

Schedules

SCHEDULE - A

(See Clauses 2.1 and 8.1)

SITE OF THE PROJECT

1. The Site

- 1.1 2-lane/2-lane with Hard Shoulder shall include the land, buildings, structures and road works as described in Annex-I of this Schedule-A.
- 1.2 The dates of handing over Right of Way to the Contractor are specified in the Annex-II of this Schedule A.
- 1.3 An inventory of the Site including the land, buildings, structures, road works, trees and any other immovable property on, or attached to, the Site shall be prepared jointly by the Authority Representative and the Contractor, and such inventory shall form part of the memorandum referred to in Clause 8.2.1 of this Agreement.
- 1.4 The alignment plans of the Project Highway are specified in Annex-III. In the case of sections where no modification in the existing alignment of the Project Highway is contemplated, the alignment plan has not been provided. Alignment plans have only been given for sections where the existing alignment is proposed to be upgraded. The proposed profile of the Project Highways shall be followed by the contractor with minimum FRL as indicated in the alignment plan. The contractor, however, improve/upgrade the Road Profile as indicated in Annexure-III based on site/design requirement.
- 1.5 The status of the environment clearances obtained or awaited is given in Annex - IV.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annexure - I

(Schedule-A)

Site

Note: Through suitable drawings and description in words, the land, buildings, structures and road works comprising the Site shall be specified briefly but precisely in this Annex-I. All the chainages/location referred to in Annex-I to Schedule A shall be existing chainages.

1. Site

The Site of the Two-Lane with paved shoulder Project Highway comprises the section of National Highway – 4 (Old NH-223) from Nimbutala at Km 206.0 to 500 m before Austin Creek at Km 239.425 in the Union Territory of Andaman & Nicobar Islands. The land, carriageway and structures comprises the Site are described below.

2. Land

The Site of the Project Highway comprises the land (sum total of land already in possession and land to be possessed) as described below:

Land Details

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
1	206.000	15	10	25	Swadesh Nagar
2	206.100	13	12	25	
3	206.200	12	13	25	
4	206.300	13	12	25	
5	206.400	13	12	25	
6	206.500	15	15	30	
7	206.600	15	15	30	
8	206.700	15	15	30	
9	206.800	12	9	21	
10	206.900	11	10	21	
11	207.000	11	10	21	
12	207.100	11	10	21	
13	207.200	12	10	22	
14	207.300	10	15	25	
15	207.400	9	9	18	
16	207.500	9	9	18	
17	207.600	10	10	20	
18	207.700	15	15	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
19	207.800	15	15	30	
20	207.900	15	15	30	
21	208.000	15	15	30	
22	208.100	15	15	30	
23	208.200	15	15	30	
24	208.300	10	10	20	
25	208.400	13	12	25	
26	208.500	15	15	30	
27	208.600	15	15	30	
28	208.700	15	15	30	
29	208.800	15	15	30	Haripur
30	208.900	15	15	30	
31	209.000	15	15	30	
32	209.100	15	15	30	
33	209.200	15	15	30	
34	209.300	15	15	30	
35	209.400	15	15	30	
36	209.500	15	15	30	
37	209.600	15	15	30	
38	209.700	15	15	30	
39	209.800	15	15	30	
40	209.900	15	15	30	
41	210.000	15	15	30	
42	210.100	15	15	30	
43	210.200	15	15	30	
44	210.300	15	15	30	
45	210.400	15	15	30	
46	210.500	15	15	30	
47	210.600	15	15	30	
48	210.700	15	15	30	
49	210.800	15	15	30	
50	210.900	15	15	30	
51	211.000	15	15	30	
52	211.100	15	15	30	
53	211.200	10	20	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
54	211.300	15	15	30	
55	211.400	15	15	30	
56	211.500	15	15	30	
57	211.600	15	15	30	
58	211.700	15	15	30	
59	211.800	15	15	30	
60	211.900	15	15	30	
61	212.000	15	15	30	
62	212.100	15	15	30	
63	212.200	15	15	30	Joypur
64	212.300	15	15	30	
65	212.400	15	15	30	
66	212.500	15	15	30	
67	212.600	15	15	30	
68	212.700	15	15	30	
69	212.800	15	15	30	
70	212.900	15	15	30	
71	213.000	15	15	30	
72	213.100	15	15	30	
73	213.200	15	15	30	
74	213.300	15	15	30	
75	213.400	12	13	25	
76	213.500	11	14	25	
77	213.600	15	15	30	
78	213.700	15	15	30	
79	213.800	15	15	30	
80	213.900	15	15	30	
81	214.000	15	15	30	
82	214.100	15	15	30	
83	214.200	15	15	30	
84	214.300	15	15	30	
85	214.400	15	15	30	
86	214.500	15	15	30	
87	214.600	15	15	30	
88	214.700	15	15	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
89	214.800	15	15	30	
90	214.900	15	15	30	
91	215.000	15	15	30	
92	215.100	15	15	30	
93	215.200	15	15	30	
94	215.300	15	15	30	
95	215.400	15	15	30	Pareshnagar
96	215.500	15	15	30	
97	215.600	15	15	30	
98	215.700	15	15	30	
99	215.800	15	15	30	Govindpur
100	215.900	15	15	30	
101	216.000	15	15	30	
102	216.100	15	15	30	
103	216.200	15	15	30	
104	216.300	15	15	30	
105	216.400	15	15	30	
106	216.500	15	15	30	
107	216.600	15	15	30	
108	216.700	15	15	30	
109	216.800	15	15	30	
110	216.900	15	15	30	
111	217.000	15	15	30	
112	217.100	15	15	30	
113	217.200	15	15	30	
114	217.300	15	15	30	
115	217.400	15	15	30	
116	217.500	15	15	30	
117	217.600	15	15	30	
118	217.700	15	15	30	
119	217.800	15	15	30	Basantipur
120	217.900	15	15	30	
121	218.000	15	15	30	
122	218.100	15	15	30	
123	218.200	15	15	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
124	218.300	15	15	30	
125	218.400	15	15	30	
126	218.500	15	15	30	
127	218.600	15	15	30	
128	218.700	15	15	30	
129	218.800	15	15	30	
130	218.900	15	15	30	
131	219.000	15	15	30	
132	219.100	15	15	30	
133	219.200	15	15	30	
134	219.300	15	15	30	
135	219.400	15	15	30	
136	219.500	15	15	30	
137	219.600	15	15	30	
138	219.700	15	15	30	
139	219.800	15	15	30	
140	219.900	15	15	30	
141	220.000	15	15	30	
142	220.100	15	15	30	
143	220.200	15	15	30	
144	220.300	15	15	30	
145	220.400	15	15	30	
146	220.500	15	15	30	
147	220.600	15	15	30	
148	220.700	15	15	30	
149	220.800	15	15	30	
150	220.900	15	15	30	
151	221.000	15	15	30	
152	221.100	15	15	30	
153	221.200	15	15	30	
154	221.300	15	15	30	
155	221.400	15	15	30	Forest
156	221.500	15	15	30	
157	221.600	15	15	30	
158	221.700	15	15	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
159	221.800	15	15	30	
160	221.900	15	15	30	
161	222.000	15	15	30	
162	222.100	15	15	30	
163	222.200	15	15	30	
164	222.300	15	15	30	
165	222.400	15	15	30	
166	222.500	15	15	30	
167	222.600	15	15	30	
168	222.700	15	15	30	
169	222.800	15	15	30	
170	222.900	15	15	30	
171	223.000	15	15	30	
172	223.100	15	15	30	
173	223.200	15	15	30	
174	223.300	15	15	30	
175	223.400	15	15	30	
176	223.500	15	15	30	
177	223.600	15	15	30	
178	223.700	15	15	30	
179	223.800	15	15	30	
180	223.900	15	15	30	
181	224.000	15	15	30	
182	224.100	15	15	30	
183	224.200	15	15	30	
184	224.300	15	15	30	
185	224.400	15	15	30	
186	224.500	15	15	30	
187	224.600	15	15	30	
188	224.700	15	15	30	
189	224.800	15	15	30	
190	224.900	15	15	30	
191	225.000	15	15	30	
192	225.100	15	15	30	
193	225.200	15	15	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
194	225.300	15	15	30	
195	225.400	15	15	30	
196	225.500	15	15	30	
197	225.600	15	15	30	
198	225.700	15	15	30	
199	225.800	15	15	30	
200	225.900	15	15	30	
201	226.000	15	15	30	
202	226.100	15	15	30	
203	226.200	15	15	30	
204	226.300	15	15	30	
205	226.400	15	15	30	
206	226.500	15	15	30	
207	226.600	15	15	30	
210	226.700	15	15	30	
211	226.800	15	15	30	
212	226.900	15	15	30	
213	227.000	15	15	30	
214	227.100	15	15	30	
215	227.200	15	15	30	
216	227.300	15	15	30	
217	227.400	15	15	30	
218	227.500	15	15	30	
219	227.600	15	15	30	
220	227.700	15	15	30	
221	227.800	15	15	30	
222	227.900	15	15	30	
223	228.000	15	15	30	
224	228.100	15	15	30	
225	228.200	15	15	30	
226	228.300	15	15	30	
227	228.400	15	15	30	
228	228.500	15	15	30	
229	228.600	15	15	30	
230	228.700	15	15	30	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
231	228.800	15	15	30	
232	228.900	15	15	30	
233	229.000	15	15	30	
234	229.100	15	15	30	
235	229.200	15	15	30	
236	229.300	15	15	30	
237	229.400	15	15	30	
238	229.500	15	15	30	
239	229.600	15	15	30	
240	229.700	15	15	30	
241	229.800	15	15	30	
242	229.900	15	15	30	
243	230.000	15	15	30	
244	230.100	15	15	30	
245	230.200	15	15	30	
246	230.300	15	15	30	
247	230.400	15	15	30	
248	230.500	15	15	30	
249	230.600	15	15	30	
250	230.700	15	15	30	
251	230.800	15	15	30	
252	230.900	15	15	30	
253	231.000	15	15	30	
254	231.100	15	15	30	
255	231.200	15	15	30	
256	231.300	15	15	30	
257	231.400	15	15	30	
258	231.500	15	15	30	
259	231.600	15	15	30	
260	231.700	15	15	30	
261	231.800	15	15	30	
262	231.900	15	15	30	
263	232.000	15	15	30	
264	232.100	15	15	30	
265	232.200	7	10	17	Pahalgaon

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
266	232.300	7	8	15	
267	232.400	4	8	12	
268	232.500	3	9	12	
269	232.600	4	8	12	
270	232.700	4	8	12	
271	232.800	5	5	10	
272	232.900	4	6	10	
273	233.000	5	10	15	
274	233.100	5	9	14	
275	233.200	5	7	12	
276	233.300	7	7	14	
277	233.400	5	8	13	
278	233.500	9	9	18	
279	233.600	5	14	19	
280	233.700	5	6	11	
281	233.800	6	7	13	
282	233.900	6	7	13	
283	234.000	4	10	14	
284	234.100	4	8	12	
285	234.200	5	6	11	
286	234.300	5	6	11	
287	234.400	5	6	11	
288	234.500	7	5	12	
289	234.600	20	20	40	
290	234.700	10	13	23	
291	234.800	13	14	27	
292	234.900	7	13	20	
293	235.000	18	15	33	
294	235.100	12	11	23	
295	235.200	10	14	24	
296	235.300	16	10	26	
297	235.400	12	13	25	
298	235.500	11	8	19	
299	235.600	12	12	24	
300	235.700	10	15	25	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
301	235.800	9	14	23	
302	235.900	11	11	22	
303	236.000	13	13	26	
304	236.100	7	13	20	
305	236.200	7	13	20	
306	236.300	7	13	20	
307	236.400	8	10	18	
308	236.500	9	8	17	Webi
309	236.600	9	10	19	
310	236.700	10	12	22	Deopur
311	236.800	6	6	12	
312	236.900	12	13	25	
313	237.000	11	11	22	
314	237.100	11	7	18	
315	237.200	11	10	21	
316	237.300	16	16	32	
317	237.400	12	7	19	
318	237.500	12	10	22	
319	237.600	14	11	25	
320	237.700	10	7	17	
321	237.800	10	10	20	
322	237.900	13	14	27	
323	238.000	7	10	17	
324	238.100	9	6	15	
325	238.200	8	8	16	
326	238.300	10	12	22	
327	238.400	11	9	20	
328	238.500	10	10	20	
329	238.600	10	10	20	
330	238.700	13	7	20	Lataw
331	238.800	6	6	12	
332	238.900	6	6	12	
333	239.000	10	6	16	
334	239.100	10	5	15	
335	239.200	11	10	21	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Chainage(km)	Existing ROW (in M)			Remarks
		Right side	Left side	Total	
336	239.300	20	7	27	
337	239.400	15	15	30	Lucknow
338	239.500	15	15	30	
339	239.600	15	15	30	
340	239.700	15	15	30	
341	239.800	15	15	30	
342	239.900	15	15	30	
343	240.000	15	15	30	

3. Carriageway

The present carriageway of the Project Highway is of. Single Lane/Intermediate lane/two lane/dual two lane divided carriageway flexible pavement having varying carriageway varying as tabulated below. The type of the existing pavement is flexible as per following details;

S.No	From	To	C/w Width
1	206.000	207.000	3.66
2	207.000	209.985	5.5
3	209.985	210.360	2 x 7.50
4	210.360	211.900	3.66
5	211.900	215.730	5.5
6	215.730	215.980	2x5.5
7	215.980	218.000	3.66
8	218.000	220.000	5.5
9	220.000	220.500	3.66
10	220.500	221.700	5.5
11	221.700	222.300	3.66
12	222.300	226.600	5.5
13	226.600	227.700	3.66
14	227.700	230.000	5.5
15	230.000	236.000	3.66
16	236.000	237.000	5.5
17	237.000	239.425	3.66

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

4. Major Bridges

The Site includes the following Major Bridges:

S. No.	Existing Chainage (km)	Type of Structure			No. of Spans with span length (m)	Width (m)
		Foundation	Sub-Structure	Super-Structure		
NIL						

5. Road over-bridges (ROB)/ Road under-bridges (RUB):

The Site includes the following ROB (road over railway line)/RUB (road under railway line):

S.No	Existing Chainage (km)	Type of Structure		No. of Spans with span length (m)	Width (m)	ROB/ RUB
		Foundation	Super Structure			
NIL						

6. Grade separators

The Site includes the following grade separators:

S. No	Existing Chainage (km)	Type of Structure		No. of Spans with span length (m)	Width (m)
		Foundation	Superstructure		
NIL					

7. Minor Bridges

The Site includes the following minor bridges

S. No.	Existing Chainage (km)	Type of Structure			No. of Spans with span length (c/c of exp gap)	Total Width (m)
		Foundation	Sub-Structure	Super-Structure		
1	206.029	Belly Bridge			53.5	4.25
2	208.625	Open	RC WALL	RC SOLID SLAB	49.0	10.50
3	212.200	Open	RC WALL	RC SOLID SLAB	3 x 6.2 + 6 x 6.0	5.3
4	217.543	Open	RC WALL	RC SOLID SLAB	1 x 6.7	8.2
5	219.090	Open	RC WALL	RC SOLID SLAB	2 x 5.7 + 2 x 6.1	7.6
6	219.639	Open	RC WALL	RC SOLID SLAB	4 x 6.0	7.7
7	232.278	Open	RC WALL	RC SOLID SLAB	1 x 7.9	5.5

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No.	Existing Chainage (km)	Type of Structure			No. of Spans with span length (c/c of exp gap)	Total Width (m)
		Foundation	Sub-Structure	Super-Structure		
8	236.720	Open	RC WALL	RC SOLID SLAB	2 x 10.9	7.5
9	239.061	Open	RC WALL	RC SOLID SLAB	1x6.0	8.4

8. Railway level crossings

The Site includes the following level crossing:

S. No.	Existing Chainage (km)	Remarks
NIL		

9. Underpasses (Vehicular, Non Vehicular)

The Site includes the following underpasses:

S. No.	Existing Chainage (Km)	Type of Structure	No. of Spans with span length (m)	Width (m)
NIL				

10. Culverts

The Site has the following culverts:

S. No	Existing Chainage (Km)	Type of culvert	Span/ Opening with Span length (m)	Width (m)
1	206.210	Slab	1x1.4	8.30
2	206.449	HP	2x0.75	8.15
3	206.597	HP	2x0.75	8.15
4	206.713	HP	2x0.75	8.20
5	206.862	HP	2x0.60	8.10
6	206.95	BLOCKED		8.1
7	207.075	Slab	1x2.25	8.30
8	207.21	HP	2x0.75	8.10
9	207.385	HP	2x0.75	8.15
10	207.575	Slab	1x2.3	8.2
11	207.76	HP	2x0.75	8.15
12	208.011	Slab	1x3.7	10.8

