SCHEDULE-B
(See Clause 2.1)
DEVELOPMENT /SCOPE OF THE PROJECT HIGHWAY

1.1 The Contractor shall operate, manage and maintain the Project Highway for entire Contract Period, subject to and in accordance with the provisions of this Agreement. The Contractor shall visit the Site and assess the durability and strength of Project Assets and make his own assessment for operation, management and maintenance as per Specifications and Standards and bear and pay all costs, expenses and charges in connection with or incidental to the performance of operation, management and maintenance **with reference to the work being executed as per schedule B**. The existing km stone of km 175+000 is fixed at km 174+750. The length of the project stretch as per km stone is 138.400 km and actual length at site is 138.150 km. Furthermore, below mentioned work does not include any work pertaining to road marking, road furniture, signages and Highway lighting, unless and until specified in the Schedule B.

Contractor shall ensure Traffic diversion safety and construction zone road safety duly providing all work as defined IRC SP 55-2014 and MORTH Extant policy.

1. **SLIP ROAD/SERVICE ROAD**

1.2 There are missing or inadequate provisions of slip/service roads at site, the Contractor shall complete the work as detailed below.

a) Construction of New Slip Roads

Slip Road shall be constructed at the following locations and for the lengths indicated below:

S. No.	Existing km		Length (m)		*Proposed* Width (m)	TCS Type
	From	To	LHS	RHS		
1.	89+550	89+597	-	47	5.5	TCS-4
2.	95+050	95+420	370	-	7.0	TCS-5
3.	94+185	95+200	-	1015	7.0	TCS-6
4.	143+992	144+205	213	-	5.5	TCS-12
5.	144+205	144+860	655	-	5.5	TCS-7
6.	144+205	144+860	-	655	5.5	TCS-7
7.	153+170	153+195	-	25	*5.5 to 10*	TCS-8
Total Length (m)			**1238**	**1742**	-	-

(b) Construction of New Service Roads

Service Road (5.5m paved width) shall be constructed at the following locations and for the lengths indicated below:

S. No.	Existing km		Length (m)		Width (m)	TCS Type
	From	To	LHS	RHS		
1.	37+820	38+015	195	-	5.5	TCS-1
2.	64+365	64+370	-	5	5.5	TCS-2

3.	87+046	87+140	-	94	5.5	TCS-3
Total Length (m)			**195**	**99**	-	-

Note:-

1. *The above slip road/service road lengths are excluding the entry/exit arrangement (as per Figure 2.1A and 2.C of IRC: SP: 84-2019)/Taper length for merging & diverging with Main Carriageway/ existing Slip Road/Service Road.*
2. *Flexible pavement shall be designed for minimum 10 MSA and 10 CBR (effective) for Slip/Service roads.*
3. *Applicable TCS are presented in **Appendix B-III***
4. *Entry and Exit arrangement shall be constructed as per 2.1A and 2.C of IRC: SP: 84-2019) on the above location, moreover any deviation from the dimension in the entry and arrangement from the 2.1A and 2.C of IRC: SP: 84-2019) shall be qualified under COS.*

1.3 Widening/ Improvement of Existing Carriageway

Existing Carriageway shall be widened at the following location.

S. No	Existing km		Length (m)	Side	Existing Width (m)	Proposed Width (m)	Remarks
	From	To					
1	139+000	139+622	622	LHS	Varying from 11.5 to 13.0	7.0+1.5+7.0	As per drawing titled as 'Proposed Junction Improvement at km 139+465' given in ***Appendix B-I***

1.4 (a) Improvement of Existing Slip Roads

Slip Roads shall be improved at the locations and for the lengths indicated below:

S. No.	Existing km		Length (m)		*Proposed* Width (m)	TCS Type
	From	To	LHS	RHS		
1.	89+597	89+660	-	63	5.5	TCS-11
2.	143+935	144+205	-	270	5.5	TCS-12
3.	152+765	153+160	395	-	*5.5 to 10 as per available ROW*	TCS-13
4.	152+765	153+170	-	405	*5.5 to 10 as per available ROW*	TCS-13
5.	153+195	153+240	-	45	*5.5 to 10 as per available ROW*	TCS-13
Total Length (m)			**395**	**783**	-	-

(b) Improvement of Existing Service Roads

Service Roads shall be improved at the locations and for the lengths indicated below:

S. No.	Existing km		Length (m)		Width (m)	TCS Type
	From	To	LHS	RHS		
1.	64+370	64+470	-	100	5.5	TCS-9
2.	87+040	87+046	-	6	5.5	TCS-10
Total Length (m)			**-**	**106**	-	-

*Note: Applicable TCS is presented in **Appendix B-III***

(c) Overlay at existing Service Road and Slip Road on the following:

The functional overlay of minimum 40 mm thick Bituminous Concrete (Bitumen: VG 40) shall be provided on existing Service/Slip roads and ramps after pre-overlay treatments including profile corrective course.

Overlay on Slip roads:

S. no.	Existing		Length	LHS	RHS	Width (m)	Remark
	From	To					
1	94.118	95.05	0.932	932	-	7	Built-up Area/PUP
2	94.185	95.2	1.015	-	1015	7	
3	95.05	95.42	0.37	370	-	7	
4	95.2	95.505	0.305	-	305	7	Built-up Area
5	95.42	95.505	0.085	85	-	7	Built -up Area
6	99.267	100.678	1.411	1433	-	7	Underopas
7	99.267	100.67	1.403	-	1425	7.5	Underpass
8	104.352	105.591	1.239	-	999	7.5	Underpass
9	104.352	105.591	1.239	999	-	7.5	Underpass
10	112.5	112.71	0.21	210	-	7	Underpass
11	112.5	112.73	0.23	-	230	7	Underpass
12	112.71	113.595	0.885	852	-	7+5.5	Slip road with PGR and separator.
13	112.73	113.4	0.67	-	637	7+5.5	Slip road with PGR and Separator.
14	113.400	113.8	0.4	-	400	7	Underpass
15	113.595	113.805	0.21	210	-	7	Underpass
16	115.137	116.092	0.955	852	-	7	Underpass
17	115.160	115.978	0.818	-	818	7	Underpass
18	128.740	129.155	0.415	415	-	5	Underpass
19	128.725	129.155	0.43	-	430	5.8	Underpass
20	129.960	130.400	0.44	440	-	4	Underpass
21	129.935	130.315	0.38	-	380	4	Underpass
22	132.310	134.030	1.72	1720	-	6	Flyover
23	132.320	134.080	1.76	-	1760	6	Flyover
24	137.700	138.065	0.365	365	-	5	Underpass
25	137.700	138.035	0.335	-	335	5	underpass
26	139.150	140.135	0.985	-	985	6	Flyover
27	147.435	149.475	2.04	2040	-	5	Built-Up Area/PUP
28	147.465	149.485	2.02	-	2020	5	Built-Up area-PUP

29	152.450	153.000	0.55	146	-	6	Junction with SH-233
30	152.450	153.000	0.55	-	146	6	Junction with SH-233
31	153.000	153.560	0.56	560	-	7.5	Built up area/PUP
32	153.000	153.170	0.17	-	170	7.5	Built up area
33	153.195	153.600	0.405	-	405	7.5	Built up area/Up
34	157.485	157.927	0.442	442	-	7.5	Built-up area/PUP
35	157.525	157.926	0.401	-	401	7.5	Built-up area/PUP
36	158.860	159.080	0.22	-	220	6.75 to 7.0	Underpass
37	158.915	159.080	0.165	165	-	6.75 to 7.0	Underpass
38	169.200	170.223	1.023	-	1023	7	Flyover
39	169.205	170.27	1.065	1065	-	7	Flyover

Overlay on Service Road:

S. no.	Existing		Length	LHS	RHS	Width (m)	Remark
	From	To					
1	143.77	144.205	0.435	-	435	5	Built-up Area
2	145.080	145.200	0.120	-	120	5	Built-Up area
3	173.751	174.492	0.741	-	741	7	Side road towards state highway
4	174.700	174.930	0.230	-	230	7	Built up area

2. IMPROVEMENT PROPOSAL IN GHAT SECTION

The ghat section shall be improved as per details given below

S. No.	Existing km		Length (m)	Remarks
	From	To		
1	123+800	126+200	2400	Ghat Section

Proposed Improvements

S. No.	Existing km		Proposed Improvement
	From	To	
1	123+900	124+265	RCC Crash Barrier shall be provided on Earthen Shoulders
2	124+522	124+750	RCC Crash Barrier shall be provided on Earthen Shoulders
3	124+915	125+000	RCC Crash Barrier shall be provided in the Median.

i) RCC crash barrier to be provided as given in table above.

ii) The height of crash barrier or any road appurtenance on median side shall not be more than 900mm to ensure forward visibility.

iii) Including Painting of NJCB barrier.

