

TYPICAL CROSS SECTIONS



Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

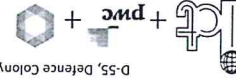
SCALE :

NOT TO SCALE

PROJECT TITLE:

Consultancy Services for Detailed Project Report cum
Transaction Advisory Services for Karnataka State Highway
Improvement Project-III (KSHIP-III) - (Group-II)

Final Detailed Project Report
Gadag to Honnali
Typical Cross Section



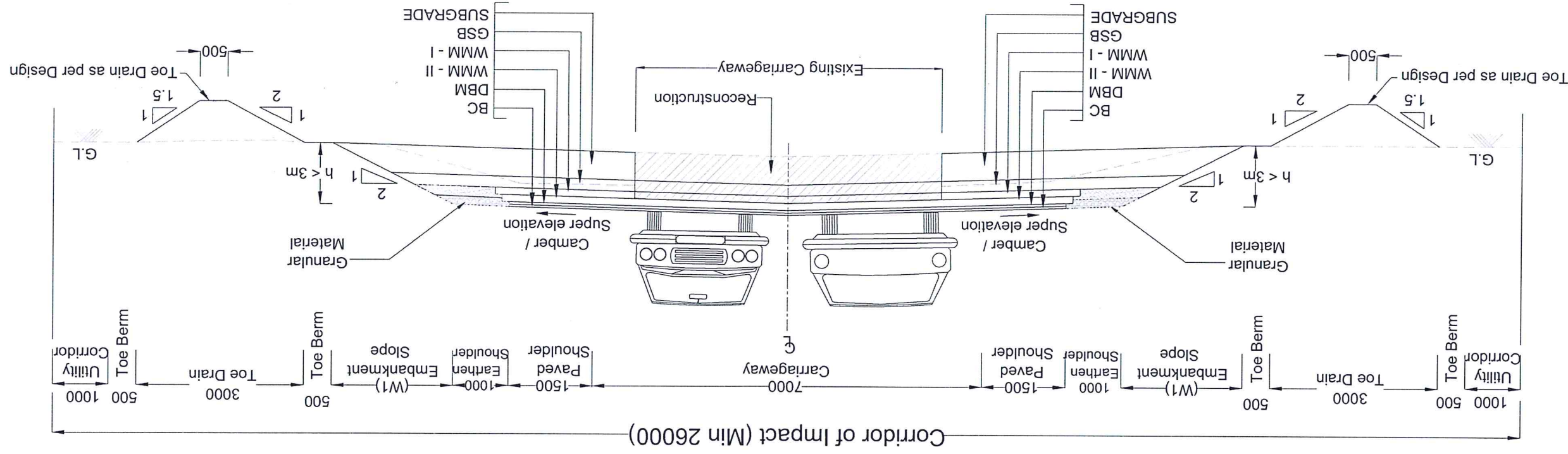
CONSULTANT: Intercontinental Consultants & Technocrats Pvt.Ltd, A-8, Green Park, New Delhi - 110016 in
joint venture with PricewaterhouseCoopers Pvt.Ltd 4th Floor, Tower - D, The Millennia, 1-2 Murphy
Road, Ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)

Prepared by: Sanjay Kumar Singh
Designed by: Harsha Chatterjee
Checked by: Aseem Prabhakar
Approved by: KVP

DRAWING No:- KSHIP/SH-57&26/GH/TCS/ 01 /R0

Revisions	By	Date	Remarks
INITIAL DRAWING		2016	
Checked by			

TYPICAL CROSS SECTION FOR 2-LANE WITH PAVED SHOULDER (OPEN COUNTRY) TCS- 1 - CONCENTRIC WIDENING (EMBANKMENT HEIGHT < 3M)



Note:-

1. All dimensions are in mm unless otherwise specified.

Executive Engineer
Kship Division
Shimoga.



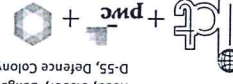
CLIENT:-
Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

SCALE :

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PROJECT TITLE:
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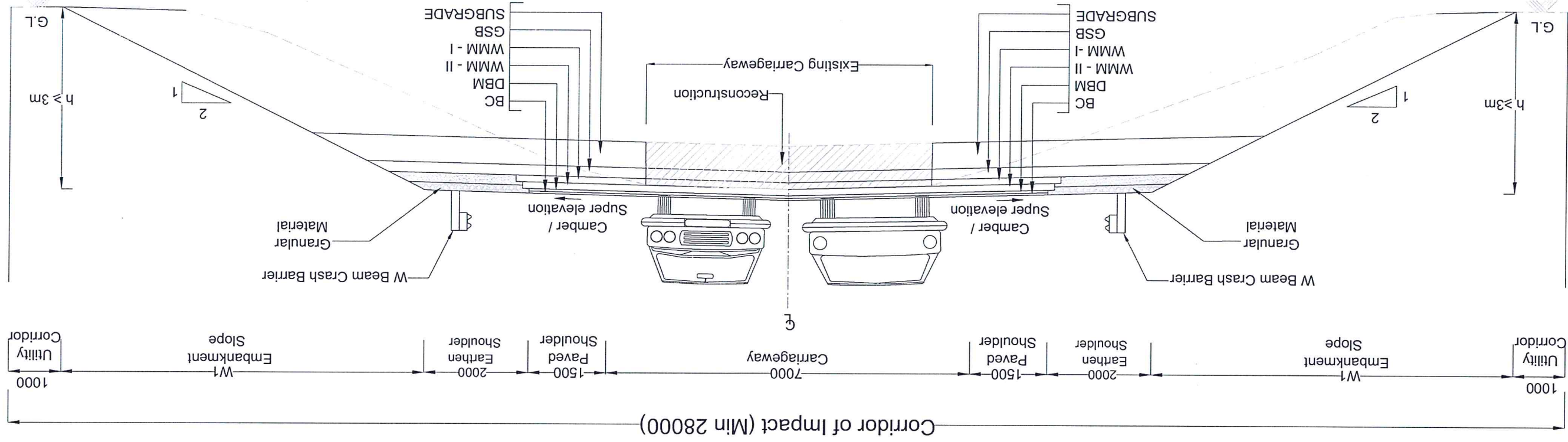
Final Detailed Project Report
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CONSULTANT:
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Road, ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)
Prepared by: *Braj Mohan*
Designed by: *Sanjay Kumar Singh*
Checked by: *Harsha Chatterjee*
Approved by: *Aseem Prabhakar*

