Environmental and Social Due Diligence Report

Project Number: 47083-004
January 2022

INDIA: Accelerating Infrastructure Investment Facility in India – Tranche 3 Shamlaji Expressway Private Limited (Part 3 of 34)

Prepared by India Infrastructure Finance Company Limited for the India Infrastructure Finance Company Limited and the Asian Development Bank.

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SIX-LANNING OF SHAMLA JI TO MOTA CHILODHA SECTION OF NH-8 FROM KM 401.200 TO KM 494.410 (LENGTH 93.210 KM) IN THE STATE OF GUJARAT UNDER NHDP PHASE –V (PACKAGE-VI) ON HYBRID ANNUITY MODE

2018

ENVIRONMENT IMPACT ASSESSMENT

CLIENT

NATIONAL HIGHWAY AUTHORITY OF INDIA

CONCESSIONAIRE

SHAMLA JI EXPRESSWAY PVT. LTD.

AUDIT CONSULTANT

INSITU ENVIRO CARE

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INTRODUCTION

1. INTRODUCTION

The National Highways Authority of India (NHAI) has been entrusted with the development, maintenance and management of such of the highways as entrusted to it by the Government. Under National Highway Development Programme (NHDP), Phase-V, the Government has decided to convert some of the existing four lane highways into six lane highways. These projects are to be executed by private entrepreneurs as Design, Build, Finance and Operate (DBFO) projects. The Louis Berger has been appointed as consultant for carrying out feasibility study for upgrading the existing 4-lane highway to 6-lane partially access control highway from Kishangarh to Udaipur section of NH-79A, NH-79 and NH-76 including Udaipur bypass (As a separate study) and CES has been appointed as consultant for carrying out feasibility study for upgrading the existing 4-lane highway to 6-lane partially access control highway from Udaipur to Ahmedabad section of NH-76.

1.1. PROJECT OVERVIEW

This study was completed, and the project was awarded to Concessionaire in 2011 however, it was terminated due to non-performance of concessionaire. To rebid the Kishangarh Udaipur Ahmedabad (KUA) section again, NHAI conveyed Louis Berger in August/September 2015 to break up bid documents in smaller packages under different bidding modes as per requirements based on fresh traffic volume count survey and update the cost estimate of the project.

The Package-6 starts from Rajasthan/Gujarat Border (Km 401.200 of NH 8/design chainage 447.385) and ends near Ahmedabad (Km 494.400 of NH-8/design chainage 540.595). The road passes through the Aravali, Sabarkantha, Gandhinagar and Ahmedabad District of Gujarat.

Table 1.1: Project Cost Breakup (Proposed Scope Wise)

Sl. No.	Particulars	Description
1	Total Length of Project	km 401.200 to km 494.410 (approx. 93.210 km)
2	Client / Authority	National Highways Authority of India
3	Independent Engineer	LEA Associates South Asia Pvt. Ltd
4	Safety Consultant	Yet to be Appointed
5	Concessionaire	M/s. Shamlaji Expressway Pvt. Ltd.
6	EPC Contractor	M/s. Chetak Enterprises Ltd.
7	Date of signing of Concession Agreement	2nd May 2018
8	Appointed Date	02-05-2015 to 29-09-2018
9	Construction Completion Date	April 30, 2020
10	Construction Completion Period	730 Days from Appointed Date

Sl. No.	Particulars	Description
13	Concession Period	15 Years from COD
14	Total Project Cost	Rs. 1361.00 Cr.

1.1.1. PROJECT LOCATION & PROPOSED DEVELOPMENT

The project road starts from Rajasthan/Gujarat Border at Km 401+200 of NH-8 and ends near Ahmedabad (km 494+400 of NH 8). The road passes through the Aravali, Sabarkantha, Gandhinagar and Ahmedabad District of Gujarat.

The existing road is part of the NH-8 from km 401+200 to km 494+400 near Ahmadabad **(Figure 1.1).** The Index map depict the project road is also enclosed. The land use pattern of the project area is mainly agriculture land, settlements, industrial and commercial areas including hilly terrain at some locations along the project road.

1.1.2. NEED OF PROJECT

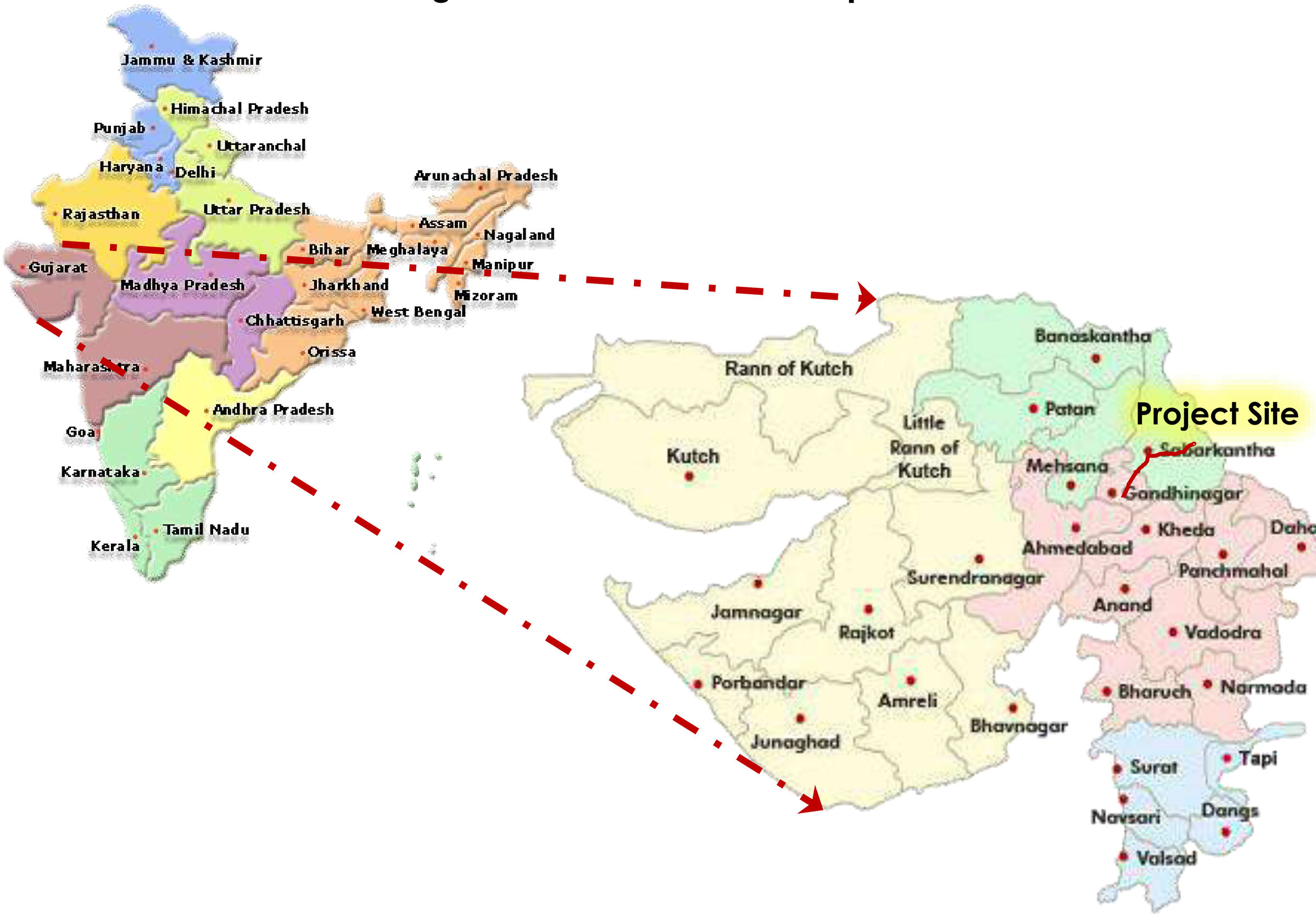
Improvement of existing road from two lanes to 6 lane configurations will provide better, fast, safe and smooth connectivity in the region. Smooth and fast-moving traffic will cause only lower emissions thereby reducing pollution levels. Accident rates are also expected to come down substantially. Development of the proposed project road will boost the local agriculture and enable farmers to realize better value for their products as well as attract more investment to that region. The vehicle operating, and maintenance cost is expected to go down substantially. The proposed road alignment will also include general amenities like bus bays, truck lay byes, rest areas, service road at built-up locations, pedestrian and cattle underpasses, landscaping and tree plantation, traffic aid post, emergency telecom system, emergency medical aid post, street light at built ups etc. and thus overall facilities to the road users shall improve.

People will have increased access to better social and health infrastructure and other services located outside the project area. This will in turn lead to overall improvement of the quality of life of the people residing in the project zone in terms of their economic, social and health status. Growth of local tourism and resultant boost to local economy is also expected due to proposed project.

Connectivity and infrastructure development are the two most critical elements needed for the development and evolution of the country. The importance of the project can be identified by launching of project by the Prime Minister of India. It will not only improve the connectivity of various towns in the region with Delhi but will also change the dynamics of the market and social structure.

All the cities leading up to Hapur will become more accessible and habitable. Since a lot of manpower comes from adjoining cities, lack of good connectivity forces them to stay in NCR only.

Figure No.: 1.1 Location Map



However, once this expressway is built and there is good public transportation available, a lot of these people will live in their home towns or in the new destinations that develop around the road and can commute to Delhi for work.

The widening of road will also result into realignment as the travel time will reduce significantly and therefore will allow people to move away from the cities.

1.2. OBJECTIVE OF THE CONSULTANCY SERVICES

The main objectives of the Consultancy service are:

- To establish the inception report of an expressway corridor between Delhi and Meerut including 6-laning of NH-24 and NH-58 and the connecting roads based on technical, economic and financial viability of the project in the first stage and thereafter prepare feasibility cum preliminary design report for construction of the expressway along the selected highway.
- To plan the Expressway as a fully access controlled facility considering the requirements of highway design, pavement design and provision of service roads, underpasses for both vehicles and pedestrians, rehabilitation and widening of existing structures and provision for new bridges/ structures, and cost estimates vis-a-vis investment and financial return through toll revenues.
- To suggest appropriate measures for mitigating the effects of property and community severance and circulation of the local traffic.

1.3. POLICIES, LEGAL AND ADMINISTRATIVE FRAMEWORK

Statutory permissions and clearances required during construction and operation of the project are summarized in Table 1.2.

Table 1.2: Project Cost Breakup (Proposed Scope Wise)

S. No	Act / Rules	Purpose	Applicability	Authority
1	Environment Protection Act 1986	To protect and improve overall environment	The project activities should maintain emission standards	MoEF; DoE, State Govt.; CPCB; SPCB
2	Environmental Impact Assessment Notification- 14th Sep 2006 and subsequent amendments	To provide environment clearance to new development activities following Environment Impact Assessment	Project covered under EIA Notification and Environment Clearance to be taken	MoEF at Centre & SEIAA at states
3	National Environment Appellate Authority Act (NEAA) 1997	Address grievances regarding the process of Environment Clearance.	Grievances by public regarding non-compliance of EC conditions can be	NEAA
4	MoEF Circular on Marginal Land	Defining "marginal land' acquisition relating to the 1997 Notification	Not Applicable	MoEF

S. No	Act / Rules	Purpose	Applicability	Authority
	Acquisition and Bypasses 1999			
5	Forest (Conservation) Act. 1980 The Forest (Conversion) Rules1981	To check deforestation by restricting conversion of forested areas into non- forested areas	There is no forest deforestation is involved in this phase.	MoEF
6	MoEF circular (1998) on Linear Plantation on roadside, canals and railway lines modifying the applicability of provisions of Forest (Conversation) Act, to Linear Plantation	Protection / planting Road-side strip as avenue/strip plantations as these are declared protected forest areas.	Applicability of Forest Conservation Act to road-side strip plantations.	MoEF
7	The Schedule Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 and Amendment Rule 2012.	To recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations	Not Applicable	MoEF
8	The Provision of Panchayat Act 1996	An Act to provide for the extension of the provision of Part IX of the constitution relating to the Panchayats to the Scheduled Areas	Not Applicable	Gram Sabha
9	Wildlife Protection Act 1972	To protect wildlife through formation of National Parks and Sanctuaries	No Wildlife Sanctuary or National Park is involved	Chief Conservator Wildlife; Forest Department
10	Air (Prevention and Control of Pollution) Act, 1981	To control air pollution and keep pollutants within prescribed standards.	Emissions from machinery and vehicle should be checked time to time during construction.	SPCB
11	Water (Prevention and Control of Pollution) Act 1974	To control water pollution by controlling	Various parameters in effluents from construction sites and	SPCB

S. No	Act / Rules	Purpose	Applicability	Authority
		discharge of pollutants as per the prescribed standards	workshops are to be kept below the prescribed standards	
12	Noise Pollution (Regulation and Control Act) 1990	The standards for noise for day and night have been promulgated by the MoEF for various land uses.	DG sets at construction sites and workshops should be provided with acoustics enclosures.	
13	Ancient Monuments and Archaeological Sites and Remains Act 1958	Conservation of cultural and historical remains found in India	If any historical remains are found, would be notified / surrendered to the competent authority.	Archaeological Survey of India & Indian National Trust for Art & Culture Heritage
14	Public Liability and Insurance Act 1991	Protection from hazardous materials and accidents.	Shall be taken as per requirements	SPCB
15	Central Motor Vehicle Act 1988 and Central Motor Vehicle Rules1989	To check vehicular air and noise pollution.	All vehicles shall obtain PUC certificates	Motor Vehicle Department

1.4. NEED OF EIA/EMP

The objective of environmental impact assessment study is to identify the adverse and positive impacts due to project implementation, suggest avoidance, mitigation and enhancements measures in project design and to prepare Environmental Management Plan (EMP) for pre-construction, construction and operation phases of the project.

1.5. REPORT STRUCTURE

The report consists of ten chapters and the content is briefly described in this section.

Chapter 1- Introduction: This chapter gives the basic information about the project and project area. It also discusses the justification of the project and the purpose of the EIA study including the scope of the study.

Chapter 2- Project Description: This chapter provides information related to various feature of the proposed highway project.

Chapter 3- Baseline Environmental Status: The methodology for assessing various baseline environmental components in the study area prior to the commencement of the project has been identified in this chapter. The various parameters of present environmental status are identified under

different aspects, which include location and regional setting of the area, topographical aspect which include land use, land cover and soil quality of the study area. Drainage aspect consists of surface and ground water quality. Meteorological aspect contains all the climatic factors and ambient air quality of the study area. Ecological environment describes the flora and fauna of the region. Human aspect includes the demography features, socio-economic environment and infrastructure facilities of the area.

Chapter 4- Analysis of Potential Environment Impacts & Mitigation Measures: This chapter provides the details of the Environmental Impact Assessment of the project during construction and operation stages. It ascertains the impacts of the proposed project on the various components of environment. The mathematical modelling exercises pertaining to ground level concentrations of air pollutants have been presented in this chapter with suitable mitigation measures.

Chapter 5- Analysis of Alternatives: This chapter describes systematic comparisons of feasible alternatives for the proposed project site, technology, and operational alternatives. Alternatives have been compared in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional training and monitoring requirements.

Chapter 6- Environment Monitoring Program: This chapter emphasizes the formation of an Environment Management cell with trained staff under Senior Environment Engineer equipped with all monitoring facilities for monitoring of all environmental Parameters during construction as well as Post project monitoring. Organization structure for environmental management and frequency of monitoring has also been provided.

Chapter 7- Additional Studies: A details of the additional studies / activities conducted as per the requirements of the TOR is given in this chapter.

Chapter 8- Project Benefits: The benefits that will be accrued from the project in the locality and society in general as well as development will be identified and described in this chapter.

Chapter 9- Environmental Management Plan: This chapter deals with the management plan incorporating recommendations to mitigate the adverse impact likely to occur on environmental parameters during construction and operation phase of the proposed highway. Post project monitoring and organization structure for environment management have been provided in the chapter.

Chapter 10-Summary & Conclusion: The overall justification for implementation of the project and explain how the adverse effects have been mitigated.

Chapter 11- Disclosure of the Consultant: The detailed profile of the consultants along with their capabilities, professional expertise and work experiences are highlighted in this chapter.

CHAPTER-2.
PROJECT DESCRIPTION

2. PROJECT DESCRIPTION

2.1. GENERAL

The National Highways Authority of India (NHAI) has been entrusted with the development, maintenance and management of such of the highways as entrusted to it by the Government. Under National Highway Development Programme (NHDP), Phase-V, the Government has decided to convert some of the existing four lane highways into six lane highways. These projects are to be executed by private entrepreneurs as Design, Build, Finance and Operate (DBFO) projects. The Louis Berger has been appointed as consultant for carrying out feasibility study for upgrading the existing 4-lane highway to 6-lane partially access control highway from Kishangarh to Udaipur section of NH-79A, NH-79 and NH-76 including Udaipur bypass (As a separate study) and CES has been appointed as consultant for carrying out feasibility study for upgrading the existing 4-lane highway to 6-lane partially access control highway from Udaipur to Ahmedabad section of NH-76.