3. CONSTRUCTION OF NEW STRUCTURES / WIDENING / RECONSTRUCTION / COMPLETION OF BALANCE WORK OF STRUCTURES

3.1 (a) Reconstruction of Culvert

S. No	Existing Km	Details of Existing Culvert			Improvement Proposal Remarks			
		Type	Span / Dia (m)	Width (m)	Improvement	Proposed Culvert		
						Type	Span/ Dia (m)	Proposed Width
1	144+645	Box	1X6.0X4.6	23.86	Reconstruction	Box	1x6x5	38.31

i) Including Painting of NJCB barrier.

3.2 Construction of New VUP along with Retaining Structure (RE-wall or Retaining wall on Approaches)

S. No.	Existing km	Span (m)	Type of Structure	Width of Structure	Remark
1.	144+401 At Konghara/Umari Village	1x20x5.5	Precast RCC Girder	2x11	Proposal given at ***Appendix B –II*** **and Drawing Volume,** (Junction Development of Approach Road)
2.	153+060 At Kelapur Village	1x20x5.5	Precast RCC Girder	2x11	

3.3 Widening/ Completion of balance work of Existing Culverts

Following culverts shall be widened/ completion of balance work to match the proposed new road cross section:

S. No.	Existing kilometre (km)	Details of Existing Culvert			Improvement Proposal	Proposed Width (m)
		Type of Structure	Span/dia. (m)	Width (m)		
1	62+442	Pipe Culvert	1x1.0	24.2	Widening	35.4
2	86+261	RCC Box	1x4x3.1	28.3	Widening	39
3	93+985	RCC Box	1x5x4.2	24	Widening	35.2
4	95+345	RCC Box	1x2x2	47.83 (Including service road)	Partially Constructed (Balance work to be taken up)	-
5	99+135	RCC Box	1x2x2.3	24.2	Widening	35.4

S. No.	Existing kilometre (km)	Details of Existing Culvert			Improvement Proposal	Proposed Width (m)
		Type of Structure	Span/dia. (m)	Width (m)		
6	105+721	Pipe Culvert	1x1.2	24.5	Widening	36
7	130+442	Pipe Culvert	1x1.2	24.4	Widening	35.6
8	130+662	RCC Box	1x5.1x3.9	24	Widening	27 (For LHS Acc. Lane)
9	138+210	RCC Box	1x3x2.3	23.8	Widening	35.3
10	138+920	Pipe Culvert	1x1.2	24.6	Widening	26 (For RHS Acc. Lane)
11	140+210	Pipe Culvert	1x1.2	28.1	Widening	36.4
12	144+006	Pipe Culvert	1x1.2	33.74	Widening	42.46 (6.72 m on LHS and 2 m on RHS)
13	144+940	Pipe Culvert	1x1.2	24.37	Widening	32.8
14	145+035	Pipe Culvert	1x1.2	24.2	Widening	30
15	145+670	Pipe Culvert	1x1.2	27.6	Widening	42.5m (14.9 m on LHS only)
16	149+1105*	Box	1x5.8x4	24.25	Widening	25.25m (1.0m on LHS only)
17	157+371	Pipe Culvert	1x1.2	26	Widening	37
18	159+152	Pipe Culvert	1x1.2	27	Widening	31.0m (4.0 m on LHS only)

**Note:* *1.* Road cross section at all Existing structures shall be widened and improved to match with the width of structure at all the locations*. Further, bidder should submit bid after inspecting the project highway and above mention locations. Traffic diversions shall be done without damaging the Main carriageway freshly laid Renewal course.*

2. The distance between km 149 and km 150 stones at site is 1333m

3.4 Widening of Existing Structures

Existing kilometre (km)	Details of Existing Structure			Improvement Proposal	Proposed Width (m)
	Type of Structure	Span/dia. (m)	Width (m)		
152+298	Minor Bridge	2x6	30	Widening	42
170+504	Minor Bridge	1x6.6	25.3	Widening	36.2

i) ***Road cross section at all Existing structures shall be widened and improved to match with the width of structure at all the locations. Further, bidder should submit bid after inspecting the project highway and above mention locations. Traffic diversions shall be done without damaging the Main carriageway freshly laid Renewal course.***

ii) Including Painting of NJCB barrier.

4. JUNCTION IMPROVEMENT

4.1 Improvement of Major Junctions

The Contractor shall improve the following junctions as per details given below and specifications & standards given in IRC: SP: 84- 2019.

S. No.	Existing km	Type	Improvement Proposal
1	75+672*** (At-grade junction - Hinganghat Urban area Near Pimpalgaon Jn Hospital Square)	+	• Second set of zebra crossings should be removed on Main Carriageway • Existing Median opening shall be closed and Vehicles shall be guided to take U turn below the ROB at km.76+371. • Service Road shall be flared for the U Turn below the flyover within the Existing ROW as per Fig. 3.8 of IRC SP 84-2019. **Proposed Traffic Circulation Plan is attached in *Appendix B-I.***
2	139+465 (One side Flyover at Yavatmal T-Junction Near Sakhara Village)	Y	• A separator is provided to segregrate through traffic from (Nagpur to Kelapur) and Traffic merging from Yavatmal travelling towards Kelapur • Install stop/give way sign and pavement markings as per IRC: 67 on the side road • Install pedestrian crossings at the junction across the project road and minor road. **Proposed Junction Improvement Plan is attached in *Appendix B-I.***
3	149+284 (Old km. 149+220) (At-Grade Junction, Near Pandharkawada Town)	**Y**	• Redesign the channelization such that the right turn movements occur at right angle to the project road and shifting the median opening towards the Kelapur side. **Proposed Junction Improvement Plan is attached in *Appendix B-I.***

Note: Major Junction Improvement work shall be executed after taking approval from Authority Engineer/NHIPMPL, accordingly shall be executed on site.

5. DRAIN LOCATION

Reinforced Cement Concrete drain cum footpath shall be provided at Locations as detailed below, Contractor shall submit the design and drawing duly considering the inlet and ground profile:

S. No.	Existing km		Length (m)		Remarks
	From	To	LHS	RHS	
1.	76+311	76+371	60	-	1.5m wide
2.	76+281	76+351	-	70	1.5m wide
3.	95+100	95+175	75	-	Shall be provided as per TCS-5&6 given in ***Appendix B-III***
4.	95+213	95+277	64	-	
5.	95+342	95+403	61	-	
6.	94+788	94+827	-	39	
7.	94+901	95+195	-	294	
8.	138+250	138+490	240	-	Footpath cum Drain. 2m wide (for Laybye)
9.	138+340	138+580	-	240	Footpath cum Drain. 2m wide (for Laybye)
10.	143+992	144+860	868	-	Shall be provided as per TCS-7 given in ***Appendix B-III***
11.	143+935	144+860	-	925	
12.	147+840	147+980	140	140	1.5m wide
13.	152+760	153+155	395	-	Shall be provided as per TCS-8 given in ***Appendix B-III***
14.	152+760	153+210	-	450	
Total Length (m)			**1903**	**2158**	-

6. MEDIAN OPENINGS

i. The Contractor shall submit the plan and profile of the project highway duly demarcated with the Median opening location and after approval improvement/construction/shifting of the median openings shall be taken up by the Contractor as given below.

S. No.	Existing km	Length (m)	Reserve lane (Yes/No)	Location	Recommendations	Remarks
1	37+823	20	No	Junction	Relocate this Median Opening to km. 38+025 with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines.	
2	40+086	20	No	No	Existing Median Opening to be Closed.	
3	41+746	20	No	No	Existing Median Opening to be Retained as it is adjacent to canal bridge at km. 41+792	
4	42+562	20	Yes (Both Side)	Junction	Existing Median Opening & Storage lane to be Modified. The drawing is presented in ***Appendix B-I.***	
5	42+705				(i) Existing Median Opening to be Retained (ii) Median width to be modified The drawing is presented in ***Appendix B-I.***	

6	44+838	20	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
7	46+475	20	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
8	50+475	20	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
9	51+588	20	No	No	Existing Median Opening to be Retained as it is adjacent to canal bridge at km. 51+539	
10	57+300	30	No	Junction	Median Opening to be Retained as it is adjacent to canal bridge at km. 57+272.	