DRAWING No:-		KSHIP/SH-57&26/GH/TCS/ 1a /R0	
Revisions		File Name: Revised 02.07.2016	
NO	DATE	DESCRIPTION	Checked by
1	02/07/2016	INITIAL DRAWING	

TYPICAL CROSS SECTION FOR 2-LANE WITH PAVED SHOULDER (OPEN COUNTRY) TCS - 1A - CONCENTRIC WIDENING (EMBANKMENT HEIGHT $\geq 3\text{M}$)



Note:-
1. All dimensions are in mm unless otherwise specified

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Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

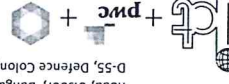
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PROJECT TITLE:

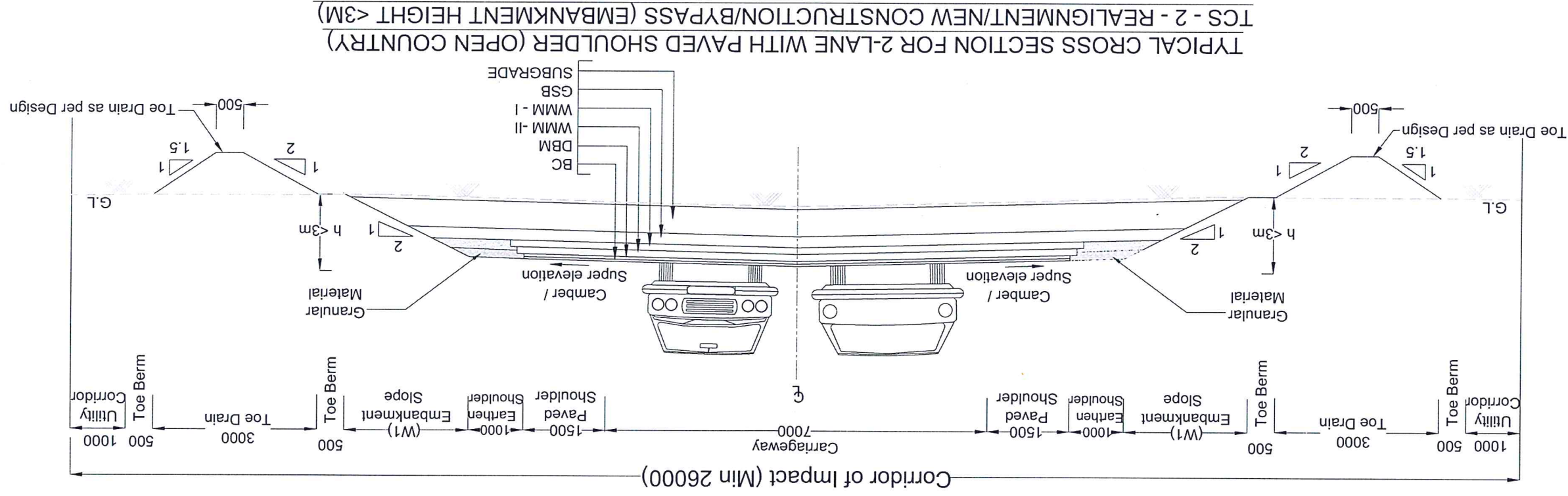
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Prepared by: Sanjay Kumar Singh
Designed by: Harsha Chatterjee
Checked by: Aseem Prabhakar
Approved by: *[Signature]*

DRAWING No:- KSHIP/SH-57&26/GH/TCS/ 02 /R0
Revisions
NO Date Description
1 01/01/2016 INITIAL DRAWING
Checked by: *[Signature]*



Note:-
1. All dimensions are in mm unless otherwise specified.

Executive Engineer
KSHIP Division
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Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

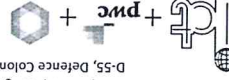
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PROJECT TITLE:

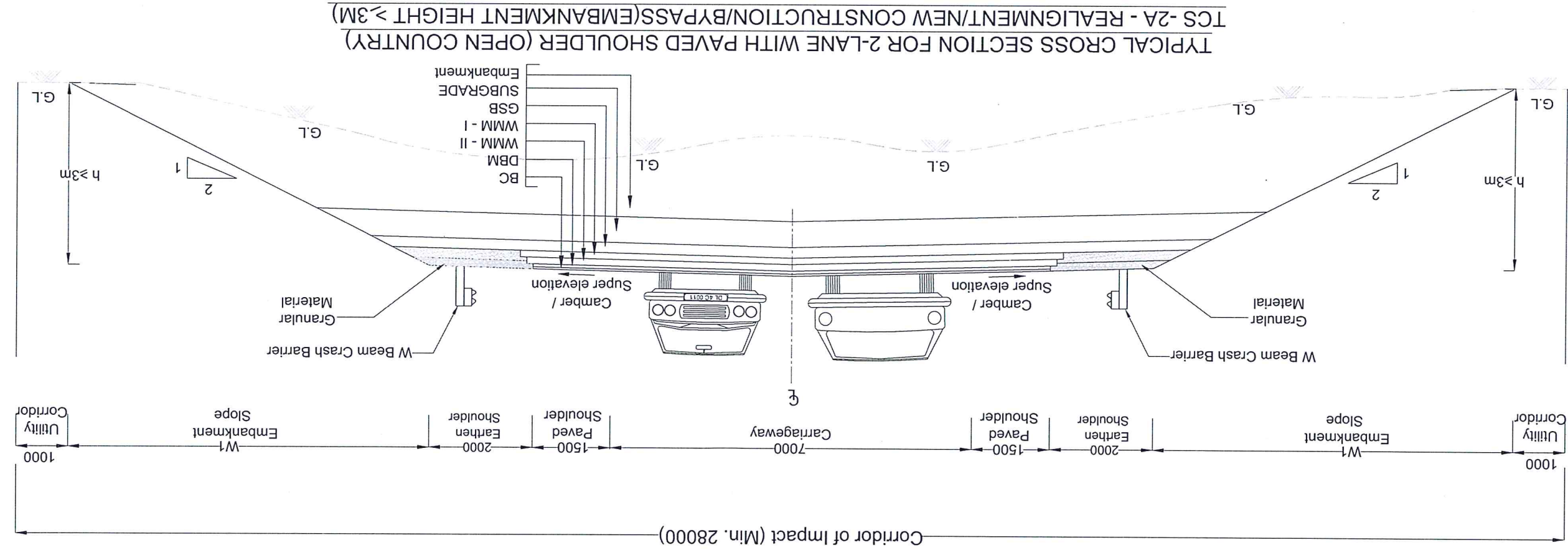
Consultancy Services for Detailed Project Report cum
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Final Detailed Project Report
Gadag to Honnali
Typical Cross Section