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No	Existing Chainage (Km)	Type of culvert	Span/ Opening with Span length (m)	Width (m)
13	208.259	HP	2x0.70	11.20
14	208.362	Blocked		8.80
15	208.467	Slab	1x5.7	10.80
16	208.871	HP	2x0.7	8.35
17	209.11	HP	1x0.80	8.20
18	209.262	HP	1x0.75	8.20
19	209.534	HP	2x0.70	8.40
20	209.689	HP	1x0.70	8.20
21	209.863	HP	2x0.75	8.20
22	210.075	Slab	1x4.3	20.70
23	210.412	Slab	1x2.5	19.50
24	210.865	HP	2x0.70	7.80
25	211.332	Slab	1x3.4	11.05
26	211.93	HP	1x0.75	8.30
27	212.7	HP	2x0.70	8.10
28	212.997	HP	1x0.75	8.25
29	213.315	HP	1x0.80	8.25
30	213.484	HP	1x0.70	8.20
31	213.654	HP	2x0.75	8.20
32	213.941	HP	2x0.80	8.30
33	214.154	HP	2x0.60	8.30
34	214.277	HP	2x0.75	8.20
35	214.495	HP	1X0.65	8.20
36	214.654	HP	1X0.7	8.15
37	214.83	Slab	1X2.7	8.25
38	214.942	HP	1X0.7	8.15
39	215.1	HP	1X0.7	8.20
40	215.217	HP	1X0.75	7.40
41	215.347	HP	2X0.9	7.15
42	215.544	HP	1X0.65	9.65

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No	Existing Chainage (Km)	Type of culvert	Span/ Opening with Span length (m)	Width (m)
43	215.71	HP	1X0.9	12.30
44	216.009	Slab	1X3.8	7.45
45	216.244	Slab	1X3.8	8.00
46	216.497	HP	1X0.7	7.45
47	216.772	Slab	1X1.6	8.35
48	217.004	HP	1X0.9	11.25
49	217.052	HP	1X0.75	7.50
50	217.233	HP	1X0.7	7.40
51	217.84	HP	1X0.75	23.50
52	218.925	HP	2X0.75	16.60
53	219.21	HP	1X0.75	7.45
54	219.791	HP	1X0.75	7.15
55	220.454	HP	1X0.7	7.1
56	220.795	HP	1X0.65	7.40
57	220.941	Slab	1X3.7	7.25
58	221.041	HP	1X0.75	7.35
59	221.247	HP	1X1.1	10.40
60	221.308	HP	2X0.75	7.35
61	221.593	HP	2X0.75	7.45
62	221.668	HP	1X0.75	7.45
63	222.245	HP	1X0.75	7.35
64	222.473	Blocked		8.45
65	222.574	HP	1X0.75	7.75
66	225.428	HP	2X0.75	7.40
67	225.674	HP	1X1.0	10.95
68	225.82	HP	1x0.7	11.15
69	227.364	HP	2x1	10.85
70	227.478	HP	2x0.9	8.50
71	227.615	HP	1x0.75	7.55
72	227.846	HP	1x0.7	7.65

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No	Existing Chainage (Km)	Type of culvert	Span/ Opening with Span length (m)	Width (m)
73	229.639	HP	1x0.7	10.05
74	229.792	HP	1x0.9	10.10
75	230.013	HP	1x0.75	10.35
76	230.082	HP	1x0.75	9.90
77	230.142	HP	2x0.75	10.25
78	230.234	HP	2x0.75	11.30
79	230.398	HP	2x0.60	7.40
80	230.831	HP	1x0.75	7.90
81	231.426	HP	2x0.75	7.55
82	231.61	HP	1x0.75	7.60
83	231.683	HP	1X0.9	12.2
84	231.803	HP	1X0.75	7.3
85	231.925	HP	2X0.75	7.75
86	232.0164	HP	1X0.75	7.45
87	232.075	HP	1X0.75	7.45
88	232.534	Slab	1X3.5	8.6
89	232.6784	HP	2X0.75	9.6
90	232.8305	HP	1X0.75	7.45
91	233.079	Slab	1X4.6	8.5
92	233.265	HP	1X0.7	7.7
93	233.382	Slab	1X2.3	8.35
94	233.703	Slab	1X3	8.3
95	233.926	Slab	1X2	9.70
96	234.239	HP	1X0.75	8.55
97	234.436	Slab	1X4.5	8.25
98	234.534	HP	1X0.75	7.45
99	234.648	HP	1X0.75	8.45
100	235.089	HP	1X0.9	12.30
101	235.225	Slab	1X5.5	7.85
102	235.326	HP	1X0.75	8.00

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No	Existing Chainage (Km)	Type of culvert	Span/ Opening with Span length (m)	Width (m)
103	235.383	HP	2X0.75	12.00
104	235.491	HP	1X1	10.20
105	235.623	HP	2x0.75	8.80
106	235.901	HP	1x0.85	9.65
107	236.267	HP	2x0.75	8.90
108	236.389	HP	1x0.75	7.60
109	236.955	HP	1x0.7	7.60
110	237.217	HP	1x0.7	7.65
111	237.45	Blocked		4.90
112	237.539	Blocked		8.10
113	237.681	HP	1X0.9	8.60
114	237.987	HP	2X0.7	7.60
115	238.388	HP	1X0.75	7.10
116	238.659	HP	2X0.75	9.70
117	238.901	Slab	1X1.5	8.20
118	239.296	Slab	1X3.85	8.00
119	239.407	Slab	1X2.6	7.90

11. Bus bays/Bus Shelters

The details of bus shelters on the Site are as follows:

S.No.	Existing Chainage	Side
1	205.867	Left
2	206.475	Left
3	207.036	Left
4	208.238	Right
5	210.07	Right
6	210.385	Left
7	211.414	Left
8	212.427	Left
9	231.165	Left

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Existing Chainage	Side
10	232.462	Left
11	233.96	Left
12	237.515	Right
13	238.06	Right

12. Truck Lay byes

The details of truck lay byes are as follows:

S. No.	Existing Chainage (Km)	Length (m)	Left Hand Side	Right Hand Side
NIL				

13. Road side drains

The details of the roadside drains are as follows:

S.No.	Existing Chainage (km)		Side
	From	To	
1	206.800	206.859	LHS
2	207.075	207.206	LHS
3	207.525	207.568	LHS
4	207.671	207.756	LHS
5	207.912	208.111	LHS
6	208.396	208.457	LHS
7	208.997	209.988	LHS
8	210.030	210.483	BOTH SIDE
9	212.229	212.339	LHS
10	212.710	213.309	LHS
11	213.659	213.698	LHS
12	214.005	214.088	LHS
13	215.250	215.542	LHS
14	215.634	215.916	LHS
15	215.896	216.005	RHS
16	216.289	216.684	LHS
17	216.862	216.911	LHS
18	217.233	217.268	LHS
19	217.333	217.355	LHS
20	217.472	217.533	LHS

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Existing Chainage (km)		Side
	From	To	
21	217.905	218.146	LHS
22	218.175	218.236	LHS
23	218.602	218.725	LHS
24	220.211	220.770	LHS
25	221.250	221.300	LHS
26	221.950	222.262	LHS
27	225.637	225.675	RHS
28	225.788	225.820	RHS
29	226.744	226.893	LHS
30	230.009	230.075	LHS
31	232.157	232.275	LHS
32	232.282	232.427	RHS
33	232.501	232.529	RHS
34	233.139	233.278	RHS
35	233.886	233.925	RHS
36	234.650	234.887	LHS
37	237.221	237.293	LHS
38	237.557	237.677	LHS
39	238.315	238.388	LHS
40	238.664	238.695	RHS
41	238.689	238.788	LHS
42	238.788	238.848	BOTH SIDE
43	238.848	238.888	RHS

14. Major junctions

The details of major junctions are as follows:

S.No	Existing Chainage (km)	At Grade	Grade Separated	Category of Cross Road+			
				NH	SH	MDR	Others
1	239.153	At grade	-	-	-	Y-type	-

+ NH= National Highway, SH= State Highway, MDR= Major District Road.

15. Minor junctions

The details of the minor junctions are as follows:

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No	Existing Chainage (km)	Village Name	Side	Type of Junction
1	206.479	TO PICHHAR NALA	LHS	T-type
2	206.993	TO PICHHAR NALA	LHS	T-type
3	207.103	TO SWADESH NAGAR GARAGE	LHS	T-type
4	208.532	TO SWADESH NAGAR	LHS	T-type
5	208.729	TO HARI NAGAR	LHS	T-type
6	208.977	TO HARI NAGAR	LHS	T-type
7	210.027	TO PINAKE NAGAR	LHS	T-type
8	210.083	TO HARI NAGAR	RHS	T-type
9	210.493	TO HARI NAGAR	LHS	Y-type
10	211.378	TO RURAL ROAD FROM S.M. HALDER	LHS	T-type
11	211.853	TO HARI NAGAR VILLAGE	LHS	Y-type
12	212.085	TO HARI NAGAR VILLAGE	LHS	Y-type
13	212.556	TO JOYPUR VILLAGE	LHS	Y-type
14	213.911	TO JOYPUR VILLAGE	LHS	T-type
15	215.891	TO PRASHNA GAR	RHS	Y-type
16	215.917	TO PRASHNA GAR BLOCK-1	LHS	T-type
17	216.025	TO GOVINDA PUR SCHOOL	LHS	Y-type
18	216.69	TO GOVINDA PUR	RHS	Y-type
19	217.825	TO GOVINDA PUR	RHS	Y-type
20	217.888	TO GOVINDA PUR	RHS	Y-type
21	218.484	TO BIBAK NAGAR	LHS	Y-type
22	220.543	TO PRATULIO NAGAR	RHS	T-type
23	232.317	TO POLICE STATION	LHS	Y-type
24	233.73	TO PRIMARY HEALTH CENTRE	LHS	Y-type
25	233.95	TO CHHIN PUR	LHS	Y-type
26	237.55	TO SCHOOL	LHS	T-type
27	238.038	TO CAREY MEMORIAL SCHOOL	RHS	Y-type

16. Bypasses

The details of the existing road sections proposed to be bypasses are as follows:

S. No	Name of bypass (Town)	Existing Chainage (Km)		Length (Km)
		From	To	
NIL				

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

17. Other Structures : Following are the details of existing causeways:

S. No	Existing Chainage (km)	Structure Type	Openings / Spans X Length	Width (m)
NIL				

18. Existing Chainages corresponding to Design Chainage

The relationship between the “Existing Chainage” and the “Design Chainage” as per field surveys is given below in Table-

S. No.	Existing Chainage (Km)	Design Chainage (Km)	Remarks
1	206.000	205.900	
2	207.000	206.900	
3	208.000	207.892	
4	209.000	208.868	
5	210.000	209.865	
6	211.000	210.868	
7	212.000	211.864	
8	213.000	212.859	
9	214.000	213.878	
10	215.000	214.870	
11	216.000	215.862	
12	217.000	216.859	
13	218.000	217.851	
14	219.000	218.841	
15	220.000	219.833	
16	221.000	220.824	
17	222.000	221.789	
18	223.000	222.794	
19	224.000	223.779	
20	225.000	224.771	
21	226.000	225.765	
22	227.000	226.753	
23	228.000	227.753	
24	229.000	228.748	
25	230.000	229.742	
26	231.000	230.723	
27	232.000	231.723	
28	233.000	232.726	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No.	Existing Chainage (Km)	Design Chainage (Km)	Remarks
29	234.000	233.725	
30	235.000	234.723	
31	236.000	235.717	
32	237.000	236.715	
33	238.000	237.731	
34	239.000	238.731	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex - II
(Schedule-A)

Dates for providing Right of Way

The dates on which the Authority shall provide Right of Way to the Contractor on different stretches of the Site are stated below:

S. No.	Design Chainage (Km)		Design Length (Km)	Width (In Meter)	Dates of Providing ROW
	From	To			
1	2	3	4	5	6
	Part Right of Way				
	Width of Land as per Clause 2 of Annexure-I of Schedule A				On Appointed Date

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex-III
(Schedule-A)
Alignment Plans

The existing alignment of the Project Highway shall be modified in the following sections as per the alignment plan indicated below:

The alignment plan of the Project Highway is available on E-Portal and in digital form in CD

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex - IV

(Schedule-A)

Environment Clearances

Not Applicable for this section.

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 Upgradation

Rehabilitation and Upgradation shall include Two-Laning with Hard shoulder 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.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex - I

(Schedule-B)

Description of Two-Laning

1. WIDENING OF THE EXISTING HIGHWAY

1.1 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 terrain to the extent land is available.

1.2 WIDTH OF CARRIAGEWAY

1.2.1 Two-Laning with hard shoulders in rural section and two-laning with covered drain with footpath in urban section shall be undertaken. The carriageway shall be 7m wide in rural and 7m to 16.5m wide in urban section conformation with the typical cross sections drawings in the Manual.

Provided that in the built-up areas the width of the carriageway shall be as specified in the following table:

S.No.	Built up Stretch (Township)	Design Chainage (Km)		Length (m)	Typical Cross Section Proposed
		From	To		
1	Swadesh nagar	205.895	206.190	295	TCS II-B
2	Swadesh nagar & Harinagar	206.190	209.851	3661	TCS II-A
3	Hari nagar	209.851	210.225	374	TCS II-C
4	Hari nagar	210.225	211.468	1243	TCS II-A
5	Joypur	212.089	212.310	221	TCS II-A
6	Nimbudera Baza	215.095	215.600	505	TCS II-A
7	Govindapur	215.600	215.848	248	TCS II-C
8	Govindapur	215.848	216.909	1061	TCS II-A
9	Basantipur	217.730	218.026	296	TCS II-A
10	Rest Camp village	231.924	232.624	700	TCS II-B

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Built up Stretch (Township)	Design Chainage (Km)		Length (m)	Typical Cross Section Proposed
		From	To		
11	Tugapur Village	233.425	233.776	351	TCS II-B
12	Webi Village	237.013	237.932	919	TCS II-A
13	Pani Ghat Village	238.406	238.731	325	TCS II-A

1.2.2 Except as otherwise provided in this Agreement, the width of the paved carriageway and cross-sectional features shall conform to paragraph 1.2.1 above

2. GEOMETRIC DESIGN AND GENERAL FEATURES

2.1 General

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

2.2 Design Speed

The design speed shall be the minimum design speed of 80 km per hour (in accordance with section 2 of the manual) for rolling terrain.

2.3 Improvement of the existing road geometry

In the following sections, where improvement of the existing road geometrics to the prescribed standards is not possible within existing ROW, 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:

Deficient Curves:-

S.No	Design Chainage (km)
1	207.881
2	208.205
3	208.377
4	208.619
5	211.884
6	211.996
7	212.126
8	218.892
9	222.065
10	222.820
11	222.905

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S.No	Design Chainage (km)
12	223.042
13	225.376
15	227.108
16	227.542
17	227.660
18	228.421
19	229.364
20	229.466
21	229.546
22	229.701
23	230.145
24	230.242
25	230.350
26	230.436
27	230.598
28	230.874
29	233.660
30	234.353
31	234.411
32	234.804
33	235.508
34	237.762
35	238.010
36	238.196
37	239.037

Bypasses

S. No	DesignChainage (Km)		Length (Km)	Name of village	Remarks
	From	To			
NIL					

2.4 Right of Way

The Site of the Project Highway comprises the land as described in Annexure-I of Schedule-A.

2.5 Type of Shoulders

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

a) In built up section, footpath over drain shall be provided in the following stretches:

S.No.	Built up Stretch (Township)	Design Chainage (Km)		Typical Cross Section Proposed
		From	To	
1	Swadesh nagar	205.895	206.190	TCS II-B
2	Swadesh nagar & Harinagar	206.190	209.851	TCS II-A
3	Hari nagar	209.851	210.225	TCS II-C
4	Hari nagar	210.225	211.468	TCS II-A
5	Joypur	212.089	212.310	TCS II-A
6	Nimbudera Baza	215.095	215.600	TCS II-A
7	Govindapur	215.600	215.848	TCS II-C
8	Govindapur	215.848	216.909	TCS II-A
9	Basantipur	217.730	218.026	TCS II-A
10	Rest Camp village	231.924	232.624	TCS II-B
11	Tugapur Village	233.425	233.776	TCS II-B
12	Webi Village	237.013	237.932	TCS II-A
13	Pani Ghat Village	238.406	238.731	TCS II-A

b) Design and specification of paved shoulder and granular material shall confirm to the requirements specified in paragraph 5.9.9 and 5.9.10 of the Manual.

2.6 Lateral and vertical clearances at underpasses

2.6.1 Lateral and vertical clearances at underpasses and provision of guardrails/crash barriers shall be as per paragraph 2.11 of the Manual.

