Tender No. HORC/HRIDC/C-23/2022
Attachment 11
to
Corrigendum No. 2

Part 2, Section VII-8: Tender Drawings and Documents Section VII-8A: Tender Drawings/R1

Section VII-8: Tender Drawings and Documents

A- Tender Drawings/R1
B- Tender Documents

Section VII-8
A: Tender Drawings/R1

List of Drawings

-Black colour shows Tender drawings which have not been revised

-Blue colour shows Tender drawings which have been revised

-Red colour shows New additional Tender drawings

Note: Tender Drawings are available for downloading on HRIDC website under Active Tender Section (https://hridc.co.in/active-tender.php).

S. No	TITLE	REVISED/NEW DRAWING NO.
1. ALIGNMENT PLAN & L-SECTION		
1.	Conceptual Plan & longitudinal section (29KM to 33.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-29-33KM_A1
2.	Conceptual Plan & longitudinal section (33.0KM to 35.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-33-35KM_A1
3.	Conceptual Plan & longitudinal section (35.0KM to 40.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-35-40KM_A1
4.	Conceptual Plan & longitudinal section (40.0KM to 45.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-40-45KM_A1
5.	Conceptual Plan & longitudinal section (45.0KM to 50.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-45-50KM_A1
6.	Conceptual Plan & longitudinal section (55.0KM to 61.5KM)	GC-HRIDC-ALL-DRW-ALN-P&P-55-61.5KM_A1
7.	Conceptual Plan & longitudinal section connectivity towards Patli	GC-HRIDC-C2-DRW-ALN-P&P-03001_A2
8.	Conceptual Plan and longitudinal section connectivity towards Sultanpur	GC-HRIDC-C2-DRW-ALN-P&P-04001_A2
9.	Re-grading of Garhi Harsaru-Farukhnagar main line of Sultanpur station yard (conceptual)	GC-HRIDC-C23-DRW-ALN-P&P-06001_A0
2. ESP/YARD PLAN		
1.	Conceptual Engineering scale plan of New Patli Junction CH:58135.513 f/Prithala	GC-HRIDC-C23-DRW-STN-ESP-NPA01_A2
2.	Conceptual Engineering scale plan Sultanpur Kaliawas junction CH: 3674.74m f/Badsa KM:6/375	GC-HRIDC-C23-DRW-STN-ESP-SUL01_A2
3.	Conceptual Engineering scale plan Dhulawat Station CH: 32767m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-DHU01_A0
4.	Conceptual Engineering scale plan Chandla Dungerwas station yard CH:42606.159m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-CDU01_A1

S. No	TITLE	REVISED/NEW DRAWING NO.
5.	Conceptual Engineering scale plan Pachgaon Station yard Ch:46279.352m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-PCG01_A1
3. STATION BUILDING AND SUBWAY		
1.	Conceptual Architectural drawing New Patli Station & Subway Br.No 144A	GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1 (Sheet 1 of 3)
		GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1 (Sheet 2 of 3)
		GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1 (Sheet 3 of 3)
2.	Conceptual Architectural drawing Sultanpur station building	GC-HRIDC-C23-DRW-STN-SAD-SUL01_A1
3.	Conceptual Architectural drawing Dhulawat station & subway Br.No 79	GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1 (Sheet 1 of 2)
		GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1 (Sheet 2 of 2)
4.	Conceptual Architectural drawing Chandla Dungerwas station & subway Br.No 104	GC-HRIDC-C23-DRW-STN-SAD-CDU01_A1
5.	Conceptual Architectural drawing Pachgaon station & subway Br.No 113	GC-HRIDC-C23-DRW-STN-SAD-PCG01_A1
4. BRIDGES		
4.1 MINOR BRIDGES		
4.1.1 MAIN LINE		
1.	Conceptual general arrangement drawing proposed ROB Br. No. 073 Span 1×11.5×11 RCC box (at Ch: 30155.000)	GC-HRIDC-C23-DRW-BRD-GAD-01073_A1
2.	Conceptual general arrangement drawing proposed Br. No. 074 span 2×3.0×2.0 RCC box (syphon) at Ch: 30528.000	GC-HRIDC-C23-DRW-BRD-GAD-01074_A1
3.	Conceptual general arrangement drawing proposed Br. No. 075 span 2×5.0×2.5 RCC box (syphon) at Ch: 30839.000	GC-HRIDC-C23-DRW-BRD-GAD-01075_A1
4.	Conceptual general arrangement drawing proposed RUB no. 076 span 2×6.2×5.650 RCC box at Ch: 31145.000	GC-HRIDC-C23-DRW-BRD-GAD-01076_A1
5.	Conceptual general arrangement drawing proposed RUB no. 077 span 1×6.0×4.0 RCC box at Ch: 31365.000	GC-HRIDC-C23-DRW-BRD-GAD-01077_A1
6.	Conceptual general arrangement drawing proposed RUB no. 078 span 1×6.0×4.0 RCC box at Ch: 32022.000	GC-HRIDC-C23-DRW-BRD-GAD-01078_A1
7.	Conceptual general arrangement drawing proposed RUB no. 080	GC-HRIDC-C23-DRW-BRD-GAD-01080_A1

S. No	TITLE	REVISED/NEW DRAWING NO.
	Span 1×6.0×4.50 RCC box at Ch: 33155.000	
8.	Conceptual general arrangement drawing balancing culvert bridge no. 81, 1x2x2 RCC box at CH:33269.230	GC-HRIDC-C23-DRW-BRD-GAD-01081_A1
9.	Conceptual general arrangement drawing bridge no. 82, 90, 96, 99 &122 pipe Culvert 1x1.8 span	GC-HRIDC-C23-DRW-BRD-GAD-PIPE_A1
10.	Conceptual general arrangement drawing for proposed RUB no. 083 span 2×7.0×5.650 RCC box at Ch: 33673.045	GC-HRIDC-C23-DRW-BRD-GAD-01083_A1
11.	Conceptual general arrangement drawing for proposed RUB no. 084 span 1×6.0×5.0 RCC box at Ch: 33976.50	GC-HRIDC-C23-DRW-BRD-GAD-01084_A1
12.	Conceptual general arrangement drawing for proposed RUB no. 085 span 2×5.5×5.650 RCC box at Ch: 34280.218	GC-HRIDC-C23-DRW-BRD-GAD-01085_A1
13.	Conceptual general arrangement drawing for road under bridge no 87 Span 1.0x5.0x3.0 RCC box at Ch: 35371.018m	GC-HRIDC-C23-DRW-BRD-GAD-01087_A1
14.	Conceptual general arrangement drawing for road under bridge no 88 Span 1.0x5.0x3.0 RCC box at Ch: 35916.064m	GC-HRIDC-C23-DRW-BRD-GAD-01088_A1
15.	Conceptual general arrangement drawing for proposed RUB no. 089 span 2×7.0×5.65 RCC box at Ch: 36984.118	GC-HRIDC-C23-DRW-BRD-GAD-01089_A1
16.	Conceptual general arrangement drawing for proposed RUB no. 091 span1×5.0×3.15 RCC box at Ch: 37804.099	GC-HRIDC-C23-DRW-BRD-GAD-01091_A1
17.	Conceptual general arrangement drawing proposed RUB no. 092 span 2×5.5×5.650 RCC box at Ch: 38456.750	GC-HRIDC-C23-DRW-BRD-GAD-01092_A1
18.	Conceptual general arrangement drawing for balancing culvert bridge no. 093 Span 1×3.0×2.0 RCC box at Ch: 39155.000	GC-HRIDC-C23-DRW-BRD-GAD-01093_A1
19.	Conceptual general arrangement drawing for road under bridge no. 094 span 1.0x5.0x3.0 RCC box at Ch: 39552.508	GC-HRIDC-C23-DRW-BRD-GAD-01094_A1

S. No	TITLE	REVISED/NEW DRAWING NO.
20.	Conceptual general arrangement drawing proposed RUB no. 095 span 2×5.5×5.650 RCC box at Ch: 40003.467	GC-HRIDC-C23-DRW-BRD-GAD-01095_A1
21.	Conceptual general arrangement drawing for proposed RUB no. 097 span 1×4.0×2.5 RCC box at Ch: 40671.025	GC-HRIDC-C23-DRW-BRD-GAD-01097_A1
22.	Conceptual general arrangement drawing for road under bridge no. 098 span 1.0x4.0x3.0 RCC box at Ch: 41312.174	GC-HRIDC-C23-DRW-BRD-GAD-01098_A1
23.	Conceptual general arrangement drawing for balancing culvert bridge no. 100 Span 1.0x2.0x2.0 RCC box at Ch: 41925.899	GC-HRIDC-C23-DRW-BRD-GAD-01100_A1
24.	Conceptual general arrangement drawing proposed RUB no. 101 span 2×7.0×5.650 RCC box at Ch: 41962.645	GC-HRIDC-C23-DRW-BRD-GAD-01101_A1
25.	Conceptual general arrangement drawing for balancing culvert bridge no 102 Span 1.0x2.0x2.0 RCC box at Ch: 42238.900	GC-HRIDC-C23-DRW-BRD-GAD-01102_A1
26.	Conceptual general arrangement drawing for proposed RUB no. 103 span 1×5.0×3.0 RCC box at Ch: 42578.906	GC-HRIDC-C23-DRW-BRD-GAD-01103_A1
27.	Conceptual general arrangement drawing proposed RUB no. 105 span 2×7.0×5.650 RCC box at Ch: 43506.883	GC-HRIDC-C23-DRW-BRD-GAD-01105_A1
28.	Conceptual general arrangement drawing for road under bridge no 106 Span 1.0x4.0x3.1 RCC box at Ch: 43758.291	GC-HRIDC-C23-DRW-BRD-GAD-01106_A1
29.	Conceptual general arrangement drawing for balancing culvert bridge no 108 Span 1.0x4.0x5.0 RCC box at Ch: 44281.401	GC-HRIDC-C23-DRW-BRD-GAD-01108_A1
30.	Conceptual general arrangement drawing for balancing culvert bridge no 109 Span 1.0x4.0x5.0 RCC box at Ch: 44401.641m	GC-HRIDC-C23-DRW-BRD-GAD-01109_A1
31.	Conceptual general arrangement drawing proposed RUB no. 110 span 1×6.0×5.0 RCC box at Ch: 44420.238	GC-HRIDC-C3-DRW-BRD-GAD-01110_A1
32.	Conceptual general arrangement drawing for balancing culvert bridge	GC-HRIDC-C23-DRW-BRD-GAD-01114_A1

S. No	TITLE	REVISED/NEW DRAWING NO.
	no 114 span 1.0x6.0x6.0 RCC box at Ch: 46635.175	
33.	Conceptual general arrangement drawing for road under bridge no 115 Span 1.0x6.0x6.0 RCC box at Ch: 46768.341	GC-HRIDC-C23-DRW-BRD-GAD-01115_A1
34.	Conceptual general arrangement drawing for balancing culvert bridge no 116 span 1.0x5.0x5.0 RCC box at Ch: 46915.023	GC-HRIDC-C23-DRW-BRD-GAD-01116_A1
35.	Conceptual general arrangement drawing for road under bridge no 117 Span 2.0x5.0x5.0 RCC box at Ch: 47300.018	GC-HRIDC-C23-DRW-BRD-GAD-01117_A1
36.	Conceptual general arrangement drawing for balancing culvert no 118 Span 1.0x4.0x4.0 RCC box at Ch: 47500.360	GC-HRIDC-C23-DRW-BRD-GAD-01118_A1
37.	Conceptual general arrangement drawing for balancing culvert bridge no 119 Span 1.0x4.0x3.0 RCC box at Ch: 47824.336	GC-HRIDC-C23-DRW-BRD-GAD-01119_A1
38.	Conceptual general arrangement drawing for balancing culvert bridge no 120 Span 1.0x4.0x4.0 RCC box at Ch: 48093.515	GC-HRIDC-C23-DRW-BRD-GAD-01120_A1
39.	Conceptual general arrangement drawing for road under bridge no 121 Span 1.0x4.0x4.0 RCC box at Ch: 48231.618	GC-HRIDC-C23-DRW-BRD-GAD-01121_A1
40.	Conceptual general arrangement drawing for road under bridge no 124 Span 1.0x4.0x4.0 RCC box at Ch: 48794.629	GC-HRIDC-C23-DRW-BRD-GAD-01124_A1
41.	Conceptual general arrangement drawing for road under bridge no 125 Span 2.0x5.0x3.6 RCC box at Ch: 49167.307	GC-HRIDC-C23-DRW-BRD-GAD-01125_A1
42.	Conceptual general arrangement drawing for bridge no. 126 Pipe culvert 1x1.2 span, at Ch: 49583.348	GC-HRIDC-C23-DRW-BRD-GAD-01126_A1
43.	Conceptual general arrangement drawing for balancing culvert bridge no 137 Span 1.0x5.0x4.0 RCC box at Ch: 56117.426	GC-HRIDC-C23-DRW-BRD-GAD-01137_A1
44.	Conceptual general arrangement drawing for road under bridge no 138 Span 1.0x5.0x4.0 RCC box at Ch: 56290.652	GC-HRIDC-C23-DRW-BRD-GAD-01138_A1

S. No	TITLE	REVISED/NEW DRAWING NO.
45.	Conceptual general arrangement drawing for balancing culvert bridge no 139 Span 1.0x5.0x4.0 RCC box at Ch: 56465.029	GC-HRIDC-C23-DRW-BRD-GAD-01139_A1
46.	Conceptual general arrangement drawing for balancing culvert bridge no 140 Span 1.0x5.0x4.0 RCC box at Ch: 56755.035	GC-HRIDC-C23-DRW-BRD-GAD-01140_A1
47.	Conceptual general arrangement drawing For Road + Balancing culvert bridge no 141/ 141A 1x2x2+1x5x4 RCC box at Ch: 57154.991/57167.991	GC-HRIDC-C23-DRW-BRD-GAD-01141_A1
48.	Conceptual general arrangement drawing for balancing culvert bridge no 142 1x5.0x4.0m RCC box at Ch:57520	GC-HRIDC-C23-DRW-BRD-GAD-01142_A1
49.	Conceptual general arrangement drawing for road under bridge no. 143, 2x7x5.25 RCC box at CH: 57670.809	GC-HRIDC-C23-DRW-BRD-GAD-01143_A1
50.	Conceptual general arrangement drawing for balancing culvert bridge no. 144, 1x2x2 RCC box at CH: 57987.046	GC-HRIDC-C23-DRW-BRD-GAD-01144_A1
51.	Conceptual general arrangement drawing for road under bridge no. 145, 1x5x3 RCC box at CH: 58203.149	GC-HRIDC-C23-DRW-BRD-GAD-01145_A1
52.	Conceptual general arrangement drawing for balancing culvert bridge no. 146, 1x2x2 RCC box at CH: 58564.993	GC-HRIDC-C23-DRW-BRD-GAD-01146_A1
53.	Conceptual general arrangement drawing for bridge no.146A - 5 m clear span inverted U over GAIL pipe line crossing at Ch. 58720.513	GC-HRIDC-C23-DRW-BRD-GAD-01146A_A0
54.	Conceptual general arrangement drawing for balancing culvert bridge no 147A 1x2.0x2.0m RCC box at Ch. 59587.000	GC-HRIDC-C23-DRW-BRD-GAD-01147A_A0
55.	Conceptual general arrangement drawing for road under bridge no. 148, 2x5x5.25 RCC box at CH: 59884.954	GC-HRIDC-C23-DRW-BRD-GAD-01148_A1
56.	Conceptual general arrangement drawing for Road+Balancing culvert bridge no 149/149A 1x5x3 + 1x2x2 RCC box at Ch. 60161.343m/ 60171.264m	GC-HRIDC-C23-DRW-BRD-GAD-01149_A1
57.	Conceptual general arrangement drawing for balancing culvert bridge	GC-HRIDC-C23-DRW-BRD-GAD-01154_A1

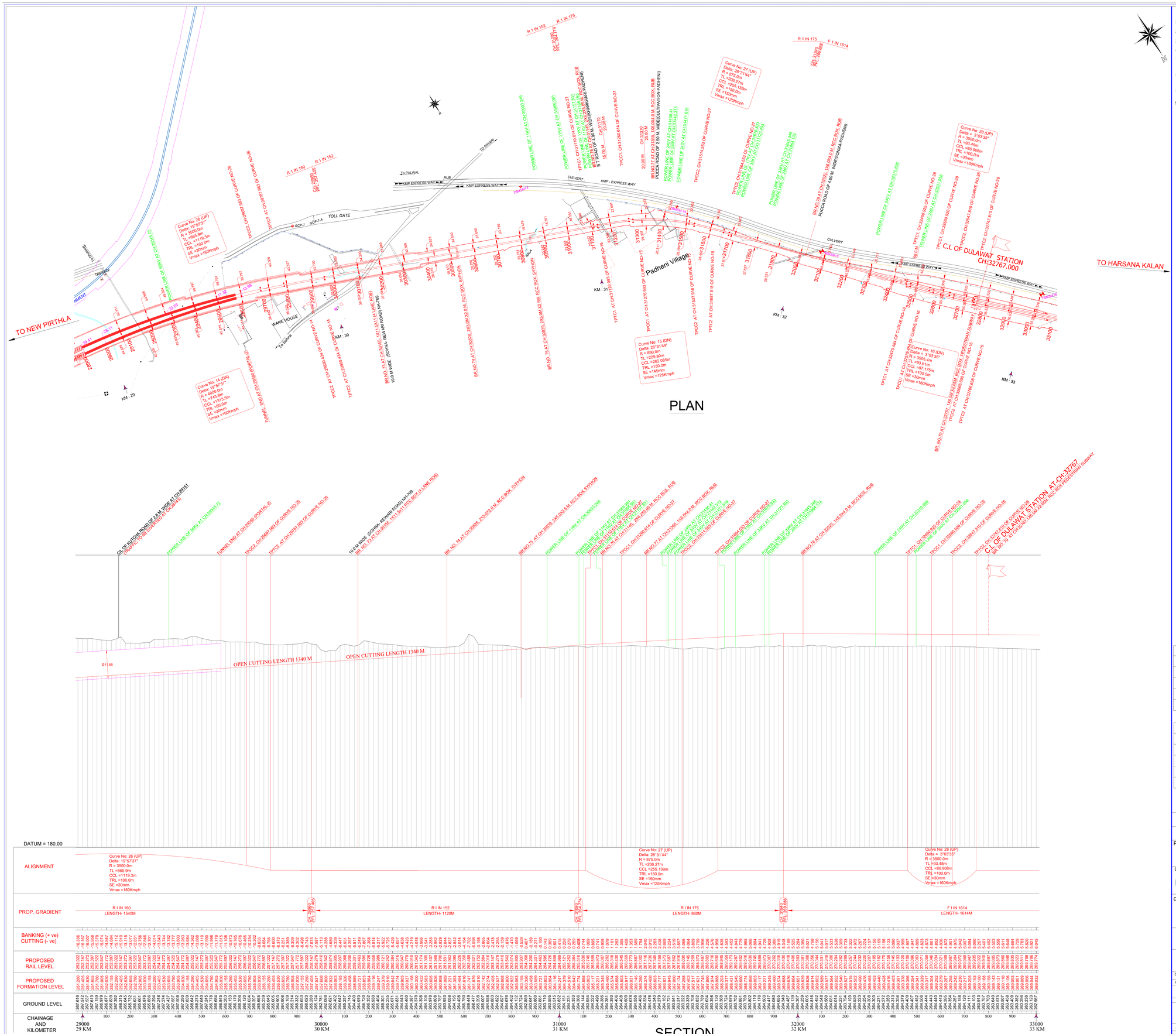
S. No	TITLE	REVISED/NEW DRAWING NO.
	no. 154, 1x2x2 RCC box at CH: 61163.504	
4.1.2 CONNECTING LINE		
A. NEW PATLI TO PATLI		
1.	Conceptual general arrangement drawing for road under bridge no. 1, 1x5x3.25 RCC box at CH: 1046.562 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03001_A1
2.	Conceptual general arrangement drawing for balancing culvert bridge no. 2, 1x2x2 RCC box at CH: 1277.958 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03002_A1
3.	Conceptual general arrangement drawing for road under bridge no. 3, 1x4x3.25 RCC box at CH: 1986.847 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03003_A1
4.	Conceptual general arrangement drawing for road under bridge no. 4, 1x5x5.25 RCC box at CH: 2518.489 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03004_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-03004_A1 (Sheet 2 of 2)
5.	Conceptual general arrangement drawing for balancing culvert bridge no. 5, 1x2.5x3 RCC box at CH: 2687.006 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03005_A1
B. NEW PATLI TO SULTANPUR		
1.	Conceptual general arrangement drawing for balancing culvert bridge no. 2, 1x2x2 RCC box at CH: 1548.996 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04002_A1
2.	Conceptual general arrangement drawing for bridge no.3A - 5 m clear span inverted U over GAIL pipe line crossing at Ch. 1785m (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04003A_A0
3.	Conceptual general arrangement drawing for balancing culvert bridge no.4, 1x2x2 RCC box at CH: 2189.831 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04004_A1
4.	Conceptual general arrangement drawing for road under bridge no. 5, 1x5x4.25 RCC box at CH: 2823.679 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04005_A1
5.	Conceptual general arrangement drawing for bridge no.5A - 5 m clear	GC-HRIDC-C23-DRW-BRD-GAD-04005A_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
	span inverted U over GAIL pipe line crossing at Ch. 3733m (connecting line new Patli to Sultanpur)	
4.2	**MAJOR BRIDGES**	
4.2.1	**MAIN LINE**	
1.	Conceptual general arrangement drawing for PSC U Slab bridge no. 86, 2x12.2 RCC box at CH:34899.045	GC-HRIDC-C23-DRW-BRD-GAD-01086_A1
2.	Conceptual general arrangement drawing for proposed major bridge no.107 at Ch: 44246.344m 1 x 18.3 m Composite girder	GC-HRIDC-C23-DRW-BRD-GAD-01107_A1
3.	Conceptual general arrangement drawing for proposed major RUB no.111 at Ch:44570.310m as 1 x 18.3 m PSC I Girder	GC-HRIDC-C23-DRW-BRD-GAD-01111_A1
4.	Conceptual general arrangement drawing for prop. major RUB no.112, at Ch: 45495.969m 4x18.3(CG) + 1x30.5(CG) + 8x24.4 (CG) + 1x76.2(OWG) + 2x24.4(CG) + 1x61(OWG)	GC-HRIDC-C23-DRW-BRD-GAD-01112_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01112_A1 (Sheet 2 of 2)
5.	Conceptual general arrangement drawing for proposed viaduct br no.123 at Ch: 48663.628m as 1 x 18.3 m PSC I girder	GC-HRIDC-C23-DRW-BRD-GAD-01123_A1
6.	Conceptual general arrangement drawing for proposed major ROR bridge no.136, 18.3(CG) + 76.2(OWG) + 18.3 (CG) at Ch: 55724.752m	GC-HRIDC-C23-DRW-BRD-GAD-01136_A1
7.	Conceptual general arrangement drawing for proposed major RUB no.147 at Ch:59106.085m 1 x 45.7m, Open Web Girder	GC-HRIDC-C23-DRW-BRD-GAD-01147_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01147_A1 (Sheet 2 of 2)
8.	Conceptual general arrangement drawing for proposed major RUB no. 150, 1x30.5 Composite Girder at CH: 60457.614	GC-HRIDC-C23-DRW-BRD-GAD-01150_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01150_A1 (Sheet 2 of 2)
9.	Conceptual general arrangement drawing for proposed major RUB no. 151, 1x24.4 Composite Girder at CH: 60563.367	GC-HRIDC-C23-DRW-BRD-GAD-01151_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01151_A1 (Sheet 2 of 2)
10.	Conceptual general arrangement drawing for proposed major RUB no. 152, 1x24.4 Composite Girder at CH: 60642.669	GC-HRIDC-C23-DRW-BRD-GAD-01152_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01152_A1 (Sheet 2 of 2)

S. No	TITLE	REVISED/NEW DRAWING NO.
11.	Conceptual general arrangement drawing for proposed major RUB no. 153, 1x30.5 Composite Girder at CH: 60754.591	GC-HRIDC-C23-DRW-BRD-GAD-01153_A1 (Sheet 1 of 2)
		GC-HRIDC-C23-DRW-BRD-GAD-01153_A1 (Sheet 2 of 2)
4.2.2 CONNECTING LINE		
A. NEW PATLI TO SULTANPUR		
1.	Conceptual general arrangement drawing for proposed major RUB no. 1 at Ch:951.499 m 1 x 45.7m, Open Web Girder (connecting line new patli to sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04001_A1
2.	Conceptual general arrangement drawing for proposed major RUB no. 3, 1x12.2 PSC U Slab at CH: 1767.989 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD_04003_A1
5. MISCELLANEOUS DRAWINGS (CONCEPTUAL PLANS)		
1.	Conceptual Plan Typical embankment/cutting profile	GC-HRIDC-SK-GEN-001_A1
2.	Conceptual Plan S&T hut	GC-HRIDC-SK-GEN-002_A1
3.	Conceptual Plan Mini platform shelter	GC-HRIDC-SK-GEN-003_A1
4.	Conceptual Plan R.C. pre-cast fencing for end platform	GC-HRIDC-SK-GEN-004
5.	Conceptual Plan Station name board	GC-HRIDC-SK-GEN-005_A1
6.	Conceptual Plan Proposed toilet block on island platforms	GC-HRIDC-SK-GEN-006_A1
7.	Conceptual Plan Proposed toilet block on end platforms	GC-HRIDC-SK-GEN-007_A1
8.	Conceptual Plan Drains for Embankment	GC-HRIDC-SK-GEN-008_A1
9.	Conceptual Plan Steel barricade	GC-HRIDC-SK-GEN-009
10.	Conceptual Plan Water booth with one side taps arrangement (end platform)	GC-HRIDC-SK-GEN-010_A1
11.	Conceptual Plan Water booth with both side taps arrangement (island platform)	GC-HRIDC-SK-GEN-011_A1
12.	Conceptual Plan Ticket counter for New Patli station	GC-HRIDC-SK-GEN-013
13.	Conceptual Plan CC Toe wall	GC-HRIDC-SK-GEN-014_A1
14.	Conceptual Plan Typical details of protection work	GC-HRIDC-SK-GEN-015_A1
15.	Conceptual Plan Barbed wire fencing	GC-HRIDC-SK-GEN-016_A1

S. No	TITLE	REVISED/NEW DRAWING NO.
16.	Conceptual Plan Rain –Water Harvesting	GC-HRIDC-SK-GEN-018
17.	Conceptual Plan for Transition system of bridge approaches	GC-HRIDC-SK-GEN-019
18.	Conceptual Plan for Self-Supporting roof covering Shed	GC-HRIDC-SK-GEN-020
19.	Conceptual Plan for formation details below subway, lift well and building	GC-HRIDC-SK-GEN-021
20.	Conceptual plan for Trolley Refuge in embankment	GC-HRIDC-SK-GEN-022
21.	Conceptual plan for Trolley Refuge in cutting	GC-HRIDC-SK-GEN-023
22.	Conceptual sketch for RCC platform wall	GC-HRIDC-SK-GEN-024
23.	Conceptual Plan for single lane and double lane road	GC-HRIDC-SK-GEN-025
24.	Conceptual Plan for reinforced earth wall geogrid reinforcement	GC-HRIDC-SK-GEN-026
25.	Conceptual Plan for sump	GC-HRIDC-SK-GEN-027
26.	Conceptual sketch for NP4 pipe of 450mm Dia	GC-HRIDC-SK-GEN-028
27.	Conceptual sketch for precast RCC box 500 x 500 mm size	GC-HRIDC-SK-GEN-029
28.	Jurisdictional Sketch for civil works C-23 package	GC-HRIDC-C23-SK-CIVIL-001_A1
29.	Conceptual Plan Drainage arrangement (New Patli)	GC-HRIDC-C23-SK-CIVIL-002_A1
30.	Conceptual Plan Drainage arrangement (Sultanpur)	GC-HRIDC-C23-SK-CIVIL-003_A1
31.	Conceptual Plan Drainage arrangement (Dhulawat)	GC-HRIDC-C23-SK-CIVIL-004_A1
32.	Conceptual Plan Drainage arrangement (Chandla Dungerwas)	GC-HRIDC-C23-SK-CIVIL-005_A1
33.	Conceptual Plan Drainage arrangement (Pachgaon)	GC-HRIDC-C23-SK-CIVIL-006_A1
34.	Conceptual Plan Bank/cutting benching at interface locations	GC-HRIDC-C23-SK-CIVIL-009_A1
35.	Type plan powder toilet for divyangs	N.R.H.Q.E PLAN NO. HQ/20/11-2021

1.Alignment Plan & L-Section



NOTES :-

1. EXISTING WORK SHOWN IN BLACK.
2. PROPOSED WORK SHOWN IN RED.
3. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE SPECIFIED.
4. CHAINAGE IS RECKONED 0.00 FROM C.L OF NEW PRITHLA STATION BUILDING .
5. RAIL LEVEL SHOULD BE 0.742m ABOVE FORMATION LEVEL FOR TRACK STRUCTURE 60KG NEW RAIL ON PSC SLEEPER (1660/KM) WITH 350mm BALLAST CUSHION.
6. RULLING GRADIENT IS 1 IN 150 OF THIS SECTION.(COMPENSATED)
7. VERTICAL CURVE WILL BE PROVIDED AS PER IRPWM PARA 419.
8. CROSS / LONGITUDINAL DRAINAGE ARRANGEMENT BET.TRACK SHOULD BE PROVIDED WHEREVER REQUIRED .
9. TROLLY REFUDGE IN BANKING / CUTTING SHALL BE PROVIDED AS PER PROVISION OF IRPWM.
10. STANRDARD OF LOADING (FOR PROP. LINE):- 32.5 T LOADING-2008 & HIGH RISE OHE.
11. TELEPHONE CABLE TO BE LAID FOR TELECOMUNICATION.
12. ALL ELECTRICAL X-ING WILL BE AS PER PARA II (I) OF CHAPTER I.GENERAL OF SCHEDULE 1 OF SOD 2004.

