



## SHREM FINANCIAL PRIVATE LIMITED

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**Four Laning of Lucknow -Sultanpur Section of NH-56 (New NH-731) from Km.11.500(Design Chainage Km.11.500) to Km.134.700(Design Chainage Km.138.925) (Total Length-127.425 Km) in the State of Uttar Pradesh under NHDP Phase-IV on Hybrid Annuity Mode**

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### TECHNICAL DUE DILIGENCE REPORT



**FEBRUARY, 2021**

**SUBMITTED BY**



**RUKY PROJECTS PRIVATE LIMITED**

**Hyderabad – 500 072**

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Km.11.500(Design Chainage Km.11.500) to Km.134.700(Design Chainage  
Km.138.925) (Total Length-127.425 Km) in the State of Uttar Pradesh  
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RU-DD Report-Lucknow-Sultanpur	01	February 2021	Technical Due Diligence Report

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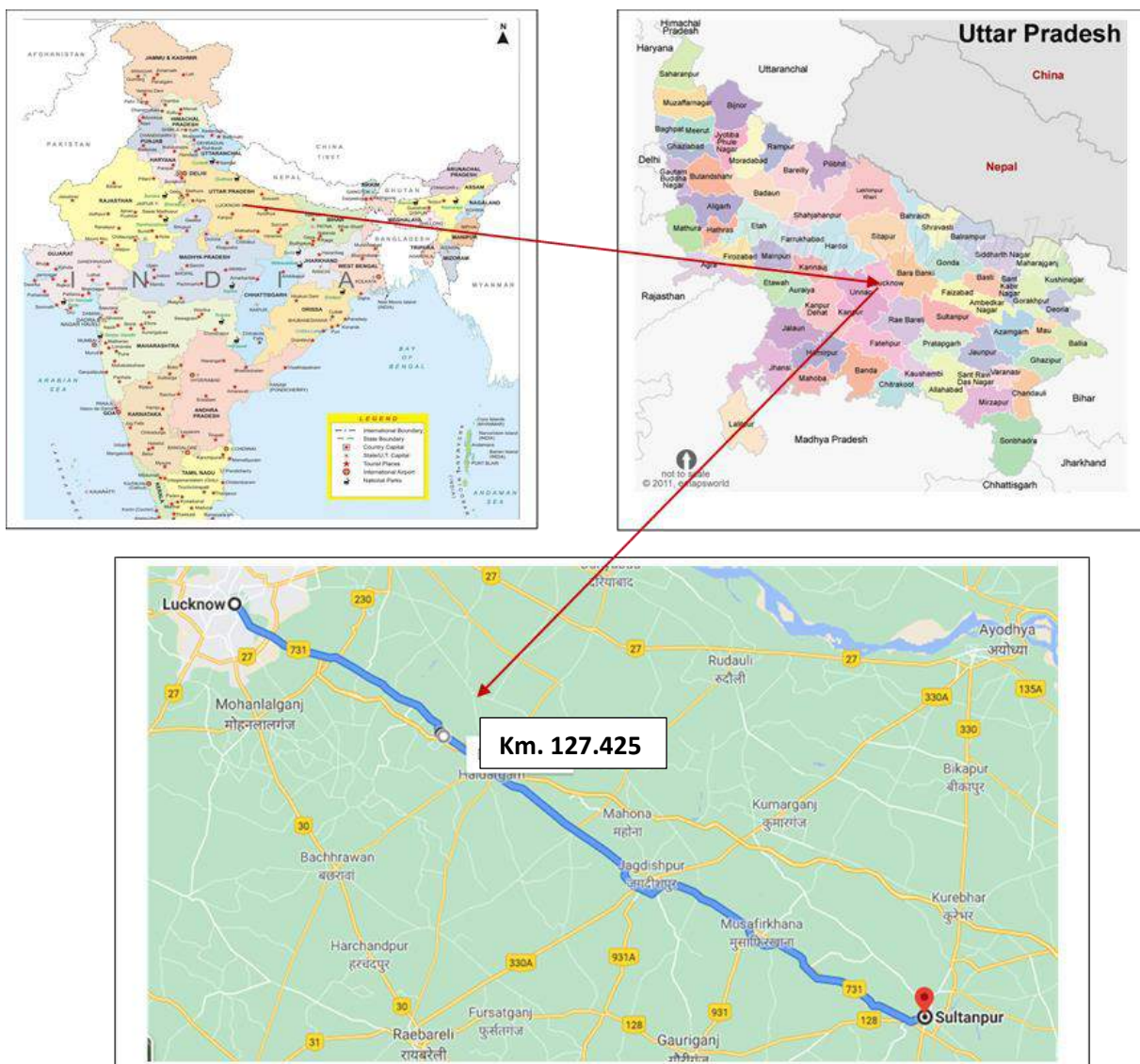
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## CHAPTER 1. INTRODUCTION

### 1.1 General

DBL LUCKNOW-SULTHANPUR HIGHWAYS LTD., (herein after referred to as the “**Concessionaire**”), had augmented the existing two-lane road Section of NH 361 from Lucknow to Sulthanpur in the state of Uttar Pradesh, in accordance with the provisions of the Concession Agreement (**CA**) executed with **National Highways Authority of India** (herein after referred to as the “**Authority**”) on 24.10.2016.

Project road starts at Km. 11+500 located near Lucknow and ends at Km. 134+700 near Sulthanpur on NH-56. The design length of the Project is 127.425 Km. The Project Highway passes through the urban stretches of Khuradi Bazar, Gangaganj, Haidergarh, Jagadeeshpur and Islamganj located along the Project Corridor. Project location map is provided at **Figure 1.1**.



**Figure 1.1: Project Locations Map**

SHREM INFRAVENTURE PRIVATE LIMITED (SIPL) acquired DBL LUCKNOW-SULTHANPUR HIGHWAYS LTD vide agreement dated 26/03/2018.



SHREM FINANCIAL PVT. LTD (SFPL). appointed RUKY Projects Pvt. Ltd. as consultant for detailed Technical Due Diligence services of the above Road Project to know-how the present condition of Carriageway and Structures, probable costs of Operations and Maintenance during balance Concession period, additional road safety requirements if any and to review the annuity payments received and future schedule of annuity payments.

## 1.2 The Project Data

**Table 1.1: Project Data**

S. No.	Particulars	Details
1	Name of the project	Four Lanning of Lucknow-Sultanpur section of NH-56(New NH-731) from Km. 11+500 (Design Chainage Km. 11+500) to Km. 134+700 (Design Chainage Km. 138+925) (Total Length-127.425 Kms.) in the State of Uttar Pradesh under NHDP, Phase –IV on Hybrid Annuity Mode.
2	Road Type	National Highway
3	Name of the Authority	National Highways Authority of India
4	Name of the Concessionaire	DBL Lucknow-Sulthanpur Highways Ltd.,
5	Name of the EPC Contractor	Dilip Buildcon Limited
6	Date of LOA	09.08.2016
7	Date of Agreement	24.10.2016
8	Design Length as per Schedule B of CA	127.425 Kms.
9	Project Lane Configuration	Four Lane
10	EPC Cost	1780 Cr.
11	Bid Project Cost	2016
12	Nature of contract	Hybrid Annuity Mode
13	Toll collected by	Authority
14	Operation Period	15 years from the Commercial Operation Date (COD)
15	Appointed date	08.05.2017
16	Concession End Date	29.04.2034
17	Construction Period	910 days from the Appointed Date
18	Schedule Completion Date	04.11.2019
19	Date of issuance of Provisional Certificate (COD)	30.04.2019
20	Bonus on early completion	Applicable as per Cl.23.5 of the CA
21	Date of issuance of Completion Certificate	03.07.2019
22	Annuity Amount	As per Clause 23.6 of the CA
23	Total Number of Annuities payable after COD	30 Nos.
24	First Annuity Payment Date	30.10.2019
25	Total Number of Annuity Payments received as on date.	3 No.

### **1.3 Scope of Consultancy Services**

The scope of work includes providing Technical Due Diligence of the Project Highway and providing estimate of the anticipated maintenance works. Scope of the work as defined in the consultancy work order is listed below:

- Review of various contractual documents
- Carryout detailed assessment of pavement condition and propose maintenance plan along with BOQ.
- Review of latest BI test report
- Carrying out inventory & condition survey of all elements of road like embankment slope, plantation, road furniture of the project.
- Carrying out inventory & condition survey of all structures (Major Bridges, Minor Bridges, ROB, RE Wall, Flyovers, VUPs, PUPs, Culverts etc.), suggest any rehabilitation & maintenance requirements along with BOQ.
- Carryout out road safety audit on Project highway and provide suggestions for improvement.
- Assess and Provide BOQ and cost estimate for routine & periodic maintenance including O&M.
- Review of punch list items, NCR's to identify any uncompleted works as on date of submission of report.
- Review of validity of insurance and statutory compliances related to Project.
- Review of correspondences exchanged between parties on contract related issues and claims etc.
- Submission of detailed report on technical due diligence of the project.

## CHAPTER 2. PROJECT DESCRIPTION & TECHNICAL DETAILS

### 2.1 Salient Features of the Project

The salient features of the Project as per Schedule B and Schedule C of Concession Agreement (CA) including Change of scope are listed in the following Table 2.1.

**Table 2.1: Salient Features**

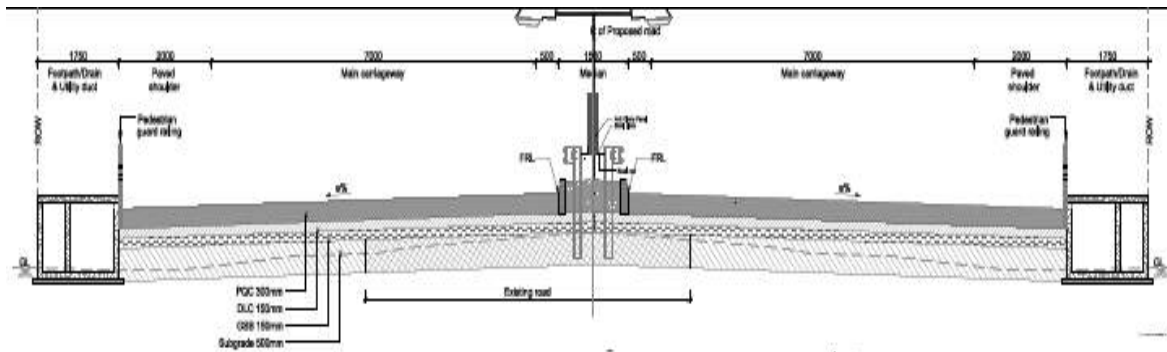
S. No.	Particulars	As per CA	As per COS	As per Site
1	Total Length of the Project Highway	127.425 Kms.	---	127.425 Kms.
2	Total Length of Main Carriageway with Rigid Pavement	121.105 Kms.	6.32 Kms.	127.425 Kms.
3	Total Length of Main Carriageway with Flexible Pavement	6.320 Kms.	-6.320 Kms.	---
4	Total length of Service Roads	---	---	---
5	Total length of Slip Roads	14.824 Kms.	---	14.824 Kms.
6	Toll Plazas	2 Nos.	---	2 Nos.
7	Bus Bays with Bus Shelters	43 Nos.	---	43 Nos.
8	Truck Lay Bays	2 Nos.	---	2 Nos.
9	Major Junctions	18 Nos.	---	20 Nos.*
10	Minor Junctions	109 Nos.	---	110 Nos.*
11	ROBs	1 No.	---	1 No.
12	Vehicular underpasses	4 Nos.	---	4 Nos.
13	Pedestrian underpasses	6 Nos.	---	6 Nos.
14	Major Bridges	1 No.	---	1 No.
15	Minor Bridges	13 Nos.	---	13 Nos.
16	Hume Pipe Culverts	182 Nos.	---	184 Nos.*
17	Box / Slab Culverts	77 Nos.	---	75 Nos.*

\*As per site requirement, 2 Major junctions and 1 minor junction is developed.

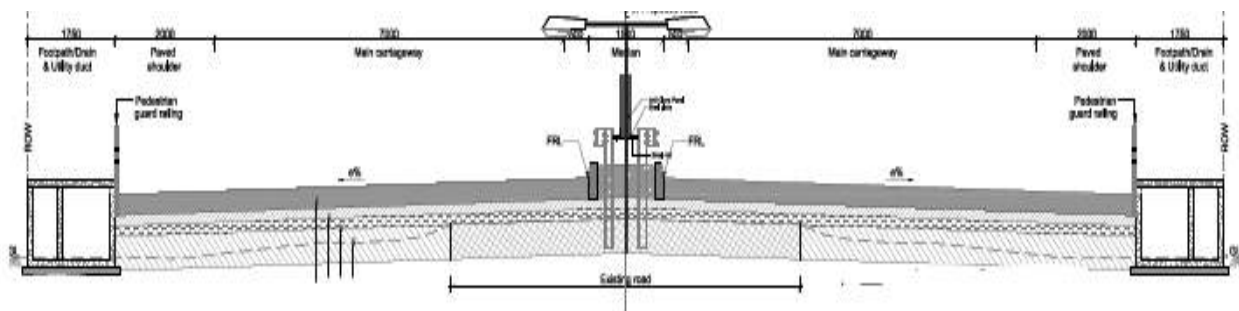
As per site requirement, 2 additional pipe culverts are constructed and 2 Slab culverts are not constructed as per site condition.

### 2.2 Typical Cross Section (TCS) Schedule

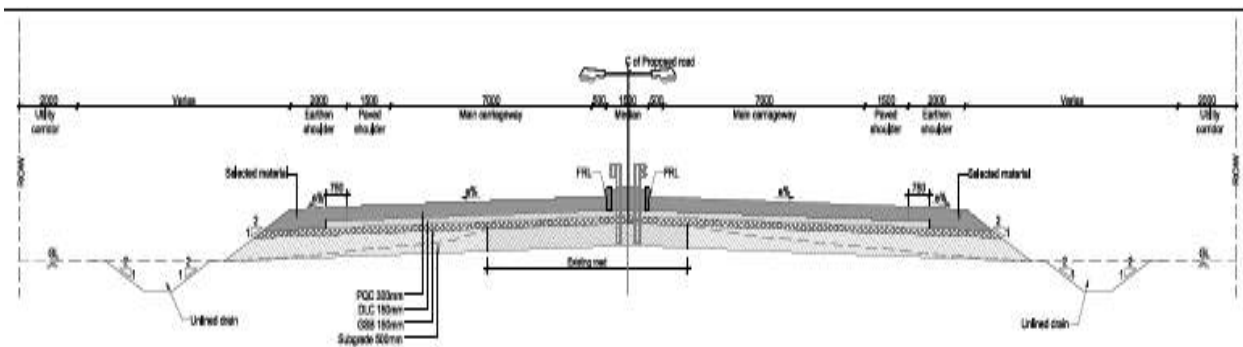
The Concessionaire has followed the Typical Cross Section Schedule, shown below as per Schedule B of CA during the Construction.



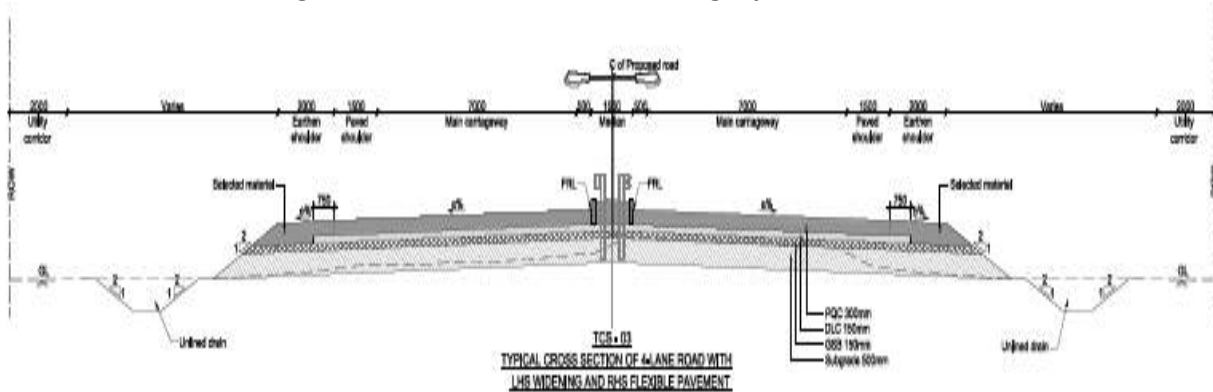
**Figure 2.1: TCS-1 4-lane road without service road including foot path drain and utility duct**



**Figure 2.2: TCS-1A 4-lane road without service road including foot path drain and utility duct concentric widening**



**Figure 2.3: TCS-2 4-lane road with rigid pavement both side**



**Figure 2.4: TCS-3 4-lane road with LHS widening and RHS flexible pavement**

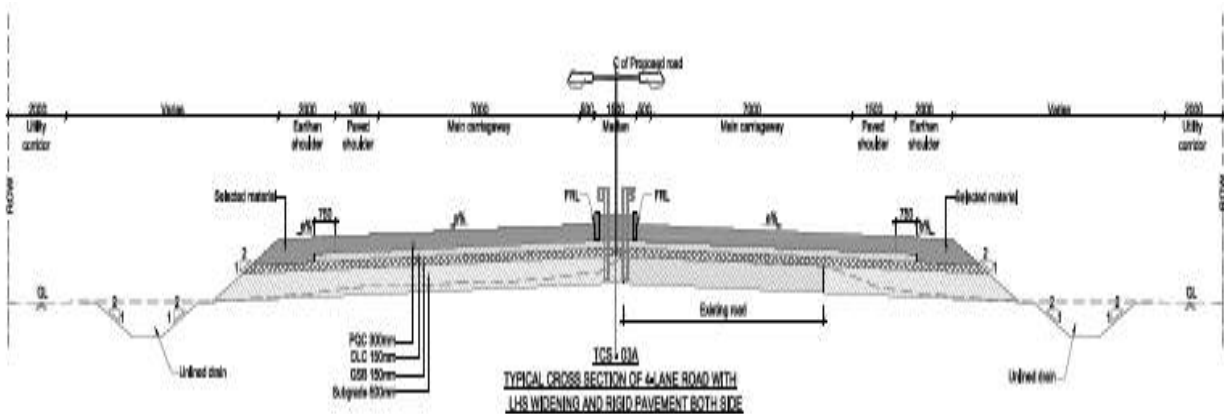


Figure 2.5: TCS-3A 4-lane road with concentric widening and rigid pavement both side

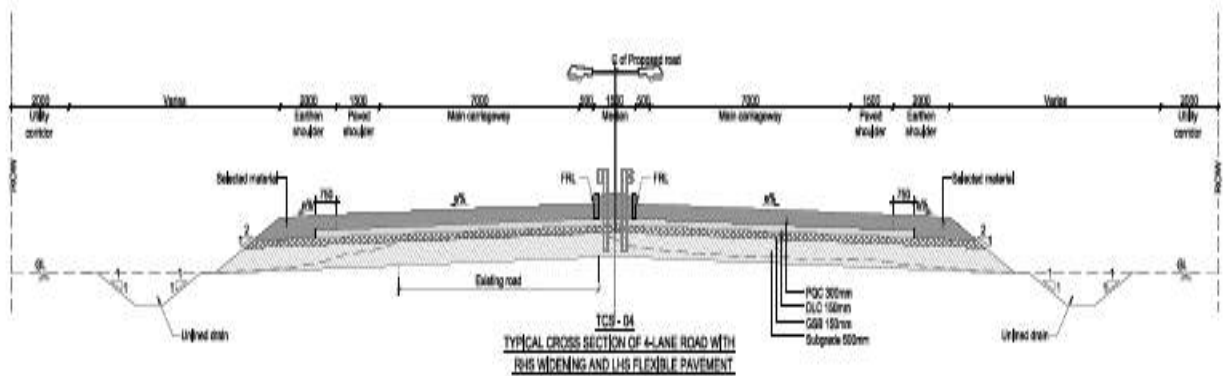


Figure 2.6: TCS-4 4-lane road with concentric widening and rigid pavement both side