2.2. LOCATION

The proposed project (Package-6) starts from Rajasthan/Gujarat Border (Km 401.200 of NH 8/design chainage 447.385) and ends near Ahmedabad (Km 494.400 of NH-8/design chainage 540.595). The road passes through the Aravali, Sabarkantha, Gandhinagar and Ahmedabad District of Gujarat. The existing road is part of NH-8. The land-use pattern of the project area is mainly agriculture land, settlements, industrial and commercial areas including hilly terrain at some locations along the project road. **Figure 2.1** is showing the project alignment and given as Index Map.

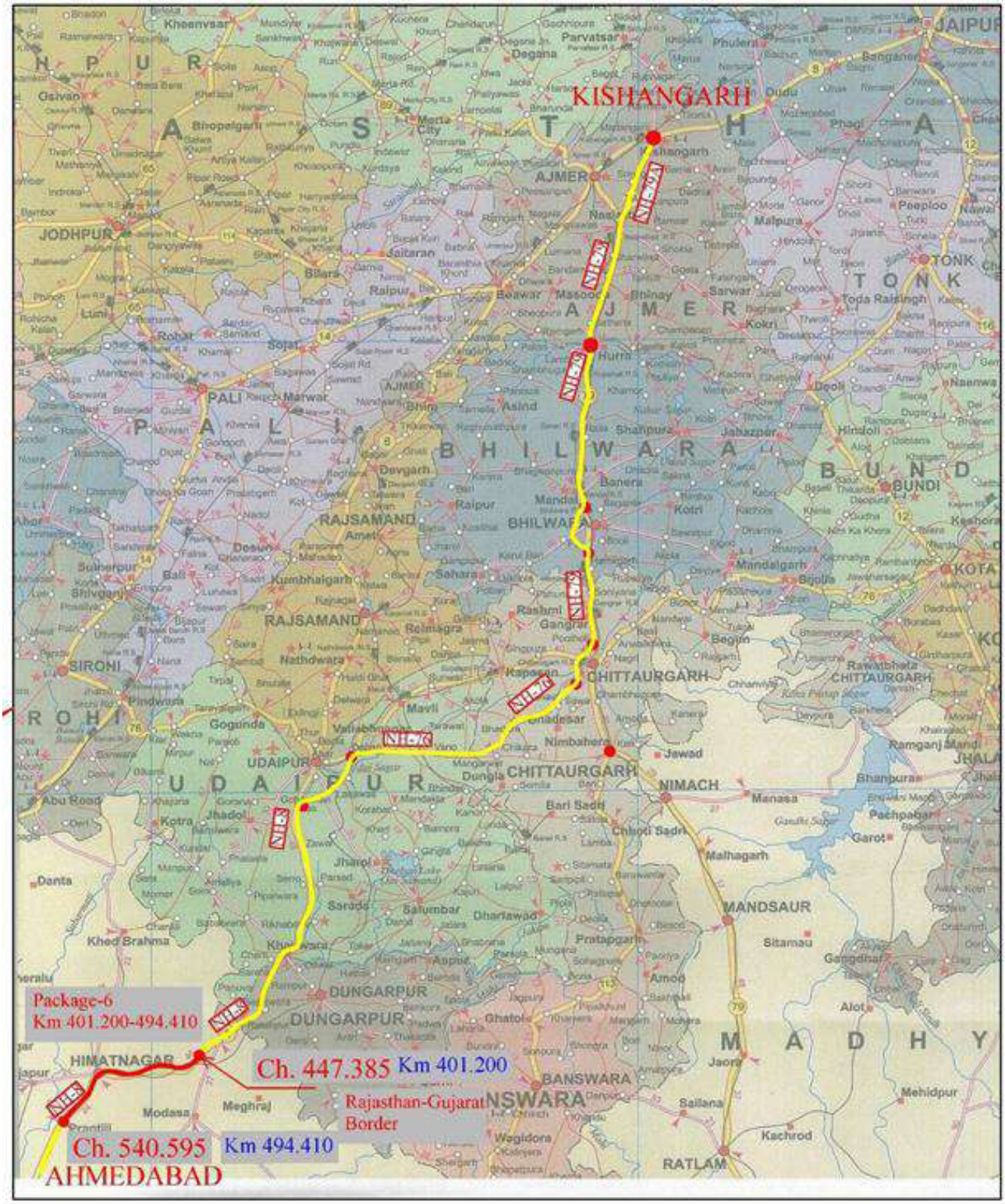


Figure 2.1: Index Map of the Proposed Project (Alignment Route of the Project)

2.3. PROJECT COST & WORK SCOPE

The project Scope is detailed with cost break-up as given in table below:

Table 2.1: Project Cost Breakup (Proposed Scope Wise)

Bill No.		Item of Descriptions	Amount (Rs.)	Amount in Cr.
I		**Civil Work Cost**		
	1	Site Clearance	₹ 1,15,32,973.00	₹ 1.15
	2	Earthworks	₹ 53,12,04,717.00	₹ 53.12
	3	Sub-Base Course & Base Course	₹ 1,53,68,57,600.00	₹ 153.69
	4	Bituminous Works	₹ 2,27,80,06,390.00	₹ 227.80
	5 & 6	Structure (Culverts & Cross Drainage, Bridges, Underpasses, Overpasses, Flyovers & ROB`s etc.	₹ 1,50,76,53,032.00	₹ 150.77
	7	Drainage and Protection Works	₹ 1,48,45,45,304.00	₹ 148.45
	8	Traffic Signs, Markings & Other Road Appurtenances	₹ 15,16,16,442.00	₹ 15.16
	9	Electricals	₹ 11,49,78,667.00	₹ 11.50
	10	Maintenance of Road	₹ 37,17,681.00	₹ 0.37
	11	Toll Plaza	₹ 20,12,64,054.00	₹ 20.13
	12	Highway Traffic Management System (HTMS), Administrative Block, Operations and Maintenance Base Camp & ETMS.	₹ 13,33,49,500.00	₹ 13.33
	13	Traffic Safety During Construction Period	₹ 93,21,000.00	₹ 0.93
	14	Service Road, Project Facilities (Bus Bye, Truck Lay Bye) & Junctions	₹ 1,92,81,12,992.00	₹ 192.81
	15	Miscellaneous	₹ 1,48,90,000.00	₹ 1.49
Total Cost of Civil Works			**₹ 9,90,70,50,352.00**	**₹ 990.71**
Total Project Cost (Including 15%ages)			**₹ 11,39,31,07,904.80**	**1139.31**
II		Green Highway Fund @ 1% of Civil Cost	₹ 9,90,70,503.52	₹ 9.91
III		Environment Mitigation Measures	₹ 181.67	₹ 0.00
IV		Land & Structure Acquisitions and Rehabilitation, Forest and Social Cost	-	-
V		Shifting of Utilities	-	-
VI		Civil Cost per KM	₹ 10,62,87,419.28	₹ 10.63
Total Project Cost Per KM			**₹ 12,22,30,534.13**	**₹ 12.22**

The Scope of Project is as below: -

- Construction of the Project on the Site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule-C, and in conformity with the Specifications and Standards set forth in Schedule-D of CA.
- Operation and Maintenance of the Project in accordance with the provisions of CA; and Performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all the obligations of the Concessionaire under the CA;

Table 2.2: Broad Scope of the Work

Sl. No.	Particular	Unit	As per CA (Schedule B)
1.	New Service Roads	Km	117.060
2.	At Grade Junctions	Nos.	30
3.	Minor Junctions (on Service Road)	Nos.	80
4.	Grade Separated structures (Flyovers)	Nos.	9
5.	Vehicular Underpasses	Nos.	8
6.	Light Vehicular Underpasses	Nos.	12
7.	Cattle Underpass	Nos.	1
8.	Pedestrian Underpasses	Nos.	34
9.	Minor Bridges New/Reconstructed	Nos.	9
10.	New Minor bridges on Service Road	Nos.	9
11.	Minor bridges to be widened	Nos.	2
12.	Slab/box culverts to be widened	Nos.	20.00
13.	Slab/box culverts to be reconstructed	Nos.	2.00
14.	Pipe culverts to be widened	nos.	101
15.	Pipe culverts to be widened over irrigation canal	nos.	7
16.	New Rail Over Bridge (ROBs)	m	3

2.4. SALIENT FEATURES & ENVIRONMENT SENSITIVITY

Table 2.3: Environment Sensitivity

Sl. No.	Accessibility	Description	Distance	Direction
1.	Inter-State Boundary	Rajasthan-Gujarat	8	NE
	Highway/ Road/ Kacha Rasta	NH-8	--	--
		NH-76A	--	NW
		NH-8C	--	W
2.	Railway Stations	Ahmedabad Railway Station	20.5	W
		Himmat Nagar Railway Station	1	N
		Parantij Railway Station	1.5	S
3.	Airport	Ahmedabad Airport	16.7	SSW
7.	Densely populated/ Settlements/ Habitat	Bhiloda	13.2	N
		Modasa	16.9	S
		Himmat Nagar	--	N
		Prantij	--	S
		Gandhi Nagar	5.5	W
		Ahmedabad	15	SSW
8.	Water Courses	Narmada Main Canal	12	S
		Khari Nadi	0.4	S
		Sabarmati River	1.8	W
		Bok Nadi	--	--
		Temba Talav	13.9	ESE

Sl. No.	Accessibility	Description	Distance	Direction
		Sher Talav	7.9	ESE
		Hathmati River	0.8	W
		Guhai Dam	11.3	N
		Ghuvai Nadi	6.6	N
		Kajan Nadi	1.9	S
		Pratap Sagar	0.3	N
		Khod Talav	3.2	N
		Meshwa River	0.05	S
		Majham River	11	SSE
9.	Protected/ Reserved or Sensitive Area	RF Near Gandhi Nagar	5.1	W
		RF Near Gandhi Nagar	3.3	W
		RF Near Gandhi Nagar	4.7	W
		RF Near Sadolia	3.4	WNW
		RF Near Mahuri	6.9	WNW
		RF Near Dedhrota	12.6	WNW
		RF Near Dedhrota	13.2	WNW
		RF Near Dedhrota	14.2	WNW
		RF Near Dedhrota	14.3	WNW
		RF Near Himmat Nagar	5.2	N
		Hathroi RF	7.6	SSE
		Adapur RF	11.2	SSE
		Hathrol RF	9.6	SSE
		RF Near Jamla	12.1	N
		RF Near Wamoj	1.8	SW
		RF Near Gamdi	--	--
		RF Near Gamdi	0.3	N
		RF Near Rampur	0.2	E
		RF Near Adapur	10.3	S
		RF Near Navalpur	0.3	S
		RF Near Navalpur	0.3	S
		RF Near Javangarh	0.2	N
		RF Near Javangarh	0.2	N
		RF Naer Jagatpur	5	NNW
		RF Near Nankhi	14	NNW
		RF Near Medi Tumba	12.5	N
		RF Near Chhapar	14.8	NNW
		RF Near Khapreta	11.8	N
		RF Near Mankdi	7.9	N
		RF Near Wantadi	6.8	N

Sl. No.	Accessibility	Description	Distance	Direction
		2 RF Near Raigadh	0.3	N
		RF Near Adpodara	7	S
		RF Near Malyan	9.8	S
		RF Near Chopda	14.4	SSE
		RF Near Sunak	0.5	N
		RF Near Bhiloda	14.7	NW
		RF Near Modasa	13.8	SSE
		2 RF Near Saira	13.8	SSE
		RF Near Vajapur	1.5	SE
		RF Near Vanjar	6	NW
		RF Near Bhetali	7.8	NW
		RF Near Rampari	12.6	N
		RF Near Shamlaji	0.7	NE
		PF Near Sadhalia	10.5	SE
		PF Near Adhera	6.7	SSE
		RF Near Dumuni	9.1	NNE
		PF Near Naranpur	5.2	SE
		RF Near Mahudi	9.7	SSE
		RF Near Isari	7.4	SE
		2 RF Near Sarki Limal	6	ESE
		RF Near Ratanpur	9.1	ENE
		RF Near Jagabar	10.2	NE
		RF Near Kalapana	11.2	E
		RF Near Hasiya	11.9	NE
10.	Seismic Zone	Adequate measures need to be adopted during construction phase of the project by respective plot owners.		

2.5. TRANSPORT ANALYSIS AND FORECASTS

A fresh traffic volume count survey has been conducted between dated 15th October 2015 to 21st October 2015 at Km 416.000 of NH-8 and Km 472.000 of NH-8. **Table 2.4 and Table 2.5** are showing ADT and PCU values.

Table 2.4: Traffic Survey Data at Km 416.000 of NH-8

Direction	FAST MOVING											Slow Moving							Toll Exempted Vehicle		Total (Traffic/ PCU)
	Passenger Vehicles				Goods Vehicles							Passenger Vehicles					Goods Vehicles				
(1) Kishangarh to Bhilwara (2) Bhilwara to Kishangarh	Pass. Car	Jeep/Van	Mini Bus	Std Bus	MINI LCV Pass.	MINI LCV Goods	LCV	2-Axle Trucks	3-Axle Trucks	4 - 6 Axle Trucks	> 6 Axle Trucks	Two-Wheeler	Auto Rickshaw	Cycle	Tonga/ Bullock Cart	Hand Cart	Tractor Without Trailer	Tractor With Trailer	Toll Exempted Vehicle Car/ Jeep/ Van (Ambulance/ Govt. veh./ Police)	Toll Exempted Vehicle Goods	
	1	1	1.5	3	1.5	1.5	1.5	3	3	4.5	4.5	0.5	1	0.5	4	4	1.5	4.5	1	1.5	
Day 1 (1) 15.10.15	773	514	60	223	14	70	228	221	558	567	0	601	96	2	0	0	7	10	21	0	
(2) 15.10.15	674	402	98	146	11	58	258	214	652	688	0	535	88	4	0	0	8	8	16	0	
Total Both Side Traffic	1447	916	158	369	25	128	486	435	1210	1255	0	1136	184	6	0	0	15	18	37	0	7825
PCU of Both Side Traffic	1447	916	237	1107	37.5	192	729	1305	3630	5647.5	0	568	184	3	0	0	22.5	81	37	0	16144
Day 2 (1) 16.10.15	963	497	59	272	7	39	285	87	461	615	1	707	88	19	0	0	13	8	23	0	
(2) 16.10.15	753	300	67	183	9	52	349	187	588	641	0	586	80	14	0	0	15	0	22	0	
Total Both Side Traffic	1716	797	126	455	16	91	634	274	1049	1256	1	1293	168	33	0	0	28	8	45	0	7990
PCU of Both Side Traffic	1716	797	189	1365	24	136.5	951	822	3147	5652	4.5	646.5	168	16.5	0	0	42	36	45	0	15758
Day 3 (1) 17.10.15	1134	386	19	309	2	66	110	162	523	689	0	799	73	33	0	0	7	15	25	0	
(1) 17.10.15	807	380	17	280	16	53	202	200	504	854	3	619	78	5	0	0	15	8	15	4	
Total Both Side Traffic	1941	766	36	589	18	119	312	362	1027	1543	3	1418	151	38	0	0	22	23	40	4	8412
PCU of Both Side Traffic	1941	766	54	1767	27	178.5	468	1086	3081	6943.5	13.5	709	151	19	0	0	33	103.5	40	6	17387
Day 4 (1) 18.10.15	1005	295	25	309	1	42	96	136	384	762	2	858	95	3	0	0	6	4	20	0	
(2) 18.10.15	1266	275	18	309	2	68	179	253	532	882	3	725	96	3	0	0	12	5	10	0	
Total Both Side Traffic	2271	570	43	618	3	110	275	389	916	1644	5	1583	191	6	0	0	18	9	30	0	8681
PCU of Both Side Traffic	2271	570	645	1854	4.5	165	412.5	1167	2748	7398	22.5	791.5	191	3	0	0	27	40.5	30	0	17760
Day 5 (1) 19.10.15	999	315	11	299	6	55	88	197	512	568	0	608	69	0	0	0	1	5	6	2	

