Schedule - B

(See Clause 2.1)

Development of the Project Highway

1. Development of the Project Highway

Development of the Project Highway shall include design and construction of the Project Highway as described in this Schedule-B and in Schedule-C.

2. [Rehabilitation and augmentation]

[Rehabilitation and augmentation] shall include [Two-Laning and Strengthening] of the Project Highway as described in Annex-I of this Schedule-B and in Schedule-C.

3. Specifications and Standards

The Project Highway shall be designed and constructed in conformity with the Specifications and Standards specified in Annex-I of Schedule-D.

Annex – I

(Schedule-B)

Description of [Two-Laning]$

[Note: Description of the Project Highway shall be given by the Authority in detail together with explanatory drawings (where necessary) to explain the Authority's requirements precisely in order to avoid subsequent changes in the Scope of the Project. The particulars that must be specified in this Schedule-B are listed below as per the requirements of the Manual of Specifications and Standards for [Two Laning of Highways (IRC:SP:73-2015)], referred to as the Manual. If any standards, specifications or details are not given in the Manual, the minimum design/construction requirements shall be specified in this Schedule. In addition to these particulars, all other essential project specific details, as required, should be provided in order to define the Scope of the Project clearly and precisely.]

1. Widening of the Existing Highway

(i) The Project Highway shall follow the existing alignment unless otherwise specified by the Authority and shown in the alignment plans specified in Annex-III of Schedule-A. Geometric deficiencies, if any, in the existing horizontal and vertical profiles shall be corrected as per the prescribed standards for [plain/rolling & mountainous] terrain to the extent land is available.

(ii) Width of Carriageway

(a) Two-Laning [with] paved shoulders shall be undertaken. The paved carriageway shall be [7(seven) m] wide in accordance with the typical cross sections drawings in the Manual.

Provided that in the built-up areas [refer to paragraphs 2.1 (ii) (a) of the Manual and provide necessary details]: the width of the carriageway shall be as specified in the following table:

Sl. No.	Built-up stretch (Township)	Location (km to km)		Width (m)	Typical cross section (Ref. to Manual)
1	Jolaibari	0.495	0.860	12.0	TCS-2
2	West Pilak	3.470	3.715	12.0	TCS-2
3	Sonaichari	13.780	14.120	12.0	TCS-4
4	Sonaichari	15.345	15.695	12.0	TCS-2
5	Sarasima	17.600	18.500	12.0	TCS-2
6	Sarasima	18.800	19.100	12.0	TCS-2
7	Belonia	20.150	21.412	12.0	TCS-2

(b) Except as otherwise provided in this Agreement, the width of the paved carriageway and cross-sectional features shall conform to paragraph 1.1 above.

$ The contents of this Annex-I may be modified in accordance with the structure of the Project.

2. Geometric Design and General Features

(i) General

Geometric design and general features of the Project Highway shall be in accordance with Section 2 of the Manual.

(ii) Design speed

The design speed shall be the minimum design speed of [80 km per hr for plain/rolling terrain].

(iii) Improvement of the existing road geometrics

[Refer to paragraph 2.1 (v) of the Manual and provide details]

In the following sections, where improvement of the existing road geometrics to the prescribed standards is not possible, the existing road geometrics shall be improved to the extent possible within the given right of way and proper road signs and safety measures shall be provided:

Sl. No.	Stretch (from km to km)		Type of deficiency	Remarks
1	7.954	8.380	Design Speed 65 kmph	To follow under construction Minor Bridge alignment.
2	20.050	21.412	Design Speed 40-50 kmph	Proposed alignment has been accommodated mostly within existing ROW without affecting roadside structures of Belonia Municipal Council area

(iv) Right of Way

[Refer to paragraph 2.3 of the Manual]. Details of the Right of Way are given in Annex II of Schedule-A.