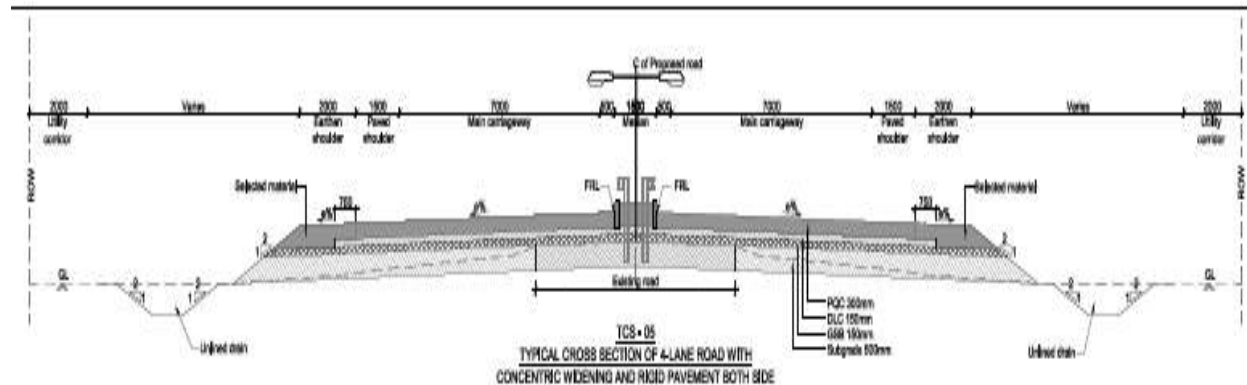


Figure 2.7: TCS-5 4-lane road for new construction with rigid pavement both side

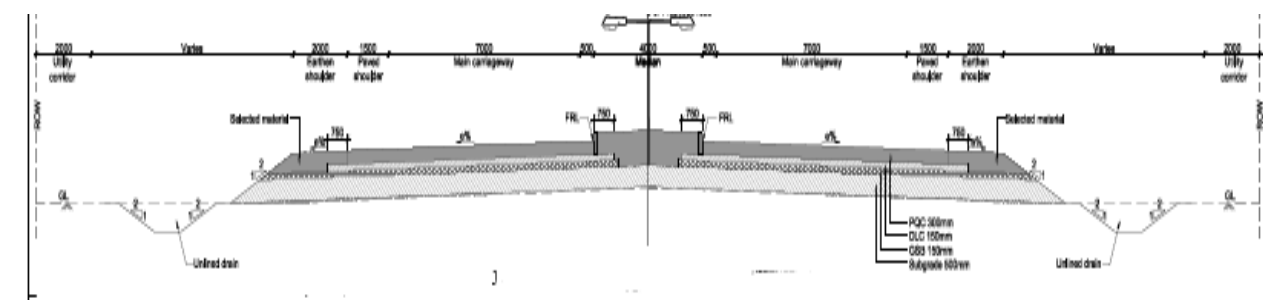


Figure 2.8: TCS-6 4-lane road for new construction with rigid pavement both side

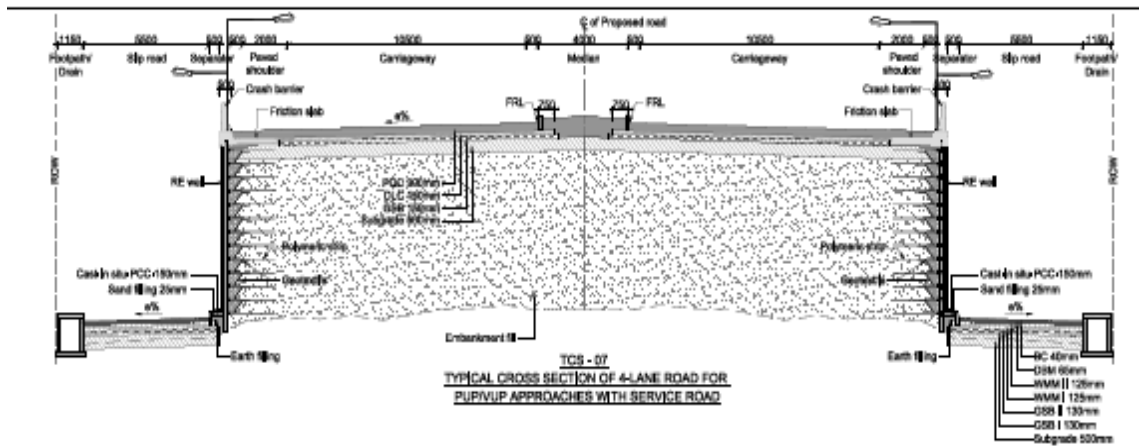


Figure 2.9: TCS-7 4-lane road for PUP/VUP approaches with service road

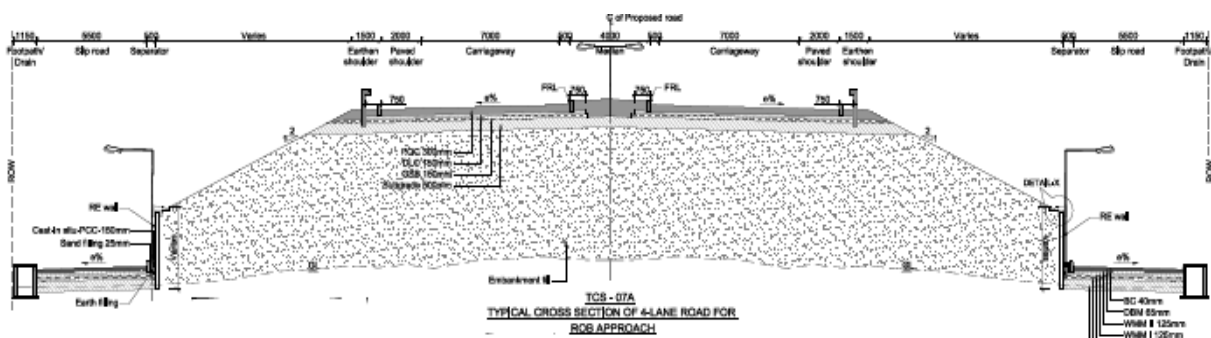


Figure 2.10: TCS-7A 4-lane road for ROB Approach

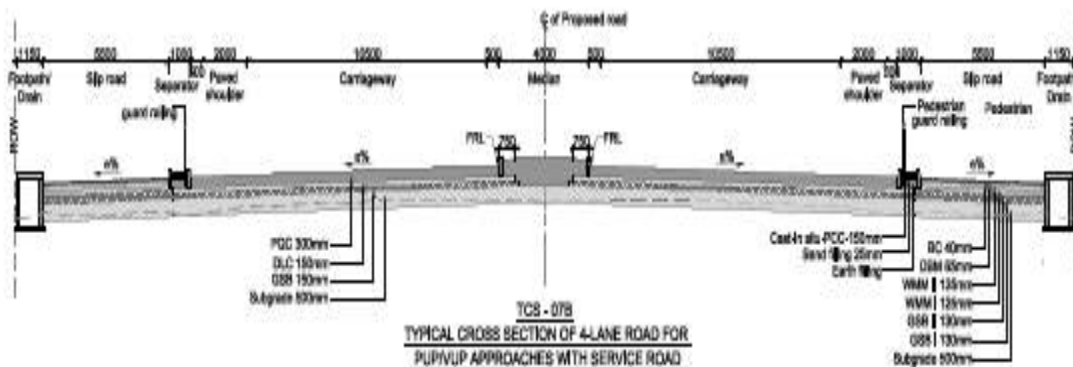


Figure 2.11: TCS-7B 4-lane road for PUP/VUP approaches with service road

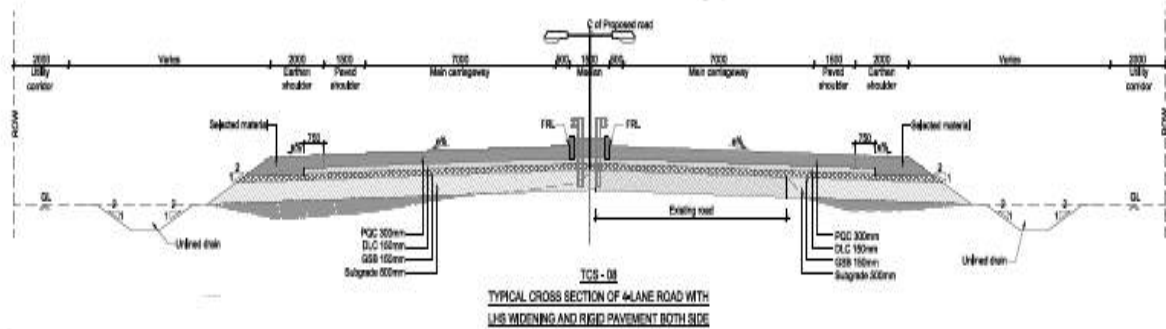


Figure 2.12: TCS-8 4-lane road with LHS widening and rigid pavement both side

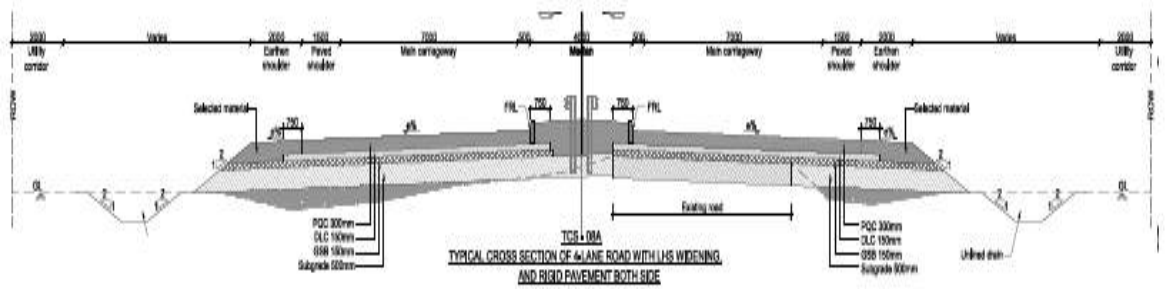


Figure 2.13: TCS-8A 4-lane road with LHS widening and rigid pavement both side

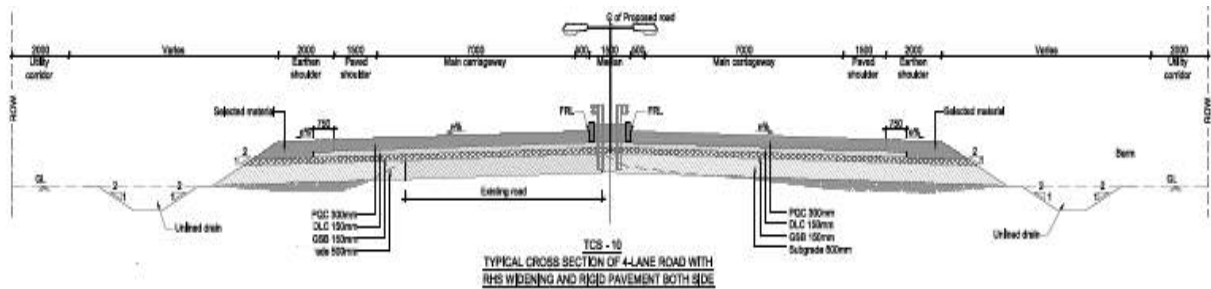


Figure 2.14: TCS-10 4-lane road with RHS widening and rigid pavement both side

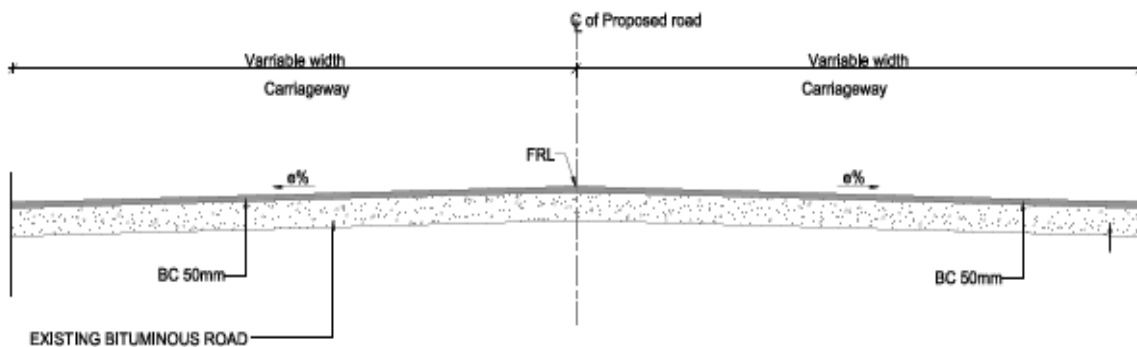
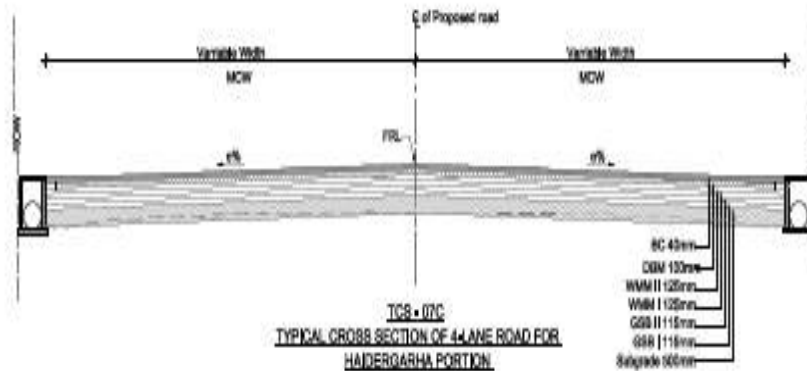
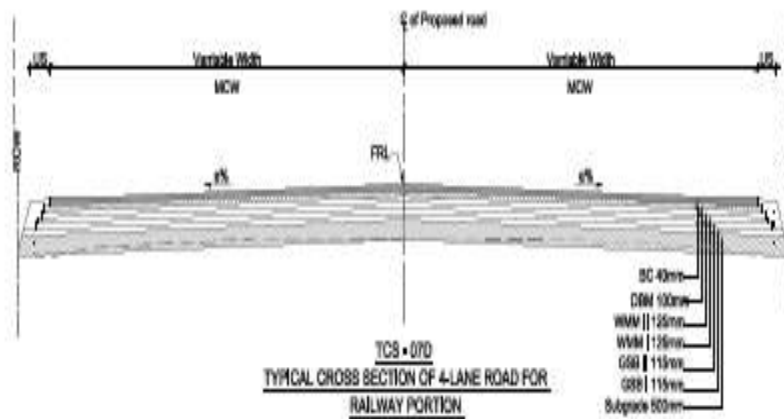


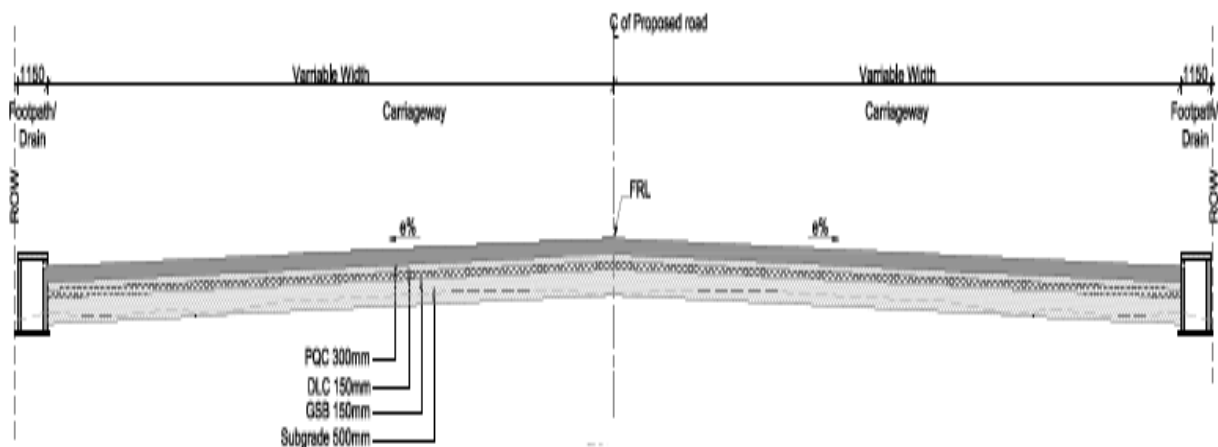
Figure 2.15: TCS-2A 4-lane road for Ahimamau portion



**Figure 2.16: TCS-7C 4-lane road for Haidergarha portion**



**Figure 2.17: TCS-7D 4-Lane Road for Railway Portion**



**Figure 2.18: TCS-11 4-lane road for toll plaza portion**



TCS Schedule is provided below.

**Table 2.2: TCS Schedule**

RHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TCS
1	11+500	11+584	84	2A
2	11+584	11+900	316	1
3	11+900	12+500	600	1
4	12+500	12+720	220	3
5	12+720	13+000	280	4
6	13+000	14+420	1420	5
7	14+420	14+590	170	2
8	14+590	15+520	930	1
9	15+520	15+760	240	1
10	15+760	15+950	190	1
11	15+950	16+210	260	1
12	16+210	16+960	750	5
13	16+960	17+650	690	6
14	17+650	17+820	170	1
15	17+820	18+050	230	1
16	18+050	18+650	600	1
17	18+650	19+900	1250	5
18	19+900	20+150	250	3
19	20+150	20+550	400	5
20	20+550	20+750	200	3
21	20+750	21+200	450	3
22	21+200	21+450	250	3
23	21+450	24+560	3110	1
24	24+560	24+860	300	2
25	24+860	25+200	340	5
26	25+200	26+350	1150	2
27	26+350	27+030	680	3
28	27+030	27+410	380	4
29	27+410	28+450	1040	1
30	28+450	28+600	150	4
31	28+600	29+150	550	5
32	29+150	29+470	320	1
33	29+470	30+200	730	5
34	30+200	30+500	300	2
35	30+500	30+750	250	5
36	30+750	30+900	150	8
37	30+900	31+450	550	5
38	31+450	31+650	200	8A

LHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TC S
1	11+500	11+584	84	2A
2	11+584	11+900	316	1
3	11+900	12+500	600	1
4	12+500	12+720	220	3
5	12+720	13+000	280	4
6	13+000	14+420	1420	5
7	14+420	14+590	170	2
8	14+590	15+520	930	1
9	15+520	15+760	240	1
10	15+760	15+950	190	1
11	15+950	16+210	260	1
12	16+210	16+960	750	5
13	16+960	17+650	690	6
14	17+650	17+820	170	1
15	17+820	18+050	230	1
16	18+050	18+650	600	1
17	18+650	19+900	1250	5
18	19+900	20+150	250	3
19	20+150	20+550	400	5
20	20+550	20+750	200	3
21	20+750	21+200	450	3
22	21+200	21+450	250	3
23	21+450	24+560	3110	1
24	24+560	24+860	300	2
25	24+860	25+200	340	5
26	25+200	26+350	1150	2
27	26+350	27+030	680	3
28	27+030	27+410	380	4
29	27+410	28+450	1040	1
30	28+450	28+600	150	4
31	28+600	29+150	550	5
32	29+150	29+470	320	1
33	29+470	30+200	730	5
34	30+200	30+500	300	2
35	30+500	30+750	250	5
36	30+750	30+900	150	8
37	30+900	31+450	550	5
38	31+450	31+650	200	8A

RHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TCS
39	31+650	31+850	200	6
40	31+850	32+200	350	2
41	32+200	32+480	280	10
42	32+480	32+680	200	2
43	32+680	33+250	570	1
44	33+250	33+430	180	1
45	33+430	33+730	300	1A
46	33+730	34+040	310	8
47	34+040	34+270	230	5
48	34+270	34+450	180	8
49	34+450	35+100	650	5
50	35+100	36+300	1200	6
51	36+300	36+900	600	5
52	36+900	37+150	250	8
53	37+150	37+550	400	5
54	37+550	37+850	300	8
55	37+850	38+000	150	2
56	38+000	38+250	250	5
57	38+250	38+550	300	2
58	38+550	39+800	1250	1
59	39+800	41+350	1550	5
60	41+350	43+210	1860	6
61	43+210	43+700	490	7A
62	43+700	43+800	100	7A
63	43+800	44+270	470	7A
64	44+270	45+620	1350	6
65	45+620	46+275	655	3A
66	46+275	46+500	225	5
67	46+500	46+900	400	1
68	46+900	47+230	330	2
69	47+230	47+700	470	5
70	47+700	47+880	180	8
71	47+880	48+050	170	10
72	48+050	48+270	220	5
73	48+270	49+390	1120	1
74	49+390	49+650	260	2
75	49+650	50+275	625	5
76	50+275	50+800	525	5
77	50+800	51+380	580	11
78	51+380	52+280	900	5

LHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TC S
39	31+650	31+850	200	6
40	31+850	32+200	350	2
41	32+200	32+480	280	10
42	32+480	32+680	200	2
43	32+680	33+250	570	1
44	33+250	33+430	180	1
45	33+430	33+490	60	1A
46	33+490	33+540	50	1A
47	33+540	33+730	190	1A
48	33+730	34+040	310	8
49	34+040	34+270	230	5
50	34+270	34+450	180	8
51	34+450	35+100	650	5
52	35+100	36+300	1200	6
53	36+300	36+900	600	5
54	36+900	37+150	250	8
55	37+150	37+550	400	5
56	37+550	37+850	300	8
57	37+850	38+000	150	2
58	38+000	38+250	250	5
59	38+250	38+550	300	2
60	38+550	39+800	1250	1
61	39+800	41+350	1550	5
62	41+350	43+210	1860	6
63	43+210	43+700	490	7A
64	43+700	43+800	100	7A
65	43+800	44+270	470	7A
66	44+270	45+620	1350	6
67	45+620	46+275	655	3A
68	46+275	46+500	225	5
69	46+500	46+900	400	1
70	46+900	47+230	330	2
71	47+230	47+700	470	5
72	47+700	47+880	180	8
73	47+880	48+050	170	10
74	48+050	48+270	220	5
75	48+270	49+400	1130	1
76	49+400	49+650	250	2
77	49+650	50+275	625	5
78	50+275	50+800	525	5

RHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TCS
79	52+280	52+600	320	5
80	52+600	52+900	300	2
81	52+900	53+640	740	5
82	53+640	53+850	210	1
83	53+850	54+300	450	1
84	54+300	54+834	534	1
85	54+834	54+881	47	7C
86	54+881	55+400	519	1
87	55+400	55+580	180	1
88	55+580	56+200	620	1
89	56+200	56+340	140	1A
90	56+340	56+360	20	1A
91	56+360	56+550	190	1A
92	56+550	56+900	350	10
93	56+900	57+150	250	2
94	57+150	57+475	325	5
95	57+475	59+450	1975	5
96	59+450	59+720	270	1A
97	59+720	60+550	830	5
98	60+550	60+700	150	10
99	60+700	60+890	190	8
100	60+890	61+300	410	2
101	61+300	61+420	120	2
102	61+420	61+690	270	5
103	61+690	61+910	220	8
104	61+910	62+630	720	5
105	62+630	63+200	570	10
106	63+200	63+500	300	1
107	63+500	63+530	30	2
108	63+530	63+750	220	5
109	63+750	63+900	150	10
110	63+900	64+950	1050	5
111	64+950	65+270	320	2
112	65+270	65+500	230	8
113	65+500	65+850	350	5
114	65+850	66+250	400	2
115	66+250	66+920	670	5
116	66+920	67+850	930	10
117	67+850	68+650	800	8
118	68+650	68+850	200	5

LHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TC S
79	50+800	51+380	580	11
80	51+380	52+280	900	5
81	52+280	52+600	320	5
82	52+600	52+900	300	2
83	52+900	53+640	740	5
84	53+640	53+850	210	1
85	53+850	54+300	450	1
86	54+300	54+835	535	1
87	54+835	54+879	44	7C
88	54+879	55+400	521	1
89	55+400	55+580	180	1
90	55+580	56+200	620	1
91	56+200	56+340	140	1A
92	56+340	56+360	20	1A
93	56+360	56+550	190	1A
94	56+550	56+900	350	10
95	56+900	57+150	250	2
96	57+150	57+475	325	5
97	57+475	59+450	1975	5
98	59+450	59+720	270	1A
99	59+720	60+550	830	5
100	60+550	60+700	150	10
101	60+700	60+890	190	8
102	60+890	61+300	410	2
103	61+300	61+420	120	2
104	61+420	61+690	270	5
105	61+690	61+910	220	8
106	61+910	62+630	720	5
107	62+630	63+200	570	10
108	63+200	63+500	300	1
109	63+500	63+530	30	2
110	63+530	63+750	220	5
111	63+750	63+900	150	10
112	63+900	64+950	1050	5
113	64+950	65+270	320	2
114	65+270	65+500	230	8
115	65+500	65+850	350	5
116	65+850	66+250	400	2
117	66+250	66+920	670	5
118	66+920	67+850	930	10

RHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TCS
119	68+850	69+250	400	8
120	69+250	70+520	1270	5
121	70+520	72+510	1990	1A
122	72+510	73+150	640	5
123	73+150	75+600	2450	2
124	75+600	77+350	1750	1A
125	77+350	78+000	650	1
126	78+000	79+060	1060	1
127	79+060	79+100	40	7D
128	79+100	80+300	1200	1
129	80+300	80+750	450	1A
130	80+750	81+400	650	1
131	81+400	85+750	4350	6
132	85+750	86+550	800	7
133	86+550	93+150	6600	6
134	93+150	93+740	590	7
135	93+740	96+830	3090	6
136	96+830	97+400	570	7
137	97+400	99+460	2060	6
138	99+460	100+030	570	7
139	100+030	100+125	95	6
140	100+125	101+150	1025	10
141	101+150	101+940	790	1
142	101+940	102+750	810	1A
143	102+750	104+360	1610	2
144	104+360	104+800	440	1A
145	104+800	106+750	1950	5
146	106+750	107+850	1100	6
147	107+850	108+420	570	7
148	108+420	111+550	3130	6
149	111+550	112+250	700	7
150	112+250	113+800	1550	6
151	113+800	114+020	220	2
152	114+020	115+957	1937	1
153	115+957	116+720	763	1
154	116+720	116+807	87	2
155	116+807	118+107	1300	5
156	118+107	118+895	788	6
157	118+895	119+570	675	7
158	119+570	119+840	270	7B

LHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TC S
119	67+850	68+650	800	8
120	68+650	68+850	200	5
121	68+850	69+250	400	8
122	69+250	70+520	1270	5
123	70+520	72+510	1990	1A
124	72+510	73+150	640	5
125	73+150	75+600	2450	2
126	75+600	77+350	1750	1A
127	77+350	78+000	650	1
128	78+000	79+060	1060	1
129	79+060	79+100	40	7D
130	79+100	80+300	1200	1
131	80+300	81+400	1100	1
132	81+400	85+750	4350	6
133	85+750	86+540	790	7
134	86+540	93+170	6630	6
135	93+170	93+720	550	7
136	93+720	96+830	3110	6
137	96+830	97+390	560	7
138	97+390	99+460	2070	6
139	99+460	99+870	410	7
140	99+870	100+030	160	7
141	100+030	100+125	95	6
142	100+125	101+150	1025	10
143	101+150	101+940	790	1
144	101+940	102+750	810	1A
145	102+750	104+360	1610	2
146	104+360	104+800	440	1A
147	104+800	106+750	1950	5
148	106+750	107+850	1100	6
149	107+850	108+420	570	7
150	108+420	111+550	3130	6
151	111+550	112+250	700	7
152	112+250	113+800	1550	6
153	113+800	114+020	220	2
154	114+020	115+957	1937	1
155	115+957	116+720	763	1
156	116+720	116+807	87	2
157	116+807	118+107	1300	5
158	118+107	118+890	783	6