	FAST MOVING											Slow Moving							Toll Exempted Vehicle		
Direction	Passenger Vehicles				Goods Vehicles							Passenger Vehicles					Goods Vehicles				
(1) Kishangarh to Bhilwara (2) Bhilwara to Kishangarh	Pass. Car	Jeep/Van	Mini Bus	Std Bus	MINI LCV Pass.	MINI LCV Goods	LCV	2-Axle Trucks	3-Axle Trucks	4 - 6 Axle Trucks	> 6 Axle Trucks	Two-Wheeler	Auto Rickshaw	Cycle	Tonga/ Bullock Cart	Hand Cart	Tractor Without Trailer	Tractor With Trailer	Toll Exempted Vehicle Car/ Jeep/ Van (Ambulance/ Govt. veh./ Police)	Toll Exempted Vehicle Goods	Total (Traffic/ PCU)
(2) 19.10.15	999	261	7	287	8	55	158	192	408	676	3	680	73	3	0	0	12	1	7	3	
Total Both Side Traffic	1998	576	18	586	14	110	246	389	920	1244	3	1288	142	3	0	0	13	6	13	5	7574
PCU of Both Side Traffic	1998	576	27	1758	21	165	369	1167	2760	5598	13.5	644	142	1.5	0	0	19.5	27	13	7.5	15307
Day 6 (1) 20.10.15	1116	346	12	319	5	37	109	185	516	681	5	679	66	5	0	0	8	3	2	2	
(1) 20.10.15	1019	286	35	270	4	62	147	155	339	675	0	633	78	3	0	0	18	1	15	0	
Total Both Side Traffic	2135	632	47	589	9	99	256	3110	855	1356	5	1312	144	8	0	0	26	4	17	2	7836
PCU of Both Side Traffic	2135	632	70.5	1767	13.5	148.5	384	1020	2565	6W2	22.5	656	144	4	0	0	39	18	17	3	15741
Day 7 (1) 21.10.15	1024	241	20	292	18	71	138	230	492	650	1	569	56	3	0	0	10	0	1	0	
(2) 21.10.15	1012	309	32	288	3	79	208	189	455	800	1	759	84	7	0	0	13	1	8	0	
Total Both Side Traffic	2036	550	52	580	21	150	346	419	947	1450	2	1328	1110	10	0	0	23	1	9	0	8064
PCU of Both Side Traffic	2036	550	78	1740	31.5	225	519	1257	2841	6525	9	664	1110	5	0	0	34.5	4.5	9	0	16668.5
Total Traffic in A DT (VEH"s)	1935	687	69	541	15	115	365	373	989	1393	3	1337	160	15	0	0	21	10	27	2	8057
Total Traffic in PCU's	1935	687	104	1623	23	173	548	1119	2967	6269	14	669	160	8	0	0	32	45	27	3	161102
Total Traffic in ADT	1935	687	69	541	15	115	365	373	989	1393	3							10			6495
Total Traffic in PCU	1935	687	104	1623	23	173	548	1119	2967	6269	14							45			15504
Toll Exempted Traffic in ADT												669	160	8	0	0			27	3	866

Source: - Executive Summary for the proposed project

Table 2.5: Traffic Survey Data at Km 472.000 of NH-8

TRAFFIC SURVEY DATA AT KM 416+000 OF NH-8																				
	FAST MOVING											Slow Moving						Toll Exempted Vehicle		
Direction	Passenger Vehicles				Goods Vehicles							Passenger Vehicles					Goods Vehicles				
(1) Kishangarh to Bhilwara (2) Bhilwara to Kishangarh	Pass. Car	Jeep/Van	Mini Bus	Std Bus	MINI LCV Pass.	MINI LCV Goods	LCV	2-Axle Trucks	3-Axle Trucks	4 - 6 Axle Trucks	> 6 Axle Trucks	Two-Wheeler	Auto Rickshaw	Cycle	Tonga/ Bullock Cart	Hand Cart	Tractor Without Trailer	Tractor With Trailer	Toll Exempted Vehicle Car/ Jeep/ Van (Ambulance/ Govt. veh./ Police)	Toll Exempted Vehicle Goods	Total (Traffic/ PCU)
	1	1	1.5	3	1.5	1.5	1.5	3	3	4.5	4.5	0.5	1	0.5	4	4	1.5	4.5	1	1.5	
Day 1 (1) 15.10.15	1833	627	19	665	11	80	689	408	755	985	0	1487	368	3	0	0	4	9	8	0	
(2) 15.10.15	2113	684	28	593	8	86	538	393	741	932	0	1839	461	6	0	1	8	10	18	0	
Total Both Side Traffic	3946	1311	47	1258	19	166	1227	801	1496	1917	0	3326	829	9	0	1	12	19	26	0	16410
PCU of Both Side Traffic	3946	1311	70.5	3774	28.5	249	1840.5	2403	4488	8626.5	0	1663	829	4.5	0	4	18	85.5	26	0	29367
Day 2 (1) 16.10.15	1978	1042	9	867	2	142	558	256	539	1059	0	1667	627	21	0	0	7	10	16	0	
(2) 16.10.15	1963	598	17	661	1	194	470	254	466	872	0	1699	415	8	0	2	13	6	21	0	
Total Both Side Traffic	3941	1640	26	1528	3	336	1028	510	1005	1931	0	3366	1042	29	0	2	20	16	37	0	16460
PCU of Both Side Traffic	3941	1640	39	4584	4.5	504	1542	1530	3015	8689.5	0	1683	1042	14.5	0	8	30	72	37	0	28375.5
Day 3 (1) 17.10.15	2216	871	9	794	0	239	571	244	466	958	0	1800	515	15	0	0	7	4	19	0	
(1) 17.10.15	2158	577	8	720	0	297	569	256	458	873	0	1815	411	8	0	0	5	6	15	0	
Total Both Side Traffic	4374	1448	17	1514	0	536	1140	500	924	1831	0	3615	926	23	0	0	12	10	34	0	16904
PCU of Both Side Traffic	4374	1448	25.5	4542	0	804	1710	1500	2772	8239.5	0	1807.5	926	1L5	0	0	18	45	34	0	28257
Day 4 (1) 18.10.15	1954	560	24	787	0	252	559	256	459	860	0	1577	355	18	0	2	12	8	20	0	
(2) 18.10.15	2331	569	12	744	0	283	544	282	506	924	0	1759	472	26	0	0	3	4	19	0	
Total Both Side Traffic	4285	1129	36	1531	0	535	1103	538	965	1784	0	3336	827	44	0	2	15	12	39	0	16181
PCU of Both Side Traffic	4285	1129	54	4593	0	802.5	1654.5	1614	2895	8028	0	1668	827	22	0	8	22.5	54	39	0	27695.5

TRAFFIC SURVEY DATA AT KM 416+000 OF NH-8																				
	FAST MOVING											Slow Moving						Toll Exempted Vehicle		
Direction	Passenger Vehicles				Goods Vehicles							Passenger Vehicles					Goods Vehicles				
(1) Kishangarh to Bhilwara (2) Bhilwara to Kishangarh	Pass. Car	Jeep/Van	Mini Bus	Std Bus	MINI LCV Pass.	MINI LCV Goods	LCV	2-Axle Trucks	3-Axle Trucks	4 - 6 Axle Trucks	> 6 Axle Trucks	Two-Wheeler	Auto Rickshaw	Cycle	Tonga/ Bullock Cart	Hand Cart	Tractor Without Trailer	Tractor With Trailer	Toll Exempted Vehicle Car/ Jeep/ Van (Ambulance/ Govt. veh./ Police)	Toll Exempted Vehicle Goods	Total (Traffic/ PCU)
Day 5 (1) 19.10.15	2211	706	6	634	0	193	459	238	455	630	0	1672	392	19	0	0	9	10	12	0	
(2) 19.10.15	1913	742	12	679	0	215	508	235	437	653	0	1390	357	10	1	6	6	8	8	0	
Total Both Side Traffic	4124	1448	18	1313	0	408	967	473	892	1283	0	3062	749	29	1	6	15	18	20	0	14826
PCU of Both Side Traffic	4124	1448	27	3939	0	612	1450.5	1419	2676	5773.5	0	1531	749	14.5	4	24	22.5	81	20	0	23915
Day 6 (1) 20.10.15	1894	773	7	564	0	245	693	213	506	729	0	1553	407	10	0	2	7	7	15	0	
(1) 20.10.15	2051	612	5	585	1	237	677	253	538	786	0	1684	363	22	0	1	5	2	11	0	
Total Both Side Traffic	3945	1385	12	1149	1	482	1370	466	1044	1515	0	3237	770	32	0	3	12	9	26	0	15458
PCU of Both Side Traffic	3945	1385	18	3447	1.5	723	2055	1398	3132	6817.5	0	1618.5	770	16	0	12	18	40.5	26	0	25423
Day 7 (1) 21.10.15	1910	580	11	598	5	110	291	217	546	888	3	1577	295	30	0	0	6	10	10	1	
(2) 21.10.15	1772	514	14	344	7	84	302	255	602	935	2	1199	270	11	1	0	5	9	12	0	
Total Both Side Traffic	3682	1094	25	942	12	194	593	472	1148	1823	5	2776	565	41	1	0	11	19	22	1	13426
PCU of Both Side Traffic	3682	1094	37.5	2826	18	291	889.5	1416	3444	8203.5	22.5	1388	565	20.5	4	0	16.5	85.5	22	1.5	24027
Total Traffic in A DT (VEH"s)	4042	1351	26	1319	5	380	1061	537	1068	1726	1	3245	815	30	0	2	14	15	29	0	15666
Total Traffic in PCU's	4042	1351	39	3957	8	570	1592	1611	3204	7767	5	1623	815	15	0	8	21	68	29	0	26723
Total Traffic in ADT	4042	1351	26	1319	5	380	1061	537	1068	1726	1							15			11531
Total Traffic in PCU	4042	1351	39	3957	8	570	1592	1611	3204	7767	5							68			24212
Toll Exempted Traffic in ADT												1623	815	15	0	8			29	0	2490

Source: - Executive Summary for the proposed project

2.6. EXISTING FEATURES

2.6.1. EXISTING RIGHT OF WAY (EROW)

The existing right of way (EROW) is available on the ground which are detailing in **Table 2.6**.

Table 2.6: Details of Existing Right of Way (EROW)

Sl. No.	Existing Chainage NH 8 (Km)		Total ROW (m)
	From	To	
1	401.200	401.350	45
2	401.350	423.000	60
3	423.000	424.270	45
4	424.270	431.370	60
5	431.370	433.175	45
6	433.175	441.000	60
7	441.000	443.000	45
8	443.000	443.300	60
9	443.300	450.750	45
10	450.750	458.560	60
11	458.560	460.430	45
12	460.430	465.280	60
13	465.280	469.250	45
14	469.250	474.235	60
15	474.235	475.900	45
16	475.900	480.580	60
17	480.580	481.550	45
18	481.550	484.100	60
19	484.100	485.000	45
20	485.000	493.130	60
21	493.130	494.410	45

Source: - Executive Summary for the proposed project

2.6.2. EXISTING CARRIAGEWAY

Table 2.7 is showing the details of existing carriageway.

Table 2.7: Details of Existing Carriageway

Sl. No.	Road	Existing Chainage (km)		Total Length (Km)	Carriageway (m)	Paved Shoulder (m)	Earthen Shoulder (m)		Existing median width (m)
		From	To				LHS	RHS	
1	NH 8	401.200	401.500	0.3	2x7.0	1.5+1.5	1.5	1.5	4.5
2	NH 8	401.500	402.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
3	NH 8	402.000	402.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
4	NH 8	402.500	403.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
5	NH 8	403.000	403.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5

Sl. No.	Road	Existing Chainage (km)		Total Length (Km)	Carriageway (m)	Paved Shoulder (m)	Earthen Shoulder (m)		Existing median width (m)
		From	To				LHS	RHS	
6	NH 8	403.500	404.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
7	NH 8	404.000	404.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
8	NH 8	404.500	405.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
9	NH 8	405.000	405.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
10	NH 8	405.500	406.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
11	NH 8	406.000	406.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
12	NH 8	406.500	407.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
13	NH 8	407.000	407.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
14	NH 8	407.500	408.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
15	NH 8	408.000	408.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
16	NH 8	408.500	409.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
17	NH 8	409.000	409.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
18	NH 8	409.500	410.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
19	NH 8	410.000	410.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
20	NH 8	410.500	411.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
21	NH 8	411.000	411.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
22	NH 8	411.500	412.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
23	NH 8	412.000	412.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
24	NH 8	412.500	413.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
25	NH 8	413.000	413.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
26	NH 8	413.500	414.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
27	NH 8	414.000	414.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
28	NH 8	414.500	415.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
29	NH 8	415.000	415.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
30	NH 8	415.500	416.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
31	NH 8	416.000	416.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
32	NH 8	416.500	417.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
33	NH 8	417.000	417.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
34	NH 8	417.500	418.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
35	NH 8	418.000	418.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
36	NH 8	418.500	419.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
37	NH 8	419.000	419.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
38	NH 8	419.500	420.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
39	NH 8	420.000	420.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
40	NH 8	420.500	421.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
41	NH 8	421.000	421.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
42	NH 8	421.500	422.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
43	NH 8	422.000	422.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
44	NH 8	422.500	423.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2

Sl. No.	Road	Existing Chainage (km)		Total Length (Km)	Carriageway (m)	Paved Shoulder (m)	Earthen Shoulder (m)		Existing median width (m)
		From	To				LHS	RHS	
45	NH 8	423.000	423.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
46	NH 8	423.500	424.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
47	NH 8	424.000	424.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
48	NH 8	424.500	425.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
49	NH 8	425.000	425.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
50	NH 8	425.500	426.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
51	NH 8	426.000	426.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
52	NH 8	426.500	427.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
53	NH 8	427.000	427.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
54	NH 8	427.500	428.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
55	NH 8	428.000	428.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
56	NH 8	428.500	429.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
57	NH 8	429.000	429.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
58	NH 8	429.500	430.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
59	NH 8	430.000	430.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
60	NH 8	430.500	431.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
61	NH 8	431.000	431.500	0.5	7.1+7.0	1.5+1.5	0	1.5	4.5
62	NH 8	431.500	432.000	0.5	7.1+7.0	1.5+1.5	0	1.5	1.2
63	NH 8	432.000	432.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
64	NH 8	432.500	433.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
65	NH 8	433.000	433.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
66	NH 8	433.500	434.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
67	NH 8	434.000	434.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
68	NH 8	434.500	435.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
69	NH 8	435.000	435.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
70	NH 8	435.500	436.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
71	NH 8	436.000	436.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
72	NH 8	436.500	437.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
73	NH 8	437.000	437.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
74	NH 8	437.500	438.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
75	NH 8	438.000	438.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
76	NH 8	438.500	439.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
77	NH 8	439.000	439.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
78	NH 8	439.500	440.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
79	NH 8	440.000	440.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
80	NH 8	440.500	441.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
81	NH 8	441.000	441.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
82	NH 8	441.500	442.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
83	NH 8	442.000	442.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5

Sl. No.	Road	Existing Chainage (km)		Total Length (Km)	Carriageway (m)	Paved Shoulder (m)	Earthen Shoulder (m)		Existing median width (m)
		From	To				LHS	RHS	
84	NH 8	442.500	443.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
85	NH 8	443.000	443.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
86	NH 8	443.500	444.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
87	NH 8	444.000	444.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
88	NH 8	444.500	445.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
89	NH 8	445.000	445.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
90	NH 8	445.500	446.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
91	NH 8	446.000	446.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
92	NH 8	446.500	447.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
93	NH 8	447.000	447.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
94	NH 8	447.500	448.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
95	NH 8	448.000	448.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
96	NH 8	448.500	449.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
97	NH 8	449.000	449.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
98	NH 8	449.500	450.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
99	NH 8	450.000	450.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
100	NH 8	450.500	451.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
101	NH 8	451.000	451.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
102	NH 8	451.500	452.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
103	NH 8	452.000	452.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
104	NH 8	452.500	453.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
105	NH 8	453.000	453.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
106	NH 8	453.500	454.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
107	NH 8	454.000	454.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
108	NH 8	454.500	455.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
109	NH 8	455.000	455.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
110	NH 8	455.500	456.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
111	NH 8	456.000	456.500	0.5	7.1+7.0	1.5+1.5	0	1.5	4.5
112	NH 8	456.500	457.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
113	NH 8	457.000	457.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
114	NH 8	457.500	458.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
115	NH 8	458.000	458.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
116	NH 8	458.500	458.900	0.4	7.1+7.0	1.5+1.5	1.5	1.5	4.5
117	NH 8	458.900	459.000	0.1	7.1+7.0	1.5+1.5	1.5	1.5	1.2
118	NH 8	459.000	459.500	0.5	6.9+7.0	1.5+1.5	1.5	1.5	1.2
119	NH 8	459.500	460.000	0.5	6.9+7.0	1.5+1.5	1.5	1.5	1.2
120	NH 8	460.000	460.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
121	NH 8	460.500	461.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
122	NH 8	461.000	461.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5