2.6.2 Lateral clearance: The width of the opening at the underpasses shall be as follows:

S. No.	Design Chainage (Km)	Span/opening (m)	Remarks
NIL			

2.7 Lateral and vertical clearances at overpasses

2.7.1 Lateral and vertical clearances at overpasses and provision of guardrails/crash barriers shall be as per paragraph 2.12 of the Manual.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

2.7.2 Lateral clearance: The width of the opening at the overpasses shall be as follows:

S. No.	Design Chainage (Km)	Span/opening (m)	Remarks
NIL			

2.8 Service roads

Service roads/Slip Roads shall be constructed at the locations and for the lengths indicated below:

S. No	Design Chainage (Km)	RHS/LHS	Length of the Service Road (m)
NIL			

2.9 Grade separated structures

2.9.1 Grade separated structures shall be provided as per paragraph 2.14 of the Manual. The requisite particulars are given below:

S. No.	Design Chainage (Km)	Length (m)	Number and length of spans	Approach gradient	Remarks, if any
NIL					

2.9.2 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:

S. No.	Design Chainage (Km)	Type of structure Length (m)	Cross road at		
			Existing level	Raised Level	Lowered Level
NIL					

2.10 Cattle and pedestrian under pass / over pass

Cattle and pedestrian underpass shall be constructed as follows:

S. No.	Design Chainage (Km)	Type of Crossing
NIL		

2.11 Typical cross-sections of the Project Highway

Indicative typical cross sections along with different types of cross-sections required to be developed in different segments of the project highway are indicated in Appendix B-I. Cross Section schedule for the project highway is as follows:

S.No	Design Chainage		Widening Proposal	Length (m)	TCS Proposed
	From	To			

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No	Design Chainage		Widening Proposal	Length (m)	TCS Proposed
	From	To			
1	205+895	206+190	Reconstruction-Urban	295	TCS II-B
2	206+190	209+851	Reconstruction-Urban	3661	TCS II-A
3	209+851	210+225	Reconstruction-Urban	374	TCS II-C
4	210+225	211+468	Reconstruction-Urban	1243	TCS II-A
5	211+468	211+650	Reconstruction-Filling	182	TCS V***
6	211+650	211+950	Reconstruction-Rural	300	TCS I
7	211+950	212+089	Reconstruction-Cutting	139	TCS IV**
8	212+089	212+310	Reconstruction-Urban	221	TCS II-A
9	212+310	215+095	Reconstruction-Rural	2785	TCS I
10	215+095	215+600	Reconstruction-Urban	505	TCS II-A
11	215+600	215+848	Reconstruction-Urban	248	TCS II-C
12	215+848	216+909	Reconstruction-Urban	1061	TCS II-A
13	216+909	217+600	Reconstruction-Rural	691	TCS I
14	217+600	217+730	Reconstruction-Filling	130	TCS V***
15	217+730	218+026	Reconstruction-Urban	296	TCS II-A
16	218+026	219+375	Reconstruction-Rural	1349	TCS I
17	219+375	220+025	Reconstruction-Filling	650	TCS V***
18	220+025	220+175	Reconstruction-Rural	150	TCS I
19	220+175	221+750	Reconstruction-Filling	1575	TCS V***
20	221+750	222+025	Reconstruction-Cutting	275	TCS IV**
21	222+025	222+150	Reconstruction-Rural	125	TCS I
22	222+150	222+300	Reconstruction-Cutting	150	TCS IV**
23	222+300	222+450	Reconstruction-Filling	150	TCS V***

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No	Design Chainage		Widening Proposal	Length (m)	TCS Proposed
	From	To			
24	222+450	222+625	Reconstruction-Cutting	175	TCS IV**
25	222+625	222+825	Reconstruction-Filling	200	TCS V***
26	222+825	224+900	Reconstruction-Rural	2075	TCS I
27	224+900	225+150	Reconstruction-Cutting	250	TCS IV**
28	225+150	225+275	Reconstruction-Filling	125	TCS V***
29	225+275	225+625	Reconstruction-Cutting	350	TCS IV**
30	225+625	226+275	Reconstruction-Rural	650	TCS I
31	226+275	226+350	Reconstruction-Cutting	75	TCS IV**
32	226+350	226+500	Reconstruction-Rural	150	TCS I
33	226+500	226+760	Reconstruction-Cutting	260	TCS IV**
34	226+760	226+975	Reconstruction-Filling	215	TCS V***
35	226+975	227+590	Reconstruction-Rural	615	TCS I
36	227+590	227+675	Reconstruction-Filling	85	TCS V***
37	227+675	227+800	Reconstruction-Cutting	125	TCS IV**
38	227+800	228+775	Reconstruction-Rural	975	TCS I
39	228+775	228+875	Reconstruction-Filling	100	TCS V***
40	228+875	228+925	Reconstruction-Rural	50	TCS I
41	228+925	229+000	Reconstruction-Cutting	75	TCS IV**
42	229+000	229+250	Reconstruction-Filling	250	TCS V***
43	229+250	229+700	Reconstruction-Cutting	450	TCS IV**
44	229+700	229+875	Reconstruction-Rural	175	TCS I
45	229+875	230+250	Reconstruction-Filling	375	TCS V***
46	230+250	230+450	Reconstruction-Rural	200	TCS III*

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No	Design Chainage		Widening Proposal	Length (m)	TCS Proposed
	From	To			
47	230+450	230+650	Reconstruction-Cutting	200	TCS IV**
48	230+650	230+825	Reconstruction-Rural	175	TCS I
49	230+825	230+925	Reconstruction-Cutting	100	TCS IV**
50	230+925	231+924	Reconstruction-Rural	999	TCS I
51	231+924	232+624	Reconstruction-Urban	700	TCS II-B
52	232+624	232+800	Reconstruction-Rural	176	TCS I
53	232+800	232+950	Reconstruction-Cutting	150	TCS IV**
54	232+950	233+150	Reconstruction-Rural	200	TCS I
55	233+150	233+425	Reconstruction-Rural	275	TCS III*
56	233+425	233+776	Reconstruction-Urban	351	TCS II-B
57	233+776	234+000	Reconstruction-Filling	224	TCS V***
58	234+000	234+175	Reconstruction-Rural	175	TCS III*
59	234+175	234+350	Reconstruction-Filling	175	TCS V***
60	234+350	234+500	Reconstruction-Rural	150	TCS I
61	234+500	234+725	Reconstruction-Cutting	225	TCS IV**
62	234+725	235+225	Reconstruction-Filling	500	TCS V***
63	235+225	235+400	Reconstruction-Rural	175	TCS I
64	235+400	235+525	Reconstruction-Cutting	125	TCS IV**
65	235+525	235+700	Reconstruction-Rural	175	TCS I
66	235+700	235+775	Reconstruction-Cutting	75	TCS IV**
67	235+775	236+150	Reconstruction-Rural	375	TCS I
68	236+150	236+550	Reconstruction-Rural	400	TCS III*
69	236+550	237+013	Reconstruction-Rural	463	TCS I

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No	Design Chainage		Widening Proposal	Length (m)	TCS Proposed
	From	To			
70	237+013	237+932	Reconstruction-Urban	919	TCS II-A
71	237+932	238+025	Reconstruction-Rural	93	TCS III*
72	238+025	238+406	Reconstruction-Rural	381	TCS I
73	238+406	238+731	Reconstruction-Urban	325	TCS II-A
74	238+731	239+300	Reconstruction-Cutting	569	TCS IV**

[Typical Cross Sections are appended separately]

- * Retaining wall and Breast wall shown in TCS III drawing is typical. Location of these components should be applied as per site condition.
- ** TCS IV is proposed for cutting in rural section and drawing shown for the same is typical. Wherever required the breast wall must be provided, if there is cutting in hill to confine the development within ROW.
- *** TCS V is proposed for filling in rural section and drawing shown for the same is typical. Wherever required the retaining wall must be provided, to confine the toe wall within ROW.

3. INTERSECTIONS AND GRADE SEPARATORS

All intersections and grade separators shall be as per section 3 of the Manual. Existing intersections which are deficient shall be improved to the prescribed standards.

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

a) **At-grade intersections (Major Junctions)**

S. No.	Design Chainage (Km)	Type of Intersection	Other features	Remarks
1	239+034	Y-type		Towards Mayabunder

b) **At-grade intersections (Minor Junctions)**

S.No	Design Chainage (km)	Type of Intersection
1	206+375	T-type
2	206+894	T-type
3	207+003	T-type
4	208+422	T-type

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No	Design Chainage (km)	Type of Intersection
5	208+613	T-type
6	208+861	T-type
7	209+893	T-type
8	209+951	T-type
9	210+36	Y-type
10	211+248	T-type
11	211+722	Y-type
12	211+949	Y-type
13	212+416	Y-type
14	213+793	T-type
15	215+757	Y-type
16	215+785	T-type
17	215+885	Y-type
18	216+551	Y-type
19	217+68	Y-type
20	217+744	Y-type
21	218+333	Y-type
22	220+373	T-type
23	232+039	Y-type
24	233+454	Y-type
25	233+675	Y-type
26	237+264	T-type
27	237+773	Y-type

c) Grade separated intersection without ramps

S. No.	Design Chainage (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

- 4.1** 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.
- 4.2** Raising of the existing road

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The existing road shall be raised at the required locations as per proposed plan and profile including the following sections:

S. No	Design Chainage (Km)		Length (Km)	Extent of raising (Top of finished road level)
	From	To		
NIL				

5. PAVEMENT DESIGN

5.1 Pavement design shall be carried out in accordance with Section 5 of the Manual.

5.2 Type of pavement

Flexible Pavement will be designed as per Clause 10.4(Treated RAP) of IRC:37-2012 along with soil stabilisation.

5.3 Design Requirements

Design requirement for the flexible pavement shall be in accordance with section 5 of the IRC:SP-73-2015 and IRC:37-2012. Treated RAP and CT Subbase shall be provided as per the provisions of IRC:37-2012.

5.3.1 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.

5.3.2 Design Traffic

Not with standing anything to the contrary contained in this Agreement or the Manual, the Contractor shall design the pavement for design traffic as given below.

S. No.	Design Chainage (Km)		Minimum Design MSA for 15 yrs
	From	To	
1	205+895	239+300	20

5.4 Reconstruction of stretches

Reconstruction of stretches for matching the proposed plan & profile shall be taken up as per actual requirements.

S. No	Design Chainage (Km)		Remarks
	From	To	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

1	205+895	239+300	Reconstruction with Treated RAP & CT subbase
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6. ROADSIDE DRAINAGE

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per Section 6 of the Manual.

7. DESIGN OF STRUCTURES

7.1 General

7.1.1 All bridges, culverts and structures shall be designed and constructed in accordance with section 7 of the manual and shall conform to the cross-sectional features and other details specified therein.

7.1.2 Width of the carriageway of new structures of more than 60m length shall be as follows, if the carriageway width is different from 7.5m in the table below.

S.No	Design Chainage (Km)	Width of Carriageway (m) and cross sectional features
NIL		

7.1.3 The following structures shall be provided with footpaths:

S. No.	Design Chainage (Km)	Remarks
NIL		

7.1.4 All bridges shall be high-level bridges. **No**

7.1.5 The following structures shall be designed to carry utility services specified in table below.

S. No.	Design Chainage (Km)	Utility service to be carried	Remarks
NIL			

7.1.6 Cross-section of the new culverts and bridges at deck level for the Project Highway shall conform to the typical cross-sections for the Project Highway.

7.2 Culverts

7.2.1 The Culverts overall width shall be equal to the roadway width of the approaches.

7.2.2 Reconstruction of existing culverts:

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

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S. No	Design Chainage (Km)	Type of culvert proposed	Span/ Opening with Span length (m)*	Remarks
1	206+105	Box	1x2.0	
2	206+343	Box	1x2.0	
3	206+492	Box	1x2.0	
4	206+607	Box	1x2.0	
5	206+756	Box	1x2.0	
6	206+844	Box	1x2.0	
7	206+976	Box	1x3.0	
8	207+109	Box	1x2.0	
9	207+285	Box	1x2.0	
10	207+476	Box	1x2.0	
11	207+658	Box	1x2.0	
12	207+904	Box	1x4.0	
13	208+148	Box	1x2.0	
14	208+253	Box	1x2.0	
15	208+363	Box	1x5.0	
16	208+754	Box	1x2.0	
17	208+977	Box	1x2.0	
18	209+131	Box	1x2.0	
19	209+402	Box	1x2.0	
20	209+556	Box	1x2.0	
21	209+729	Box	1x2.0	
22	209+942	Box	1x5.0	
23	210+278	Box	1x3.0	
24	210+732	Box	1x2.0	
25	211+200	Box	1x3.5	
26	211+798	Box	1x2.0	
27	212+573	Box	1x2.0	
28	212+879	Box	1x2.0	
29	213+196	Box	1x2.0	
30	213+366	Box	1x2.0	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S. No	Design Chainage (Km)	Type of culvert proposed	Span/ Opening with Span length (m)*	Remarks
31	213+535	Box	1x2.0	
32	213+819	Box	1x2.0	
33	214+032	Box	1x2.0	
34	214+156	Box	1x2.0	
35	214+373	Box	1x2.0	
36	214+533	Box	1x2.0	
37	214+707	Box	1x3.0	
38	214+819	Box	1x2.0	
39	214+970	Box	1x2.0	
40	215+087	Box	1x2.0	
41	215+216	Box	1x2.0	
42	215+413	Box	1x2.0	
43	215+578	Box	1x2.0	
44	215+872	Box	1x4.0	
45	216+106	Box	1x4.0	
46	216+358	Box	1x2.0	
47	216+633	Box	1x2.0	
48	216+863	Box	1x2.0	
49	216+910	Box	1x2.0	
50	217+091	Box	1x2.0	
51	217+695	HP	1x1.2	
52	218+772	Box	1x2.0	
53	219+052	Box	1x2.0	
54	219+629	Box	1x2.0	
55	220+285	Box	1x2.0	
56	220+626	Box	1x2.0	
57	220+772	Box	1x4.0	
58	220+866	Box	1x2.0	
59	221+070	HP	1x1.2	

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S. No	Design Chainage (Km)	Type of culvert proposed	Span/ Opening with Span length (m)*	Remarks
60	221+131	HP	2x1.2	
61	221+413	Box	1x2.0	
62	221+489	Box	1x2.0	
63	222+031	Box	1x2.0	
64	222+258	Box	1x2.0	
65	222+358	Box	1x2.0	
66	225+200	Box	1x2.0	
67	225+448	Box	1x2.0	
68	225+594	Box	1x2.0	
69	227+117	HP	2x1.2	
70	227+231	Box	1x2.0	
71	227+367	Box	1x2.0	
72	227+599	HP	1x1.2	
73	229+385	Box	1x2.0	
74	229+535	Box	1x2.0	
75	229+752	Box	1x2.0	
76	229+823	Box	1x2.0	
77	229+883	Box	1x2.0	
78	229+971	HP	2x1.2	
79	230+130	HP	1x1.2	
80	230+559	Box	1x2.0	
81	231+153	Box	1x2.0	
82	231+335	Box	1x2.0	
83	231+408	Box	1x2.0	
84	231+526	Box	1x2.0	
85	231+647	Box	1x2.0	
86	231+739	Box	1x2.0	
87	231+796	Box	1x2.0	
88	232+258	Box	1x3.5	
89	232+403	Box	1x2.0	

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S. No	Design Chainage (Km)	Type of culvert proposed	Span/ Opening with Span length (m)*	Remarks
90	232+554	Box	1x2.0	
91	232+804	Box	1x5.0	
92	232+990	Box	1x2.0	
93	233+107	Box	1x2.5	
94	233+429	Box	1x3.0	
95	233+651	Box	1x2.0	
96	233+965	Box	1x2.0	
97	234+162	Box	1x4.5	
98	234+260	Box	1x2.0	
99	234+371	Box	1x2.0	
100	234+813	HP	1x1.2	
101	234+945	Box	1x5.0	
102	235+048	Box	1x2.0	
103	235+105	Box	1x2.0	
104	235+212	Box	1x2.0	
105	235+342	Box	1x2.0	
106	235+618	Box	1x2.0	
107	235+982	Box	1x2.0	
108	236+104	Box	1x2.0	
109	236+67	Box	1x2.0	
110	236+931	Box	1x2.0	
111	237+163	Box	1x2.0	
112	237+253	Box	1x2.0	
113	237+394	Box	1x2.0	
114	237+700	Box	1x2.0	
115	238+120	Box	1x2.0	
116	238+390	Box	1x2.0	
117	238+633	Box	1x2.0	
118	239+173	Box	1x4.0	
119	239+284	Box	1x2.5	

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S. No	Design Chainage (Km)	Type of culvert proposed	Span/ Opening with Span length (m)*	Remarks

*Note- height of opening shall be kept according to adjoining TCS.

7.2.3 Widening of Existing Culverts

All existing culverts, which are not to be reconstructed, shall be widened up to the roadway width of the Project Highway & as per the typical cross section given in the Manual and the existing width portion of culverts shall be repaired as per site requirements.