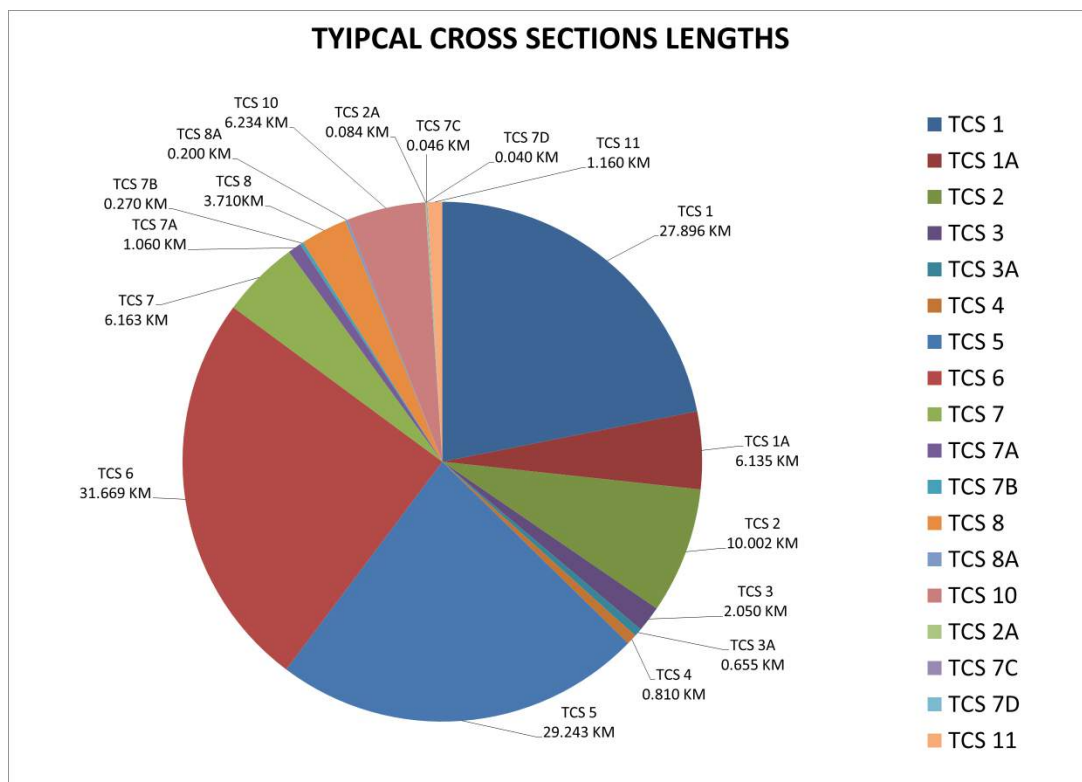
RHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TCS
159	119+840	120+400	560	7
160	120+400	121+460	1060	6
161	121+460	122+060	600	7
162	122+060	123+383	1323	6
163	123+383	123+633	250	8
164	123+633	125+330	1697	10
165	125+330	126+033	703	5
166	126+033	126+283	250	8
167	126+283	126+783	500	10
168	126+783	127+100	317	5
169	127+100	127+680	580	11
170	127+680	128+133	453	5
171	128+133	128+445	312	10
172	128+445	129+200	755	5
173	129+200	129+500	300	2
174	129+500	131+950	2450	1
175	131+950	132+050	100	10
176	132+050	132+500	450	6
177	132+500	133+060	560	7
178	133+060	133+800	740	6
179	133+800	134+376	576	1
180	134+376	134+810	434	1
181	134+810	135+600	790	1
182	135+600	135+720	120	1
183	135+720	137+020	1300	5
184	137+020	137+550	530	1
185	137+550	138+880	1330	1
186	138+880	138+925	45	1

LHS				
S. No.	From (Km.)	To (Km.)	Length (m)	TC S
159	118+890	119+570	680	7
160	119+570	119+840	270	7B
161	119+840	120+400	560	7
162	120+400	121+460	1060	6
163	121+460	122+050	590	7
164	122+050	123+383	1333	6
165	123+383	123+633	250	8
166	123+633	125+330	1697	10
167	125+330	126+033	703	5
168	126+033	126+283	250	8
169	126+283	126+783	500	10
170	126+783	127+100	317	5
171	127+100	127+680	580	11
172	127+680	128+133	453	5
173	128+133	128+445	312	10
174	128+445	129+200	755	5
175	129+200	129+500	300	2
176	129+500	131+950	2450	1
177	131+950	132+050	100	10
178	132+050	132+500	450	6
179	132+500	133+060	560	7
180	133+060	133+800	740	6
181	133+800	134+170	370	1
182	134+170	134+400	230	1
183	134+400	134+810	410	1
184	134+810	135+600	790	1
185	135+600	135+720	120	1
186	135+720	137+020	1300	5
187	137+020	137+550	530	1
188	137+550	138+880	1330	1
189	138+880	138+925	45	1

**Table 2.3: TCS wise summary**

TCS TYPE	RHS (Kms.)	LHS (Kms.)	Total Length (Kms.) =(RHS+LHS)/2
TCS 1	27.664	28.127	27.896
TCS 1A	6.360	5.910	6.135
TCS 2	10.007	9.997	10.002
TCS 3	2.050	2.050	2.050
TCS 3A	0.655	0.655	0.655
TCS 4	0.810	0.810	0.810

TCS TYPE	RHS (Kms.)	LHS (Kms.)	Total Length (Kms.) =(RHS+LHS)/2
TCS 5	29.243	29.243	29.243
TCS 6	31.636	31.701	31.669
TCS 7	6.195	6.130	6.163
TCS 7A	1.060	1.060	1.060
TCS 7B	0.270	0.270	0.270
TCS 8	3.710	3.710	3.710
TCS 8A	0.200	0.200	0.200
TCS 10	6.234	6.234	6.234
TCS 2A	0.084	0.084	0.084
TCS 7C	0.047	0.044	0.046
TCS 7D	0.040	0.040	0.040
TCS 11	1.160	1.160	1.160
<b>TOTAL</b>	<b>127.425</b>	<b>127.425</b>	<b>127.425</b>



**Figure 2.19: Pictorial Diagram of TCS Lengths.**

### 2.3 Road Side Drainage

- To facilitate quick disposal of storm water from the Carriageway and to avoid accumulation of drainage from the Carriageway, side drains are constructed along the main carriage way on both flanks as specified in Schedule B of CA in strict adherence to the Standard Specifications set forth in Schedule D of CA.
- The Concessionaire has provided RCC covered drains with footpath in built up areas while earthen drains are constructed in open and rural areas.

## 2.4 Service Roads

Service Roads and Slip Roads are provided as per the provisions of Schedule B of the Concession Agreement. The details are provided below.

**Table 2.4: List of Slip Road locations**

S. No.	From (Km.)	To (Km.)	Side	Length (Kms.)
1	43+0400	44+3400	Both Sides	2.600
2	85+7000	86+5000	Both Sides	1.600
3	93+6800	94+1600	Both Sides	0.960
4	96+8200	97+4200	Both Sides	1.200
5	99+5000	99+9670	Both Sides	0.934
6	107+8800	108+4800	Both Sides	1.200
7	111+5600	112+2600	Both Sides	1.400
8	118+8200	119+6150	Both Sides	1.590
9	119+8750	120+4200	Both Sides	1.090
10	121+4800	122+1000	Both Sides	1.240
11	132+6000	133+1050	Both Sides	1.010
<b>Total</b>				<b>14.824</b>

## 2.5 Bypass/Realignment

As per the provisions of Schedule B of the Concession Agreement Realignment is provided at the following locations.

**Table 2.5: Realignment/Bypass stretches**

S. No.	From (Km.)	To (Km.)	Length (Kms.)	Remarks
1	81+547	100+125	18.57	Bypass
2	106+750	113+800	7.05	Bypass
3	118+107	123+383	5.276	Bypass
4	132+050	133+800	1.750	Bypass
5	35+100	36+300	1.200	Realignment
6	41+350	45+550	4.200	Realignment
7	103+450	104+300	0.850	Realignment
<b>Total</b>			<b>38.904</b>	

## 2.6 Intersections

List of Major and Minor junctions are given below:

**Table 2.6: List of Major Junctions**

S. No.	Chainage (Km.)	Type of Junction	Details	Remarks
1	11+575	X	Fajjabad LHS, Kanpur RHS	

S. No.	Chainage (Km.)	Type of Junction	Details	Remarks
2	13+068	T	LHS	Develop as per site condition
3	22+072	Y	Mohanlalganj-RHS	
4	23+459	T	Barabanki -LHS	
5	41.535	Y	RHS	Develop as per site condition
6	49+617	X	Road to village Bara-LHS Road to Village - RHS	
7	54+863	X	SH 13	
8	71+540	X	SH31	
9	81+697	Y	Start of Jagdishpur Bypass	
10	86+155	SH-15	start of Jagadeeshpur Bypass	
11	100+120	Y	End of Jagdishpur Bypass	
12	106+880	Y	Start of MushafirKhana Bypass	
13	108+100	MDR	Musfarikhana bypass	
14	111+935	MDR	Musfarikhana bypass	
15	113+570	Y	End of MushafirKhana Bypass	
16	118+220	Y	Start of Aliganji Bypass	
17	119+240	MDR	Aliganj bypass	
18	123+180	Y	LHS	
19	132+155	Y	Start of Shabhaganj & Badaunkalan Bypass	
20	133+610	Y	Start of Shabhaganj & Badaunkalan Bypass	

**Table 2.7: List of Minor Junctions**

S. No.	Chainage (Km.)	Type of Junction	Details	Remarks
1	11+500	X	City Kanpur	
2	13+035	Y	Golf City	
3	14+141	Y	Mirzapur	
4	14+596	Y	Hasanpur	
5	15+840	T	Kajriya	
6	15+852	Y	Marthmau	
7	16+555	Y	Pahar Nagar	
8	17+340	X	AanchaliKheraBeraj	
9	20+900	Y	Village Kashimpur	
10	21+183	Y	Chandsary	
11	21+641	Y	Kuryani	
12	22+625	Y	Mahmudpur	
13	23+515	T	Village road	
14	24+745	Y	Sekhnapur	
15	25+682	Y	Kaji Kera	



S. No.	Chainage (Km.)	Type of Junction	Details	Remarks
16	26+613	T	Basriya	
17	27+472	Y	Village Muhara Kalan	
18	27+475	Y	Doharagaon	
19	28+026	Y	Krwali	
20	28+236	T	Rambhag	
21	29+313	Y	Gadhi	
22	30+214	Y	Karim Nagar	
23	31+084	Y	Rahmat Nagar	
24	33+285	Y	Mohanlalganj	
25	33+366	Y	Dist. Barabanki	
26	33+754	Y	Dist. Barabanki	
27	34+771	Y	Bhaduwa	
28	36+219	T	Bhitipurwa	
29	36+726	Y	Chhandrolli	
30	37+912	Y	Village BaghPurwa	
31	38+254	Y	Makudpur	
32	39+120		Village road	
33	39+623	Y	Goria Ka Puria	
34	40+097	Y	Village Bhilwal	
35	40+412	Y	Village Khanpur	
36	40+809	T	Dahla	
37	41+201	Y	Khawajapur	
38	42+467	Y	Kandhi Trilokpur	
39	43+384	X	Mubarakpur	
40	44+563	Y	Kandhitrilokpur	
41	45+827	Y	GurudutKhera	
42	45+870	Y	Collage Road	
43	46+847	T	Sahriya	
44	46+850	T	Kabri	
45	47+064	T	Kabri	
46	47+435	T	Tejwapur	
47	47+969	Y	Budhanapur	
48	48+251	Y	Kolhada	
49	48+606	Y	Jalapur	
50	49+900	T	Bara	
51	50+835	Y	Shahpur	
52	52+726	Y	Ranapur	
53	52+919	Y	Purwa	
54	53+811	T	Ranapur	
55	55+576	Y	Suveha	

S. No.	Chainage (Km.)	Type of Junction	Details	Remarks
56	56+989	Y	Bhatkhera	
57	60+988	Y	Bhikhera	
58	63+150	Y	Murai	
59	65+612	T	Hazari Ganj	
60	66+443	T	Anguri	
61	67+230	Y	Garghi	
62	67+396	Y	Chilaoli	
63	67+641	Y	Chilaoli	
64	67+804	Y	Chilaoli	
65	68+020	T	Simara	
66	69+355	Y	Fields	
67	72+469	T	Achalgarh	
68	73+190	T	Bijoira	
69	73+486	Y	Bijoira	
70	73+796	T	Duhlan Ka Purwa	
71	74+719	T	Pure Nati Dubey	
72	75+354	T	Lal Purwa	
73	75+757	T	Lal Purwa	
74	76+943	Y	RHS	
75	78+345	X	BHS	
76	79+178	T	RHS	
77	80+608	X	Suduruwa	
78	80+827	T	Suduruwa	
79	86+745	X	JAYAJ	
80	89+421	X	JAGDISHPUR	
81	92+563	X	MISROLI	
82	93+475	X	Village Road	
83	97+101	X	Village Road	Developed as per site condition
84	99+723	X	Village Road	
85	100+697	T	KANKUPUR	
86	103+422	T	Thouri	
87	104+445	T	Chak Bohar	
88	104+969	Y	Metha	
89	106+103	T	Pure Pahalwanpur	
90	113+570	T	Jamwari	
91	113+929	T	Mana Madanpur	
92	114+368	X	Mana Madanpur	
93	115+558	T	Karpiya	
94	116+734	T	Upadhaipur	
95	117+682	T	Kharsa	

S. No.	Chainage (Km.)	Type of Junction	Details	Remarks
96	118+100	T	Pure Ghuppa Pande	
97	120+129	X	Village Road	
98	121+714	X	Village Road	Developed as per site condition
99	124+500	Y	Rawania Purwa	
100	125+382	T	Bahlolpur	
101	126+500	T	Chandpur	
102	126+781	X	Chandpur	
103	127+935	T	Narhi	
104	128+560	T	Kuwar	
105	129+624	Y	Dhamaur	
106	129+832	Y	Miranpur	
107	132+778	X	Village Road	
108	136+210	Y	Hasanpur	
109	137+847	Y	Aligarh	
110	138+119	Y	Hajiyaripur Shah	

## 2.7 Grade Separated Structures and underpasses

As per the provisions of Schedule B of the Concession Agreement 6 Nos. of Pedestrian Underpass, and 4 Nos. of Vehicular Underpass structures are provided in the Project Corridor. Details are provided in Chapter 4.

## 2.8 Road Over Bridge (ROB)

One ROB is provided in the project road at Km. 43+740 as per provisions of Schedule B of CA.

## 2.9 Carriageway Details

Summary of Carriageway Details is given below:

**Table 2.8: Summary of Carriageway Details**

S. No.	Description	Flexible (Kms.)	Rigid (Kms.)
1	Slip Roads	14.824	---
2	4 Lane Paved shoulder	---	127.425
3	Total Length of the Project	14.824	127.425
<b>TYPE OF ALIGNMENT</b>			
4	Widening	---	87.012
5	Realignment/New	---	33.001
6	Flyover/VUP/PUP approaches	---	7.412
7	Cutting Section	---	
8	Total Length of the Project	--	127.425

## 2.10 Summary of Structures

Summary of Structures as per provisions of schedule B of the CA is given below.

**Table 2.9: Summary of Structures**

S. No.	Description	Major Bridges	Minor Bridges	Hume Pipe Culverts	Box/Slab Culverts	ROB	Underpasses
1	Retained						
2	Widening		5	72	40		
3	Reconstruction			66	12		
4	New	1	8	44	25	1	VUP – 4 Nos. PUP – 6 Nos.
5	Improvement						
	<b>Total</b>	<b>1</b>	<b>13</b>	<b>182</b>	<b>77</b>	<b>1</b>	<b>10</b>

## 2.11 Toll Plazas

- Two toll Plazas are provided on the project road at Km. 50+900 and Km.123+490, which comprises of 16 lanes.
- The width of each toll lane is provided 3.2 m, except for the lane for over dimensioned vehicles, where it is 4.5 m.
- Between each toll lane of the toll plaza, traffic islands are constructed to accommodate tollbooth.
- Protective barriers of reinforced concrete and traffic impact attenuators are placed in the front of each island to prevent out of control approaching vehicles crashing into the tollbooth.
- The canopy is provided for weather protection to toll operators, drivers and facilities. The canopy is designed aesthetically pleasing with cylindrical support columns located at traffic island so that there is no restriction on visibility and traffic movement.
- Total 15 Nos. toll booths are provided in toll plaza.
- Toll Plaza is updated to ETC Lane system as per the Change of Scope Order issued to the Concessionaire.
- List of tolling equipment provided at site is furnished in the Detailed Report.

## 2.12 Bus bays/Bus shelters

As per provisions of Schedule C of CA bus shelters are provided at 21 locations. Details are provided below.

**Table 2.10: List of Bus bays/Bus shelters**

LHS			RHS		
S. No.	Name of Habitations	Location	S. No.	Name of Habitations	Location
1	Bhadva (Gajariafarm)	13+400	23	Bakkas	16+830
2	MadarmauKhurad	14+380	24	KasimpurBeruha	19+090
3	Chand Saray	21+100	25	Amethi	27+150
4	Amethi	27+100	26	Salempur	32+450
5	Rahmatnagar	30+630	27	Khanpur	40+590
6	Makanpur	37+860	28	Madnapur	47+870

LHS		
S. No.	Name of Habitations	Location
7	Kakri&Madnapur	47+740
8	Ranapur&Lilhoura	53+470
9	Inhona	70+450
10	Kathora (Built Up)	77+720
11	Kamroli (Built Up)	81+500
12	Mangroa	82+875
13	Jalalpur Tiwari	85+650
14	Mangoli	86+760
15	Mishroli	89+490
16	Kankupur	96+600
17	ChakBaher	102+900
18	Kasthuni Paschim	110+480
19	Khandsa	113+190
20	Khokhipur (at SR)	119+700
21	Rankedih	125+285
22	Ahamamau	13+260

RHS		
S. No.	Name of Habitations	Location
29	Bhatkhera&Kharsatiya	57+270
30	Inhona	72+150
31	Kathora (Built Up)	77+720
32	Uthelwa	81+600
33	Mangrora	82+915
34	Jalalpur Tiwari	85+650
35	Sindhiyava	86+920
36	Mishroli	89+550
37	Kankupur	97+500
38	ChakBaher	103+000
39	Majhgava	110+480
40	Khandsa	113+190
41	RavniyaPashchim (at SR)	120+440
42	MudduiNewada	126+650
43	Dandu Pur	133+510

### 2.13 Other Project Facilities Provided as per Schedule C of CA

- Roadside furniture: Sign Boards Kilometer stones, Road Marking and object/hazard markers are provided in accordance with IRC-SP: 84-2014.
- Traffic safety devices: W Beam Crash barriers, parapet walls are provided as per the provisions of Schedule C of CA.
- Landscaping: Provided at Toll Plaza location and being maintained
- Tree Plantation: Median plantation and Avenue plantation on both sides of the Project Corridor is provided all along the way and is being maintained.
- Medical Aid Post: Provided at Toll Plaza location and is operational
- Highway Lighting: Highway lighting is provided at Toll Plaza, Bus bays and Truck Lay byes and is functional.



**Starting Point of Project**



**Bus Stop at Km. 37+860**



**Truck Lay Bye at Km. 37+200**



**Truck lay at Km. 37+200**



**At Km 41+400**



**Truck Lay Bye at Km. 75+300**



**Km. 127+300**



**Km. 133+600**



**Km. 138+880**

**Figure 2.20: Representative Photos of Road Features**

## CHAPTER 3. ROAD INVENTORY & PAVEMENT CONDITION

### 3.1 General

Road Inventory and pavement condition surveys were carried out by a team of Engineers and the features noted at site are presented in the sections provided below

### 3.2 Road Inventory

Inventory of the project road was carried out physically and the same is summarized in the following Table 3.1. Few representative photographs are presented below.

**Table 3.1: Road Inventory**

S. No.	Features	Remarks
1	Terrain	Plain rolling Terrain
2	Land Use	Agriculture and forest
3	Four lane length	127.425 Kms.
4	Earthen shoulder	1.0 m to 1.5m Width on site
5	Junctions	130 Nos.
6	Toll Plazas	At Km. 50+900 and Km. 123+490
7	Sign boards	Sign boards are provided as per Highway requirements
8	Road Markings	Lane markings are provided as per Highway requirement
9	Bus Bays /shelters	43 Nos.
10	Highway Lighting	Provided as per requirement
11	Avenue plantation	Provided

### 3.3 Pavement Condition Survey

The survey on general pavement condition was primarily undertaken by means of slow drive- over survey, and supplemented with measurements wherever necessary. Pavement assessment was done with the help of simple instruments using measuring tape, Straight edge. It was carried out to quantify pavement deficiency on a representative basis. Aspects of pavement condition assessment include surface defects, rut depth, cracking, potholes, patched areas, shoulder conditions etc. An overall assessment of performance serviceability of the road was also done to rate the existing pavement and shoulder condition qualitatively.

The pavement condition was measured under the following sub-heads:

- Shoulder- (Composition/Condition)
- Riding Quality (Good/Fair/Poor/Very Poor)
- Pavement Condition

As per the provisions of Schedule B, the Concessionaire has constructed the Main Carriageway with Rigid Pavement and Service & Slip Roads with Flexible Pavement. Pavement Design submitted by the Concessionaire was reviewed and found in accordance with the provisions of IRC:37 and IRC 58. Design parameters are provided below. CBR considered for Flexible Pavement was 13% and Effective CBR for

Rigid pavement was 7%. Based on CBR values, axle loads and Traffic the crust designed is satisfactory. The crust details are given below.

**Table 3.2: For Rigid pavement –Main carriage way**

S. No.	Layer	Thickness
1	PQC	300 mm
2	DLC	150 mm
3	GSB	150 mm
4	Sub Grade	500 mm

**Table 3.3: Flexible Pavement-Service Roads**

S. No.	Layer	Thickness
1	BC	40 mm
2	DBM	65 mm
3	WMM	250 mm
4	GSB	260 mm
5	Sub Grade	500 mm

- Based on the review on Designs submitted by the Concessionaire, the above crust is safe for project.

Upon verification of the Pavement condition in the above said manner, it is observed that the Pavement condition of Project road is good. The field measurements of the Pavement Condition survey are tabulated in the standard proforma as per IRC: SP-19. The summary of Pavement condition is given below.

**Table 3.4: Pavement Condition Summary**

From (Km.)	To (Km.)	Length (Kms.)	Condition
11+500	134+700	127.425	Good



**Km. 35+300**



**Km. 41+000**





**Km. 50+800**



**Km. 76+000**



**Km. 87+700**



**Km. 111+400**

**Figure 3.1: Representative Photos of Pavement Condition.**

## CHAPTER 4. INVENTORY AND CONDITION OF STRUCTURES

### 4.1 General Assessment and Condition of the structures

Inspection of existing structures on the project section was carried out, detailed inventory and condition is examined during the site visit as per the guide lines provided in IRC SP: 52-1999 & IRC SP: 35-1990

### 4.2 Inventory of Structures

The details of Structures along this project road are listed below.

**Table 4.1: List of Structures**

S. No.	Type of Structure	Numbers
1	Major bridges	01 Nos.
2	Minor Bridge	13 Nos.
3	Pipe culverts	184 Nos.
4	Slab/Box Culverts	75 Nos.
5	ROB	01 Nos.
6	Underpasses	10 Nos.