Sl. No.	Road	Existing Chainage (km)		Total Length (Km)	Carriageway (m)	Paved Shoulder (m)	Earthen Shoulder (m)		Existing median width (m)
		From	To				LHS	RHS	
123	NH 8	461.500	462.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
124	NH 8	462.000	462.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
125	NH 8	462.500	463.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
126	NH 8	463.000	463.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
127	NH 8	463.500	464.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
128	NH 8	464.000	464.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
129	NH 8	464.500	465.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
130	NH 8	465.000	465.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
131	NH 8	465.500	466.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
132	NH 8	466.000	466.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
133	NH 8	466.500	467.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
134	NH 8	467.000	467.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
135	NH 8	467.500	468.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
136	NH 8	468.000	468.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
137	NH 8	468.500	469.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
138	NH 8	469.000	469.300	0.3	2x7.0	1.5+1.5	1.5	1.5	1.2
139	NH 8	469.300	469.500	0.2	2x7.0	1.5+1.5	1.5	1.5	4.5
140	NH 8	469.500	470.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
141	NH 8	470.000	470.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
142	NH 8	470.500	471.000	0.5	2x7.0	1.5+1.5	0	1.5	4.5
143	NH 8	471.000	471.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
144	NH 8	471.500	472.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
145	NH 8	472.000	472.500	0.5	7.1+7.0	1.5+1.5	0	1.5	4.5
146	NH 8	472.500	473.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
147	NH 8	473.000	473.500	0.5	6.9+7.0	1.5+1.5	1.5	1.5	4.5
148	NH 8	473.500	474.000	0.5	6.9+7.0	1.5+1.5	1.5	1.5	4.5
149	NH 8	474.000	474.500	0.5	2x7.0	1.5+1.5	0	1.5	4.5
150	NH 8	474.500	475.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
151	NH 8	475.000	475.500	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
152	NH 8	475.500	476.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
153	NH 8	476.000	476.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
154	NH 8	476.500	477.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
155	NH 8	477.000	477.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
156	NH 8	477.500	478.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
157	NH 8	478.000	478.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
158	NH 8	478.500	479.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
159	NH 8	479.000	479.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
160	NH 8	479.500	480.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
161	NH 8	480.000	480.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5

Sl. No.	Road	Existing Chainage (km)		Total Length (Km)	Carriageway (m)	Paved Shoulder (m)	Earthen Shoulder (m)		Existing median width (m)
		From	To				LHS	RHS	
162	NH 8	480.500	481.000	0.5	2x7.0	1.5+1.5	1.5	1.5	1.2
163	NH 8	481.000	481.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
164	NH 8	481.500	482.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
165	NH 8	482.000	482.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
166	NH 8	482.500	483.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
167	NH 8	483.000	483.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
168	NH 8	483.500	484.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
169	NH 8	484.000	484.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
170	NH 8	484.500	485.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
171	NH 8	485.000	485.300	0.3	7.1+7.0	1.5+1.5	1.5	1.5	1.2
172	NH 8	485.300	485.500	0.2	7.1+7.0	1.5+1.5	1.5	1.5	4.5
173	NH 8	485.500	486.000	0.5	7.1+7.0	1.5+1.5	0	1.5	4.5
174	NH 8	486.000	486.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
175	NH 8	486.500	487.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
176	NH 8	487.000	487.500	0.5	7.2+7.0	1.5+1.5	1.5	1.5	4.5
177	NH 8	487.500	488.000	0.5	7.2+7.0	1.5+1.5	1.5	1.5	4.5
178	NH 8	488.000	488.500	0.5	7.2+7.0	1.5+1.5	1.5	1.5	4.5
179	NH 8	488.500	489.000	0.5	7.2+7.0	1.5+1.5	1.5	1.5	4.5
180	NH 8	489.000	489.500	0.5	7.2+7.0	1.5+1.5	1.5	1.5	4.5
181	NH 8	489.500	490.000	0.5	7.2+7.0	1.5+1.5	1.5	1.5	4.5
182	NH 8	490.000	490.500	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
183	NH 8	490.500	491.000	0.5	2x7.0	1.5+1.5	1.5	1.5	4.5
184	NH 8	491.000	491.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
185	NH 8	491.500	492.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
186	NH 8	492.000	492.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
187	NH 8	492.500	493.000	0.5	7.1+7.0	1.5+1.5	1.5	1.5	4.5
188	NH 8	493.000	493.500	0.5	7.1+7.0	1.5+1.5	1.5	1.5	1.2
189	NH 8	493.500	494.000	0.5	7.1+7.0	1.5+1.5	0	1.5	1.2
190	NH 8	494.000	494.410	0.41	7.1+7.0	1.5+1.5	1.5	1.5	1.2

Source: - Executive Summary for the proposed project

2.6.3. EXISTING RAIL OVER BRIDGES (ROBS)

Table 2.8 is showing the details of existing rail over bridges (ROBs).

Table 2.8: Details of Existing Rail Over Bridges (ROBs)

Sl. No.	Name/ Location (Km)		Road	Span Arrangement Expansion Joint to Expansion Joint (m)	Total Length (Front Face of Dirt Wall) (m)	Type of Super-structure	Type of Substructure		Carriage-Way Width (m)	Total Deck Width (m)
							Pier	Abutment		
1	412/1, km. 411.15	Left	NH8	2 X 7.0 + 20 (Skew)	34	RCC T-Beams (Central Span) RCC Solid Slab (End Spans)	RCC	RCC	11	12.1
		Right	NH8	1 X 8.2 (Skew)	34	RCC Solid Slab	Stone Masonry	RCC	7.7	12.1
2	423/1, km. 422.237	Left	NH8	3 x 35.62 (skew)	106.86	PSC T-Beams	RCC	RCC	11.0 Clear	-
		Right	NH8	1 X 17.65 (Skew)	106.86	RCC Solid Slab	RCC	RCC	7.7 Clear	-
3	431/1, km. 430.672	Left	NH8	2 X 16.28 + 35.62 (Skew)	68.18	PSC T-Beams (Central Span) RCC T-Beams (End Spans)	RCC	RCC	11	12.1
		Right	NH8	1 X 11.8 (Skew)	68.18	RCC Solid Slab	RCC	RCC	8.0 Clear	-
4	467/1, km. 466	Left	NH8	2 X 18.0 + 25.1 (Skew)	61.1	RCC T-GIRDER	RCC	RCC	11	12.1
		Right	NH8	2 X 18.0 + 25.1 (Skew)	61.1	RCC T-GIRDER	RCC	RCC	11	12.1

Source: - Executive Summary for the proposed project

2.6.4. EXISTING MINOR BRIDGES

The site includes the following minor bridges and **Table 2.9** is showing the details of existing minor bridges.

Table 2.9: Details of Existing Minor Bridges

Sl. No.	Name/ Location (Km)	Road Side	Road	Span Arrangement to Expansion	Total Length (Front Face of Dirt Wall) (m)	Type of Superstructure	Type of Substructure		Width (m)	
							Pier	Abutment	Carriage	Total Deck
1	403/2 Km.	Left	NH-8	2x10.70 + 1x10.20	31.6	Solid Slab	RCC	RCC	11	12.1
	402.750	Right	NH-8	3x10.0	30	Solid Slab	RCC	RCC	11	12.1
2	412/3 Km.	Left	NH-8	2x15.22 + 1x19.80	50.24	Solid Slab	RCC	RCC	11	12.1
	411.805	Right	NH-8	2x15.22 + 1x19.80	50.24	Solid Slab	RCC	RCC	11	12.1
3	419/1 Km.	Left	NH-8	1x16.40	16.4	RCC T Girder	RCC	RCC	11	12.1
	418.598	Right	NH-8	2x8.0	16	Solid Slab	Stone Masonry	Stone Masonry	11	12.1
4	420/1 Km.	Left	NH-8	1x27.0	27	RCC T Girder	RCC	RCC	11	12.1
	419.320	Right	NH-8	3x10.0	30	RCC T Girder	Stone Masonry	Stone Masonry	11	12.1
5	420/2 Km.	Left	NH-8	1x7.80	7.8	Solid Slab	RCC	PCC Wall	11	12.1
	419.886	Right	NH-8	1x7.80	7.8	Solid Slab	RCC	PCC Wall	11	12.1
6	422/2 Km.	Left	NH-8	1x17.60 + 1x18.4	36	RCC T Girder	RCC	RCC	11	12.1
	421.534	Right	NH-8	4x9.1	36.4	RCC T Girder	RCC	RCC	11	12.1
7	422/3 Km.	Left	NH-8	3x10.75	32.25	RCC T Girder	RCC	RCC	11	12.1
	421.750	Right	NH-8	3x10.75	32.25	RCC T Girder	RCC	RCC	11	12.1
8	429/1 Km.	Left	NH-8	3x5.0	15	Solid Slab	RCC	RCC	11	12.1
	428.150	Right	NH-8	1x15	15	RCC T Girder	RCC	RCC	11	12.1
9	430/2 Km.	Left	NH-8	2x5.0	10	Solid Slab	RCC	RCC	11	12.1
	429.720	Right	NH-8	1x8.60	8.6	Solid Slab	RCC	RCC	11	12.1
10	433/1 Km.	Left	NH-8	2x5.3+1x5.0	15.6	Solid Slab	RCC	RCC	11	12.1
	432.350	Right	NH-8	2x5.3+1x5.0	15.6	Solid Slab	RCC	RCC	11	12.1
11	436/1 Km.	Left	NH-8	1x15.70	15.7	Solid Slab	Stone Masonry	Stone Masonry	11	12.1
	435.250	Right	NH-8	2x7.8	15.6	RCC T Girder	RCC	RCC	11	12.1

Sl. No.	Name/ Location (Km)	Road Side	Road	Span Arrangement to Expansion	Total Length (Front Face of Dirt Wall) (m)	Type of Superstructure	Type of Substructure		Width (m)	
							Pier	Abutment	Carriage	Total Deck
12	437/3 Km.	Left	NH-8	1x10.0	10	Solid Slab	Stone Masonry	Stone Masonry	11	12.1
	436.650	Right	NH-8	2x5.0	10	Solid Slab	Stone Masonry	Stone Masonry	11	12.1
13	443/1 Km.	Left	NH-8	1x13.0	13	RCC T Girder	RCC	RCC	11	12.1
	442.600	Right	NH-8	2x6.0	12	Solid Slab	RCC	RCC	11	12.1
14	460/2 Km.	Left	NH-8	1x8.0	8	RCC T Girder	RCC	RCC	8.9	10
	459.400	Right	NH-8	1x8.0	8	Solid Slab	RCC	RCC	9	10
15	467/3 Km.	Left	NH-8	1x7.9	7.9	Solid Slab	RCC	RCC	11	12.1
	466.800	Right	NH-8	1x7.9	7.9	Solid Slab	RCC	RCC	11	12.1
16	468/1 Km.	Left	NH-8	1x6.7	6.7	Solid Slab	RCC	RCC	9	10
	467.100	Right	NH-8	1x6.7	6.7	Solid Slab	RCC	RCC	9	10
17	468/2 Km.	Left	NH-8	1x8.7	8.7	Frame Type	RCC	RCC	9	10
	467.650	Right	NH-8	1x8.7	8.7	Frame Type	RCC	RCC	9	10
18	490/1 Km.	Left	NH-8	1x16.8	16.8	RCC T Girder	RCC	RCC	11	12.1
	490.250	Right	NH-8	3x5.6	16.8	Solid Slab	Stone Masonry	Stone Masonry	11	12.1

Source: - Executive Summary for the proposed project

2.6.5. EXISTING MINOR BRIDGES ON IRRIGATION CANAL

The site includes the following minor bridges on irrigation canal and **Table 2.10** is showing the details of existing minor bridges.

Table 2.10: Details of Existing Minor Bridges on irrigation Canal

Sl. No.	Name/ Location (Km)	Side	Road	Span Arrangement Expansion Joint to Expansion Joint (m)	Total Length (Front Face of Dirt Wall) (m)	Type of Super-structure	Type of Substructure		Carriageway Width (m)	Total Deck Width (m)	Remarks
							Pier	Abutment			
1	462/2 Km. 462.25	Left	NH-8	1x6.60	6.6	Solid Slab	RCC	Stone Masonry	11	12.1	
		Right	NH-8	1x6.60	6.6	Solid Slab	RCC	RCC			
2	km 469.950	Left	NH-8	2X4.8	9.6	RCC Box	RCC	RCC	40 (56m in skew)	114 (skew)	
		Right	NH-8	2X4.8	9.6	RCC Box	RCC	RCC			

Source: - Executive Summary for the proposed project

2.6.6. EXISTING OTHER DETAILS

The site includes the following details and **Tables** are showing the existing details which are falling existing road.

Table 2.11: Details of Existing Box/Slab Culvert on Irrigation Channel

Sl. No.	Chainage (km)	Road/ CD No.	CD Type	Size (m)
1	433.654	NH 8	1 / Slab	1 x 3.2 x 2
2	452.53	NH 9	1 / Slab	1X5.3X1.7
3	457.134	NH 8	1 / Slab	1 x 3.0 x 1.5
4	463.549	NH 8	1 / Slab	1X5.5X1.5
5	478.804	NH 8	1 / Slab	1 x 4.8 x 1.2

Source: - Executive Summary for the proposed project

Table 2.12: Details of Existing Pipe Culvert on Irrigation Channel

Sl. No.	Chainage (km)	Road/CD No.	CD Type	Size (m)
1.	438.075	NH 8	2 Pipe Culvert	2 x 0.9
2.	440.47	NH 8	1 Pipe Culvert	1 x 0.9
3.	458.88	NH 8	2 Pipe Culvert	2 x 0.9
4.	461.85	NH 8	1 Pipe Culvert	1 x 0.9
5.	472.314	NH 8	1 Pipe Culvert	1 x 0.3
6.	474.094	NH 8	1 Pipe Culvert	1 x 1.2

Sl. No.	Chainage (km)	Road/CD No.	CD Type	Size (m)
7.	476.31	NH 8	1 Pipe Culvert	1X0.9

Source: - Executive Summary for the proposed project

Table 2.13: Details of Existing Box/Slab Culverts

Sl. No.	Chainage (km)	Road/CD No.	CD Type	Size (m)
1.	403.222	NH 8	1 / Slab	1 x 5.9 x 4
2.	403.689	NH 8	1 / Slab	1 x 4.0 x 3
3.	411.615	NH 8	1 / Slab	1 x 3.5 x 2
4.	415.88	NH 8	1 / Slab	1 x 3.6 x 1.2
5.	416.765	NH 8	1 / Slab	1 x 3.2 x 1.5
6.	417.707	NH 8	1 / Slab	1 x 3.6 x 2
7.	424.05	NH 8	1 / Slab	1 x 5.6 x 1.9
8.	426.84	NH 8	1 / Slab	1 x 5.8 x 2
9.	436.03	NH 8	1 / Slab	1 x 5.5 x 3.5
10.	438.175	NH 8	1 / Slab	1 x 4.2 x 3
11.	438.87	NH 8	1 / Slab	1 x 5.7 x 4
12.	438.934	NH 8	1 / Slab	1 x 4.8 x 3
13.	466.496	NH 8	1 / Slab	1 x 4.5 x 5
14.	466.952	NH 8	1 / Slab	1 x 4.1
15.	468.952	NH 8	1 / Slab	1 x 3.6 x 5.7
16.	480.881	NH 8	3 / Slab	3 x 0.9 x 1.5
17.	484.98	NH 8	1 / Slab	1 x 4.2 x 3

Source: - Executive Summary for the proposed project

Table 2.14: Details of Existing Pipe Culverts

Sl. No.	Chainage (km)	Road/ CD No.	CD Type	Size (m)
1.	402.447	NH 8	3 Pipe Culvert	3 x 0.9
2.	404.324	NH 8	1 Pipe Culvert	1 x 0.9
3.	404.535	NH 8	2 Pipe Culvert	2 x 0.9
4.	404.743	NH 8	1 Pipe Culvert	1 x 0.9
5.	404.817	NH 8	4 Pipe Culvert	4 x 0.9
6.	405.505	NH 8	1 Pipe Culvert	1 x 0.9
7.	405.748	NH 8	1 Pipe Culvert	1 x 0.9
8.	406.889	NH 8	2 Pipe Culvert	2 x 0.9
9.	407.905	NH 8	3 Pipe Culvert	3 x 0.9
10.	408.747	NH 8	4 Pipe Culvert	4 x 0.9
11.	410.144	NH 8	5 Pipe Culvert	5 x 0.9
12.	414.286	NH 8	3 Pipe Culvert	3 x 0.9
13.	414.808	NH 8	2 Pipe Culvert	2 x 0.9
14.	415.56	NH 8	3 Pipe Culvert	3 x 0.9
15.	420.395	NH 8	2 Pipe Culvert	2 x 0.9
16.	421.35	NH 8	2 Pipe Culvert	2 x 0.9