(v) Type of shoulders

[Refer to paragraph 2.5.2 of the Manual and specify]

(a) In built-up sections, footpaths/fully paved shoulders shall be provided in the following stretches:

Sl. No.	Stretch (from km to km)		Fully paved shoulders/ footpaths	Reference to cross section
1	0.495	0.860	Yes	TCS-2
2	3.470	3.715	Yes	TCS-2
3	13.780	14.120	Yes	TCS-4
4	15.345	15.695	Yes	TCS-2
5	17.600	18.500	Yes	TCS-2
6	18.800	19.100	Yes	TCS-2
7	20.150	21.412	Yes	TCS-2

(b) In open country, [paved shoulders of 1.5 m width shall be provided and balance 1.0m width shall be covered with 150 mm thick compacted layer of granular material].

(c) Design and specifications of paved shoulders and granular material shall conform to the requirements specified in the relevant Manual.

(vi) Lateral and vertical clearances at underpasses

(a) Lateral and vertical clearances at underpasses and provision of guardrails/ crash barriers shall be as per the provision of relevant Manual.

(b) Lateral clearance: The width of the opening at the underpasses shall be as follows:

Sl. No.	Location (Chainage) (from km to km)	Span/opening (m)	Remarks
Nil			

(vii) Lateral and vertical clearances at overpasses

(a) Lateral and vertical clearances at overpasses shall be as the provision of relevant Manual.

(b) Lateral clearance: The width of the opening at the overpasses shall be as follows:

Sl. No.	Location (Chainage) (from km to km)	Span/ opening (m)	Remarks
Nil			

(viii) Service roads

Service roads shall be constructed at the locations and for the lengths indicated below: [Refer to the provision of relevant Manual and provide details]

Sl. No.	Location of service road (from km to km)	Right hand side (RHS)/Left hand side (LHS)/ or Both sides	Length (km) of service road
1	Ratanpur PHC near existing ROB location (km 11.850 to km 12.300)	RHS	0.450

(ix) Grade separated structures

(a) Grade separated structures shall be provided as per provision of the relevant Manual. The requisite particulars are given below:

[Refer to the provision of relevant Manual and provide details]

Sl. No.	Location of structure	Length (m)	Number and length of spans (m)	Approach gradient	Remarks, if any
Nil					

(b) In the case of grade separated structures, the type of structure and the level of the Project Highway and the cross roads shall be as follows: [Refer to the provision of relevant Manual and specify the type of vehicular under pass/ overpass structure and whether the cross road is to be carried at the existing level, raised or lowered]

Sl. No.	Location	Type of structure Length (m)	Cross road at			Remarks, if any
			Existing Level	Raised Level	Lowered Level	
Nil						

(x) Cattle and pedestrian underpass /overpass

Cattle and pedestrian underpass/overpass shall be constructed as follows: [Refer to provision of relevant Manual and specify the requirements of cattle and pedestrian underpass/overpass]

Sl. No.	Location	Type of crossing
Nil		

(xi) Typical cross-sections of the Project Highway

[Give typical cross-sections of the Project Highway by reference to the Manual]

As per attached Drawings

TCS TYPE	DESCRIPTION
TCS-1	Typical Cross Section of Two-Lane Carriageway with Paved Shoulder at Realignment stretches in Rural Area
TCS-2	Typical Cross Section of Two-Lane Carriageway with Paved Shoulder at Built-up Area
TCS-3	Typical Cross Section of Two-Lane Carriageway with Paved Shoulder at Existing Road Stretch in Rural Area
TCS-4	Typical Cross Section of Two-Lane Carriageway with Paved Shoulder at Built-up Area (Sub-grade Stabilization)
TCS-5	Typical Cross Section of Two-Lane Carriageway with Paved Shoulder at Existing Road Stretch in Rural Area (Sub-grade Stabilization)
TCS-6	Typical Cross Section of Two-Lane Carriageway with Paved Shoulder at Realignment stretches in Rural Area (Sub-grade Stabilization)