For Major bridge the Superstructure is of PSC I Girder with RCC circular type Piers and wall type Abutments resting on open foundation. For Minor bridges, the superstructure is RCC solid slab and the substructures are of PCC conventional wall type supported on open foundations. Detailed inventory and condition survey of bridges are given in **ANNEXURE 1**. The culverts observed along the project road are mainly of two types viz. Pipe culverts and RCC slab/box culverts. Condition of most of the culverts is fair. Detailed inventory and condition survey of culverts are given in **ANNEXURE 2**.

### 4.3 Details of Major Bridges

The total length of the Major bridge at Km. 31+569 is 79.50 m both on LHS and RHS side. The superstructure is of PSC I girder with RCC circular type Piers and wall type Abutments resting on open foundations both for LHS and RHS. Superstructure is seated on Elastomeric bearings. Expansion joints are of Strip Seal type. RCC crash barrier has been provided on both sides of the deck.

**Table 4.2: List of Major Bridge**

S. No.	Chainage (Km.)	Side	Span (m)	Total Length of Bridge (m)
1	31+569	LHS	3 x 26.5	79.5
		RHS	3 x 26.5	79.5

The condition of the superstructure and substructure is good. Certain minor maintenance operations such as quadrant pitching, reflector plates, cleaning of drainage spouts and cleaning of strip seal expansion joints are to be carried out.



**Km. 31+569**



**Km. 31+569**



**Km. 31+569**



**Km. 31+569**

**Figure 4.1: Representative photos of Major Bridge**

#### 4.4 Road Over Bridge (ROB):

There is one ROB in the project stretch with 77.5m both on LHS and RHS side. The superstructure is of composite girder with RCC rectangular piers and wall type abutments both for LHS and RHS. For approach spans the superstructure is of RCC girder type. Expansion joints are of Strip Seal type. RCC crash barrier has been provided on both sides of the deck.

**Table 4.3: Details of ROB**

S. No.	Chainage (Km.)	Side	Span (m)	Total Length of Bridge (m)
1	43+750	LHS	1 x 47.5 + 2 X 15.0	77.50
		RHS	1 x 47.5 + 2 X 15.0	77.50

The condition of the superstructure and substructure is good.



ROB Km. 43+750



ROB Km. 43+750

**Figure 4.2: Representative photos of ROB**

#### 4.5 Details of Minor Bridges

There are 13 minor bridges in the project stretch. The type of superstructure for minor bridges is RCC solid slab or RCC/PSC girder supported on RCC/PCC wall type Abutment or Pier resting on open foundations. Some are RCC box type minor bridges. Expansion joints are buried type/strip seal type and bearings are of tar paper/ elastomeric bearings. RCC crash barriers are provided on all structures.

**Table 4.4: Inventory of Minor Bridges**

S. No.	Design Chainage Km.	Location	Span (No. X m)	Total Length of Bridge (m)	Description
1.	17+305	LHS	4 x 13.2	52.8	The superstructure is of RCC girder supported on conventional RCC wall type piers and abutments resting on open foundations. Buried/Strip seal type expansion joints.
		RHS	1 x 52.8	52.8	The superstructure is of composite steel girder supported on conventional RCC wall type abutments resting on open foundations. Buried/Strip seal type expansion joints.
2.	45+586	LHS	1 x 26.3	26.3	The superstructure is of PSC girder supported on conventional RCC wall type piers and abutments resting on open foundations. Buried/Strip seal type expansion joints.
		RHS	1 x 26.3	26.3	The superstructure is voided slab supported on conventional RCC wall type abutments resting on open foundations. Buried/Strip seal type expansion joints.
3.	53+620	LHS	3 x 3.40	10.2	It is RCC box type minor bridge with bituminous wearing coat.
		RHS	3 x 3.40	10.2	It is RCC box type minor bridge with bituminous wearing coat.

S. No.	Design Chainage Km.	Location	Span (No. X m)	Total Length of Bridge (m)	Description
4.	56+347	LHS	3 x 5.6	16.8	It is RCC box type minor bridge with bituminous wearing coat.
		RHS	3 x 5.6	16.8	It is RCC box type minor bridge with bituminous wearing coat.
5.	65+597	LHS	3 x 4.6	13.8	It is RCC box type minor bridge with bituminous wearing coat.
		RHS	3 x 4.6	13.8	It is RCC box type minor bridge with bituminous wearing coat.
6.	70+199	LHS	3 x 3.8	11.4	It is RCC box type minor bridge with bituminous wearing coat.
		RHS	3 x 3.8	11.4	It is RCC box type minor bridge with bituminous wearing coat.
7.	82+315	LHS	3 x 6.0	18.0	It is RCC box type minor bridge with bituminous wearing coat.
		RHS	3 x 6.0	18.0	It is RCC box type minor bridge with bituminous wearing coat.
8.	83+356	LHS	3 x 8.5	25.5	It is RCC box type minor bridge with bituminous wearing coat.
		RHS	3 x 8.5	25.5	It is RCC box type minor bridge with bituminous wearing coat.
9.	92+945	LHS	2 x 16	32.0	The superstructure is RCC solid slab supported on conventional RCC wall type piers/abutments resting on open foundations. Buried/Strip seal type expansion joints.
		LHS	2 x 16	32.0	The superstructure is RCC solid slab supported on conventional RCC wall type piers/abutments resting on open foundations. Buried/Strip seal type expansion joints.
10.	103+772	RHS	2 x 24	48.0	The superstructure is of PSC/RCC girder supported on conventional RCC wall type piers and abutments resting on open foundations. Buried/Strip seal type expansion joints.
		LHS	2 x 24	48.0	The superstructure is of PSC/RCC girder supported on conventional RCC wall type abutments resting on open foundations. Buried/Strip seal type expansion joints.
11	107+607	RHS	1 x 32	32.0	The superstructure is of PSC girder supported on conventional RCC wall type piers and abutments resting on open foundations. Buried/Strip seal type expansion joints.
		LHS	1 x 32	32.0	The superstructure is of PSC girder

S. No.	Design Chainage Km.	Location	Span (No. X m)	Total Length of Bridge (m)	Description
					supported on conventional RCC wall type abutments resting on open foundations. Buried/Strip seal type expansion joints.
12	112+518	RHS	1 x 32	32.0	The superstructure is of PSC girder supported on conventional RCC wall type abutments resting on open foundations. Buried/Strip seal type expansion joints.
		LHS	1 x 32	32.0	The superstructure is of PSC girder supported on conventional RCC wall type abutments resting on open foundations. Buried/Strip seal type expansion joints.
13	129+590	RHS	4 x 2.8	11.2	It is RCC box type minor bridge with bituminous wearing coat.
		LHS	4 x 2.8	11.2	It is RCC box type minor bridge with bituminous wearing coat.



**Km. 56+347**



**Km. 107+607**

**Figure 4.3: Representative photos of Minor Bridges.**

#### 4.6 Details of Underpass

There are 6 PUP's and 4 VUP's in the project stretch. It is RCC box type structure with buried type/Strip seal type expansion joints.

**Table 4.5: Inventory of Underpass (VUP/PUP)**

S. No.	Chainage (Km.)	Type of Structure	Span (No. X m)	Total Length (m)	Description
1.	86+155	VUP	2 x 15.0	30.0	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
2.	93+475	PUP	1 x 7.32	7.32	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
3.	97+101	PUP	1 x 8.3	8.3	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
4.	99+723	PUP	1 x 7	7.0	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
5.	108+100	VUP	1 x 12.5	12.5	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
6.	111+956	VUP	1 x 12.1	12.1	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
7.	119+241	VUP	1 x 14.5	14.5	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
8.	120+129	PUP	1 x 7.1	7.1	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
9.	121+714	PUP	1 x 7.5	7.5	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
10.	132+778	PUP	1 x 7.4	7.4	It is RCC Box structure. It has RCC crash barrier, bituminous wearing coat.



**PUP Km. 93+475**



**PUP Km. 93+475**



**PUP Km. 93+475**



**PUP Km. 93+475**



**PUP Km. 99+723**



**PUP Km. 99+723**



**PUP Km. 99+723**



**PUP Km. 99+723**

**Figure 4.4: Representative photos of PUP**



**VUP Km. 86+155**



**VUP Km. 86+155**





VUP Km. 86+155



VUP Km. 86+155



VUP Km. 108+100



VUP Km. 108+100



VUP Km. 108+100



VUP Km. 108+100

Figure 4.5: Representative photos of VUP

#### 4.7 Details of Culverts:

The culverts observed along the project road are mainly of two types' viz. RCC Slab/Box culverts and Pipe culverts. The condition of culverts is good. For some of the pipe culverts vegetation and vent cleaning is required. In general, the condition of all the structures is found satisfactory. The detailed condition of the same are given the following sections. Detailed inventory and condition survey of culverts are given in **ANNEXURE 2**.

##### 4.7.1. Slab/Box Culverts

There are 75 Nos. of Slab/Box culvert in the project stretch. The details of the culverts are as given below.

**Table 4.6: List of Slab/Box Culverts**

S. No.	Chainage (Km.)	Type of Structure	Span (No. X m)	S. No.	Chainage (Km.)	Type of Structure	Span (No. X m)
1	13+518	Box	1 x 3.0	39	78+188	Box	1 x 1.5
2	14+056	Box	1 x 2.5	40	78+320	Box	1 x 2.0
3	15+498	Box	1 x 1.0	41	81+062	Box	1 x 2.0
4	16+563	Box	1 x 2.0	42	81+545	Box	1 x 3.75
5	16+950	Box	1 x 3.0	43	81+800	Box	3 x 2.5
6	18+248	Box	1 x 6.0	44	81+951	Box	1 x 2.0
7	20+907	Box	1 x 2.0	45	84+633	Box	1 x 4.62
8	21+336	Box	1 x 1.0	46	85+522	Box	3 x 2.5
9	21+449	Box	1 x 1.0	47	86+266	Box	1 x 6.0
10	21+813	Box	1 x 4.0	48	86+763	Box	1 x 6.2
11	22+636	Box	1 x 2.1	49	87+674	Box	1 x 6.1
12	23+452	Box	1 x 2.0	50	88+250	Box	3 x 2.5
13	32+307	Box	1 x 2.0	51	89+379	Box	1 x 2.5
14	36+693	Box	1 x 2.6	52	91+250	Box	3 x 2.5
15	37+715	Box	1 x 1.0	53	90+740	Box	1 x 2.0
16	38+560	Box	1 x 1.0	54	92+200	Box	1 x 2.0
17	42+788	Box	1 x 3.0	55	95+190	Box	1 x 3.0
18	43+191	Box	1 x 3.5	56	95+548	Box	2x3.0
19	44+903	Box	1 x 3.98	57	97+290	Box	1 x 3.0
20	47+998	Box	1 x 2.5	58	98+304	Box	1 x 4.0
21	49+198	Box	1 x 4.8	59	99+144	Box	1 x 3.0
22	50+735	Box	1 x 1.0	60	100+319	Box	1 x 2.0
23	51+907	Box	1 x 0.9	61	101+091	Box	1 x 2.0
24	52+843	Box	1 x 5.4	62	101+484	Box	1 x 1.0
25	53+014	Box	1 x 2.0	63	102+178	Box	1 x 1.8
26	53+306	Box	1 x 2.8	64	102+692	Box	1 x 1.0
27	54+657	Box	1 x 4.0	65	104+274	Box	1 x 2.0
28	55+182	Box	1 x 3.0	66	105+714	Box	1 x 2.0
29	55+301	Box	1 x 1.5	67	106+194	Box	1 x 2.0
30	56+208	Box	1 x 2.0	68	108+873	Box	1 x 8.4
31	56+430	Box	1 x 2.0	69	112+450	Box	1 x 9.45
32	60+324	Box	1 x 1.0	70	117+690	Box	1 x 3.5
33	67+224	Box	1 x 2.0	71	118+950	Box	1 x 3.0
34	67+575	Box	1 x 1.0	72	121+200	Box	1 x 3.0
35	74+861	Box	1 x 3.1	73	121+580	Box	1 x 3.0
36	75+280	Box	1 x 3.5	74	124+626	Box	1 x 3.0
37	76+356	Box	1 x 1.5	75	132+078	Box	1 x 2.0
38	76+394	Box	1 x 5.0				

#### 4.7.2. Condition of the Slab/Box Culverts:

The general condition of above Box/slab culverts is good. Maintenance is to be carried out before monsoon for vent clearance, Protection works etc.



**Km. 81+800**



**Km. 84+633**



**Km.90+740**

**Figure 4.6: Representative photos of Box Culverts**

#### 4.7.3. General Description of the Pipe Culverts

There are 184 Nos. of pipe culverts in the project stretch. The details of the culverts are as given below.

**Table 4.7: List of Pipe Culverts**

S. No.	Chainage (km.)	Type of Structure	No. of Row x Dia.(m.)	S. No.	Chainage (km.)	Type of Structure	No. of Row x Dia.(m.)
1	11+808	HPC	1 x 1.0	93	66+540	HPC	1 x 1.2
2	12+346	HPC	3 x 0.9	94	66+812	HPC	1 x 1.2
3	13+138	HPC	9 x 1.0	95	67+044	HPC	1 x 0.9
4	13+844	HPC	2 x 1.0	96	67+33	HPC	1 x 1.2
5	14+260	HPC	1 x 1.0	97	67+483	HPC	1 x 1.2
6	14+952	HPC	1 x 0.9	98	67+726	HPC	1 x 1.2
7	17+004	HPC	1 x 1.2	99	67+970	HPC	1 x 1.2
8	17+549	HPC	1 x 1.2	100	68+059	HPC	1 x 1.2
9	17+861	HPC	1 x 1.2	101	68+564	HPC	1 x 1.2
10	18+620	HPC	1 x 1.2	102	68+872	HPC	1 x 1.0

S. No.	Chainage (km.)	Type of Structure	No. of Row x Dia.(m.)
11	19+362	HPC	1 x 1.2
12	19+501	HPC	1 x 1.2
13	20+039	HPC	1 x 1.2
14	20+074	HPC	1 x 1.2
15	20+416	HPC	1 x 1.2
16	21+078	HPC	1 x 1.2
17	21+654	HPC	1 x 0.9
18	23+011	HPC	1 x 1.2
19	24+303	HPC	1 x 1.2
20	24+740	HPC	1 x 0.9
21	24+951	HPC	1 x 1.0
22	25+001	HPC	1 x 1.2
23	25+493	HPC	1 x 1.0
24	26+375	HPC	1 x 1.0
25	26+691	HPC	1 x 1.2
26	26+912	HPC	1 x 1.2
27	27+456	HPC	2 x 1.2
28	27+745	HPC	1 x 1.2
29	28+831	HPC	1 x 1.2
30	29+135	HPC	1 x 1.2
31	29+380	HPC	1 x 1.2
32	29+611	HPC	1 x 1.2
33	29+849	HPC	1 x 1.2
34	30+241	HPC	1 x 1.2
35	30+865	HPC	1 x 1.0
36	33+123	HPC	2 x 0.9
37	33+480	HPC	1 x 1.2
38	34+261	HPC	7 x 1.0
39	34+956	HPC	3 x 0.9
40	35+517	HPC	1 x 1.2
41	36+000	HPC	1 x 1.2
42	36+214	HPC	1 x 0.9
43	36+294	HPC	1 x 1.2
44	37+991	HPC	2 x 1.0
45	38+303	HPC	1 x 1.2
46	38+918	HPC	1 x 1.0
47	39+303	HPC	1 x 1.2
48	39+865	HPC	1 x 0.9
49	40+344	HPC	1 x 1.2
50	40+755	HPC	1 x 1.2
51	40+989	HPC	1 x 1.2

S. No.	Chainage (km.)	Type of Structure	No. of Row x Dia.(m.)
103	69+032	HPC	1 x 1.2
104	69+850	HPC	1 x 1.2
105	70+289	HPC	1 x 1.2
106	70+581	HPC	1 x 0.9
107	70+651	HPC	1 x 1.2
108	71+045	HPC	1 x 1.2
109	71+313	HPC	1 x 1.2
110	72+126	HPC	1 x 1.0
111	72+190	HPC	1 x 0.9
112	72+834	HPC	1 x 1.2
113	73+545	HPC	1 x 1.2
114	73+780	HPC	1 x 1.2
115	74+218	HPC	1 x 1.2
116	74+631	HPC	1 x 1.0
117	76+320	HPC	1 x 1.2
118	76+593	HPC	1 x 1.2
119	76+868	HPC	1 x 1.2
120	76+956	HPC	1 x 1.2
121	77+000	HPC	1 x 1.2
122	77+200	HPC	1 x 1.2
123	78+000	HPC	1 x 1.2
124	79+196	HPC	1 x 1.2
125	80+580	HPC	1 x 1.2
126	83+030	HPC	2 x 1.2
127	83+582	HPC	2 x 1.2
128	89+130	HPC	2 x 1.2
129	88+520	HPC	1 x 1.2
130	93+260	HPC	1 x 1.2
131	94+500	HPC	1 x 1.2
132	83+960	HPC	1 x 1.2
133	96+690	HPC	1 x 1.2
134	89+850	HPC	1 x 1.2
135	98+900	HPC	1 x 1.2
136	84+120	HPC	1 x 1.2
137	102+034	HPC	1 x 0.9
138	104+581	HPC	1 x 1.2
139	106+800	HPC	1 x 1.2
140	107+293	HPC	1 x 1.2
141	107+578	HPC	1 x 1.2
142	107+780	HPC	2 x 1.2
143	108+186	HPC	1 x 1.2

S. No.	Chainage (km.)	Type of Structure	No. of Row x Dia.(m.)
52	41+778	HPC	1 x 1.2
53	41+883	HPC	1 x 1.2
54	42+422	HPC	1 x 1.2
55	43+430	HPC	1 x 1.2
56	44+020	HPC	1 x 1.2
57	44+270	HPC	1 x 1.2
58	46+351	HPC	1 x 1.2
59	46+572	HPC	1 x 1.0
60	49+836	HPC	1 x 0.9
61	50+952	HPC	1 x 0.9
62	51+382	HPC	1 x 1.2
63	51+712	HPC	1 x 0.9
64	52+296	HPC	1 x 0.9
65	56+940	HPC	1 x 1.2
66	57+393	HPC	1 x 1.2
67	58+109	HPC	2 x 1.0
68	58+235	HPC	1 x 1.2
69	58+577	HPC	1 x 1.2
70	58+938	HPC	1 x 1.2
71	59+285	HPC	1 x 1.2
72	59+476	HPC	1 x 1.2
73	59+746	HPC	1 x 1.2
74	59+849	HPC	1 x 1.2
75	60+104	HPC	1 x 1.2
76	60+17	HPC	1 x 1.2
77	60+734	HPC	1 x 1.2
78	61+08	HPC	1 x 1.2
79	61+255	HPC	1 x 1.2
80	61+794	HPC	1 x 1.2
81	62+183	HPC	1 x 1.2
82	62+707	HPC	1 x 1.2
83	63+075	HPC	1 x 1.2
84	63+290	HPC	1 x 1.0
85	63+454	HPC	1 x 1.2
86	63+606	HPC	1 x 1.2
87	63+785	HPC	1 x 1.0
88	64+199	HPC	1 x 1.2
89	64+611	HPC	1 x 1.0
90	64+899	HPC	1 x 1.0
91	65+957	HPC	1 x 1.0
92	66+312	HPC	1 x 1.2

S. No.	Chainage (km.)	Type of Structure	No. of Row x Dia.(m.)
144	109+414	HPC	1 x 1.2
145	110+129	HPC	1 x 1.2
146	111+060	HPC	1 x 1.2
147	111+650	HPC	1 x 1.2
148	112+250	HPC	1 x 1.2
149	112+550	HPC	2 x 1.2
150	112+977	HPC	1 x 1.2
151	113+080	HPC	1 x 1.2
152	114+308	HPC	1 x 1.2
153	115+510	HPC	1 x 1.2
154	116+969	HPC	2 x 1.2
155	118+530	HPC	1 x 1.2
156	119+520	HPC	2 x 1.2
157	119+830	HPC	1 x 1.2
158	120+540	HPC	1 x 1.2
159	121+930	HPC	2 x 1.2
160	122+820	HPC	1 x 1.2
161	123+226	HPC	2 x 1.0
162	123+615	HPC	3 x 1.0
163	124+483	HPC	1 x 1.2
164	124+920	HPC	1 x 1.2
165	125+437	HPC	1 x 1.0
166	126+036	HPC	1 x 1.0
167	127+235	HPC	1 x 0.9
168	127+470	HPC	1 x 1.2
169	127+678	HPC	1 x 0.9
170	128+852	HPC	1 x 1.2
171	130+322	HPC	1 x 1.2
172	130+660	HPC	1 x 0.9
173	131+066	HPC	1 x 1.2
174	132+610	HPC	1 x 1.2
175	132+920	HPC	1 x 1.2
176	133+310	HPC	2 x 1.2
177	107+636	HPC	1 x 1.2
178	135+230	HPC	1 x 1.2
179	135+447	HPC	1 x 0.9
180	135+992	HPC	1 x 1.2
181	136+421	HPC	1 x 1.2
182	136+875	HPC	1 x 1.0
183	137+450	HPC	2 x 1.2
184	137+898	HPC	1 x 1.2



**Km. 26+375**

**Figure 4.7: Representative photos of Pipe Culverts**

#### **4.7.4. Condition of the Pipe Culverts**

The general condition of above pipe culverts is good. Maintenance is to be carried out before monsoon for vent clearance, Protection works etc.

The culverts are in fair condition and can be retained in the present condition with following repairs/rehabilitation measures.

- Chocked culverts must be cleared.
- Debris and garbage near outside the vents must be removed.

## CHAPTER 5. REVIEW OF PAVEMENT DESIGN

### 5.1 General

Review of Pavement design report includes providing insights on design life of pavement, crust thickness, history of overlays on the existing pavement, pavement condition and CA provisions for the upcoming renewal cycles.

### 5.2 Pavement design

The Pavement Design shall be carried out in accordance with Indian Roads Congress guide lines. The pavement is designed in accordance with IRC: 58 -2015 “Guidelines for the Design of Plain Jointed Rigid Pavements for Highways”, IRC: SP:84-2014, IRC:15-2011 “Construction Concrete Road (FOURTH REVISION)” and relevant clauses of schedule B of the EPC agreement. Pavement crust thickness for main carriageway as per pavement design report summarized below.

**Table 5.1: Rigid Pavement Design for Main carriageway**

Description	Design/Adopted Parameters
CBR of sub grade	6 %
Two-way commercial traffic volume per day	3522
Design life in years	30
Pavement Quality Concrete (PQC) – (mm)	300
Dry Lean Concrete (DLC) – (mm)	150
Drainage Layer (GSB) - (mm)	150
Diameter of Dowel Bar (mm)	32
Length of Dowel Bar (mm)	500
Spacing of Dowel Bars (mm)	300
Diameter of Tie Bar (mm)	12 (Deformed)
Length of Tie Bar (mm)	640
Spacing of Tie Bars (mm)	520

As per schedule D, (Annexure-I), clause 2, pavements for Slip road/Service road shall be flexible pavement and designed as per provision of design manual IRC: SP: 84:2014. The design traffic in case of service road shall be ten million standard axles as per Cl:5.5.5 of IRC: SP: 84:2014. The crust composition shall be designed in accordance with the IRC:37, “Guidelines for the Design of Flexible Pavements”.

**Table 5.2: Flexible Pavement for service road**

S. No.	Description/ Pavement layer	Design/Adopted Parameters
1	Sub Grade CBR (%)	6 %
2	Design Life (Years)	15 years
3	Design Traffic (MSA)	10 MSA
4	Surface course (BC)	40 mm
5	Binder course (DBM)	65 mm
6	Base course (WMM)	250 mm
7	Sub Base course (GSB)	260 mm

The Pavement crust has been designed according to IRC specification and found in order, the adopted/ Constructed pavement layer thickness is adequately provided than actual/designed thickness.