Prepared by	Braj Mohan
Designed by	Sanjay Kumar Singh
Checked by	Harsha Chatterjee
Approved by	Assem Prabhakar
CONSULTANT: Intercontinental Consultants & Technocrats Pvt.Ltd, A-8, Green Park, New Delhi - 110016 in joint venture with PricewaterhouseCoopers Pvt.Ltd 4th floor, Tower - D, The Millenia, 1-2 Murphy Road, Ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)	

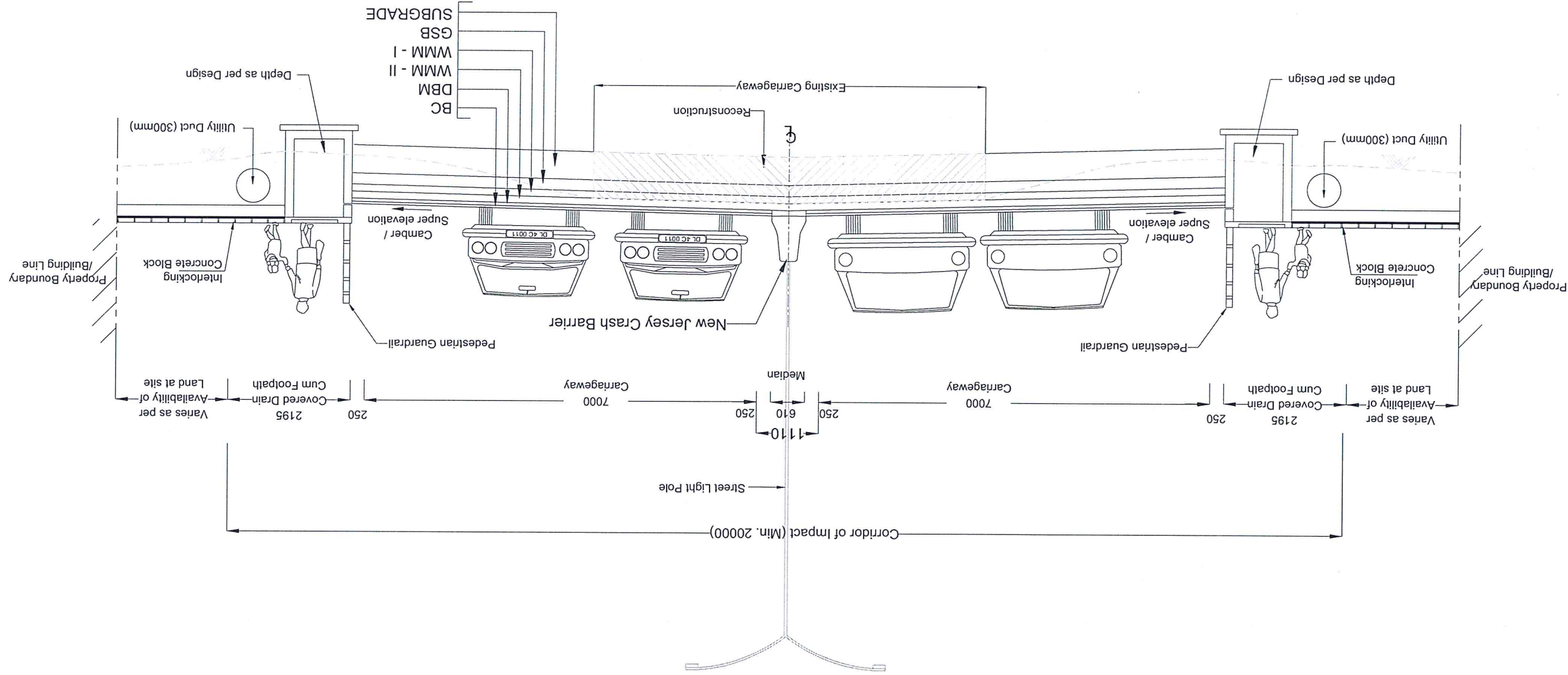
Final Name : Revised Design June 2016		
DRAWING NO.:-		
KSHIP/SH-57&26/GH/TCS/ 2a /R0		
Revisions		
Revisions	Date	Description
R0	Dec 2016	INITIAL DRAWING
Checked by		



Note:-
1. All dimensions are in mm unless otherwise specified.

Executive Engineer
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TYPICAL CROSS SECTION FOR 4-LANE DIVIDED CARRIAGEWAY (URBAN SECTION)