Sl. No.	Chainage (km)	Road/ CD No.	CD Type	Size (m)
17.	423.45	NH 8	2 Pipe Culvert	2 x 0.9
18.	424.34	NH 8	3 Pipe Culvert	3 x 0.9
19.	425.17	NH 8	2 Pipe Culvert	2 x 0.9
20.	426.095	NH 8	2 Pipe Culvert	2 x 0.9
21.	427.165	NH 8	2 Pipe Culvert	2 x 0.9
22.	427.815	NH 8	1 Pipe Culvert	1 x 5.7
23.	429.17	NH 8	3 Pipe Culvert	3 x 0.9
24.	431.28	NH 8	1 Pipe Culvert	1 x 0.9
25.	433.075	NH 8	2 Pipe Culvert	2 x 0.9
26.	433.355	NH 8	2 Pipe Culvert	2 x 0.9
27.	434.745	NH 8	2 Pipe Culvert	2 x 0.9
28.	435.455	NH 8	2 Pipe Culvert	2 x 0.9
29.	436.302	NH 8	1 Pipe Culvert	1 x 0.9
30.	437.483	NH 8	2 Pipe Culvert	2 x 0.9
31.	437.995	NH 8	2 Pipe Culvert	2 x 0.9
32.	438.308	NH 8	2 Pipe Culvert	2 x 0.9
33.	439.025	NH 8	2 Pipe Culvert	2 x 0.9
34.	439.225	NH 8	1 Pipe Culvert	1 x 0.9
35.	439.775	NH 8	3 Pipe Culvert	3 x 0.9
36.	442.765	NH 8	3 Pipe Culvert	3 x 0.9
37.	442.895	NH 8	4 Pipe Culvert	4 x 0.9
38.	443.246	NH-8	1 Pipe Culvert	1 x 0.9
39.	443.949	NH-8	4 Pipe Culvert	4 x 0.9
40.	444.468	NH-8	4 Pipe Culvert	4 x 0.9
41.	445.37	NH-8	4 Pipe Culvert	4 x 0.9
42.	446.478	NH-8	2 Pipe Culvert	2 x 0.9
43.	447.774	NH-8	2 Pipe Culvert	2 x 0.9
44.	449.536	NH 8	2 Pipe Culvert	2 x 0.9
45.	451.608	NH 8	2 Pipe Culvert	2 x 0.9
46.	451.947	NH 8	1 Pipe Culvert	1 x 0.9
47.	452.03	NH 8	1 Pipe Culvert	1 x 0.9
48.	453.921	NH 8	3 Pipe Culvert	3 x 0.9
49.	454.633	NH 8	1 Pipe Culvert	1 x 0.9
50.	455.08	NH 8	1 Pipe Culvert	1 x 0.9
51.	455.299	NH 8	3 Pipe Culvert	3 x 0.9
52.	455.833	NH 8	2 Pipe Culvert	2 x 0.9
53.	456.202	NH 8	1 Pipe Culvert	1 x 0.9
54.	456.425	NH 8	2 Pipe Culvert	2 x 0.9
55.	458.317	NH 8	2 Pipe Culvert	2 x 0.9
56.	458.695	NH 8	2 Pipe Culvert	2 x 0.9
57.	459.105	NH 8	1 Pipe Culvert	1 x 0.9

Sl. No.	Chainage (km)	Road/ CD No.	CD Type	Size (m)
58.	459.975	NH 8	2 Pipe Culvert	2 x 0.9
59.	460.489	NH 8	1 Pipe Culvert	1 x 0.6
60.	460.814	NH 8	3 Pipe Culvert	3 x 0.9
61.	460.913	NH 8	1 Pipe Culvert	1 x 0.9
62.	461.619	NH 8	2 Pipe Culvert	2 x 0.9
63.	462.048	NH 8	2 Pipe Culvert	2 x 0.9
64.	462.786	NH 8	2 Pipe Culvert	2 x 0.9
65.	463.282	NH 8	2 Pipe Culvert	2 x 0.9
66.	464.129	NH 8	2 Pipe Culvert	2 x 0.9
67.	464.393	NH 8	2 Pipe Culvert	2 x 0.9
68.	464.801	NH 8	2 Pipe Culvert	2 x 0.9
69.	465.6	NH 8	2 Pipe Culvert	2 x 0.9
70.	469.207	NH 8	2 Pipe Culvert	2 x 0.9
71.	469.661	NH 8	3 Pipe Culvert	3 x 0.9
72.	470.123	NH 8	1 Pipe Culvert	1 x 1.2
73.	470.441	NH 8	1 Pipe Culvert	1 x 0.9
74.	471.087	NH 8	4Pipe Culvert	4 x 0.9
75.	471.275	NH 8	1 Pipe Culvert	Left 1 x 0.60 Right 1 x 0.90
76.	472.222	NH 8	4 Pipe Culvert	4 x 0.9
77.	472.854	NH 8	2 Pipe Culvert	2 x 0.9
78.	473.759	NH 8	2 Pipe Culvert	2 x 0.9
79.	474.356	NH 8	4Pipe Culvert	4 x 0.9
80.	474.624	NH 8	2 Pipe Culvert	2 x 0.9
81.	474.93	NH 8	2 Pipe Culvert	2 x 0.9
82.	475.947	NH 8	4 Pipe Culvert	4 x 0.9
83.	476.918	NH 8	4Pipe Culvert	4 x 0.9
84.	477.8	NH 8	4 Pipe Culvert	4 x 0.9
85.	479.386	NH 8	4 Pipe Culvert	4 x 0.9
86.	481.305	NH 8	2 Pipe Culvert	2 x 0.9
87.	481.899	NH 8	2 Pipe Culvert	2 x 0.9
88.	482.294	NH 8	2 Pipe Culvert	2 x 0.9
89.	482.931	NH 8	2 Pipe Culvert	2 x 0.9
90.	483.554	NH 8	2 Pipe Culvert	2 x 0.6
91.	484.013	NH 8	3Pipe Culvert	3 x 0.6
92.	484.575	NH 8	2 Pipe Culvert	2 x 0.9
93.	485.448	NH 8	4 Pipe Culvert	4 x 0.9
94.	485.737	NH 8	2 Pipe Culvert	2 x 0.9
95.	488.19	NH 8	2 Pipe Culvert	2 x 0.9
96.	489.642	NH 8	2 Pipe Culvert	2 x 0.9
97.	490.573	NH 8	2 Pipe Culvert	2 x 0.9

Sl. No.	Chainage (km)	Road/ CD No.	CD Type	Size (m)
98.	491.245	NH 8	3 Pipe Culvert	3 x 0.9
99.	492.05	NH 8	4Pipe Culvert	4 x 0.9
100.	492.865	NH 8	2 Pipe Culvert	2 x 0.9
101.	494.177	NH 8	4Pipe Culvert	4 x 0.9

Source: - Executive Summary for the proposed project

Table 2.15: Details of Existing Side Drains

Sl. No.	Road	Location		Sides		Lengths	Village/Town Name
		From	To	LHS	RHS	(Km)	
1.	NH 8	415.350	415.600	LHS		0.25	Toll Plaza
2.	NH 8	415.350	415.600		RHS	0.25	Toll Plaza
3.	NH 8	423.000	424.150	LHS		1.15	Rajgadh
4.	NH 8	423.000	424.150		RHS	1.15	Rajgadh
5.	NH 8	431.500	433.000	LHS		1.50	Gamboi
6.	NH 8	431.500	433.000		RHS	1.50	Gamboi
7.	NH 8	443.125	451.250	LHS		8.13	Himmatnagar
8.	NH 8	443.125	446.820		RHS	3.69	Himmatnagar
9.	NH 8	447.220	448.125		RHS	0.90	Himmatnagar
10.	NH 8	459.000	460.450	LHS		1.45	Salal
11.	NH 8	459.000	460.450		RHS	1.45	Salal
12.	NH 8	466.600	468.860	LHS		2.26	Prantij
13.	NH 8	466.600	468.860		RHS	2.26	Prantij
14.	NH 8	471.850	472.100	LHS		0.25	Toll Plaza
15.	NH 8	471.850	472.100		RHS	0.25	Toll Plaza
16.	NH 8	474.600	475.340	LHS		0.74	Tajpur
17.	NH 8	474.600	475.340		RHS	0.74	Tajpur
18.	NH 8	480.750	481.200	LHS		0.45	Chandrala
19.	NH 8	480.600	481.550		RHS	0.95	Chandrala
20.	NH 8	484.300	485.360	LHS		1.06	Chhala
21.	NH 8	484.300	485.360		RHS	1.06	Chhala
22.	NH 8	493.030	494.410	LHS		1.38	Chiloda
23.	NH 8	493.030	494.410		RHS	1.38	Chiloda
Total Length						**34.20**	

Source: - Executive Summary for the proposed project

Table 2.16: Details of Existing Toll Plaza

Sl. No.	Chainage (km)	Locations	Road
1.	Km. 415.500	Vantada	NH 8
2.	Km. 472.100	Katpur	NH 8

The site includes the following Bus/Bus Shelters which are given in **Table 2.14**.

Table 2.17: Details of Existing Bus Bays/Bus Shelters

Sl. No.	Locations/ Chainage (km)	Road	Side
1	404.000 to 404.100	NH 8	Right
2	404.300 to 404.500	NH 8	Left
3	408.900 to 408.998	NH 8	Right
4	408.950 to 408.995	NH 8	Left
5	409.000 to 409.100	NH 8	Both
6	410.300 to 410.400	NH 8	Right
7	410.300 to 410.450	NH 8	Left
8	412.200 to 412.400	NH 8	Left
9	412.300 to 412.400	NH 8	Right
10	418.100 to 418.300	NH 8	Left
11	420.700 to 420.800	NH 8	Right
12	420.700 to 420.900	NH 8	Left
13	434.800 to 434.900	NH 8	Right
14	434.900 to 434.999	NH 8	Left
15	447.100 to 447.200	NH 8	Right
16	451.400 to 451.550	NH 8	Left
17	451.700 to 451.800	NH 8	Right
18	453.700 to 453.800	NH 8	Right
19	455.400 to 455.500	NH 8	Left
20	456.750 to 456.800	NH 8	Left
21	462.800 to 462.900	NH 8	Right
22	462.850 to 462.950	NH 8	Left
23	473.800 to 473.900	NH 8	Right
24	4740 to 474.100	NH 8	Left
25	475.500 to 475.600	NH 8	Right
26	478.200 to 478.350	NH 8	Left
27	478.500 to 478.600	NH 8	Right
28	487.700 to 487.800	NH 8	Right
29	487.700 to 487.850	NH 8	Left
30	490.600 to 490.700	NH 8	Right
31	490.600 to 490.750	NH 8	Left

Source: - Executive Summary for the proposed project

Table 2.18: Details of Existing Urban Sections

Sl. No.	Road	Locations		Length	Village Name
		From (km)	To (km)	(Km)	
1	NH-8	409.900	410.100	0.2	Gadadhar
2	NH-8	420.000	421.000	1	Javanpura
3	NH-8	422.600	423.830	1.23	Raigadh
4	NH-8	429.250	429.600	0.35	Shravana
5	NH-8	431.250	432.650	1.4	Gambhoi
6	NH-8	434.400	434.600	0.2	Karanpur
7	NH-8	437.500	438.200	0.7	Gamadi
8	NH-8	442.650	443.100	0.45	Kanknol
9	NH-8	443.100	449.000	5.9	Himatnagar
10	NH-8	449.000	449.200	0.2	Piplodi
11	NH-8	449.600	451.000	1.4	Boriya Khurad
12	NH-8	451.000	451.750	0.75	Hajipur
13	NH-8	454.950	455.300	0.35	Dalpur
14	NH-8	458.550	460.200	1.65	Salal
15	NH-8	465.170	465.250	0.08	Aminpur
16	NH-8	466.000	467.000	1	Prantij
17	NH-8	467.400	468.750	1.35	Kamalpur
18	NH-8	474.200	475.200	1	Tajpur
19	NH-8	477.350	478.250	0.9	Majara
20	NH-8	480.350	481.300	0.95	Chandarala
21	NH-8	483.910	485.150	1.24	Chhala
22	NH-8	490.100	490.300	0.2	Dhanap
23	NH-8	493.300	493.750	0.45	Mahudara

Sl. No.	Road	Locations		Length	Village Name
		From (km)	To (km)	(Km)	
24	NH-8	494.000	494.410	0.41	Chiloda
Total Length				23.36	

Source: - Executive Summary for the proposed project

Table 2.19: Details of Existing Service Roads

Sl. No.	Road	Location		Sides		Width (m)		Length	Village/Town Name
		From	To	LHS	RHS	LHS	RHS	Km	
1	NH 8	423.000	424.150	LHS		7		1.15	Rajgadh
2	NH 8	423.000	424.150		RHS		7	1.15	Rajgadh
3	NH 8	431.500	433.000	LHS		7		1.5	Gamboi
4	NH 8	431.500	433.000		RHS		7	1.5	Gamboi
5	NH 8	443.125	451.250	LHS		7		8.13	Himmatnagar
6	NH 8	443.125	446.820		RHS		7	3.69	Himmatnagar
7	NH 8	447.220	448.125	RHS		7		0.9	Himmatnagar
8	NH 8	459.000	460.450		LHS		7	1.45	Salal
9	NH 8	459.000	460.450		RHS		7	1.45	Salal
10	NH 8	466.600	468.860	LHS		7		2.26	Prantij
11	NH 8	466.600	468.860		RHS		7	2.26	Prantij
12	NH 8	474.600	475.340	LHS		7		0.74	Tajpur
13	NH 8	474.600	475.340		RHS		7	0.74	Tajpur
14	NH 8	480.750	481.200	LHS		7		0.45	Chandrala
15	NH 8	480.600	481.550		RHS		7	0.95	Chandrala
16	NH 8	484.300	485.360	LHS		7		1.06	Chhala
17	NH 8	484.300	485.360		RHS		7	1.06	Chhala
18	NH 8	493.030	494.900	LHS		7		1.87	Chiloda

Sl. No.	Road	Location		Sides		Width (m)		Length	Village/Town Name
		From	To	LHS	RHS	LHS	RHS	Km	
19	NH 8	493.030	494.410		RHS		7	1.38	Chiloda
							Total Length	33.69	

Source: - Executive Summary for the proposed project

The site also includes the following At-Grade Major Junctions.

Table 2.20: Details of Existing At-Grade Major Junctions

Sl. No.	Existing Chainage (km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
1	420.67	466.855	Modasa	Rajendranagar	+	BT	BT	SH-59/MDR
2	432.105	478.29		Harsol/ Ranasan	2	432.105	478.29	
3	432.46	478.645	Gambhoi	Bhiloda	+	BT	BT	SH-143
4	445.48	491.665	Ranasan	Himatnagar town	4	445.48	491.665	Ranasan
5	447.01	493.195	-	Ambaji	T	-	BT	NH-76A
6	450.63	496.815	Talod	-	T	BT	-	SH-237
7	466.6	512.785	Prantij	Prantij	+	BT	BT	SH-138
8	468.125	514.31	Prantij	Mahudi	+	BT	BT	SH-138
9	478.415	524.6	Majra	-	T	BT	-	SH-143
10	485.38	531.565	Dehgam	Jakua	+	BT	BT	SH-192