LEGEND	
EXISTING CENTRE LINE	
PROPOSED CENTRE LINE	
DFC CENTRE LINE	
EXISTING TPTC	
PROPOSED TPTC	
TBM	
KM-STONE	
PROPOSED BOUNDARY	
EXISTING BRIDGE	
PROPOSED BRIDGE	
NALA,CANAL,DRAIN	
PERMANENT STRUCTURE	
TEMPORARY STRUCTURE	
PROPOSED GATE LODGE	
TOE LINE	
ROAD	
POWER LINE WITH POLE	
PYLON	
EMBANKMENT / BUND	
ROCKY AREA	
COMPOUND WALL	
DITCH / QUARRY	
BARBED WIRE FENCING	
GROUND LEVEL	

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	
SUDHIR AGRAWAL DPD/C/VIL	
KRISHAN CHAND SAINSI CRE/C/VIL	

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR GM/ IP&P	
RAJU SOLANKI DGM/C/VIL	

NORTHERN RAILWAY

DELHI DIVISION

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

SIGN

RITES THE INFRASTRUCTURE PEOPLE — SMEC

TITLE: CONCEPTUAL PLAN & LONGITUDINAL SECTION (29 KM TO 33.0 KM)

GC/HORC DRG. NO:- GC-HRIDC-ALL-DRW-ALN-P&P-29-33KM_A1

ISSUE Dt: 11.11.2022 REVISED Dt: 24.12.2022

SCALE: HORIZONTAL 1:2000 VERTICAL 1:200

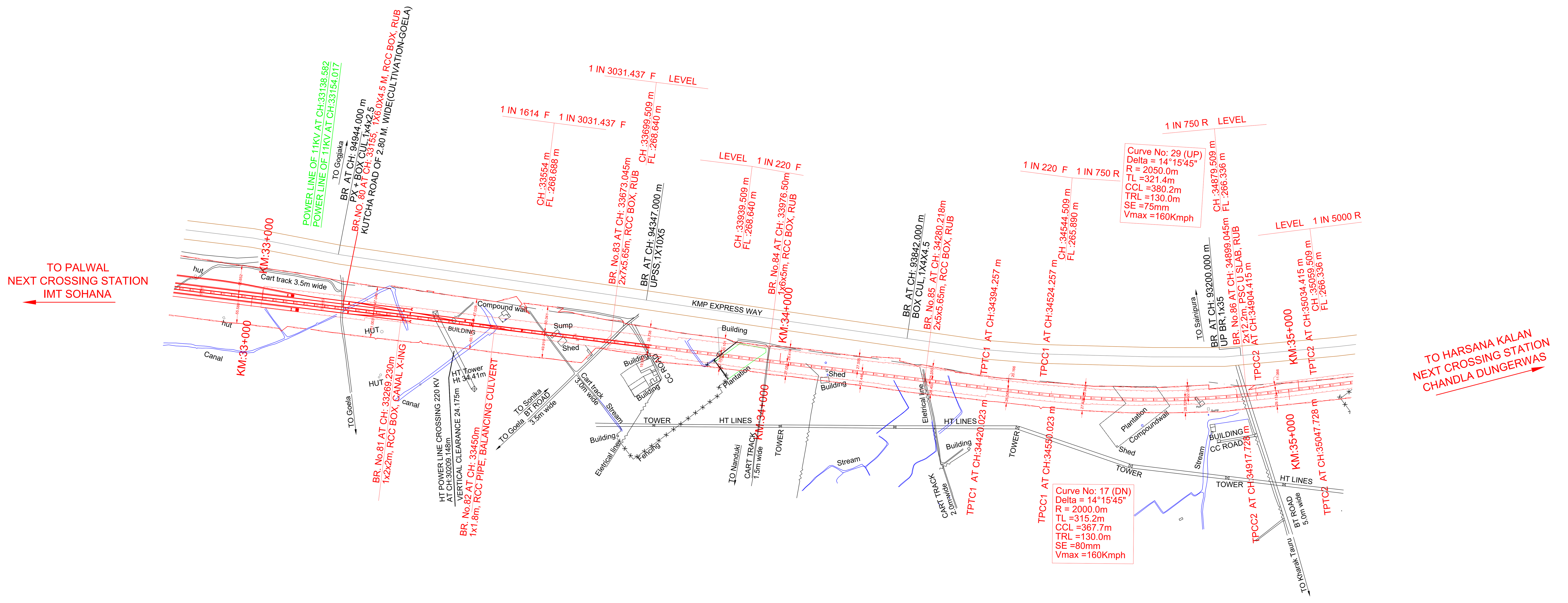
SMC DRG. NO:- SMC/HRIDC/TUNNEL/LS- (R-4)

CONSULTANT: S.M. CONSULTANTS — An ISO 9001 Company — Khuberwan / Balasore / Secunderabad / South Andaman / New Delhi — Web: www.smcindia.com, E-Mail: support@smcindia.com

DRAWN BY:- L.MOHANTY CHECKED BY:- SIVRAM J

S. S. SENIYAT PROJECT ENGINEER

RELEASED FOR: PRELIMINARY FOR APPROVAL ☐ TENDER ☑ CONSTRUCTION ☐



LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND
- PRO.TOE LINE

NOTE:-

1. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE STATED
2. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL.
3. TRACK CETRE BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
4. PUBLIC UTILITIES HT/LT LINES OFC CABLES WATER /SEWER LINES ETC INTERFERING WITH DFC TRACKS SHALL BE RELOCATED.
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.
6. VERTICAL CLEARANCE FROM LOWEST CONDUCTOR OF HT POWER LINE TO PROPOSED RAIL LEVEL ARE SHOWN

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD)

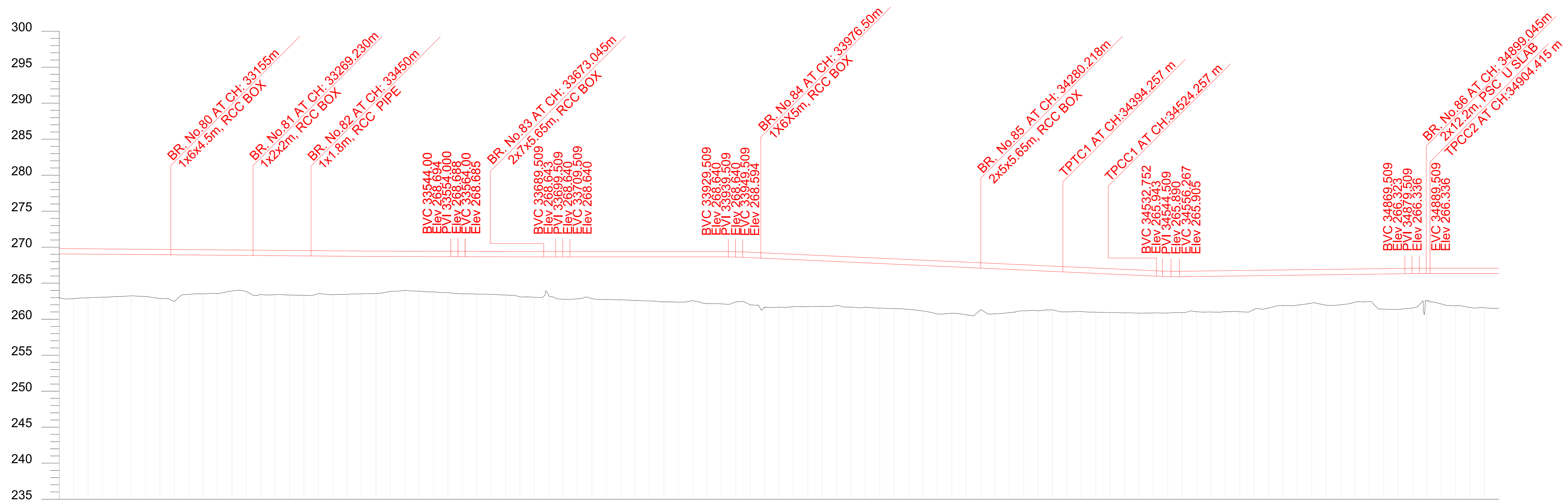
I. FOR RAIL CORRIDOR: 160KMPH Speed
- * TRACK = 60KG RAILS
- * SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
- * BALLAST CUSHION : 350mm
- * ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS:-

1. BVC - BEGIN OF VERTICAL CURVE
2. PVI - POINT OF VERTICAL INTERSECTION
2. EVC - END OF VERTICAL CURVE

LEGEND FOR PROFILE :

- PROPOSED RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE



HORIZONTAL ALIGNMENT: L=1646.447m; TRL=130m; R =-2050m; TRL=130m

VERTICAL ALIGNMENT: L=1594m, 1 IN 1614 F; L=20.000m, R=21220.654m; L=125.509m, 1 IN 3031.437 F; L=20.000m, R=-60000.00m; L=220.000m, LEVEL; L=20.000m, R=4400.04m; L=583.243m, 1 IN 220 F; L=23.515m, R=-4000.02m; L=313.242m, 1 IN 750 R; L=20.000m, R=15000.01m; L=160.000m, LEVEL

CHAINAGES	DEPTH OF CUTTING (-) HIGHT OF BANKING (+)	PROPOSED RAIL LEVEL	PROPOSED FORMATION LEVEL	GROUND LEVELS
33000.0	+6.045	269.774	269.032	262.987
33020.0	+6.165	269.761	269.019	262.854
33040.0	+6.030	269.749	269.007	262.977
33060.0	+5.929	269.736	268.994	263.065
33080.0	+5.825	269.724	268.982	263.157
33100.0	+5.728	269.712	268.970	263.242
33120.0	+5.789	269.699	268.957	263.168
33140.0	+6.084	269.687	268.945	262.861
33160.0	+6.462	269.674	268.932	262.470
33180.0	+5.462	269.662	268.920	263.458
33200.0	+5.381	269.650	268.908	263.527
33220.0	+5.344	269.637	268.895	263.551
33240.0	+4.968	269.625	268.883	263.915
33260.0	+5.010	269.612	268.870	263.860
33280.0	+5.413	269.600	268.858	263.445
33300.0	+5.431	269.588	268.846	263.415
33320.0	+5.476	269.575	268.833	263.357
33340.0	+5.516	269.563	268.821	263.305
33360.0	+5.258	269.550	268.808	263.550
33380.0	+5.394	269.538	268.796	263.402
33400.0	+5.338	269.526	268.784	263.446
33420.0	+5.247	269.513	268.771	263.524
33440.0	+5.223	269.501	268.759	263.536
33460.0	+4.875	269.489	268.747	263.872
33480.0	+4.736	269.476	268.734	263.998
33500.0	+4.825	269.464	268.722	263.897
33520.0	+4.910	269.451	268.709	263.799
33540.0	+4.994	269.439	268.697	263.703
33560.0	+5.158	269.428	268.686	263.528
33580.0	+5.200	269.421	268.679	263.479
33600.0	+5.223	269.415	268.673	263.450
33620.0	+5.312	269.408	268.666	263.354
33640.0	+5.558	269.401	268.659	263.101
33660.0	+5.605	269.395	268.653	263.048
33680.0	+5.296	269.388	268.646	263.350
33700.0	+5.871	269.382	268.640	262.769
33720.0	+5.815	269.382	268.640	262.825
33740.0	+5.781	269.382	268.640	262.859
33760.0	+5.897	269.382	268.640	262.743
33780.0	+5.940	269.382	268.640	262.700
33800.0	+6.042	269.382	268.640	262.598
33820.0	+6.108	269.382	268.640	262.532
33840.0	+6.232	269.382	268.640	262.408
33860.0	+6.269	269.382	268.640	262.371
33880.0	+6.060	269.382	268.640	262.580
33900.0	+6.460	269.382	268.640	262.180
33920.0	+6.504	269.382	268.640	262.136
33940.0	+6.255	269.369	268.627	262.372
33960.0	+6.547	269.288	268.546	261.999
33980.0	+6.817	269.198	268.456	261.639
34000.0	+6.708	269.107	268.365	261.657
34020.0	+6.518	269.016	268.274	261.756
34040.0	+6.419	268.925	268.183	261.764
34060.0	+6.330	268.834	268.092	261.762
34080.0	+6.115	268.743	268.001	261.886
34100.0	+6.224	268.652	267.910	261.686
34120.0	+6.169	268.561	267.819	261.650
34140.0	+6.184	268.470	267.728	261.544
34160.0	+6.145	268.379	267.637	261.492
34180.0	+6.189	268.288	267.546	261.357
34200.0	+6.312	268.198	267.456	261.144
34220.0	+6.630	268.107	267.365	260.735
34240.0	+6.433	268.016	267.274	260.841
34260.0	+6.574	267.925	267.183	260.609
34280.0	+5.803	267.834	267.092	261.289
34300.0	+6.243	267.743	267.001	260.758
34320.0	+6.009	267.652	266.910	260.901
34340.0	+5.648	267.561	266.819	261.171
34360.0	+5.559	267.470	266.728	261.169
34380.0	+5.337	267.379	266.637	261.300
34400.0	+5.526	267.288	266.546	261.020
34420.0	+5.395	267.198	266.456	261.061
34440.0	+5.391	267.107	266.365	260.974
34460.0	+5.361	267.016	266.274	260.913
34480.0	+5.296	266.925	266.183	260.887
34500.0	+5.254	266.834	266.092	260.838
34520.0	+5.120	266.743	266.001	260.881
34540.0	+5.052	266.659	265.917	260.865
34560.0	+4.999	266.652	265.910	260.911
34580.0	+4.888	266.679	265.937	261.049
34600.0	+4.966	266.706	265.964	260.998
34620.0	+4.947	266.732	265.990	261.043
34640.0	+4.980	266.759	266.017	261.037
34660.0	+4.671	266.786	266.044	261.373
34680.0	+4.521	266.812	266.070	261.549
34700.0	+4.191	266.839	266.097	261.906
34720.0	+4.172	266.866	266.124	261.952
34740.0	+3.908	266.892	266.150	262.242
34760.0	+4.224	266.919	266.177	261.953
34780.0	+4.195	266.946	266.204	262.009
34800.0	+3.872	266.972	266.230	262.358
34820.0	+3.796	266.999	266.257	262.461
34840.0	+4.887	267.026	266.284	261.397
34860.0	+4.938	267.052	266.310	261.372
34880.0	+4.754	267.075	266.333	261.579
34900.0	+3.789	267.078	266.336	262.547
34920.0	+4.227	267.078	266.336	262.109
34940.0	+4.471	267.078	266.336	261.865
34960.0	+4.698	267.078	266.336	261.638
34980.0	+4.739	267.078	266.336	261.597
35000.0	+4.808	267.078	266.336	261.528

LONGITUDINAL PROFILE
HORIZONTAL-1:5000, VERTICAL-1:500

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	(signed)
SUDHIR AGRAWAL DPD/CIVIL	(signed)
KRISHAN CHAND SAINSI CRE/CIVIL	(signed)

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR GM/ IP&P	(signed)
RAJU SOLANKI DGM/CIVIL	(signed)

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (33.0 KM TO 35.0 KM)

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-33-35KM_A1

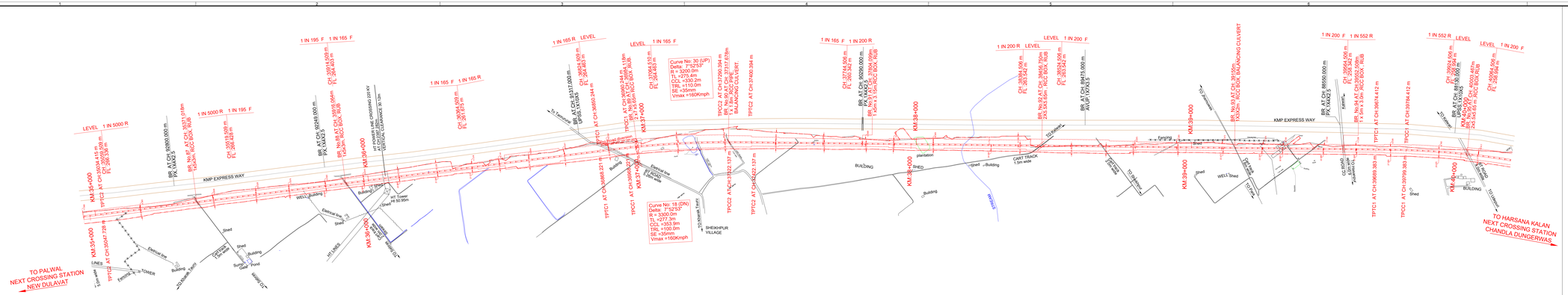
ISSUE Dt: 11.11.2022 | REVISED Dt: 24.12.2022

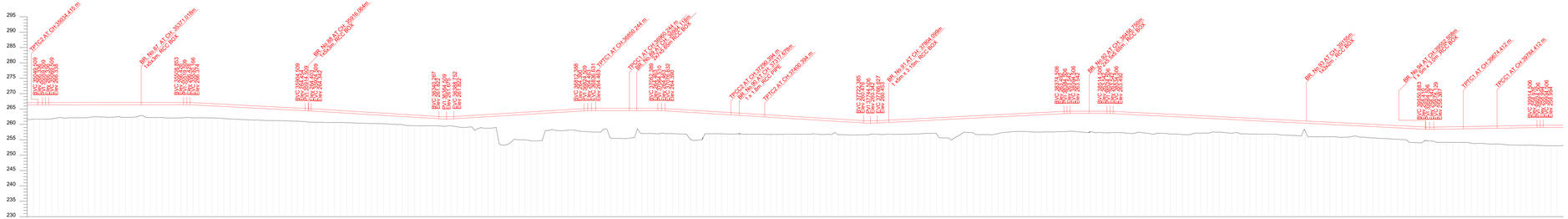
CONSULTANTS : aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23737633; Fax: 91-40-23736277
e-mail: railways@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES

TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO.AA/2245/AL/DR/P&P/R3 | SHEET No. 6 OF 24
SCALE : H = 1:5000 V = 1:500 | ISSUED Dt: 26.11.2019 | REV Dt: 06-08-2022





LONGITUDINAL PROFILE
HORIZONTAL SCALE: VERTICAL SCALE

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND
- PRO.TOE LINE

NOTE:-

1. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE STATED
2. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL
3. TRACK CETRE BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
4. PUBLIC UTILITIES HT/LT LINES OFC CABLES WATER /SEWER LINES ETC INTERFERING WITH DFC TRACKS SHALL BE RELOCATED.
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.
6. VERTICAL CLEARANCE FROM LOWEST CONDUCTOR OF HT POWER LINE TO PROPOSED RAIL LEVEL ARE SHOWN

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD)

I. FOR RAIL CORRIDOR: 160KMPH Speed
* TRACK = 60KG RAILS
* SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
* BALLAST CUSHION : 350mm
* ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS:-

1. BVC - BEGIN OF VERTICAL CURVE
2. PVI - POINT OF VERTICAL INTERSECTION
2. EVC - END OF VERTICAL CURVE

LEGEND FOR PROFILE :-

- PROPOSED RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE

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NAME / DESIGNATION	SIGN
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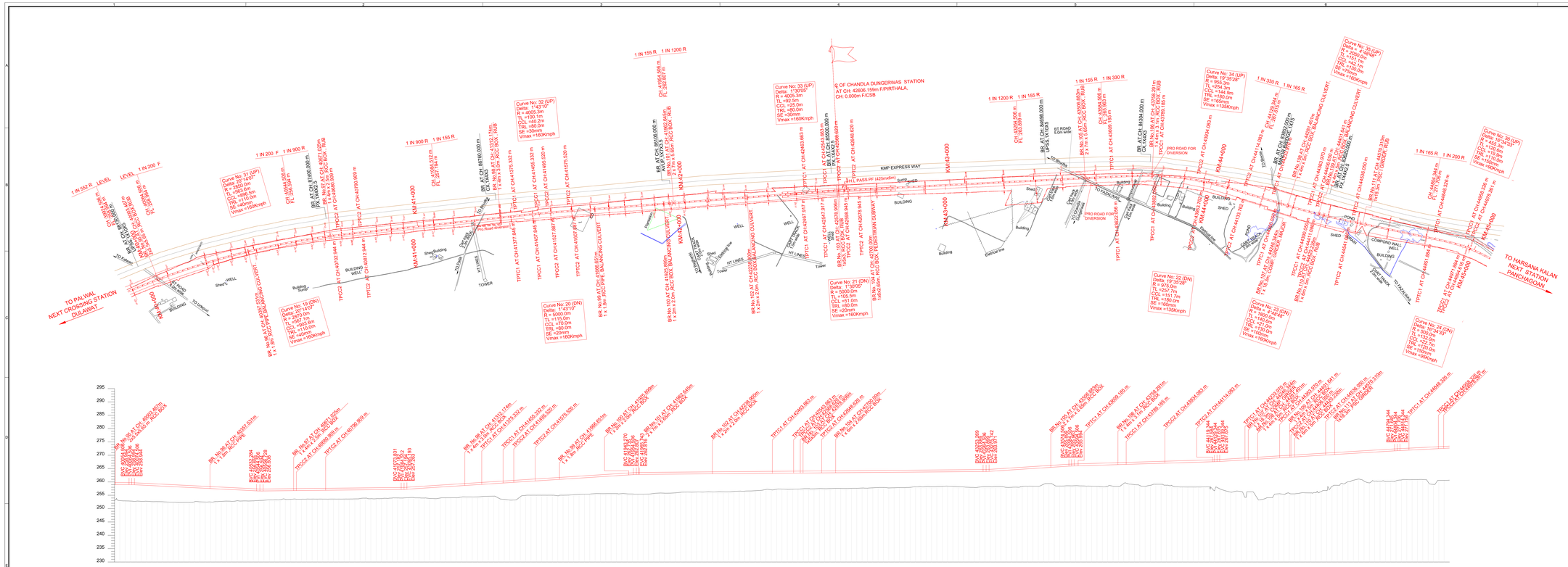
PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

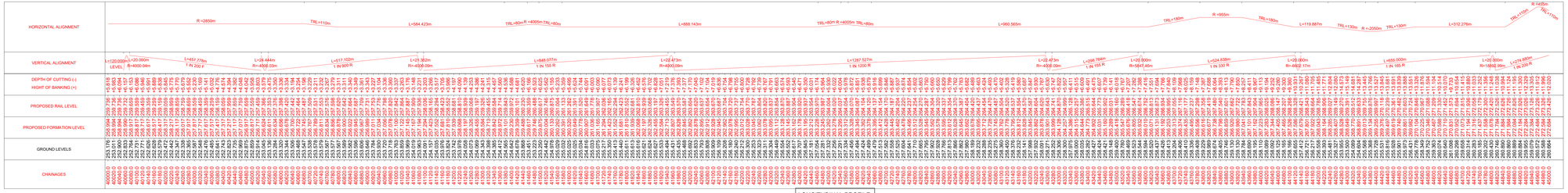
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (35.0 KM TO 40.0 KM)

GC DRG.NO.	GC-HRIDC-ALL-DRW-ALN-P&P-35-40KM_A1
ISSUE DI: 11.11.2022	REVISED DI: 24.12.2022
CONSULTANTS : aarvee associates architects engineers & consultants pvt ltd. Ravuna Residency, Srinagar Colony Main Rd., Hyderabad-82, India Tel: 91-40-23737630, Fax: 91-40-23736277 e-mail: railways@aarvee.net; web:www.aarvee.net	AARVEE ASSOCIATES DRAWN: TANMAY (AM CAD) CHECKED: G.PRASAD (M) APPROVED: N. J. RAO (VP)
DRG.NO.AA/2245/AL/DR/P&P/R3	SHEET No. 7 OF 24
SCALE : H = 1:5000 V = 1:500	ISSUED DI: 26.11.2019 REV DI: 06-08-2022





LONGITUDINAL PROFILE
HORIZONTAL SCALE: VERTICAL 1:500

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
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NOTE:-

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R. R. KUMAR GM IP&P	
UMA. M. RAO DGM/CIVIL	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (40.0 KM TO 45.0 KM)

GC DRG.NO. : GC-HRIDC-ALL-DRW-ALN-P&P-40-45KM_A1

ISSUE DI: 11.11.2022 | REVISED DI: 24.12.2022

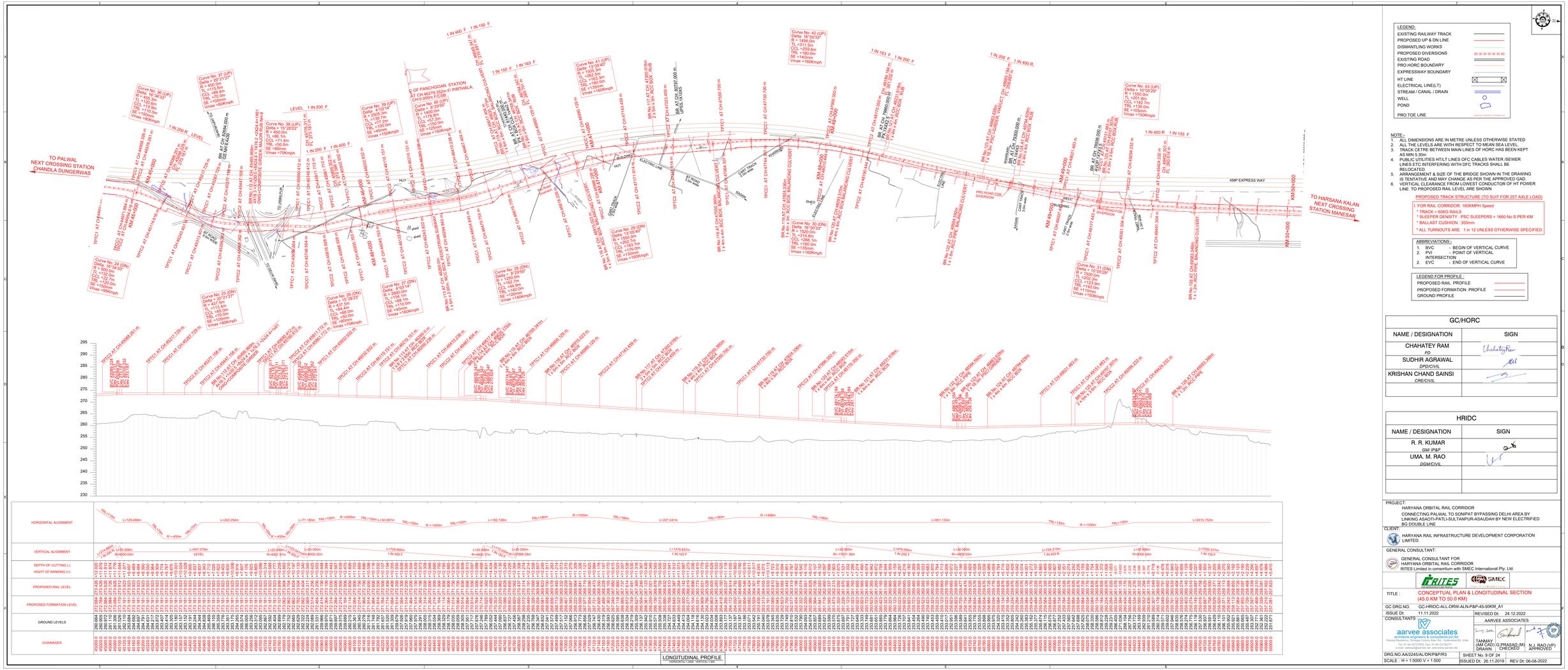
CONSULTANTS : aarvee associates — architects engineers & consultants pvt. ltd. Raviula Residency, Srinagar Colony Main Rd., Hyderabad(A.P.), India. Tel: 91-40-23736253, Fax: 91-40-23736277, e-mail: railways@aarvee.net, web:www.aarvee.net

AARVEE ASSOCIATES

TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO.AA/2245/ALDR/P&P/R3 | SHEET No. 8 OF 24