### **5.3 Maintenance/ Overlay schedule**

Periodic Maintenance includes Profile corrective course overlaid with the periodic renewal of the wearing course of BC for service roads. The detail maintenance schedule is summarized below.

**Routine maintenance** - Every year

**Periodic Renewal for Flexible Pavement (service roads)** – Next Periodic Renewal Proposed on or before 2027 and 2034.

**Periodic Maintenance for Rigid Pavement** – Re-texturing shall be done at least once in 10 years from construction. (As per IRC 58-2015).



## CHAPTER 6. SAFETY AUDIT OF ROAD

### 6.1 General

Road Safety Audit (RSA) is defined as “the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users”.

Road Safety is a multi- sectorial and multi- dimensional issues. It incorporates the development and management of road infrastructure, provisions of safer vehicles, legislations and law enforcements, mobility planning, provisions of health and hospital services, child safety, urban land use planning.

A Key feature of a road safety audit is the use of a team of professionals with varied expertise. The team shall include highway safety engineers, highway design engineers, maintenance personal, and law enforcement. Additional specialties shall be added to the team as needed.

Central Road Research Institute (CRRI) has studied road safety elements extensively in the past and has come up with various manuals such as manual for safety in road design (1998), Road safety Audit Manual (2003) and Revised Road Safety Audit manual (2010). Indian Road Congress (IRC) has published Special provision SP-88, Manual on road Safety Audit. The methodology used for the design stage audit process is based on these manuals like Type Designs for Intersections on National Highways, 1992.

**Table 6.1: Referred IRC Publications**

IRC Code No.	IRC Code Name
IRC: 35	Code of Practice for Road Markings
IRC: 38	Guidelines for Design of Horizontal curves for highways and Design tables
IRC: 67	Code of Practice for Road signs
IRC: 73	Geometric Design standards for rural highways (non-urban)
IRC:103	Guidelines for Pedestrian Facilities
IRC: SP-15	Ribbon Development along highways and its prevention
IRC: SP-23	Vertical curves for highways
IRC: SP-41	Guidelines on design of at-grade intersections in Rural and Urban areas
IRC: SP-55	Guidelines for safety in construction zones
IRC: SP- 88	Manual of Road Safety

### 6.2 Road Safety Audit

During the site visit, it is observed that all safety items are provided as shown in the following Table 6.2.

**Table 6.2: Safety Items**

S. No.	Item Description		Status	Condition
<b>Road Furniture</b>				
1	Sign Boards	Chevron Signs	Available as per site requirement	Good
		Village sign boards	Available as per site requirement	Good
		Information Boards	Available as per site requirement	Good
		Other Sign Boards	Available as per site requirement	Good
		Gantry Sign Boards	Available as per site requirement	Good
2	Road Marking	Studs & Lane marking	Available as per site requirement	Good
3	Metal Beam Crash Barriers	At High embankments & Bridge Approaches	Available as per site requirement	Good
4	Median kerb	Along the Project Highway	Provided as per IRC SP:84-2014	Good
5	Road studs & Solar Blinkers	Along the Project Highway	Provided as per IRC SP:84-2014	Good

This Project Section is part of an important corridor. It is the Concessionaire's duty and responsibility to provide safe road for the commuters by assuring safe and hindrance free movement for both Traffic and Pedestrians along urban locations & habitations.

The Concessionaire is maintaining the safety features in good condition from time to time in accordance with the provisions of Schedule K of the Concession Agreement.



**Km. 17+300**



**Km. 20+300**



**Km. 41+450**



**Km. 54+100**



**Km. 55+900**



**Km. 81+600**

**Figure 6.1: Representative photos during road safety audit**

### 6.3 Conclusion

Safety arrangements made for road users along the Project road are found to be in conformity with project road requirements and good industry practice. However, a continuous monitoring on safety arrangements is highly necessary during the maintenance period.

## CHAPTER 7. TOLL PLAZA & HTMS

### 7.1 General

There are two toll Plazas on the project road at Km. 50+900 and Km. 123+490. The width of each toll lane is provided 3.2 m, except for the lane for over dimensioned vehicles, where it is 4.5 m. between each toll lane of the toll plaza, traffic islands is constructed to accommodate tollbooth. Protective barriers of reinforced concrete and traffic impact attenuators is placed at the front of each island to prevent out of control approaching vehicles crashing into the toll booth. The canopy is provided for weather protection to toll operators, drivers and facilities. The canopy is designed aesthetically pleasing with cylindrical support columns located at traffic island so that there is no restriction on visibility and traffic movement. Total 15 Nos. toll booths are provided in toll plaza.

Toll Plaza is updated to ETC Lane system as per the Change of Scope Order issued to the Concessionaire.

### 7.2 Tolling Equipment and Control Room Equipment

List of equipment provided at toll plaza and control room is enclosed at **ANNEXURE 9**.

### 7.3 Vehicles

The list of vehicles, which were observed at site, for operation of Highway and Toll Plaza are presented below.

**Table 7.1: List of Vehicles**

S. No.	Vehicle Type	Toll Plaza
1	Patrol Vehicle	2 No
2	Ambulance	2 No.



**Toll Plaza Km. 50+900**



**Toll Building Km. 50+900**



**Toll Plaza Km. 123+490**



**Toll Building Km. 123+490**

**Figure 7.1: Representative photos of Toll Plaza**

## CHAPTER 8. SCHEDULE OF ANNUITY PAYMENTS

### 8.1 Hybrid Annuity Model (HAM)

Hybrid annuity model is the PPP model in which Authority makes payment of 40% of the Bid Project cost during construction period based on progress milestones set forth in Concession Agreement. Payment of the balance 60% of the Bid Project Cost is made in form of bi-annual annuities with interest during the operational phase of concession.

**Table 8.1: Schedule of Payment Milestones**

S. No.	Payment Milestone No	Criteria for releasing the Payment
1	I	On Achievement of 20% of Physical Progress
2	II	On Achievement of 40% of Physical Progress
3	III	On Achievement of 60% of Physical Progress
4	IV	On Achievement of 75% of Physical Progress
5	V	On Achievement of 90% of Physical Progress

During the Operation Period following payment components are payable.

- Annuity Payment as per the Annuity Payment Schedule provided in 23.6.3 of the Concession Agreement.
- Interest to be paid on the balance of completion cost at an interest rate equal to the applicable Bank Rate Plus 3%.
- O&M Payment as a lump sum amount as per Clause 23.7.1 of the Concession Agreement.

### 8.2 Schedule of Annuity Payments

Details of Annuity payments are as below.

**Table 8.2: Schedule of Annuity Payments**

S. No.	Following the COD	Percentage of Completion Cost remaining	Annuity Due date	Annuity Paid Date
1	Annuity No 1	2.10%	27.10.2019	07-Nov-19
2	Annuity No 2	2.17%	27.04.2020	01-May-20
3	Annuity No 3	2.24%	27.10.2020	04-Nov-20
4	Annuity No 4	2.31%		
5	Annuity No 5	2.38%		
6	Annuity No 6	2.45%		
7	Annuity No 7	2.52%		
8	Annuity No 8	2.60%		
9	Annuity No 9	2.68%		
10	Annuity No 10	2.76%		
11	Annuity No 11	2.84%		
12	Annuity No 12	2.93%		
13	Annuity No 13	3.02%		

<b>S. No.</b>	<b>Following the COD</b>	<b>Percentage of Completion Cost remaining</b>	<b>Annuity Due date</b>	<b>Annuity Paid Date</b>
14	Annuity No 14	3.11%		
15	Annuity No 15	3.20%		
16	Annuity No 16	3.30%		
17	Annuity No 17	3.40%		
18	Annuity No 18	3.50%		
19	Annuity No 19	3.61%		
20	Annuity No 20	3.72%		
21	Annuity No 21	3.83%		
22	Annuity No 22	3.94%		
23	Annuity No 23	4.06%		
24	Annuity No 24	4.18%		
25	Annuity No 25	4.25%		
26	Annuity No 26	4.25%		
27	Annuity No 27	4.44%		
28	Annuity No 28	4.71%		
29	Annuity No 29	4.75%		
30	Annuity No 30	4.75%		

## **CHAPTER 9. OPERATION AND MAINTENANCE**

### **9.1 General**

As per Article 17 of CA, the Concessionaire will operate and maintain the Project roads by itself or through O & M Contractors and comply with specification and standards, and other requirements set forth in the Agreement, Good Industry Practice, Applicable Laws, applicable permits and manufacturer guidelines and instructions.

### **9.2 Inspection**

Inspection system followed is illustrated as divided into the following 3 types.

- **Visual Inspection:** Visual inspections are done at frequent intervals, and are intended to determine any potential traffic hazards to the road user or hampering the aesthetics of the project stretch. Visual Inspections are meant to identify defects that constitute an imminent or immediate hazard to the public.
- **Detailed Inspection:** Detailed Inspections often require some measuring instruments, are done less frequently and are intended more towards determining performance and behavior of various elements. These inspections also indicate if there is any need for thorough inspections. Detailed inspections are carried out primarily to establish programs of periodic or major maintenance tasks, and enhancement requirements not requiring urgent execution
- **Thorough Inspection:** Thorough Inspections are aimed at finding the cause and remedy of specific problems and at specific locations. Specialist's inspections are required once in a while. Thorough Inspections shall be carried out with highly sophisticated instruments

The inspection procedures will assist in identifying the need for replacement or renewal under planned program of maintenance and rehabilitation. The elements viz. pavement, drainage, shoulders / slopes / Earthworks, structures and buildings are covered.

Maintenance program will be submitted to authority not later than 45 days prior to each accounting year.

### **9.3 Operations**

#### **9.3.1. Traffic Flow Operation & Traffic Management Plan**

Following are the obligations of the Concessionaire for the regular and emergency operations of the Project road and Project Facilities.

- i. Permitting smooth and uninterrupted flow of traffic during normal operating conditions.
- ii. carrying out preventive and periodic maintenance of the Project road;
- iii. undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices;
- iv. Undertaking major maintenance such as resurfacing of pavements, repairs to structures.
- v. Functioning of the lighting system;



- vi. Functioning of the Patrolling System
- vii. Functioning of rescue and medical aid services
- viii. Ambulance as and when required
- ix. Functioning of the Project Facilities
  - x. Administrative, Operational and Maintenance Base Camp
  - xi. Truck Lay byes
  - xii. Pickup Bus stops / Bus Bays
- xiii. protection of the environment and provision of equipment and materials
- xiv. Operation and maintenance of all communication, control and administrative systems necessary for the efficient operation of the Project road
- xv. complying with Safety Requirements in accordance with Article 18.

#### **9.4 Operation of Toll Plazas**

There are two lanes in each direction operating at toll plaza, middle lanes are used by Car/LCV for collecting toll and extra wide lanes are utilized by wide vehicles like Bus/Trucks/Tractors and toll exempted vehicles. The cash collected is deposited on daily basis to the Escrow Account. In case of ETC system, Toll collection is connected with Network system and directly deposited into the Escrow account.

#### **9.5 Maintenance of Project road**

The maintenance methodology and yearly maintenance programme will guide the Maintenance team to undertake the routine & periodic maintenance works of the Project Facilities. This programme is the basic indicator of the intended works to be carried out by the Maintenance Team over a period of one year.

Road maintenance can be carried out in four ways as listed below.

- i. Preventive Maintenance
- ii. Routine Maintenance
- iii. Periodic Maintenance
- iv. Special repairs

##### **9.5.1. Preventive Maintenance**

Preventive maintenance is an organized, systematic process of applying a series of preventive treatments over the life of the pavement to minimize life cycle costs.

The strategy of applying periodic treatments at appropriate times in a pavement's life is economical than applying treatment at the end of pavement's life. Preventive maintenance is designed to retard pavement deterioration. Regular preventive maintenance will be carried out to ensure adherence to the Design Requirements and specifications throughout the Concession period.

The flexible pavement is in good condition and hence does not require any immediate or preventive interventions.

### 9.5.2. Routine Maintenance

Routine maintenance, which involves repairing of cracks, replacement of safety girders along the highway, clearance of debris following accidents, ensuring functionality of sign posts, maintenance of a security set-up, and such other activities.

### 9.5.3. Periodic Maintenance

In contrast to preventive maintenance treatments, periodic maintenance treatments are ideally applied on pavements to improve surface integrity and waterproofing, or to improve skid resistance, without increasing the strength of the pavement significantly.

**Table 9.1: Schedule and status of for Periodic Maintenance**

Description	Schedule of Major Maintenance	Status of Major Maintenance
1 <sup>st</sup> Periodic Maintenance	2027	Planned to execute
2 <sup>nd</sup> Periodic Maintenance	2034	Planned to execute

### 9.5.4. Special Repairs

The group of activities performed to restore the roadway following damage due to natural calamities such as heavy floods, sand storms, hurricanes, cyclones, earthquakes or landslides which shall be unpredictable. The affected Project road shall be rectified, and the system shall be restored to function as per programme prepared in consultation with Independent Engineer. Typical activities include.

- a. Culvert and bridge repairs
- b. Retaining wall repairs and construction;
- c. Construction of Diversions;
- d. Floodway repairs; and
- e. Flood damage restoration works, etc.

## 9.6 Review of Test Reports

### 9.6.1. Bump Integrator Test:

Maintenance of road is dependent on several factors, one of which is the condition of Pavement surface. As such Roughness is the measurement of the riding quality, which in turn is the effect of total surface deterioration. Bump Integrator (BI) is one of the equipment needed for roughness measurement. The roughness of pavement surface is designated as uneven index value and expressed as surface roughness from which the condition of the road can be assessed.

As per Schedule K of the CA, Roughness value shall not exceed 2750 mm in a Km. Based on the review of documents, it was noticed that no NCRs were issued pertinent to riding quality

## 9.7 O&M Payments

In accordance with Cl.23.7.1, O&M expenses shall be borne by Concessionaire, a lumpsum financial support in the form of bi annual payments shall be due and payable by Authority.

## 9.8 O&M Forecast

The O&M costs were estimated based on various parameters of CA, and design reports. The cost summary is given below, and detailed cost estimations are given in **ANNEXURE 3**.

**Table 9.2: Proposed Plan for Future Operation & Maintenance Cost (In Crores)**

Year	Routine maintenance	Incidental maintenance	Periodic / Major maintenance	Operational Cost	Total cost per year
2019	3.549	2.792		4.85	11.19
2020	3.656	2.876		4.99	11.52
2021	3.765	2.962		5.14	11.87
2022	3.878	3.051		5.30	12.23
2023	3.994	3.142		5.46	12.59
2024	4.114	3.237		5.62	12.97
2025	4.238	3.334		5.79	13.36
2026	4.365	3.434	34.45	5.96	48.21
2027	4.496	3.537		6.14	14.17
2028	4.631	3.643		6.33	14.60
2029	4.770	3.752		6.52	15.04
2030	4.913	3.865		6.71	15.49
2031	5.060	3.981		6.91	15.95
2032	5.212	4.100	39.58	7.12	56.01
2033	5.368	4.223		7.33	16.92
2034	5.529	4.350		7.55	17.43
2035	0.452	0.356		0.62	1.43
<b>Total</b>	<b>71.990</b>	<b>56.631</b>	<b>74.03</b>	<b>98.35</b>	<b>301.00</b>

## **CHAPTER 10. REVIEW OF CONCESSION AGREEMENT**

### **10.1 General: Scope of Work (Article 2)**

Article 2 of the CA provides the scope of work, which includes the following.

- Operation and Maintenance of the Project Highway on the Site set forth in Schedule A and as specified in Schedule B together with provision of Project Facilities as specified in Schedule C, and in conformity with the Specifications and Standards set forth in Schedule D;
- collection of Fee from the Users of the Project; subject and in accordance with the provisions of the Concession Agreement;
- performance and fulfillment of all other obligations of the Contractor in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all of the obligations of the Contractor under this Agreement

### **10.2 Letter of Award**

After evaluation of the bids received, Authority will select one bidder considering their score in technical and financial bids. Further Authority will issue a Letter called LOA (Letter of Award) to the selected bidder requiring the execution of agreement within stipulated time. The issued LOA copy given in **ANNEXURE 4**.

### **10.3 Conditions precedent (Article 4)**

#### **Conditions precedent to be fulfilled by the Authority**

- Providing adequate Right of Way
- Providing necessary approvals as per the Concession Agreement

#### **Conditions precedent to be fulfilled by the Concessionaire**

- Provide performance security to the Authority
- Executed and procured Escrow Agreement & Substitution Agreement
- Procured all applicable permits specified in Schedule E of CA
- Executed financing Agreements and delivering 3 copies of Financial Package
- Delivered to the Authority confirmation in original of the correctness of their representations and warranties set forth in Agreement and a legal opinion from the legal opinion from the legal counsel of the Concessionaire

### **10.4 Major Obligations of the Concessionaire (Clause 5.1)**

- The Concessionaire shall obtain necessary permits in conformity with the applicable laws
- Procure appropriate rights for obtaining materials
- Perform and fulfill its obligations under financing Agreements
- To make reasonable efforts to facilitate the acquisition of land required for execution
- Transfer the Project road upon termination of the Concession Agreement

### **10.5 Performance Security (Article 9)**

- The Concessionaire shall submit the Performance security to the Authority within 30 days from the date of the Agreement,
- The Performance security shall remain in force and effect for a period of one year from the Appointed Date
- Performance Security shall be released upon the Concessionaire expending on Project Construction an Aggregate sum that is not less than 30% of the Total Project Cost.

### **10.6 Tests (Clause 13.3)**

For determining that the Project, conforms to the specifications, the Independent Engineer shall require the Concessionaire (Concessionaire shall in turn require the Contractor) to carry out, or cause to be carried out, tests specified by it in accordance with Good Industry Practice. One half of the costs incurred on such tests, and to the extent certified by the Independent Engineer as reasonable, shall be reimbursed by the Authority to the Concessionaire.

### **10.7 Provisional Certificate (Clause 14.3)**

- Upon completion of works in accordance with the specifications and standards set forth in the Schedule B, C and D of CA after determining the tests on completion successful the Independent engineer shall issue the Completion Certificate in the form set forth in Schedule J of CA. A copy of PCOD is enclosed at **ANNEXURE 5**.

### **10.8 Completion Certificate (Clause 14.4)**

- Upon completion of Punch list items appended to the Provisional Completion Certificate within 90 days of issuance of Provisional Complete Certificate, Completion Certificate shall be issued to the Concessionaire. A copy of CC attached at **ANNEXURE 6**.

### **10.9 Commercial Operation Date (COD) (clause 15.1)**

- COD shall be the date on which the Provisional Completion Certificate is issued by the Independent Engineer.
- With COD the Project shall enter into commercial service and the Concessionaire is entitled to demand and collect Fee.

### **10.10 Change of scope (Article 16)**

Change of scope proposals that were initiated during construction period and consented by the HAI are provided in **ANNEXURE 8**.

### **10.11 O&M Obligations of the Concessionaire (Clause 17.1)**

- Permitting safe, smooth and uninterrupted flow of traffic on the Project road
- Collecting and appropriating the Fee
- Minimizing the disruption to traffic in the event of accidents

- Undertaking routine maintenance including prompt repairs of pot holes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices
- Undertaking major maintenance such as resurfacing of pavements.
- Preventing any unauthorized use of the Project road.
- Protection of environment and provision of equipment and materials
- Complying with safety Requirements in accordance with the provisions of the CA.

#### **10.12 Maintenance Requirements (Clause 17.2)**

The Contractor shall procure that at all times during the Operations period; the Project road conforms to the maintenance requirements set forth in Schedule K of CA (The “**Maintenance Requirements**”).

#### **10.13 Maintenance Manual (Clause 17.3)**

No later than 90 (ninety) days prior to the Scheduled Two Lanning Date, the Contractor shall, in consultation with the Independent Engineer, evolve a repair and maintenance manual (the “**Maintenance Manual**”) for the regular and preventive maintenance of the Project in conformity with the Specifications and Standards, Maintenance Requirements, Safety Requirements and Good Industry Practice, and shall provide 5 (five) copies thereof to the Authority and 2 (two) copies to the Independent Engineer. The Maintenance Manual shall be revised and updated once every 3 (three) years and the provisions of this Clause shall apply, mutatis mutandis, to such revision.

#### **10.14 Maintenance Programme (Clause 17.4)**

- On or before COD and no later than 45 days prior to the beginning of each Accounting year during the Operation Period as the case may be the Concessionaire shall provide to the Authority and Independent Engineer its proposed annual Programme of preventive, urgent and the schedule maintenance.
- The Concessionaire has been submitting the Annual Maintenance Programme regularly as per the above clause.

#### **10.15 Damages for breach of Maintenance Obligations (Clause 17.8)**

- In the event that the Contractor fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified therein, it shall be deemed to be in breach of the Agreement and the Concessionaire shall be entitled to recover Damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of the following.
- 2% (two percent) of the performance security, and
- 0.1% (zero decimal one per cent) of the cost of such repair or rectification as estimated by the Independent Engineer.

#### **10.16 Monthly status reports (Clause 19.1)**

During the Operation Period, the Contractor shall, no later than 7 (seven) days after the close of each month, furnish to the Concessionaire, the Authority and the Independent Engineer a monthly report stating in reasonable detail the condition of the Project including its compliance or otherwise with the Maintenance Requirements, Maintenance Manual, Maintenance Program and Safety

Requirements, and shall promptly give such other relevant information as may be required by the Concessionaire, Independent Engineer or the Authority. In particular, such report shall separately identify and state in reasonable detail the defects and deficiencies that require rectification.

#### **10.17 Payment of Bid Project Cost (Article 23)**

The Authority agrees to pay 40% of the Bid Project Cost in five installments against the achievement of Project Milestones specified in Clause 23.4 of the Concession Agreement and the amount shall be adjusted with Price index.

Remaining balance completion cost shall be paid as per the % of balance completion cost biannually from the date of COD. Percentage of amounts payable for each Annuity is specified in 23.6.3 of the Concession Agreement.

#### **10.18 Change in Law (Article 35)**

The Contractor acknowledges that the Contractor shall be responsible for any consequences arising from any Change in Law and the Contractor shall at its own costs and expenses, undertake the compliance with any such Change in Law, however, in the event any receivables are obtained by the Concessionaire from the Authority, towards the losses incurred by the Concessionaire on account of Change in Law, then the Contractor shall ensure that such receivables are passed to the Concessionaire.

## CHAPTER 11. INSURANCE

### 11.1 Details of Insurance:

As per clause 26.1 of the CA, the Concessionaire shall affect and maintain at its own cost during the Operation Period such insurances for such maximum sums as may be required under the Financing Agreements and the Applicable laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice.

Accordingly, the Concessionaire has procured the following insurances for mitigating the risks. Copy of insurances are enclosed at **ANNEXURE 7**.

**Table 11.1: Insurance Details**

Name of the Policy	Insurance Company	Policy No	Effective Period		Property covered
			From	To	
Employees Compensation Insurance	HDFC ERGO General Insurance Co Ltd	4203786194200000	3.11.2020	2.11.2021	All categories of Employees of the Contractor & sub-contractor engaged in the Project
Civil Engineering Completed Risk Policy	National Insurance Co Ltd	32130044190001996	27.3.2020	26.3.2021	Road and structures, Toll Bldg., Road furniture etc.
Electronic Equipment Insurance Policy	The Oriental Insurance Co Ltd	171200/44/2021/64	12.11.2020	11.11.2021	Four Lanning of Lucknow sulthanpur Road



## CHAPTER 12. CONCLUSION

### 12.1 General

Based on detailed site inspection, review of various documents and reports as described in the preceding chapters technical over view of the Project is provided below.