S. No	Design Chainage (Km)	Structure Type	Openings / Spans x Length	Width of existing culvert (m)	Remark
NIL					

7.2.4 Additional new culverts (given in table below) shall be constructed for width equal to the roadway width of the Project Highway & as per typical cross-section given in the manual:

S. No.	Design Chainage (Km)	Proposed type	No. of Spans X span length (m)
1	230+33	Box	1x2.0

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

S. No.	Design Chainage (Km)	Type of repair required
NIL		

7.2.6 Floor protection works shall be as specified in the relevant IRC Codes and Specifications

7.3 Bridges

7.3.1 Existing bridges to be re-constructed/widened:

(i) The Existing bridges at the following locations shall be reconstructed:

S. No	Bridge Location (Design Chainage, in Km)	Salient Features of Existing Bridge		Features of Proposed Bridge	
		No. of Spans with Span Length (c/c of exp. Gap)	Total Width (m)	Proposed Length (m)	Total proposed Width
1	205+923	1x53.5	4.25	56.6	8.5

NOTE: GAD is given in CD

(ii) The following narrow bridges shall be widened:

S.No.	Design	Width	Extent*	Span	Type of Structure	Cross

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	Chainage (Km)	(m)	of Widening	Arrangement (m)	Foundation	Sub-Structure	Super-Structure	Section at Deck Level for widening
1	212+064	5.3	3.8	3 x 6.2 + 6 x 6.0	Open	RC Wall	RC Solid Slab	8.5
2	232+000	5.5	4.2	1x7.9	Open	RC Wall	RC Solid Slab	8.5

7.3.2 Additional new bridges

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

S. No.	Bridge Location (Design Chainage, in Km)	Total Length (m)	Remarks
NIL			

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

S. No.	Design Chainage (Km)	Total length (m)	Remarks
NIL			

7.3.4 Repairs/replacements of railing/parapets of the existing bridges shall be undertaken as follows

S. No.	Design Chainage (Km)	Existing span arrangement (m)	Remarks
NIL			

7.3.5 Drainage system for bridge deck

An effective drainage system for bridge decks shall be provided as specified in paragraph 7.21 of the Manual

7.3.6 Structures in marine environment

The Project Alignment does not lie in Marine Alignment.

7.4 Rail-road bridges

7.4.1 Design, construction and detailing of ROB/RUB shall be as specified in the Manual. The Width of proposed ROB shall be as specified in Schedule D.

7.4.2 Road over-bridges

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

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S. No	Proposed Structure	Existing Chainage	Design Chainage	Name of Crossing	Proposed structural configuration	Proposed Super Structure	Proposed span arrangement (m)	Total Width of Structure
NIL								

7.4.3 Road under-bridges

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

S. No	Design Chainage (Km)	Number and length of span (m)
NIL		

7.5 Grade separated structures

The grade separated structures shall be provided at the locations and of the type and length specified in paragraphs 2.9 and 3 of this Annex-I.

7.6 Repairs and strengthening of bridges and structures

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

A. Bridges

S. No.	Design Chainage (Km)	Nature and extent of repairs /strengthening to be carried out
1	208+512	Minor repair works
2	217+400	Minor repair works
3	218+932	Minor repair works
4	219+477	Minor repair works
5	236+434	Minor repair works
6	238+792	Minor repair works

B. ROB / RUB

S. No.	Design Chainage (Km)	Nature and extent of repairs /strengthening to be carried out
NIL		

C. Overpasses/Underpasses and other structures

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S. No.	Design Chainage (Km)	Nature and extent of repairs /strengthening to be carried out
NIL		

7.7 List of Major Bridges and Structures

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

S. No.	Type of Structure	Design Chainage (Km)	Remark
NIL			

- Note:** - 1. The location and vent size of all the culverts proposed for irrigation purposes shall be decided in consultation with irrigation authority/ independent engineer.
2. Width of culvert shall be reconciled as per cross section at that location
3. Cross road culvert to be provided at the location of Major Junction/ Minor Junctions or utility purposes etc. shall be decided with independent Engineer shall not be treated as change of scope.

8. TRAFFIC CONTROL DEVICES AND ROAD SAFETY WORK.

- 8.1** Traffic control devices and road safety works shall be provided in accordance with Section 9 of the IRC:SP:73-2015.
- 8.2** Specifications of the reflective sheeting shall be as per the Manual of Specifications (IRC:SP:73-2015).

9. ROAD SIDE FURNITURE

- 9.1** Road side furniture shall be provided in accordance with the provisions of Section 11 of the IRC:SP:73-2015.
- a) Road boundary stones for the entire project highway.
 - b) Pedestrian guard rails: At each bus stop location.
 - c) Delineators: For the entire project highway at the locations as suggested in schedule D.
- 9.2 Overhead traffic signs: location and size**
- a) Full width overhead signs: 2 Nos.
 - b) Cantilever overhead signs: Nil
 - c) Overhead Traffic Signs (locations & Size) shall conform to the Manual of Specifications (IRC:SP:73-2015).

10. COMPULSORY AFFORESTATION

The minimum number of trees 8477 are required to be planted by the contractor as compensatory afforestation shall be as per Forest Conservation Act and as per conditions

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of revenue authority while giving permission. Any increase or decrease in numbers of trees as specified (as 500) shall not be treated as change of scope.

11. HAZARDOUS LOCATIONS

The road side safety/Crash barriers shall be provided at following locations for minimum length as per the Manual of Specifications (IRC:SP:73-2015). However, the actual length shall be identified as per requirement of clause 9.4 of IRC:SP:73-2015 in consultation with Authority Engineer. Any increase or decrease in length as specified shall not be treated as change of scope.

S. No.	Design Chainage (km)		Type	Side	Length of Barrier (m)	Remark
	From	To				
Nil						

12. SPECIAL REQUIREMENTS FOR HILL ROAD

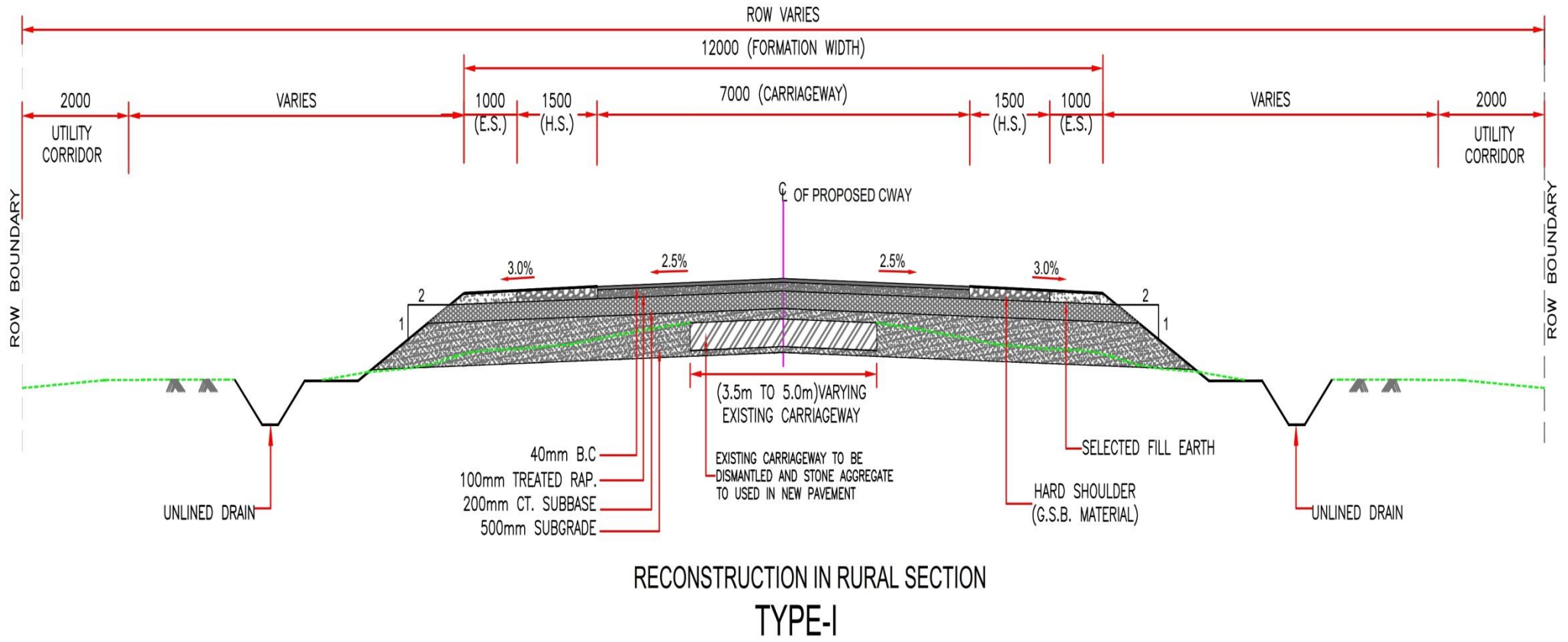
Not Applicable

13. CHANGE OF SCOPE

The length of Structures and bridges specified hereinabove shall be treated as an approximate assessment. The Contractor in accordance with the Specifications and Standards shall determine the actual lengths as required on the basis of detailed investigations. 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.

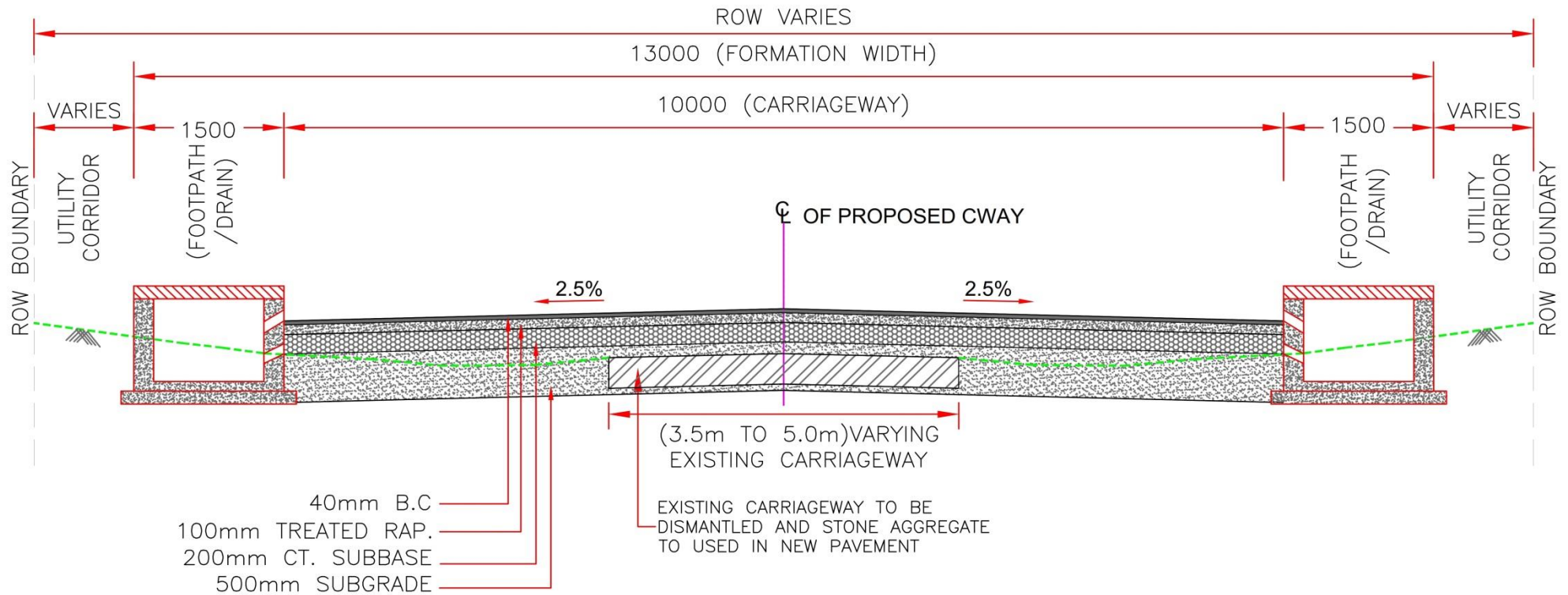
Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Appendix-B-I



Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

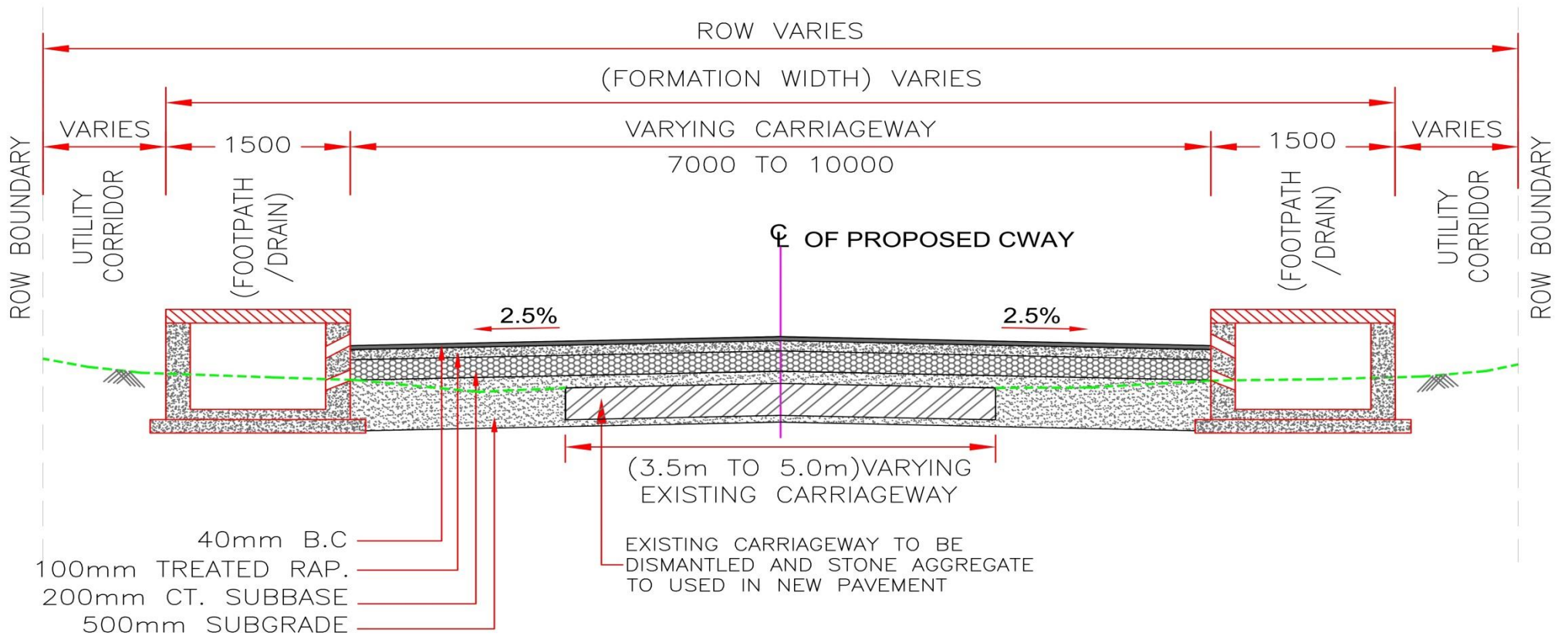
Appendix-B-I



**RECONSTRUCTION IN URBAN SECTION
TYPE-II(A)**

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

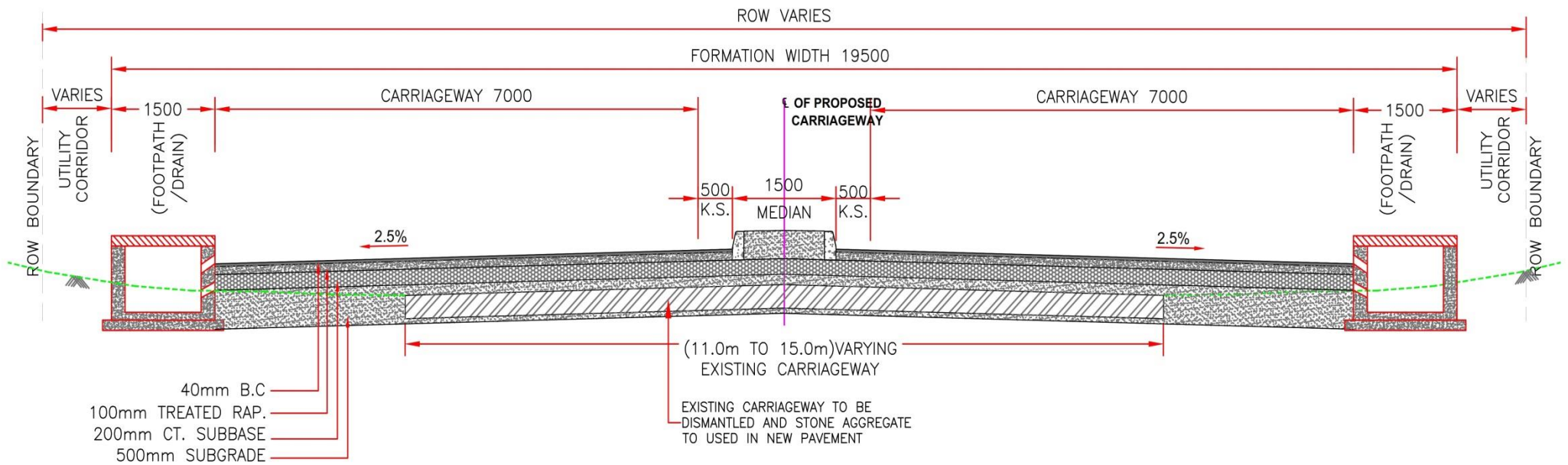
Appendix-B-I



**RECONSTRUCTION IN URBAN SECTION
TYPE-II(B)**

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

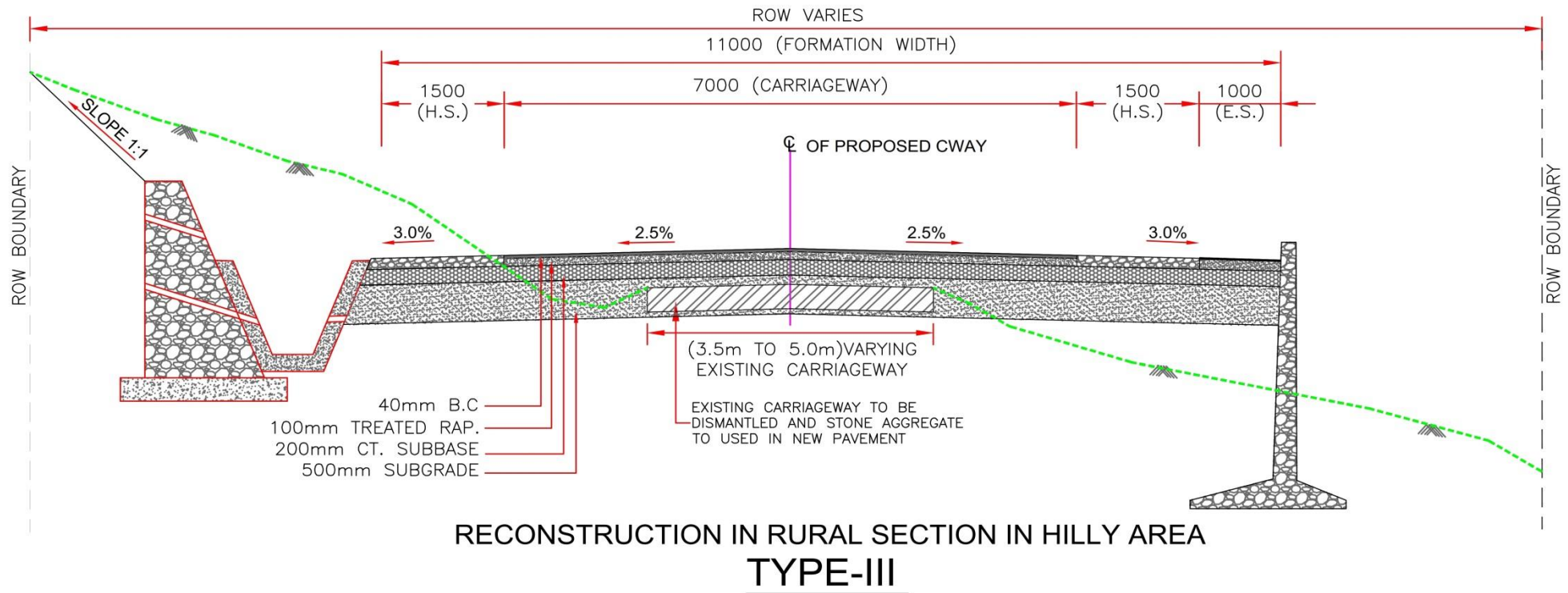
Appendix-B-I



**RECONSTRUCTION TO FOUR LANE WITH RAISED MEDIAN IN URBAN SECTION
TYPE-II(C)**

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

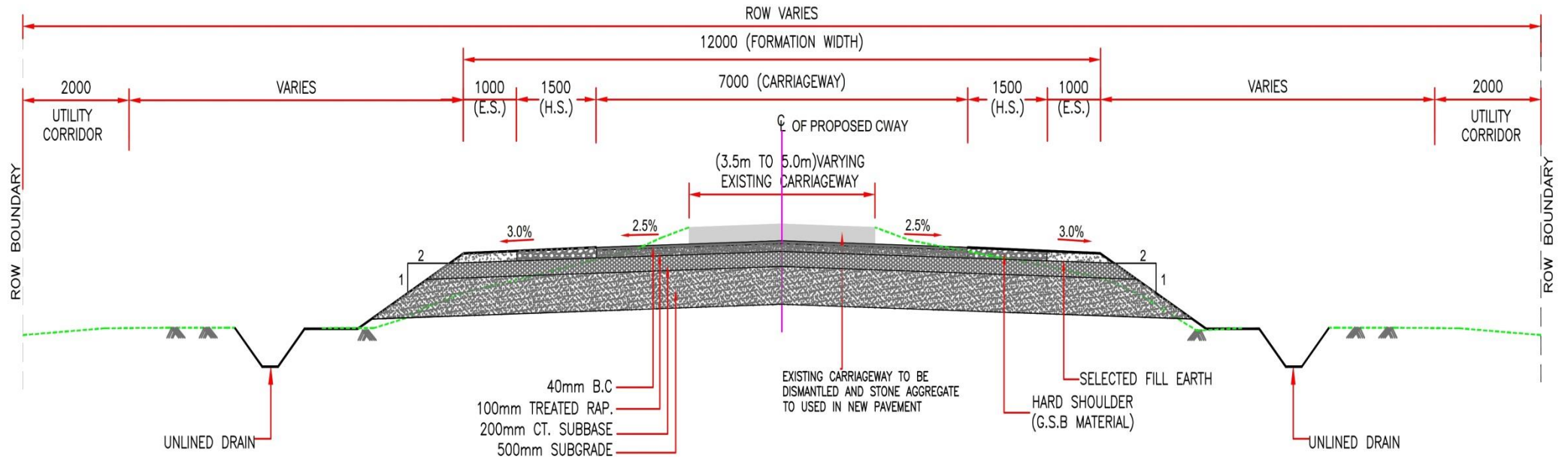
Appendix-B-I



* Retaining wall and Breast wall shown in TCS drawing is typical. Location of these components should be applied as per site condition.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Appendix-B-I

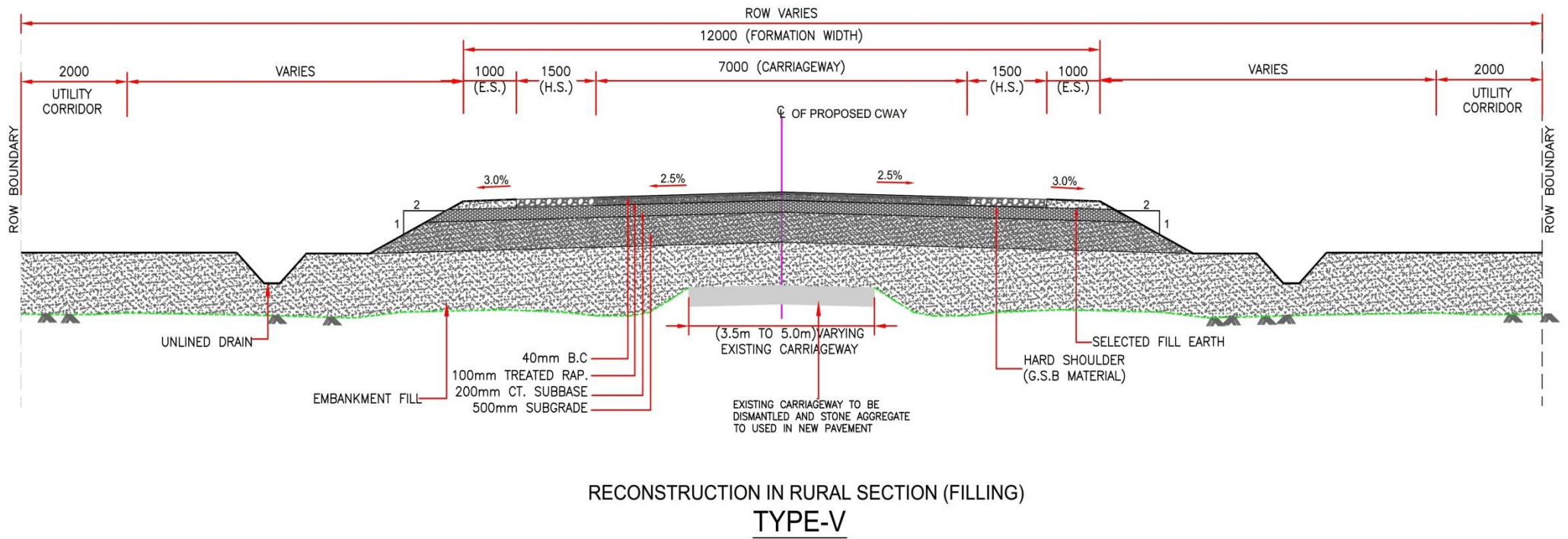


**RECONSTRUCTION IN RURAL SECTION (CUTTING)
TYPE-IV**

** TCS IV is proposed for cutting in rural section and drawing shown for the same is typical. Where ever required the breast wall must be provided, if there is cutting in hill to confine development within ROW.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Appendix-B-I



***TCS V is proposed for filling in rural section and drawing shown for the same is typical. Wherever required the retaining wall must be provided, to confine the toe wall within ROW.

SCHEDULE - C

(See Clause 2.1)

PROJECT FACILITIES

1. Project Facilities

The Contractor shall construct the Project Facilities in accordance with the provisions of this Agreement. Such Project Facilities shall include:

- a) Roadside furniture;
- b) Pedestrian facilities;
- c) Bus shelter
- d) Breast Wall & Retaining Wall

Others to be specified

2. Description of Project Facilities

Each of the Project Facilities is described below:

a) Roadside furniture;

The roadside furniture shall include the provision of:

i. Traffic Signs:

Traffic signs include roadside signs, overhead signs and kerb-mounted signs along the entire Project Highway as per the manual of specifications.

ii. Pavement Markings:

Pavement markings shall cover road marking as per the manual of specifications.

iii. LED Traffic Blinkers:

LED Traffic Blinkers for the entire project highway at the locations as suggested in Manual.

iv. Crash barrier

As per clause 9.4 of IRC:SP-73 and as per details given in schedule-B

v. Delineators

Delineators for the entire Project Highway at the locations as suggested in Manual.

vi. Hectometre / Kilometre stones:

Hectometre/ Kilometre Stones for the entire Project Highway at the locations as suggested in Manual.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

b) Pedestrian facilities;

The pedestrian facilities shall be provided as per the Manual.

c) Bus Shelter

The Contractor shall provide additional 3 nos. of Bus Shelters along the project highway and the locations are given below. The design of Bus Shelters should be aesthetically pleased with surrounding. The locations of these bus shelters shall be finalized by the Contractor in consultation with Authority's Engineer.

S. No.	Existing Chainage	Design Chainage	Side
1	217.095	216+952	Left
2	217.292	217+150	Right
3	231.998	231+620	Right

d) Breast Wall / Retaining Wall

Breast Wall have been proposed along the roadway edge on the hilly side of the section of project road where cutting is required or cutting is more than available ROW. In hilly sections, breast Wall of Random Rubble Masonary shall be provided.

Breast wall and Retaining wall shall be provided as specified in table below & in accordance with the Manual of Specifications and Standards as referred in Schedule-D.

Breast Wall locations

S.No	Design Chainage		Side	Length (m)
	From	To		
1	221.750	221.800	Left	50
2	221.875	221.950	Left	75
3	232.850	232.950	Right	100
4	233.250	233.275	Left	25
5	234.075	234.100	Right	25
6	234.500	234.725	Both	450
7	235.420	235.485	Left	65
8	236.280	236.310	Left	20
9	238.950	239.075	Both	30
Total length (m)				1070

Retaining wall shall be proposed to be installed in sections of the project road having filling embankment height > 3m or toe of the filling section is beyond available ROW to confine it within ROW.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Retaining Wall locations

S.No	Design Chainage		Side	Length (m)
	From	To		
1	217.700	217.725	Right	25
2	221.025	221.225	Right	200
3	221.175	221.250	Left	75
4	221.630	221.700	Left	70
5	221.725	221.750	Right	25
6	225.625	225.675	Left	50
7	229.065	229.085	Right	20
8	229.920	229.950	Left	30
9	229.950	230.000	Right	50
10	230.125	230.175	Right	50
11	230.275	230.325	Right	50
12	233.160	233.225	Left	65
13	233.375	233.425	Left	50
14	233.800	234.100	Both	600
15	234.175	234.300	Both	250
16	234.325	234.350	Both	50
17	234.775	234.825	Right	50
18	234.875	234.925	Both	100
19	234.975	235.050	Right	75
20	235.200	235.225	Right	25
21	236.180	236.220	Right	40
22	236.400	236.440	Left	40
23	236.440	236.550	Both	220
24	237.932	237.950	Right	18
	237.950	238.000	Left	50
Total length (m)				2278

SCHEDULE – D

(See Clause 2.1)

SPECIFICATIONS AND STANDARDS

1. Construction

The Contractor shall comply with the Specifications and Standards set forth in Annex-I of this Schedule-D for construction of the Project Highway.

2. Design Standards

The Project Highway including Project Facilities shall conform to design requirements set out in the following documents:

Manual of Specifications and Standards for Two-Laning of Highways (IRC:SP:73-2015), referred to herein as the Manual.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex - I

(Schedule-D)

Specifications and Standards for Construction

1. Specification and Standards

All Materials, works and construction operations shall conform to the Manual of Specifications and Standards for Two-Lanning of Highways (IRC:SP:73-2015), referred to as the Manual, and MORTH Specifications for Road and Bridge Works. Where the specification for a work is not given, Good Industry Practice shall be adopted to the satisfaction of the Engineer in charge.

2. Deviations from the Specifications and Standards

2.1. The terms “Concessionaire”, “Independent Engineer” and “Concession Agreement” used in the Manual shall be deemed to be substituted by the terms “Contractor”, “Authority’s Engineer” and “Agreement” respectively.

2.2. Notwithstanding anything to the contrary contained in Paragraph 1 above, the following Specifications and Standards shall apply to the Project Highway, and for purposes of this Agreement, the aforesaid Specifications and Standards shall be deemed to be amended to the extent set forth below:

- a. In case of usage of soil stabilization technology, soil stabilizer shall be accredited by IRC as per IRC-28-1967.
- b. Carriageway shall be 7.0m with 1.5m hard shoulder in rural section and 7m to 10.0m carriageway with 1.5m footpath with drain in urban section wherever ROW is available. IRC:SP:73-2015 shall be followed to the extent as required for execution of work in consonance with plan & profile and TCS.

S. No.	Clause Referred in Manual	Item	Provisions as per Manual	Modified Provision
1	2.2.1	Design Speed	80 kmph (min. speed for plain/rolling terrain)	Design speed has not been as per Manual to restrict the construction within the available ROW
2	7.3(iv)	Width of bridge	11 carriageway including 0.5m Kerb shyness on both sides. 0.5m Crash barrier to be provided on both sides after kerb shyness.	8.5m width including crash barrier has been provided because of less traffic on the road.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

SCHEDULE – E

(See Clause 2.1 and 14.2)

MAINTENANCE REQUIREMENTS

1. Maintenance Requirements

- 1.1. The Contractor shall, at all-time maintain the Project Highway in accordance with the provisions of this Agreement, Applicable Laws and Applicable Permits.
- 1.2. The Contractor shall repair or rectify any Defect or deficiency set forth in Paragraph 2 of this Schedule-E within the time limit specified therein and any failure in this behalf shall constitute non-fulfillment of the Maintenance obligations by the Contractor. Upon occurrence of any breach hereunder, the Authority shall be entitled to effect reduction in monthly lump sum payment as set forth in Clause 14.6 of this Agreement, without prejudice to the rights of the Authority under this Agreement, including Termination thereof.
- 1.3. All Materials, works and construction operations shall conform to the "SPECIFICATIONS FOR ROAD AND BRIDGE WORKS (FIFTH REVISION, April 2013)", including latest corrections slips, issued by the Ministry of Surface Transport & Highways, Government of India and published by the Indian Roads Congress.

This being not an item rate contract, the procedure for Measurement and Payment for the items of works shall be in accordance with provision of Article 19 of the Agreement. Therefore the Sub Clauses of measurement for payment and rates in above specifications stand deleted.