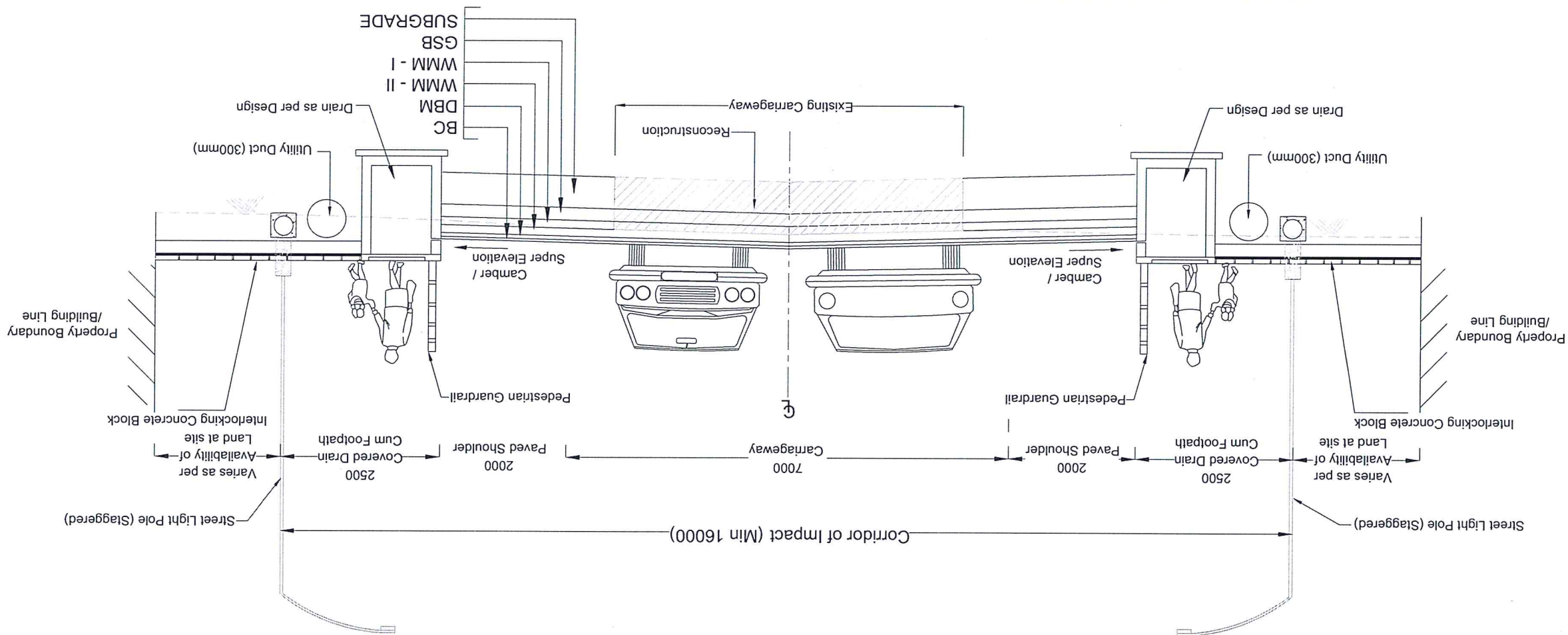


Note:-

1. All dimensions are in mm unless otherwise specified.
2. New Jersey Crash Barrier shall be as per IRC:119-2015
4. Interlocking Concrete block shall be as per IRC SP 63-2004

Executive Engineer
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TYPICAL CROSS SECTION FOR 2-LANE WITH PAVED SHOULDER (URBAN SECTION)



Note:-

1. All dimensions are in mm unless otherwise specified.
2. Interlocking Concrete block shall be as per IRC SP 63-2004.

Executive Engineer
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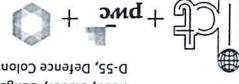


Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

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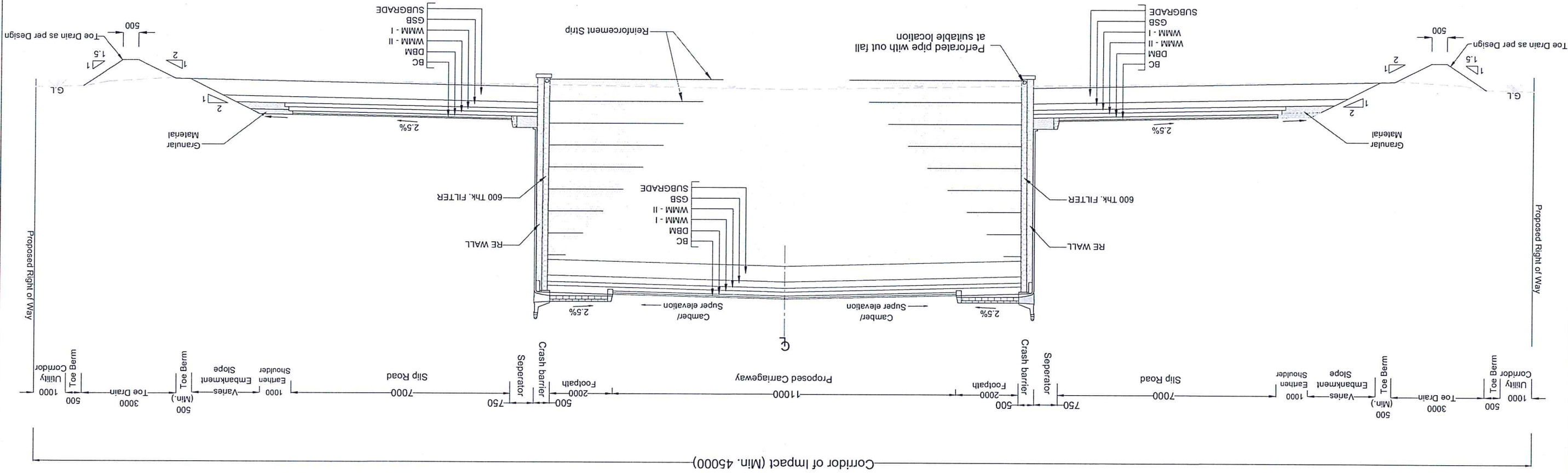
Final Detailed Project Report
Gadag to Honnali
Typical Cross Section



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Road, Ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)
Prepared by: *Sanjay Kumar Singh*
Designed by: *Sanjay Kumar Singh*
Checked by: *Harsha Chatterjee*
Approved by: *Aseem Prabhakar*

DRAWING No.:
KSHIP/SH-57&26/GH/TCS/ 05 /R0
Revisions
R0
Dec 2016
INITIAL DRAWING
Checked by:

TYPICAL CROSS SECTION FOR APPROACHES TO ROB WITH SLIP ROAD (OPEN COUNTRY) TYPE - 5 REALIGNMENT / NEW CONSTRUCTION / BYPASS



Note:-

1. All dimensions are in mm unless otherwise specified.
2. Interlocking Concrete block shall be as per IRC SP 63-2004.
3. Pond Ash shall be used for embankment construction (Where ever required) in pursuance of the Ministry of Environment, Forests and Climate Change Notification, New Delhi dated 14.09.1999 (as amended on 27.08.2003, 3.11.2009 and 25.01.2016) in accordance with IRC SP 58.