11	64+353	30	Yes (Both Side)	Junction	Existing Median Opening to be Retained and the opening shall be restricted to 20m opening conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
12	70+600	30	Yes (Both Side)	No	Existing Median Opening to be Closed	
13	93+728	35	No	After Toll Plaza	Existing Median Opening to be Closed	
14	95+562	25	No	Junction	Median opening shall be improved with storage lane on both sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
15	99+024	21	Yes (Both Side)	No	Existing Median Opening shall be shifted at km 98+805. The drawing is presented in ***Appendix B-IV.***	
16	102+550	20	Yes (Both Side)	Junction	Relocate this Median Opening to km. 102+518 with storage lane on both sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
17	104+111	22	Yes (Both Side)	No	Existing Median Opening shall be shifted at km 103+910. The drawing is presented in ***Appendix B-IV.***	

18	114+1053*	20	Yes (Both Side)	No	Existing Median Opening shall be shifted at km 114+600. The drawing is presented in ***Appendix B-IV.***	
19	117+546	20	Yes (Both Side)	No	Relocate this Median Opening to km. 118+400 with storage lane on both sides conforming to IRC: SP: 84-2019 guidelines. The exact location shall be finalized in consultation with AE/IE .	
20	122+551	18	Yes (Both Side)	No	Relocate this Median Opening to km. 122+467 with storage lane on both sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
23	131+405	20	Yes (Both Side)	No	Relocate this Median Opening to km. 131+275 with storage lane on Both Sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
24	135+290	18	No	Junction	Median opening shall be improved with storage lane on Both Sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-IV.***	

25	138+310	17	No	No	Existing Median Opening shall be shifted at km 137+250. The drawing is presented in ***Appendix B-IV.***	
26	140+300	20	No	No	Existing Median Opening shall be shifted at km 140+550 .The drawing is presented in ***Appendix B-IV.***	
27	141+203	18	No	No	Existing Median Opening to be Closed	
28	143+150	24	No	Junction	Median opening shall be improved with storage lane on Both Sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-IV.***	
29	145+075	18	No	No	Existing Median Opening to be Closed	
30	149+220	60	Yes (Both Side)	Junction	Relocate this Median Opening to km. 149+284 with storage lane on Both Sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
31	149+1010*	33	No	Junction	Median opening shall be improved with storage lane on Both Sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	

32	150+108	18	No	Junction	Median opening shall be improved with storage lane on Both Sides conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-IV.***	
33	150+690	20	No	No	Existing Median Opening to be Closed	
34	152+440	26	No	No	Existing Median Opening to be Closed due to proposed VUP. The drawing is presented in ***Appendix B-I & B-II.***	
35	153+161	30	Yes (Both Side)	No		
36	155+443	15	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
37	156+165	20	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	

38	159+299	15	No	No	Relocate this Median Opening to km. 159+375 with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
39	160+905	20	No	No	Relocate this Median Opening to km. 160+930 with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
40	162+190	20	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
41	165+510	20	No	Junction	Median opening shall be improved with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	

42	167+000	20	No	Junction	Relocate this Median Opening to km. 166+960 with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
43	174+502	20	No	No	Median opening shall be improved with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	
44	174+985	25	No	No	Median opening shall be improved with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***	

i. These new Median Opening shall be provided at as per provisions of IRC: SP: 84- 2019.

S. No.	Existing km	Remarks	Recommendations
1.	57+994	Side road on RHS	New Median Opening is proposed at junction location with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***
2.	71+034	Side Road on LHS	New Median Opening is proposed at junction location with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***

S. No.	Existing km	Remarks	Recommendations
3.	71+248	Side Road on RHS	New Median Opening is proposed at junction location with storage lane for right turn of traffic (towards Borkhedi side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***
4.	155+500	Side Road on LHS	New Median Opening is proposed at junction location with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***
5.	167+015	Side Road on LHS	New Median Opening is proposed at junction location with storage lane for right turn of traffic (towards Maharashtra/ Telangana Border side only) conforming to IRC: SP: 84-2019 guidelines. The drawing is presented in ***Appendix B-I.***

** The distance between km. 149 and km. 150 is not 1000m at site.*

7. Bus Bays/ Bus Shelters

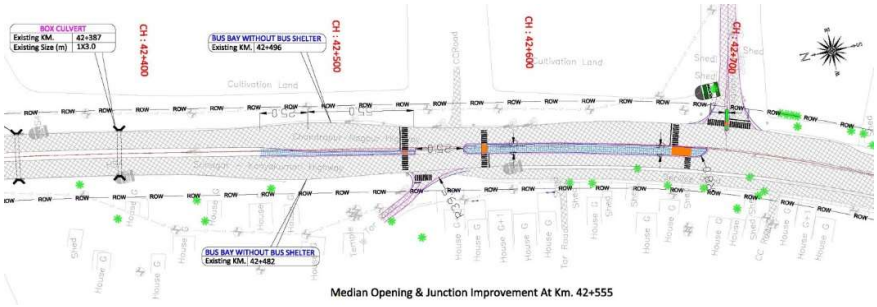
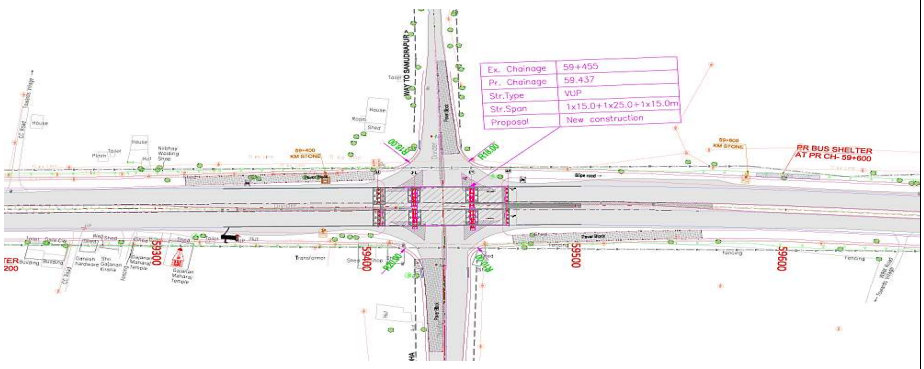
Bus Bays shall be provided at the following locations as per IRC: SP: 84- 2019 within the ROW. The Bus shelter locations are mentioned below: (Drawing enclosed of the Existing Bus sh

S. No.	Existing km	Side	Recommendations
1.	37+806	RHS	Bus Shelter to be Provided
2.	39+260	RHS	Bus Shelter to be Provided
3.	39+377	LHS	Bus Shelter to be Provided
4.	42+482	RHS	Bus Shelter to be Provided
5.	42+496	LHS	Bus Shelter to be Provided
6.	44+290	RHS	Bus Shelter to be Provided
7.	44+434	LHS	Bus Shelter to be Provided
8.	44+770	RHS	Bus Shelter to be Provided
9.	44+912	LHS	Bus Shelter to be Provided
10.	46+539	LHS	Bus Shelter to be Provided
11.	49+078	RHS	Bus Shelter to be Provided
12.	49+250	LHS	Bus Shelter to be Provided
13.	50+225	LHS	Bus Shelter to be Provided
14.	51+455	LHS	Bus Shelter to be Provided
15.	51+455	RHS	Bus Shelter to be Provided
16.	53+315	RHS	Bus Shelter to be Provided
17.	53+426	LHS	Bus Shelter to be Provided