Source: - Executive Summary for the proposed project

Table 2.21: Details of Existing At-Grade Minor Junctions

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
1	401.97	448.155	Shamlapur	Primary School	+	BT	BT	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS	(T/Y/+)	LHS	RHS	
2	402.96	449.145	-	Khari	T	-	BT	Village Road
3	403.08	449.265	-	Khari	T	-	ER	Village Road
4	403.465	449.65	Junakhari	Meravada	+	ER	BT	Village Road
5	404.26	450.445	Khari	Napdatanda	+	BT	BT	Village Road
6	405.21	451.395	Dantiya	-	T	BT	-	Village Road
7	406.07	452.255	-	Napda	T	-	BT	Village Road
8	406.99	453.175	Napada Kampa	Field	+	BT	ER	Village Road
9	407.3	453.485	-	Private Company Road	T	-	BT	Village Road
10	408.17	454.355	Asal	-	T	ER	BT	Village Road
11	409.16	455.345	Nandisan	Khiloda	+	ER	BT	Village Road
12	409.25	455.435	-	Field	T	-	ER	Fiel Track
13	409.9	456.085	-	Field	T	-	ER	Fiel Track
14	410.26	456.445	Gadadar	Gadadar	+	BT	ER	Fiel Track
15	410.6	456.785	-	Field	T	-	ER	Fiel Track
16	411.125	457.31	TitoiMadasa	-	T	BT	-	SH-57
17	411.475	457.66	Field	Village	+	ER	CC	Village Road
18	412.18	458.365	Sunokh	-	T	BT	-	Village Road
19	412.6	458.785	Sunokh	Vanesra kampa	+	ER	BT	Village Road
20	415.26	461.445	Vantada	-	T	BT	-	Village Road
21	417.28	463.465	Chhatresari	DavliNad	+	BT	BT	Village Road
22	417.775	463.96	Chhatresari	-	T	ER	-	Village Road
23	418.125	464.31	Davli	-	T	BT	-	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS	(T/Y/+)	LHS	RHS	
24	419.23	465.415	Field	Gadhada Kampa	T	ER	BT	Village Road
25	421.07	467.255	-	Sahyog Krusthyagan Trust(RHS)	T	-	BT	Village Road
26	421.315	467.5	Bilpan	-	T	-	BT	Village Road
27	422.6	468.785	Field	Field	+	ER	ER	Village Road
28	423.2	469.385	Bilpan Kampa	-	Y	BT	-	Village Road
29	423.305	469.49	Hadpodra	Rajgadh	+	BT	BT	Village Road
30	424.635	470.82	-	Javangadh	T	-	BT	Village Road
31	424.97	471.155	Village	-	T	CC	-	Village Road
32	426.5	472.685	Navalpur		T	BT	-	Village Road
33	426.8	472.985	Navalpur	Navalpur	+	ER	CC	Village Road
34	428.2	474.385	Field		T	ER	-	Village Road
35	428.36	474.545	-	Mathasuliya	T	-	BT	Village Road
36	429.9	476.085	Field	Sarvana	+	ER	BT	Village Road
37	431.585	477.77	Kesarpura		T	BT	-	Village Road
38	432.87	479.055	-	Power House	T	-	ER	Village Road
39	433.66	479.845	Vamoj	Surajpura	+	ER	ER	Canal Track
40	434.77	480.955	-	Vantada	Y	-	BT	Village Road
41	434.85	481.035	Karanpur	-	T	BT	-	Village Road
42	435.1	481.285	Karanpur	-	T	ER	-	Village Road
43	435.485	481.67	-	Hamirgadh	T	-	BT	Village Road
44	437.54	483.725	Vamoj	-	T	BT	-	Village Road
45	437.86	484.045	-	Gamdi	T	-	BT	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS	(T/Y/+)	LHS	RHS	
46	440.39	486.575	Agiyol	Berana	+	BT	BT	Village Road
47	440.48	486.665	Agiyol	Berana	+	ER	ER	Canal Track
48	442.71	488.895	Hanpura Kampa	Field	+	BT	ER	Village Road
49	443.19	489.375	Kanknol	Kanknol	+	BT	BT	Village Road
50	446.495	492.68	Himatnagar town	Himatnagar town	+	BT	BT	Town Road
51	446.87	493.055	-	Himatnagar town	Y	-	BT	Town Road
52	447.19	493.375	-	Himatnagar town	Y	-	BT	Town Road
53	448.13	494.315	GIDC	-	T	BT	-	Town Road
54	448.9	495.085	-	Field	T	-	ER	Village Road
55	449.065	495.25	Field	Piplodi	+	ER	BT	Town Road
56	449.45	495.635	-	Showroom	T	-	ER	Showroom
57	450.02	496.205	Piplodi	-	T	-	CC	Village Road
58	450.15	496.335	-	Field	Y	-	ER	Fiel Track
59	451.55	497.735	-	Hajipur	T	-	BT	Village Road
60	451.67	497.855	Nananpur	-	T	ER	-	Village Road
61	452.08	498.265	-	Hajipur	T	-	ER	Village Road
62	453.7	499.885	Nananpur	-	T	BT	-	Village Road
63	454.04	500.225	-	Factory	T	-	ER	Village Road
64	455.28	501.465	Dalpur	-	Y	-	ER	Village Road
65	455.35	501.535	Dalpur	Dalpur	+	BT	BT	Village Road
66	456.88	503.065	Sanasan	Katwad	+	BT	BT	Village Road
67	457.725	503.91	-	Govt. College	T	-	ER	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS	(T/Y/+)	LHS	RHS	
68	459.09	505.275	Sanasan	Moyad	+	BT	BT	Village Road
69	459.605	505.79	-	Salal	T	-	BT	Village Road
70	460.44	506.625	-	Rasulpur	T	-	BT	Village Road
71	461.65	507.835	-	Rasulpur	T	-	BT	Village Road
72	462.955	509.14	Jesangpura	Piludra	+	BT	BT	Village Road
73	464.16	510.345	-	Kesaypur	Y	-	BT	Village Road
74	464.625	510.81	Field	Jesangpura	+	ER	CC	Village Road
75	465.35	511.535	Poglu	-	Y	BT	-	Village Road
76	466.85	513.035	-	Piludra	T	-	BT	Village Road
77	466.92	513.105	Prantij	Prantij	+	BT	BT	Village Road
78	467.26	513.445	Prantij	Prantij	+	BT	BT	Village Road
79	467.4	513.585	-	Prantij	T	-	CC	Village Road
80	467.925	514.11		Vagpur	T	-	BT	Village Road
81	468.82	5155	-	Galesara	T	-	BT	Village Road
82	469.045	515.23	Katpur	Katpur	+	BT	ER	Village Road
83	469.22	515.405	-	Anwarpura	Y	-	BT	Village Road
84	469.99	516.175	Katpur	Sodoliya	+	BT	BT	Canal Track
85	471.71	517.895	Katpur	-	T	BT	-	Village Road
86	473.16	519.345	-	Oran	T	-	BT	Village Road
87	473.5	519.685	-	Village	T	-	ER	Village Road
88	473.96	520.145	Vadvasa	Field	+	BT	ER	Village Road
89	474.76	520.945	Karol	Oran	+	BT	ER	Village Road
90	475.5	521.685	Tajpur Kui	-	T	BT	-	Village Road
91	4780	524.185	Majra	Majra	+	ER	BT	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
92	478.8	524.985	Sukhad	Majra	+	ER	ER	Canal Track
93	479.42	525.605	-	Majra Village and Divine Energy BAPS	T	-	BT	Village Road
94	480.405	526.59	-	School	T	-	BT	School Road
95	480.7	526.885	Chandrala	-		ER	-	Village Road
96	480.88	527.065	-	Chandrala	T	-	BT	Village Road
97	481.2	527.385	Chandrala	Ghadkan	+	ER	BT	Village Road
98	481.775	527.96	-	Field	T	-	ER	Fiel Track
99	482.315	528.5	Chandrala	-	T	ER	-	Fiel Track
100	482.945	529.13	Mahadevpura	-	T	BT	-	Fiel Track
101	484.585	530.77	Chhala	Chhala	+	BT	BT	Village Road
102	484.96	531.145	Chhala	Chhala	+	BT	BT	Village Road
103	485.2	531.385	Chhala	-	T	BT	-	Village Road
104	485.25	531.435	-	Chhala	T	-	BT	Village Road
105	487.655	533.84	Giyod	Harila	+	BT	BT	Village Road
106	490.565	536.75	Dhanap	Dashela	+	BT	BT	Village Road
107	491.91	538.095	-	Govt. Hotmix Plant	Y	-	ER	Hotmix Plant
108	492.095	538.28	-	Shiholi	Y	-	BT	Village Road
109	492.9	539.085	Mahudhara LHS	SiholiBadi	+	BT	BT	Village Road
110	493.615	539.8	Isanpur Mota	Siholi	+	ER	ER	Village Road

Source: - Executive Summary for the proposed project

2.7. ESTABLISHMENT TO BE DONE FOR PROPOSED DEVELOPMENT

Table 2.22: Major Plants & Machineries

Sl. No.	Category	Camp 1 (408.000)	Camp 2 (432.000)	Camp 3 (451.000)	Camp 4 (465.000)	Camp 5 (478.000)
(A) MAJOR PLANTS						
1	Hot Mix Plant (150 TPH)	0	0	0	Done	0
2	Concrete Batching Plant (60 Cum/ h)	Done	0	Done	0	0
3	Casting Yard	Done	0	Done	0	Done
4	WMM Plant (200 TPH)	0	0	Done	0	Done
(B) MAJOR MACHINERIES						
1	Excavator	5	5	5	5	4
2	Grader	2	2	1	1	1
3	Soil Comactor	2	1	2	2	1
4	Dumper	10	10	10	10	10
5	Sensor Paver	0	0	1	0	0
6	Tendom Rollers	0	0	0	0	0
7	Transit Mixer	0	0	3	0	0
(C) OTHER ESTABLISHMENTS						
1	Cement Warehouse (1000 sqm)	1	1	1	1	1
2	Office (client, IE, Contractor)	In Progress.	In Progress.	1	In Progress.	1
3	Machine Maintenance Workshop	In Progress.	In Progress.	1	In Progress.	1

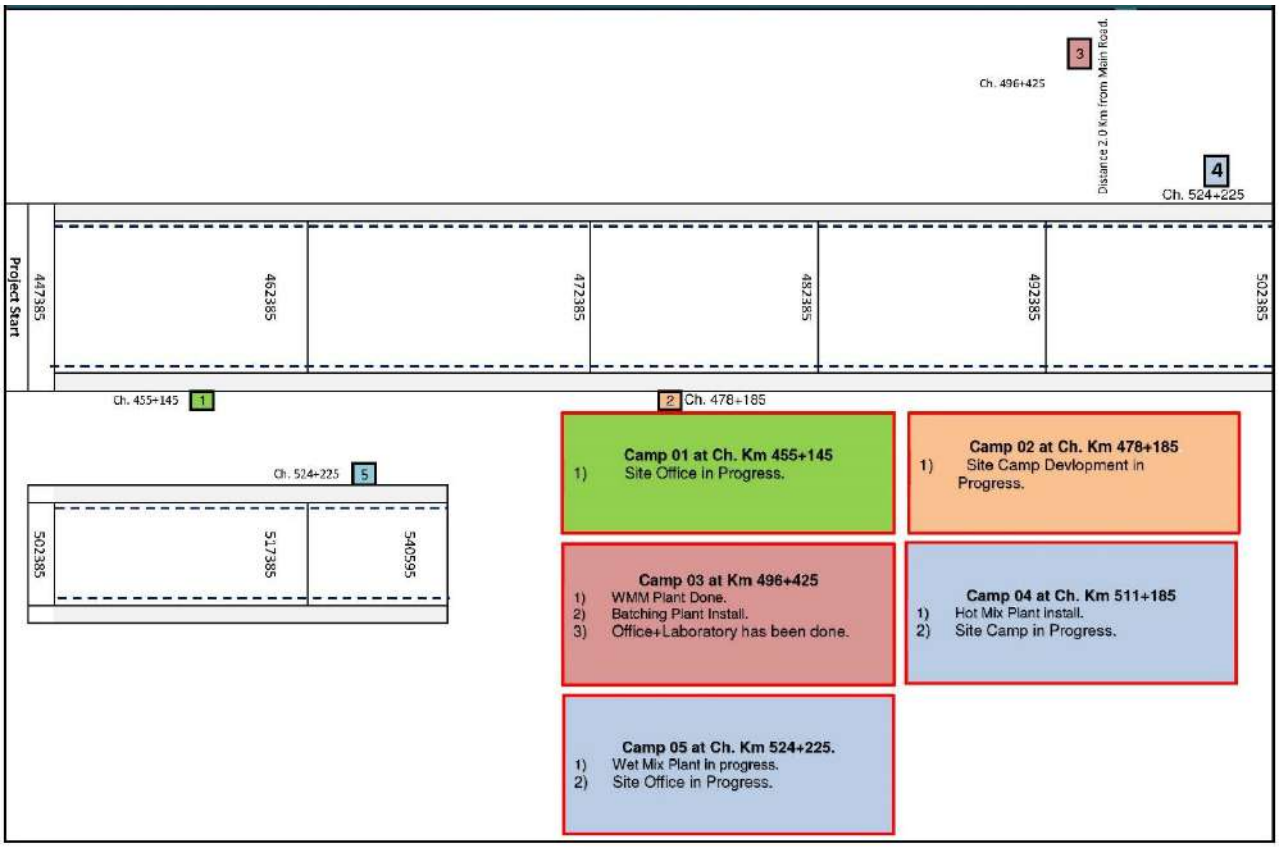


Figure 2.2: The Typical Cross Sections of the Proposed Project

2.8. PROPOSED IMPROVEMENTS AS PER DESIGN

Development of the Project Roads shall include construction of the Rajasthan/Gujarat Border to Ahmedabad Section from km 401.200 to km 494.410 near Ahmadabad. Raised median width has been proposed throughout. Facilities in the form of service roads, under/over passes and grade separators are considered at the reasonable intervals for local traffic including pedestrians' movements.

The typical cross sections of the proposed project which are designed, are given in **Table 2.23 and Figure 2.2 are showing the typical cross sections**.

Table 2.23: Details of Typical Cross Sections

Sl. No.	Existing Chainage		Design Chainage		Length	TCS Type
	From	To	From	To	(Km)	
1	401.200	401.770	447.385	447.955	0.57	Type IV
2	401.770	402.170	447.955	448.355	0.4	LVUP with both side Service Road
3	402.170	404.060	448.355	450.245	1.89	Type IV
4	404.060	404.460	450.245	450.645	0.4	LVUP with both side Service Road
5	404.460	410.500	450.645	456.685	6.04	Type IV
6	410.500	411.100	456.685	457.285	0.6	VUP with both side Service Road
7	411.100	411.350	457.285	457.535	0.25	Type V
8	411.350	411.750	457.535	457.935	0.4	LVUP with both side Service Road
9	411.750	413.000	457.935	459.185	1.25	Type IV

Sl. No.	Existing Chainage		Design Chainage		Length	TCS Type
	From	To	From	To	(Km)	
10	413.000	415.200	459.185	461.385	2.2	Type V
11	415.200	415.750	461.385	461.935	0.55	TOLL PLAZA
12	415.750	417.200	461.935	463.385	1.45	Type V
13	417.200	417.925	463.385	464.110	0.725	Type IV
14	417.925	418.325	464.110	464.510	0.4	LVUP with both side Service Road
15	418.325	420.235	464.510	466.420	1.91	Type V
16	420.235	421.065	466.420	467.250	0.83	Flyover with both side Service Road
17	421.065	421.300	467.250	467.485	0.235	Type IV
18	421.300	422.520	467.485	468.705	1.22	Type V
19	422.520	423.000	468.705	469.185	0.48	Type IV
20	423.000	423.600	469.185	469.785	0.6	VUP with both side Service Road
21	423.600	426.100	469.785	472.285	2.5	Type IV
22	426.100	426.300	472.285	472.485	0.2	Type V
23	426.300	426.700	472.485	472.885	0.4	Type V
24	426.700	428.100	472.885	474.285	1.4	Type V
25	428.100	428.150	474.285	474.335	0.05	Type IV
26	428.150	428.550	474.335	474.735	0.4	LVUP with both side Service Road
27	428.550	429.700	474.735	475.885	1.15	Type V
28	429.700	430.100	475.885	476.285	0.4	Type V
29	430.100	431.500	476.285	477.685	1.4	Type V
30	431.500	432.035	477.685	478.220	0.535	Type IV
31	432.035	432.865	478.220	479.050	0.83	Flyover with both side Service Road
32	432.865	434.300	479.050	480.485	1.435	Type V
33	434.300	434.650	480.485	480.835	0.35	Type IV
34	434.650	435.050	480.835	481.235	0.4	LVUP with both side Service Road
35	435.050	437.500	481.235	483.685	2.45	Type V
36	437.500	437.900	483.685	484.085	0.4	Type IV
37	437.900	438.600	484.085	484.785	0.7	Type IV
38	438.600	439.500	484.785	485.685	0.9	Type V
39	439.500	440.180	485.685	486.365	0.68	Type IV
40	440.180	440.580	486.365	486.765	0.4	LVUP with both side Service Road
41	440.580	443.000	486.765	489.185	2.42	Type IV
42	443.000	443.400	489.185	489.585	0.4	LVUP with both side Service Road
43	443.400	445.075	489.585	491.260	1.675	Type IV
44	445.075	445.905	491.260	492.090	0.83	Flyover with both side Service Road
45	445.905	446.555	492.090	492.740	0.65	Type I
46	446.555	447.465	492.740	493.650	0.91	Flyover with both side Service Road
47	447.465	447.715	493.650	493.900	0.25	Type I
48	447.715	448.545	493.900	494.730	0.83	Flyover with both side Service Road
49	448.545	450.185	494.730	496.370	1.64	Type VI

Sl. No.	Existing Chainage		Design Chainage		Length	TCS Type
	From	To	From	To	(Km)	
50	450.185	451.015	496.370	497.200	0.83	Flyover with both side Service Road
51	451.015	451.250	497.200	497.435	0.235	Type IV
52	451.250	451.850	497.435	498.035	0.6	VUP with both side Service Road
53	451.850	453.500	498.035	499.685	1.65	Type IV
54	453.500	453.900	499.685	500.085	0.4	Type IV
55	453.900	455.150	500.085	501.335	1.25	Type IV
56	455.150	455.550	501.335	501.735	0.4	LVUP with both side Service Road
57	455.550	456.650	501.735	502.835	1.1	Type IV
58	456.650	457.050	502.835	503.235	0.4	LVUP with both side Service Road
59	457.050	458.790	503.235	504.975	1.74	Type IV
60	458.790	459.390	504.975	505.575	0.6	VUP with both side Service Road
61	459.390	460.600	505.575	506.785	1.21	Type IV
62	460.600	461.440	506.785	507.625	0.84	Type V
63	461.440	461.840	507.625	508.025	0.4	Type V
64	461.840	462.755	508.025	508.940	0.915	Type V
65	462.755	463.155	508.940	509.340	0.4	LVUP with both side Service Road
66	463.155	464.425	509.340	510.610	1.27	Type IV
67	464.425	464.825	510.610	511.010	0.4	CUP with both side Service Road
68	464.825	465.970	511.010	512.155	1.145	Type IV
69	465.970	466.035	512.155	512.220	0.065	ROB UTURN Type VII
70	466.035	466.865	512.220	513.050	0.83	Flyover with both side Service Road
71	466.865	467.800	513.050	513.985	0.935	Type IV
72	467.800	468.400	513.985	514.585	0.6	VUP with both side
73	468.400	468.850	514.585	515.035	0.45	Type IV
74	468.850	469.250	515.035	515.435	0.4	Type IV
75	469.250	471.800	515.435	517.985	2.55	Type V
76	471.800	472.400	517.985	518.585	0.6	TOLL PLAZA
77	472.400	472.960	518.585	519.145	0.56	Type IV
78	472.960	473.360	519.145	519.545	0.4	Type IV
79	473.360	474.460	519.545	520.645	1.1	Type IV
80	474.460	475.060	520.645	521.245	0.6	VUP with both side Service Road
81	475.060	477.985	521.245	524.170	2.925	Type IV
82	477.985	478.815	524.170	525.000	0.83	Flyover with both side Service Road
83	478.815	479.220	525.000	525.405	0.405	Type IV
84	479.220	479.620	525.405	525.805	0.4	Type IV
85	479.620	480.900	525.805	527.085	1.28	Type IV
86	480.900	481.500	527.085	527.685	0.6	VUP with both side Service Road
87	481.500	482.750	527.685	528.935	1.25	Type IV
88	482.750	483.150	528.935	529.335	0.4	Type IV
89	483.150	484.285	529.335	530.470	1.135	Type V