Executive Engineer
Kship Division
Shimoga.

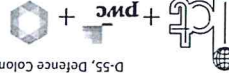


Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

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Improvement Project-III (KSHIP-III) - (Group-II)

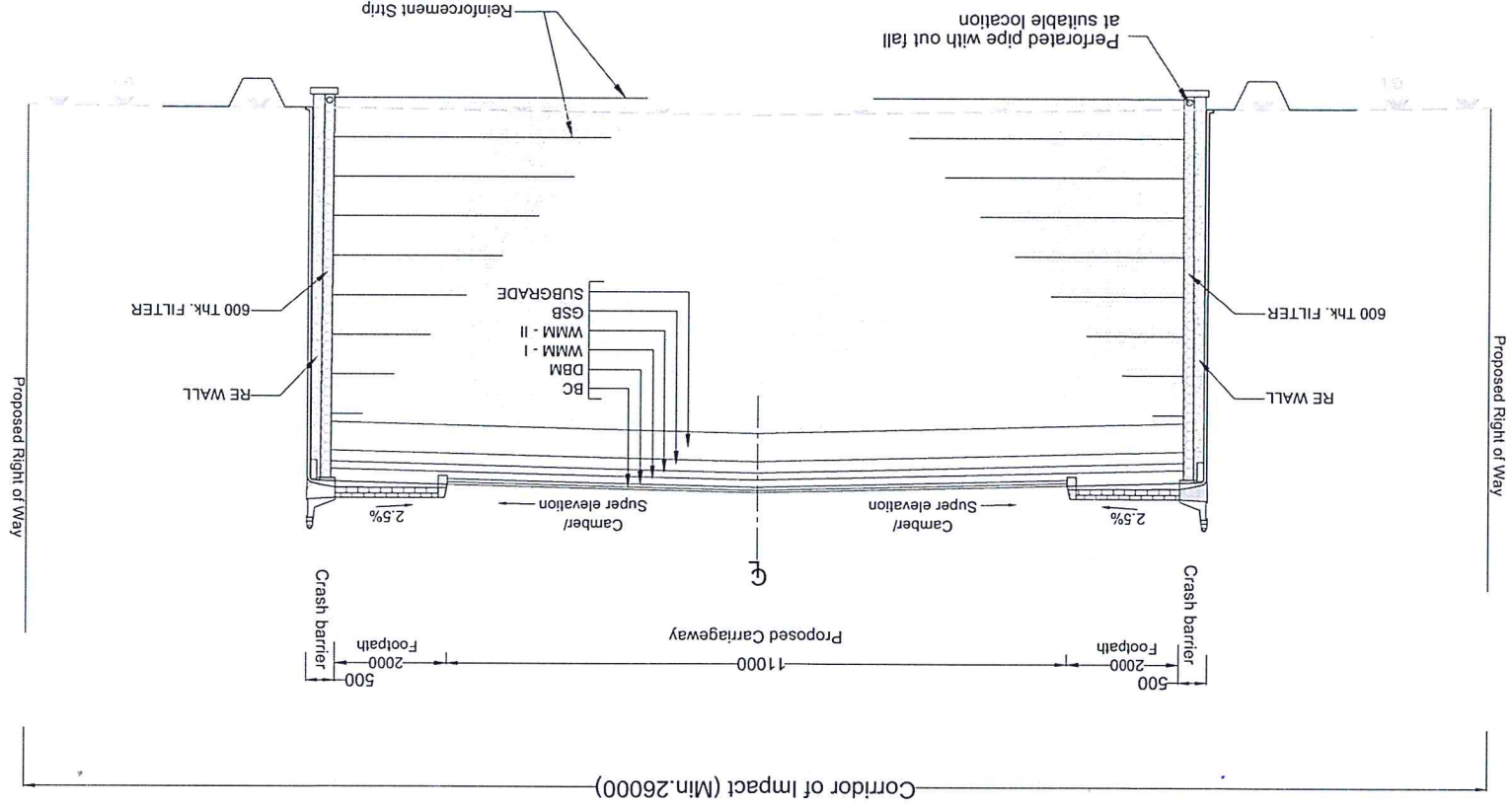
Final Detailed Project Report
Gadag to Honnali
Typical Cross Section



CONSULTANT: Intercontinental Consultants & Technocrats Pvt.Ltd, A-8, Green Park, New Delhi - 110016 in
joint venture with PricewaterhouseCoopers Pvt.Ltd 4th Floor, Tower - D, The Millenia, J-2 Murphy
Road, Ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)
Prepared by: Sanjay Kumar Singh
Designed by: Harsha Chatterjee
Checked by: Aseem Prabhakar
Approved by: *AP*

DRAWING No:- KSHIP/SH-57&26/GH/TCS/ 5a /R0
Revisions
NO. DATE DESCRIPTION
1 01/01/2016 INITIAL DRAWING
Checked by: *Shimoge*

TYPICAL CROSS SECTION FOR APPROACHES TO ROB WITHOUT SLIP ROAD (OPEN COUNTRY) TYPE - 5A REALIGNMENT / NEW CONSTRUCTION / BYPASS



- Note:-
1. All dimensions are in mm unless otherwise specified.
 2. Interlocking Concrete block shall be as per IRC SP 63-2004.
 3. Pond Ash shall be used for embankment construction (Where ever required) in pursuance of the Ministry of Environment, Forests and Climate Change Notification, New Delhi dated 14.09.1999 (as amended on 27.08.2003, 3.11.2009 and 25.01.2016) in accordance with IRC SP 58.