### 12.2 Pavement Condition

The Pavement condition for the overall project is good. RCC drains are constructed in Built up locations and earthen drains in rural locations which facilitates, effective drainage system along the project road. Shoulder condition is fair.

### 12.3 Condition of Structures

General condition of Bridges is good. No major structural defects were noticed. General condition of Culverts is good. Observed vegetation growth in vents of Box and Hume Pipe culverts and they are being cleared during regular maintenance period.

### 12.4 Project Facilities

Two Toll Plazas are constructed one at Km.50+900 and another is at Km. 123+490. Both Toll Plazas are operational. Toll Plazas are operated by ETC Toll collection system and connected by network system monitored in administrative building. Bus bays and truck Lay byes are in fair condition. Medical Aid posts found functional. Avenue plantation and landscaping at Toll Plaza is provided and being maintained well. Highway lighting is provided at toll plaza, bus bay and truck lay bye locations and the same is found functional.

### 12.5 Road safety

Pavement marking is in fair condition and number of sign boards are provided as per IRC SP 73-2007. The condition of sign boards & other road appurtenances like metal beam crash barriers is fair.

### 12.6 Maintenance

- Routine maintenance is being carried out by O&M contractor effectively, based on documents reviewed, time to time observations made by client/Authority are being complied and no outstanding NCR's are to be attended as on date.
- Major maintenance (MM) /Periodic maintenance was carried recently and next MM is scheduled in the year 2027 and 2034.

### 12.7 Epilogue

The project is designed and constructed as per the stipulated specifications besides maintenance work, being carried out timely and effectively to keep the road in traffic worthy and safe at all times.

**Annexure 1: Condition of Bridges**

S. No.	Chainage (Km.)	Type of Structure	Sub structure	Super structure	Wearing coat	Bearings	Quadrant Pitching	Toe wall	Aprons
1	17+305	Minor bridge	Good	Good	Good	-	Good	Good	-
2	31+569	Major bridge	Good	Good	Good	-	Good	Good	-
3	43+740	ROB	Good	Good	Good	-	Good	Good	-
4	45+317	Minor bridge	Good	Good	Good	-	Good	Good	-
5	53+620	Minor bridge	Good	Good	Good	-	Good	Good	-
6	56+347	Minor bridge	Good	Good	Good	-	Good	Good	-
7	65+597	Minor bridge	Good	Good	Good	-	Good	Good	-
8	70+199	Minor bridge	Good	Good	Good	-	Good	Good	-
9	82+315	Minor bridge	Good	Good	Good	-	Good	Good	-
10	83+390	Minor bridge	Good	Good	Good	-	Good	Good	-
11	86+155	VUP	Good	Good	Good	-	Good	Good	-
12	92+945	Minor bridge	Good	Good	Good	-	Good	Good	-
13	93+475	PUP	Good	Good	Good	-	Good	Good	-
14	97+101	PUP	Good	Good	Good	-	Good	Good	-
15	99+723	PUP	Good	Good	Good	-	Good	Good	-
16	103+772	Minor bridge	Good	Good	Good	-	Good	Good	-
17	107+607	Minor bridge	Good	Good	Good	-	Good	Good	-
18	108+100	VUP	Good	Good	Good	-	Good	Good	-
19	111+956	VUP	Good	Good	Good	-	Good	Good	-
20	112+518	Minor bridge	Good	Good	Good	-	Good	Good	-
21	119+241	VUP	Good	Good	Good	-	Good	Good	-
22	120+129	PUP	Good	Good	Good	-	Good	Good	-
23	121+714	PUP	Good	Good	Good	-	Good	Good	-
24	129+590	Minor bridge	Good	Good	Good	-	Good	Good	-
25	132+778	PUP	Good	Good	Good	-	Good	Good	-

**Annexure 2: Condition of Culverts**

**Condition Hume Pipe Culverts**

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Quadrant pitching	Toe wall
1	11+808	Good	Good	Good	Fair
2	12+346	Good	Good	Good	Fair
3	13+138	Good	Good	Good	Fair
4	13+844	Good	Good	Good	Fair
5	14+260	Good	Good	Good	Fair
6	14+952	Good	Good	Good	Fair
7	17+004	Good	Good	Good	Fair
8	17+549	Good	Good	Good	Fair
9	17+861	Good	Good	Good	Fair
10	18+620	Good	Good	Good	Good
11	19+362	Good	Good	Good	Good
12	19+501	Good	Good	Good	Good
13	20+039	Good	Good	Good	Good
14	20+074	Good	Good	Good	Fair
15	20+416	Good	Good	Good	Fair
16	21+078	Good	Good	Good	Good
17	21+654	Good	Good	Good	Good
18	23+011	Good	Good	Good	Good
19	24+303	Good	Good	Good	Good
20	24+740	Good	Good	Good	Good
21	24+951	Good	Good	Good	Good
22	25+001	Good	Good	Good	Good
23	25+493	Good	Good	Good	Good
24	26+375	Good	Good	Good	Good
25	26+691	Good	Good	Good	Good
26	26+912	Good	Good	Good	Good
27	27+456	Good	Good	Good	Good
28	27+745	Good	Good	Good	Good
29	28+831	Good	Good	Good	Good
30	29+135	Good	Good	Good	Fair
31	29+380	Good	Good	Good	Fair
32	29+611	Good	Good	Good	Good
33	29+849	Good	Good	Good	Fair
34	30+241	Good	Good	Good	Good
35	30+865	Good	Good	Good	Good
36	33+123	Good	Good	Good	Fair
37	33+480	Good	Good	Good	Fair
38	34+261	Good	Good	Good	Not visible

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Quadrant pitching	Toe wall
39	34+956	Good	Good	Good	Good
40	35+517	Good	Good	Good	Good
41	36+000	Good	Good	Good	Good
42	36+214	Good	Good	Good	Fair
43	36+294	Good	Good	Good	Fair
44	37+991	Good	Good	Good	Fair
45	38+303	Good	Good	Good	Good
46	38+918	Good	Good	Good	Good
47	39+303	NV	Fair	Good	Good
48	39+865	Good	Good	Good	Good
49	40+344	NV	Fair	Good	Good
50	40+755	Good	Good	Good	Good
51	40+989	Good	Good	Good	Good
52	41+778	Good	Good	Good	Good
53	41+883	Good	Good	Good	Good
54	42+422	Good	Good	Good	Good
55	43+430	Good	Good	Good	Good
56	44+020	Good	Good	Good	Good
57	44+270	Good	Good	Good	Good
58	46+351	Good	Good	Good	Good
59	46+572	Good	Good	Good	Good
60	49+836	Good	Good	Good	Good
61	50+952	Good	Good	Good	Good
62	51+382	Good	Good	Good	Good
63	51+712	Good	Good	Good	Good
64	52+296	Good	Good	Good	Good
65	56+940	Good	Good	Good	Good
66	57+393	Good	Good	Good	Good
67	58+109	Good	Good	Good	Good
68	58+235	Good	Good	Good	Good
69	58+577	Good	Good	Good	Good
70	58+938	Good	Good	Good	Good
71	59+285	Good	Good	Good	Good
72	59+476	Good	Good	Good	Good
73	59+746	Good	Good	Good	Good
74	59+849	Good	Good	Good	Good
75	60+104	Good	Good	Good	Good
76	60+170	Good	Good	Good	Good
77	60+734	Good	Good	Good	Good
78	61+080	Good	Good	Good	Good

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Quadrant pitching	Toe wall
79	61+255	Good	Good	Good	Good
80	61+794	Good	Good	Good	Good
81	62+183	Good	Good	Good	Good
82	62+707	Good	Good	Good	Good
83	63+075	Good	Good	Good	Good
84	63+290	Good	Good	Good	Good
85	63+454	Good	Good	Good	Good
86	63+606	Good	Good	Good	Good
87	63+785	Good	Good	Good	Good
88	64+199	Good	Good	Good	Good
89	64+611	Good	Good	Good	Good
90	64+899	Good	Good	Good	Good
91	65+957	Good	Good	Good	Good
92	66+312	Good	Good	Good	Good
93	66+540	Good	Good	Good	Good
94	66+812	Good	Good	Good	Good
95	67+044	Good	Good	Good	Good
96	67+330	Good	Good	Good	Good
97	67+483	Good	Good	Good	Good
98	67+726	Good	Good	Good	Good
99	67+970	Good	Good	Good	Good
100	68+059	Good	Good	Good	Good
101	68+564	Good	Good	Good	Good
102	68+872	Good	Good	Good	Good
103	69+032	Good	Good	Good	Good
104	69+850	Good	Good	Good	Good
105	70+289	Good	Good	Good	Good
106	70+581	Good	Good	Good	Good
107	70+651	Good	Good	Good	Good
108	71+045	Good	Good	Good	Good
109	71+313	Good	Good	Good	Good
110	72+126	Good	Good	Good	Good
111	72+190	Good	Good	Good	Good
112	72+834	Good	Good	Good	Good
113	73+545	Good	Good	Good	Good
114	73+780	Good	Good	Good	Good
115	74+218	Good	Good	Good	Good
116	74+631	Good	Good	Good	Good
117	76+320	Good	Good	Good	Good
118	76+593	Good	Good	Good	Good

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Quadrant pitching	Toe wall
119	76+868	Good	Good	Good	Good
120	76+956	Good	Good	Good	Good
121	77+000	Good	Good	Good	Good
122	77+200	Good	Good	Good	Good
123	78+000	Good	Good	Good	Good
124	79+196	Good	Good	Good	Good
125	80+580	Good	Good	Good	Good
126	83+030	Good	Good	Good	Good
127	83+582	Good	Good	Good	Good
128	83+960	Good	Good	Good	Good
129	84+120	Good	Good	Good	Good
130	88+520	Good	Good	Good	Good
131	89+130	Good	Good	Good	Good
132	89+850	Good	Good	Good	Good
133	93+260	Good	Good	Good	Good
134	94+500	Good	Good	Good	Good
135	96+690	Good	Good	Good	Good
136	98+900	Good	Good	Good	Good
137	102+034	Good	Good	Good	Good
138	104+581	Good	Good	Good	Good
139	106+800	Good	Good	Good	Good
140	107+293	Good	Good	Good	Good
141	107+578	Good	Good	Good	Good
142	107+636	Good	Good	Good	Good
143	107+780	Good	Good	Good	Good
144	108+186	Good	Good	Good	Good
145	109+414	Good	Good	Good	Good
146	110+129	Good	Good	Good	Good
147	111+060	Good	Good	Good	Good
148	111+650	Good	Good	Good	Good
149	112+250	Good	Good	Good	Good
150	112+550	Good	Good	Good	Good
151	112+977	Good	Good	Good	Good
152	113+080	Good	Good	Good	Good
153	114+308	Good	Good	Good	Good
154	115+510	Good	Good	Good	Good
155	116+969	Good	Good	Good	Good
156	118+530	Good	Good	Good	Good
157	119+520	Good	Good	Good	Good
158	119+830	Good	Good	Good	Good

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Quadrant pitching	Toe wall
159	120+540	Good	Good	Good	Good
160	121+930	Good	Good	Good	Good
161	122+820	Good	Good	Good	Good
162	123+226	Good	Good	Good	Good
163	123+615	Good	Good	Good	Good
164	124+483	Good	Good	Good	Good
165	124+920	Good	Good	Good	Good
166	125+437	Good	Good	Good	Good
167	126+036	Good	Good	Good	Good
168	127+235	Good	Good	Good	Good
169	127+470	Good	Good	Good	Good
170	127+678	Good	Good	Good	Good
171	128+852	Good	Good	Good	Good
172	130+322	Good	Good	Good	Good
173	130+660	Good	Good	Good	Good
174	131+066	Good	Good	Good	Good
175	132+610	Good	Good	Good	Good
176	132+920	Good	Good	Good	Good
177	133+310	Good	Good	Good	Good
178	135+230	Good	Good	Good	Good
179	135+447	Good	Good	Good	Good
180	135+992	Good	Good	Good	Good
181	136+421	Good	Good	Good	Good
182	136+875	Good	Good	Good	Good
183	137+450	Good	Good	Good	Good
184	137+898	Good	Good	Good	Good

**Condition of Box/Slab Culverts**

S. No.	Chainage (Km.)	Condition	Return wall	Quadrant pitching	Toe wall	Parapet wall
1	13+518	Good	Good	Good	Good	Good
2	14+056	Good	Good	Good	Good	Good
3	15+498	Good	Good	Good	Good	Good
4	16+563	Good	Good	Good	Good	Good
5	16+950	Good	Good	Good	Good	Good
6	18+248	Good	Good	Good	Good	Good
7	20+907	Good	Good	Good	Good	Good
8	21+336	Good	Good	Good	Good	Good
9	21+449	Good	Good	Good	Good	Good
10	21+813	Good	Good	Good	Good	Good
11	22+636	Good	Good	Good	Good	Good
12	23+452	Good	Good	Good	Good	Good
13	32+307	Good	Good	Good	Good	Good
14	36+693	Good	Good	Good	Good	Good
15	37+715	Good	Good	Good	Good	Good
16	38+560	Good	Good	Good	Good	Good
17	42+788	Good	Good	Good	Good	Good
18	43+191	Good	Good	Good	Good	Good
19	44+903	Good	Good	Good	Good	Good
20	47+998	Good	Good	Good	Good	Good
21	49+198	Good	Good	Good	Good	Good
22	50+735	Good	Good	Good	Good	Good
23	51+907	Good	Good	Good	Good	Good
24	52+843	Good	Good	Good	Good	Good
25	53+014	Good	Good	Good	Good	Good
26	53+306	Good	Good	Good	Good	Good
27	54+657	Good	Good	Good	Good	Good
28	55+182	Good	Good	Good	Good	Good
29	55+301	Good	Good	Good	Good	Good
30	56+208	Good	Good	Good	Good	Good
31	56+430	Good	Good	Good	Good	Good
32	60+324	Good	Good	Good	Good	Good
33	67+224	Good	Good	Good	Good	Good
34	67+575	Good	Good	Good	Good	Good
35	74+861	Good	Good	Good	Good	Good
36	75+280	Good	Good	Good	Good	Good
37	76+356	Good	Good	Good	Good	Good
38	76+394	Good	Good	Good	Good	Good
39	78+188	Good	Good	Good	Good	Good



S. No.	Chainage (Km.)	Condition	Return wall	Quadrant pitching	Toe wall	Parapet wall
40	78+320	Good	Good	Good	Good	Good
41	81+062	Good	Good	Good	Good	Good
42	81+545	Good	Good	Good	Good	Good
43	81+800	Good	Good	Good	Good	Good
44	81+951	Good	Good	Good	Good	Good
45	84+633	Good	Good	Good	Good	Good
46	85+522	Good	Good	Good	Good	Good
47	86+266	Good	Good	Good	Good	Good
48	86+763	Good	Good	Good	Good	Good
49	87+674	Good	Good	Good	Good	Good
50	88+250	Good	Good	Good	Good	Good
51	89+379	Good	Good	Good	Good	Good
52	90+740	Good	Good	Good	Good	Good
53	91+250	Good	Good	Good	Good	Good
54	92+200	Good	Good	Good	Good	Good
55	95+190	Good	Good	Good	Good	Good
56	95+548	Good	Good	Good	Good	Good
57	97+290	Good	Good	Good	Good	Good
58	98+304	Good	Good	Good	Good	Good
59	99+144	Good	Good	Good	Good	Good
60	100+319	Good	Good	Good	Good	Good
61	101+091	Good	Good	Good	Good	Good
62	101+484	Good	Good	Good	Good	Good
63	102+178	Good	Good	Good	Good	Good
64	102+692	Good	Good	Good	Good	Good
65	104+274	Good	Good	Good	Good	Good
66	105+714	Good	Good	Good	Good	Good
67	106+194	Good	Good	Good	Good	Good
68	108+873	Good	Good	Good	Good	Good
69	112+450	Good	Good	Good	Good	Good
70	117+690	Good	Good	Good	Good	Good
71	118+950	Good	Good	Good	Good	Good
72	121+200	Good	Good	Good	Good	Good
73	121+580	Good	Good	Good	Good	Good
74	124+626	Good	Good	Good	Good	Good
75	132+078	Good	Good	Good	Good	Good

**Annexure 3: Operation & Maintenance cost**

**Routine Maintenance cost for 1 year**

Item	Frequency	Unit	No	Frequency per year	Quantity	Rate (Rs.)	Amount (Rs.)	Remarks
General Cleaning in Carriageway & Shoulders Rural area	Monthly	Km.	93.992	12	4	350	15,79,066	04 nos of Labour
General Cleaning in Carriageway & Shoulders Urban area	Twice in a month	Km.	32.28	24	4	350	10,84,608	04 nos of Labour
Watering in Median Plants	Once in Week	Km.	126.272	52	1	1939	1,27,31,753	01 nos of Labour
Watering in Avenue plants	Once in Week	Km.	93.992	52	94	1939	94,77,025	
Median Maintenance (Grass cutting and plant trimming)	Once in Month	Km.	93.992	12	12	21000	2,52,000	02 nos of Labour - 2 x 350 = 700 x 30 = 2,52,000
ROW Cleaning	Half yearly	Km.	88.3904	2	10	350	6,18,733	10 Nos of labour per KM (70% of the Project length)
Cleaning of Culverts	Half yearly	Nos.	260	2	3	650	10,14,000	3 nos of Labour along with JCB or Excavator
Road Furniture Cleaning	Quarterly	Km.	126.272	4	2	350	3,53,562	02 nos of Labour
Maintenance of Bus shelters	Monthly	Nos.	43	12	2	350	3,61,200	2 nos/ Bus shelter/month
General Cleaning in Building & Facilities	Daily	Nos.	4	12	60	350	10,08,000	02 nos of Labour for 30 days
Bridges	Half yearly	Nos.	14	2	4	350	39,200	04 nos of Labour for removal of vegetation/Structure
Carriageway Maintenance (Pot Holes etc)	Yearly	Sqm.	15	1	550	124	10,23,000	2.5% of CW area

Item	Frequency	Unit	No	Frequency per year	Quantity	Rate (Rs.)	Amount (Rs.)	Remarks
								considered 22.0x1000x2.5%
<b>Total</b>							<b>2,95,42,147</b>	
<b>EQUIPMENT SUPPLY</b>								
TRUCK TIPPER 6-8 CUM CAPACITY	Monthly	Nos.		12	2	400000	8,00,000	(2000000 is the cost of vehicle, considering 20% Rental per year) including maintenance
Water Tanker Cap 12 KL for Median	Monthly	Nos.	126.272	12	0	440000	-	(2200000 is the cost of vehicle, considering 20% Rental per year) including maintenance
Tractor Mounted Water Tanker Cap 6 KL for RoW	Monthly	Nos.		12		160000	-	(800000 is the cost of vehicle, considering 20% Rental per year) including maintenance
Mechanical Sweeper	Monthly	Nos.		12	2	250000	5,00,000	(2500000 is the cost of vehicle, considering 20% Rental per year) including maintenance
Grass cutter	Monthly	Nos.	126.272	12	6	12000	75,763	(12000/year)

Project: Four Lanning of Lucknow-Sultanpur section of NH-56 from Km. 11+500 to Km. 134+700 in the State of Uttar Pradesh under NHDP, Phase –IV on Hybrid Annuity Mode.



**TECHNICAL  
DUE DILIGENCE REPORT**

Item	Frequency	Unit	No	Frequency per year	Quantity	Rate (Rs.)	Amount (Rs.)	Remarks
Manhoise/ Skyscraper	Monthly	Nos.		12	1	400000	4,00,000	(2000000 is the cost of vehicle, considering 20% Rental per year) including maintenance
Bikes	Monthly	Nos.	126.272	12	8	2500	2,52,544	15 Km/Bike/Month
Building Maintenance	Yearly			12	1	25000	3,00,000	25000/ month
Toll plaza AMC	Yearly	Nos.		12	1	100000	12,00,000	100000/month
<b>Total</b>							<b>35,28,307</b>	

Patrolling vehicle	Monthly	Nos.	12		3	300000	900000	(1500000 is the cost of vehicle, considering 20% Rental per year) including maintenance
Ambulance	Monthly	Nos.	12		2	240000	480000	(1200000 is the cost of vehicle, considering 20% Rental per year) including maintenance (1 Ambulance/toll plaza)
Tow away trucks and Crane	Monthly	Nos.	12		2	400000	800000	(2000000 is the cost of vehicle, considering 20%

Project: Four Lanning of Lucknow-Sultanpur section of NH-56 from Km. 11+500 to Km. 134+700 in the State of Uttar Pradesh under NHDP, Phase –IV on Hybrid Annuity Mode.