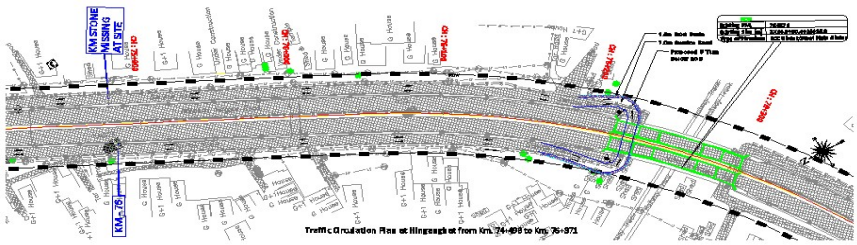
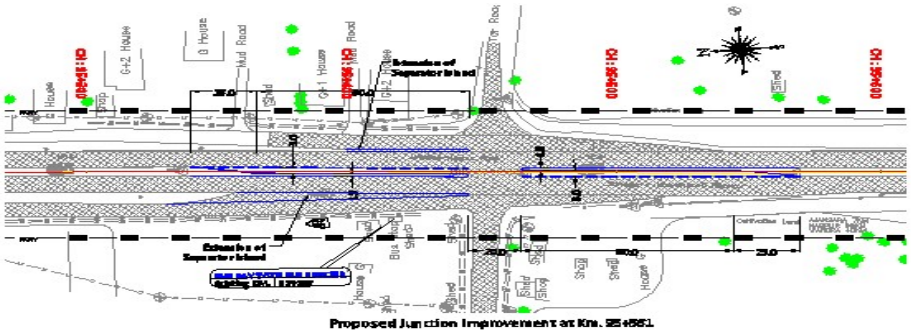
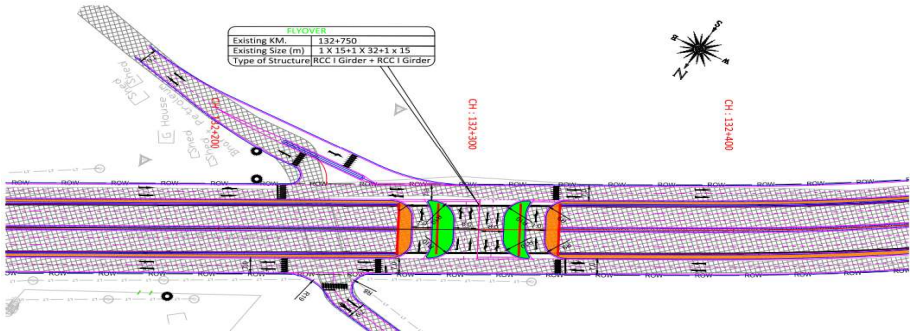
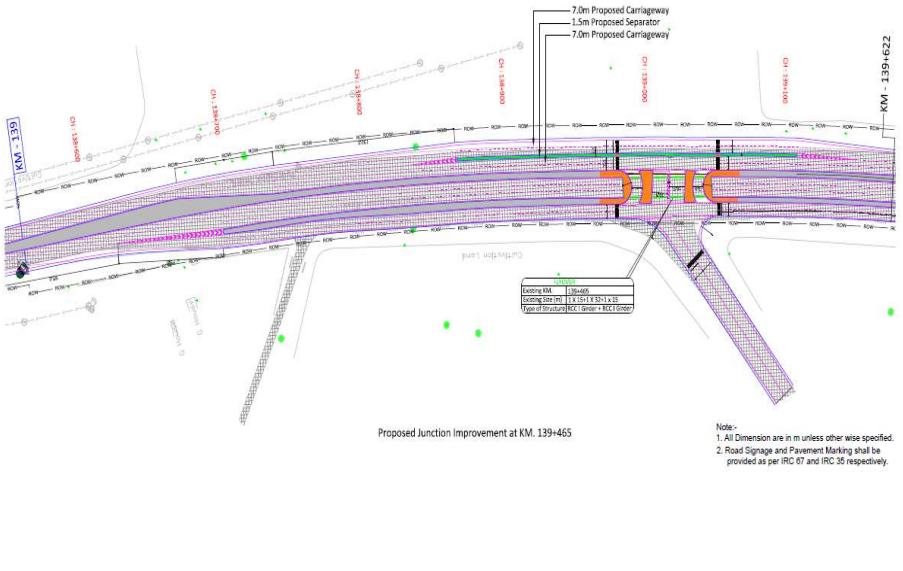
S. No.	Existing km	Side	Recommendations
18.	55+446	RHS	Bus Shelter to be Provided
19.	55+562	LHS	Bus Shelter to be Provided
20.	58+042	RHS	Bus Shelter to be Provided
21.	58+150	LHS	Bus Shelter to be Provided
22.	59+380	RHS	Bus Shelter to be Provided
23.	59+555	LHS	Bus Shelter to be Provided
24.	63+520	RHS	Bus Shelter to be Provided
25.	63+666	LHS	Bus Shelter to be Provided
26.	159+108	RHS	Bus Shelter to be shifted towards ROW due to exit arrangement of service road.
27.	159+110	LHS	Bus Shelter to be shifted towards ROW due to entry arrangement of service road.

****

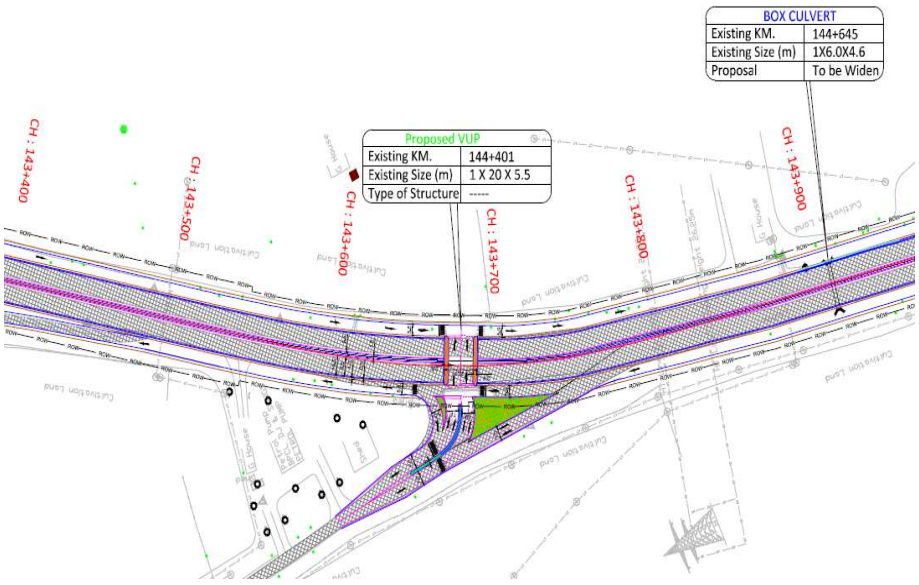
Appendix-B-I

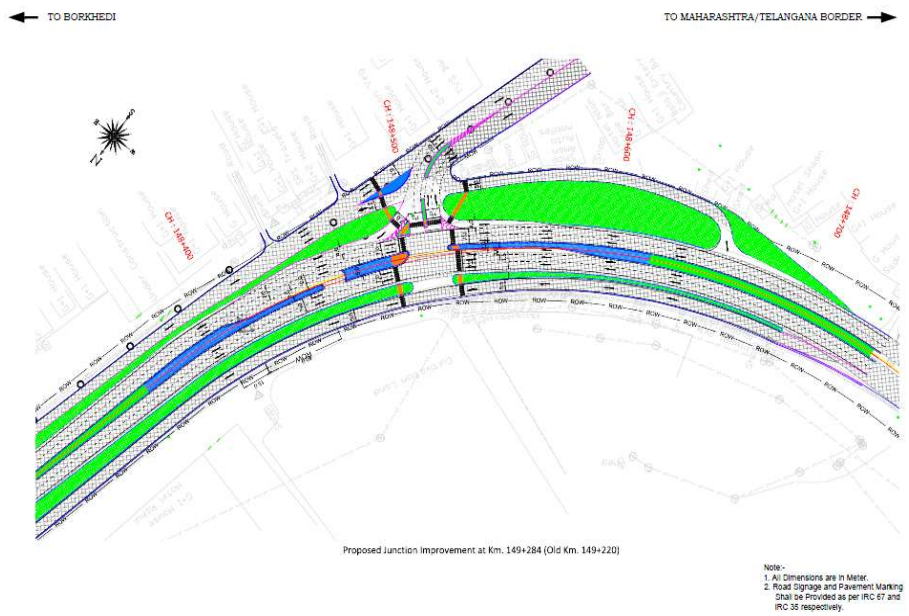
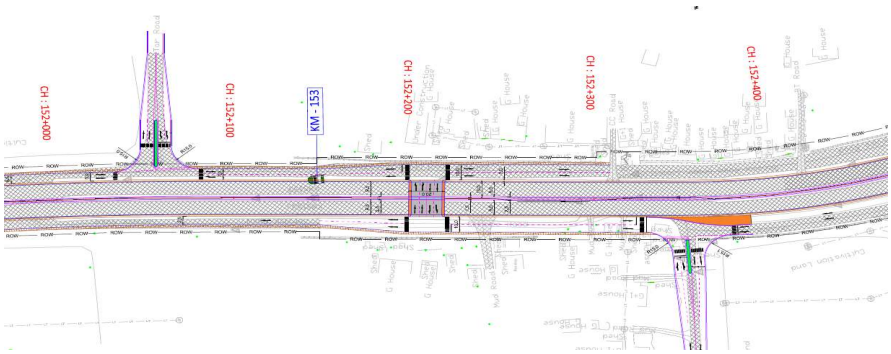
Existing km	Improvement Strategies for Major Junctions
42+555 (Near Sonegaon Lodi Village)- Minor Jn 42+710 (Near Sonegaon Lodhi –Bela Junction near Sonegaon Lodi Village)	 Median Opening & Junction Improvement At Km. 42+555
59+455 (Shedgaon-Samudrapur Junction Near Shedgaon Village)	