Shimoge
Kship Division
Engineer



Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

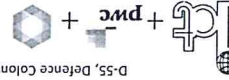
SCALE :

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Consultancy Services for Detailed Project Report cum
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Improvement Project-III (KSHIP-III) - (Group-II)

Final Detailed Project Report
Gadag to Honnali
Typical Cross Section



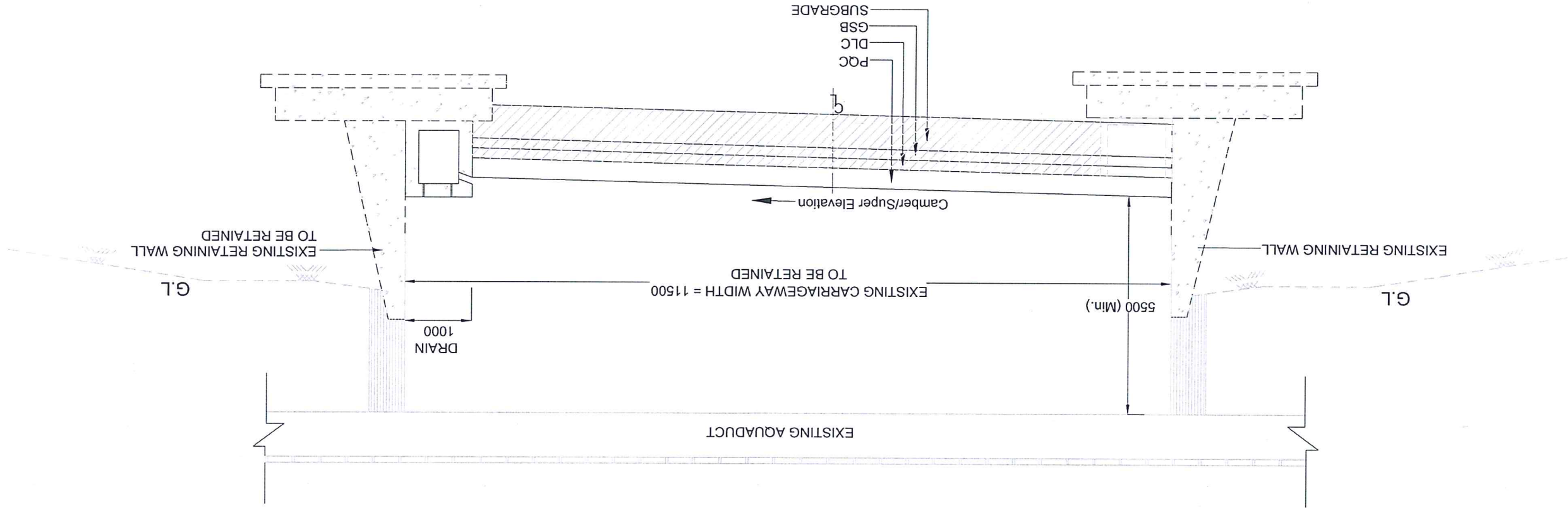
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Prepared by
Braj Mohan
Designed by
Sanjay Kumar Singh
Checked by
Harsha Chatterjee
Approved by
Aseem Prabhakar

Revisions	Drawings	Date
INITIAL DRAWING		Dec 2016
Checked by		

TYPICAL CROSS SECTION FOR APPROACHES TO AQUEDUCT (OPEN COUNTRY) TCS - 6 - CONCENTRIC WIDENING/RECONSTRUCTION



Note:-
1. All Dimensions are in mm, unless otherwise specified.
2. Existing Carriageway between Retaining wall to be retained.

Executive Engineer
Kship Division
Shimoga.



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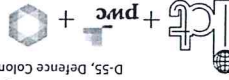
SCALE :

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Consultancy Services for Detailed Project Report cum
Transaction Advisory Services for Karnataka State Highway
Improvement Project-III (KSHIP-III) - (Group-II)

PROJECT TITLE:

Final Detailed Project Report
Gadag to Honnali
Typical Cross Section



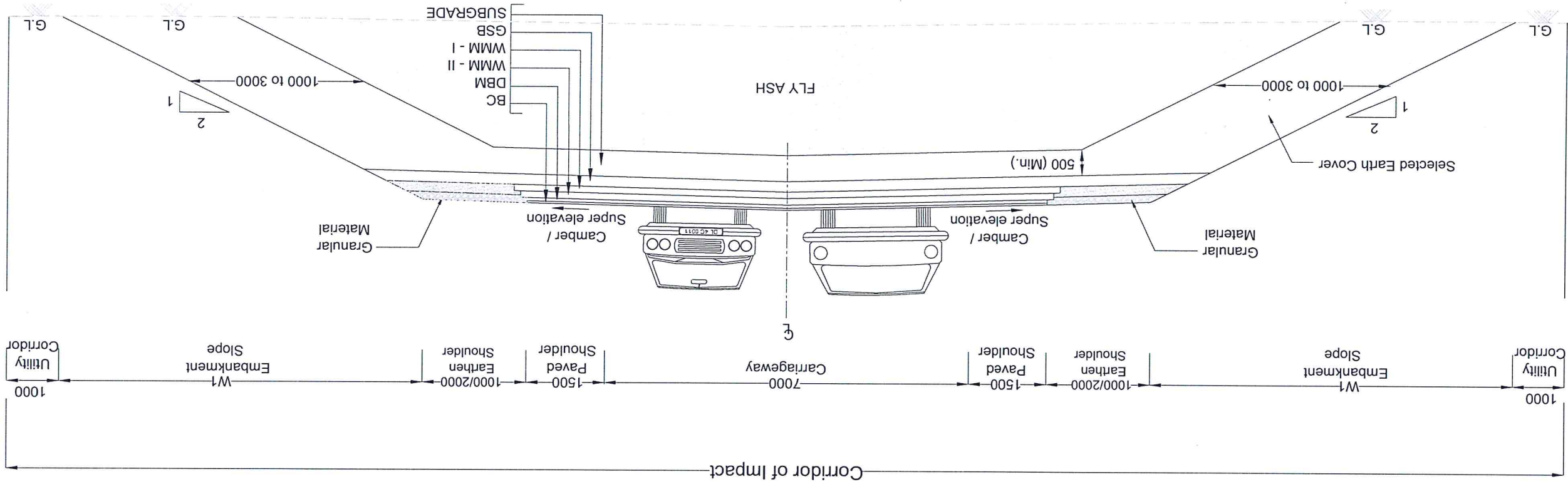
CONSULTANT:
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Road, Uisoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)