Design Chainage (m)		Length (m)	TCS Type
From	To		
0	350	350	TCS-3
350	495	145	TCS-3
495	860	365	TCS-2
860	1050	190	TCS-1
1050	1900	850	TCS-3
1900	3470	1570	TCS-1
3470	3715	245	TCS-2
3715	3750	35	TCS-3
3750	4050	300	TCS-1
4050	5200	1150	TCS-3
5200	5400	200	TCS-5
5400	5450	50	TCS-6
5450	5650	200	TCS-1
5650	6200	550	TCS-3
6200	6450	250	TCS-1
6450	6700	250	TCS-3
6700	7500	800	TCS-1
7500	7600	100	TCS-6
7600	7735	135	TCS-1
7735	8020	285	TCS-6
8020	8800	780	TCS-1
8800	9250	450	TCS-6
9250	9450	200	TCS-3

Design Chainage (m)		Length (m)	TCS Type
From	To		
9450	9700	250	TCS-5
9700	9900	200	TCS-6
9900	10390	490	TCS-1
10390	10500	110	TCS-6
10500	10700	200	TCS-5
10700	11090	390	TCS-1
11090	11260	170	TCS-6
11260	11540	280	TCS-1
11540	11650	110	TCS-6
11650	11900	250	TCS-1
11900	12050	150	TCS-3
12050	12300	250	TCS-1
12300	12900	600	TCS-3
12900	13050	150	TCS-5
13050	13600	550	TCS-3
13600	13780	180	TCS-5
13780	14120	340	TCS-4
14120	14400	280	TCS-5
14400	15345	945	TCS-3
15345	15695	350	TCS-2
15695	15850	155	TCS-3
15850	17350	1500	TCS-1
17350	17600	250	TCS-3
17600	18500	900	TCS-2
18500	18800	300	TCS-3
18800	19100	300	TCS-2
19100	20150	1050	TCS-3
20150	21412	1262	TCS-2

3. Intersections and Grade Separators

All intersections and grade separators shall be as per the provision of relevant Manual. Existing intersections which are deficient shall be improved to the prescribed standards.

[Refer to the provision of relevant Manual and specify the requirements. Explain where necessary with drawings/sketches/general arrangement]

Properly designed intersections shall be provided at the locations and of the types and features given in the tables below:

(i) At-grade intersections

Major Intersections:

Sl. No.	Intersection at km	Type of intersection	Other features
1	0.000	3-Legged Junction at Jolaibari	Road leads to Agartala
2	0.700	3-Legged Junction at Jolaibari	Road leads to Agartala
3	15.550	3-Legged Junction at Jharjhari	Road leads to Hrishyamukh
4	20.800	3-Legged Junction at Belonia	Road leads to Bankar

Minor Intersections:

Sl. No.	Intersection at km	Type of intersection	Other features
1	2.770	4-legged	Muhuripur at LHS and Pilak at RHS
2	6.650	3-legged	Road leads to Muhuripur Market
3	6.900	3-legged	Starting of Realignment
4	8.160	3-legged	Ending of Realignment
5	9.850	3-legged	Road leads to Ratanpur market
6	9.910	3-legged	Road leads to Ishwarchandra Royaja para
7	10.700	3-legged	Road leads to village
8	13.770	3-legged	Road leads to Sompara
9	14.860	3-legged	Road leads to Village
10	15.350	3-legged	Road leads to Killamura
11	17.650	3-legged	Road leads to Uttar Sonaichari village
12	17.850	3-legged	Road leads to Amjadnagar
13	17.750	4-legged	Arpit Nagar at LHS. and Belonia I.T.I college at RHS
14	18.740	3-legged	Road leads to village
15	18.940	3-legged	Road leads to Belonia Rail station.
16	19.660	3-legged	Road leads to College Square
17	19.695	3-legged	Road leads to D.M office
18	20.020	3-legged	Junction is shifted in the Realignment stretch

Sl. No.	Intersection at km	Type of intersection	Other features
19	20.560	3-legged	Road leads to Belonia
20	20.910	3-legged	Road leads to Belonia market

(ii) Grade separated intersection with/without ramps

Sl. No.	Location (km)	Salient features	Minimum length of viaduct to be provided	Road to be carried over/under the structures
Nil				

4. Road Embankment and Cut Section

(i) Widening and improvement of the existing road embankment/cuttings and construction of new road embankment/ cuttings shall conform to the Specifications and Standards given in Section 4 of the Manual and the specified cross sectional details. Deficiencies in the plan and profile of the existing road shall be corrected.