Construction and widening of VUP and MNB structure including widening of culverts and other works in Borkedi-Wadner–Kelapur from Km 36+00 to 175+00 Section of NH-44 in the State of Maharashtra

77+700 (Hinganghat Urban area Near ROB)	
)	
95+561 (Wadner Village)	
132+750 (Karanaji Village)	
139+465 (One side Flyover at Yavatmal T-Junction Near Sakhara Village)	

Construction and widening of VUP and MNB structure including widening of culverts and other works in Borkedi-Wadner–Kelapur from Km 36+00 to 175+00 Section of NH-44 in the State of Maharashtra

144+401 (Old km. 144+500) (Konghara-Umari-Yavatmal Jn near Konghara Village)	

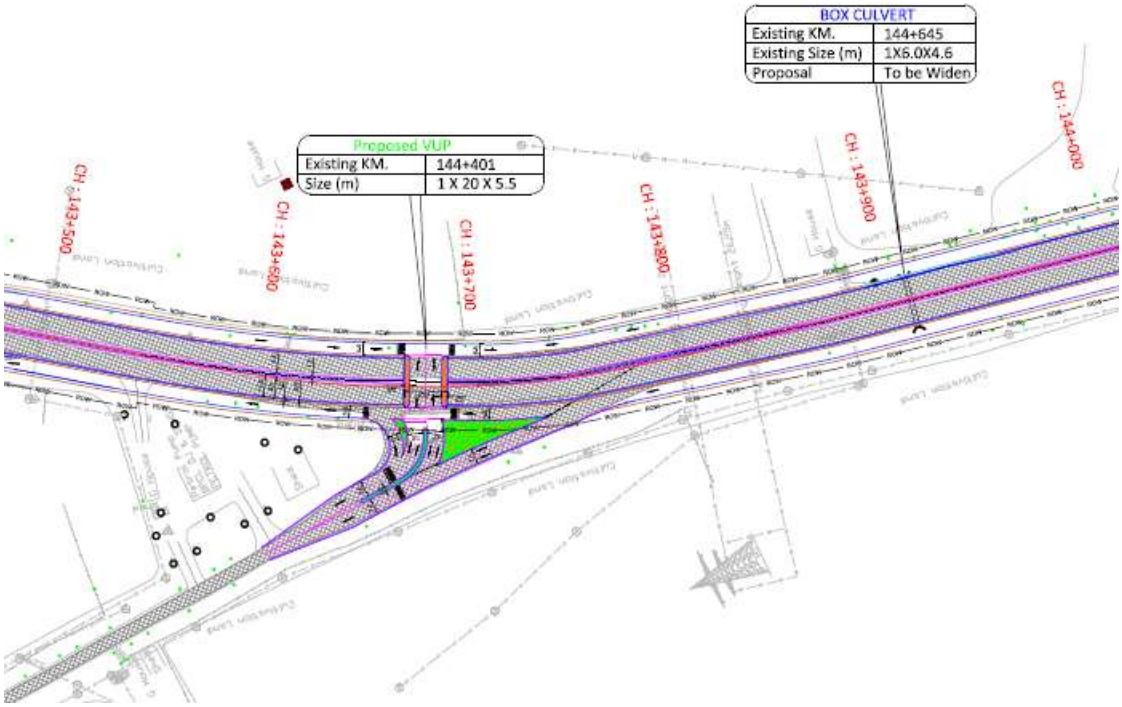
149+284 (Old km. 149+220) (Near Pandharkawada Town)	
153+060 (VUP Junction)	

Construction and widening of VUP and MNB structure including widening of culverts and other works in Borkedi-Wadner–Kelapur from Km 36+00 to 175+00 Section of NH-44 in the State of Maharashtra

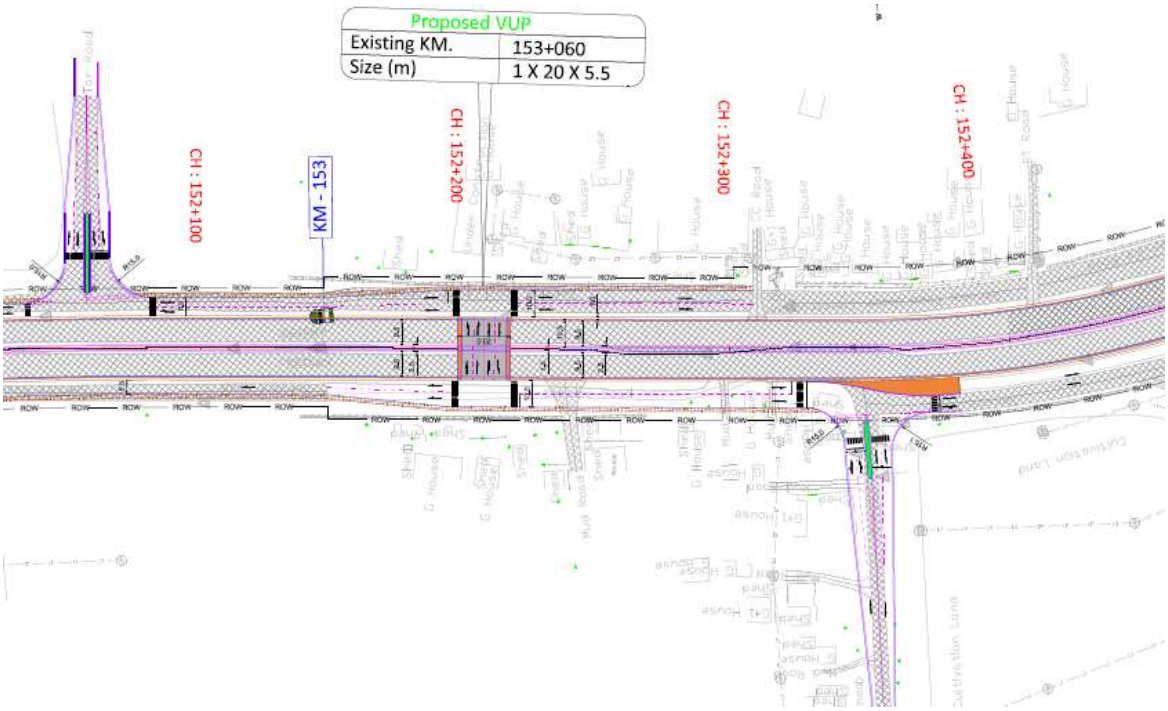
Appendix-B-II

Being constructed under NHAI

1) Grade Separator (VUP) at km144+401 near Konghana Village.



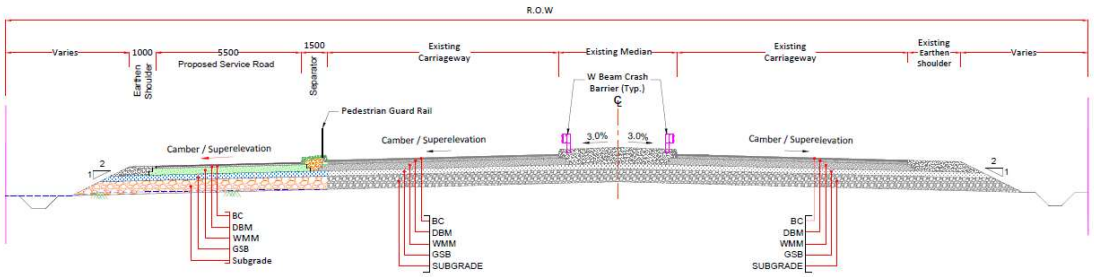
2) Grade Separator (VUP) at km153+060 near Kelapur Village.