SCALE : H = 1:5000 V = 1:500 | ISSUED DI: 26.11.2019 | REV DI: 06-08-2022



LEGEND:

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- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
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- STREAM / CANAL / DRAIN
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4. PUBLIC UTILITIES HT/LT LINES OFC CABLES WATER /SEWER LINES ETC INTERFERING WITH DFC TRACKS SHALL BE RELOCATED.
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD
6. VERTICAL CLEARANCE FROM LOWEST CONDUCTOR OF HT POWER LINE TO PROPOSED RAIL LEVEL ARE SHOWN

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD)

I. FOR RAIL CORRIDOR : 160KM/PH Speed
- * TRACK = 60KG RAILS
- * SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
- * BALLAST CUSHION : 350mm
- * ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS:-

1. BVC - BEGIN OF VERTICAL CURVE
2. PVI - POINT OF VERTICAL INTERSECTION
3. EVC - END OF VERTICAL CURVE

LEGEND FOR PROFILE :

- PROPOSED RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram
SUDHIR AGRAWAL DPS/CIVIL	
KRISHAN CHAND SAINSI CRE/CIVIL	

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR GM/ IP&P	
UMA. M. RAO DGM/CIVIL	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES | SMEC

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (45.0 KM TO 50.0 KM)

GC DRG.NO.	HRIDC-ALL-DRW-ALN-P&P-45-50KM_A1
ISSUE DI: 11.11.2022	REVISED Dt: 24.12.2022
CONSULTANTS : aarvee associates architects engineers & consultants pvt ltd. Ravuna Residency, Srinagar Colony Main Rd., Hyderabad-82, India Tel: 91-40-23737630, Fax: 91-40-23736777 e-mail: railways@aarvee.net; web: www.aarvee.net	AARVEE ASSOCIATES TANMAY (AM CAD) DRAWN G.PRASAD (M) CHECKED N.J. RAO (VP) APPROVED
DRG.NO.AA/2245/ALDR/P&P/R3	SHEET No. 9 OF 24
SCALE : H = 1:5000 V = 1:500	ISSUED Dt: 26.11.2019 REV Dt: 06-08-2022

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND
- PRO.TOE LINE

NOTE:-

1. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE STATED
2. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL.
3. TRACK CETRE BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
4. PUBLIC UTILITIES HT/LT LINES OFC CABLES WATER /SEWER LINES ETC INTERFERING WITH DFC TRACKS SHALL BE RELOCATED.
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.
6. VERTICAL CLEARANCE FROM LOWEST CONDUCTOR OF HT POWER LINE TO PROPOSED RAIL LEVEL ARE SHOWN

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I. FOR RAIL CORRIDOR: 160KMPH Speed
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2. EVC - END OF VERTICAL CURVE

LEGEND FOR PROFILE :

- PROPOSED RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	(signature)
SUDHIR AGRAWAL DPD/CIVIL	(signature)
KRISHAN CHAND SAINSI CRE/CIVIL	(signature)

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR GM/ IP&P	(signature)
UMA. M. RAO DGM/CIVIL	(signature)

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (55.0 KM TO 61.5 KM)

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-55-61.5KM_A1

ISSUE Dt: 11.11.2022 | REVISED Dt: 24.12.2022

CONSULTANTS : aarvee associates
architects engineers & consultants pvt.ltd.
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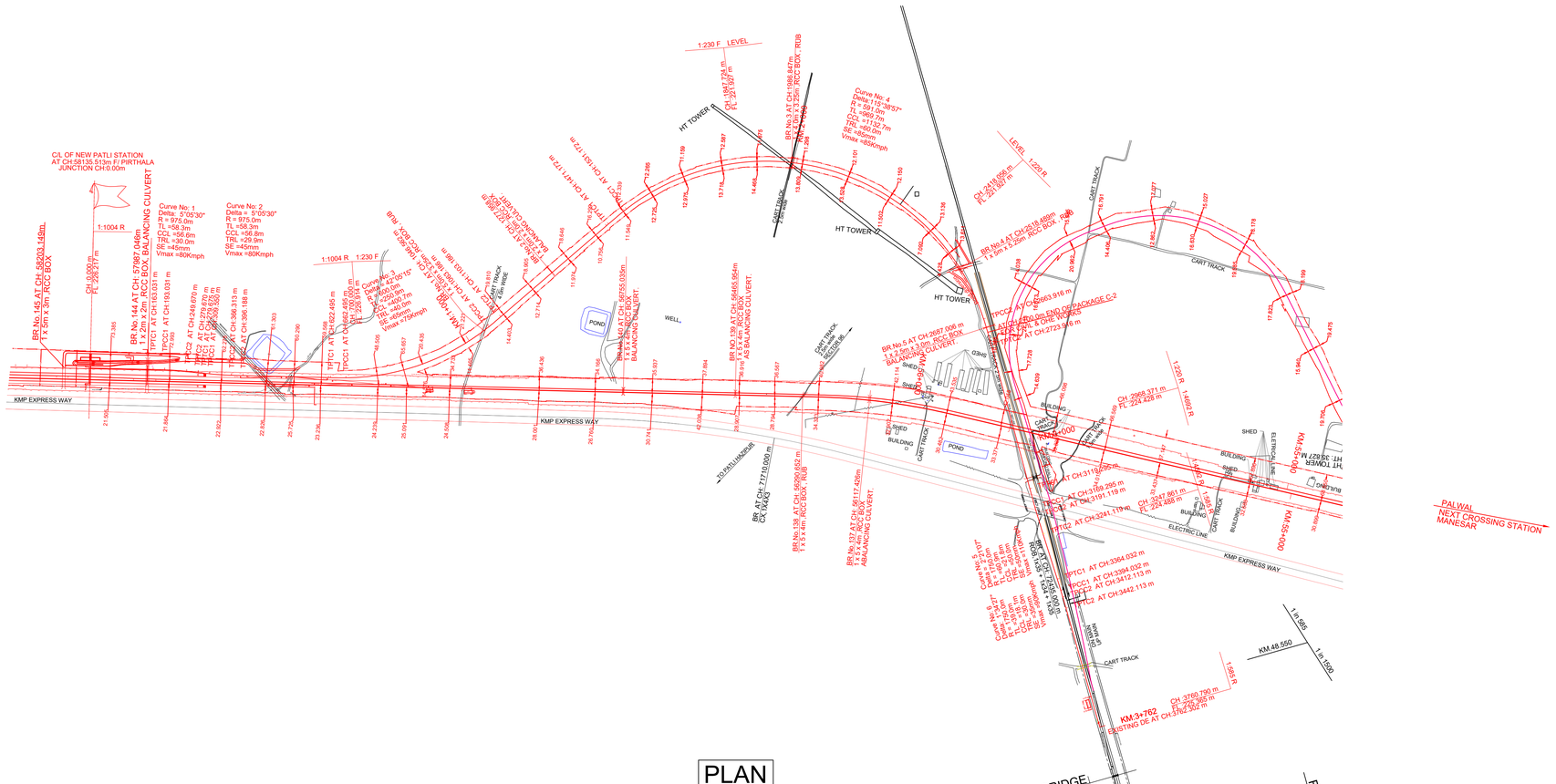
Tel: 91-40-23737633; Fax: 91-40-23736277
e-mail: railways@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES

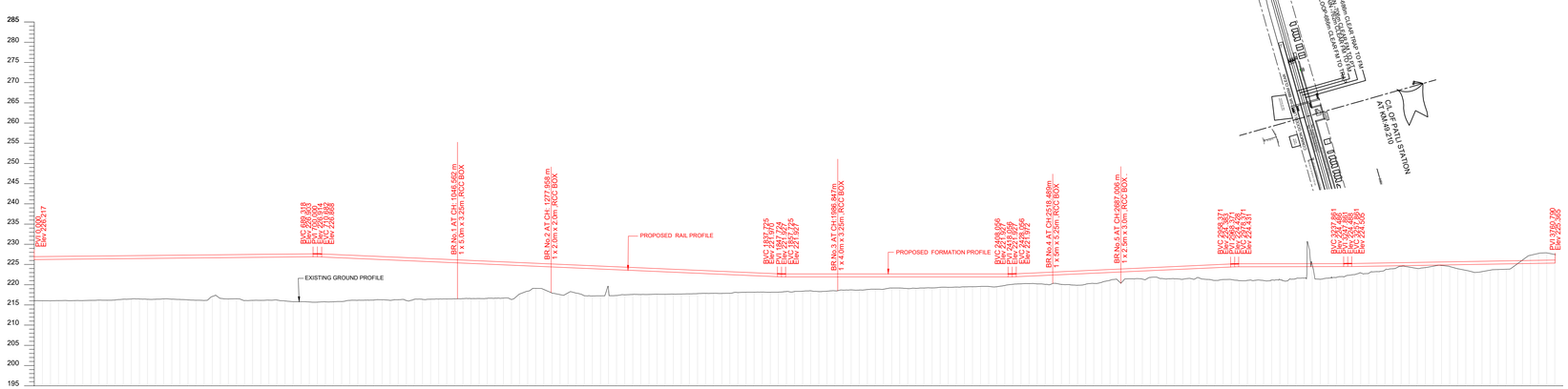
TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

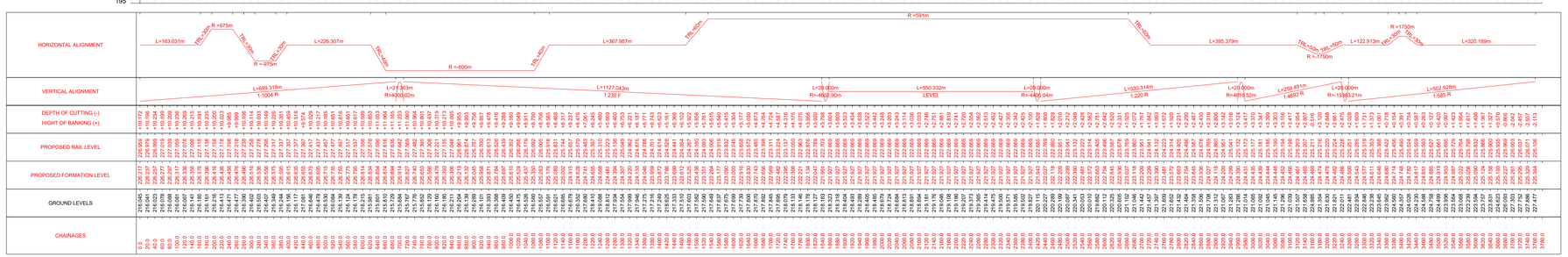
DRG.NO.AA/2245/AL/DR/P&P/55-60/R3 | SHEET No. 1

SCALE : H = 1:5000 V = 1:500 | ISSUED Dt: 26.11.2019 | REV Dt: 06-08-2022



PLAN
1:5000





LONGITUDINAL PROFILE
HORIZONTAL: 1 IN 5000, VERTICAL: 1 IN 500

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- KMP EXPRESSWAY
- KMP EXPRESSWAY BOUNDARY
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

NOTE:-

1. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE STATED
2. CH:0.00 FOR CONNECTIVITY LINE IS RECKONED FROM NEW PATLI STATION
3. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL.
4. TRACK CENTER BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

I. FOR RAIL CORRIDOR: 160KMPH Speed
* TRACK = 60KG RAILS
* SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
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ABBREVIATIONS:-

1. BVC - BEGIN OF VERTICAL CURVE
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GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	
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PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES | SMEC

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION CONNECTIVITY TOWARDS PATLI

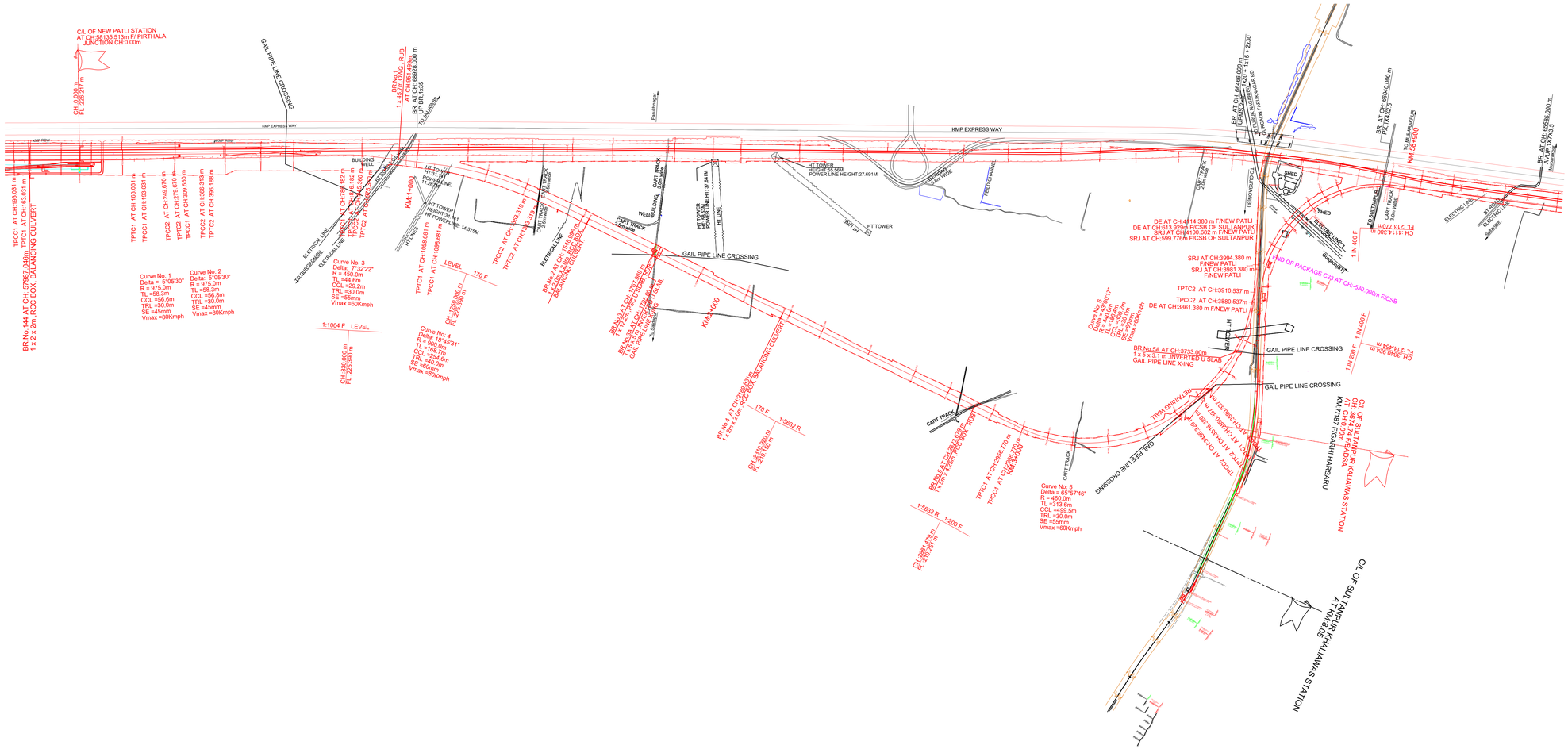
GC DRG.NO.	GC-HRIDC-C2-DRW-ALN-P&P-03001_A2		
ISSUE Dt:	11.11.2022	REVISED Dt:	24.12.2022

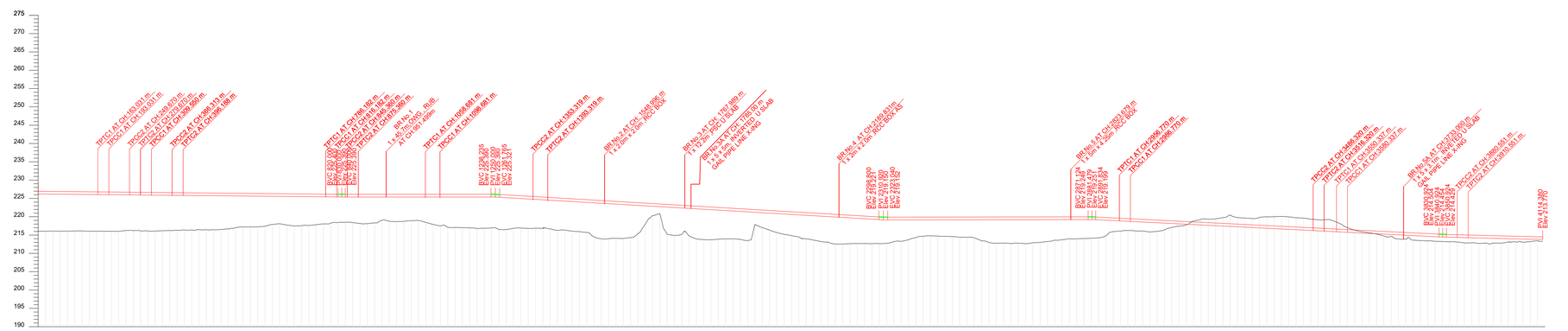
CONSULTANTS :
aarvee associates
architects engineers & consultants pvt.ltd
Randa Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23737633; Fax: 91-40-23736377
e-mail: railways@aarvee.net; web:www.aarvee.net

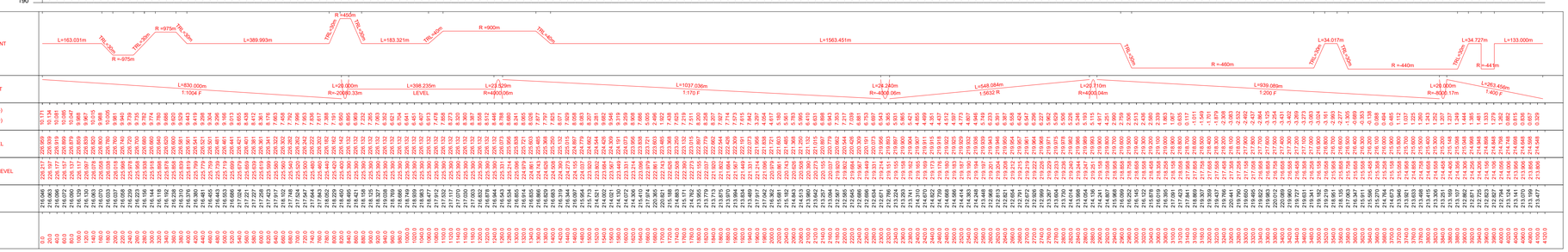
AARVEE ASSOCIATES

TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO.	AA/2245/AL/DR/P&P/REV-2	SHEET No. 1	
SCALE : 1:1000		ISSUED Dt: 26.11.2019	REV Dt: 06-08-2022







LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY — PROW — PROW —
- KMP EXPRESSWAY
- KMP EXPRESSWAY BOUNDARY — PROW — PROW —
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

NOTE:-

1. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE STATED
2. CH:0.00 FOR CONNECTIVITY LINE IS RECKONED FROM NEW PATLI STATION
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PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING AGAOTI-PATLI-SUL TANPUR-KAJAUSAI BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PROVIDER | SMEC

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION CONNECTIVITY TOWARDS SULTANPUR

GC DRG.NO. GC-HRIDC-C2-DRW-ALN-P&P-04001_A2

ISSUE Dt: 11.11.2022 | REVISED Dt: 24.12.2022

CONSULTANTS :
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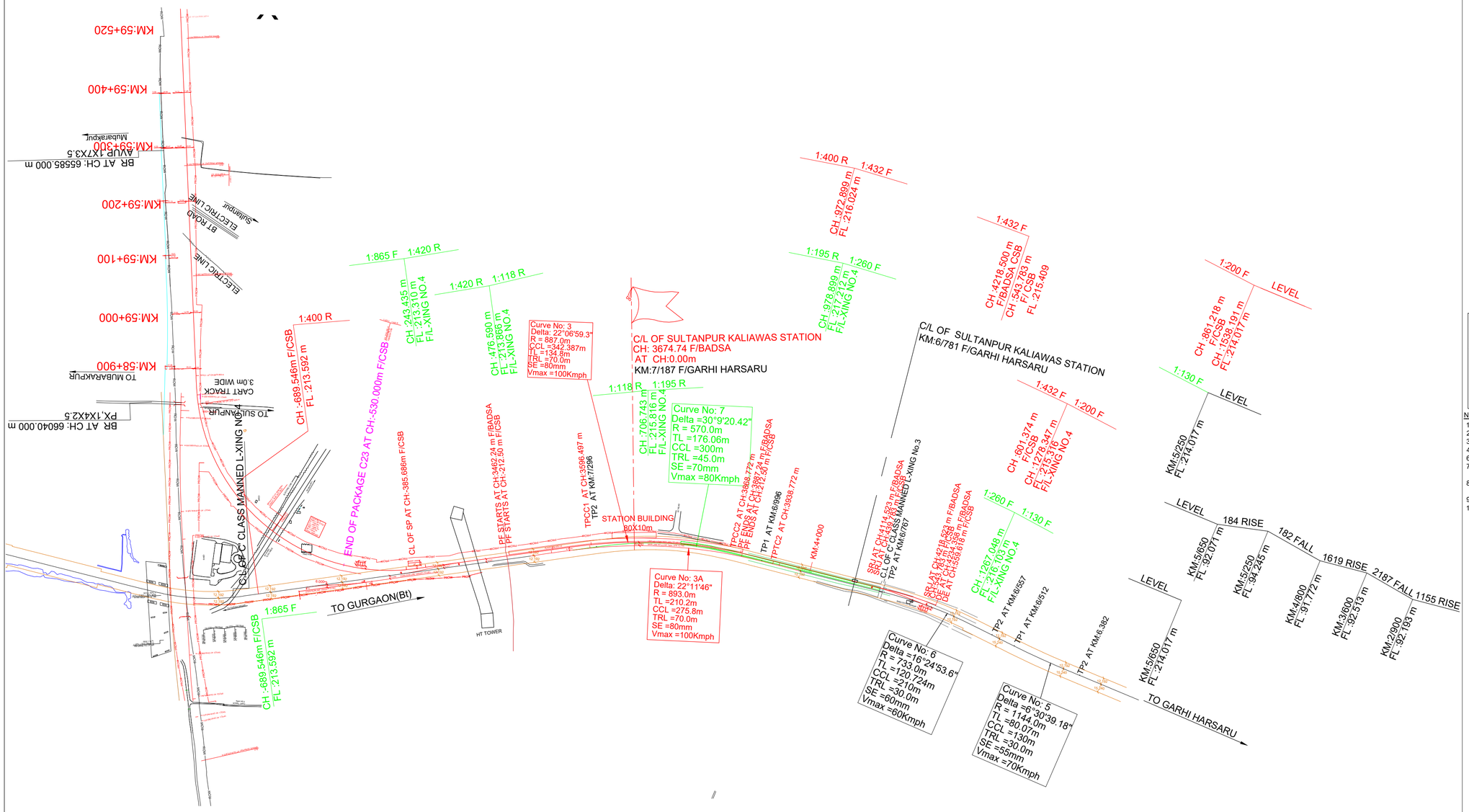
DRG.NO. AA/2245/AL/DR/P&P/REV-2 | SHEET No. 1

SCALE : H= 1:500,V = 1:500 | ISSUED Dt: 26.11.2019 | REV Dt: 06-08-2022



LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
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F/CSB-FROM CENTER LINE OF STN BLDG	RH - RIGHT HANDED
TP1 & TP2 - TANGENT POINT	LH - LEFT HANDED
R - RADIUS	FM - FOULING MARK
CCL - CIRCULAR CURVE LENGTH	SRJ - STOCK RAIL JOINT
TL - TANGENT LENGTH	TS - TRAP SWITCH
TR - TRANSITION LENGTH	DE - DEAD END
SE - SUPERELEVATION	Rr - RESULTANT RADIUS
Δ - DEFLECTION ANGLE	D - DEGREE OF CURVE
CSR - CLEAR STANDING ROOM	RH - RELAY HUT
SSP - SUB SECTIONING & PARALLING POST	

NOTE:

1. ALL DIMENSIONS ARE SHOWN IN METRES.
2. CH:0.00 IS RECKONED FOR C.L OF STATION BUILDING.
3. EXISTING WORK SHOWN IN BLACK.
4. PROPOSED WORK SHOWN IN RED.
6. ISOLATION WILL BE PROVIDED AS PER STD .IIR.
7. STD IIR ELECTRONIC INTERLOCKING WITH MACL SIGNALLING WILL BE PROVIDED.
8. ALL POINTS AND CROSSINGS ARE TO BE PROVIDED WITH FAN SHAPED CURVED SWITCHES ON CONCRETE SLEEPER
9. CHAINAGES ARE RECKONED FROM C.L OF PIRTHALA STATION
10. RULING GRADIENT FOR THIS SECTION IS 1 IN 150 COMPENSATED

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

I. FOR RAIL CORRIDOR: 160KMPH Speed
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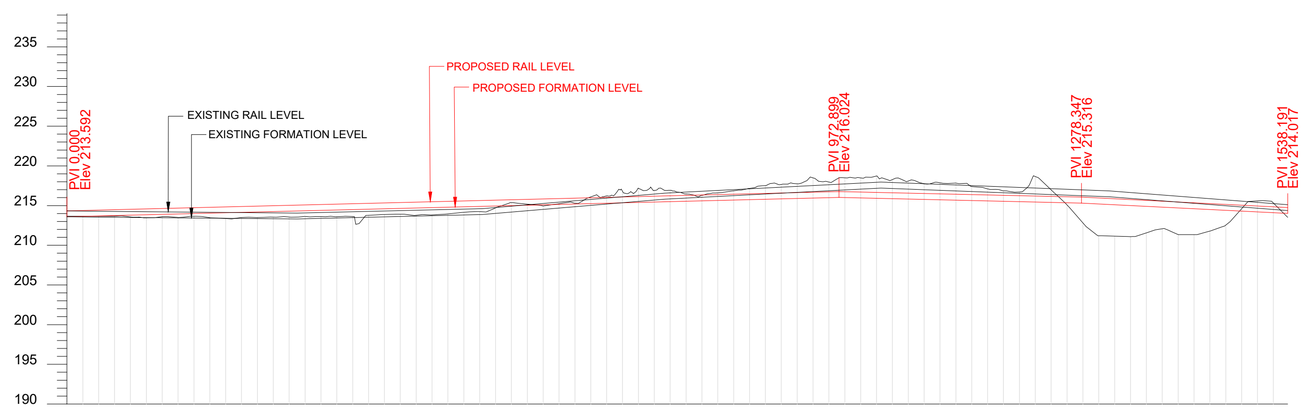

