य	पता	मोबाईल नं.	हस्ताक्षर
1	सरपंच अवध (ग्राम पंचायत)	महेश मेहरा	8827816333	
2	सचिव	सुहृद राजोरिया तेलियाल फोटा	700772106	
3	सदस्य (प्रसंगिक, पी.आर.टी.)			
4	सदस्य (महिला) पंच	मीना मेहरा	9993503254	
5	सदस्य (महिला)	श्रीमती मंजु मेहरा	7566107181	
6	सदस्य	वितेन्द्र जैन	9424070919	
7	सदस्य	महेश मेहरा	9993503254	

ब्लैक साइट के हस्ताक्षर एवं पदमुद्रा
 सरपंच

नोट :- समिति द्वारा उपरोक्त संघटित क्षेत्र की समस्याओं एवं सुझावों का भी निवारण किया जायेगा। समिति का गठन एम.पी.आर.एस.पी. प्रोग्राम के अंतर्गत है।

अध्यक्ष
अमर पंचायत समिति
अ.पं. कल्याण, डि. छार

सदस्यावली की शर्तें
<ul style="list-style-type: none"> • समिति में सदस्यों की अधिकतम संख्या पांच से ज्यादा नहीं होनी चाहिए। • समिति में कम से कम 33 प्रतिशत महिलाओं के रूप में समावेशित/संलग्नकारी चर्चा केंद्रों का प्राथमिकता देना होगा। • यदि एक संस्था के सभी, इस समिति में शामिल सदस्यों में से किसी एक सदस्य अलग-अलग स्थानों के प्रकाशकों/संस्थाओं को शामिल किया जा सकता है। • समिति वाले दो क्षेत्र के किसी अन्य व्यक्ति को भी समिति-सदस्य के रूप में शामिल कर सकता है।

कार्यालय महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण परियोजना क्रिया-बचन इकाई क्र. 3
114, प्रकाश नगर धार (म.प्र.) फोन नं. 07292-236142
Mail ID : piudhar3@rediffmail.com

क्रमांक / घा.स.वि. / अ.क्र. / 2023 मार. दिनांक

पति.

सरपंच महोदय
ग्राम पंचायत माकनी
ज.प. बड़नाबर (धार)

विषय - ब्लेक स्पॉट के पुनर कार्य हेतु सामुदायिक चर्चा करने का ब्यव.

संदर्भ

म.प्र.ग्रामीण सड़क विकास प्राधिकरण द्वारा संचालित एम.पी.आर.सी.पी. परियोजना व
संचालित सी.पी.आर.एस.पी. प्रोग्राम - विभिन्न ब्लेक स्पॉट पर सामुदायिक चर्चा करना अनिवार्य है।
अतः सामुदायिक चर्चा करने हेतु दिनांक 13/07/23 एवं समय 11-00 AM प्रस्तावित है।
आपसे अनुरोध है कि समुदाय से उनकी उपलब्धता सुनिश्चित करके टेलीफोन द्वारा
समाप्त करें।


महाप्रबंधक

म.प्र. ग्रामीण सड़क विकास प्राधिकरण
परि. क्रिया. इकाई क्र. 3 धार (म. प्र.)


ग्राम पंचायत माकनी
ज.प. बड़नाबर, धार

सामुदायिक चर्चा में उपस्थित प्रतिनिधि

एम.पी.आर.आर.डी.ए. द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी. आर.एस.पी. प्रोग्राम में चिन्हित ब्लैक स्पॉट पर सामुदायिक चर्चा आज दिनांक 15/03/2023 को ब्लैक स्पॉट पिहवाड़ा कि.मी./घनेज 4 जिला धर पर चर्चा टीम द्वारा किया गया जिसमें निम्न प्रतिनिधि सम्मिलित हुए।

स.क्र.	नाम	महिला /पुरुष	व्यवसाय	सामाजिक वर्ग	हस्ताक्षर / मोबाइल नं.
1	रितेश पटेल	M	रूपि	O.B.C	88276640
2	राहुल पाटीदार	M	"	"	राहुल पाटीदार
3	संदीप सिंह चन्द्रावर	M	"	O.B.C	Sandeep Singh
4	राहेरा पाटीदार	M	"	O.B.C	
5	सुल्दीप पाटीदार	M	"	"	
6	जीतेन्द्र पाटीदार	M	"	"	
7	गोरव प्रताप सिंह	M	"	O.B.C	826000942
8	राधेश्याम	M	"	O.B.C	राधेश्याम
9	निरंजन सिंह पंवार	M	"	O.B.C	निरंजन सिंह
10	पुष्पेन्द्र सिंह ओडिया	M	"	O.B.C	पुष्पेन्द्र सिंह
11	केलशा पटेल	M	"	O.B.C	केलशा पटेल
12	पवन पाटीदार	M	"	O.B.C	
13	गजेन्द्र सिंह	M	"	O.B.C	8223886666
14	रवि पटेल	M	O.B.C	O.B.C	8349489776
15	विजयश्रीह पन्नाकर	M	"	O.B.C	8085903588
16					