Appendix-B-III

Construction and widening of VUP and MNB structure including widening of culverts and other works in Borkedi-Wadner–Kelapur from Km 36+00 to 175+00 Section of NH-44 in the State of Maharashtra

TYPICAL CROSS SECTIONS

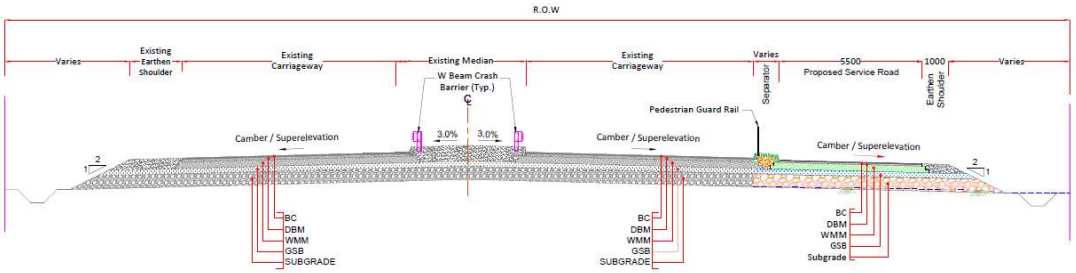


TCS - 1

TYPICAL CROSS SECTION FOR PROPOSED SERVICE ROAD ON LHS

TCS-1			
S No	Existing km.		Length (km)
	From	To	
1	37+820	38+015	0.195

Note:-
1. All Dimension are in mm unless other wise specified.

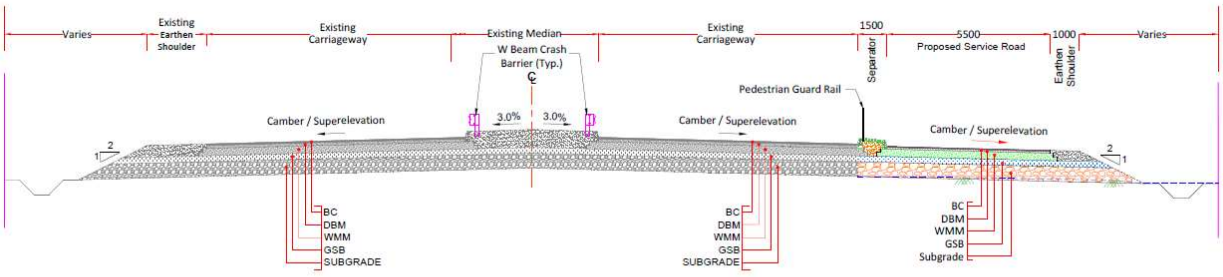


TCS - 2

TYPICAL CROSS SECTION FOR PROPOSED SERVICE ROAD ON RHS (TYPE - 1)

TCS-2			
S No	Existing km.		Length (km)
	From	To	
1	64+365	64+370	0.005

Note:-
1. All Dimension are in mm unless other wise specified.

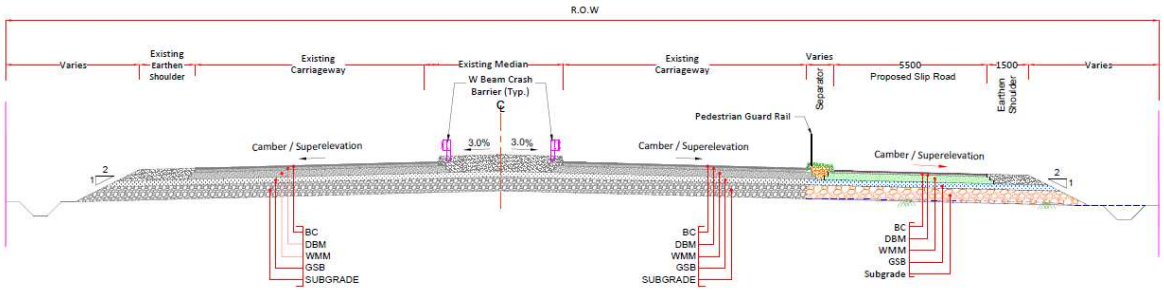


TCS - 3

TYPICAL CROSS SECTION FOR PROPOSED SERVICE ROAD ON RHS (TYPE - 2)

TCS-3			
S No	Existing km.		Length (km)
	From	To	
1	87+046	87+140	0.094

Note:-
1. All Dimension are in mm unless other wise specified.

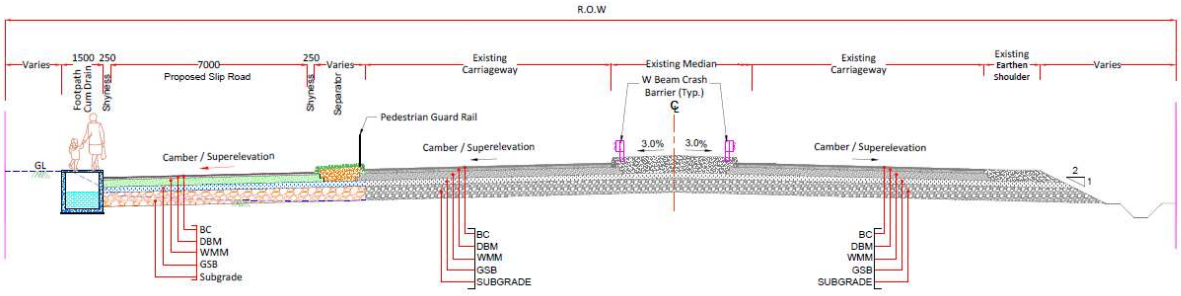


TCS - 4

TYPICAL CROSS SECTION FOR PROPOSED SLIP ROAD ON RHS (TYPE - 3)

TCS-4			
S No	Existing km.		Length (km)
	From	To	
1	89+550	89+597	0.047

Note:-
1. All Dimension are in mm unless other wise specified.

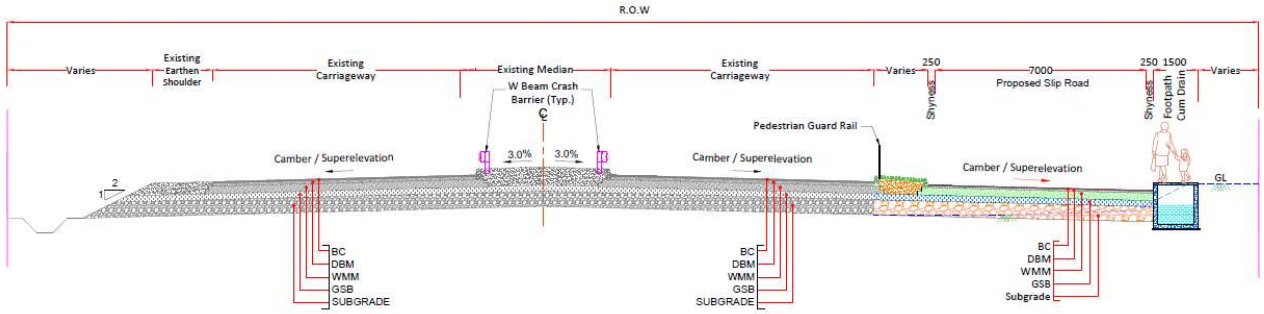


TCS - 5

TYPICAL CROSS SECTION FOR PROPOSED SLIP ROAD WITH DRAIN ON LHS

TCS-5			
S No	Existing km.		Length (km)
	From	To	
1	95+050	95+420	0.370

Note:-
1. All Dimension are in mm unless other wise specified.

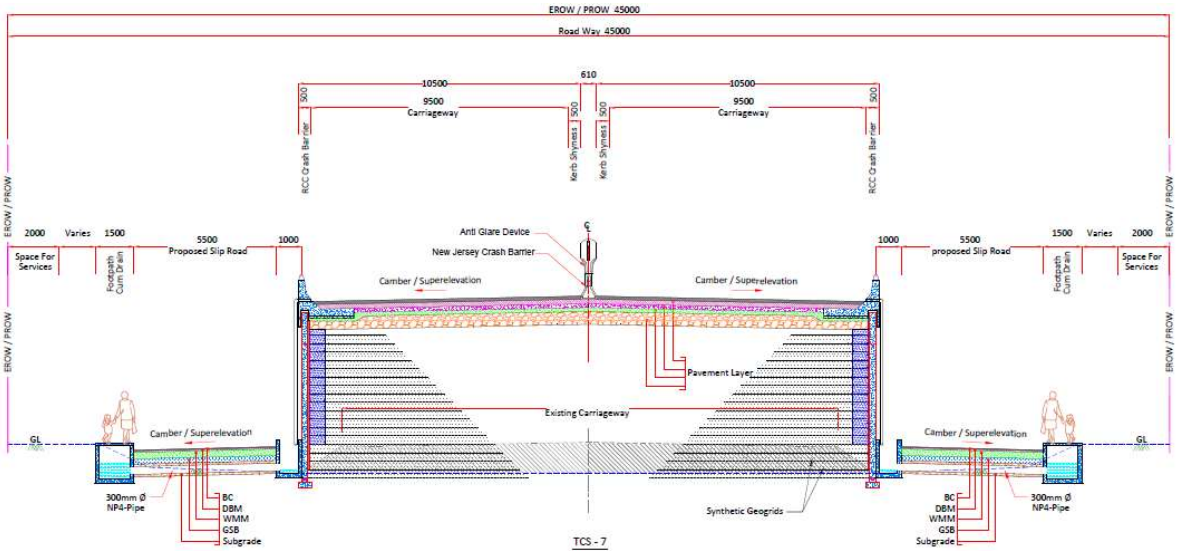


TCS - 6

TYPICAL CROSS SECTION FOR PROPOSED SLIP ROAD WITH DRAIN ON RHS

TCS-6			
S No	Existing km.		Length (km)
	From	To	
1	94+185	95+200	1.015

Note:-
1. All Dimension are in mm unless other wise specified.