HORIZONTAL ALIGNMENT: TRL=70m, R =893m, TRL=70m

VERTICAL ALIGNMENT: L=972.899m 1:400 R; L=305.448m 1:-432 R; L=259.844m 1:-200 R

CHAINAGES	DIFF. B/W EXIST. RAIL LEVEL & PROP. RAIL LEVEL	PROPOSED RAIL LEVEL	PROPOSED FORMATION LEVEL	EXISITNG RAIL LEVEL	GROUND LEVELS
689.546	0.000	214.334	213.592	214.334	213.661
680.0	+0.073	214.384	213.642	214.311	213.648
660.0	+0.146	214.434	213.692	214.288	213.657
640.0	+0.220	214.484	213.742	214.264	213.667
620.0	+0.293	214.534	213.792	214.241	213.572
600.0	+0.366	214.584	213.842	214.218	213.452
580.0	+0.439	214.634	213.892	214.195	213.611
560.0	+0.512	214.684	213.942	214.172	213.505
540.0	+0.585	214.734	213.992	214.149	213.655
520.0	+0.658	214.784	214.042	214.126	213.478
500.0	+0.731	214.834	214.092	214.103	213.372
480.0	+0.805	214.884	214.142	214.079	213.496
460.0	+0.878	214.934	214.192	214.056	213.497
440.0	+0.892	214.984	214.242	214.092	213.548
420.0	+0.895	215.034	214.292	214.139	213.559
400.0	+0.897	215.084	214.342	214.187	213.624
380.0	+0.899	215.134	214.392	214.235	213.610
360.0	+0.902	215.184	214.442	214.282	213.611
340.0	+0.904	215.234	214.492	214.330	213.626
320.0	+0.906	215.284	214.542	214.378	213.776
300.0	+0.909	215.334	214.592	214.425	213.883
280.0	+0.911	215.384	214.642	214.473	213.921
260.0	+0.914	215.434	214.692	214.520	213.786
240.0	+0.916	215.484	214.742	214.568	213.827
220.0	+0.898	215.534	214.792	214.636	213.959
200.0	+0.778	215.584	214.842	214.806	214.152
180.0	+0.659	215.634	214.892	214.975	214.236
160.0	+0.539	215.684	214.942	215.145	214.718
140.0	+0.420	215.734	214.992	215.314	215.382
120.0	+0.300	215.784	215.042	215.484	215.178
100.0	+0.181	215.834	215.092	215.653	214.951
80.0	+0.061	215.884	215.142	215.823	215.237
60.0	-0.085	215.934	215.192	215.992	215.302
40.0	-0.178	215.984	215.242	216.095	216.095
20.0	-0.297	216.034	215.292	216.162	216.216
0.00	-0.417	216.084	215.342	216.501	216.794
40.0	-0.492	216.134	215.392	216.626	217.174
60.0	-0.597	216.184	215.442	216.728	216.909
80.0	-0.650	216.234	215.492	216.831	216.918
100.0	-0.702	216.284	215.542	216.934	216.458
120.0	-0.755	216.334	215.592	217.036	216.300
140.0	-0.807	216.384	215.642	217.139	216.612
160.0	-0.860	216.434	215.692	217.241	216.855
180.0	-0.912	216.484	215.742	217.344	217.167
200.0	-0.965	216.534	215.792	217.446	217.521
220.0	-1.018	216.584	215.842	217.549	217.669
240.0	-1.070	216.634	215.892	217.652	217.755
260.0	-1.123	216.684	215.942	217.754	218.497
280.0	-1.199	216.734	215.992	217.857	217.966
300.0	-1.169	216.750	216.007	217.949	218.497
320.0	-1.139	216.703	215.961	217.872	218.493
340.0	-1.109	216.657	215.914	217.796	218.726
360.0	-1.078	216.610	215.868	217.719	218.274
380.0	-1.047	216.564	215.822	217.642	218.094
400.0	-1.017	216.518	215.775	217.565	217.750
420.0	-0.986	216.471	215.729	217.488	217.871
440.0	-0.955	216.425	215.683	217.411	217.829
460.0	-0.925	216.379	215.636	217.334	217.407
480.0	-0.894	216.332	215.590	217.257	217.114
500.0	-0.863	216.286	215.544	217.180	216.861
520.0	-0.833	216.240	215.497	217.103	216.709
540.0	-0.802	216.193	215.451	217.026	218.659
560.0	-0.771	216.147	215.405	216.949	216.979
580.0	-0.696	216.101	215.358	216.872	215.086
600.0	-0.642	216.050	215.307	216.746	212.818
620.0	-0.588	215.950	215.207	216.592	211.204
640.0	-0.534	215.850	215.107	216.438	211.150
660.0	-0.480	215.750	215.007	216.284	211.076
680.0	-0.426	215.650	214.907	216.130	211.569
700.0	-0.373	215.550	214.807	215.976	212.076
720.0	-0.319	215.450	214.707	215.823	211.348
740.0	-0.265	215.350	214.607	215.669	211.344
760.0	-0.211	215.250	214.507	215.515	211.793
780.0	-0.157	215.150	214.407	215.361	212.541
800.0	-0.102	215.050	214.307	215.207	214.616
820.0	-0.050	214.950	214.207	215.053	215.584
840.0	-0.010	214.850	214.107	214.900	215.320
860.0		214.750	214.017	214.760	213.514

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NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C/WEST	
KRISHAN CHAND SAINSI CRE/CIVIL			

NORTHERN RAILWAY

DRM-DLI	
ADRM-INFRA-DLI	
SRDEN-CO-DLI	
SRDOM- DLI	
SRDSTE-DLI	
SRDEE-TRD-DLI	
SRDEN-5-DLI	
ADEN-DEE	
SSE-PWAY-GGN	
SSE-W-GGN	

NR.DIVL FILE NO.	
NR.DIVL PLAN NO.	
NRHQ CASE NO.	
NRHQ PLAN NO.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE :
RE-GRADING OF GARHI HARSARU-FARUKHNAGAR MAIN LINE OF SULTANPUR STATION YARD (CONCEPTUAL)

GC DRG.NO. GC-HRID-C23-DRW-ALN-P&P-06001-A0
ISSUE DI: 11.11.2022 REVISED DI: 24.12.2022

CONSULTANTS : aarvee associates
architects engineers & consultants pvt.ltd.
Ravuta Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23737633; Fax: 91-40-23735277
e-mail: railways@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES

MANISHA (AM CAD) DRAWN | G.PRASAD (M) CHECKED | N.J. RAO (VP) APPROVED

DRG.NO. AA/RLY/2245/HRIDC/ESP-07/REV-3 | SHEET No. 1
SCALE : 1:1000 | ISSUED DI: 26.11.2019 | REV DI: 18-07-2022

2. ESP/Yard Plan

F/CSB-FROM CENTER LINE OF STN BLDG	RH - RIGHT HANDED
TP1 & TP2 - TANGENT POINT	LH - LEFT HANDED
R - RADIUS	FM - FOULING MARK
CCL - CIRCULAR CURVE LENGTH	SRJ - STOCK RAIL JOINT
TL - TANGENT LENGTH	TS - TRAP SWITCH
TR - TRANSITION LENGTH	DE - DEAD END
SE - SUPERELEVATION	Rr - RESULTANT RADIUS
Δ - DEFLECTION ANGLE	D - DEGREE OF CURVE
CSR - CLEAR STANDING ROOM	RH - RELAY HUT
SSP - SUB SECTIONING & PARALLING POST	

NOTE:

1. ALL CHAINAGES ARE TAKEN FROM C.L OF STATION BUILDING AS 0.00 M .
2. ALL CHAINAGES AND LEVELS ARE IN METRES.
3. ALL MAIN LINE PTS & CROSSINGS ARE TO BE LAID WITH 60 Kg WITH 1 IN 12 THICK WEB SWITCH WITH WELDABLE CMS CROSSING.
4. TRACK STRUCTURE OF ALL NEW / REPLACEMENT OF LINES SHALL BE OF 60 KG RAILS ON 60 KG PSC SLEEPERS AND WITH SLEEPER DENSITY FOR MAIN LINE 1660 Nos/Km.BALLAST CUSHION 350 MM & FOR LOOP LINE 1540 Nos/Km.BALLAST CUSHION 250 MM.
5. PROVISION HAS BEEN MADE FOR EI/SSI WITH STD. - IIIR DISTRIBUTED INTERLOCKING AND MACL SIGNALING SYSTEM.
6. MINIMUM PASSENGER AMENITIES ARE TO BE PROVIDED WHEREVER REQUIRED AS PER RLY.BOARD. NORMS.(AS PER RLY. BOARD'S LT. NO: RB/L&A/005/2012. DTD:11/09/2012).

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

I. FOR RAIL CORRIDOR: 160KMPH Speed
* TRACK = 60KG RAILS
* SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
* BALLAST CUSHION : 350mm
* ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

CSR DETAILS FOR NEW PATLI YARD

LINE NO	LINE NOTATION	START (F/CSB)		END (F/CSB)		TOTAL LENGTH OF CSR (m)
LINE NO-1	LOOP LINE	FM	428.800	SRJ	419.703	826.2610
LINE NO-2	LOOP LINE	SRJ	389.524	FM	448.907	826.2610
LINE NO-3	DN MAIN LINE	FM	580.842	FM	550.873	1119.522
LINE NO-4	UP MAIN LINE	FM	478.889	FM	512.716	991.605
LINE NO-5	LOOP LINE	SRJ	461.864	SRJ	495.669	957.533

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
KRISHAN CHAND SAINSI CRE/CIVIL		AM/S&T	
AMARNATH SINGH CRE/S&T		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

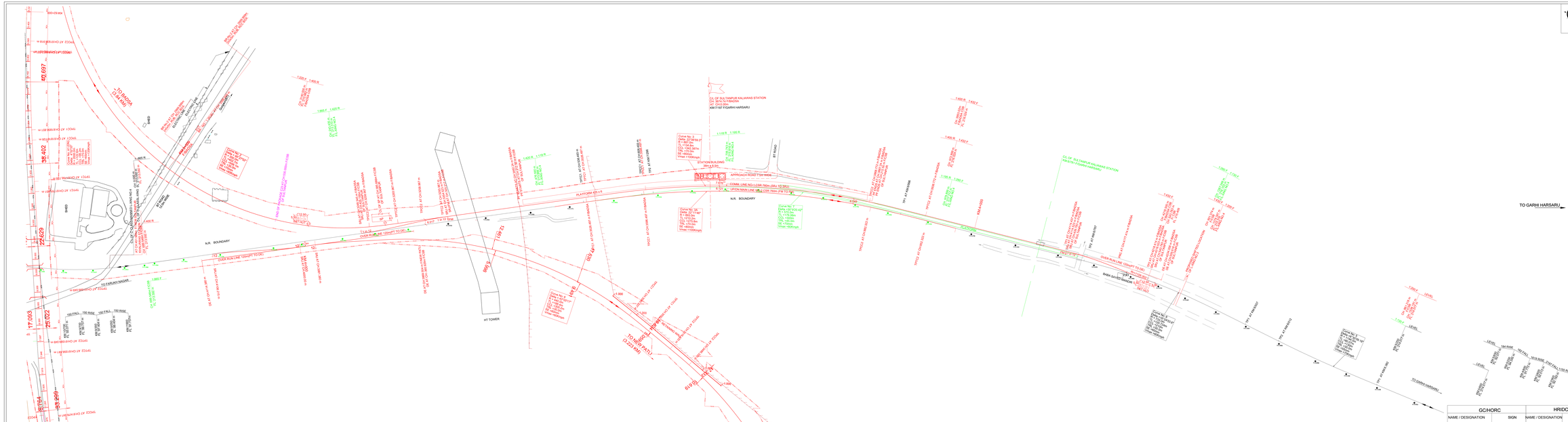
TITLE : CONCEPTUAL ENGINEERING SCALE PLAN OF NEW PATLI JUNCTION CH:58135.513m F/PRITHALA

GC DRG.NO. GC-HRIDC-C23-DRW-STN-ESP-NPA01_A2
ISSUED Dt: 11.11.2022 REV Dt: 26.12.2022

CONSULTANTS : aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23737633; Fax: 91-40-23736277
e-mail: railways@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES
MANISHA (AM CAD) DRAWN | G.PRASAD (M) CHECKED | N.J. RAO (VP) APPROVED

DRG.NO. AA/RLY/2245/HRIDC/ESP-06/REV-3 | SHEET No. 1
SCALE : 1:1000 | ISSUED Dt: 26.11.2019 | REV Dt: 28-07-2022



CSR DETAILS FOR SULTANPUR KALUWAS YARD							
LINE NO	LINE NOTATION	START (FORTHALA, FM, FG,RM, EG,OM)		END (FORTHALA, FM, FG,RM, EG,OM)		TOTAL LENGTH OF CSR (m)
LINE NO-1	LOOP LINE	SRJ	320.217	SRJ	419.703	828.261
LINE NO-2	MAIN LINE	FM	320.217	FM	419.783	828.263

LEGEND:
- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

TP1 & TP2 - TANGENT POINT
R - RADIUS
CCL - CIRCULAR CURVE LENGTH
TL - TANGENT LENGTH
TT - TRANSITION LENGTH
SE - SUPERELEVATION
Δ - DEFLECTION ANGLE
CSR - CLEAR STANDING ROOM
SSP - SUB SECTIONING & PARALLING POST

RH - RIGHT HANDED
LH - LEFT HANDED
FM - FOULING MARK
SRJ - STOCK RAIL JOINT
FM - FOULING MARK
DE - DEAD END
RR - RESULTANT RADIUS
D - DEGREE OF CURVE
RH - RELAY HUT

NOTES:
1. ALL DIMENSIONS ARE SHOWN IN METRES.
2. CH 0.00 IS REQUIRED FOR C.L OF STATION BUILDING.
3. EXISTING WORK SHOWN IN BLACK.
4. PROPOSED WORK SHOWN IN RED.
5. ISOLATION WILL BE PROVIDED AS PER STD. IR.
6. STD IR ELECTRONIC INTERLOCKING WITH MACL SIGNALLING WILL BE PROVIDED.
7. ALL POINTS AND CROSSINGS ARE TO BE PROVIDED WITH FAN SHAPED PRESTRESSED CONCRETE SLEEPERS.
8. RULING GRADIENT FOR THIS SECTION IS 1 IN 150 COMPENSATED
9. ADMINISTRATIVE APPROVAL FOR SHIFTING OF LC No.3 FROM STATE GOVT. TO RAILWAY HAS BEEN ACCORDED VIDE LETTER NO.
10. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

FOR RAIL CORRIDOR 100KMPH Speed
- TRACK = 60KG RAILS
- SLEEPER DENSITY - PSC SLEEPERS = 1660 No.S PER KM
- BALLAST CUSHION - 350mm
- ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

NORTHERN RAILWAY	
DRM-DLI	
ADRM-INFRA-DLI	
SRDEN-CO-DLI	
SRDOM- DLI	
SRDSTE-DLI	
SRDEE-TRD-DLI	
SRDEN-S-DLI	
ADEN-DEE	
SSE-PWAY-GGN	
SSE-W-GGN	
NR.DVL FILE NO.	
NR.DVL PLAN NO.	
NRHQ CASE NO.	
NRHQ PLAN NO.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT (EXPANDING DELHI AREA BY LINKING NAKATPUR-LALITA KALI-TIKRI KHASAN ETC IN PHASE-II) (DELHI-NCR)

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES LIMITED (JV WITH IDR CREC International Pte. Ltd.)

GC/HORC		HRIDC		
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN	
CHAHATEY RAM PD		R.R KUMAR GM IR&P/HRIDC		
SUDHIR AGRAWAL DPO/CIVIL		UMA M.RAO DGM/CC/WEST		
KRISHAN CHAND SAINSI CRE/CIVIL		AM/S&T		
AMARNATH SINGH CRE/S&T		DGM/Elect.		

RITES | AECOM | SMLC

GC ORG.NO. : GC-HORC-CO-GRP-R-RHDP-SUCC_A2

TITLE : CONCEPTUAL ENGINEERING SCALE PLAN
SULTANPUR KALUWAS JUNCTION
CH:3674.74m F/BADSA KM:6/375

CONSULTANTS : aarvee associates
aarvee associates
architects engineers & consultants pvt ltd.
"Aarvee Associates", Architects Engineers & Consultants
Tel: 91-(011)41102272-74, Fax: 91-(011)41102273
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DRN:	CHECKED:	CHECKED:	R.J. RAO (MP)
	S.K.PRASAD (MP)		APPROVED:
	M.K.SAXENA	CHECKED:	

DRG.NO. AARV/ 1123/HORC/RDC/ESP/REV-0 SHEET No. 1/1

SCALE : 1:1000 ISSUED On : 26.11.2018 REV On : 29.08.2022

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R. KUMAR GM/IP&P / HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-S	
KRISHAN CHAND SAINSI CRE/CIVIL		AM/S&T	
AMARNATH SINGH CRE/S&T		DGM/Elect.	

NORTHERN RAILWAY

DELHI DIVISION

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

SIGN

RITES THE INFRASTRUCTURE PEOPLE

SMEC

TITLE: **CONCEPTUAL ENGINEERING SCALE PLAN DHULAWAT STATION CH: 32767m F/PRITHALA**

GC/HORC DRG. NO:- GC-HRIDC-C23-DRW-STN-ESP-DHU01-A0

ISSUE DATE: 11.11.2022 | REVISED DATE: 26.12.2022

SCALE: 1:1000 1MM:1METRE

SMC DRG. NO:- HRIDC/PS/LP-1

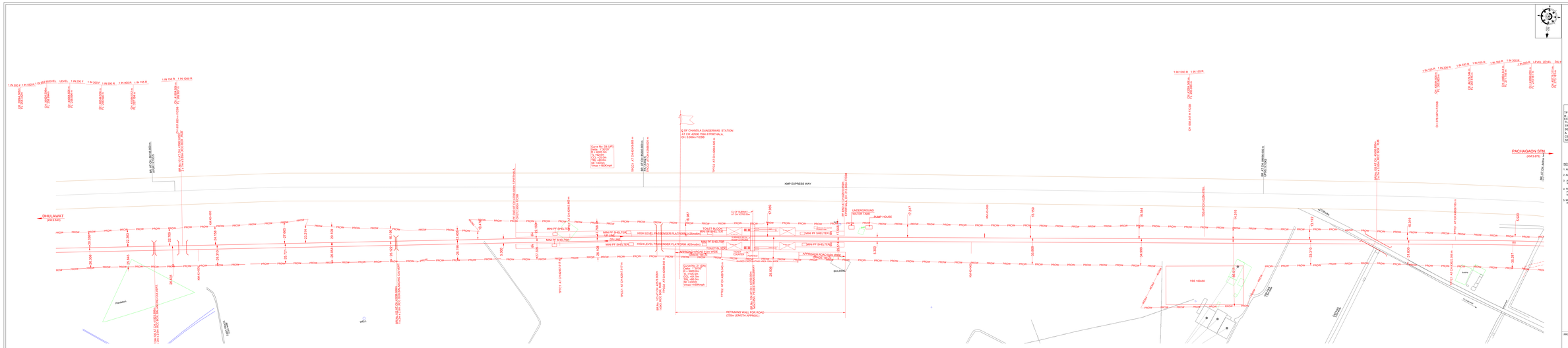
CONSULTANT: S.M. CONSULTANTS
An ISO 9001 Company
Bhubaneswar / Balasore / Secunderabad / South Andaman / New Delhi
Web : www.smcindia.com , E-Mail : support@smcindia.com

S.M. CONSULTANTS BHUBANESWAR

A. A. SAMANT
PROJECT INCHARGE

DRAWN BY:- R.DAS | CHECKED BY:- A. A SAMANT

RELEASED FOR: ☐ PRELIMINARY FOR APPROVAL ☑ TENDER ☐ CONSTRUCTION



LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- RAILWAY BOUNDARY
- EXPRESSWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

TP1 & TP2 - TANGENT POINT	RH - RIGHT HANDED
R - RADIUS	LH - LEFT HANDED
FCL - CIRCULAR CURVE LENGTH	FM - FOULING MARK
TC - TANGENT CURVE	SRJ - STOCK RAIL JOINT
TR - TRANSITION LENGTH	TS - TRAP SWITCH
SE - SUPERELEVATION	DE - DEAD END
Δ - DEFLECTION ANGLE	MR - MINIMUM RADIUS
CSR - CLEAR STANDING ROOM	D - DEGREE OF CURVE
SSP - SUB SECTIONING & PARALLING POST	RH - RELAY HUT

NOTE:

1. ALL CHAINAGES ARE TAKEN FROM C.L OF STATION BUILDING AS 0.00 M
2. ALL CHAINAGES AND LEVELS ARE IN METRES
3. ALL MAIN LINE PTS & CROSSINGS ARE TO BE LAID WITH 60 kg WITH 1 IN 12 THICK WEB SWITCH WITH WELDABLE CWS CROSSING.
4. TRACK STRUCTURE OF ALL NEW / REPLACEMENT OF LINES SHALL BE OF 60 KG RAILS ON 60 KG PSC SLEEPERS AND WITH SLEEPER DENSITY FOR MAIN LINE 1660 No/km BALLAST CUSHION 350 mm. ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.
5. MINIMUM PASSENGER AMENITIES ARE TO BE PROVIDED WHEREVER REQUIRED AS PER RLY BOARD NORMS (AS PER RLY. BOARD'S LT. NO RBS.&A/05/2012 DTD 11/09/2012)

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

1 FOR RAIL CORRIDOR: 160KMPH Speed
* TRACK = 60KG RAILS
* SLEEPER DENSITY = PSC SLEEPERS = 1660 No.S PER KM
* BALLAST CUSHION : 350mm
* ALL TURNOUTS ARE : 1 in 12 UNLESS OTHERWISE SPECIFIED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT (FRANKISH) (NCR AREA BY-LINES)
(SHOOTING FLAG HAPPA KHAMPUR REGION BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
INTEGRATED RAILWAY STATION DEVELOPMENT

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PO		R.R KUMAR GM IRWR/HRDC	
SUDHIR AGRAWAL DPO/CIVIL		UMA M RAO DGM(C)WEST	
KRISHAN CHAND SAINI CRE/CIVIL		AM/S&T	
AMARNATH SINGH CRE/S&T		DGM/Elect.	

Title: CONCEPTUAL ENGINEERING SCALE PLAN
CHANDLA DUNGERWAS STATION YARD
CH: 4200/6.100m F / PRITHALA

GC DRG.NO: GC-HRD-C23-DRW-STN-ESP-CD/JC_A1
ISSUED ON : 11-11-2022
REVISED ON : 28-12-2022

CONSULTANTS:
aarvee associates
ARCHITECTS ENGINEERS & CONSULTANTS
Revisit Partnership: Kothiyal Centre Vidhan Sabha Road - Paldi Ahmedabad - 380006
Tel. 079-26577960 / 26577961 Fax 079-26577962 Web www.aarvee.net
E-Mail: aa@aarvee.net, info@aarvee.net, aa@aarvee.net

PREPARED BY	DRAWN	CHECKED
M.PRASAD (AC)		R.J. RAO (CP) APPROVED

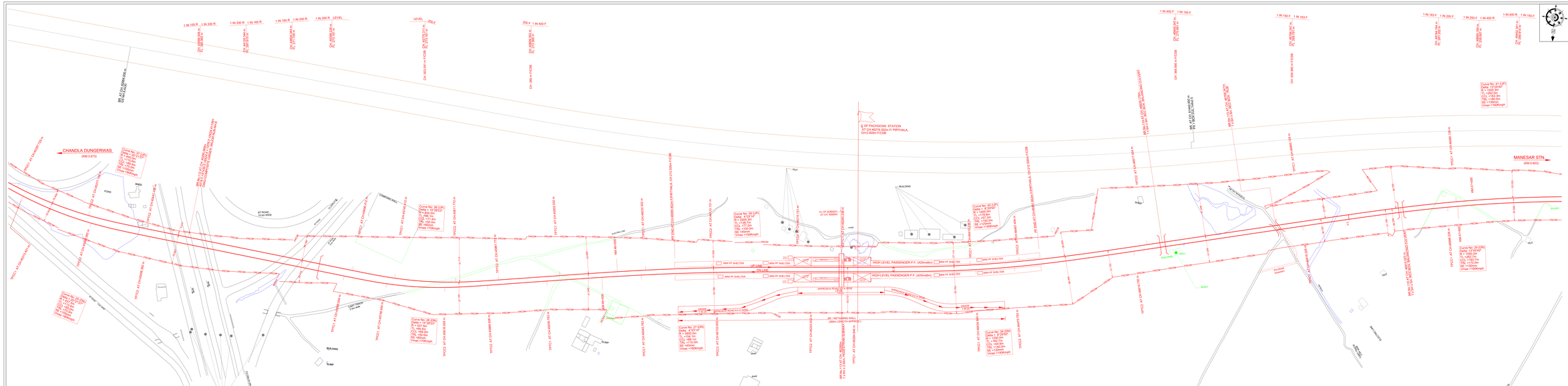
DRG.NO: AARV/C23/HRIDC/ESP-DWRG-4

SHEET No. 1

SCALE : 1:1000

ISSUED ON : 29-11-2019

REV 29 : 28-11-2022



LEGEND:	
EXISTING RAILWAY TRACK	
PROPOSED UP & DN LINE	
DISMANTLING WORKS	
PROPOSED DIVERSIONS	
EXISTING ROAD	
PRO HORC BOUNDARY	
EXPRESSWAY BOUNDARY	
HT LINE	
ELECTRICAL LINE(LT)	
STREAM / CANAL / DRAIN	
WELL	
POND	

TP1 & TP2 - TANGENT POINT	RH - RIGHT HANDED
CCL - CIRCULAR CURVE LENGTH	LH - LEFT HANDED
TL - TANGENT LENGTH	FM - FOULING MARK
TR - TRANSITION LENGTH	SKJ - STOCK RAIL JOINT
SE - SUPERELEVATION	SW - SLEEPER WIDTH
Δ - DEFLECTION ANGLE	DE - DEAD END
CSR - CLEAR STANDING ROOM	R - RESULTANT RADIUS
SSP - SUB SECTIONING & PARALLING POST	D - DEGREE OF CURVE
	RH - RELAY HUT

NOTE:

1. ALL CHAINAGES ARE TAKEN FROM C L OF STATION BUILDING AS 0.00 M.
2. ALL CHAINAGES AND LEVELS ARE IN METRES.
3. ALL MAIN LINE PTS & CROSSINGS ARE TO BE LAID WITH 60 kg WITH 1 IN 12 THICK WEB SWITCH WITH WELDABLE CMS CROSSING.
4. TRACK STRUCTURE OF ALL NEW / REPLACEMENT OF LINES SHALL BE OF 60 KG RAILS ON 60 KG PSC SLEEPERS AND WITH SLEEPER DENSITY FOR MAIN LINE 1660 Nos/km BALLAST CUSHION 350 MM & FOR LOOP LINE 1540 Nos/km BALLAST CUSHION 250 MM.
5. MINIMUM PASSENGER AMENITIES ARE TO BE PROVIDED WHEREVER REQUIRED AS PER RLY BOARD. NORMS (AS PER RLY. BOARD'S LT. NO. RBL&A/655/2012 (TD) 11/08/2012).

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

1. FOR RAIL CORRIDOR: 160KMPH Speed
   * TRACK = 60KG RAILS
   * SLEEPER DENSITY : PRC SLEEPERS = 1660 No.S PER KM.
   * BALLAST CUSHION : 350mm
   * ALL TURNOUTS ARE : 1 in 12 UNLESS OTHERWISE SPECIFIED

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
(PACHGAON - PIRTHALA SECTION INCLUDING AREA BY LINKING
CHAINTYPING AND TRAFFIC/GOODS YARD AT NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMLC International Pvt. Ltd.

RITES | SMLC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R. KUMAR GM IR&P/HRIDC	
SUDHIR AGRAWAL DPO/CIVIL		UMA M RAO DGM(C/WE)ST	
KRISHAN CHAND SAINSI CRE/CIVIL		AM/S&T	
AMARNATH SINGH CRE/S&T		DGM/Elect.	