(ii) Raising of the existing road [Refer to the provision of relevant Manual and specify sections to be raised]

The existing road shall be raised in the following sections:

Sl. No.	Section (from km to km)	Length	Extent of raising [Top of finished road level]
Nil			

5. Pavement Design

(i) Pavement design shall be carried out in accordance with the provision of relevant Manual.

(ii) Type of pavement

[Refer to the provision of relevant Manual and state specific requirement, if any, of providing cement concrete pavement.]

(iii) Design requirements

[Refer to the provision of relevant Manual and specify design requirements and strategy]

a) Design Period and strategy

Flexible pavement for new pavement or for widening and strengthening of the existing pavement shall be designed for a minimum design period of 15 years. Stage construction shall not be permitted.

b) Design Traffic

Notwithstanding anything to the contrary contained in this Agreement or the Manual, the Contractor shall design the pavement for design traffic of 20 million standard axles.

(iv) Reconstruction of stretches

[Refer to the provision of relevant Manual and specify the stretches, if any, to be reconstructed.]

The following stretches of the existing road shall be reconstructed. These shall be designed as new pavement.

Sl. No.	Stretch From km to km		Remarks
1	0.000	0.350	TCS-3
2	0.350	0.495	TCS-3
3	0.495	0.860	TCS-2
4	1.050	1.900	TCS-3
5	3.470	3.715	TCS-2
6	3.715	3.750	TCS-3
7	4.050	5.200	TCS-3
8	5.200	5.400	TCS-5
9	5.650	6.200	TCS-3
10	6.450	6.700	TCS-3
11	9.250	9.450	TCS-3
12	9.450	9.700	TCS-5
13	10.500	10.700	TCS-5
14	11.900	12.050	TCS-3
15	12.300	12.900	TCS-3
16	12.900	13.050	TCS-5
17	13.050	13.600	TCS-3
18	13.600	13.780	TCS-5
19	13.780	14.120	TCS-4
20	14.120	14.400	TCS-5
21	14.400	15.345	TCS-3
22	15.345	15.695	TCS-2
23	15.695	15.850	TCS-3
24	17.350	17.600	TCS-3
25	17.600	18.500	TCS-2
26	18.500	18.800	TCS-3

Sl. No.	Stretch From km to km		Remarks
27	18.800	19.100	TCS-2
28	19.100	20.150	TCS-3
29	20.150	21.412	TCS-2

6. Roadside Drainage

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per the provision of relevant Manual.

List of RCC Cover Drain

Chainage (m)		Side	Net Length (m)
From	To		
495	860	Both	725.00
3470	3715	Both	490.00
13780	14120	Both	680.00
15345	15695	Both	695.00
17600	18500	Both	1794.60
18800	19100	Both	600.00
20150	21412	Both	2499.60
Total=			**7484 m**

7. Design of Structures

(i) General

(a) All bridges, culverts and structures shall be designed and constructed in accordance with the provision of relevant Manual and shall conform to the cross- sectional features and other details specified therein.

(b) Width of the carriageway of new bridges and structures shall be as follows:

[Refer to the provision of relevant Manual and specify the width of carriageway of new bridges and structures of more than 60 (sixty) metre length, if the carriageway width is different from 7.5 (seven point five) metres in the table below.]