Sl. No.	Existing Chainage		Design Chainage		Length	TCS Type
	From	To	From	To	(Km)	
90	484.285	484.885	530.470	531.070	0.6	VUP with both side Service Road
91	484.885	484.965	531.070	531.150	0.08	Type IV
92	484.965	485.795	531.150	531.980	0.83	Flyover with both side Service Road
93	485.795	487.450	531.980	533.635	1.655	Type V
94	487.450	487.850	533.635	534.035	0.4	LVUP with both side Service Road
95	487.850	490.260	534.035	536.445	2.41	Type IV
96	490.260	490.860	536.445	537.045	0.6	VUP with both side Service Road
97	490.860	492.700	537.045	538.885	1.84	Type IV
98	492.700	493.100	538.885	539.285	0.4	LVUP with both side Service Road
99	493.100	494.410	539.285	540.595	1.31	Type IV

Source: - Executive Summary for the proposed project

Table 2.24: Provision of New Service Roads

Sl. No.	Road	Existing Chainage		Design Chainage		Length	Both Side
		From	To	From	To	(Km)	Length (Km)
1	NH-8	401.200	401.770	447.385	447.955	1.14	Both Side
2	NH-8	401.770	402.170	447.955	448.355	0.8	Both Side
3	NH-8	402.170	404.060	448.355	450.245	3.78	Both Side
4	NH-8	404.060	404.460	450.245	450.645	0.8	Both Side
5	NH-8	410.500	411.100	456.685	457.285	1.2	Both Side
6	NH-8	411.350	411.750	457.535	457.935	0.8	Both Side
7	NH-8	411.750	413.000	457.935	459.185	2.5	Both Side
8	NH-8	417.200	417.925	463.385	464.110	1.45	Both Side
9	NH-9	417.925	418.325	464.110	464.510	0.8	Both Side
10	NH-9	420.235	421.065	466.420	467.250	1.66	Both Side
11	NH-8	421.065	421.300	467.250	467.485	0.47	Both Side
12	NH-8	422.520	423.000	468.705	469.185	0.96	Both Side
13	NH-8	423.000	423.600	469.185	469.785	1.2	Both Side
14	NH-8	423.600	426.100	469.785	472.285	5	Both Side
15	NH-8	428.100	428.150	474.285	474.335	0.1	Both Side
16	NH-8	428.150	428.550	474.335	474.735	0.8	Both Side
17	NH-8	431.500	432.035	477.685	478.220	1.07	Both Side
18	NH-8	432.035	432.865	478.220	479.050	1.66	Both Side
19	NH-8	434.300	434.650	480.485	480.835	0.7	Both Side
20	NH-8	434.650	435.050	480.835	481.235	0.8	Both Side
21	NH-8	437.500	437.900	483.685	484.085	0.8	Both Side
22	NH-8	437.900	438.600	484.085	484.785	1.4	Both Side
23	NH-8	439.500	440.180	485.685	486.365	1.36	Both Side
24	NH-8	440.180	440.580	486.365	486.765	0.8	Both Side
25	NH-8	440.580	443.000	486.765	489.185	4.84	Both Side
26	NH-8	443.000	443.400	489.185	489.585	0.8	Both Side

Sl. No.	Road	Existing Chainage		Design Chainage		Length	Both Side
		From	To	From	To	(Km)	Length (Km)
27	NH-8	443.400	445.075	489.585	491.260	3.35	Both Side
28	NH-8	445.075	445.905	491.260	492.090	1.66	Both Side
29	NH-8	445.905	446.555	492.090	492.740	1.3	Both Side
30	NH-8	446.555	447.465	492.740	493.650	1.82	Both Side
31	NH-8	447.465	447.715	493.650	493.900	0.5	Both Side
32	NH-8	447.715	448.545	493.900	494.730	1.66	Both Side
33	NH-8	448.545	450.185	494.730	496.370	1.64	One Side
34	NH-8	450.185	451.015	496.370	497.200	1.66	Both Side
35	NH-8	451.015	451.250	497.200	497.435	0.47	Both Side
36	NH-8	451.250	451.850	497.435	498.035	1.2	Both Side
37	NH-8	451.850	453.500	498.035	499.685	3.3	Both Side
38	NH-8	453.500	453.900	499.685	500.085	0.8	Both Side
39	NH-8	453.900	455.150	500.085	501.335	2.5	Both Side
40	NH-8	455.150	455.550	501.335	501.735	0.8	Both Side
41	NH-8	455.550	456.650	501.735	502.835	2.2	Both Side
42	NH-8	456.650	457.050	502.835	503.235	0.8	Both Side
43	NH-8	457.050	458.790	503.235	504.975	3.48	Both Side
44	NH-8	458.790	459.390	504.975	505.575	1.2	Both Side
45	NH-8	459.390	460.600	505.575	506.785	2.42	Both Side
46	NH-8	462.755	463.155	508.940	509.340	0.8	Both Side
47	NH-8	463.155	464.425	509.340	510.610	2.54	Both Side
48	NH-8	464.425	464.825	510.610	511.010	0.8	Both Side
49	NH-8	464.825	465.970	511.010	512.155	2.29	Both Side
50	NH-8	465.970	466.035	512.155	512.220	0.13	Both Side
51	NH-8	466.035	466.865	512.220	513.050	1.66	Both Side
52	NH-8	466.865	467.800	513.050	513.985	1.87	Both Side
53	NH-8	467.800	468.400	513.985	514.585	1.2	Both Side
54	NH-8	468.400	468.850	514.585	515.035	0.9	Both Side
55	NH-8	468.850	469.250	515.035	515.435	0.8	Both Side
56	NH-8	472.400	472.960	518.585	519.145	1.12	Both Side
57	NH-8	472.960	473.360	519.145	519.545	0.8	Both Side
58	NH-8	473.360	474.460	519.545	520.645	2.2	Both Side
59	NH-8	474.460	475.060	520.645	521.245	1.2	Both Side
60	NH-8	475.060	477.985	521.245	524.170	5.85	Both Side
61	NH-8	477.985	478.815	524.170	525.000	1.66	Both Side
62	NH-8	478.815	479.220	525.000	525.405	0.81	Both Side
63	NH-8	479.220	479.620	525.405	525.805	0.8	Both Side
64	NH-8	479.620	480.900	525.805	527.085	2.56	Both Side
65	NH-8	480.900	481.500	527.085	527.685	1.2	Both Side
66	NH-8	481.500	482.750	527.685	528.935	2.5	Both Side

Sl. No.	Road	Existing Chainage		Design Chainage		Length	Both Side
		From	To	From	To	(Km)	Length (Km)
67	NH-8	482.750	483.150	528.935	529.335	0.8	Both Side
68	NH-8	484.285	484.885	530.470	531.070	1.2	Both Side
69	NH-8	484.885	484.965	531.070	531.150	0.16	Both Side
70	NH-8	484.965	485.795	531.150	531.980	1.66	Both Side
71	NH-8	487.450	487.850	533.635	534.035	0.8	Both Side
72	NH-8	490.260	490.860	536.445	537.045	1.2	Both Side
73	NH-8	490.860	492.700	537.045	538.885	3.68	Both Side
74	NH-8	492.700	493.100	538.885	539.285	0.8	Both Side
75	NH-8	493.100	494.410	539.285	540.595	2.62	Both Side

Source: - Executive Summary for the proposed project

Total length of service road is 117.06 km.

Development of the Project Roads shall include construction of the Rajasthan/Gujarat Border to Ahmedabad Section from km 401.200 to km 494.410 near Ahmadabad. Raised median width has been proposed throughout. Facilities in the form of service roads, under/over passes and grade separators are considered at the reasonable intervals for local traffic including pedestrians' movements.

Table 2.25: Details of Proposed Right of Ways (PROW)

Sl. No.	Road	Existing Chainage		Design Chainage		Length (Km)	ROW	Side		Remark
		LHS	RHS	LHS	RHS			L	R	
1	NH-8	401.200	404.340	447.385	450.525	3.14	60			
2	NH-8	404.340	404.530	450.525	450.715	0.19	90	L	R	Bus Bay
3	NH-8	404.530	407.100	450.715	453.285	2.57	60	-	-	-
4	NH-8	407.100	407.460	453.285	453.645	0.36	75	L	-	Truck Lay Bye
5	NH-8	407.460	408.100	453.645	454.285	0.64	60	-	-	-
6	NH-8	408.100	408.290	454.285	454.475	0.19	90	L	R	Bus Bay
7	NH-8	408.290	410.300	454.475	456.485	2.01	60	-	-	-
8	NH-8	410.300	410.490	456.485	456.675	0.19	90	L	R	Bus Bay
9	NH-8	410.490	412.250	456.675	458.435	1.76	60	-	-	-
10	NH-8	412.250	412.610	458.435	458.795	0.36	75	L	-	Truck Lay Bye
11	NH-8	412.610	412.900	458.795	459.085	0.29	60	-	-	-
12	NH-8	412.900	413.090	459.085	459.275	0.19	90	L	R	Bus Bay
13	NH-8	413.090	415.250	459.275	461.435	2.16	60	-	-	-
14	NH-8	415.250	415.750	461.435	461.935	0.50	150	-	-	Toll Plaza
15	NH-8	415.750	417.000	461.935	463.185	1.25	60	-	-	-
16	NH-8	417.000	417.200	463.185	463.385	0.20	90	L	R	Bus Bay
17	NH-8	417.200	417.850	463.385	464.035	0.65	60	-	-	-
18	NH-8	417.850	418.210	464.035	464.395	0.36	75	-	R	Truck Lay Bay
19	NH-8	418.210	418.400	464.395	464.585	0.19	75	L	-	Bus Bay

Sl. No.	Road	Existing Chainage		Design Chainage		Length (Km)	ROW	Side		Remark
		LHS	RHS	LHS	RHS			L	R	
20	NH-8	418.400	419.300	464.585	465.485	0.90	60	-	-	-
21	NH-8	419.300	419.490	465.485	465.675	0.19	90	L	R	Bus Bay
22	NH-8	419.490	428.450	465.675	474.635	8.96	60	-	-	-
23	NH-8	428.450	428.810	474.635	474.995	0.36	75	L	-	Truck Lay Bye
24	NH-8	428.810	430.300	474.995	476.485	1.49	60	-	-	-
25	NH-8	430.300	430.490	476.485	476.675	0.19	90	L	R	Bus Bay
26	NH-8	430.490	435.200	476.675	481.385	4.71	60	-	-	-
27	NH-8	435.200	435.400	481.385	481.585	0.20	90	L	R	Bus Bay
28	NH-8	435.400	435.600	481.585	481.785	0.20	60	-	-	-
29	NH-8	435.600	435.960	481.785	482.145	0.36	75	L	-	Truck Lay Bye
30	NH-8	435.960	445.905	482.145	492.090	9.95	60	-	-	-
31	NH-8	445.905	446.555	492.090	492.740	0.65	47	-	-	-
32	NH-8	446.555	447.465	492.740	493.650	0.91	47	-	-	-
33	NH-8	447.465	447.600	493.650	493.785	0.14	47	-	-	-
34	NH-8	447.600	447.790	493.785	493.975	0.19	65	-	R	Bus Bay
35	NH-8	447.790	448.000	493.975	494.185	0.21	47	-	-	-
36	NH-8	448.000	449.810	494.185	495.995	1.81	47	-	-	-
37	NH-8	449.810	450.000	495.995	496.185	0.19	55	L	-	Bus Bay
38	NH-8	450.000	452.200	496.185	498.385	2.20	60	-	-	-
39	NH-8	452.200	452.390	498.385	498.575	0.19	75	-	R	Bus Bay
40	NH-8	452.390	453.400	498.575	499.585	1.01	60	-	-	-
41	NH-8	453.400	453.590	499.585	499.775	0.19	90	L	R	Bus Bay
42	NH-8	453.590	453.800	499.775	499.985	0.21	60	-	-	-
43	NH-8	453.800	454.160	499.985	500.345	0.36	75	L	-	Truck Lay Bye
44	NH-8	454.160	455.600	500.345	501.785	1.44	60	-	-	-
45	NH-8	455.600	455.790	501.785	501.975	0.19	75	-	R	Bus Bay
46	NH-8	455.790	456.600	501.975	502.785	0.81	60	-	-	-
47	NH-8	456.600	456.790	502.785	502.975	0.19	75	-	R	Bus Bay
48	NH-8	456.790	456.900	502.975	503.085	0.11	60	-	-	-
49	NH-8	456.900	457.090	503.085	503.275	0.19	75	L	-	Bus Bay
50	NH-8	457.090	458.240	503.275	504.425	1.15	60	-	-	-
51	NH-8	458.240	458.600	504.425	504.785	0.36	90	L	R	Truck Lay Bye
52	NH-8	458.600	459.510	504.785	505.695	0.91	60	-	-	-
53	NH-8	459.510	460.000	505.695	506.185	0.49	47	-	-	-
54	NH-8	460.000	460.350	506.185	506.535	0.35	45	-	-	-
55	NH-8	460.350	463.100	506.535	509.285	2.75	60	-	-	-
56	NH-8	463.100	463.290	509.285	509.475	0.19	90	L	R	Bus Bay
57	NH-8	463.290	465.600	509.475	511.785	2.31	60	-	-	-
58	NH-8	465.600	465.790	511.785	511.975	0.19	75	L	-	Bus Bay
59	NH-8	465.790	470.250	511.975	516.435	4.46	60	-	-	-

Sl. No.	Road	Existing Chainage		Design Chainage		Length (Km)	ROW	Side		Remark
		LHS	RHS	LHS	RHS			L	R	
60	NH-8	470.250	470.610	516.435	516.795	0.36	75	-	R	Truck Lay Bye
61	NH-8	470.610	471.800	516.795	517.985	1.19	60	-	-	-
62	NH-8	471.800	472.300	517.985	518.485	0.50	200	-	-	Toll Plaza
63	NH-8	472.300	473.500	518.485	519.685	1.20	60	-	-	-
64	NH-8	473.500	473.690	519.685	519.875	0.19	75	-	R	Bus Bay
65	NH-8	473.690	473.880	519.875	520.065	0.19	75	L	-	Bus Bay
66	NH-8	473.880	474.950	520.065	521.135	1.07	60	-	-	-
67	NH-8	474.950	475.250	521.135	521.435	0.30	47	-	-	-
68	NH-8	475.250	475.450	521.435	521.635	0.20	65	-	R	Bus Bay
69	NH-8	475.450	475.560	521.635	521.745	0.11	60	-	-	-
70	NH-8	475.560	475.750	521.745	521.935	0.19	75	L	-	Bus Bay
71	NH-8	475.750	476.000	521.935	522.185	0.25	60	-	-	-
72	NH-8	476.000	476.360	522.185	522.545	0.36	75	-	R	Truck Lay Bye
73	NH-8	476.360	477.700	522.545	523.885	1.34	60	-	-	-
74	NH-8	477.700	477.900	523.885	524.085	0.20	75	-	R	Bus Bay
75	NH-8	477.900	478.940	524.085	525.125	1.04	60	-	-	-
76	NH-8	478.940	479.300	525.125	525.485	0.36	75	-	R	Truck Lay Bye
77	NH-8	479.300	479.500	525.485	525.685	0.20	75	L	-	Bus Bay
78	NH-8	479.500	481.600	525.685	527.785	2.10	60	-	-	-
79	NH-8	481.600	482.850	527.785	529.035	1.25	60	-	-	-
80	NH-8	482.850	487.200	529.035	533.385	4.35	60	-	-	-
81	NH-8	487.200	487.390	533.385	533.575	0.19	75	L	-	Bus Bay
82	NH-8	487.390	487.750	533.575	533.935	0.36	60	-	-	-
83	NH-8	487.750	487.940	533.935	534.125	0.19	75	-	R	Bus Bay
84	NH-8	487.940	491.100	534.125	537.285	3.16	60	-	-	-
85	NH-8	491.100	491.290	537.285	537.475	0.19	75	L	-	Bus Bay
86	NH-8	491.290	491.480	537.475	537.665	0.19	75	-	R	Bus Bay
87	NH-8	491.480	492.950	537.665	539.135	1.47	60	-	-	-
88	NH-8	492.950	493.130	539.135	541.265	0.18	60	-	-	-
89	NH-8	493.130	494.410	539.315	540.595	1.28	60			

Source: - Executive Summary for the proposed project

The details of the junction which are being to be improved as given in **Table 2.26**.