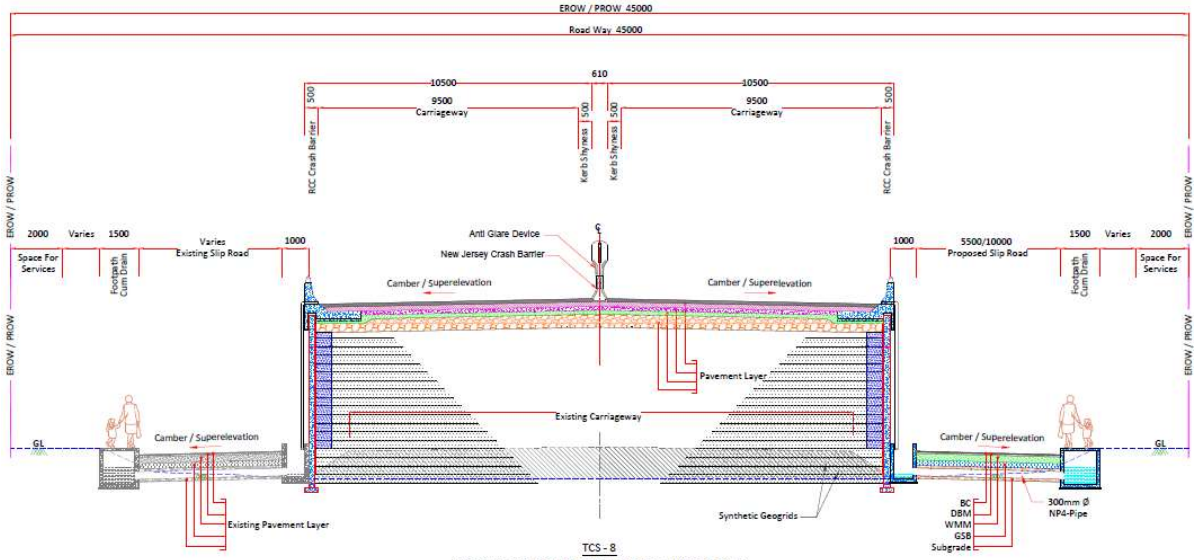


TCS - 7

TYPICAL CROSS SECTION FOR 4-LANE VUP WITH SLIP ROAD

TCS-7				
S No	Existing km.		Length (km)	Side
	From	To		
1	144+205	144+860	0.655	LHS
2	144+205	144+860	0.655	RHS

Note:-
1. All Dimension are in mm unless other wise specified.

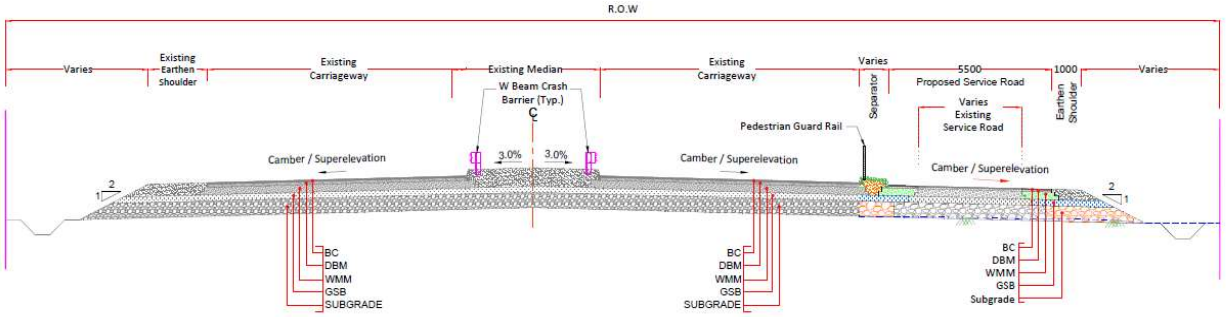


TCS - 8

TYPICAL CROSS SECTION FOR 4-LANE VUP WITH SLIP ROAD

TCS-8				
S No	Existing km.		Length (km)	Side
	From	To		
1	153+170	153+195	0.025	RHS

Note:-
1. All Dimension are in mm unless other wise specified.

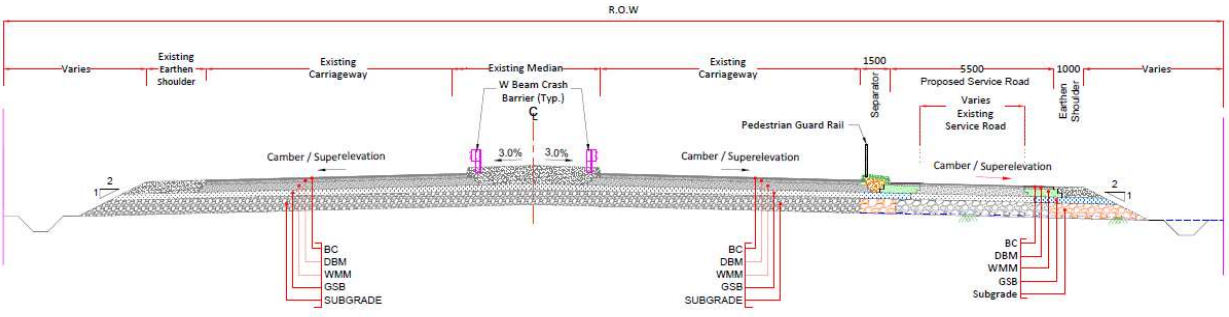


TCS - 9

TYPICAL CROSS SECTION FOR SERVICE ROAD ON RHS - TYPE - 1
(WIDENING OF EXISTING SERVICE ROAD)

TCS-9			
S No	Existing km.		Length (km)
	From	To	
1	64+370	64+470	0.100

Note:-
1. All Dimension are in mm unless other wise specified.

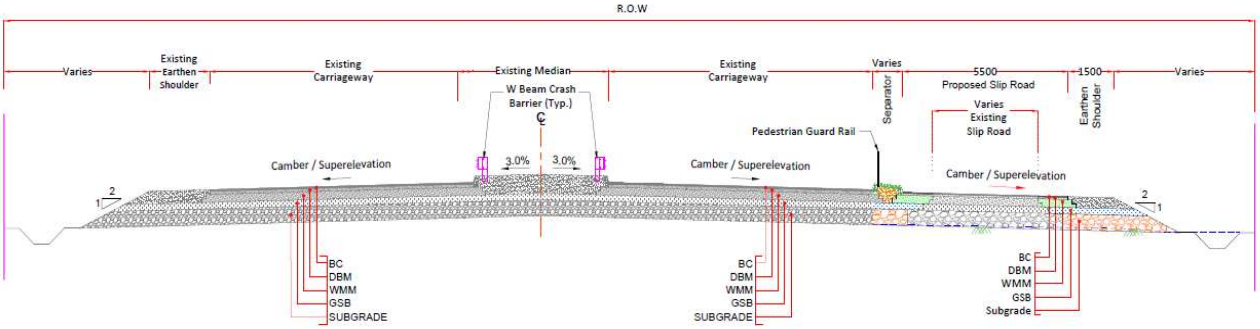


TCS - 10

TYPICAL CROSS SECTION FOR SERVICE ROAD ON RHS - TYPE - 2
(WIDENING OF EXISTING SERVICE ROAD)

TCS-10			
S No	Existing km.		Length (km)
	From	To	
1	87+040	87+046	0.006

Note:-
1. All Dimension are in mm unless other wise specified.