Prepared by
Braj Mohan
Designed by
Sanjay Kumar Singh
Checked by
Harsha Chatterjee
Approved by
Aseem Prabhakar

DRAWING No:-
KSHIP/SH-57&26/GH/TCS/ 07 /R0

Revisions	NO	Date	By	Check by
INITIAL DRAWING		Dec 2016		

TCS - 7 : CONSTRUCTION OF EMBANKMENT WITH POND ASH
TYPICAL CROSS SECTION FOR 2-LANE WITH PAVED SHOULDER



Note:-

1. All dimensions are in mm unless otherwise specified.
2. Pond Ash shall be used for embankment construction (Where ever required) in pursuance of the Ministry of Environment, Forests and Climate Change Notification, New Delhi dated 14.09.1999 (as amended on 27.08.2003, 3.11.2009 and 25.01.2016) in accordance with IRC SP 58.

Executive Engineer
Kship Division
Shimoga



Government of Karnataka
Public Works, Ports & IWT Department
Karnataka State Highways Improvement Project

NOT TO SCALE

Consultancy Services for Detailed Project Report cum
Transaction Advisory Services for Karnataka State Highway
Improvement Project-III (KSHIP-III) - (Group-II)

FINAL DETAILED PROJECT REPORT
(GADAG TO HONNALI)
TYPICAL CROSS SECTION
SCHEDULE

Prepared by Braj Mohan Sanjay Kumar Singh Designed by Harsha Chatterjee Checked by Aseem Prabhakar Approved by KSHIP/SH-57&26/GH/TCS/ 08/R0		Joint venture with PricewaterhouseCoopers Pvt.Ltd 4th floor, Tower - D, The Millennia, 1-2 Murphy Road, Ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)		D-55, Defence Colony, New Delhi-110024		CONSULTANT: Intercontinental Consultants & Technocrats Pvt.Ltd, A-8, Green Park, New Delhi - 110016 in association with PricewaterhouseCoopers Pvt.Ltd 4th floor, Tower - D, The Millennia, 1-2 Murphy Road, Ulsoor, Bangalore - 560 008 in association with Dhir & Dhir Associates (as Sub-Consultant)		DRAIVING NO:- KSHIP/SH-57&26/GH/TCS/ 08/R0		Revision No. : Revised Date June 2016	
Braj Mohan		Sanjay Kumar Singh		Harsha Chatterjee		Aseem Prabhakar		KSHIP/SH-57&26/GH/TCS/ 08/R0		Revision No. : Revised Date June 2016	
Braj Mohan		Sanjay Kumar Singh		Harsha Chatterjee		Aseem Prabhakar		KSHIP/SH-57&26/GH/TCS/ 08/R0		Revision No. : Revised Date June 2016	

Sl. No.	From	To	Length (km)	Cross Section Type
1	105+500	107+000	1.500	TCS 3
2	107+000	108+830	1.830	TCS 1
3	108+830	109+000	0.170	TCS 2
4	109+000	109+700	0.700	TCS 1
5	109+700	109+900	0.200	TCS 2
6	109+900	112+200	2.300	TCS 1
7	112+200	112+600	0.400	TCS 4
8	112+600	114+800	2.200	TCS 1
9	114+800	115+600	0.800	TCS 2
10	115+600	117+100	1.500	TCS 1
11	117+100	117+300	0.200	TCS 2
12	117+300	118+570	1.270	TCS 1
13	118+570	119+550	0.980	TCS 2
14	119+550	119+850	0.300	TCS 2A
15	119+850	120+000	0.150	TCS 2
16	120+000	120+600	0.600	TCS 1
17	120+600	120+710	0.110	TCS 1A
18	120+710	121+500	0.790	TCS 1
19	121+500	122+000	0.500	TCS 2
20	122+000	122+200	0.200	TCS 4
21	122+200	122+600	0.400	TCS 1
22	122+600	123+030	0.430	TCS 2
23	123+030	123+500	0.470	TCS 1
24	123+500	124+100	0.600	TCS 2
25	124+100	124+570	0.470	TCS 1
26	124+570	125+330	0.760	TCS 2
27	125+330	125+360	0.030	TCS 2A
28	125+360	125+650	0.290	TCS 2
29	125+650	125+950	0.300	TCS 2A
30	125+950	126+740	0.790	TCS 2
31	126+740	127+090	0.350	TCS 1
32	127+090	127+290	0.200	TCS 2
33	127+290	127+340	0.050	TCS 2A
34	127+340	128+200	0.860	TCS 2
35	128+200	128+710	0.510	TCS 2A
36	128+710	130+090	1.380	TCS 2
37	130+090	130+810	0.720	TCS 1
38	130+810	130+910	0.100	TCS 1A
39	130+910	131+980	1.070	TCS 1
40	131+980	132+080	0.100	TCS 1A
41	132+080	132+250	0.170	TCS 1
42	132+250	132+380	0.130	TCS 2
43	132+380	132+610	0.230	TCS 1
44	132+610	132+640	0.030	TCS 1A
45	132+640	132+780	0.140	TCS 1
46	132+780	132+870	0.090	TCS 1A
47	132+870	133+280	0.410	TCS 1
48	133+280	133+340	0.060	TCS 1A
49	133+340	135+170	1.830	TCS 1
50	135+170	135+450	0.280	TCS 2
51	135+450	136+250	0.800	TCS 4
52	136+250	136+740	0.490	TCS 1
53	136+740	136+830	0.090	TCS 1A
54	136+830	137+390	0.560	TCS 1
55	137+390	137+490	0.100	TCS 2
56	137+490	139+480	1.990	TCS 1
57	139+480	139+610	0.130	TCS 2
58	139+610	141+900	2.290	TCS 1
59	141+900	141+980	0.080	TCS 1A
60	141+980	142+200	0.220	TCS 1