TITLE: CONCEPTUAL ENGINEERING SCALE PLAN
PACHGAON STATION YARD
CH:46279.352 m F/ PIRTHALA

GC DRG.NO. GC-HRDC-C2S-DRN-ETN-ESP-PO001_A1 | ISSUED DA: 11.11.2022
REVISED DA: 28.12.2022

CONSULTANTS: aarvee associates
architects engineers & consultants pvt ltd.
Regd. Office: Aarvee Associates, Architects Engineers & Consultants (P) Ltd., Tel: 91-40-23370102, Fax: 91-40-23370071
E-mail: hyd@aarvee.net, Website: www.aarvee.net

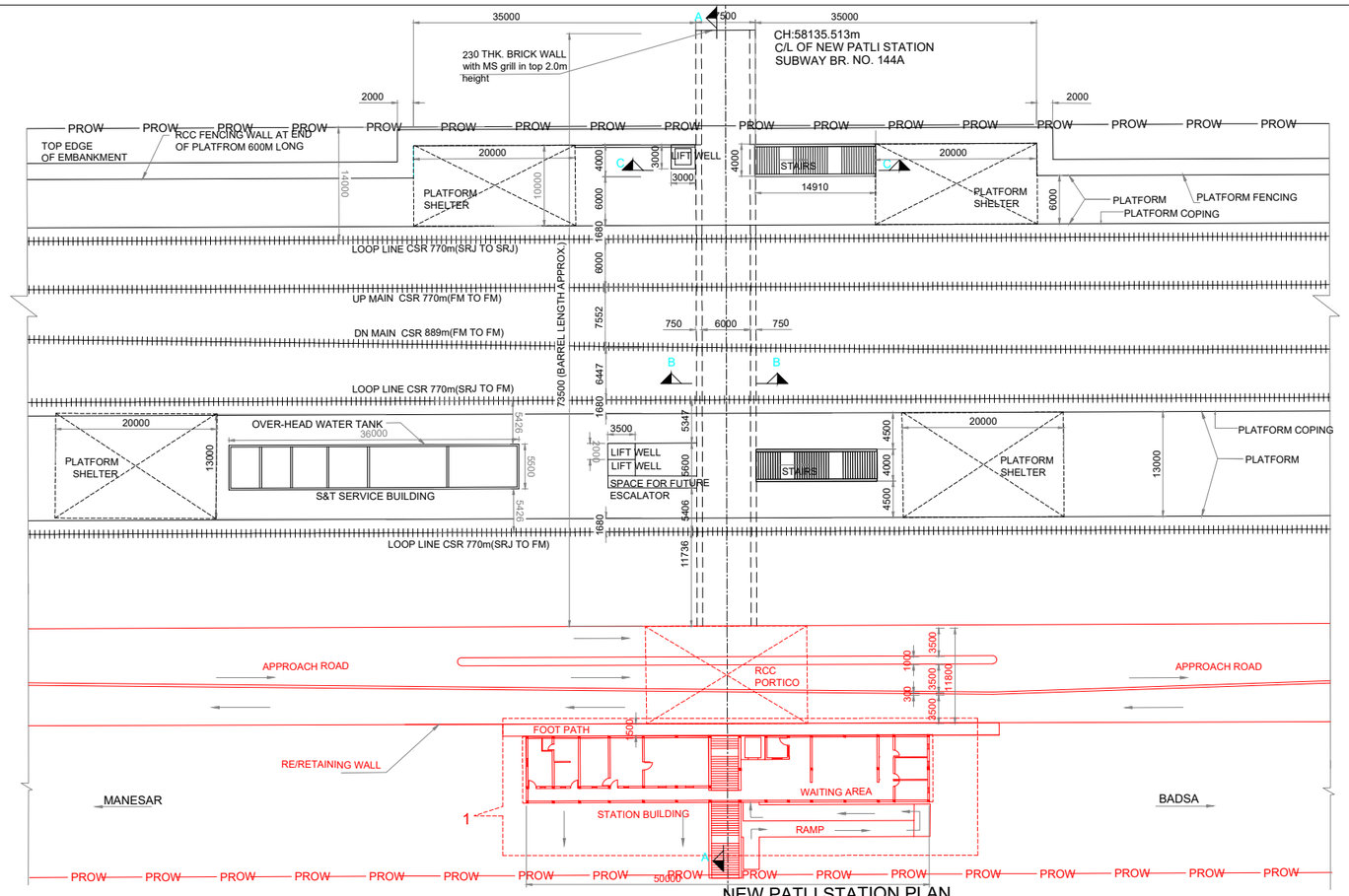
AARVEE ASSOCIATES

DRAWN:	CHECKED:	APPROVED:
M.PRABHU	G.PRABHAKAR	R.J. RAO

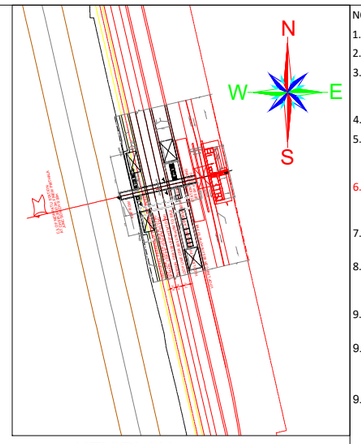
DRG.NO: AARV_Y-CIVIL/HRIDC/ESP-001REV-0 | SHEET No. 1

SCALE: 1:1000 | ISSUED DA: 28.11.2019 | REV DA: 28-11-2022

3. Station Building and Subway



NEW PATLI STATION PLAN
(SCALE 1:350)



KEY PLAN
SCALE 1:NTS

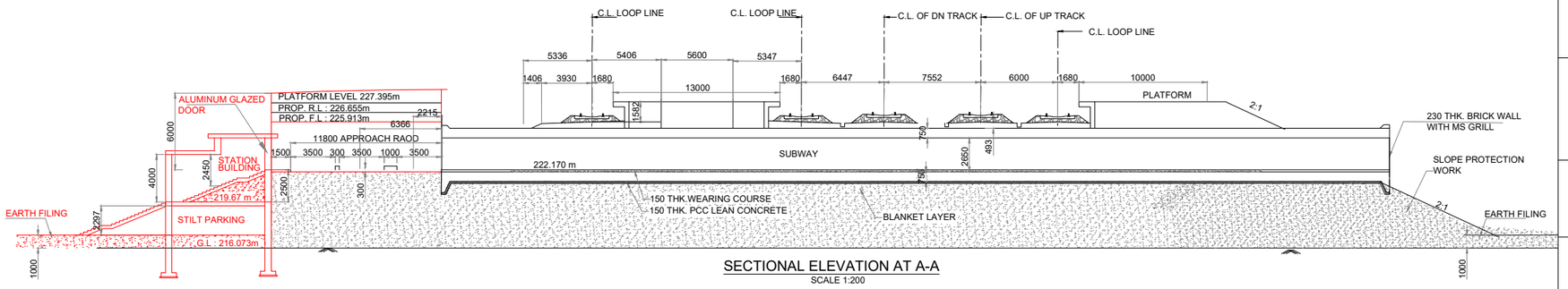
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. STAINLESS STEEL HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE & RAMP.
5. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
6. STATION BUILDING SHALL BE DESIGNED FOR G+5 WITH STILT PARKING FOR FUTURE DEVELOPMENT. IN THE PRESENT CONTRACT, STATION BUILDING AS SHOWN IN DRAWING SHALL BE CONSTRUCTED.
7. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AS PER SKETCH NO.: GC-HRIDC-SK-GEN-020
8. LOCATION AND LAYOUT OF STATION BUILDING SHOWN IN THE DRAWING IS TENTATIVE. STATION BUILDING CAN BE RELOCATED/ LAYOUT REORGANIZED WITHIN THE GIVEN PLINTH AREA.
9. BASE OF SUBWAY & LIFT WELL SHALL BE SUPPORTED AS PER SKETCH NO.: GC-HRIDC-SK-GEN-021
9. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

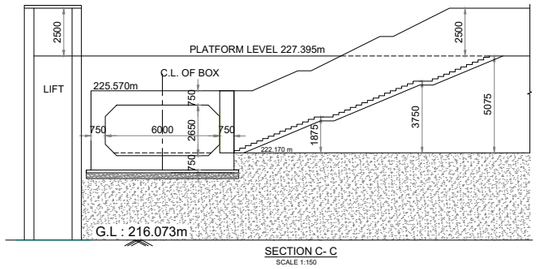
LEGEND

ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'

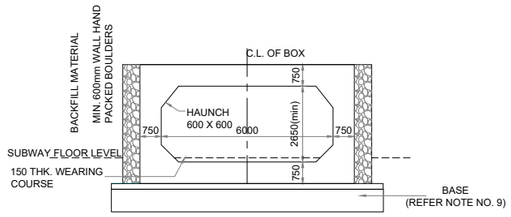
ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'



SECTIONAL ELEVATION AT A-A
SCALE 1:200



SECTION C- C
SCALE 1:150



SECTION B-B
SCALE 1:100

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

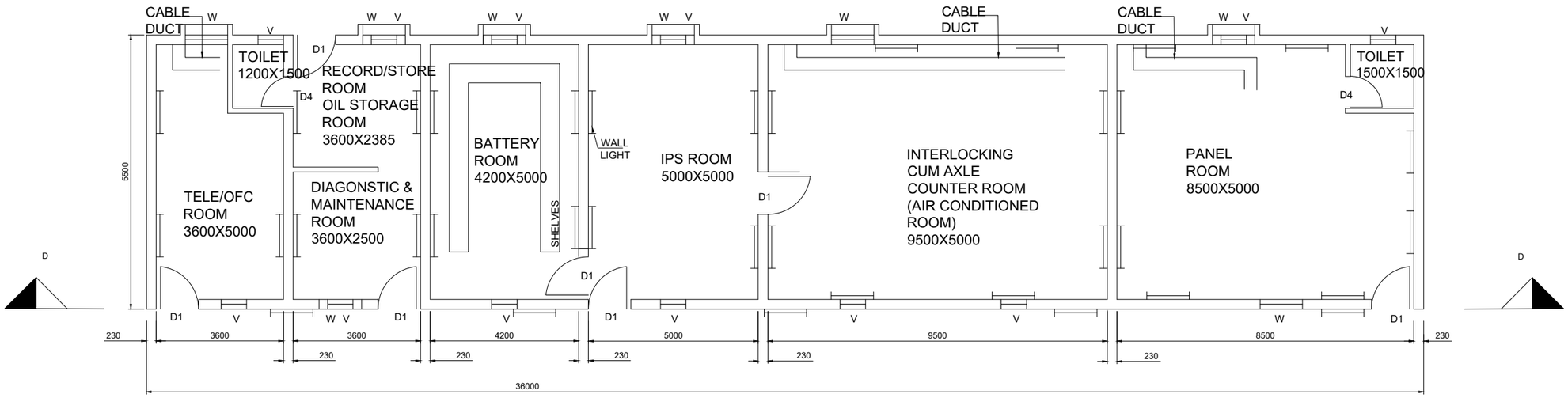
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

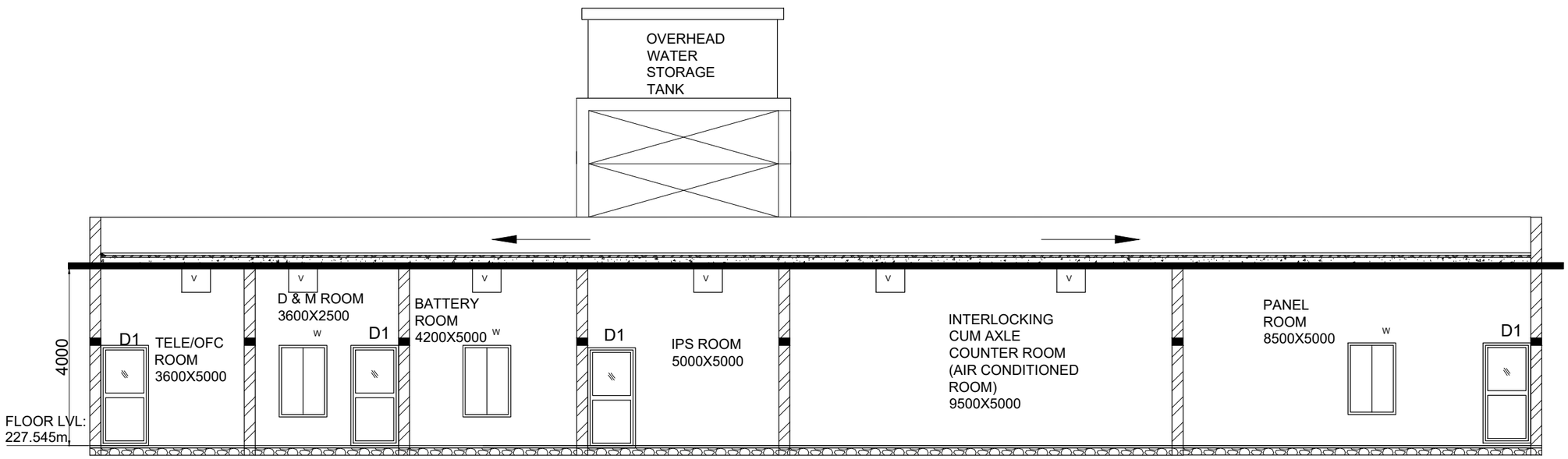
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
NEW PATLI STATION & SUBWAY BR. NO. 144A

DRG. NO. GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1
SHEET NO. 1 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



S&T SERVICE BUILDING PLAN



S&T SERVICE BUILDING ELEVATION

SECTION D-D

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THE FLOOR LEVEL OF PANEL ROOM SHALL BE AT LEAST 300 MM ABOVE PLATFORM LEVEL.
3. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.

SCHEDULE DOOR

D1	1000x2100	FLUSH DOOR WITH MOSQUITO NET
D2	1000x2100	FLUSH DOOR
D3	1000x2100	HALF GLASS SINGLE DOOR WITH DOUBLE LOCKING ARRANGE MENT
D4	750x2100	FLUSH DOOR

SCHEDULE WINDOW

W	1500x1200	GLAZED WITH MOSQUITO NET
V	600X500	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

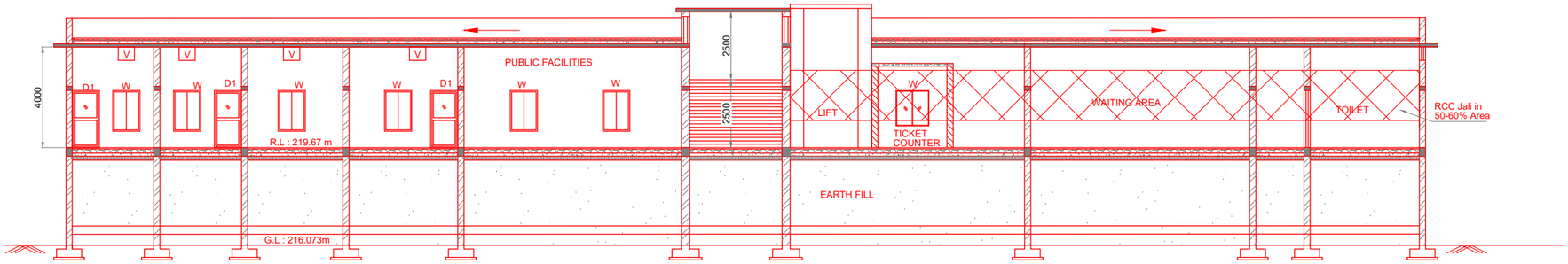
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
NEW PATLI STATION & SUBWAY BR. NO. 144A

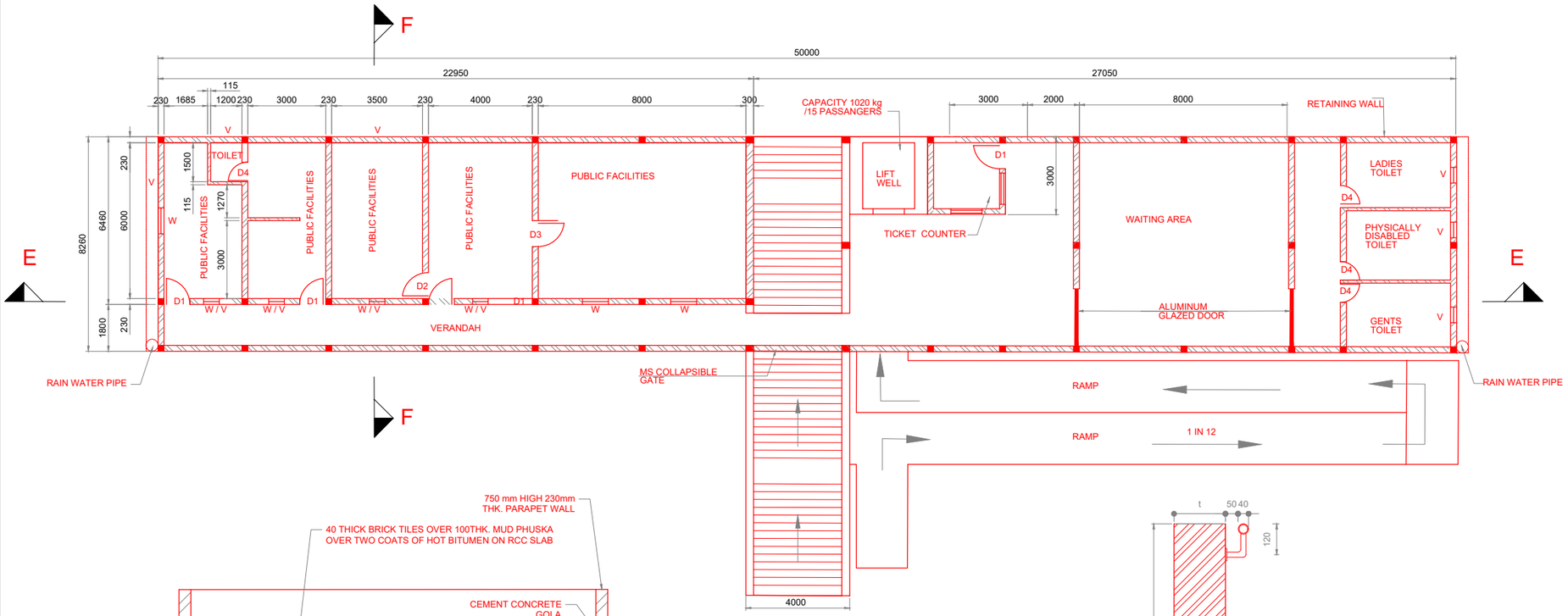
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1	2 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



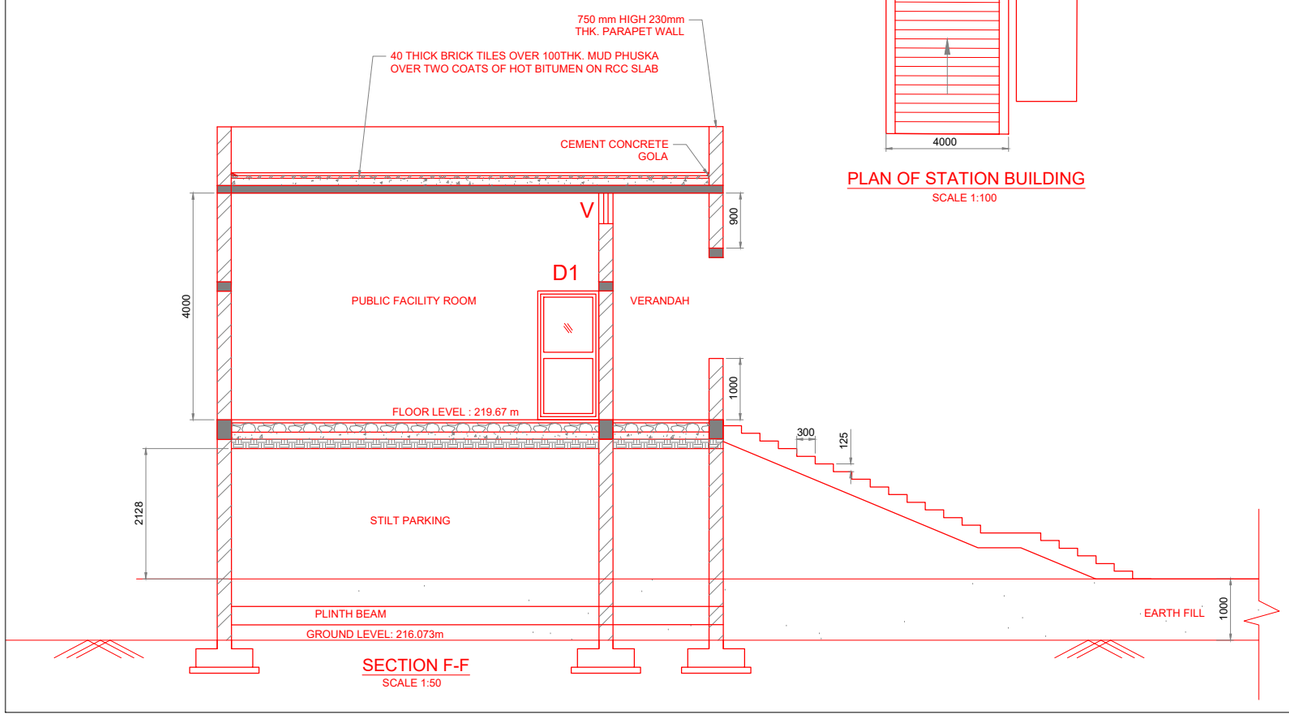
SECTION E-E

SCALE 1:100



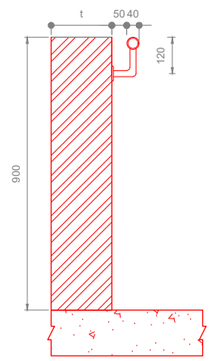
PLAN OF STATION BUILDING

SCALE 1:100



SECTION F-F

SCALE 1:50



FIXING DETAIL OF HANDRAIL TO THE WALL

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
3. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN0-013.
5. STAINLESS STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AS PER SKETCH NO.: GC-HRIDC-SK-GEN-020
7. LOCATION AND LAYOUT OF STATION BUILDING SHOWN IN THE DRAWING IS TENTATIVE. STATION BUILDING CAN BE RELOCATED/ LAYOUT REORGANIZED WITHIN THE GIVEN PLINTH AREA.
8. BASE OF SUBWAY & LIFT WELL SHALL BE PLACED AS PER SKETCH NO.: GC-HRIDC-SK-GEN-021
9. FOR DETAILING OF LADIES AND GENTS TOILETS REFER DRAWING NO. GC-HRIDC-SK-GEN-007.

SCHEDULE DOOR

D1	1000x2100	FLUSH DOOR WITH MOSQUITO NET
D2	1000x2100	FLUSH DOOR
D3	1000x2100	HALF GLASS SINGLE DOOR WITH DOUBLE LOCKING ARRANGE MENT
D4	750x2100	FLUSH DOOR

SCHEDULE WINDOW

W	1500x1200	GLAZED WITH MOSQUITO NET
V	600X500	

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

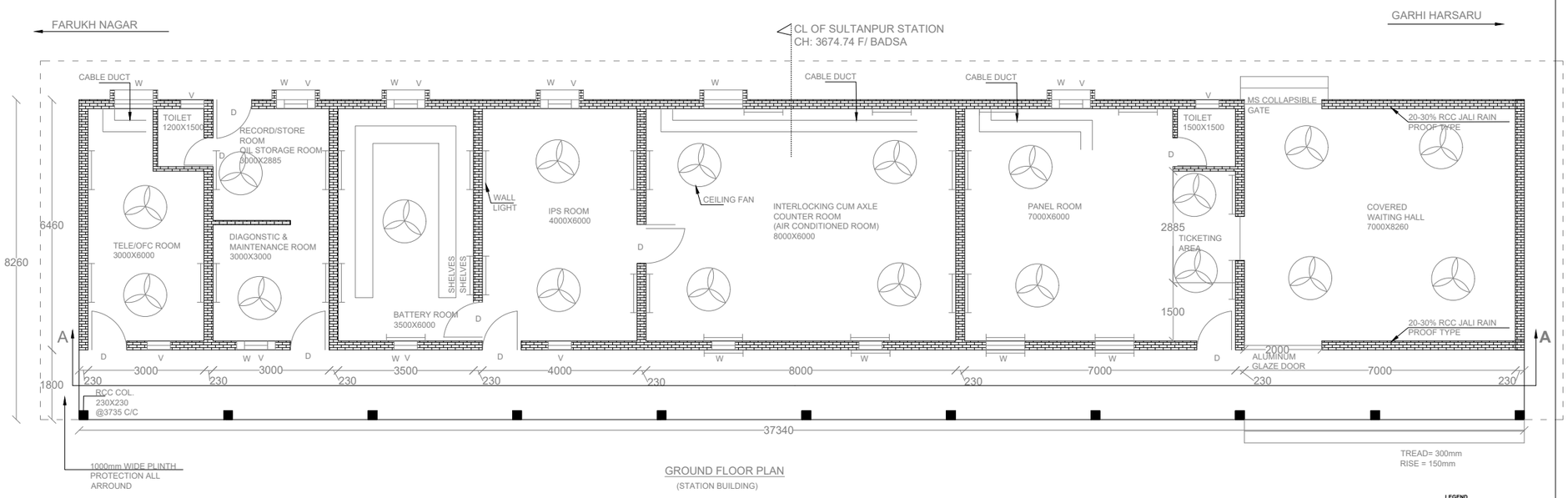
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL	Reetu	DGM/Elect.	

TITLE:-

CONCEPTUAL ARCHITECTURAL DRAWING NEW PATLI STATION & SUBWAY BR. NO. 144A

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1	3 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022

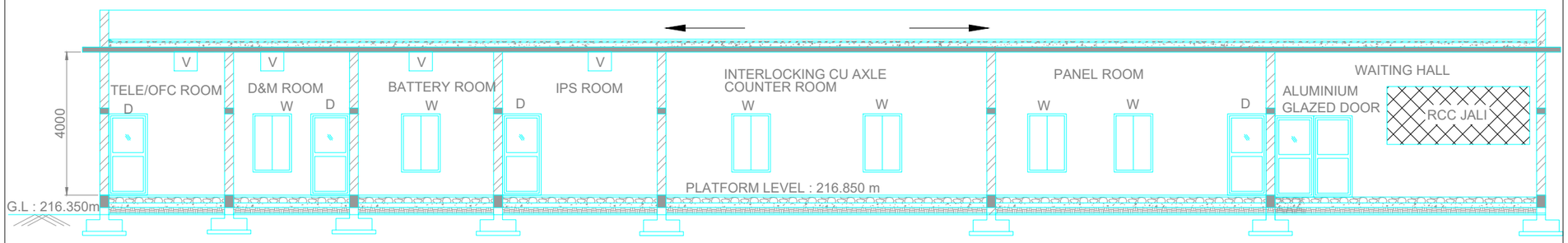


GROUND FLOOR PLAN

(STATION BUILDING)

LEGEND

D- PANELED DOOR
W- WINDOW
V- VENTILATOR



SECTION A-A

TYPE	OPENING SIZE		DESCRIPTION
D	1000	2100	Panelled Door
D1	750	2100	PVC Framed Door
W	1500	1200	Glazed with MS Grill
V	750	600	Glazed Louvered Ventilator
V1	600	500	Glazed Louvered Ventilator

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR OTHER DETAIL REFER NORTHERN RAILWAY DRAWING S & T SERVICE BUILDING DWG.NO N.R.H.Q.E.PLAN NO.HQ/02/02-2021. SH. 1 OF 5 TO 5 OF 5.
3. FLOOR LEVEL OF BUILDING SHALL BE 500mm ABOVE GROUND LEVEL.
4. HEIGHT OF STATION BUILDING SHALL BE MINIMUM 4000mm ABOVE FLOOR LEVEL
5. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

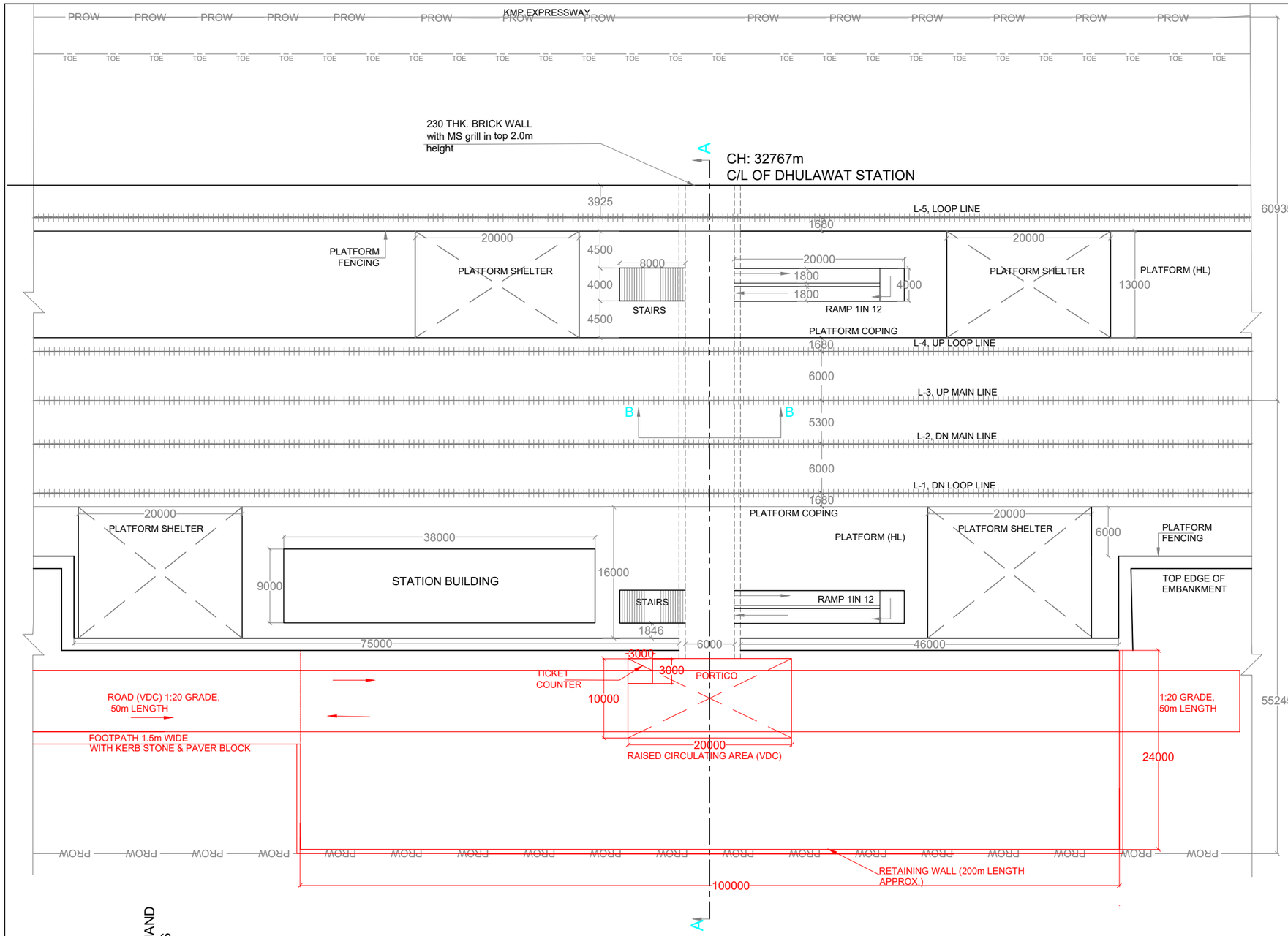
TITLE:-

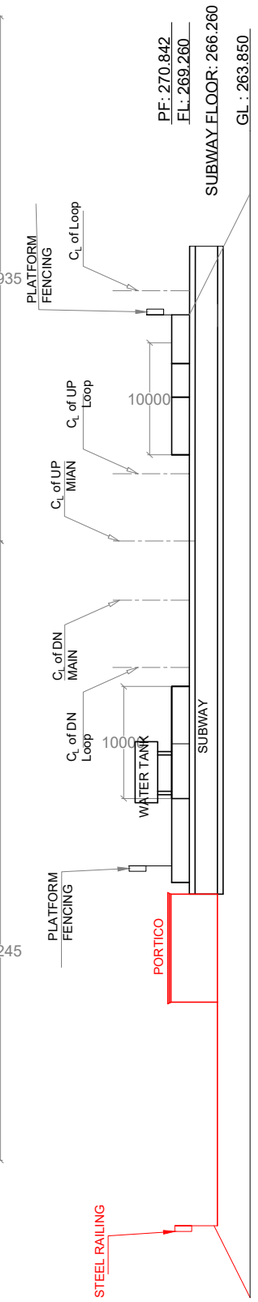
CONCEPTUAL ARCHITECTURAL DRAWING

SULTANPUR STATION BUILDING

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-SUL01_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022