Sl. No.	Bridge at km	Width of carriageway and cross-sectional features*
1	4.000	**Carriageway Width = 11.0 m** Footpath width= 3.0m (2 x 1.5m) Width of Crash Barrier = 1.0m (2 x 0.5m)
2	9.544	

Sl. No.	Bridge at km	Width of carriageway and cross-sectional features*
3	14.152	Width of Railings = 1.0m (2 x 0.50m) **Overall width = 16.0 m**

(c) The following structures shall be provided with footpaths:

[Refer to the provision of relevant Manual and provide details of new Structures with footpath.]

Sl. No.	Location at km	Remarks
1	4.000	1.5 m wide Footpath on Both Side
2	9.544	
3	14.152	

(d) All bridges shall be high-level bridges.
[Refer to the provision of relevant Manual and state if there is any exception]

(e) The following structures shall be designed to carry utility services specified in table below:

[Refer to the provision of relevant Manual and provide details]

Sl. No.	Bridge at km	Utility service to be carried	Remarks
Nil			

(f) Cross-section of the new culverts and bridges at deck level for the Project Highway shall conform to the typical cross-sections given in the provision of relevant Manual.

(ii) Culverts

(a) Overall width of all culverts shall be equal to the roadway width of the approaches.

(b) Reconstruction of existing culverts:

The existing culverts at the following locations shall be re-constructed as new culverts:

[Refer to the provision of relevant Manual and provide details]

Sl. No.	Culvert location (km)	Span/Opening (m)	Remarks, if any*
1	0.867	2.0 x 3.0 (Single cell)	
2	1.085	2.0 x 4.0 (Single cell)	
3	1.154	2.0 x 3.0 (Single cell)	
4	1.237	2.0 x 3.0 (Single cell)	
5	1.567	5.0 x 5.0 (Single cell)	
6	1.64	2.0 x 4.0 (Single cell)	
7	2.796	2.0 x 3.0 (Single cell) with EC	
8	4.088	2.0 x 2.0 (Single cell) with EC	
9	4.596	2.0 x 3.0 (Single cell)	
10	4.916	2.0 x 2.0 (Single cell) with EC	
11	5.196	2.0 x 4.0 (Single cell)	
12	5.311	2.0 x 4.0 (Single cell)	
13	5.702	5.0 x 5.0 (Single cell)	
14	5.978	2.0 x 4.0 (Single cell)	
15	6.200	4.0 x 4.0 (Single cell)	
16	6.506	2.0 x 4.0 (Single cell)	
17	9.317	2.0 x 2.0 (Single cell) with EC	
18	9.410	2.0 x 4.0 (Single cell)	
19	9.599	2.0 x 2.0 (Single cell)	
20	10.190	2.0 x 3.0 (Single cell) with EC	
21	10.340	2.0 x 2.0 (Single cell) with EC	
22	10.560	2.0 x 4.0 (Single cell)	
23	10.640	3.0 x 4.0 (Single cell)	
24	10.886	2.0 x 2.0 (Single cell) with EC	
25	12.365	2.0 x 3.0 (Single cell)	
26	12.497	2.0 x 2.0 (Single cell) with EC	
27	12.755	2.0 x 2.0 (Single cell) with EC	
28	12.894	2.0 x 4.0 (Single cell)	
29	13.090	2.0 x 3.0 (Single cell)	

Sl. No.	Culvert location (km)	Span/Opening (m)	Remarks, if any*
30	13.657	4.0 x 4.0 (Single cell)	
31	13.780	2.0 x 3.0 (Single cell)	
32	14.565	2.0 x 3.0 (Single cell)	
33	14.629	2.0 x 2.0 (Single cell)	
34	14.880	2.0 x 3.0 (Single cell)	
35	14.988	3.0 x 4.0 (Single cell)	
36	15.088	2.0 x 2.0 (Single cell)	
37	15.171	2.0 x 3.0 (Single cell)	
38	15.273	2.0 x 2.0 (Single cell)	
39	15.585	2.0 x 2.0 (Single cell)	
40	18.074	2.0 x 3.0 (Single cell)	
41	18.746	3.0 x 4.0 (Single cell)	
42	19.200	3.0 x 4.0 (Single cell)	
43	19.511	2.0 x 2.0 (Single cell)	
44	19.655	4.0 x 4.0 (Single cell)	
45	19.897	4.0 x 4.0 (Single cell)	
46	20.067	3.0 x 4.0 (Single cell)	
47	20.370	4.0 x 4.0 (Single cell)	
48	20.737	1.5 x 1.5 (Single cell)	
49	20.864	2.0 x 2.0 (Single cell)	
50	21.068	2.0 x 2.0 (Single cell)	