**TECHNICAL  
DUE DILIGENCE REPORT**

Item	Frequency	Unit	No	Frequency per year	Quantity	Rate (Rs.)	Amount (Rs.)	Remarks
								Rental per year) including maintenance
Consumables for Medical Aid Post and Ambulance	Monthly	Nos.	12		2	5000	120000	5000 Per month for per set (Per set - Per toll plaza)
Consumables for Route Patrolling & Crane	Monthly	Nos.	12		2	5000	120000	5000 Per month for per set (Per set - Per toll plaza)
							<b>24,20,000</b>	
<b>Routine Maintenance Cost</b>							<b>3,54,90,455</b>	

**Incidental cost for 1 year (1st Cycle)**

Item		Unit	No	Frequency	Quantity	Rate	Amount	Remarks
Road marking	Half yearly	Sqm.	1	1	371	516	1,91,436	33 % of Total Project length on B/S for 1 year
Carriageway Maintenance (Pot Holes etc)	Yearly	Sqm.	1	1	66	168	11,088	2% of Flexible Pavement (changed quantities to only Service road portion)
Maintenance of Earthen Shoulder	Half yearly	Cum.	1	3	3788	225	25,56,900	10% of total Shoulder length throughout the project
Sign Board	Quarterly	Ls.	1	4	1	200000	8,00,000	5 % of Total sign boards per year (Lumpsum of 200000)
MBCB	Monthly	RMT.			3124	2400	74,97,600	3% of Total qty per year - (considered 2400 for km per month)
Mile Stone (KM Stone/ HM Stone / ROW stone etc.)	Quarterly	Nos.	126.27	4	32	2250	2,88,000	5 % of total stones per year (unable to understand the backup)
ROW Fencing (If available)	Quarterly	Km.		4			-	10 % of total ROW fencing per year
Kerb	Yearly	Km.	126.27	1	5051	250	12,62,750	2 % of total Kerbings per year
Electrical Poles	Yearly	Nos.	4136	1	124	55000	68,20,000	3 % of total poles per year
Replacement of Rigid pavement Panels	Yearly	Ls.	1	1	2046.00	4000	81,84,000	Considered 0.3% of the total volume in O & M period per year
Providing Reinforced cement concrete crash barrier at the edges of the bridge structures constructed with M-40 grade concrete with HYS-D-Fe 500 TMT reinforcement concrete per Rmt conforming to IRC:21 and fixing with dowel bars 16 mm dia to old concrete using epoxy grout as per drawing and Technical Specifications and as directed by the Engineer.	Yearly	RMT.	2574		77	3985	3,06,845	3% of Length replacement in every 5 years
<b>Total amount for 1 Year</b>							<b>2,79,18,619</b>	

**Operational Expenses**

S.NO.	PARTICULARS	Amount
1	Man Power	₹ 1,21,20,000
2	Fuel for Generator & Vehicles	₹ 1,93,44,000
3	Electricity	₹ 1,12,20,000
4	Stationary	₹ 1,00,000
5	Replacement of Electrical Fixtures	₹ 50,99,982
6	Refurbishment of Toll Plaza Equipment	₹ 6,00,000
	<b>Total Amount</b>	<b>₹ 4,84,83,982</b>

**Summary of Major Maintenance**

Description	Due date	Base cost	Esc Period	Escalation Rate per Year	Cost of MMR on due date @ 3% Escalation	In crores
Date of Estimation	01-06-2019					
1st Major Maintenance - Highway	01-06-2026	27,81,93,178	7.00	3.0%	33,66,13,745	33.66
1st Major Maintenance - Structures	01-06-2026	65,27,556	7.00	3.0%	78,98,343	0.79
2nd Major Maintenance - Highways	01-06-2032	27,81,93,178	13.00	3.0%	38,66,88,517	38.67
2nd Major Maintenance - Structures	01-06-2032	65,27,556	13.00	3.0%	90,73,303	0.91
				<b>Total</b>	<b>₹ 74,02,73,908</b>	<b>74.03</b>

**Major Maintenance BOQ**

S. No.	DESCRIPTION	Unit	QUANTITY	RATE	AMOUNT
<b>Pavement (Asphalt &amp; Concrete)</b>					
1	Providing and applying tack coat with Rapid Setting Bitumen Emulsion using emulsion pressure distributor on the prepared bituminous/granular surface cleaned with mechanical broom,Ref. to Technical specification 503.			-	
(a)	On Bituminous surface @ 2.0 kg to 3.0 kg/10 sq.m.	Sqm	2,09,615.63	14.00	29,34,619
2	Providing and laying bituminous concrete using a batch type Hot Mix Plant using crushed aggregates of size (table 500-17), premixed with VG Grade Bitumen and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers, Pneumatic Tyre Rollers to achieve the desired compaction as per Technical specification clause No. 507 and mix design conforming the IRC -111 and IRC 37.	Cum	8,384.63	7,682.00	6,44,10,689
3	Repair of joint Grooves with Epoxy Mortar Repair of spalled joint grooves of contraction joints, longitudinal joints and expansion joints in concrete pavements using epoxy mortar or epoxy concrete)	MTRS	2,27,289.90	250.00	5,68,22,475
4	Texturing of Rigid pavement ( considering 50% for 7 years)	Sqm	11,79,229.00	130.00	15,32,99,770
<b>Total</b>					<b>27,74,67,553</b>
<b>Junctions, Traffic Signs Marking and Other Appurtenances</b>					
1	Providing and laying of <b>cement concrete kerb without channel</b> (M-20 Grade) over WMM foundation using kerb laying machine & proper curing complete, as per drawing & technical specification clause no.409, 1700 and as per the instructions of Employer's representative.	Rmt		380.00	



2	Providing and laying lane markings of hot applied thermoplastic compound 2.5 mm thick including reflectorizing glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes,Ref. to Technical specification 803.	Sqm	1,406.25	516.00	7,25,625
3	Road Studs	Nos		750.00	
<b><u>Total Chapter 9</u></b>				-	<b>7,25,625</b>
<b><u>Grand Total</u></b>					<b>27,81,93,178</b>

Annexure 4: Letter of Acceptance



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण  
(सड़क परिवहन और राजमार्ग मंत्रालय)  
**National Highways Authority of India**

(Ministry of Road Transport and Highways)

जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली-110075

G-5 & 6, Sector-10, Dwarka, New Delhi-110075

Lucknow-Sultanpur/NH-56/Hybrid Annuity/UP(Tech-Div)/2015/

दूरभाष / Phone : 91-11-25074100/25074200

फैक्स / Fax : 91-11-25093507 / 25093514

86748

Dated: 09.08.2016

To,

Dilip Buildcon Limited,  
Plot No. 5,  
Inside Goving Narayan Singh Gate,  
Chuna Bhatti, Kolar Road,  
Bhopal 426 016 (M. P.)  
Email: db@dilipbuildcon.co.in; dilipb\_99@rediffmail.com

**Kind attention: Shri Kundan Kumar Das, AGM Bussiness Development**

**Sub:** 4-Laning of Lucknow-Sultanpur section of NH-56 from km 11.500 (design chainage km 11.500) to km 134.700 (design chainage km 138.925) in the State of Uttar Pradesh under NHDP Phase-IV on hybrid annuity mode-**Letter of Award (LOA)**.

**Ref:** Request For Proposal submitted on 13.05.2016.

Dear Sir,

This is to notify that based on your bid submitted for the project of "4-Laning of Lucknow-Sultanpur section of NH-56 from km 11.500 (design chainage km 11.500) to km 134.700 (design chainage" and offer a Bid Price consisting of Bid Project Cost of Rs 2016.0 crores (Rupees two thousand sixteen crore only) and First Year O&M Cost of Rs 5.0 crore (Rs five crore only) is hereby accepted by NHA and declaring you as the "Selected bidder" as per the provisions of Clause 1.2.6 of RFP.

2. In accordance with the Clause 3.8.4 of the RFP, you are requested to sign the duplicate copy of the LoA and return the same as your acknowledgment within 7 (Seven) days of receipt of LoA. Thereafter, pursuant to Clause 1.3 of RFP, you are required to execute the Concession Agreement within 45 days from issue of LOA.

3. You shall promote and incorporate the Concessionaire as a limited liability company under the Companies Act 2013, as the entity which shall undertake and perform the obligations and exercise the rights of the Bidder under the LOA, including the obligation to enter into this Concession Agreement pursuant to the LOA for executing the Project. The Concessionaire shall, for the performance of its obligations hereunder during the Construction Period, provide to the Authority no later than 30 (thirty) days from the date of this agreement, an irrevocable and unconditional guarantee from a Bank for a sum equivalent to Rs 100.80 crores (Rupees one hundred crore eighty lakh) in the form set forth in Schedule-F (the "Performance Security").

Continued 2/-

**Annexure 5: Provisional Certificate**



**TPF GETINSA EUROESTUDIOS, S.L.**

In association with

**Segmental Consulting & Infrastructure Advisory (P) Ltd**

TL Office Address: A-80 South City, Raebareli Road,  
Near Sahred Path, Telibagh Lucknow -226025 (UP)  
E-Mail: Scia012.Lucknow@segmental.in  
FCRN: F04460, CIN: U74140DL2009PTC168591

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TPF  
INDIA



TPF-GE-SCIA/12/IE/NH-56/2019/ 878

Date: 30.04.2019

To,

✓ **The Authorized signatory**

M/S DBL Lucknow Sultanpur Highway Ltd.  
House No.B-25, Jagdishpur Industrial Area  
BHEL, Dist. Amethi, (U.P).

**Sub:** Independent Engineer services for four laning of Lucknow Sultanpur Section of NH-56 (New NH-731) from km.11.500 (Design Chainage km.11.500) to km.134.700 (Design Chainage km.138.925) in the state of UP NHDP Phase-IV on Hybrid Annuity Mode:- **Issuance of Provisional Certificate as per clause 14.3.1 of concession agreement. reg.**

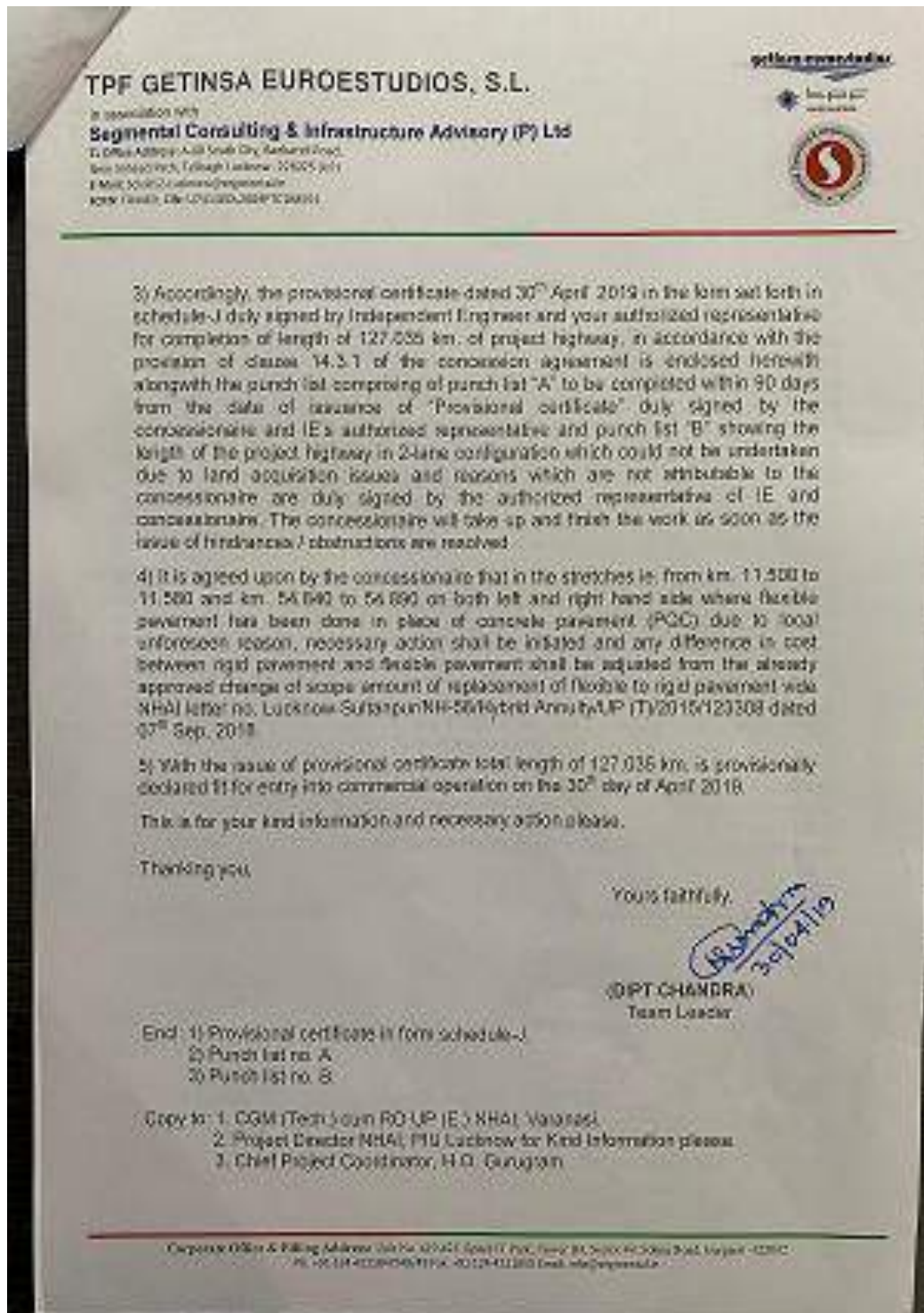
- Ref:-**
- 1) Concessionaire letter no. DBL/IE/NH-56/Lucknow-Sultanpur/2019/418 dated 15.02.2019.
  - 2) IE Letter no. TPF-GE-SCIA/12/IE/NH-56/2019/804 dated 28.02.2019.
  - 3) PIU letter no. NHAI/PIU/LKO/NH-56/4-lane/2019/3064 dated 01.03.2019.
  - 4) RO UP (E) letter no.70011/2/RO/UP(E)/2019/519 dated 08.03.2019.
  - 5) Concessionaire letter no. DBL/IE/NH-56/Lucknow-Sultanpur/2019/440 dated 23.04.2019.
  - 6) IE Letter no. TPF-GE-SCIA/12/IE/NH-56/2019/873 dated 26.04.2019.
  - 7) PIU letter no. NHAI/PIU/LKO/NH-56/PCOD/2019/273 dated 26.04.2019.
  - 8) RO UP (E) letter no.15019/29/RO/UP(E)/VNS/2018/5770 dated 29.04.2019.
  - 9) PIU letter no. 139794/NHAI/PIU/LKO/NH-56/4-lane/2018/283 dated 29.04.2019.

Dear Sir,

With reference to your letter cited above requesting for issuance of provisional certificate for the completed part of the project highway from km. 11.500 to km. 138.925 in accordance with clause 14.3.1 of the concession agreement, we are pleased to state as follows.

- 1) Test stipulated in clause 14.1.2 and schedule-I of the concession agreement have been completed successfully for the project highway of length 127.035 km.
- 2) The completed stretches of 127.035 km. of the project highway except a length of 390 metre, can be safely and reliably placed in commercial service for the road users thereof, and in terms of the concession agreement. Therefore, the length of 127.035 km. of project highway is hereby provisionally fit for entry into commercial operation on this 30<sup>th</sup> day of April, 2019.

Cont...



**Four laning of Lucknow Sultanpur Section of NH-56 (New NH-731) from km.11.500 (Design Chainage km.11.500) to km.134.700 (Design Chainage km.138.925) in the state of UP NHDP Phase-1V on Hybrid Annuity mode**

**PUNCH LIST - "B"**

The Following Length is under Punch List B ,Which will be completed by concessionaire whenever Authority provides the Land/clear .

SNo	Chainage		Side	Length (Km)	Remarks
	From	To			
1	33490	33540	LHS	0.05	Hindrance (Gangaganj)
2	79065	79095	LHS	0.03	Hindrance (Railway)
3	79065	79095	RHS	0.03	Hindrance (Railway)
4	134170	134420	LHS	0.25	Hindrance (Railway)
5	77720		RHS		Hindrance (Land Dispute)
<b>Total</b>				<b>0.36</b>	

For & on behalf of  
DBL Lucknow Sultanpur Highways Limited



(Raj Narayan Nigam)  
Authorised Signatory

*Handwritten signature*  
Q.S.



Independent Engineer

Four Lanning of Lucknow-Sultanpur Section of NH-56 (New NH-731) from km.11.500 (Design Chainage km.11.800) to km.134.700 (Design Chainage km.138.825) in the state of UP NHDP Phase-IV on Hybrid Annuity mode

**PUNCH LIST - A**

The following Balance Works must be completed within 90 days from Issue of Provisional Completion Certificate as Per article 14.4.1 of Concession Agreement .

Sl. No.	Description	Unit	Quantity Balance to be done	Rate	Amount	Remarks
1	POC	Cum	45	11787.40	530433	0.5 m wide POC Balance from Ch. 15+850 to 15+880 in R/O.
2	Service Road/ Slip Road	km	0.7	24811654.74	17368134	
3	RCC Drain cum foot path (line drain)	km	1.225	35134577.52	18536857	
4	Earthen drain	km	20	88000	1760000	
5	Rain Water Harvesting	No.	16	500000	8000000	
6	Major Junction	No.	2	1000000	2000000	Road Marking, Road furniture, is in progress
7	Minor Junction	No.	6	500000	3000000	
8	ROB	No.	0	15	10000000	LIGHTING, DRAINAGE ARRANGEMENT AND STAIRCASE WORK TO BE COMPLETED
9	Boundary stone	No.	2597	1024	2655328	Flang & Casting in progress
10	Guard Rail	km	15269	2700	41237300	In Progress
11	Anti glare screen	km	32.5	750000	24375000	
12	Lighting at builtup area, Truck laybye, Bus laybye, Toll Plaza, Weigh bridge, parking and O&M Building	No.	480	40000	18900000	
13	Road side (Avenue) Plantation Both Side	km	66.33	194565.80	12905540	
14	Land scaping at Toll Plaza, Major junction, wayside amenities, Truck laybye	No.	11	100000	1100000	In progress
15	ROW fencing(Both Side)	km	37	2000000	56000000	AT TOLL PLAZAS, BYPASS, REALIGNMENT
16	Truck lay bye	No.	0	15	500000	Misc. work in progress
17	Rest Area at Truck lay bye	No.	2	100000	200000	
18	O & M Building	No.	2	2000000	4000000	work in Progress
19	Wayside Amenities At 73+300 U/S	No.	1	15	500000	
					Total	263085192
					Say Rs.	26.31 Cr.

(Raj Narayan Kigam)  
Authorized Signatory

Anil K.S.

Independent Engineer

### Annexure 6: Completion Certificate

#### TPF GETINSA EUROESTUDIOS, S.L.

in association with

#### Segmental Consulting & Infrastructure Advisory (P) Ltd

TL Office Address: A-80 South City, Raebareilly Road,  
Near Saheed Path, Teelbagh Lucknow -226025 (UP)  
E-Mail: Scia012.Lucknow@segmental.in  
FCRN: F04460, CIN: U74140DL2009PTC188591

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TPF-GE-SCIA/12/IE/NH-56/2019/946

Date: 06.07.2019

To,  
**The Authorized signatory**  
M/S DBL Lucknow Sultanpur Highway Ltd.  
House No.B-25, Jagdishpur Industrial Area  
BHEL, Dist. Amethi, (U.P),

**Sub:** Independent Engineer services for four laning of Lucknow Sultanpur Section of NH-56 (New NH-731) from km.11.500 (Design Chainage km.11.500) to km.134.700 (Design Chainage km.138.925) in the state of UP NHDP Phase-IV on Hybrid Annuity Mode:- **issue of final completion certificate under Article 14.2 of concession agreement. reg.**

**Ref:-** 1) IE Letter no. TPF-GE-SCIA/12/IE/NH-56/2019/878 dated 30.04.2019. ✓  
2) Concessionaire letter no. DBL/IE/NH-56/Lucknow-Sultanpur/2019/315 dated 17.06.2019. ✓  
3) IE Letter no. TPF-GE-SCIA/12/IE/NH-56/2019/937 dated 25.06.2019. ✓  
4) Concessionaire letter no. DBL/IE/NH-56/Lucknow-Sultanpur/2019/455 dated 27.06.2019. ✓  
5) RO UP(E.) letter no. 15019/29/RO/UP(E.)/2019/6346 dated 02.07.2019. ✓  
6) PIU letter no. 139794/NHA/PIU/LKO/NH-56/4-lane/2019/859 dated 02.07.2019. ✓

Dear Sir,

In continuation of our letter no. 878 dated 30.04.2019 through which provisional completion certificate alongwith Punch list "A" and "B" was issued under clause 14.3 of the CA with a time limit of completion of Punch list items within 90 days of the date of issue of provisional certificate.

After completion of the Punch list "A" item, a request was made by you for issuance of final completion certificate vide your letter referred above in sl. no. 2. However, vide our letter no. 937 dated 26.06.2019, we have brought in your knowledge about some incomplete works which were in progress but not considered as completed. Finally after attending those works, you have again requested for issuance of final completion certificate vide your letter no. 455 dated 27.06.2019.

Cont...



## TPF GETINSA EUROESTUDIOS, S.L.

in association with

### Segmental Consulting & Infrastructure Advisory (P) Ltd

TL Office Address: A-80 South City, Raebareilly Road,  
Near Saheed Path, Tollybagh Lucknow - 226025 (UP)  
E-Mail: Scia012.Lucknow@segmental.in  
FCRN: FD4460, CIN: U74140DL2009PTC188591

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Your submission was examined and after a joint inspection of site by PD NHAI PIU, concessionaire representatives and undersigned, it is found that all pending works of Punch list "A" have been completed. The justification provided by you for not fixing the guard rail in the gap portion was also found to be true and accordingly the authority has been informed. As far as the items of Punch list "B" are concerned, the land/hindrance has not been cleared as on date and therefore the reason of non-completion is solely attributable to the authority.

However, the length of 360 M of work in 2-lane configuration shall be mentioned in the completion certificate and you have to take up and finish the same as and when the land issue is resolved.

In this connection, our Chief Project Coordinator from Head Office has also inspected the site from 30.06.2019 to 01.07.2019 and has found that the project is fit for entry into the commercial operation and has given his consent for issuance of completion certificate. The concurrence of RO UP(E.) conveyed to IE by PD NHAI PIU Lucknow on 03.07.2019 vide letter no. 859 dated 02.07.2019 for issuance of completion certificate. As such, we are issuing the completion certificate with effect from 3<sup>rd</sup> July 2019 in the form set forth in schedule-J of the concession agreement.

However, certain works as stated below which are pending at your level need to be submitted to us for our scrutiny and onward action.

- 1) The O&M manual has not been finalized due to delay on your part. Please submit the relevant detail and take approval.
- 2) At certain locations, flexible pavement has been done or likely to be done as per Punch list "B" in place of rigid pavement and therefore you need to submit the proposal for reduction in scope of the project under Article 16.6 of the concession agreement. The locations are as under:
  - i) Km. 11+500 to km. 11+580 (Both Side)- 80 M flexible pavement followed in place of rigid pavement.
  - ii) Km. 79+060 to 79+100 (Both side)- 40 M railway crossing involved as such section of rigid pavement cannot be followed.
  - iii) Km. 54+840 to 54+890 (Both side) - 50 M deduction shall be made from the COS already processed for replacement of flexible pavement with rigid pavement.
- 3) Inventory of the project highway is required to be submitted taking into consideration all the movable and immovable items.

*Cont...*

## TPF GETINSA EUROESTUDIOS, S.L.

in association with

### Segmental Consulting & Infrastructure Advisory (P) Ltd

TL Office Address: A-80 South City, Raebareilly Road,  
Near Saheed Path, Telibagh Lucknow -226025 (UP)  
E-Mail: Scia012.Lucknow@segmental.in  
FCRN: F04460, CIN: U74140DL2009PTC188591

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4) The "As Built" drawing submitted by you are under checking and verification, you are required to depute your representative for the same for an early finalization of the quantities as per governing manual of specification of IRC:SP:84:2014 and contract provision vis-a-vis. The same shall be notified to you at a later date.

The requisite final completion certificate with effect from 3<sup>rd</sup> July'2019 as per clause 14.4.2 schedule-J format and incorporating the balance 360 metre of pending works as per the detail mentioned in Punch list "B" is enclosed herewith.

Thanking you,

Yours faithfully,



(DIPT CHANDRA)  
Team Leader

Encl: 1) Completion certificate in form-J.  
2) Punch list "B".

Copy to: 1. CGM (Tech.) cum RO UP (E.) NHAI, Varanasi.  
2. Project Director NHAI, PIU Lucknow for Kind Information please.  
3. Chief Project Coordinator, H.O. Gurugram.

## TPF GETINSA EUROESTUDIOS, S.L.

in association with

### Segmental Consulting & Infrastructure Advisory (P) Ltd

TL Office Address: A-80 South City, Raebareli Road,

Near Saheed Path, Telibagh Lucknow -226025 (UP)

E-Mail: [Scia012.Lucknow@segmental.in](mailto:Scia012.Lucknow@segmental.in)

FCRN: F04460, CIN: U74140DL2009PTC188591

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## Completion Certificate

1) I, Dipt Chandra, Authorized representative of M/s TPF Getinsa Euroestudios, S.L in association with Segmental Consulting and Infrastructure Advisory (P) Ltd. acting as Independent engineer under and in accordance with the concession agreement dated 24.10.2016 ( the "Agreement"), for development & operation of the Project Four-Laning of Lucknow-Sultanpur Section of NH-56 ( New NH-731) from Km 11.500 to Km 134.700/design Chainage km 11.500 to km138.925 in the state of utter Pradesh NHDP phase-IV ( the "Project") on design, build, operate and Transfer on Hybrid Annuity mode basis through DBL Lucknow Sultanpur Highways Limited ( Name of the Concessionaire ), hereby certify that the tests specified in Article-14 and schedule-1 of the agreement have been successfully undertaken for the project from km.11.500 to km 134.700 / design Chainage km 11.500 to km 138.925 of the project to determine compliance thereof with the provisions of the agreement except 2-laning 360 M length at different locations reason attributable to Authority and pending completion thereof as mention in the punch list "B". I am satisfied that the project can be safely and reliably placed in commercial service of the Users thereof.

2) It is certified that, in terms of the aforesaid Agreement, all works forming par. of the Project have been completed except 2- laning 360 M length at different Location pending completion thereof mentioned in the Punch list "B" and the Project is hereby declared fit for entry into commercial operation on this day of 3<sup>rd</sup> July 2019.