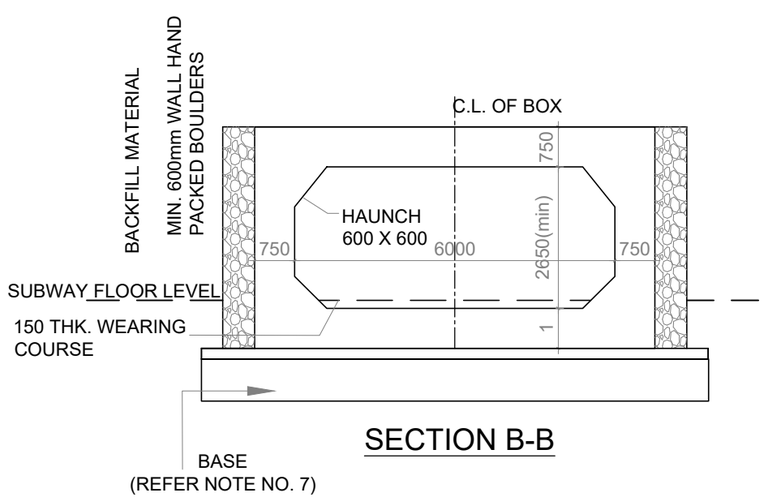
SECTION AT A-A

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. STAINLESS STEEL HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE & RAMP.
5. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
6. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AND RAMP AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
7. BASE OF SUBWAYS SHALL BE SUPPORTED AS PER SKETCH NO. GC-HRID-SK-GEN-021.
8. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

LEGEND

- ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'
- ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'



SECTION B-B

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

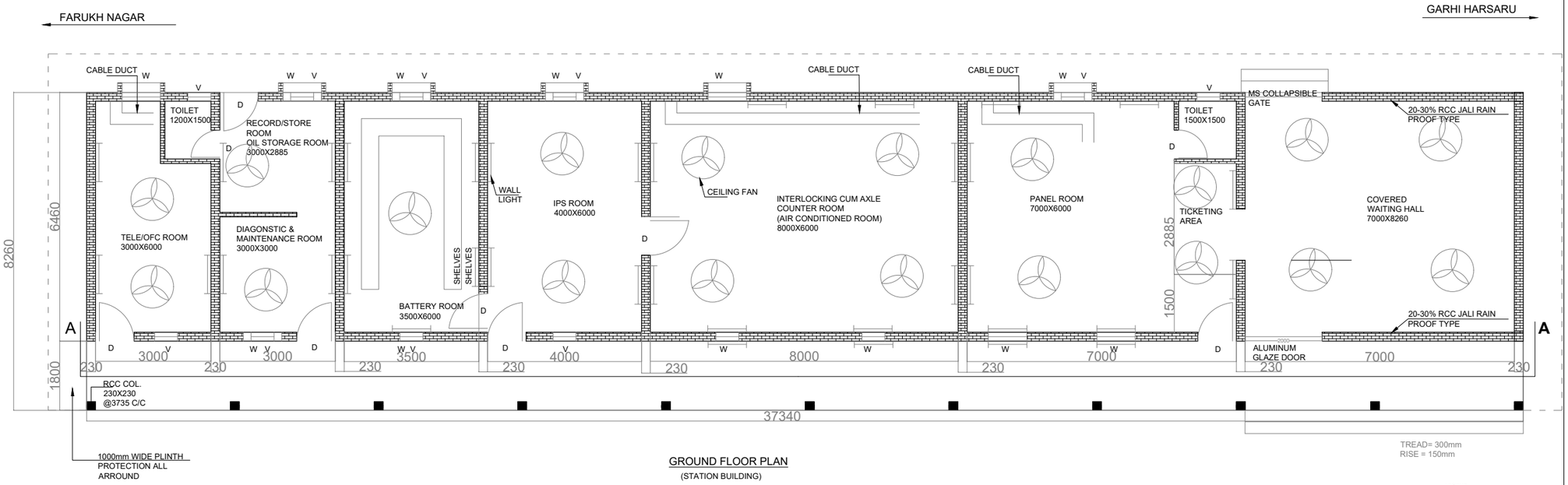
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-

CONCEPTUAL ARCHITECTURAL DRAWING DHULAWAT STATION & SUBWAY BR. NO. 79

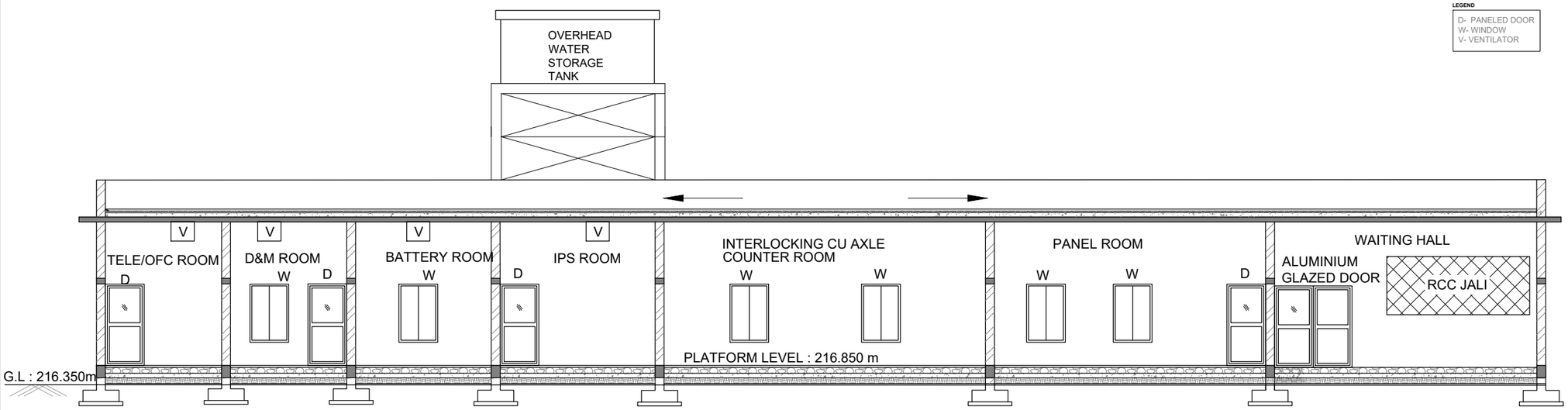
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022

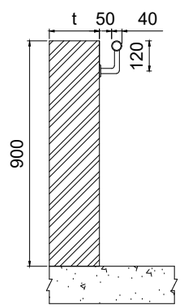


GROUND FLOOR PLAN
(STATION BUILDING)

LEGEND
D- PANELED DOOR
W- WINDOW
V- VENTILATOR



SECTION A-A



FIXING DETAIL OF HANDRAIL TO THE WALL

TYPE	OPENING SIZE		DESCRIPTION
D	1000	2100	Panelled Door
D1	750	2100	PVC Framed Door
W	1500	1200	Glazed with MS Grill
V	750	600	Glazed Louvered Ventilator
V1	600	500	Glazed Louvered Ventilator

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR OTHER DETAIL REFER NORTHERN RAILWAY DRAWING S & T SERVICE BUILDING DWG.NO N.R.H.Q.E.PLAN NO.HQ/02/02-2021. SH. 1 OF 5 TO 5 OF 5.
3. FLOOR LEVEL OF BUILDING SHALL BE 500mm ABOVE GROUND LEVEL.
4. HEIGHT OF STATION BUILDING SHALL BE MINIMUM 4000mm ABOVE FLOOR LEVEL.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

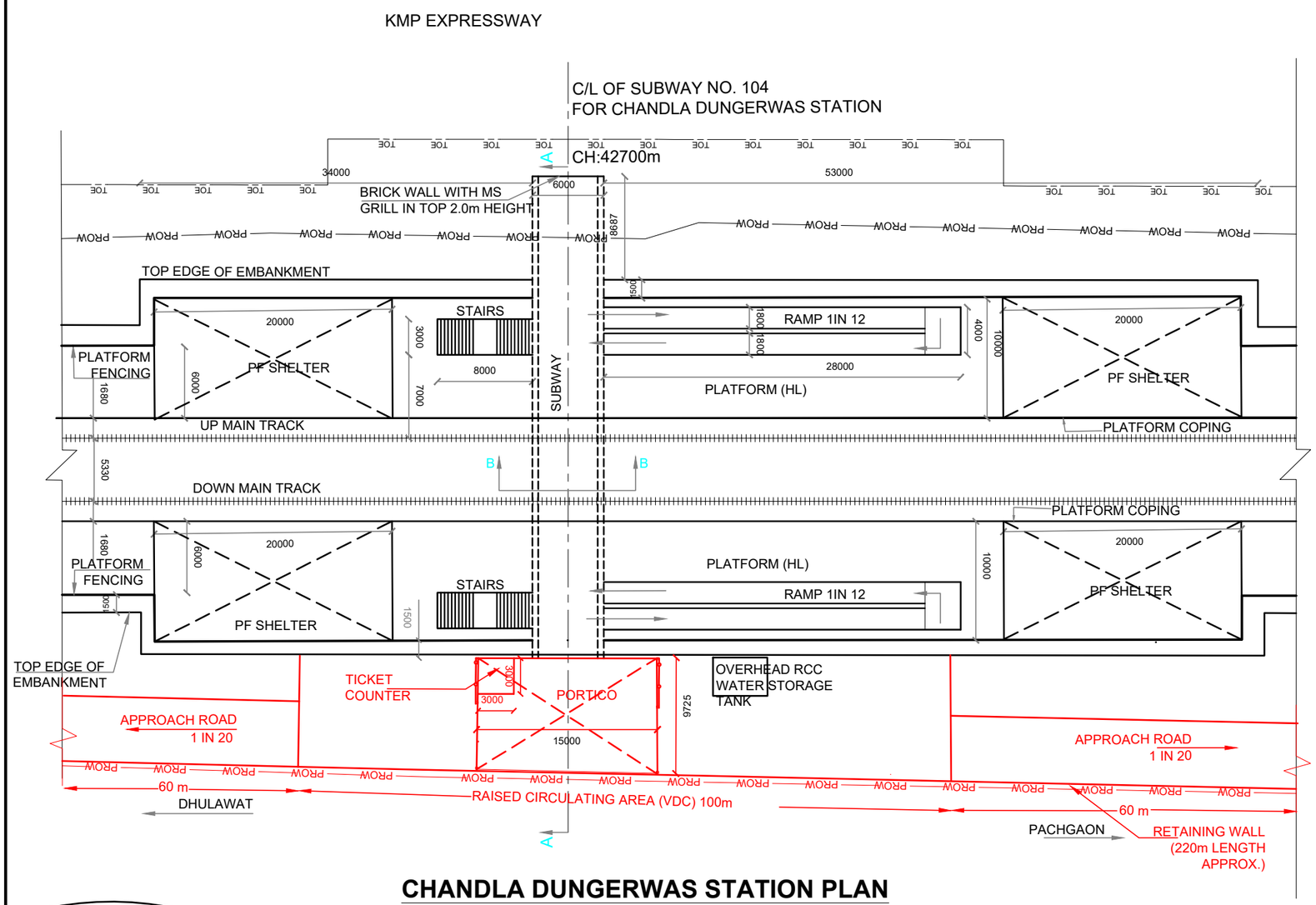
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

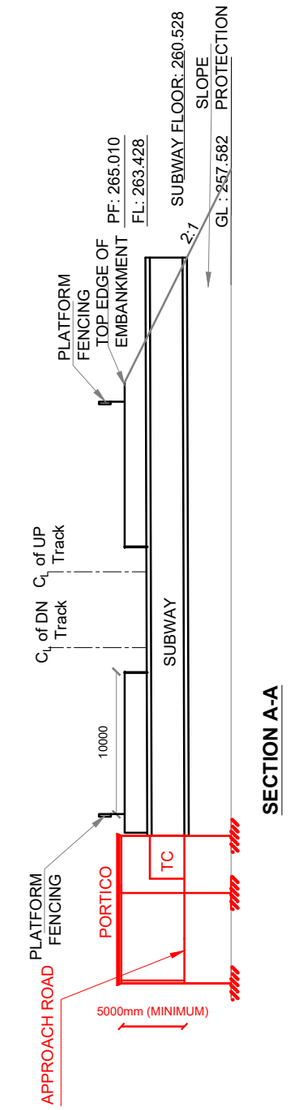
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
DHULAWAT STATION & SUBWAY BR. NO. 79

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



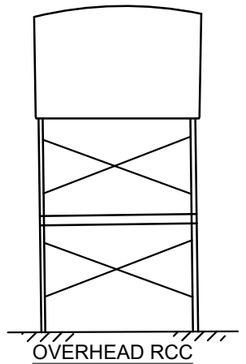
CHANDLA DUNGERWAS STATION PLAN



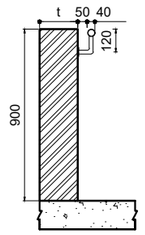
SECTION A-A

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
5. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
7. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS & RAMP PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
8. BASE OF SUBWAY SHALL BE SUPPORTED AS PER SKETCH NO. GC-HRIDC-SK-GEN-021.
9. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

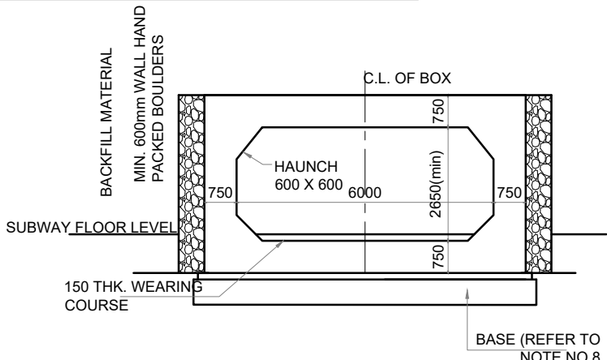
LEGEND
- ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'
- ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'



OVERHEAD RCC
WATER STORAGE TANK



FIXING DETAIL OF
HANDRAIL TO THE WALL



SECTION B-B

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

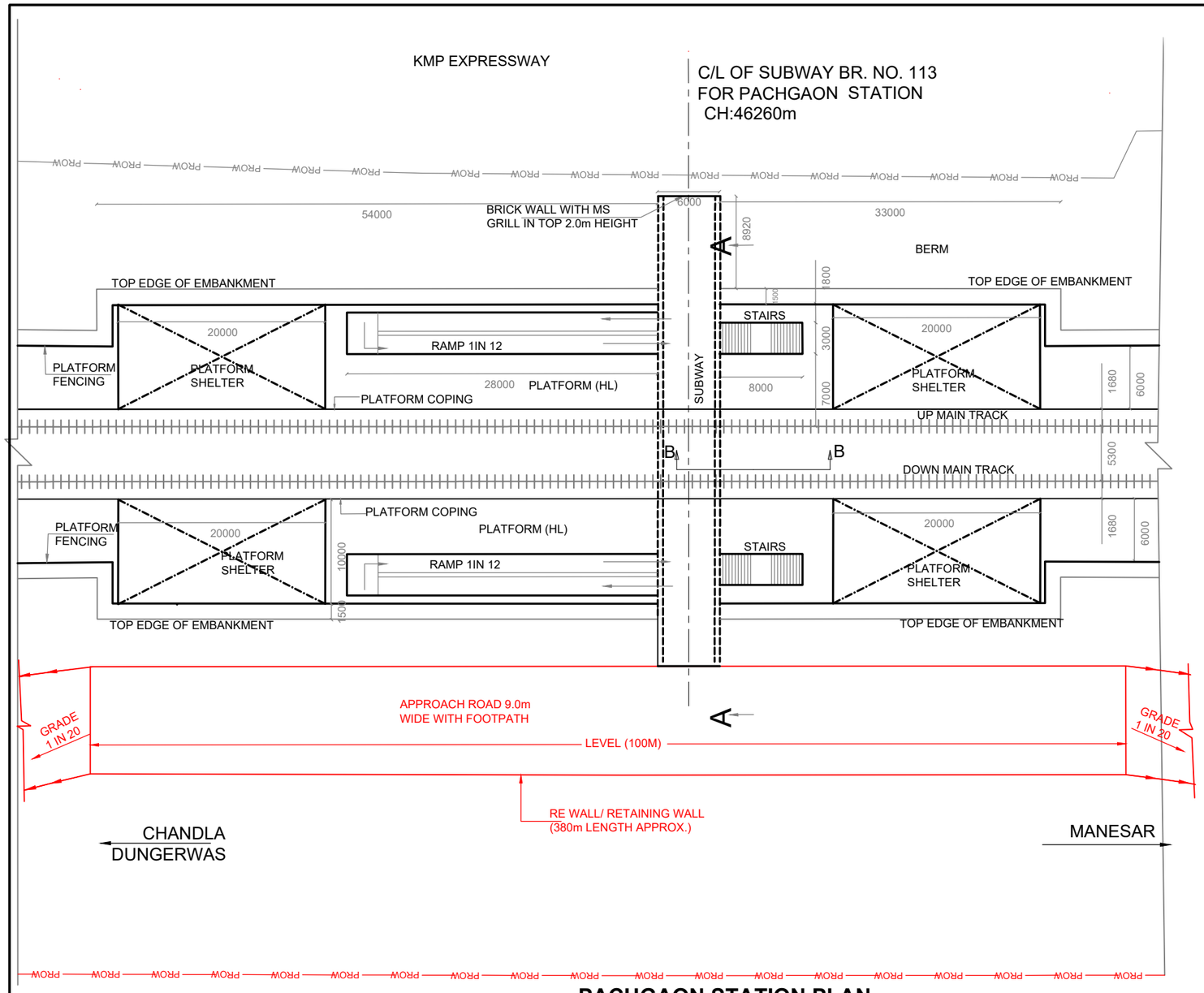
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

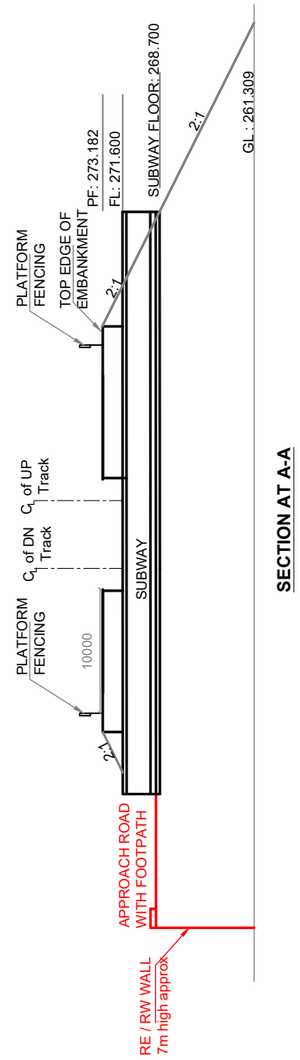
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING CHANDLA DUNGERWAS STATION & SUBWAY BR. NO. 104

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-CDU01_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



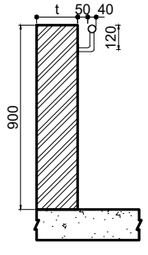
PACHGAON STATION PLAN



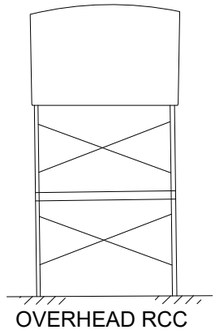
SECTION AT A-A

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
5. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
7. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS & RAMP PROVIDED ON PLATFORM AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
8. BASE OF SUBWAY SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-021
9. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

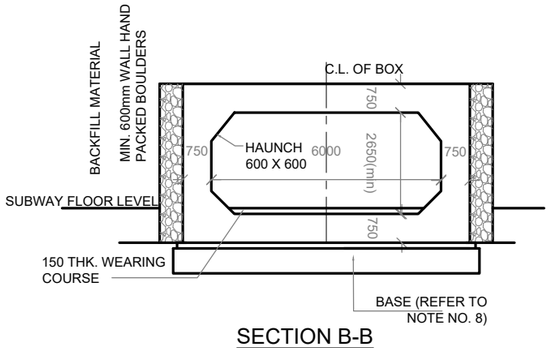
LEGEND
- ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'
- ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'



FIXING DETAIL OF
HANDRAIL TO THE WALL



OVERHEAD RCC
WATER STORAGE TANK



SECTION B-B

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
PACHGAON STATION & SUBWAY BR. NO. 113

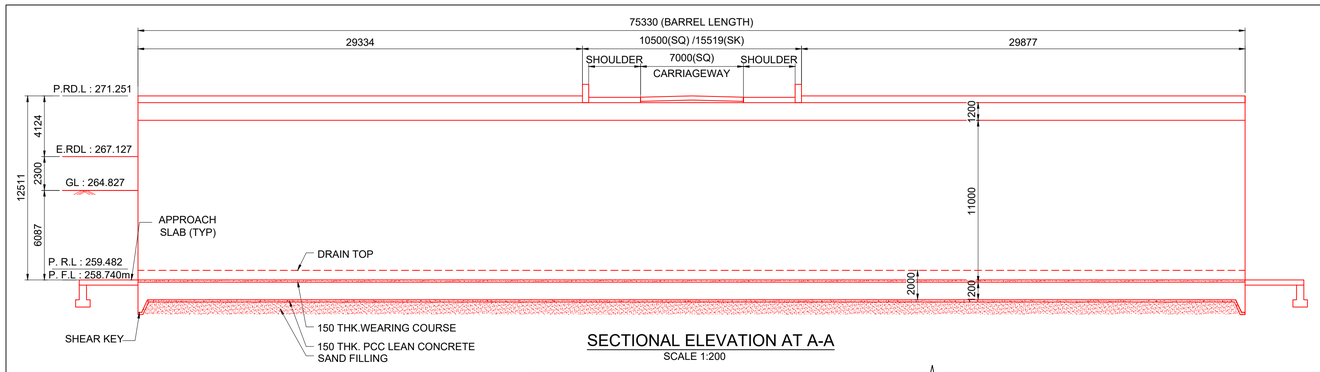
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-PCG01_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022

4 Bridges

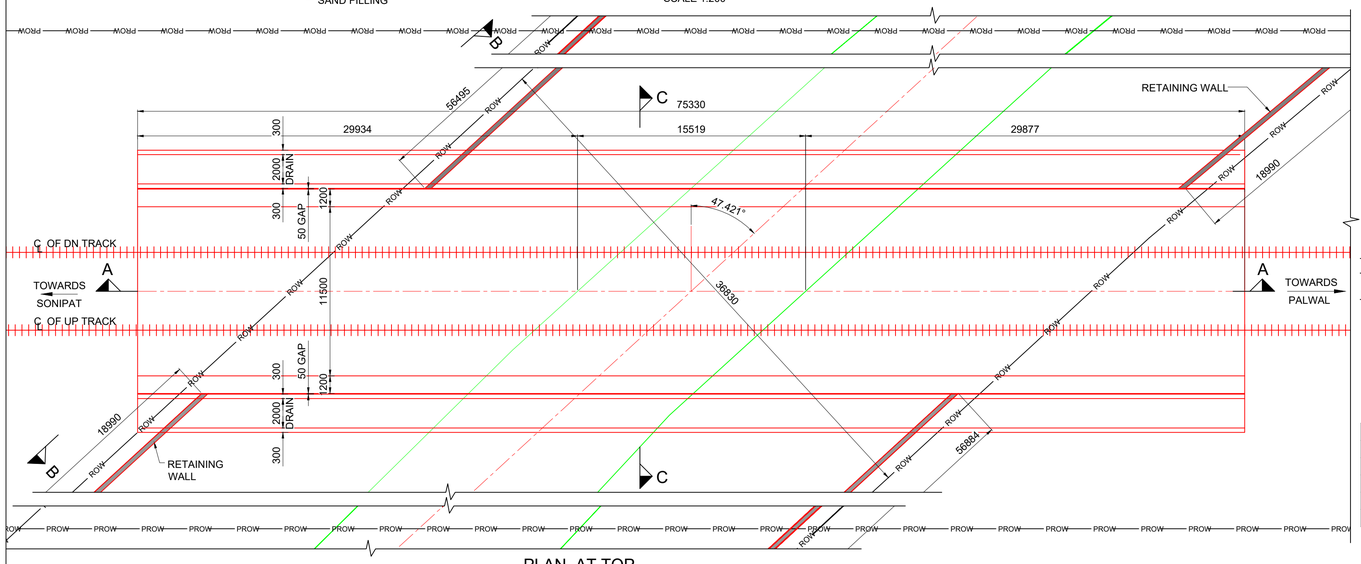
4.1 Minor Bridges

4.1.1 Main Line



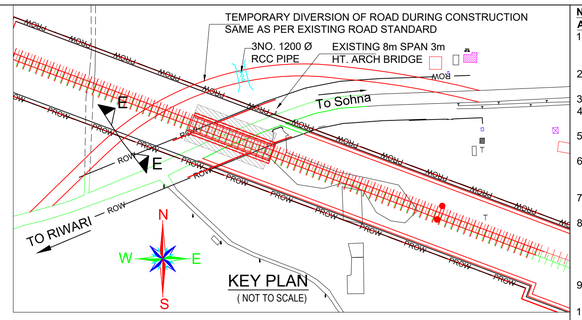
SECTIONAL ELEVATION AT A-A

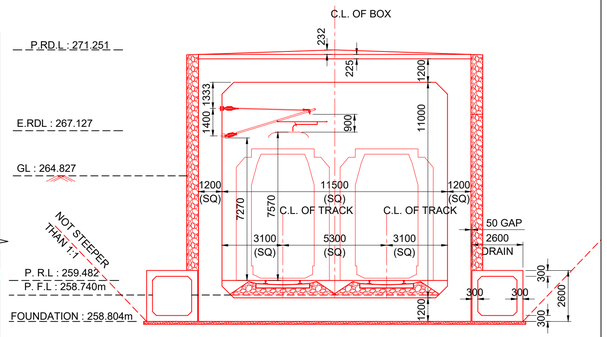
SCALE 1:200



PLAN AT TOP

SCALE 1:200



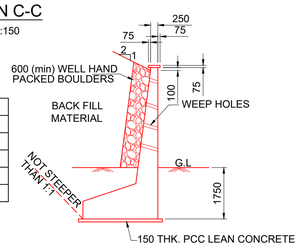


SECTION C-C

SCALE 1:150

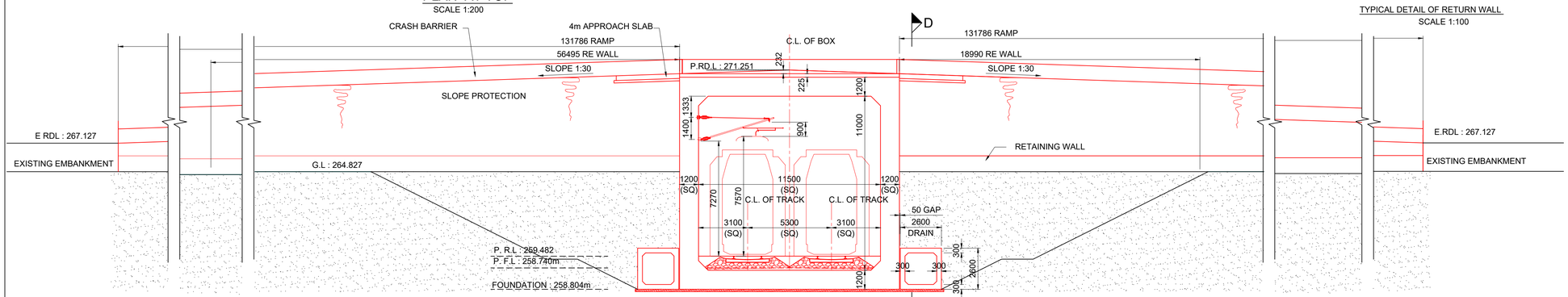
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
P.RD.L	PROPOSED ROAD LEVEL
E.RD.L	EXISTING ROAD LEVEL