*[Specify modifications, if any, required in the road level, etc.]

(c) Widening of existing culverts:

All existing culverts which are not to be reconstructed shall be widened to the roadway width of the Project Highway as per the typical cross section given in the provision of relevant Manual. Repairs and strengthening of existing structures where required shall be carried out.

Sl. No.	Culvert location	Type, span, height and width of existing culvert (m)	Repairs to be carried out [specify]
Nil			

(d) Additional new culverts shall be constructed as per particulars given in the table below:

Sl No.	Culvert location (km)	Span/Opening (m)
1	0.736	2.0 x 2.0 (Single cell)
2	2.060	2.0 x 4.0 (Single cell)
3	2.342	2.0 x 2.0 (Single cell) with EC
4	3.800	3.0 x 3.0 (Single cell) with EC
5	4.400	3.0 x 4.0 (Single cell)
6	6.331	2.0 x 3.0 (Single cell)
7	6.841	2.0 x 4.0 (Single cell)
8	6.985	5.0 x 5.0 (Single cell)
9	7.090	4.0 x 4.0 (Single cell)
10	7.310	3.0 x 4.0 (Single cell)
11	7.420	3.0 x 4.0 (Single cell)
12	7.682	3.0 x 4.0 (Single cell) with EC
13	8.100	3.0 x 4.0 (Single cell) with EC
14	8.327	3.0 x 4.0 (Single cell) with EC
15	8.600	3.0 x 4.0 (Single cell) with EC
16	8.775	3.0 x 4.0 (Single cell) with EC
17	9.080	4.0 x 4.0 (Single cell)
18	10.103	2.0 x 3.0 (Single cell) with EC
19	10.955	2.0 x 3.0 (Single cell) with EC
20	11.040	2.0 x 3.0 (Single cell) with EC
21	11.285	3.0 x 4.0 (Single cell) with EC
22	16.075	2.0 x 4.0 (Single cell)
23	16.40	2.0 x 3.0 (Single cell)
24	16.528	3.0 x 4.0 (Single cell)

Sl No.	Culvert location (km)	Span/Opening (m)
25	16.668	2.0 x 2.0 (Single cell) with EC
26	16.878	3.0 x 4.0 (Single cell) with EC

(e) Repairs/replacements of railing/parapets, flooring and protection works of the existing culverts shall be undertaken as follows:

[Refer to the provision of relevant Manual and provide details]

Sl. No.	Location at km	Type of repair required
Nil		

(f) Floor protection works shall be as specified in the relevant IRC Codes and Specifications

(iii) Bridges

(a) Existing bridges to be re- constructed/widened

(i) The existing bridges at the following locations shall be re-constructed as new Structures]

[Refer to the provision of relevant Manual and provide details]

Sl. No.	Bridge location (km)	Salient details of existing bridge		Adequacy or otherwise of the existing waterway, vertical clearance, etc*	Remarks
		Type of Structures	Span Arrangement and Total Vent way (No. x Length) (m)		
1	4.000	Integral Slab Bridge	2 x 16.0	Due to Realignment	
2	9.544	Slab Culvert	1 x 8.1	Insufficient width and not conform to IRC Loadings.	