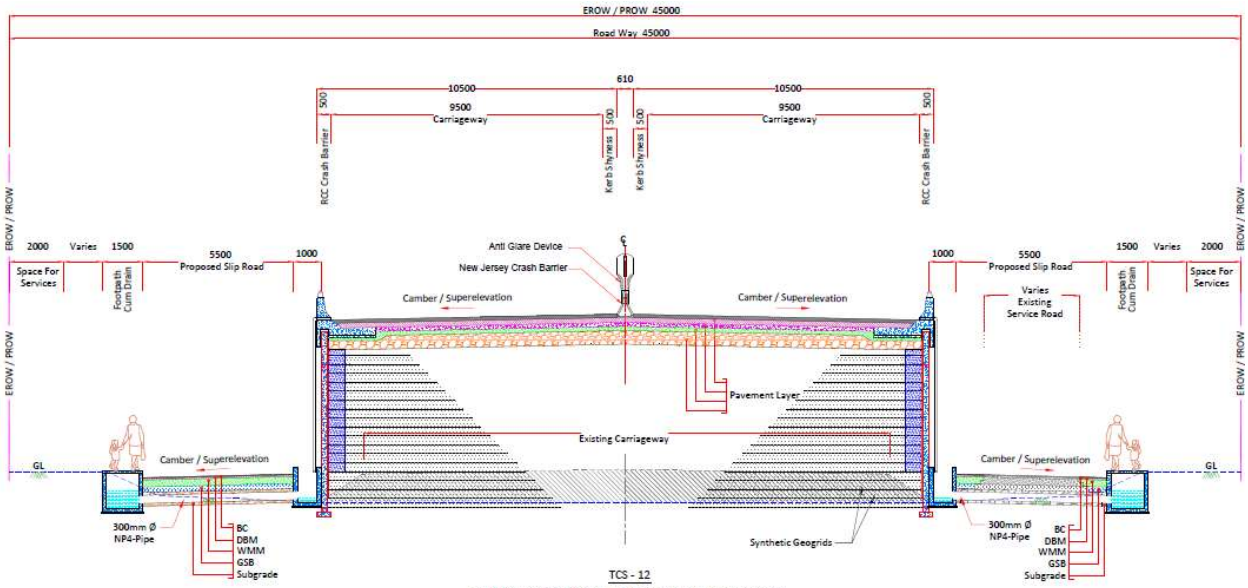


TCS - 11

TYPICAL CROSS SECTION FOR SLIP ROAD ON RHS - TYPE - 3
(WIDENING OF EXISTING SLIP ROAD)

TCS-11			
S No	Existing km.		Length (km)
	From	To	
1	89+597	89+660	0.063

Note:-
1. All Dimension are in mm unless other wise specified.

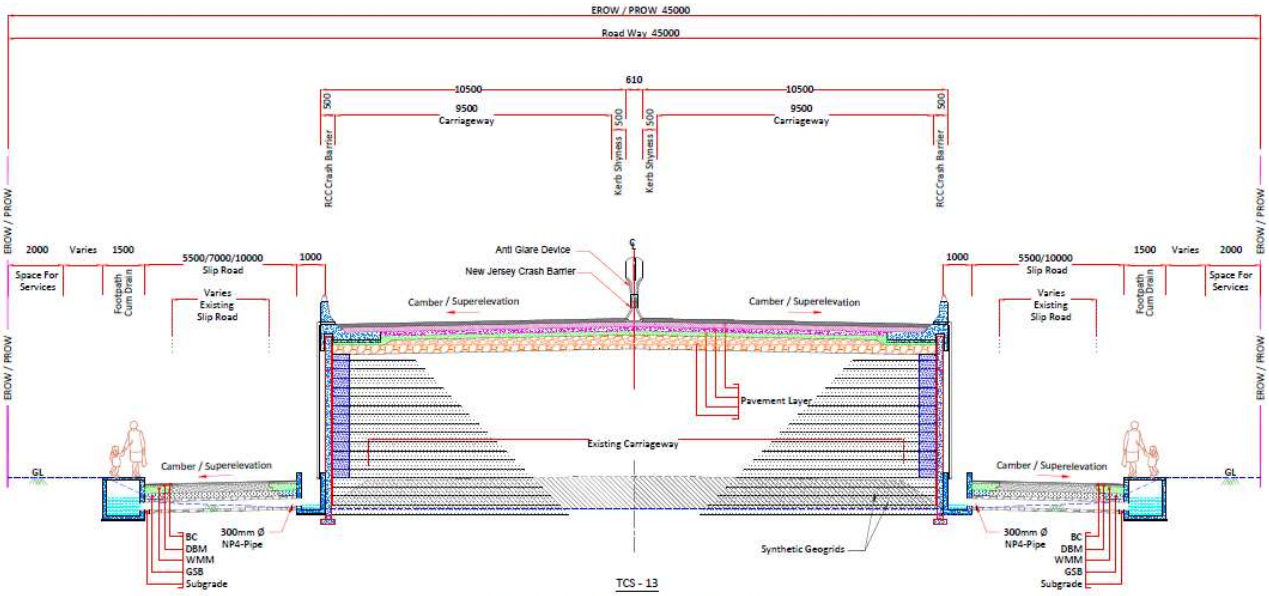


TCS - 12

TYPICAL CROSS SECTION FOR 4-LANE VUP WITH SLIP ROAD
(WIDENING OF EXISTING SERVICE ROAD ON RHS)

TCS-12				
S No	Existing km. From	Existing km. To	Length (km)	Side
1	143+935	144+205	0.270	RHS
2	143+992	144+205	0.213	LHS

Note:-
1. All Dimension are in mm unless other wise specified.

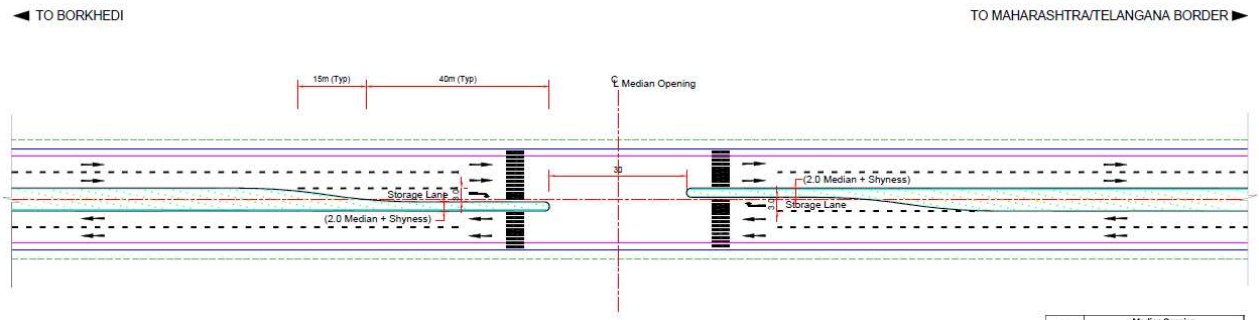


TCS - 13

TYPICAL CROSS SECTION FOR 4-LANE VUP WITH SLIP ROAD
(WIDENING OF EXISTING SLIP ROAD)

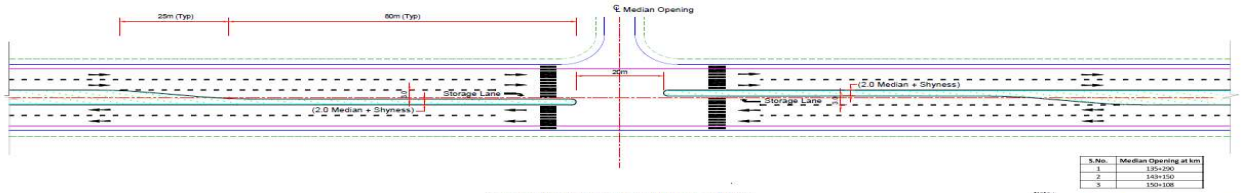
TCS-13				
S No	Existing km. From	Existing km. To	Length (km)	Side
1	152+765	153+160	0.395	LHS
2	152+765	153+170	0.405	RHS
3	153+195	153+240	0.045	RHS

Note:-
1. All Dimension are in mm unless other wise specified.



S. No.	Median Opening		
	Existing (km)	Shifted (km)	New (km)
1	99+024	98+805	-
2	104+111	103+910	-
3	114+1053*	114+600	-
4	138+310	137+250	-
5	140+300	140+550	-
6	-	-	82+182

TYPICAL LAYOUT FOR 'U' TURN (MEDIAN OPENING)



S.No.	Median Opening at km
1	135+290
2	143+150
3	150+108

Note :-
1. All Dimension are in m unless other wise specified.
2. * Distance between km stones is not 1000m at site.

TYPICAL LAYOUT FOR MEDIAN OPENING AT JUNCTION

Schedules-C

(See Clause 2.1)

***** Deleted *****