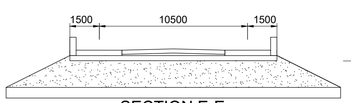
TYPICAL DETAIL OF RETURN WALL

SCALE 1:100



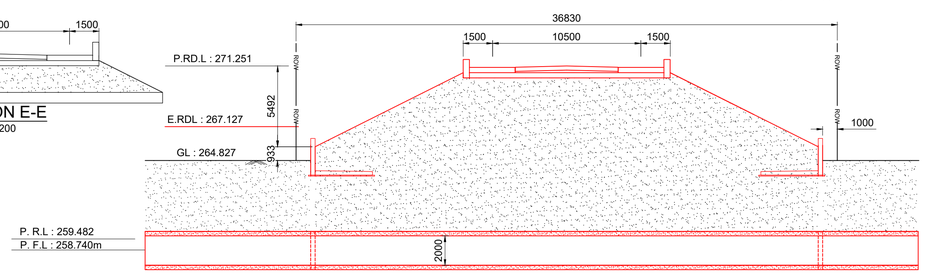
SECTION B-B

SCALE 1:150



SECTION E-E

SCALE 1:200



SECTION D-D

SCALE 1:200

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE SHALL BE BE DESIGNED FOR CLASS-A& 70R AS PER IRC-6 AND 32.5 T LOADING AS PER IRS,AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL GAD.
11. SIZE OF STRUCTURAL MEMBERS ARE TENTATIVE AND SHALL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. ROAD TO BE TEMPORARY DIVERTED FOR CONSTRUCTION WITH SAME STANDARD AS OF EXISTING ROAD.
15. PERMANENT ROAD INCLUDING RE WALL SHALL BE CONSTRUCTED WITH SAME STANDARDS AS OF EXISTING ROAD. COST OF CONSTRUCTION OF ALL THE ELEMENTS SHOWN IN GAD SHALL BE BEARED BY HRIDC.
16. THE TRACK SHALL BE WITH GUARD RAIL.
17. DRAINAGE ARRANGEMENT SHOWN ARE INDICATIVE, DETAILED ARRANGEMENT SHALL BE SHOWN IN MISCELLANEOUS DRAWING.
18. SOFT AND LOOSE POCKET IN BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANULAR MATERIAL.
19. PROPER DETAILING SHALL BE DONE FOR LIGHTENING AND VENTILATION.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			
STIPHEN SAHOO SRE/ ELECT.			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

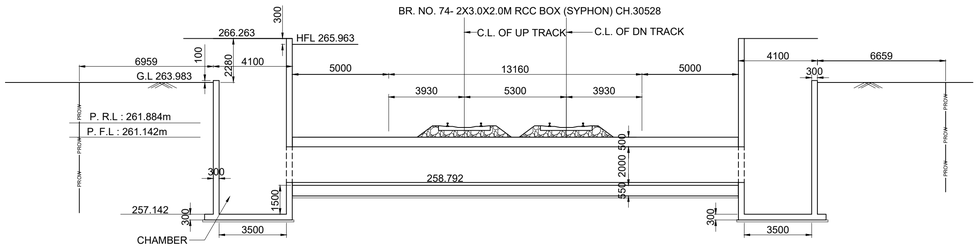
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED ROB BR. NO. 073

SPAN 1×11.5×11 RCC BOX (AT CH: 30155)

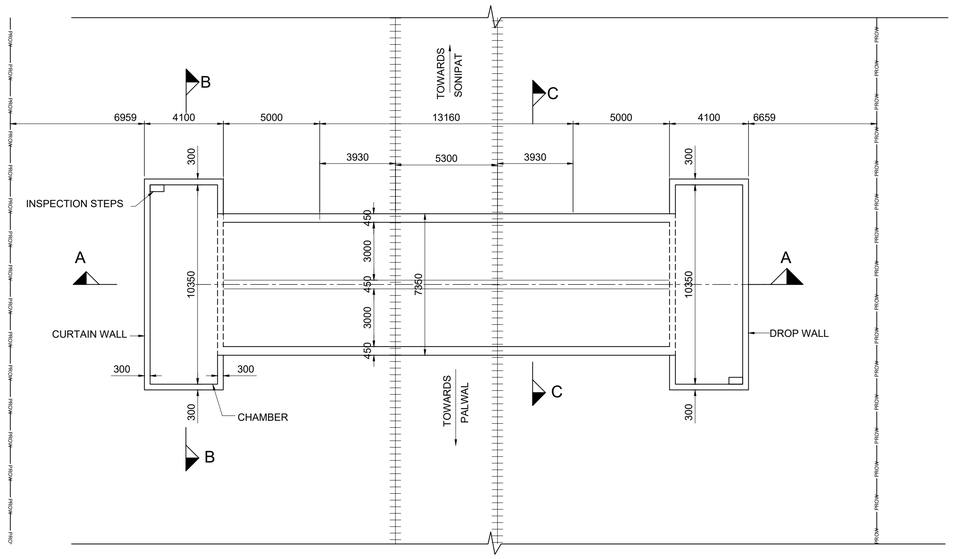
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01073_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



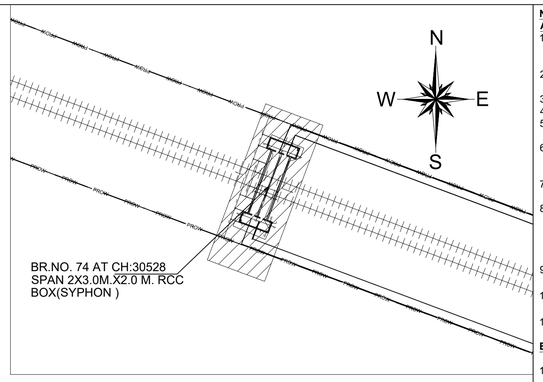
SECTIONAL ELEVATION AT A-A

SCALE 1:150



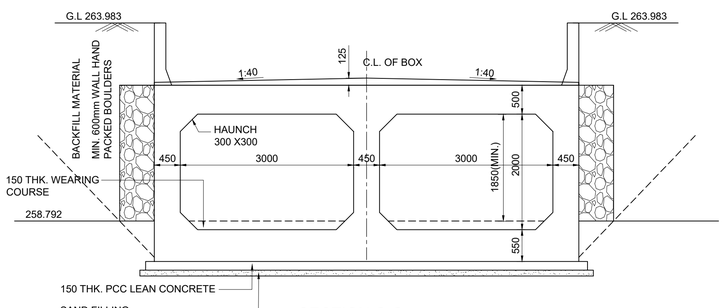
PLAN AT TOP

SCALE 1:150



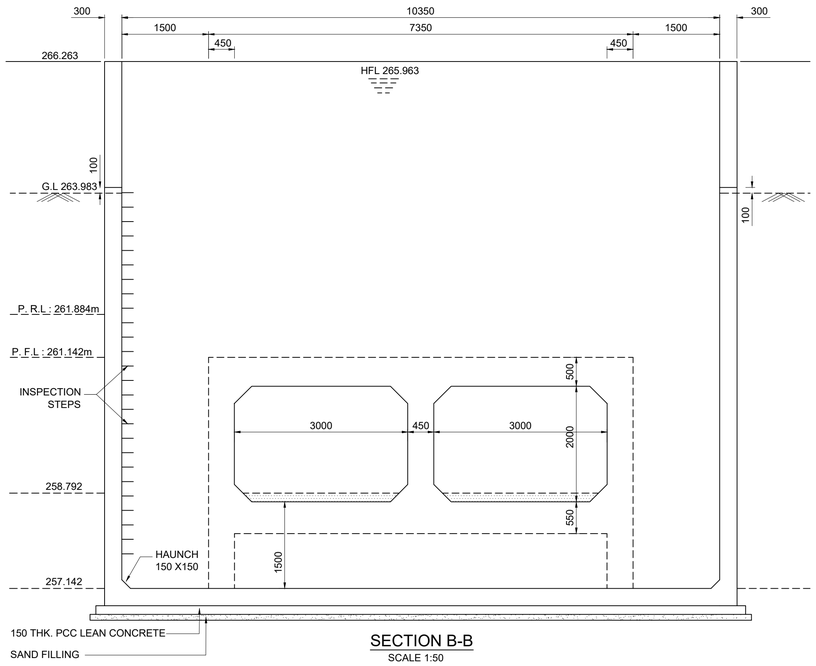
KEY PLAN

(NOT TO SCALE)



SECTION C-C

SCALE 1:50



SECTION B-B

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. ALL GAPS SHALL BE FILLED WITH POLY-SULPHIDE BASED SEALANT OR EQUIVALENT MATERIAL.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

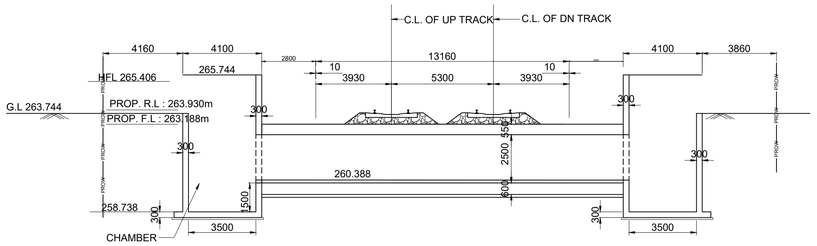
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED BR. NO. 074 SPAN 2×3.0×2.0 RCC BOX (SYPHON) AT CH: 30528

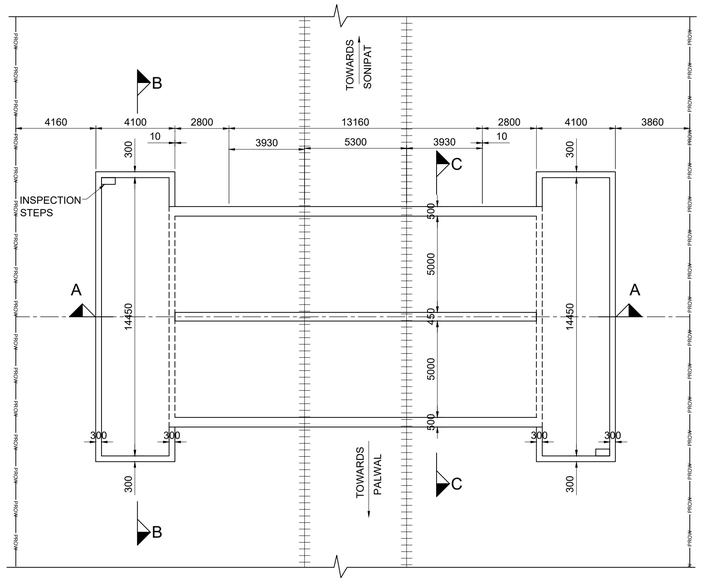
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01074_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



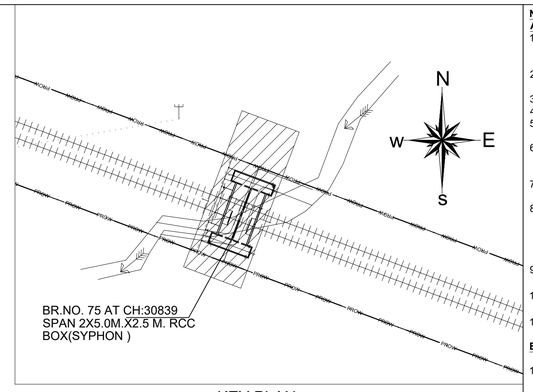
SECTIONAL ELEVATION AT A-A

SCALE 1:150



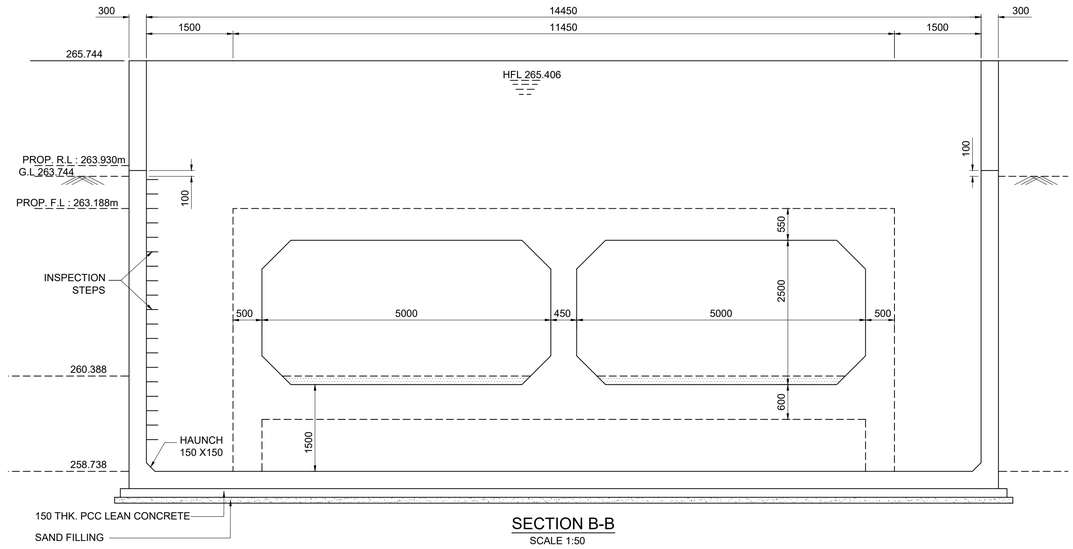
PLAN AT TOP

SCALE 1:150



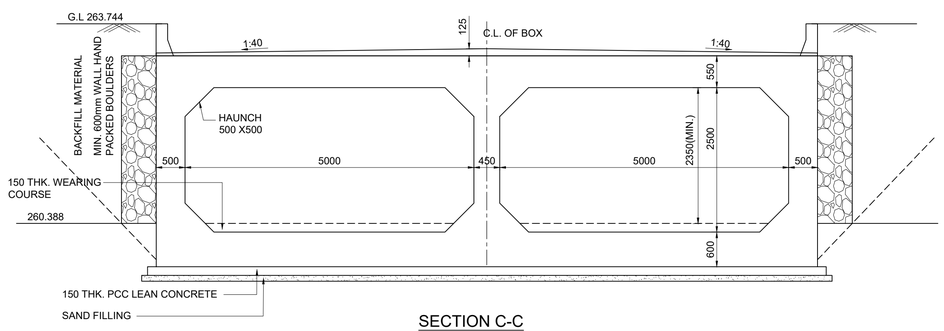
KEY PLAN

(NOT TO SCALE)



SECTION B-B

SCALE 1:50



SECTION C-C

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDE ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. ALL GAPS SHALL BE FILLED WITH POLY-SULPHIDE BASED SEALANT OR EQUIVALENT MATERIAL.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

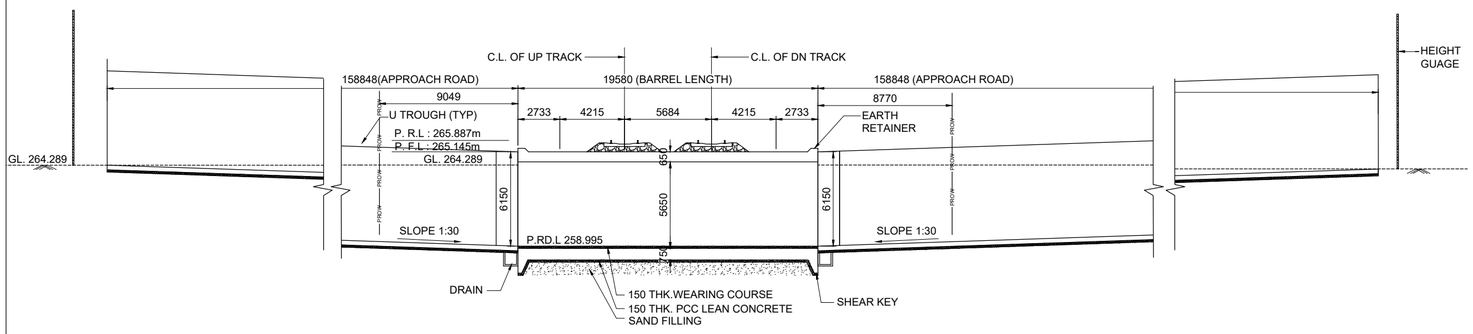
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED BR. NO. 075 SPAN 2×5.0×2.5 RCC BOX (SYPHON) AT CH: 30839

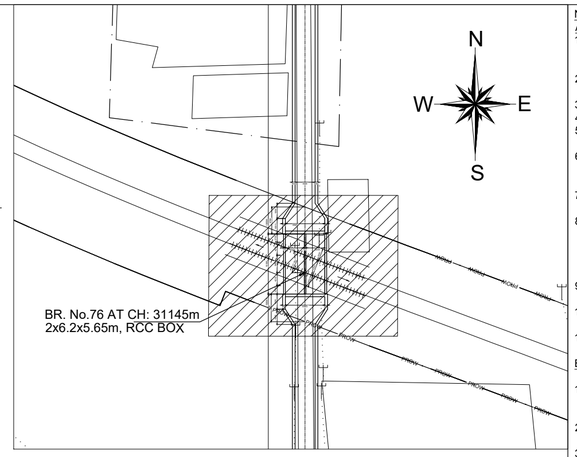
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01075_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



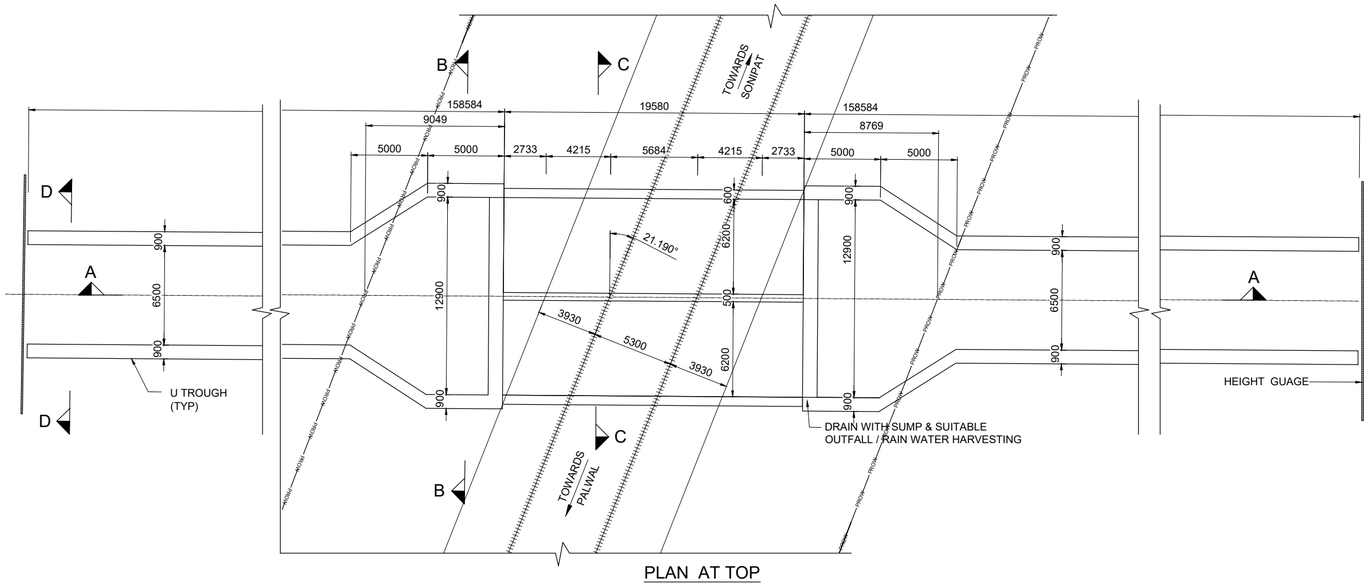
SECTIONAL ELEVATION AT A-A

SCALE 1:200



KEY PLAN

(NOT TO SCALE)



PLAN AT TOP

SCALE 1:200

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL

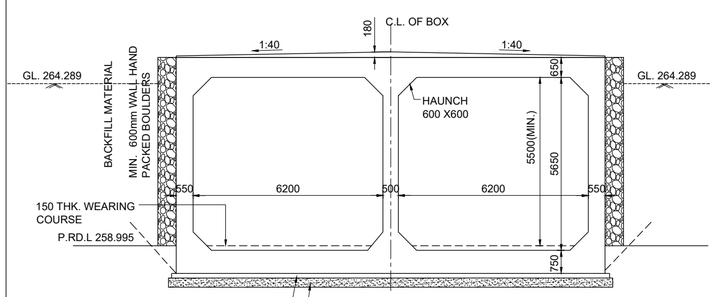
NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

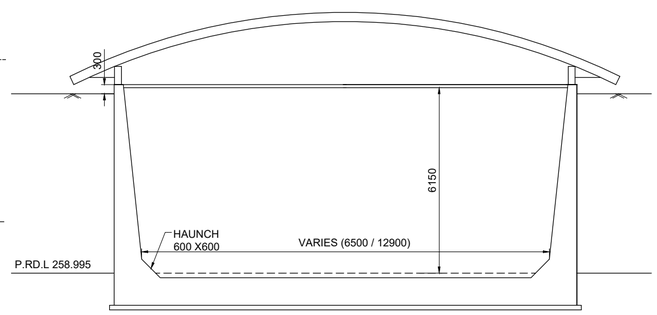
B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL. NO WEEP HOLE SHALL BE PROVIDED IN RETAINING WALL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.
18. SELF SUPPORTING COVER SHED SHALL BE PROVIDED OVER THE APPROACH ROAD.



SECTION C-C

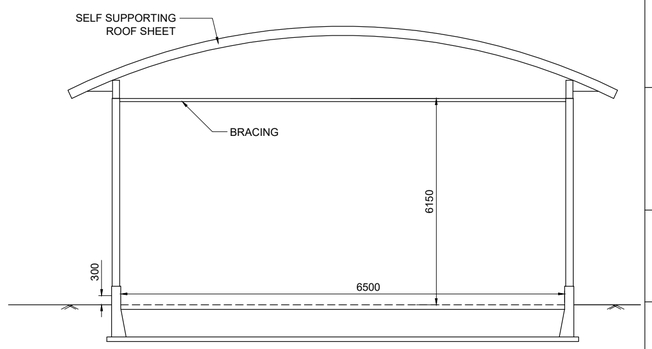
SCALE 1:100



SECTION B-B

NTS

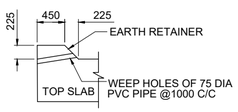
DETAIL OF COVER SHED ON APPROACH ROAD



SECTION D-D

NTS

DETAIL OF COVER SHED ON APPROACH ROAD



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

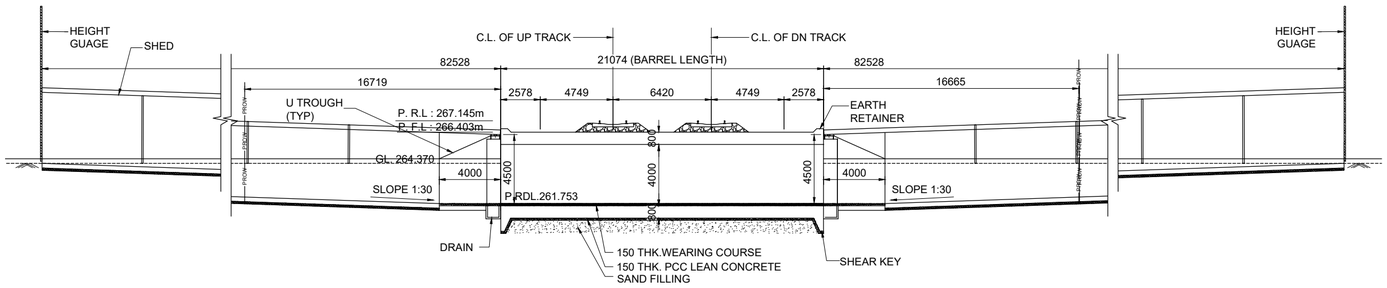
THE INFRASTRUCTURE PEOPLE

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 076 SPAN
2×6.2×5.650 RCC BOX AT CH: 31145

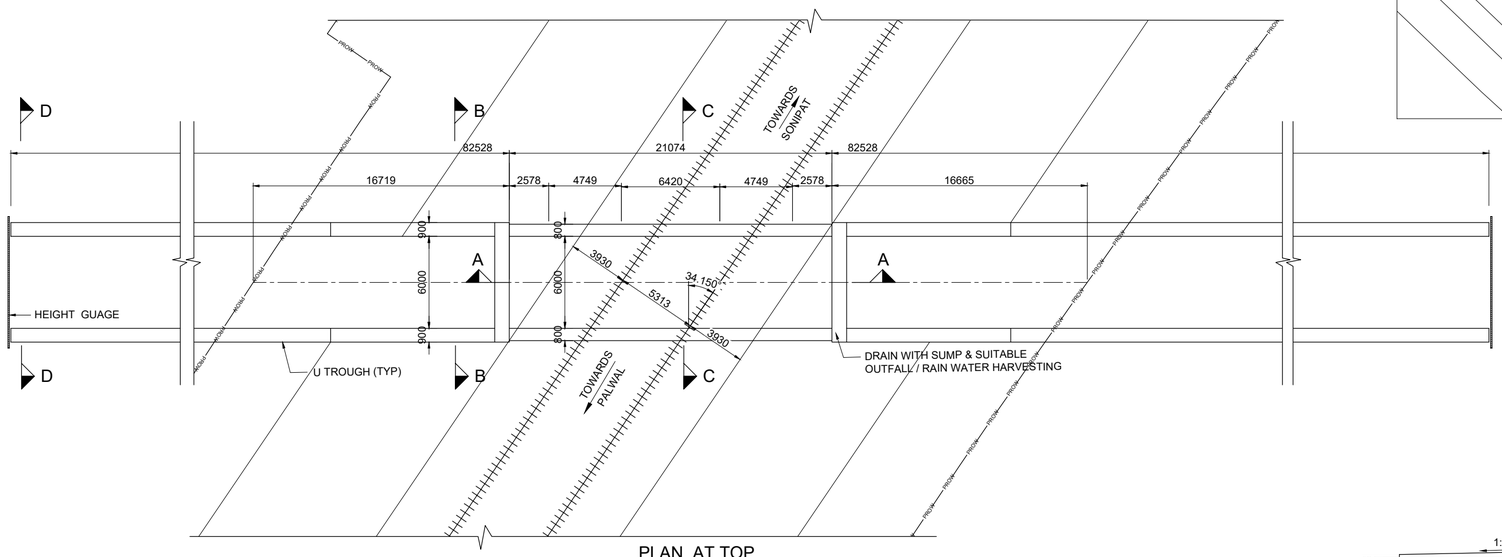
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01076_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



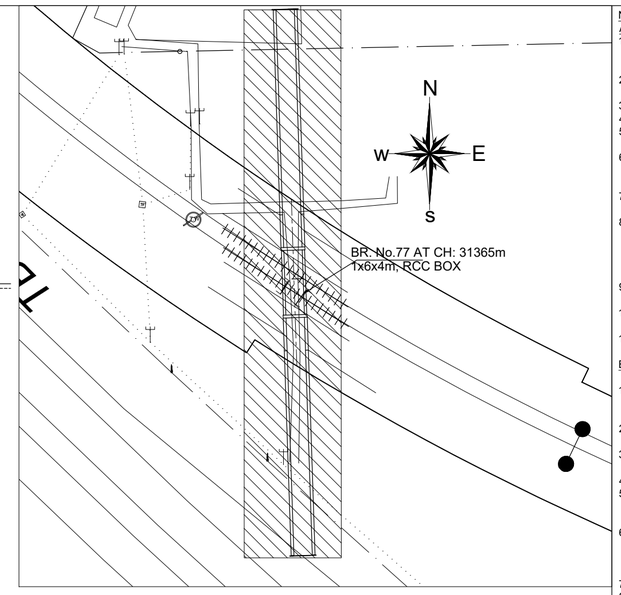
SECTIONAL ELEVATION AT A-A

SCALE 1:200



PLAN AT TOP

SCALE 1:200



KEY PLAN

(NOT TO SCALE)

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL

NOTES :

A) GENERAL NOTES

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5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
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11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
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4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
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    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
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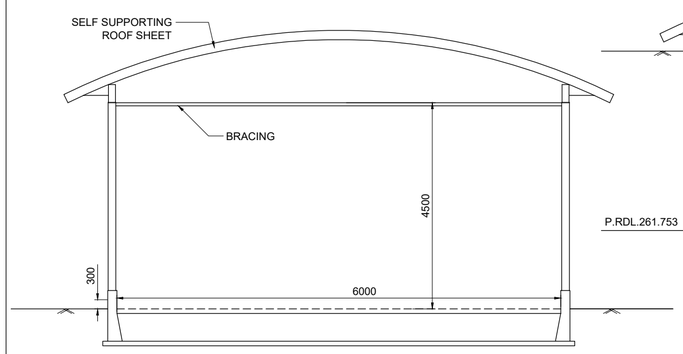
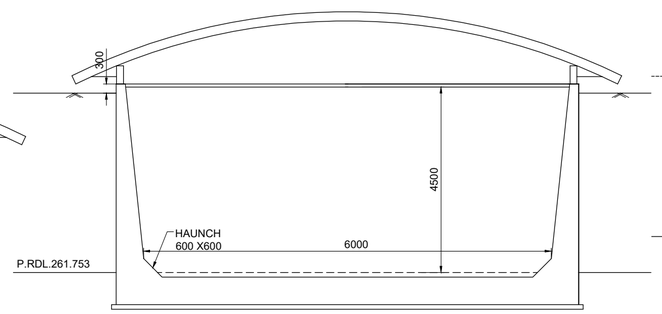
18. SHED SHALL BE PROVIDED OVER THE RAMP.