*Attach GAD

(ii) The following narrow bridges shall be widened:

Sl. No.	Location (km)	Existing width (m)	Extent of widening (m)	Cross-section at deck level for widening @
Nil				

@ Attach cross-section

(b) Additional new bridges

[Specify additional new bridges if required, and attach GAD]

New bridges at the following locations on the Project Highway shall be constructed. GADs for the new bridges are attached in the drawings folder.

Sl. No.	Location (km)	Total length (m)	Remarks, if any
Nil			

(c) The railings of existing bridges shall be replaced by crash barriers at the following locations:

[Refer to the provision of relevant Manual and provide details:]

Sl. No.	Location at km	Remarks
Nil		

(d) Repairs/replacements of railing/parapets of the existing bridges shall be undertaken as follows:

[Refer to the provision of relevant Manual and provide details]

Sl. No.	Location at km	Remarks
Nil		

(e) Drainage system for bridge decks

An effective drainage system for bridge decks shall be provided as specified in the provision of relevant Manual.

(f) Structures in marine environment

[Refer to the provision of relevant Manual and specify the necessary measures / treatments for protecting structures in marine environment, where applicable]

(iv) Rail-road bridges

(a) Design, construction and detailing of ROB/RUB shall be as specified in the provision of relevant Manual. [Refer to the provision of relevant Manual and specify modification, if any]

(b) Road over-bridges

Road over-bridges (road over rail) shall be provided at the following level crossings, as per GAD drawings attached:

Sl. No.	Location of Level crossing (Chainage km)	Length of bridge (m)
Nil		

(c) Road under-bridges

Road under-bridges (road under railway line) shall be provided at the following level crossings, as per GAD drawings attached:

Sl. No.	Location of Level crossing (Chainage km)	Number and length of span (m)
Nil		

(v) Grade separated structures

[Refer to the provision of relevant Manual]

The grade separated structures shall be provided at the locations and of the type and length specified in paragraphs 2 (ix) and 3 of this Annex-I.

(vi) Repairs and strengthening of bridges and structures

[Refer to the provision of relevant Manual and provide details]

The existing bridges and structures to be repaired/strengthened, and the nature and extent of repairs /strengthening required are given below:

(a) Bridges

Sl. No.	Location of bridge (km)	Nature and extent of repairs/ strengthening to be carried out
Nil		

(b) ROB / RUB

Sl. No.	Location of ROB/RUB (km)	Nature and extent of repairs/ strengthening to be carried out
Nil		

(c) Overpasses/Underpasses and other structures

Sl. No.	Location of Structure (km)	Nature and extent of repairs/ strengthening to be carried out
Nil		

(vii) List of Major Bridges and Structures

The following is the list of the Major Bridges and Structures:

Sl. No.	Location (km)
Nil	

8. Traffic Control Devices and Road Safety Works

(i) Traffic control devices and road safety works shall be provided in accordance with the provision of relevant Manual.

(ii) Specifications of the reflective sheeting. [Refer to the provision of relevant Manual and specify]

9. Roadside Furniture

(i) Roadside furniture shall be provided in accordance with the provisions of the relevant Manual.

(ii) Overhead traffic signs: location and size

Sl No.	Location (km)	Size	Remarks
1	0.000	18m x 1.5m	Double pole
2	0.700	3 nos. (7.2m x 2.4m)	Cantilever
3	15.550	3 nos. (7.2m x 2.4m)	Cantilever
4	21.150	3 nos. (7.2m x 2.4m)	Cantilever
5	21.400	18m x 1.5m	Double pole

[Refer to the provision of relevant Manual and provide details]

10. Compulsory Afforestation

[Refer to the provision of relevant Manual and specify the number of trees which are required to be planted by the Contractor as compensatory afforestation.]