Where the specifications for a work are not given, Good Industry Practice shall be adopted to the satisfaction of the Authority's Engineer.

2. Repair/rectification of Defects and deficiencies

The obligations of the Contractor in respect of Maintenance Requirements shall include repair and rectification of the Defects and deficiencies specified in Annex-I of this Schedule-E within the time limit set forth therein.

3. Other Defects and deficiencies

In respect of any Defect or deficiency not specified in Annex-I of this Schedule-E, the Authority's Engineer may, in conformity with Good Industry Practice, specify the permissible limit of deviation or deterioration with reference to the Specifications and Standards, and any deviation or deterioration beyond the permissible limit shall be repaired or rectified by the Contractor within the time limit specified by the Authority's Engineer.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

4. Extension of time limit

Notwithstanding anything to the contrary specified in this Schedule-E, if the nature and extent of any Defect or deficiency justifies more time for its repair or rectification than the time specified herein, the Contractor shall be entitled to additional time in conformity with Good Industry Practice. Such additional time shall be determined by the Authority's Engineer and conveyed to the Contractor and the Authority with reasons thereof;

5. Emergency repairs/restoration

Notwithstanding anything to the contrary contained in this Schedule-E, if any Defect, deficiency or deterioration in the Project Highway poses a hazard to safety or risk of damage to property, the Contractor shall promptly take all reasonable measures for eliminating or minimizing such danger.

6. Daily inspection by the Contractor

The Contractor shall, through its engineer, undertake a daily visual inspection of the Project Highway and maintain a record thereof in a register to be kept in such form and manner as the Authority's Engineer may specify. Such record shall be kept in safe custody of the Contractor and shall be open to inspection by the Authority and the Authority's Engineer at any time during office hours.

7. Pre-monsoon inspection / Post-monsoon inspection

The Contractor shall carry out a detailed pre-monsoon inspection of all bridges, culverts and drainage system before [1st June] every year in accordance with the guidelines contained in IRC: SP:35. Report of this inspection together with details of proposed maintenance works as required on the basis of this inspection shall be sent to the Authority's Engineer before the [10th June] every year. The Contractor shall complete the required repairs before the onset of the monsoon and send to the Authority's Engineer a compliance report. Post monsoon inspection shall be done by the [30th September] and the inspection report together with details of any damages observed and proposed action to remedy the same shall be sent to the Authority's Engineer.

8. Repairs on account of natural calamities

All damages occurring to the Project Highway on account of torrential rains, floods, earthquake or other natural disasters shall be undertaken by the Contractor at its own cost and/or out of the proceeds of insurance.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

**Annex – I
(Schedule-E)**

Repair/rectification of Defects and deficiencies

The Contractor shall repair and rectify the defects and deficiencies specified in this Annex-I of Schedule-E within the time limit set forth in the table below.

Nature of Defect or deficiency		Time limit for repair/ rectification
ROADS		
(a)	Carriageway and paved shoulders	
(i)	Breach or blockade	Temporary restoration of traffic within 24 hours; permanent restoration within 15 (fifteen) days
(ii)	Any significant change in roughness value from original value [more than 5%] in a stretch of 1 km (as measured by a Calibrated bump integrator)	120 (one hundred and twenty) days
(iii)	Pot holes	24 hours
(iv)	Any cracks in road surface	15 (fifteen) days
(v)	Any depressions, rutting exceeding 10 mm in road surface	30 (Thirty) days
(vi)	Skidding	7 (seven) days
(vii)	Any other defect/distress on the road	15 (fifteen) days
(viii)	Damage to pavement edges	15 (fifteen) days
(ix)	Removal of debris, dead animals	6 hours
(x)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(b)	Granular earth shoulders, side slopes, drains and culverts	

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

(i)	Edge drop at shoulders exceeding 40 mm	7 (Seven) days
(ii)	Variation by more than 1% in the prescribed slope of camber/cross fall (shall not be less than the camber on the main carriageway)	7 (seven) days
(iii)	Variation by more than 15% in the prescribed side (embankment) slopes	30 (thirty) days
(iv)	Rain cuts/gullies in slope	7 (Seven) days
(v)	Damage to or silting of culverts and side drains	7 (Seven) days
(vi)	Desilting of drains in urban/semi-urban areas	24 hours
(vii)	Railing, parapets, crash barriers	7 (Seven) days (Restore immediately if causing safety hazard)
(viii)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(c)	Road side furniture including road sign and pavement marking	
(i)	Damage to shape or position, poor visibility or loss of retro-reflectivity	48 hours
(ii)	Painting of KM stone, railing, parapets, crash barriers	As and when required/Once every year
(iii)	Damaged/missing road signs required replacement	7 (Seven) days
(iv)	Damage to road mark ups	7 (Seven) days
(v)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(d)	Road lighting	
(i)	Any major failure of the system	24 hours
(ii)	Faults and minor failures	8 hours
(iii)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(e)	Trees and plantation	
(i)	Obstruction in a minimum head-room of 5 m	24 hours

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

	above carriageway or obstruction in visibility of road signs	
(ii)	Removal of fallen trees from carriageway	4 hours
(iii)	Deterioration in health of trees and bushes	Timely watering and treatment
(iv)	Trees and bushes requiring replacement	30 (Thirty) days
(v)	Removal of vegetation affecting sight line and road structures	15 (fifteen) days
(vi)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(f)	Other Project Facilities, Rest Area and Approach roads	
(i)	Damage in pedestrian facilities, truck lay-buys, bus-bays, bus-shelters, cattle, crossings, [Traffic Aid Posts, Medical Aid Posts] and service roads	15 (fifteen) days
(ii)	Cleaning of toilets	Every 4 hours
(iii)	Defects in electrical, water and sanitary installations	24 hours
(iv)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(v)	Rescue operations and attendance at accidents	Round the clock patrolling Inform police and other agencies immediately Removal of vehicles or debris. Assistance for first-aid and transport of accident victim to hospital Arrangement for safe movement of traffic
(vi)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days
(vii)	Damaged vehicles or debris on the road	4 (Four) hours
(viii)	Malfunctioning of the mobile cranes	4 (four) hours

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Bridges		
(a)	Superstructure	
(i)	Any damage, cracks, spalling/scaling Temporary measures Permanent measures	Within 48 hours Within 15 (fifteen) days or as specified by the Authority's Engineer
(b)	Bearings (metallic) of bridges	
(i)	Deformation	15 (fifteen) days Greasing of metallic bearings once in a year
(c)	Joints	
(i)	malfunctioning of joints	15 (fifteen) days
(ii)	Any other defects/deficiency not covered above (a) , (b) &(c) but pointed out by Engineer	3 (Three) days
(d)	Foundations	
(i)	Scouring and/or cavitation	15 (fifteen) days
(e)	Piers, abutments, return walls and wing walls	
(i)	Cracks and damages including settlement and tilting, Spalling, scaling	30 (thirty) days
(ii)	Any other defects/deficiency not covered above (d) & (e) but pointed out by Engineer	3 (Three) days
(f)	Other items	
(i)	Deforming of pads in elastomeric bearings	7 (seven) days
(ii)	Gathering of dirt in bearings and joints; or clogging of spouts, weep holes and vent-holes	3 (three) days
(iii)	Damage or deterioration in kerbs, parapets, handrails and crash barriers	3 (three) days

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

		(immediately within 24 hours if posing danger of safety)
(iv)	Rain-cuts or erosion of banks of the side slopes of approaches	7 (seven) days
(v)	Damage to wearing coat	15 (fifteen) days
(vi)	Damage or deterioration in approach Slabs, pitching, apron, toes, floor or guide bunds	30 (thirty) days
(vii)	Growth of vegetation affecting the structure or obstructing the waterway	15 (fifteen) days
(viii)	Any other defects/deficiency not covered above but pointed out by Engineer	3 (Three) days

The failure to address above measures for any of the defects/deficiency may attract reduction in payment as per schedule M

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Schedule-F

(See Clause 3.1.5(a))

APPLICABLE PERMITS

1. Applicable Permits

The Contractor shall obtain, as required under the Applicable Laws, the following Applicable Permits:

- (a) Permission of the State Government for extraction of boulders from quarry;
- (b) Permission of Village Panchayat and Pollution Control Board for installation of crushers;
- (c) License for use of explosives;
- (d) Permission of the State Government for drawing water from river/reservoir;
- (e) License from inspector of factories or other competent Authority for setting up batching plant;
- (f) Clearance of Pollution Control Board for setting up batching plant;
- (g) Clearance of Village Panchayats and Pollution Control Board for setting up asphalt plant;
- (h) Permission of Village Panchayats and State Government for borrow earth; and
- (i) Any other permits, clearances or approvals required under Applicable Laws.

1.2 Applicable permits, as required, relating to environmental protection and conservation shall have been produced by the Authority in accordance with the provisions of this Agreement

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Schedule-G

(See Clause 7.1.1, 7.5.3 and 19.2)

FORM OF BANK GUARANTEE

Annex-I

(See Clause 7.1.1)

PERFORMANCE SECURITY

**The Managing Director,
NHIDCL,
3rd Floor, PTI Building, Sansad Marg,
New Delhi**

WHEREAS:

- (A) _____ [name and address of contractor] (hereinafter called “the Contractor”) and [NHIDCL], (“the Authority”) have entered into an agreement (the “Agreement”) for “Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands”, subject to and in accordance with the provisions of the Agreement.
- (B) The Agreement requires the Contractor to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period and Defects Liability Period (as defined in the Agreement) in a sum of Rs. Crore (Rupees Crore) (the “Guarantee Amount”).
- (C) We, through our branch at (the “Bank”) have agreed to furnish this bank guarantee (hereinafter called the “Guarantee”) by way of Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during and under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the guarantee amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the Authority, under the hand of an officer not below the rank of [Executive Director, NHIDCL], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Bank, notwithstanding any difference between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other Authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfillment and/or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfillment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The Performance Security shall cease to be in force and effect upto 90 (ninety) days after the end of the Defects Liability Period as set forth in Clause 17.1 of EPC agreement.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.
[[[
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in para 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.
12. This guarantee shall also be operable at our..... Branch at New Delhi, from whom, confirmation regarding the issue of this guarantee or extension/ renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.
13. Intimation regarding issuance of this Bank Guarantee shall be sent to Authority's Bank through SFMS gateway as per the details below:

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

S.No.	Particulars	Details
1	Name of Beneficiary	National Highways & Infrastructure Development Corporation Limited
2	Beneficiary Bank Account No.	90621010002659
3	Beneficiary Bank Branch	IFSC SYNB0009062
4	Beneficiary Bank Branch Name	Transport Bhawan, New Delhi
5	Beneficiary Bank Address	Syndicate Bank transport Bhawan, 1st Parliament Street, New Delhi-110001

Signed and sealed this day of 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex-II

(Schedule-G)

(See Clause 7.5.3)

Form for Guarantee for Withdrawal of Retention Money

**The Managing Director,
NHIDCL,
3rd Floor, PTI Building, Sansad Marg,
New Delhi**

WHEREAS:

[Name and address of contractor] (hereinafter called “**the Contractor**”) has executed an agreement (hereinafter called the “**Agreement**”) with the [NHIDCL], (hereinafter called “the Authority”) for the “Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands”, subject to and in accordance with the provisions of the Agreement.

- a. in accordance with the Clause 7.5.3 of the Agreement, whenever the amount of the retention money (hereinafter called “**Retention Money**”) held by the Authority exceeds 1% (one per cent) of the Contract Price, the Contractor may, at its option, withdraw the Retention Money after furnishing to the Authority a bank guarantee for an amount equal to the proposed withdrawal.
- b. We, through our branch at (the “**Bank**”) have agreed to furnish this bank guarantee (hereinafter called the “**Guarantee**”) for the amount of Rs. (..... in words) (the “**Guarantee Amount**”).

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

2. A letter from the Authority, under the hand of an officer not below the rank of [Executive Director, NHIDCL], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Bank, notwithstanding any difference between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other Authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Retention Money and any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Retention Money.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

8. The guarantee shall cease to be in force and effect 90 (ninety) days after the end of the Defects Liability Period specified in Clauses 17.1 of the Agreement.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in para 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.
12. This guarantee shall also be operable at our..... Branch at New Delhi, from whom, confirmation regarding the issue of this guarantee or extension/ renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.
13. Intimation regarding issuance of this Bank Guarantee shall be sent to Authority's Bank through SFMS gateway as per the details below:

S.No.	Particulars	Details
1	Name of Beneficiary	National Highways & Infrastructure Development Corporation Limited
2	Beneficiary Bank Account No.	90621010002659
3	Beneficiary Bank Branch	IFSC SYNB0009062
4	Beneficiary Bank Branch Name	Transport Bhawan, New Delhi
5	Beneficiary Bank Address	Syndicate Bank transport Bhawan, 1st Parliament Street, New Delhi-110001

Signed and sealed this day of 20..... at

SIGNED, SEALED AND DELIVERED

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Annex-III

(Schedule-G)

(See Clause 19.2)

Form for Guarantee for Advance Payment

**The Managing Director,
NHIDCL,
3rd Floor, PTI Building, Sansad Marg,
New Delhi**

WHEREAS:

- (A) [name and address of contractor] (hereinafter called “**the Contractor**”) has executed an agreement (hereinafter called the “**Agreement**”) with the [NHIDCL], (hereinafter called “**the Authority**”) for the “Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands”, subject to and in accordance with the provisions of the Agreement.
- (B) in accordance with the Clause 19.2 of the Agreement the Authority shall make to the Contractor advance payment (hereinafter called “**Advance Payment**”) equal to 10% (ten per cent) of the contract price for mobilization expenses and acquisition of equipment; and that the Advance Payment shall be made in two installments subject to the Contractor furnishing an irrevocable and unconditional guarantee by a scheduled bank for an amount equal to the amount of each installment to remain effective till the complete and full repayment of the installment of the Advance Payment as security for compliance with its obligations in accordance with the Agreement; and the amount of (first/second) installment of the Advance Payment is Rs. ***** cr. (Rupees ***** crore) (the “**Guarantee Amount**”).
- (C) We, through our branch at (the “**Bank**”) have agreed to furnish this bank guarantee (hereinafter called the “**Guarantee**”) for the Guarantee Amount.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful repayment on time of the aforesaid installment of the Advance Payment under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the guarantee amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the Authority, under the hand of an officer not below the rank of [Executive Director, NHIDCL], that the Contractor has committed default in the due and faithful performance of all or any of its obligations for the repayment of the installment of the Advance Payment under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final, and binding on the Bank, notwithstanding any difference between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other Authority or body, or by the discharge of the Contractor for any reason whatsoever
3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Advance Payment or to extend the time or period of its repayment or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Advance Payment.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The guarantee shall cease to be in force and effect 90 (ninety) days after the end of the one year from the date of payment of the installment of the Advance Payment, as set forth in Clause 19.2 of the Agreement.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.
11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in para 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.
12. Notwithstanding anything contained herein before, our liability under this Bank Guarantee is restricted to Rs. _____ (Rs. _____ in words) and the bank guarantee shall remain valid till _____. Unless a claim or a demand in writing is served upon us on or before _____ all our liability under this Bank Guarantee shall cease.
13. This guarantee shall also be operable at our..... Branch at New Delhi, from whom, confirmation regarding the issue of this guarantee or extension/ renewal thereof shall be made available on demand. In the contingency of this guarantee being invoked and payment thereunder claimed, the said branch shall accept such invocation letter and make payment of amounts so demanded under the said invocation.

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

14. Intimation regarding issuance of this Bank Guarantee shall be sent to Authority's Bank through SFMS gateway as per the details below:

S.No.	Particulars	Details
1	Name of Beneficiary	National Highways & Infrastructure Development Corporation Limited
2	Beneficiary Bank Account No.	90621010002659
3	Beneficiary Bank Branch	IFSC SYNB0009062
4	Beneficiary Bank Branch Name	Transport Bhawan, New Delhi
5	Beneficiary Bank Address	Syndicate Bank transport Bhawan, 1st Parliament Street, New Delhi-110001

15.