सहयोग एवं समस्या निवारण समिति

एन.पी.आर.आर.सी.ए. द्वारा संघटित एन.पी.आर.सी.पी. पश्चिमोत्तर के अंतर्गत सी.पी.आर.एस.पी. क्षेत्र में विभिन्न ब्लॉक स्पोर्ट्स पिटारा फार्म जिला धार पर समुदायिक वर्गों के दौरान सहयोग एवं समस्या निवारण समिति का मठन आज दिनांक 15/03/2024 को किया गया। जिसमें ब्लॉक स्पोर्ट ट्रीटमेंट का कार्य सुगम एवं विवाद रहित तरीके से संपन्न हो, इसके लिए सर्वसम्मति से निम्न सदस्यों को मनोनीत किया गया :-

स.क्र.	मनोनीत सदस्य	नाम	संघाईल नं.	हस्ताक्षर
१	अध्यक्ष (वार्ड चार्ज)	अशोक शर्मा	9809422068	
२	सचिव	विक्रम सिंह	975589884	
३	सह. प्रबंधक, पी.आर.सी.	राजपाल		
४	सदस्य (महिला)	दुर्गा देवी	9933607149	
५	सदस्य (महिला)	रेखा देवी	998686215	
६	सदस्य	निखिल सिंह	942409517	
७	सदस्य	संजिव सिंह	898252819	संजिव सिंह


 वार्ड चार्ज एवं अध्यक्ष
 ग्राम पंचायत, पिटारा
 प.प. धार (जि. धार)

नोट :- समिति द्वारा सुदृढ संघटित क्षेत्र की समस्याओं एवं सुदृढ एवं ही विवाद निवारण के लिए समुदायिक वर्गों के दौरान सहयोग एवं समस्या निवारण समिति के काम करेंगे। साथ ही सभी सदस्यों को सूचित किया जा रहा है।

सदस्यों की कार्य

- समिति में सदस्यों की अधिकतम संख्या पांच से कम होगी एवं संघटित वार्ड चार्ज का सचिव का पद अध्यक्ष होगा।
- समिति में कम से कम 33 सदस्यों महिलाओं के रूप में 20% महिलाओं का प्रतिनिधित्व एवं अन्य सदस्यों का समान होगा या अधिक है।
- जहाँ तक संभव हो सके, इस समिति में महिला सदस्यों में से किसी एक सदस्य को सचिव के पद पर नियुक्त कर लिया जा सकता है।
- समुदाय चार्ज के क्षेत्र के किसी अन्य सदस्य को भी समिति-सदस्य के रूप में शामिल कर सकते हैं।

कार्यालय महाप्रबंधक
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क्रमांक 360 / ग्रा.स.वि./तक/2023
प्रति,

धार, दिनांक / 28/2/23

सरपंच महोदय
ग्राम पंचायत, पिटगारा
जनपंचायत, बदनावर जिला, सी.धार

विषय :- ब्लेक स्पॉट के सुधार कार्य हेतु सामुदायिक चर्चा करने बाबद।

महोदय,

म.प्र.ग्रामीण सड़क विकास प्राधिकरण द्वारा संचालित एम.पी.आर.सी.पी. परियोजना के अंतर्गत सी.पी.आर.एस.पी. प्रोग्राम में चिन्हित ब्लेक स्पॉट पर सामुदायिक चर्चा करना अनिवार्य है।

अतः आपसे अनुरोध है कि समुदाय से चर्चा करने हेतु प्रस्तावित दिनांक एवं समय अतिशीघ्र सूचित करें।


सरपंच
ग्राम पंचायत, पिटगारा
ज.पं., बदनावर (जि.धार)


महाप्रबंधक
म.प्र. ग्रामीण सड़क विकास प्राधिकरण
परि. क्रिया. इकाई क्र. 3 धार (म. प्र.)