11. Hazardous Locations

The safety barriers shall also be provided at the following hazardous locations:

a) Retaining Wall:

Sl. No.	Location stretch from (km) to (km)		LHS/RHS
	From	To	

Sl. No.	Location stretch from (km) to (km)		LHS/RHS
	From	To	
1	0.410	0.433	RHS
2	2.600	2.610	LHS
3	3.450	3.470	RHS
4	3830	3850	LHS
5	3.880	3.910	RHS
6	4.330	4.342	RHS
7	4.475	4.510	LHS
8	4.590	4.625	RHS
9	4.600	4.620	LHS
10	4.635	4.650	RHS
11	4.670	4.695	RHS
12	5.020	5.034	LHS
13	5.960	5.977	LHS
14	6.070	6.090	RHS
15	6.160	6.190	LHS
16	6.820	6.870	RHS
17	9.400	9.425	RHS
18	9.455	9.475	RHS
19	9.770	9.800	RHS
20	12.395	12.420	LHS
21	12.460	12.500	LHS
22	12.915	12.927	LHS
23	13.095	13.115	LHS
24	13.105	13.160	RHS
25	13190	13.202	LHS
26	13.835	13.860	RHS
27	14.280	14.310	RHS
28	14.360	14.385	RHS
29	14.420	14.450	LHS
30	15.680	15.690	RHS
31	15.770	15.785	RHS
32	18.620	18.650	LHS

Sl. No.	Location stretch from (km) to (km)		LHS/RHS
	From	To	
33	19.850	19.910	RHS
34	20.010	20.070	LHS
35	20.870	20.910	RHS
36	20.980	21.010	RHS

b) Mild Steel Railing in Footpath:

Sl. No.	Location stretch from (km) to (km)		LHS/RHS
	From	To	
1	0.495	0.860	Both side
2	13.780	14.120	Both side
3	17.600	17.800	Both side
4	20.950	21.300	Both side

c) Metal Beam Crash Barrier:

Sl. No.	Location stretch from (km) to (km)		LHS/RHS
	From	To	
1	0.430	0.550	LHS
2	1.975	2.025	LHS
3	2.575	2.625	LHS
4	2.750	3.025	LHS
5	3.750	4.425	LHS
6	4.925	5.170	LHS
7	5.300	5.375	LHS
8	7.650	7.750	LHS
9	8.075	8.475	LHS
10	8.600	8.800	LHS
11	9.250	9.375	LHS
12	9.485	9.605	LHS
13	10.000	10.350	LHS
14	10.775	11.075	LHS

Sl. No.	Location stretch from (km) to (km)		LHS/RHS
	From	To	
15	11.300	11.500	LHS
16	11.775	12.800	LHS
17	13.250	13.325	LHS
18	14.090	14.275	LHS
19	16.550	16.725	LHS
20	16.925	16.975	LHS
21	0.430	0.550	RHS
22	1.050	1.125	RHS
23	1.575	1.625	RHS
24	2.600	2.650	RHS
25	3.750	4.325	RHS
26	4.550	4.625	RHS
27	4.800	5.170	RHS
28	5.325	5.375	RHS
29	7.400	7.700	RHS
30	8.050	8.475	RHS
31	8.600	8.800	RHS
32	9.250	9.325	RHS
33	9.485	9.605	RHS
34	9.925	10.275	RHS
35	11.300	11.525	RHS
36	11.675	12.900	RHS
37	13.075	13.225	RHS
38	14.090	14.275	RHS
39	16.525	16.675	RHS
40	16.875	16.950	RHS
41	17.525	17.575	RHS
42	18.625	18.725	RHS
43	19.125	19.175	RHS

12. Special Requirement for Hill Roads

[Refer to provision of relevant Manual and provide details where relevant and required.]

13. Change of Scope

The length of Structures and bridges specified hereinabove shall be treated as an approximate assessment. The actual lengths as required on the basis of detailed investigations shall be determined by the Contractor in accordance with the Specifications and Standards. Any variations in the lengths specified in this Schedule-B shall not constitute a Change of Scope, save and except any variations in the length arising out of a Change of Scope expressly undertaken in accordance with the provisions of Article 13.

(Schedule – B-1)

1. The shifting of utilities and felling of trees shall be carried out by the **Concerned Line Department**. The cost of the same shall be borne by the Authority.