SIGNED, SEALED AND DELIVERED

For and on behalf of  
INDEPENDENT ENGINEER by



Signature:

Name: Dipt Chandra

Designation: Authorized Signatory & Team Leader  
M/s TPF Getinsa Euroestudios, S.L in association with  
Segmental Consulting & Infrastructure Advisory (P) Ltd  
Address: - A-80, South City, Raebareli Road,  
Near Saheed Path, Telibagh, Lucknow -226025 (UP)



**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण  
National Highways Authority of India**

(सड़क परिवहन एवं राजमार्ग विभाग, भारत सरकार)  
(Ministry of Road Transport & Highways, Govt. of India)

परियोजना कार्यान्वयन इकाई, लखनऊ  
Project Implementation Unit, Lucknow

3/248, विशाल खण्ड, गौमती नगर, लखनऊ-226010  
3/248, Vishal Khand, Gomti Nagar, Lucknow-226010

दूरभाष / Phone: 011-222-2302167

ई-मेल / E-mail: jsc@nhai.org

वेबसाइट / Website: www.nhai.org

139794/NHAI/PIU/LKO/NH-56/4-lane/2019/९८१

Dated 02.07.2019

To,

**The Team Leader**

M/s TPF Getinsa Euroestudios, S.L.

with Segmental Consulting & Infrastructure Advisory Pvt. Ltd.

A-80, South City, Raebareli Road, Telibag

Lucknow-226025

**Sub:** - Four laning of Lucknow Sultanpur Section of NH-56 (New NH-731) from Km. 11.500 (Design Chainage Km.11+500) to Km.134.700 (Design Chainage Km. 138+925) in the State of UP NHDP Phase-IV on Hybrid Annuity Mode.

**-Regarding issuance of Completion certificate (COD)-reg.**

- Ref:-**
1. Your letter no. TPF-GE-SCIA/12/IE/NH-56/2019/940 dated 28.06.2019
  2. RO UP(E) letter no. 15019/29/RO/UP(E)/2019/6346 dated 02.07.2019

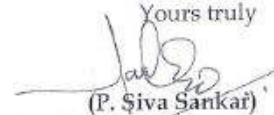
Sir,

Please refer to your above cited letter dated 28.06.2019 vide which you have sought concurrence of Competent Authority for issuance of Completion Certificate for the above mentioned project.

In this regard, it is to inform you that the Competent Authority i.e. RO-UP(E), Varanasi has conveyed concurrence for issuance of Completion Certificate vide letter dated 02.07.2019 (Copy enclosed).

This is for your information and further necessary action.

Yours truly



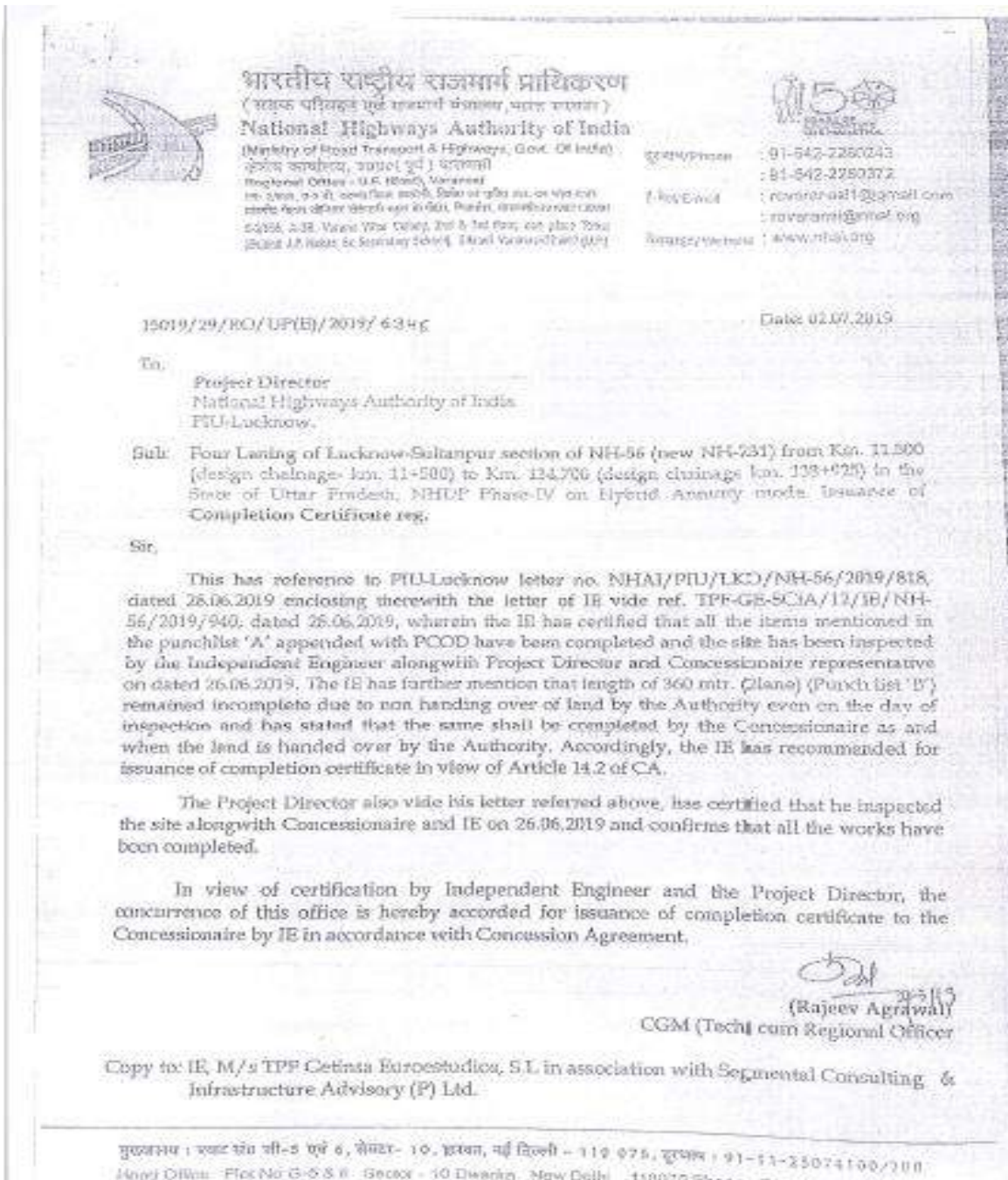
General Manager (I)/Project Director

Copy to:-

- M/s DBL Lucknow Sultanpur Highways Ltd., for information please.

TPF GETINSA EUROESTUDIOS, S.L.
Received
Date: 03/07/2019
Sr. No.:
File No.:

मुख्यालय : प्लॉट नं० जी-६ एवं ६, सेक्टर-१०, द्वारका, नई दिल्ली - ११००७६  
Head Office: Plot No. G-5 & 6, Sector- 10, Dwarka, New Delhi - 110 076 Phone : 91-11-25074100/200



A

Four Lanning of Lucknow Sultanpur Section of NH-56 (New NH-721) from km. 11.500 (Design Chainage km. 11.500) to km. 134.700 (Design Chainage km. 130.925) in the state of UP NHDP Phase-IV on Hybrid Annuity mode						
PUNCH LIST - "B"						
The following Length is under Punch List B, which will be completed by concerned authority whenever Authority provides the Land/clear.						
Sl. No.	Chainage		Side	Length (Km)	Remarks as on 30.04.2019	Status as on 26.05.2019
	From	To				
1	13450	13640	LHS	0.65	Encroachment (Gangapani)	ROW under Hindrance
2	79065	79095	LHS	0.83	Hindrance (Railway)	ROW under Hindrance
3	79065	79295	RHS	0.00	Hindrance (Railway)	ROW under Hindrance
4	134170	134420	LHS	0.35	Hindrance (Railway)	ROW under Hindrance
5	77720		RHS	0.35	Hindrance (Land Dispute)	ROW under Hindrance
<b>Total</b>				<b>0.35</b>		



Contractor's Representative

*Mohd. Salman Idrisi*  
MOHD. SALMAN IDRISI  
Quantity Surveyor



Independent Engineer

**Annexure 7: Insurance**

**ELECTRONIC EQUIPMENT INSURANCE POLICY SCHEDULE**

Signature: ATUL JERATH  
Date: Thu, Nov 12, 2020 13:10:17 IST  
Location: NOIDA  
Reason: Signing Policy-M/OCL

<b>Policy No</b> :	171200/44/2021/84	<b>Prev Policy No</b> :	
<b>Cover Note No</b> :		<b>Cover Note Dt</b> :	
<b>Insured's Code</b> :	118734077	<b>Issuing Office Code</b> :	171200
<b>Insured's Name</b> :	DBL Lucknow Sultanpur Highways Ltd. (GSTIN: 09AAFC8380G1ZD)	<b>Issuing Office Name</b> :	CBU Vadodara (GSTIN: 24AAACT00)
<b>Address</b> :	B 25 PHASE II, SECTOR 5 JAGDISPUR, AMETHI, AMETHI, Uttar Pradesh, 227405	<b>Address</b> :	1st FLOOR, KIRTI TOWER, TILAK ROAD VADODARA
<b>Tel /Fax /Email</b> :	SULTANPUR 227405 / / 0 / NA	<b>Tel /Fax /Email</b> :	GUJARAT 390001 0265-2427075 / 0265-2430054 / 171200@orientalinsurance.co.in

<b>Agent/Broker Details</b>	
<b>Dev.Off.Code</b> :	
<b>Agent/Broker</b> :	LC0000000179 (1149)UNISON INSURANCE BROKING SERVICES P LTD
<b>Address</b> :	601-602 ,8TH FLOOR AURAM NR VASNA,HP PETROL PUMP MARKAND DESAI RAOD VADODARA 390015 GUJARAT INDIA,MOB NO 9898295111 PHONE NO 0265- 2252274,BARODA,GUJARAT,396007
<b>Tel/Fax/Email</b> :	0265-2252274/0265-2357445/0265-2358033/

**Period of Insurance** : FROM 12:04 ON 12/11/2020 TO MIDNIGHT OF 11/11/2021  
**Collection No & Dt** : DC\_LIND 3214001145 - 12/11/2020    **GST INVOICE NO** :2410030840    **UIN** :0  
**Gross Premium** : 26,088    **GST** : 4,000    **Stamp Duty** : 1    **Total** : 30,784

**RISK DETAILS**

**Section I :**    **EEL - EQUIPMENT**

**Sum Insured :**    **5,21,77,538**

1 **Location of the Risk** : AS PER LIST ATTACHED  
 4 Laning of Lucknow Sultanpur section of NH-56 from Km 11.500 to Km 134.700 in the state of Uttarpradesh under NHDP Phase IV on hybrid annuity mode  
 4 Laning of Lucknow Sultanpur section of NH-56 from Km 11.500 to Km 134.700 in the state of Uttarpradesh under NHDP Phase IV on hybrid annuity mode  
 UTTAR PRADESH - 227405

SI No.	Description of Items	Manufacturer Name	Year of Manufacture	Annual Maintenance Contract	Identification No.	Escalation %	Sum Insured
1	AS PER LIST	AS PER LIST	2018		AS PER LIST		5,21,77,538

**Deductible / Excess for :** AS PER LIST ATTACHED

**Excess :**

- (a) For equipment with value upto Rs. 1 lakh  
 1) For PC : 5% of claim amount subject to minimum of Rs.2500/-  
 2) For Equipment other than PC :

**Place** : -    **For and on behalf of**  
**Date** : 12/11/2020    **The Oriental Insurance Company Limited**

This is an electronically generated document (Policy Schedule).The Policy document duly stamped will be sent by post.

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485.

**Authorized Signatory**

CIN: U00010DL1047GOI007158 All the Amounts mentioned in this policy are in Indian Rupee    **Page 1 of 2**  
 IRDA Regn. No. 550 - Now you can buy and renew selected policies online at www.orientalinsurance.org.in

पॉलिसी अनुसूची/Policy Schedule - Civil Engineering Completed Risk

**Policy Number:**  
321300441910001996  
**जारीकर्ता कार्यालय/Issuing Office**  
कार्यालय कोड /Office Code: 321300  
कार्यालय पता /Office Address: BHOPAL  
DIVISION II B-8, Indrapuri, B H E L, Bhopal,  
Madhya Pradesh - 462022.  
State Code: 23 - Madhya Pradesh  
GSTIN: 23AAACN9987E17B  
Contact Number: 755 2692822  
eMail: 321300@nic.co.in  
Mobile Number:

**व्यवसाय स्रोत /Business Source:** 910355  
**विक्रेता चैनल कोड/Sales Channel Code:**  
91035500000001  
**नाम /Name:** Aspire Insurance Brokers Pvt  
Ltd - HO Contact Number: 8291914810  
**सह दलाल कोड / Co Broker Code:**  
  
**Customer Care Toll Free Number:**  
1800 345 0330  
email:customer.support@nic.co.in

**ग्राहक का नाम /Customer Name:** DBL LUCKNOW SULTANPUR  
HIGHWAYS LIMITED  
**पता /Address:** B 25 PHASE II, SECTOR 5 JAGDISPUR, AMETHI,  
AMETHI, UTTAR PRADESH, 227405, City: AMETHI, District:  
CHATRAPATI SHAHUJI MAHARAJ NGR, State: UTTAR  
PRADESH, PIN: 227405.  
Cell: 9826292328

**ग्राहक आईडी /Customer ID:**  
9701460047  
**फोन /Phone:**

**पैन /PAN:** AAFCD9380G

**ई-मेल /E-Mail:**

पॉलिसी: 27/03/2020 के 00:00 से 26/03/2021 को मध्य रात्रि तक प्रभावी /Policy Effective from 00:00 hours, on 27/03/2020 to midnight of 26/03/2021

विवरण /Particulars	रकम /Amount	कवर नोट संख्या और तारीख /Cover Note Number and Date	विवरण /Particulars
प्रिमियम /Premium	₹ 1,83,67,513.00	NA	
CGST	₹ 0.00		
SGST/UTGST	₹ 0.00		
IGST	₹ 33,06,152.00		
फ्लड सेस /Kerala Flood Cess	₹ 0.00	प्रस्ताव संख्या और तारीख /Proposal Number and Date	8800200327087209 Dt. 27/03/2020
कम-जीएसटी, टीडीएस /Less:GST, TDS	₹ 0.00		
पुनर्प्राप्त योग्य स्टाम्प ड्यूटी /Recoverable Stamp Duty	₹ 0.00	रसीद संख्या और तारीख /Receipt Number and Date	321300811910007666 Dt. 27/03/2020
<b>कुल /Total Amount</b>	<b>₹ 2,16,73,665.00</b>	पिछली पॉलिसी संख्या और समाप्ती तारीख /Previous Policy Number and Expiry Date	NA

(Rupees Two Crore Sixteen Lakh Seventy Three Thousand Six Hundred Sixty Five Only.)  
Location: Lucknow-Sultanpur section of NH-56, Uttar Pradesh Lucknow, Lucknow, 226001.

Sr.No	Type of Risk	Description Of Risk	Earthquake Zone	Sum Insured of the risk(₹)	Excess(₹)
1	Roads	ROAD AND STRUCTURE Toll Building & Booths, TMS, HTMS, Office & It Equipment, Electronic	Zone IV	17,29,52,30,000.00	1,00,000.00
2	Roads	Equipment, Road Furniture, Fixtures, Electrical Poles Lighting & Fittings, Signboard & Safety Barrier	Zone IV	1,06,81,70,000.00	1,00,000.00

लगाव, खंड, पुरावोंकर्मों एवं वारंटों / Clauses, Endorsements and Warranties Applicable: Agreed Bank Clause, Terrorism Damage Exclusion Warranty, Riot, Strike, and Malicious Damage Clause, Policy is subject to following conditions: POLICY IS SUBJECT TO THE FOLLOWING CONDITIONS:

1. Excess applicable under the policy is: (a) Upto Sl of Rs 500 Cr = 10% of Claim subject to Minimum of Rs 5 lacs & (b) Sl above 500 Cr & upto 1500 Cr = 10% of Claim subject to Minimum of Rs 10 lacs. Entire Road package will be treated as One location for application of Excess.
2. Policy is Applicable for Roads & Road side structures & Toll plazas & Bridges & Flyovers on Land.
3. No Coverage for (Road) Transportation Tunnels
4. No Coverage for Marine Vessel Impact Damage.
5. Each 72 hour period will be treated as One occurrence/event for STFI & EQ for application of Excess.

Printed on 27/03/2020 by ID: 75159

Page no: 1





## HDFC ERGO General Insurance Company Limited



November 06, 2020

DILIP BUILDCON LIMITED

PLOT NO. 5, GOVIND NARAYAN SINGH GATE,  
CHUNA BHATTI, BHOPAL,  
BHOPAL,  
MADHYA PRADESH,462016.



Dear Customer,

**Sub: Employees Compensation Insurance Policy No: 3114203786194200000**

We thank you for having preferred us for your *Insurance* requirements. We at HDFC ERGO General Insurance believe "*Insurance*" as not only to be an assurance to indemnify in the event of unfortunate circumstances, but one that signifies protection and support, which you can count on when you need it most.

The Insurance Policy enclosed herewith is a written agreement providing confirmation of our responsibility towards you that puts insurance coverage into effect against stipulated perils.

Please note that the policy has been issued based on the information contained in the proposal form and / or documents received from you or your representative / broker.

Name of the Intermediary : GLOBAL INSURANCE BROKERS PVT LTD

Intermediary Code : 200113159601

Where the proposal form is not received, information obtained from you or your representative /broker, whether orally or otherwise, is captured in the policy document.

If you wish to contact us in reference to your existing policy and /or other general insurance solutions offered by us, you may write to our correspondence address as mentioned below. Alternatively, you may visit our website [www.hdfcergo.com](http://www.hdfcergo.com). To enable us to serve you better, you are requested to quote your Policy Number in all correspondences.

Thanking you once again for choosing HDFC ERGO General Insurance Company Limited and looking forward to many more years of association.

Yours sincerely,

Authorised Signatory

3114203786194200000

Page 1 of 14

HDFC ERGO General Insurance Company Limited (Formerly HDFC General Insurance Limited)

UIN : IRDANI25P0017V02201112 | IRDAI Reg No.146 | CIN : U86300MH2003PLC177117

Registered & Corporate Office:  
1st Floor, HDFC House, 155 - 156 Backbay Reclamation,  
H. T. Parekh Marg, Churchgate, Mumbai - 400 020

Customer Service Address:  
D-301, 3rd Floor, Eastern Business District (Magnet Mall),  
LBS Marg, Bandrup (West), Mumbai - 400 075

Toll Free Number: 1800 2700 700  
Telephone : +91 22 6630 3600 Fax: 91 22 6630 3699  
Email : [care@hdfcergo.com](mailto:care@hdfcergo.com)

**HDFC ERGO General Insurance Company Limited**

Certificate of Insurance cum Policy Schedule

Policy No. 3114203786194200000

Employees Compensation Insurance



<b>Insured Name</b>	DILIP BUILDCON LIMITED (PAN Number:AACCD6124B)		<b>Business</b>	Construction and Engineering	
<b>Correspondence Address</b>	PLOT NO. 5, GOVIND NARAYAN SINGH GATE, CHUNA BHATTI, BHOPAL, BHOPAL, MADHYA PRADESH, 462016.				
<b>Mobile</b>		<b>Phone</b>		<b>E Mail</b>	
				<b>Policy Issuance Date</b>	06/11/2020
<b>Period of Insurance</b>	<b>From Date &amp; Time</b>	03/11/2020 00:01 AM		<b>To Date &amp; Time</b>	02/11/2021 Midnight

**LAW**

The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:

Sr. No.	Law	Limit of Indemnity
a.	Employee's Compensation Act, 1923 and subsequent amendments thereof prior to the date of issue of this Policy	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured
b.	Common Law	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured, but not exceeding:-  a) Limit Per Employee for any number of accidents during Period of Insurance ₹. Unlimited  b) Limit Per Accident for any number of Employees ₹. Unlimited  c) Aggregate Limit for all accidents and claims arising there from during the Period of Insurance ₹. Unlimited

EC-13-0005

3114203786194200000

Page 2 of 14

HDFC ERGO General Insurance Company Limited (Formerly HDFC General Insurance Limited)

UN : IRDAN125P0017V02201112 | IRDAI Reg No. 146 | CIN : U86300MH0007PLC177117

Registered & Corporate Office:  
1st Floor, HDFC House, 195 - 196 Sector 52, Reclamation,

Customer Service Address:  
D-301, 3rd Floor, Eastern Business District (Magnet Mall),

Toll Free Number: 1800 2702 700  
Telephone : +91 22 6630 3600 Fax: 91 22 6630 3699

### Annexure 8: Change of Scope

**Table 9.1 :Abstract -COS**

S.No	COS item	DBL submitted Value in Cr	Status of COS
1	Replacing length of 6.34 Kms (2-lane) flexible pavement with rigid	6.76	Pending @ HQ
2	Replacement of 300mm dia HPC with NP4 1200mm dia	1.02	OK by NHAI HQ
3	Replacement of 600mm dia HPC with NP4 1200mm dia	2.21	OK by NHAI HQ
4	Replacement of (4+4) Lane to (8+8) Lane @ 51+160	12.34	Final checking under progress at IE
5	Replacement of (4+4) Lane to (8+8) Lane @ 127+370	12.34	Final checking under progress at IE
6	Construction of VUP(1x12) conversion to VUP(2x19.5) @ 86+500	1.92	OK by NHAI HQ

**Annexure 9: Toll plaza Equipment**

**LANE EQUIPMENT LIST**

S. No.	Equipment Name	Quantity
<b>ASOGRA TOLL PLAZA</b>		
1	Automatic barrier	18
2	AVC	18
3	UIU	18
4	Traffic Light	19
5	OHLS	17
6	RFID	18
7	LPIC	18
8	ICS	18
9	RITPL	18
10	MWWM	18
11	Indicator Panel	18
12	Mouse	3
13	Intercom Slab	18
14	Monitoring Camera	18
15	Smart Card	18
16	Thermal Printer	18
<b>KM.123+490 -TOLL PLAZA</b>		
1	TLC	8
2	Electrical Enclosure	8
3	LCP	8
4	AVC RX PANEL	18
5	AVC TX PANEL	18
6	ICS	18
7	LPIC	18
8	OHLS	18
9	UFD	18
10	TRAFFIC LIGHT	18
11	RFID	18
12	MS WIM RX VS	18
13	MS WIM TX VS	18
14	MS WIM INDICATOR	18
15	PTZ CAMERA	18

**CONTROL ROOM EQUIPMENT**

S. No.	Equipment Name	Quantity
<b>ASOGRA TOLL PLAZA</b>		
1	Server	1
2	Server Room	1
3	Internet switch	1
4	D-link cat	1
5	LCD	3
6	Key board	5
7	Cashup Machine	1
8	Mastercam	1
9	NVR	1
11	CCH Machine	1
14	SwB Machine	2
19	Mouse	1
20	Audit Machine	1
23	Mouse	4
25	Joystick	1
26	Poe Switch	1
27	UPS	5
32	Monitoring Camera	3
35	CTC POS	1
36	Smart Card POS	1
<b>TOLL PLAZA AT KM KM.123+490</b>		
1	Server	1
2	Server Room	1
3	Internet switch	1
4	D-link cat	1
5	LCD	3
6	Key board	4
7	Cashup Machine	1
8	Mastercam	1
9	NVR	1
11	CCH Machine	1
13	Mouse	4
14	SwB Machine	1
16	Mouse	1
17	SwB Machine	1
20	Audit Machine	1
25	Joystick	1
26	Poe Switch	1

**CONTROL ROOM EQUIPMENT**

<b>S. No.</b>	<b>Equipment Name</b>	<b>Quantity</b>
27	UPS	5
32	Monitoring Camera	3
35	CTC POS	1
36	Smart Card POS	1

**Annexure 10: Project Photos**