Table 2.26: Junctions (On Cross Roads at the Location of Flyovers/Underpasses) to be Improved

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Proposed Structures	Side		Type of Junc-tion (T/Y/+)	Type of Road		Type of Junction (Major/ Minor)	Remarks (NH/SH/MDR/ Village Road)
				LHS	RHS		LHS	RHS		
1	401.970	448.155	LVUP	Shamlapur	Primary School	+	BT	BT	Minor	Village Road
2	404.260	450.445	LVUP	Khari	Napdatanda	+	BT	BT	Minor	Village Road
3	411.475	457.660	LVUP	Field	Village	+	ER	CC	Minor	Village Road
4	418.125	464.310	LVUP	Davli	-	T	BT	-	Minor	Village Road
5	420.670	466.855	Flyover	Modasa	Rajendranagar	+	BT	BT	Major	SH-59/MDR
6	423.305	469.490	VUP	Hadpodra	Rajgadh	+	BT	BT	Minor	Village Road
7	428.360	474.545	LVUP	-	Mathasuliya	T	-	BT	Minor	Village Road
8	432.460	478.645	Flyover	Gambhoi	Bhiloda	+	BT	BT	Major	SH-143
9	434.850	481.035	LVUP	Karanpur	-	T	BT	-	Minor	Village Road
10	440.390	486.575	LVUP	Berana	Agyol	+	BT	BT	Minor	Village Road
11	445.480	491.665	Flyover	Ranasan	Himatnagar town	+	BT	BT	Major	SH-145
12	447.010	493.195	Flyover	-	Ambaji	T	-	BT	Major	NH-76A
13	448.130	494.315	Flyover	GIDC	-	T	BT	-	Minor	Town Road
14	450.630	496.815	Flyover	Talod	-	T	BT	-	Major	SH-237
15	451.550	497.735	VUP	-	Hajipur	T	-	BT	Minor	Village Road
16	455.350	501.535	LVUP	Dalpur	Dalpur	+	BT	BT	Minor	Village Road
17	456.880	503.065	LVUP	Sanasan	Katwad	+	BT	BT	Minor	Village Road
18	459.090	505.275	VUP	Sanasan	Moyad	+	BT	BT	Minor	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Proposed Structures	Side		Type of Junc-tion (T/Y/+)	Type of Road		Type of Junction (Major/ Minor)	Remarks (NH/SH/MDR/ Village Road)
				LHS	RHS		LHS	RHS		
19	462.955	509.140	LVUP	Jesangpura	Piludra	+	BT	BT	Minor	Village Road
20	464.625	510.810	CUP	Field	Jesangpura	+	ER	CC	Minor	Village Road
21	466.600	512.785	Flyover	Prantij	Prantij	+	BT	BT	Major	SH-138
22	468.125	514.310	VUP	Prantij	Mahudi	+	BT	BT	Major	SH-138
23	474.760	520.945	VUP	Karol	Oran	+	BT	ER	Minor	Village Road
24	478.415	524.600	Flyover	Majra	-	T	BT	-	Major	SH-143
25	481.200	527.385	VUP	Chandrala	Ghadkan	+	ER	BT	Minor	Village Road
26	484.585	530.770	VUP	Chhala	Chhala	+	BT	BT	Minor	Village Road
27	485.380	531.565	Flyover	Dehgam	Jakua	+	BT	BT	Major	SH-192
28	487.655	533.840	LVUP	Giyod	Harila	+	BT	BT	Minor	Village Road
29	490.565	536.750	VUP	Dhanap	Dashela	+	BT	BT	Minor	Village Road

Source: - Executive Summary for the proposed project

Note: Junction Improvement below grade separator structures shall be done as per manual of specification.

Table 2.27: Minor Junctions (On Service Road) to be Improved

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
1	402.960	449.145	-	Khari	T	-	BT	Village Road
2	403.080	449.265	-	Khari	T	-	ER	Village Road
3	403.465	449.650	Junakhari	Meravada	+	ER	BT	Village Road
4	405.210	451.395	Dantiya	-	T	BT	-	Village Road
5	406.070	452.255	-	Napda	T	-	BT	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
6	406.990	453.175	NapadaKampa	Field	+	BT	ER	Village Road
7	407.300	453.485	-	Private Company	T	-	BT	Village Road
8	408.170	454.355	Asal	-	T	ER	BT	Village Road
9	410.260	456.445	Gadadar	Gadadar	+	BT	ER	Fiel Track
10	410.600	456.785	-	Field	T	-	ER	Fiel Track
11	412.180	458.365	Sunokh	-	T	BT	-	Village Road
12	412.600	458.785	Sunokh Village	Vanesra kampa	+	ER	BT	Village Road
13	415.260	461.445	Vantada	-	T	BT	-	Village Road
14	417.280	463.465	Chhatresari	DavliNad	+	BT	BT	Village Road
15	417.775	463.960	Chhatresari	-	T	ER	-	Village Road
16	419.230	465.415	Field	Gadhada Kampa	T	ER	BT	Village Road
17	421.070	467.255	-	Sahyog Krusthyagan Trust	T	-	BT	Village Road
18	421.315	467.500	Bilpan	-	T	-	BT	Village Road
19	422.600	468.785	Field	Field	+	ER	ER	Village Road
20	423.200	469.385	Bilpan Kampa	-	Y	BT	-	Village Road
21	424.635	470.820	-	Javangadh	T	-	BT	Village Road
22	424.970	471.155	Village	-	T	CC	-	Village Road
23	426.800	472.985	Navalpur	Navalpur	+	ER	CC	Village Road
24	428.200	474.385	Field	-	T	ER	-	Village Road
25	431.585	477.770	Kesarpura	-	T	BT	-	Village Road
26	432.105	478.290	Harsol/Ranasan	-	T	BT	-	SH-143
27	432.870	479.055	-	Power House	T	-	ER	Village Road
28	433.660	479.845	Vamoj	Surajpura	+	ER	ER	Canal Track

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
29	434.770	480.955	-	Vantada	Y	-	BT	Village Road
30	435.100	481.285	Karanpur	-	T	ER	-	Village Road
31	435.485	481.670	-	Hamirgadh	T	-	BT	Village Road
32	437.540	483.725	Vamoj	-	T	BT	-	Village Road
33	437.700	483.885	Vamoj	Gamdi	+	BT	BT	Village Road
34	437.860	484.045	-	Gamdi	T	-	BT	Village Road
35	440.480	486.665	Agiyol	Berana	+	ER	ER	Canal Track
36	442.710	488.895	Hanpura Kampa	Field	+	BT	ER	Village Road
37	443.190	489.375	Kanknol	Kanknol	+	BT	BT	Village Road
38	446.495	492.680	Himatnagar town	Himatnagar town	+	BT	BT	Town Road
39	446.870	493.055	-	Himatnagar town	Y	-	BT	Town Road
40	448.900	495.085	-	Field	T	-	ER	Village Road
41	449.065	495.250	Field	Piplodi	+	ER	BT	Town Road
42	449.450	495.635	-	Showroom	T	-	ER	Showroom
43	450.020	496.205	Piplodi	-	T	-	CC	Village Road
44	450.150	496.335	-	Field	Y	-	ER	Fiel Track
45	451.670	497.855	Nananpur	-	T	ER	-	Village Road
46	452.080	498.265	-	Hajipur	T	-	ER	Village Road
47	453.700	499.885	Nananpur	-	T	BT	-	Village Road
48	454.040	500.225	-	Factory	T	-	ER	Village Road
49	455.280	501.465	Dalpur	-	Y	-	ER	Village Road
50	457.725	503.910	-	Govt. College	T	-	ER	Village Road
51	459.605	505.790	-	Salal	T	-	BT	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
52	460.440	506.625	-	Rasulpur	T	-	BT	Village Road
53	461.650	507.835	-	Rasulpur	T	-	BT	Village Road
54	464.160	510.345	-	Kesaypur	Y	-	BT	Village Road
55	465.350	511.535	Poglu	-	Y	BT	-	Village Road
56	466.850	513.035	-	Piludra	T	-	BT	Village Road
57	466.920	513.105	Prantij	Prantij	+	BT	BT	Village Road
58	467.260	513.445	Prantij	Prantij	+	BT	BT	Village Road
59	467.400	513.585	-	Prantij	T	-	CC	Village Road
60	467.925	514.110		Vagpur	T	-	BT	Village Road
61	468.820	515.005	-	Galesara	T	-	BT	Village Road
62	469.220	515.405	-	Anwarpura	Y	-	BT	Village Road
63	469.990	516.175	Katpur	Sodoliya	+	BT	BT	Canal Track
64	471.710	517.895	Katpur	-	T	BT	-	Village Road
65	473.500	519.685	-	Village	T	-	ER	Village Road
66	473.960	520.145	Vadvasa	Field	+	BT	ER	Village Road
67	475.500	521.685	Tajpur Kui	-	T	BT	-	Village Road
68	478.000	524.185	Majra	Majra	+	ER	BT	Village Road
69	478.800	524.985	Sukhad	Majra	+	ER	ER	Canal Track
70	480.405	526.590	-	School	T	-	BT	School Road
71	480.700	526.885	Chandrala	-		ER	-	Village Road
72	480.880	527.065	-	Chandrala	T	-	BT	Village Road
73	481.775	527.960	-	Field	T	-	ER	Fiel Track
74	482.315	528.500	Chandrala	-	T	ER	-	Fiel Track
75	484.960	531.145	Chhala	Chhala	+	BT	BT	Village Road

Sl. No.	Existing Chainage (Km)	Design Chainage (Km)	Side		Type of Junction (T/Y/+)	Type of Road		Remarks (NH/ SH/ MDR/ Village Road)
			LHS	RHS		LHS	RHS	
76	485.200	531.385	Chhala	-	T	BT	-	Village Road
77	485.250	531.435	-	Chhala	T	-	BT	Village Road
78	491.910	538.095	-	Govt. Hotmix Plant	Y	-	ER	Hotmix Plant Road
79	492.095	538.280	-	Shiholi	Y	-	BT	Village Road
80	493.615	539.800	Isanpur Mota	Siholi	+	ER	ER	Village Road

Source: - Executive Summary for the proposed project

Table 2.28: Details of Proposed Grade Separated Structure (Flyovers)/Interchanges

Sl. No.	Road	Existing Chainage (km)	Design Chainage (km)	No of Intersecting Road	Proposed Structural Configuration	Proposed Structure Type	Proposed Span	Total Width (m)
1	NH-8	420.65	466.835	2	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
2	NH-8	432.45	478.595	2	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
3	NH-8	445.48	491.665	2	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
4	NH-8	447.01	493.195	1	6 Lane Flyover	PSC T-Girder	2x30	2x13.4
5	NH-8	448.13	494.315	1	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
6	NH-8	450.6	496.785	1	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
7	NH-8	466.45	512.635	1	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
8	NH-8	478.405	524.59	1	6 Lane Flyover	PSC T-Girder	1x30	2x13.4
9	NH-8	485.38	531.565	2	6 Lane Flyover	PSC T-Girder	1x30	2x13.4

Source: - Executive Summary for the proposed project

Note: - Opening of 5mX2.5m shall be provided on both RE wall approaches for pedestrian movement. The appropriate location shall be furnished in constitution with NHAI.

Table 2.29: Details of Proposed Vehicular Underpasses

Sl. No.	Road	Existing Chainage (km)	Design Chainage (km)	Proposed Structural Configuration	Proposed Structure Type	Proposed Size (L x H) (m)	Total Width (m)
1	NH-8	410.900	457.085	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
2	NH-8	423.305	469.490	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
3	NH-8	459.090	505.275	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
4	NH-8	468.100	514.285	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
5	NH-8	474.760	520.945	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
6	NH-8	481.200	527.385	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
7	NH-8	484.585	530.745	6 Lane	RCC T-Girder	20 x 5.5	2x13.4
8	NH-8	490.560	536.750	6 Lane	RCC T-Girder	20 x 5.5	2x13.4

Source: - Executive Summary for the proposed project

Note: - Opening of 5mX2.5m shall be provided on both RE wall approaches for pedestrian movement. The appropriate location shall be furnished in constitution with NHAI.

All existing vehicular underpasses are proposed to be retained after carrying out necessary repairs and rehabilitation works. Repairs shall include but not limited to general cleaning of underpasses, repairing/replacement of the Crash barrier/railing and wearing coat.

Table 2.30: Details of Proposed Light Vehicular Underpasses

Sl. No.	Road	Existing Chainage (km)	Design Chainage (km)	Proposed Structural Configuration	Proposed Structure Type	Proposed Size (L x H x M)	Total Width (m)
1	NH-8	401.970	448.155	6 lanes	RCC Box	12 x 4.5	Roadway Width
2	NH-8	404.260	450.445	6 lanes	RCC Box	12 x 4.5	Roadway Width
3	NH-8	411.475	457.660	6 lanes	RCC Box	12 x 4.5	Roadway Width
4	NH-8	418.125	464.310	6 lanes	RCC Box	12 x 4.5	Roadway Width
5	NH-8	428.360	474.545	6 lanes	RCC Box	12 x 4.5	Roadway Width
6	NH-8	434.850	481.035	6 lanes	RCC Box	12 x 4.5	Roadway Width

Sl. No.	Road	Existing Chainage (km)	Design Chainage (km)	Proposed Structural Configuration	Proposed Structure Type	Proposed Size (L x H x M)	Total Width (m)
7	NH-8	440.390	486.575	6 lanes	RCC Box	12 x 4.5	Roadway Width
8	NH-8	455.350	501.535	6 lanes	RCC Box	12 x 4.5	Roadway Width
9	NH-8	456.850	503.035	6 lanes	RCC Box	12 x 4.5	Roadway Width
10	NH-8	462.955	509.140	6 lanes	RCC Box	12 x 4.5	Roadway Width
11	NH-8	487.650	533.835	6 lanes	RCC Box	12 x 4.5	Roadway Width
12	NH-8	492.900	539.085	6 lanes	RCC Box	12 x 4.5	Roadway Width

Source: - Executive Summary for the proposed project

Note: - Opening of 5mX2.5m shall be provided on both RE wall approaches for pedestrian movement. The appropriate location shall be furnished in constitution with NHAI.

Table 2.31: Proposed Cattle Under Pass

Sl. No.	Road	Existing Chainage (km)	Design Chainage (km)	Proposed Structural Configuration	Proposed Structure Type	Proposed Size (L x H) (m)	Total Width (m)
1	NH-8	464.625	510.81	6 lanes	RCC Box	7x3.5	Roadway Width

Source: - Executive Summary for the proposed project

Note: - Opening of 5mX2.5m shall be provided on both RE wall approaches for pedestrian movement. The appropriate location shall be furnished in constitution with NHAI.

2.8.1. REHABILITATION/REPAIR/WIDENING OF EXISTING MINOR/MAJOR BRIDGES

All existing major bridges are proposed to be retained after carrying out necessary repairs and rehabilitation works. Repairs shall include but not limited to general cleaning of bridges and area around bridges, restoration of slopes and protective works, removal and relaying of existing wearing coat, repair and replacement of drainage spouts, construction of new crash barriers in place of old railing, reconstruction of approach slab & return wall ,providing of new expansion joints and bearings in place of old ones wherever required and repair and rehabilitation of damaged

concrete of any etc. to the complete satisfaction of independent engineer. All the repairs and rehabilitation works shall be carried out as per standards and manuals.

The details of new minor bridges to be reconstructed are given in **Table 2.32**.

Table 2.32: New Minor Bridges/Minor bridges to be Reconstructed

Sl. No.	Road/ Name of Bridge	Bridge No.	Existing Chainage (km)	Design Chainage (km)	Proposed Structural Configuration	Proposed Structure Type Both Sides	Proposed Span Arrangement (c/c bridge) (m)	Length of Bridge	Total Width of Structure (m)
1	NH-8	419/1 (RCW)	418.598	464.783	New 3-lane Bridge	RCC T-Girder	1x18.0	18	13.4
2	NH-8	420/1 (RCW)	419.320	465.505	New 3-lane Bridge	PSC T-Girder superstructure and RCC Abutment	1x30.0	30	15.2
3	NH-8	422/2 (RCW)	421.534	467.719	New 3-lane Bridge	RCC T-Girder superstructure and RCC Abutment/Pier	1x17.60 + 1x18.40	36	13.4
4	NH-8	433/1 (LCW + RCW)	432.350	478.535	New 6-lane Bridge	Solid Slab	2x5.3+1x5	15.6	2x13.40
5	NH-8	436/1 (LCW)	435.250	481.435	New 3-lane Bridge	RCC-T-Girder	1x15.70	15.7	15.2
6	NH-8	443/1 (RCW)	442.600	488.785	New 3-lane Bridge	RCC-T-Girder	1x13.0	13	13.4
7	NH-8	460/2 (LCW + RCW)	459.400	505.585	New 6-lane Bridge	Solid Slab	1x8.0	8	2 x13.40
8	NH-8	467/3 (LCW + RCW)	466.800	512.985	New 6-lane Bridge	Solid Slab	1x7.9	7.9	2 x13.40

Source: - Executive Summary for the proposed project