Sl. No.	From	To	Length (km)	Cross Section Type
61	142+200	142+600	0.400	TCS 4
62	142+600	142+850	0.250	TCS 1
63	142+850	143+500	0.650	TCS 4
64	143+500	144+160	0.660	TCS 1
65	144+160	144+440	0.280	TCS 1A
66	144+440	146+150	1.710	TCS 1
67	146+150	147+050	0.900	TCS 2
68	147+050	147+240	0.190	TCS 2A
69	147+240	147+310	0.070	TCS 2
70	147+310	147+360	0.050	TCS 2A
71	147+360	147+420	0.060	TCS 2
72	147+420	147+600	0.180	TCS 2A
73	147+600	148+790	1.190	TCS 2
74	148+790	149+010	0.220	TCS 2A
75	149+010	149+230	0.220	TCS 2
76	149+230	149+260	0.030	TCS 2A
77	149+260	149+365	0.105	TCS 2
78	149+365	149+470	0.105	TCS 1
79	149+470	149+610	0.140	TCS 2
80	149+610	150+080	0.470	TCS 1
81	150+080	150+115	0.035	TCS 2A
82	150+115	150+915	0.800	TCS 2
83	150+915	151+730	0.815	TCS 1
84	151+730	151+970	0.240	TCS 2
85	151+970	152+020	0.050	TCS 2A
86	152+020	152+420	0.400	TCS 2
87	152+420	152+790	0.370	TCS 1
88	152+790	152+820	0.030	TCS 2A
89	152+820	153+100	0.280	TCS 2
90	153+100	153+400	0.300	TCS 1
91	153+400	153+800	0.400	TCS 4
92	153+800	154+115	0.315	TCS 2
93	154+115	154+300	0.185	TCS 1
94	154+300	154+430	0.130	TCS 2
95	154+430	154+610	0.180	TCS 1A
96	154+610	154+640	0.030	TCS 1A
97	154+640	156+060	1.420	TCS 2
98	156+060	156+580	0.520	TCS 1
99	156+580	157+940	0.360	TCS 1
100	157+940	157+130	0.190	TCS 1
101	157+130	157+200	0.070	TCS 2
102	157+200	157+300	0.100	TCS 2A
103	158+440	158+600	1.140	TCS 2
104	158+440	159+100	0.660	TCS 2A
105	159+100	159+160	0.060	TCS 2
106	159+160	160+010	0.850	TCS 1
107	160+010	160+240	0.230	TCS 2
108	160+240	161+270	1.000	TCS 1
109	161+270	161+270	0.030	TCS 1A
110	161+270	161+850	0.580	TCS 1
111	161+850	162+650	0.800	TCS 2
112	162+650	162+800	0.150	TCS 2A
113	162+800	165+040	2.240	TCS 2
114	165+040	165+060	0.020	TCS 2A
115	165+060	165+200	0.140	TCS 2
116	165+200	165+335	0.135	TCS 1
117	165+335	165+750	0.415	TCS 2
118	165+750	166+200	0.450	TCS 4
119	166+200	166+800	0.600	TCS 1
120	166+800	167+050	0.250	TCS 2

Sl. No.	Design Chainage (km)		Length (km)	Cross Section Type
	To	From		
121	167+050	167+280	0.230	TCS 1
122	167+280	167+540	0.260	TCS 2
123	167+540	169+100	1.560	TCS 2A
124	169+100	170+880	1.780	TCS 2
125	170+880	171+355	0.475	TCS 1
126	171+355	171+500	0.145	TCS 2
127	171+500	172+280	0.780	TCS 1
128	172+280	172+310	0.030	TCS 1A
129	172+310	173+385	1.075	TCS 1
130	173+385	173+660	0.275	TCS 2
131	173+660	173+700	0.040	TCS 1
132	173+700	173+800	0.100	TCS 1A
133	173+800	173+880	0.080	TCS 1
134	173+880	174+020	0.140	TCS 2
135	174+020	174+300	0.280	TCS 1
136	174+300	174+890	0.590	TCS 2
137	174+890	178+660	3.770	TCS 1
138	178+660	178+940	0.280	TCS 2
139	178+940	179+200	0.260	TCS 2A
140	179+200	180+140	0.940	TCS 2
141	180+140	180+550	0.410	TCS 2A
142	180+550	180+870	0.320	TCS 2
143	181+200	181+510	0.310	TCS 2
144	181+510	183+500	1.990	TCS 1
145	183+500	183+800	0.300	TCS 4
147	184+800	184+400	0.600	TCS 1
148	184+400	184+700	0.300	TCS 2
149	184+700	186+000	1.300	TCS 1
150	186+000	186+200	0.200	TCS 2
151	186+200	186+400	0.200	TCS 1
152	186+400	187+100	0.700	TCS 2
153	187+100	187+160	0.060	TCS 2A
154	187+160	187+200	0.040	TCS 2
155	187+200	187+830	0.630	TCS 1
156	187+830	188+110	0.280	TCS 1A
157	188+110	188+200	0.090	TCS 1
158	188+200	188+500	0.300	TCS 2
159	188+500	188+770	0.270	TCS 1
160	188+770	188+890	0.120	TCS 2
161	188+890	188+990	0.100	TCS 2
162	189+230	189+600	0.370	TCS 2A
163	189+600	189+900	0.300	TCS 2A
164	189+900	189+950	0.050	TCS 2
165	190+900	190+500	0.400	TCS 3
166	190+500	191+500	1.000	TCS 2
167	191+500	191+570	0.070	TCS 2
168	191+570	191+650	0.080	TCS 2A
169	191+650	191+700	0.050	TCS 2
170	191+700	192+025	0.325	TCS 6
171	192+025	192+110	0.085	TCS 2
172	192+110	194+210	2.100	TCS 1
173	194+210	194+310	0.100	TCS 2
174	195+310	195+250	0.060	TCS 1
175	195+250	195+320	0.070	TCS 2
176	195+320	195+360	0.040	TCS 2A
177	195+360	195+550	0.190	TCS 2
178	195+550	197+270	1.720	TCS 1
179	197+270	197+750	0.480	TCS 2
180	197+750	198+170	0.420	TCS 1