Signed and sealed this day of 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

Schedule-H

(See Clauses 10.1.4 and 19.3)

Contract Price Weightages

- 1.1 The Contract Price for this Agreement is **Rs. Crore.**
 1.2 Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
1	2	3	4
Road works including culverts, widening and repair of culverts	67.89%	B.1- Reconstruction/ New 4-lane realignment/bypass (Flexible pavement)	
		(1) Earthwork up to top of the sub-grade	20.31%
		(2) Treated Sub-Base Course	25.76%
		(3) Treated RAP	12.58%
		(4) Bituminous Base Course	0.00
		(5) Wearing Coat	12.37%
		D-Re-Construction and New culverts on existing road, realignments, bypasses:	
		Culverts (lengths < 6m)	28.98%
Minor Bridges/ Underpasses/ Overpasses	2.54%	A.1- Widening and Repair of Minor bridges (length >6 m and < 60 m)	
		Minor bridges	59.39%
		A.2- New Minor bridges (length >6 m and < 60 m)	
		(1) Foundation + Sub- Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers upto the abutment/ pier cap.	20.77%

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		(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respect.	18.80%
		(3) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use.	1.04%
Major Bridge works	0.00%	A.1- Widening and Repair of Major bridges	
		Major Bridges	0.00%
		A.2 -New major bridges & Viaduct	
		(1) Foundation	0.00%
		(2) Sub-structure	0.00%
		(3) Super-structure (including bearings)	0.00%
		(4) Wearing Coat including expansion joints	0.00%
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.00%
		(6) Wing walls/ return walls	0.00%
		(7) Guide Bunds, River Training works etc.	0.00%
		(8) Approaches (including Retaining walls, stone pitching and protection works)	0.00%
Other works	29.57%	(i) Road side drains	33.08%
		(ii) Road signs, markings, km stones, safety devices,....	11.26%
		(iii) Junctions	11.05%
		(iv) Protection Works	22.66%
		(v) Project facilities	2.41%
		(a) Bus Bays	0.000%
(b) Truck lay-byes	0.000%		
(c) Rest areas	0.000%		
(d) others	0.000%		

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		(vi) Repair of Protection Works other than approaches to the bridges, elevated sections/ flyover/ grade separators and ROBs/ RUBs	0.000%
		(vii) Site Clearance & Dismantling	1.60%
		(viii) Safety and traffic management during construction	0.00%
		ix) Maintenance cost	17.94%

- The above list is illustrative and may require modification as per the scope of the work.

1.3 Procedure of estimating the value of work done.

1.3.1 Road works.

Procedure for estimating the value of road work done shall be as follows:

Table 1.3.1

Stage for Payment	Percentage weightage	Payment Procedure
B.1- Reconstruction/ New 4-lane realignment/bypass (Flexible pavement)		
(1) Earthwork up to top of the sub-grade	20.31%	Unit of measurement is linear length for two lane. Payment of each stage shall be made on pro rata basis on completion of a stage in length of nor less than 10% of the total length.
(2) Treated Sub-Base Course	25.76%	
(3) Treated RAP	12.58%	
(4) Bituminous Base Course	0.00	
(5) Wearing Coat	12.37%	
D-Re-construction and New culverts on existing road, realignments, bypasses:		
(1) Culverts (length < 6m)	28.98%	Cost of each culvert shall be determined on pro- rata basis with respect to the total number of culverts. Payment shall be made on the completion of at least five culverts.

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@ For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

$$\text{Cost per km} = P \times \text{weightage for road work} \times \text{weightage for bituminous work} \times (1/L)$$

Where P = Contract Price

L = Total length in km

Similarly, the rates per km for stages shall be worked out accordingly.

Note: The length affected due to law and order problems or litigation during execution due to which the Contractor is unable to execute the work, may be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affect and referred in other clauses of the Contract Agreement.

1.3.2 Minor Bridge and Underpasses/ Overpasses

Procedure for estimating the value of Minor Bridge and Underpasses/ Overpasses shall be as stated in table 1.3.2:

Table 1.3.2

Stage of Payment	Weightage	Payment Procedure
1	2	3
A.1- Widening and Repair of Minor bridges (length >6 m and < 60 m)	59.39%	Cost of each minor bridge shall be determined on pro rata basis with respect to the total linear length of the minor bridges. Payment shall be made on the completion of widening & repair works of a minor bridge.
A.2- <u>New minor bridges</u>		
(1) Foundation + Sub- Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers upto the abutment/ pier cap.	20.77%	Cost of each minor bridge shall be determined on pro rata basis with respect to the total linear length (m) of the minor bridges. Payment against foundation + sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of

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		foundation + sub-structure of each bridge subject to completion of at least two foundations along with sub-structure upto abutment/pier cap level of each bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respect.	18.80%	Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure of at least one span in all respects as specified in the column of “Stage of Payment” in this sub-clause.
(3) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect and fit for use.	1.04%	Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified in the column of “Stage of Payment” in this sub-clause.

1.3.3 Major Bridge works & Viaducts

Procedure for estimating the value of Major Bridge works & Viaducts shall be as stated in table 1.3.3:

Table 1.3.3

Stage for Payment	Percentage weightage	Payment Procedure
A.1- Widening and Repair of Major bridges	0.00%	Cost of each major bridge shall be determined on pro rata basis with respect to the total linear length of the major bridges. Payment shall be made on the completion of widening & repair works of a minor bridge.
A.2- <u>New major bridges & Viaduct</u>		

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(1) Foundation	0.000%	Cost of each major bridge/ Viaduct shall be determined on pro rata basis with respect to the total linear length (m) of the Major bridge/ Viaduct. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the Major bridge/ Viaduct subject to completion of at least two foundations of the Major bridge/ Viaduct. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	0.000%	Payment against sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the Major bridge/ Viaduct subject to completion of at least two sub-structures of abutments/piers upto abutment/pier cap level of the Major bridge/ Viaduct.
(3) Super-structure (including bearings)	0.000%	Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure including bearings of at least one span in all respects as specified.
(4) Wearing Coat including expansion joints	0.000%	Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.	0.000%	Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/ return walls	0.000%	Payment shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Guide Bunds, River Training	0.000%	Payment shall be made on completion of all

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works etc.		Guide Bunds/River Training works etc. complete in all respects as specified.
(8) Approaches (including Retaining walls, stone pitching and protection works)	0.000%	Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respect as specified.

1.3.4 Other works.

Procedure for estimating the value of other works done shall be as stated in table 1.3.4:

Table 1.3.4

Stage for Payment		Percentage weightage	Payment Procedure
(i) Road side drains		33.08%	Unit of measurement is linear length in km.
(ii) Road signs, markings, km stones, safety devices,....		11.26%	Payment shall be made on pro-rata basis on completion of a stage in a length of not less than 10% (ten per cent) of the total length.
(iii) Junctions		11.05%	Payment shall be made on pro rata basis for completed facilities.
(iv) Protection works		22.66%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 10% (ten per cent) of the total length.
(v) Project facilities	(i) Bus byes	2.41%	Payment shall be made on pro-rata basis for completed facilities.
	(ii) Truck lay bye	0.000%	
	(iii) Rest areas	0.000%	
	(iv) others	0.000%	
(vi) Repair of Protection Works other than approaches to the bridges, elevated sections/ flyover/ grade separators and ROBs/ RUBs		0.000%	Unit of measurement is linear length. Payment shall be made on pro-rata basis on completion of a stage in a length of not less than 10% (ten per cent) of the total length.
(vii) Site Clearance & Dismantling		1.60%	
(v) Safety and traffic management during construction		0.000%	Payment shall be made on pro rata basis every six months.
(vii) Maintenance for 4 years		17.94	

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2. Procedure for payment for Maintenance

- 2.1 The cost for maintenance shall be as stated in Clause 14.1.1.
- 2.2 Payment for Maintenance shall be made in quarterly instalments in accordance with the provisions of Clause 19.7..

SCHEDULE-I

(See Clause 10.2)

DRAWINGS

1. Drawings

In compliance of the obligations set forth in Clause 10.2 of this Agreement, the Contractor shall furnish to the Authority's Engineer, free of cost, all Drawings listed in Annex-I of this Schedule-I.

2. Additional Drawings

If the Authority's Engineer determines that for discharging its duties and functions under this Agreement, it requires any drawings other than those listed in Annex-I, it may by notice require the Contractor to prepare and furnish such drawings forthwith. Upon receiving a requisition to this effect, the Contractor shall promptly prepare and furnish such drawings to the Authority's Engineer, as if such drawings formed part of Annex-I of this Schedule-I.

Annex-I

(Schedule-I)

List of Drawings

Alignment Plan and longitudinal Section are enclosed in digital form in CD marked as Annex-I

[Note: The Authority shall describe in this Annex-I, all the Drawings that the Contractor is required to furnish under Clause 10.2.]

- Horizontal and Vertical Alignment (with plan & profile) with details of reference pillars. Horizontal Intersection Point, Vertical Intersection Points, elements of curves, and sight distances.
- Cross-section at 50m interval along the alignment within ROW.
- Typical Cross-section with details of pavement structures.
- Detailed drawings of individual Bridges/Structures/ROB.
- Detailed drawing for individual culverts.
- Detailed layout drawings for intersections and interchanges.
- Drawings for Road sign, Markings.
- Traffic Management drawings for safety in construction zones.
- Detailed drawings of guide bunds and protection works and retaining structures.
- Detailed drawings of Drainage including Masonry drains and other drains.

SCHEDULE-J

(See Clause 10.3.2)

PROJECT COMPLETION SCHEDULE

1. Project Completion Schedule

During Construction period, the Contractor shall comply with the requirements set forth in this Schedule J for each of the Project Milestones and the **Scheduled Completion Date**. Within 15 (fifteen) days of the date of each Project Milestone, the Contractor shall notify the Authority of such compliance along with necessary particulars thereof.

2. Project Milestone-I

2.1 Project Milestone-I shall occur on the date falling on the 120th (One Twenty) day from the Appointed Date (the “**Project Milestone-I**”).

2.2 Prior to the occurrence of Project Milestone-I, the Contractor shall have commenced construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements completion schedule in reference to Schedule-H Items, Stages and Sub-stages payment statements for an amount not less than 10% (ten per cent) of the Contract Price.

3. Project Milestone-II

3.1 Project Milestone-II shall occur on the date falling on the 330th (Three hundred and thirty) day from the Appointment Date (the “**Project Milestone-II**”).

Prior to the occurrence of Project Milestone-II, the Contractor shall have commenced construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements completion schedule in reference to Schedule-H Items, Stages and Sub-stages payment statements for an amount not less than 35% (thirty five per cent) of the Contract Price.

4. Project Milestone-III

4.1 Project Milestone-III shall occur on the date falling on the 540th (five hundred and Fourty) day from the Appointed Date (the “**Project Milestone-III**”).

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4.2 Prior to the occurrence of Project Milestone-III, the Contractor shall have continued with construction of the Project Highway and submitted to the Authority duly and validly prepared payment Statements for an amount not less than 60% (sixty per cent) of the Contract Price.

5 Schedule Completion Date

5.1 The Schedule Completion Date shall occur on the 730th (seven hundred and thirtieth) day from the Appointed Date.

5.2 On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

6 Extension of time

Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Completion Date, as the case may be, under and in accordance with the provisions of this Agreement, the Project Completion Schedule shall be deemed to have been amended accordingly.

SCHEDULE-K

(See Clause 12.1.2)

Tests on Completion

1. Schedule for Tests

- 1.1 The Contractor shall, no later than 30 (thirty) days prior to the likely completion of construction, notify the Authority's Engineer and the Authority of its intent to subject the Project Highway to Tests, and no later than 10 (ten) days prior to the actual date of Tests, furnish to the Authority's Engineer and the Authority detailed inventory and particulars of all works and equipment forming part of Works.
- 1.2 The Contractor shall notify the Authority's Engineer of its readiness to subject the Project Highway to Tests at any time after 10 (ten) days from the date of such notice, and upon receipt of such notice, the Authority's Engineer shall, in consultation with the Contractor, determine the date and time for each Test and notify the same to the Authority who may designate its representative to witness the Tests. The Authority's Engineer shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 12 and this Schedule K.

2 Tests

- 2.1 Visual and physical test: The Authority's Engineer shall conduct a visual and physical check of construction to determine that all works and equipment forming part thereof conform to the provisions of this Agreement. The physical tests shall include: all the tests specified in IRC code, manual and MORTH specifications for the road and Bridge works, 5th revision, 2013.
- 2.2 Riding quality test: Riding quality of each lane of the carriageway shall be checked with the help of a calibrated bump integrator and the maximum permissible roughness for purposes of this Test shall be [2,000 (two thousand)] mm for each kilometer.
- 2.3 Tests for bridges: All major and minor bridges shall be subjected to the rebound hammer and ultrasonic pulse velocity tests, to be conducted in accordance with the procedure described in Special Report No. 17: 1996 of the IRC Highway Research Board on Nondestructive Testing Techniques, at two spots in every span, to be chosen at random by the Authority's Engineer. Bridges with a span of 15 (fifteen) meters or more shall also be subjected to load testing.
- 2.4 Other tests: The Authority's Engineer may require the Contractor to carry out or cause to be carried additional tests, in accordance with Good Industry Practice, for determining the compliance of the Project Highway with Specifications and Standards.

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- 2.5 Environmental audit: The Authority's Engineer shall carry out a check to determine conformity of the Project Highway with the environmental requirements set forth in Applicable Laws and Applicable Permits.
- 2.6 Safety Audit: The Authority's Engineer shall carry out or cause to be carried out, a safety audit to determine conformity of the Project Highway with the safety requirements and Good Industry Practice.

3 Agency for conducting Tests

All Tests set forth in this Schedule-K shall be conducted by the Authority's Engineer or such other agency or person as it may specify in consultation with the Authority.

4. Completion Certificate

Upon successful completion of Tests, the Authority's Engineer shall issue the Completion Certificate in accordance with the provisions of Article 12.

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SCHEDULE-L

(See Clause 12.2 and 12.4)

PROVISIONAL CERTIFICATE

1. I, (Name of the Authority's Engineer), acting as Authority's Engineer, under and in accordance with the Agreement dated (the "**Agreement**"), for construction of the "Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands through (Name of Contractor), hereby certify that the Tests in accordance with Article 12 of the Agreement have been undertaken to determine compliance of the Project Highway with the provisions of the Agreement.

2. Construction Works that are incomplete on account of Time Extension have been specified in the Punch List appended hereto, and the Contractor has agreed and accepted that it shall complete all such works in the time and manner set forth in the Agreement. In addition, certain minor works are incomplete and these are not likely to cause material inconvenience to the users of the Project Highway or other their safety. The contractor has agreed and accepted that as a condition of this Provisional Certificate, it shall complete such minor works within 30 (thirty) days hereof. These minor works have also been specified in the aforesaid punch list.

3. In view of the foregoing, I am satisfied that that Project Highway can be safety and reliably placed in service of the users thereof, and in terms of the Agreement, the Project Highway is hereby provisionally declared fit for entry into operation on this theday of20

ACCEPTED, SIGNED, SEALED

SIGNED, SEALED AND DELIVERED

AND DELIVERED

For and on behalf of

For and on behalf of

CONTRACTOR

by Authority's Engineer

by:

(Signature)

(Signature)

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

COMPLETION CERTIFICATE

1. I, (Name of the Authority's Engineer), acting as Authority's Engineer, under and in accordance with the Agreement dated (the "**Agreement**"), for construction of the "Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands through (Name of Contractor), hereby certify that the Tests in accordance with Article 12 of the Agreement have been successfully undertaken to determine compliance of the Project Highway with the provisions of the Agreement, and I am satisfied that the Project Highway can be safety and reliably placed in service of the Users thereof..
2. It is certified that, in terms of the aforesaid Agreement, all works forming part of Project Highway have been completed, and the Project Highway is hereby declared fit for entry into operation on this theday of20

SIGNED, SEALED AND DELIVERED

For and on behalf of
Authority's Engineer by:
(Signature)
(Name)
(Designation)
(Address)

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

SCHEDULE-M

(See Clauses 14.6., 15.2 and 19.7)

PAYMENT REDUCTION FOR NON-COMPLIANCE

1. Payment reduction for non-compliance with the Maintenance Requirements

1.1 Monthly lump sum payments for maintenance shall be reduced in the case of non-compliance with the Maintenance Requirements set forth in Schedule-E.

1.2 Any deduction made on account of non-compliance with the maintenance Requirements shall not be paid even after compliance subsequently. The deduction shall continue to be made every month until compliance is done.

1.3 The Authority's Engineer shall calculate the amount of payment reduction on the basis of weightage in percentage assigned to non-conforming items as given in Paragraph 2.

2. Percentage reductions in lump sum payments

2.1 The following percentages shall govern the payment reduction:

S. No.	Item/Defect/Deficiency	Percentage
(a)	Carriageway/Pavement	
(i)	Potholes, cracks, other surface defects	15%
(ii)	Repairs of Edges, Rutting	5%
(b)	Road, Embankment, Cuttings, Shoulders	
(i)	Edge drop, inadequate crossfall, undulations, settlement, potholes, ponding, obstructions	10%
(ii)	Deficient slopes, raincuts, disturbed pitching, vegetation growth, pruning of trees	5%
(c)	Bridges and Culverts	
(i)	Desilting, cleaning, vegetation growth, damaged pitching, flooring, parapets, wearing course, footpaths, any damage to foundations	20%

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(ii)	Any Defects in superstructures, bearings and sub-structures	10%
(iii)	Painting, repairs/replacement kerbs, railings, parapets, guideposts/crash barriers	5%
(d)	Roadside Drains	
(i)	Cleaning and repair of drains	5%
(e)	Road Furniture	
(i)	Cleaning, painting, replacement of road signs, delineators, road markings, 200 m/km/5th km stones	5%
(f)	Miscellaneous Items	
(i)	Removal of dead animals, broken down/accidented vehicles, fallen trees, road blockades or malfunctioning of mobile crane	10%
(ii)	Any other Defects in accordance with paragraph 1.	5%
(g)	Defects in Other Project Facilities	5%

2.2 The amount to be deducted from monthly lump-sum payment for non-compliance of particular item shall be calculated as under:

$$R = P/100 * M * L1/L$$

Where. P= Percentage of particular item//Defect/deficiency for deduction

M = Monthly lump-sum payment in accordance with the Bid

L1 = Non-complying length

L = Total length of the road,

R = Reduction (the amount to be deducted for noncompliance for a particular item/Defect/deficiency

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The total amount of reduction shall be arrived at by summation of reductions for such items/Defects/deficiency or noncompliance.

For any Defect in a part of one kilometer, the non-conforming length shall be taken as one kilometer.

SCHEDULE-N

(See Clause 18.1.1)

SELECTION OF AUTHORITY'S ENGINEER

1 Selection of Authority's Engineer

- 1.1 The provisions of the Model Request for Proposal for Selection of Technical Consultants, issued by the Ministry of Finance in May 2009, or any substitute thereof shall apply for selection of an experienced firm to discharge the functions and duties of an Authority's Engineer.
- 1.2 In the event of termination of the Technical Consultants appointed in accordance with the provisions of Paragraph 1.1, the Authority shall appoint another firm of Technical Consultants forthwith and may engage a government-owned entity in accordance with the provisions of Paragraph 3 of this Schedule-N.

2 Terms of Reference

The Terms of Reference for the Authority's Engineer (the "TOR") shall substantially conform with Annex 1 to this Schedule N.

3 Appointment of Government entity as Authority's Engineer

Notwithstanding anything to the contrary contained in this Schedule, the Authority may in its discretion appoint a government-owned entity as the Authority's Engineer; provided that such entity shall be a body corporate having as one of its primary functions the provision of consulting, advisory and supervisory services for engineering projects; provided further that a government-owned entity which is owned or controlled by the Authority shall not be eligible for appointment as Authority's Engineer.

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Annex – I

(Schedule - N)

TERMS OF REFERENCE FOR AUTHORITY’S ENGINEER

1. Scope

1.1 These Terms of Reference (the “**TOR**”) for the Authority’s Engineer are being specified pursuant to the EPC Agreement dated (the “**Agreement**”), which has been entered into between the Ministry of Road Transport and Highways (the “**Authority**”) and (the “**Contractor**”) for “Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands, and a copy of which is annexed hereto and marked as Annex-A to form part of this TOR.

1.2 The TOR shall apply to construction and maintenance of the Project Highway.

2. Definitions and interpretation

2.1 The words and expressions beginning with or in capital letters and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.

2.2 References to Articles, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be references to the Articles, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.

2.3 The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Agreement shall apply, *mutatis mutandis*, to this TOR.

3. General

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- 3.1 The Authority's Engineer shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.
- 3.2 The Authority's Engineer shall perform the duties and exercise the authority in accordance with the provisions of this Agreement, but subject to obtaining prior written approval of the Authority before determining:
- (a) Any Time extension;
 - (b) Any additional cost to be paid by the Authority to the Contractor;
 - (c) The Termination Payment; or
 - (d) Any other matter which is not specified in (a), (b) or (c) above and which creates an obligation or liability on either Party for a sum exceeding Rs. 5,000,000 (Rs. fifty lakh).
- 3.2 The Authority's Engineer shall submit regular periodic reports, at least once every month, to the Authority in respect of its duties and functions under this Agreement. Such reports shall be submitted by the Authority's Engineer within 10 (ten) days of the beginning of every month.
- 3.4 The Authority's Engineer shall inform the Contractor of any delegation of its duties and responsibilities to its suitably qualified and experienced personnel; provided, however, that it shall not delegate the authority to refer any matter for the Authority's prior approval in accordance with the provisions of Clause 18.2.
- 3.5 The Authority's Engineer shall aid and advise the Authority on any proposal for Change of Scope under Article 13.
- 3.6 In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the authority's Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

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4 Construction Period

- 4.1 During the Construction Period, the Authority's Engineer shall review the Drawings furnished by the Contractor along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys, and the recommendations of the Safety Consultant in accordance with the provisions of Clause 10.1.6. The Authority's Engineer shall complete such review and send its observations to the Authority and the Contractor within 15 (fifteen) days of receipt of such Drawings; provided, however that in case of a Major Bridge or Structure, the aforesaid period of 15 (fifteen) days may be extended upto 30 (thirty) days. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards.
- 4.2 The Authority's Engineer shall review any revised Drawings sent to it by the Contractor and furnish its comments within 10 (ten) days of receiving such Drawings.
- 4.3 The Authority's Engineer shall review the Quality Assurance Plan submitted by the Contractor and shall convey its comments to the Contractor within a period of 21 (twenty-one) days stating the modifications, if any, required thereto.
- 4.4 The Authority's Engineer shall complete the review of the methodology proposed to be adopted by the Contractor for executing the Works, and convey its comments to the Contractor within a period of 10 (ten) days from the date of receipt of the proposed methodology from the Contractor.
- 4.5 The Authority's Engineer shall grant written approval to the Contractor, where necessary, for interruption and diversion of the flow of traffic in the existing lane(s) of the Project Highway for purposes of maintenance during the Construction Period in accordance with the provisions of Clause 10.4.

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- 4.6 The Authority's Engineer shall review the monthly progress report furnished by the Contractor and send its comments thereon to the Authority and the Contractor within 7 (seven) days of receipt of such report.
- 4.7 The Authority's Engineer shall inspect the Construction Works and the Project Highway and shall submit a monthly Inspection Report bringing out the results of inspections and the remedial action taken by the Contractor in respect of Defects or deficiencies. In particular, the Authority's Engineer shall include in its Inspection Report, the compliance of the recommendations made by the Safety Consultant.
- 4.8 The Authority's Engineer shall conduct the pre-construction review of manufacturer's test reports and standard samples of manufactured Materials, and such other Materials as the Authority's Engineer may require.
- 4.9 For determining that the Works conform to Specifications and Standards, the Authority's Engineer shall require the Contractor to carry out, or cause to be carried out, tests at such time and frequency and in such manner as specified in the Agreement and in accordance with Good Industry Practice for quality assurance. For purposes of this Paragraph 4.9, the tests specified in the IRC Special Publication-11 (Handbook of Quality Control for Construction of Roads and Runways) and the Specifications for Road and Bridge Works issued by MORTH (the "Quality Control Manuals") or any modification/substitution thereof shall be deemed to be tests conforming to Good Industry Practice for quality assurance.
- 4.10 The Authority's Engineer shall test check at least 20 (twenty) percent of the quantity or number of tests prescribed for each category or type of test for quality control by the Contractor.
- 4.11 The timing of tests referred to in Paragraph 4.9, and the criteria for acceptance/rejection of their results shall be determined by the Authority's Engineer in accordance with the Quality Control Manuals. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that

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may be carried out by the Contractor for its own quality assurance in accordance with Good Industry Practice.

- 4.12 In the event that results of any tests conducted under Clause 11.10 establish any Defects or deficiencies in the Works, the Authority's Engineer shall require the Contractor to carry out remedial measures.
- 4.13 The Authority's Engineer may instruct the Contractor to execute any work which is urgently required for the safety of the Project Highway, whether because of an accident, unforeseeable event or otherwise; provided that in case of any work required on account of a Force Majeure Event, the provisions of Clause 21.6 shall apply.
- 4.14 In the event that the Contractor fails to achieve any of the Project Milestones, the Authority's Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Authority's Engineer shall determine that completion of the Project Highway is not feasible within the time specified in the Agreement, it shall require the Contractor to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which the Project Completion Date shall be achieved. Upon receipt of a report from the Contractor, the Authority's Engineer shall review the same and send its comments to the Authority and the Contractor forthwith.
- 4.15 The Authority's Engineer shall obtain from the Contractor a copy of all the Contractor's quality control records and documents before the Completion Certificate is issued pursuant to Clause 12.4.
- 4.16 Authority's Engineer may recommend to the Authority suspension of the whole or part of the Works if the work threatens the safety of the Users and pedestrians. After the Contractor has carried out remedial measure, the Authority's Engineer shall inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked.

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- 4.17 In the event that the Contractor carries out any remedial measures to secure the safety of suspended works and Users, and requires the Authority's Engineer to inspect such works, the Authority's Engineer shall inspect the suspended works within 3 (three) days of receiving such notice, and make a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.
- 4.18 The Authority's Engineer shall carry out, or cause to be carried out, all the Tests specified in Schedule-K and issue a Completion Certificate or Provisional Certificate, as the case may be. For carrying out its functions under this Paragraph 4.18 and all matters incidental thereto, the Authority's Engineer shall act under and in accordance with the provisions of Article 12 and Schedule-K.

5. Maintenance Period

- 5.1 The Authority's Engineer shall aid and advise the Contractor in the preparation of its monthly Maintenance Programme and for this purpose carry out a joint monthly inspection with the Contractor.
- 5.2 The Authority's Engineer shall undertake regular inspections, at least once every month, to evaluate compliance with the Maintenance Requirements and submit a Maintenance Inspection Report to the Authority and the Contractor.
- 5.3 The Authority's Engineer shall specify the tests, if any, that the Contractor shall carry out, or cause to be carried out, for the purpose of determining that the Project Highway is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Contractor in this behalf.
- 5.4 In respect of any defect or deficiency referred to in Paragraph 3 of Schedule- E, the Authority's Engineer shall, in conformity with Good Industry Practice, specify the permissible limit of deviation or deterioration with reference to the Specifications and Standards and shall also specify the time limit for repair or rectification of any deviation or deterioration beyond the permissible limit.

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5.5 The Authority's Engineer shall examine the request of the Contractor for closure of any lane(s) of the Project Highway for undertaking maintenance/repair thereof, and shall grant permission with such modifications, as it may deem necessary, within 5 (five) days of receiving a request from the Contractor. Upon expiry of the permitted period of closure, the Authority's Engineer shall monitor the reopening of such lane(s), and in case of delay, determine the Damages payable by the Contractor to the Authority under Clause 14.5.

6 Determination of costs and time

6.1 The Authority's Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Agreement.

6.2 The Authority's Engineer shall determine the period of Time Extension that is required to be determined by it under the Agreement.

6.3 The Authority's Engineer shall consult each Party in every case of determination in accordance with the provisions of Clause 18.5.

7. Payments

7.1 The Authority's Engineer shall withhold payments for the affected works for which the Contractor fails to revise and resubmit the Drawings to the Authority's Engineer in accordance with the provisions of Clause 10.2.4 (d).

7.2 Authority's Engineer shall -

(a) within 10 (ten) days of receipt of the Stage Payment Statement from the Contractor pursuant to Clause 19.4, determine the amount due to the Contractor and recommend the release of 90 (ninety) percent of the amount so determined as part payment, pending issue of the Interim Payment Certificate; and

(b) within 15 (fifteen) days of the receipt of the Stage Payment Statement referred to in Clause 19.4, deliver to the Authority and the Contractor an Interim Payment

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Certificate certifying the amount due and payable to the Contractor, after adjustments in accordance with the provisions of Clause 19.10.

7.3 The Authority's Engineer shall, within 15 (fifteen) days of receipt of the Monthly Maintenance Statement from the Contractor pursuant to Clause 19.6, verify the Contractor's monthly statement and certify the amount to be paid to the Contractor in accordance with the provisions of the Agreement.

7.4 The Authority's Engineer shall certify final payment within 30 (thirty) days of the receipt of the final payment statement of Maintenance in accordance with the provisions of Clause 19.16.

8. Other duties and functions

The Authority's Engineer shall perform all other duties and functions as specified in the Agreement.

9 Miscellaneous

9.1 A copy of all communications, comments, instructions, Drawings or Documents sent by the Authority's Engineer to the Contractor pursuant to this TOR, and a copy of all the test results with comments of the Authority's Engineer thereon, shall be furnished by the Authority's Engineer to the Authority forthwith.

9.2 The Authority's Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody.

9.3 Within 90 (ninety) days of the Project Completion Date, the Authority's Engineer shall obtain a complete set of as-built Drawings, in 2 (two) hard copies and in micro film form or in such other medium as may be acceptable to the Authority, reflecting the Project Highway as actually designed, engineered and constructed, including an as-built survey illustrating the layout of the Project Highway and setback lines, if any, of the buildings and structures forming part of Project Facilities; and shall hand them over to the Authority against receipt thereof.

9.4 The Authority's Engineer, if called upon by the Authority or the Contractor or both, shall mediate and assist the Parties in arriving at an amicable settlement of any Dispute between the Parties.

9.5 The Authority's Engineer shall inform the Authority and the Contractor of any event of Contractor's Default within one week of its occurrence.

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SCHEDULE - O

(See Clauses 19.4.1, 19.6.1, and 19.8.1)

Forms of Payment Statements

1. Stage Payment Statement for Works

The Stage Payment Statement for Works shall state:

- (a) The estimated amount for the Works executed in accordance with Clause 19.3.1 subsequent to the last claim;
- (b) Amounts reflecting adjustments in price for the aforesaid claim;
- (c) The estimated amount of each Change of Scope Order executed subsequent to the last claim;
- (d) Amounts reflecting adjustment in price, if any, for (c) above in accordance with the provisions of Clause 13.2.3 (a);
- (e) Total of (a), (b), (c) and (d) above;
- (f) Deductions:
 - (i) Any amount to be deducted in accordance with the provisions of the Agreement except taxes;
 - (ii) Any amount towards deduction of taxes; and
 - (iii) Total of (i) and (ii) above.
- (g) Net claim: (e) – (f) (iii);
- (h) The amounts received by the Contractor upto the last claim:
 - (i) For the Works executed (excluding Change of Scope orders);
 - (ii) For Change of Scope Orders, and
 - (iii) Taxes deducted

2. Monthly Maintenance Payment Statement

The monthly Statement for Maintenance Payment shall state:

- (a) the monthly payment admissible in accordance with the provisions of the agreement;
- (b) the deductions for maintenance work not done;

Rehabilitation and Up-gradation of section from Km 206.000 to Km 239.445 (Nimbutala to Austin Creek) of NH-4 (Old NH-223) to 2-Lane with hard shoulder in the Union Territory of Andaman & Nicobar Islands

- (c) net payment for maintenance due, (a) minus (b);
- (d) amounts reflecting adjustments in price under Clause 19.12; and
- (e) amount towards deduction of taxes

3. Contractor's claim for Damages

Note: The Contractor shall submit its claims in a form acceptable to the Authority.

SCHEDULE-P

(See Clause 20.1)

INSURANCE

1. Insurance during Construction Period

1.1. The Contractor shall effect and maintain at its own cost, from the Appointed Date till the date of issue of the last Completion Certificate, the following insurances for any loss or damage occurring on account of Non Political Event of Force Majeure, malicious act, accidental damage, explosion, fire and terrorism:

- (a) insurance of Works, Plant and Materials and an additional sum of [15 (fifteen)] per cent of such replacement cost to cover any additional costs of and incidental to the rectification of loss or damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature; and
- (b) Insurance for the Contractor's equipment and Documents brought onto the Site by the Contractor, for a sum sufficient to provide for their replacement at the Site.

1.2 The insurance under paragraph 1.1 (a) and (b) above shall cover the authority and the Contractor against all loss or damage from whatsoever cause arising under paragraph 1.1 other than risks which are not insurable at commercial terms.

2. Insurance for Contractor's Defects Liability

The Contractor shall effect and maintain insurance cover for the works from the date of issue of the Completion Certificate until the end of the Defects Liability Period for any loss or damage for which the Contractor is liable and arises from a cause occurring prior to the issue of Completion Certificate. The Contractor shall also maintain other insurances for maximum sums as may be required under the Applicable Laws and in accordance with Good Industry Practice.

3. Insurance against injury to persons and damage to property

3.1. The Contractor shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Paragraph 1 and 2 of this Schedule or to any person (except persons insured under Clause 20.9), which may arise out of the Contractor's performance of this agreement and occurring before the issue of the Performance Certificate. This insurance shall be for a limit per occurrence of not less than the amount stated below with no limit on the number of occurrences.

The insurance cover shall be as per the applicable laws of government and procedure in vogue.

3.2 The insurance shall be extended to cover liability for all loss and damage to the Authority's property arising out of the Contractor's performance of this Agreement excluding:

- (a) the Authority's right to have the construction works executed on, over, under, in or through any land, and to occupy this land for the Works; and
- (b) Damage which is and unavoidable result of the Contractor's obligations to execute the Works.

4. Insurance to be in joint names

The insurance under paragraphs 1 to 3 above shall be in the joint names of the Contractor and the Authority.