SECTION D-D

NTS

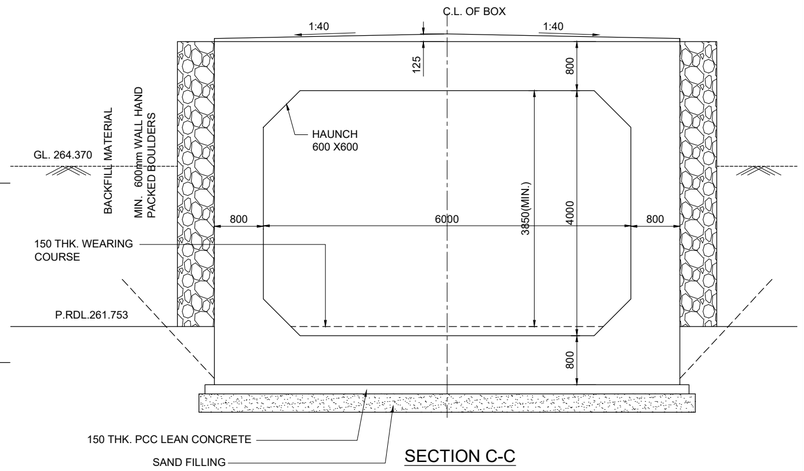
DETAIL OF COVER SHED ON APPROACH ROAD



SECTION B-B

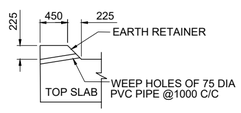
NTS

DETAIL OF COVER SHED ON APPROACH ROAD



SECTION C-C

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

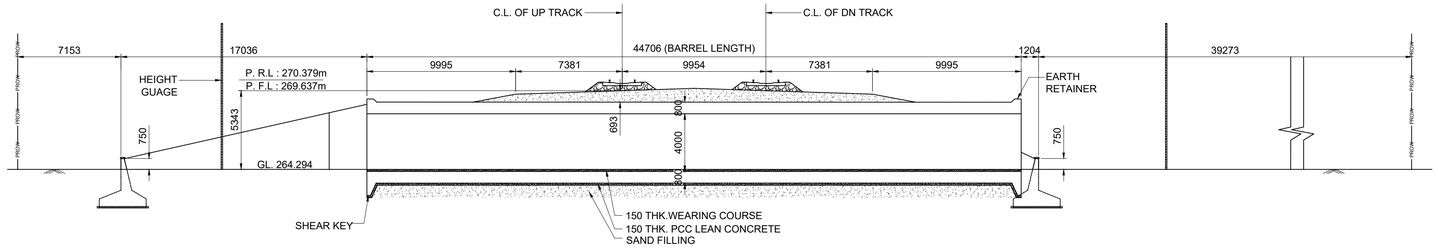
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

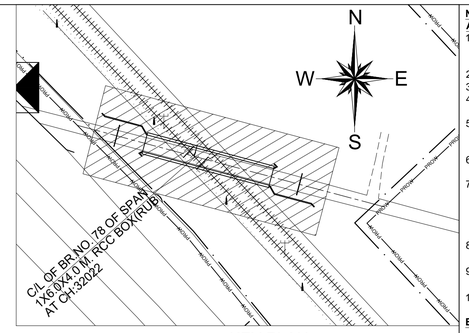
PROPOSED RUB NO. 077 SPAN
1×6.0×4.0 RCC BOX AT CH: 31365

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01077_A1	1 OF 1

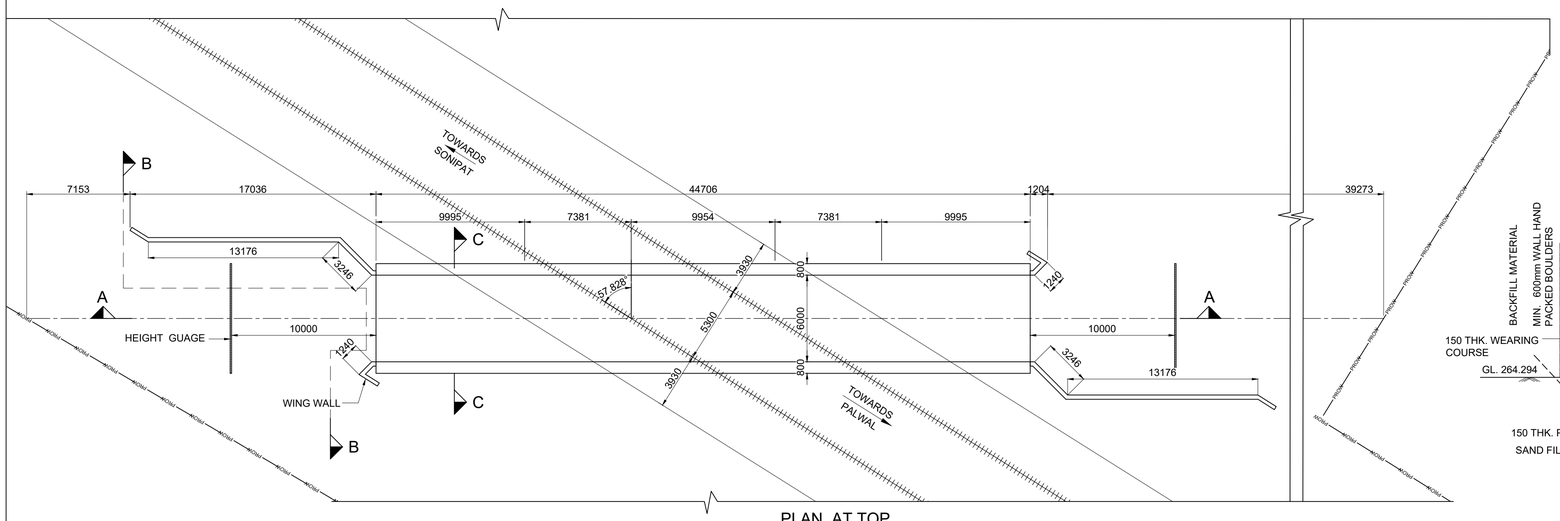
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



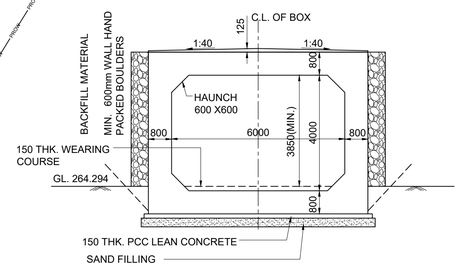
SECTIONAL ELEVATION AT A-A
SCALE 1:200



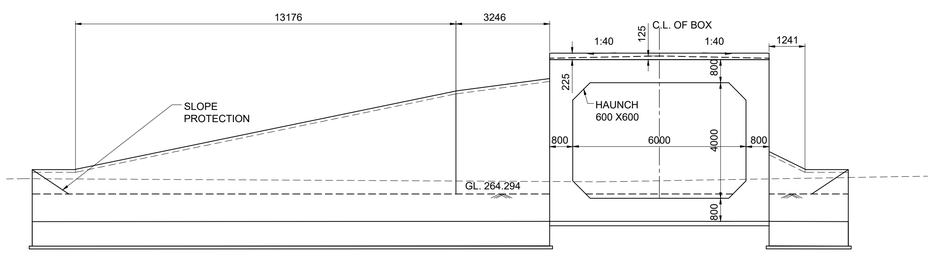
KEY PLAN
(NOT TO SCALE)



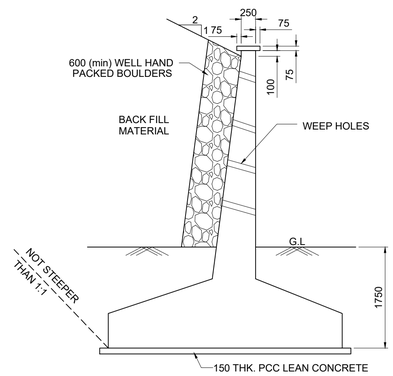
PLAN AT TOP
SCALE 1:200



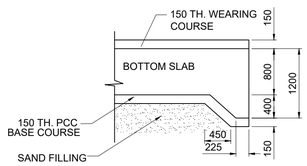
SECTION C-C
SCALE 1:100



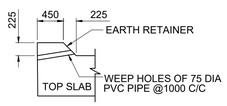
SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

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5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

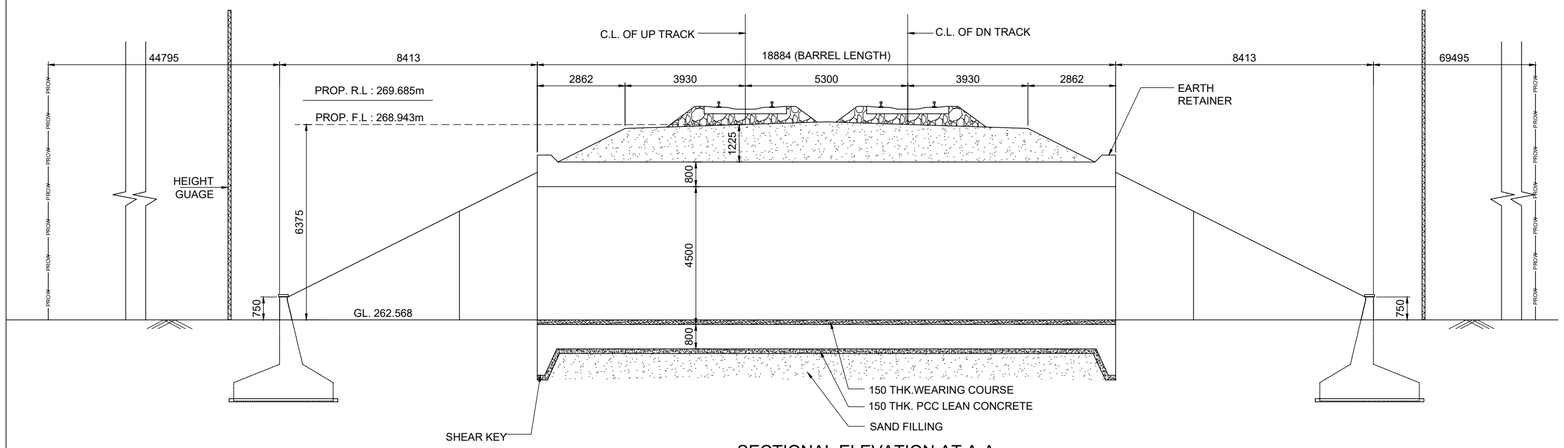
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 078 SPAN
1×6.0×4.0 RCC BOX AT CH: 32022

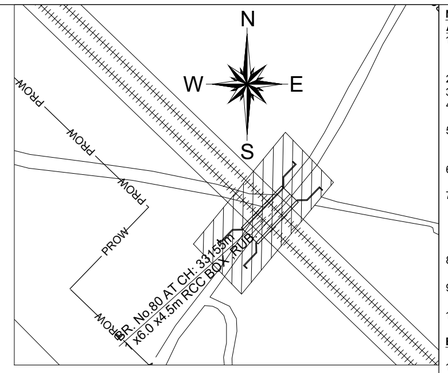
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01078_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



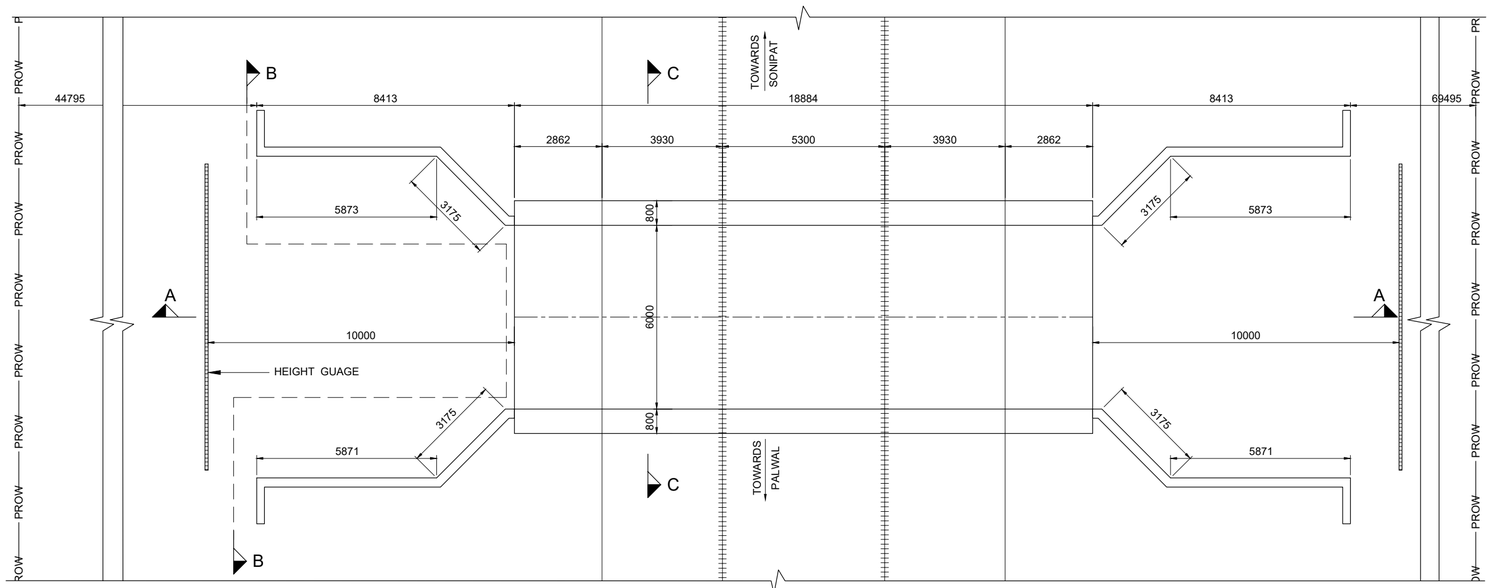
SECTIONAL ELEVATION AT A-A

SCALE 1:100



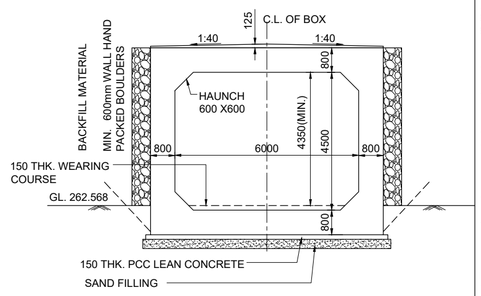
KEY PLAN

(NOT TO SCALE)



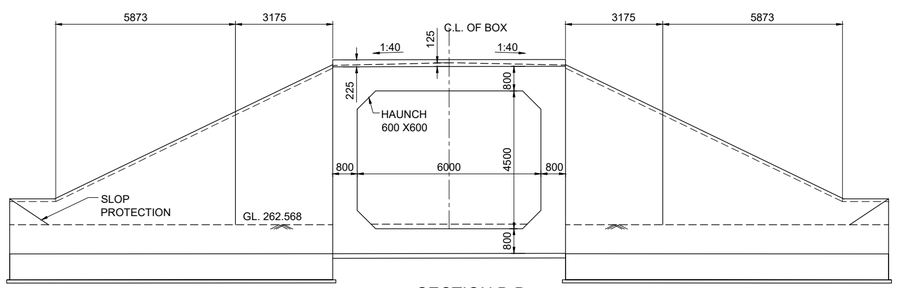
PLAN AT TOP

SCALE 1:100



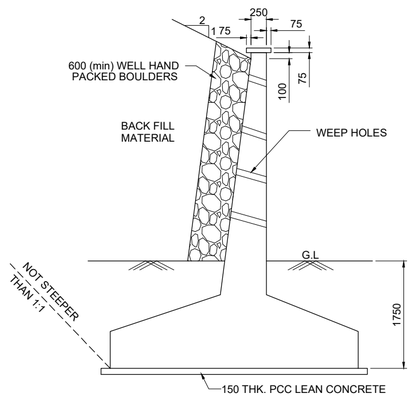
SECTION C-C

SCALE 1:100



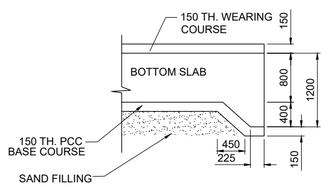
SECTION B-B

SCALE 1:100



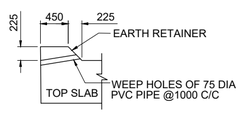
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

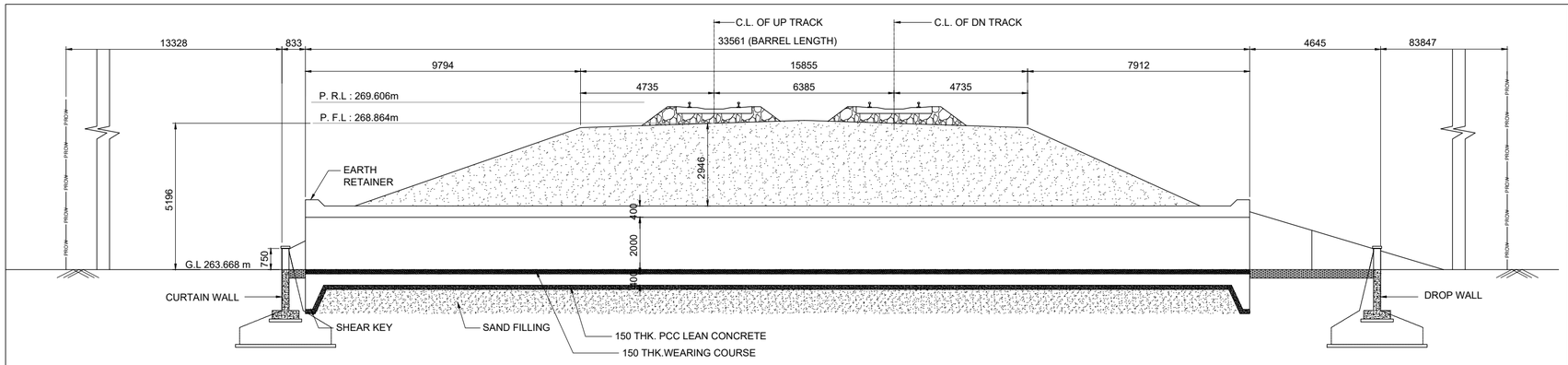
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 080
SPAN 1×6.0×4.50 RCC BOX AT CH: 33155

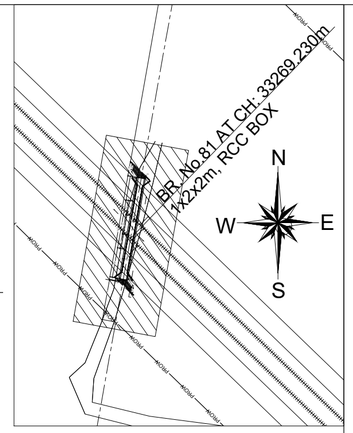
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01080_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



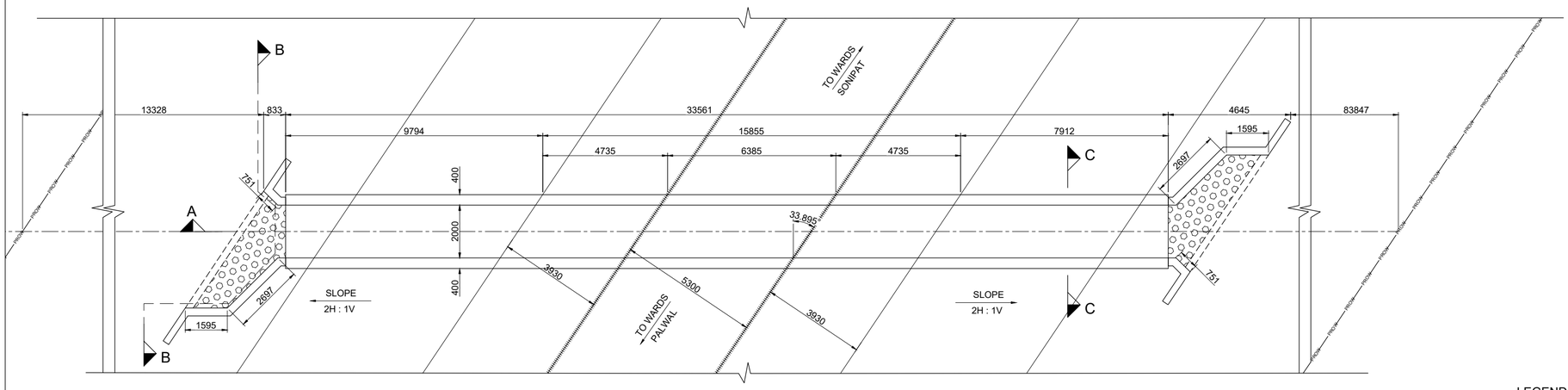
SECTIONAL ELEVATION AT A-A

SCALE 1:100



KEY PLAN

(NOT TO SCALE)

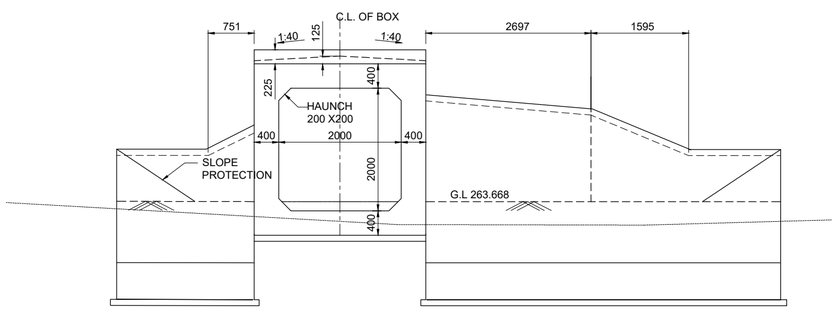


PLAN AT TOP

SCALE 1:100

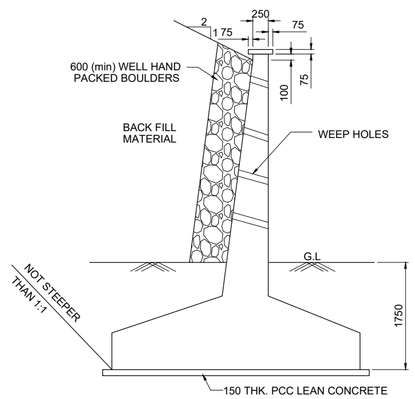
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



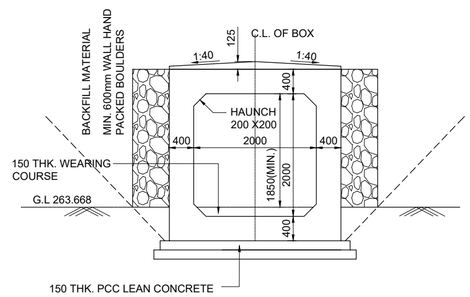
VIEW AT B-B

SCALE 1:50



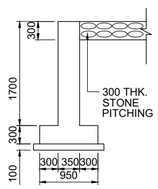
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



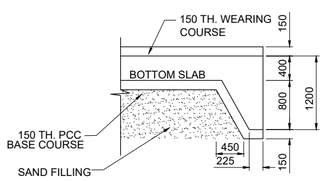
SECTION C-C

SCALE 1:50



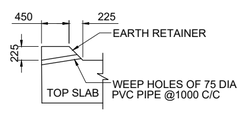
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
16. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
17. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

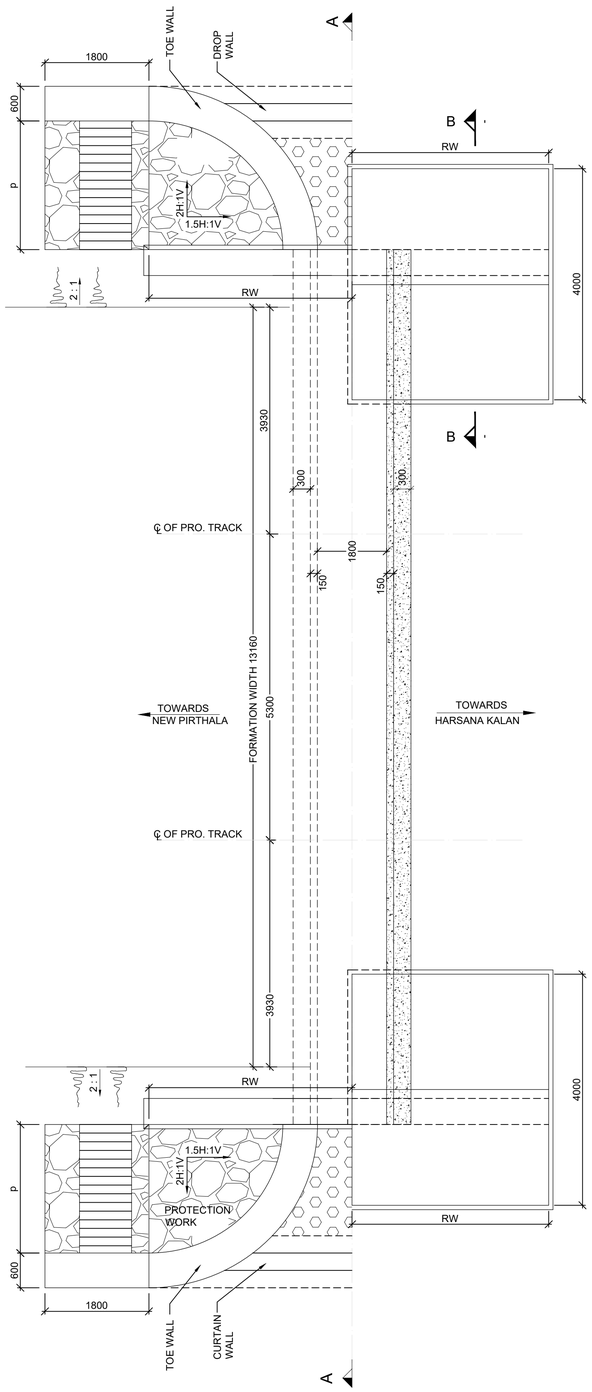
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO. 081
SPAN 1×2.0×2.0 RCC BOX AT CH: 33269.230

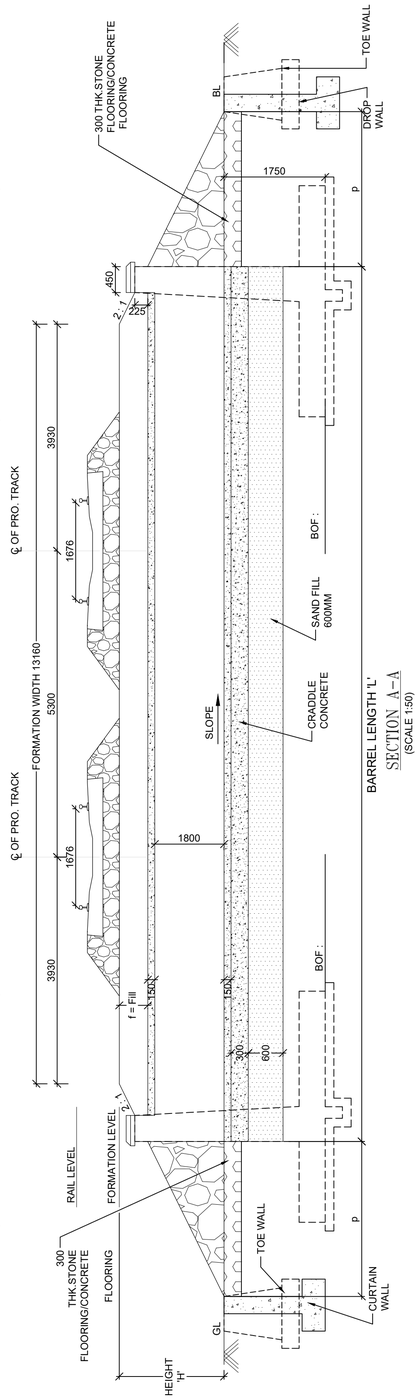
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01081_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



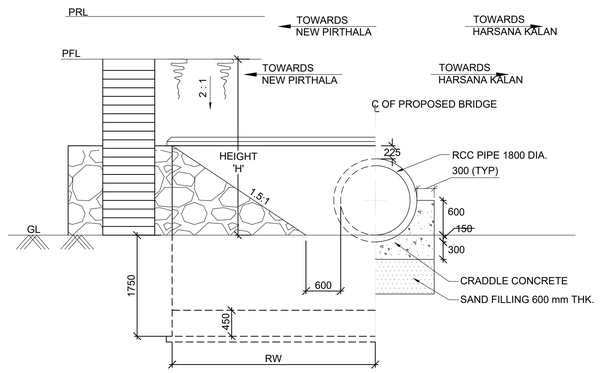
HALF PLAN AT TOP HALF PLAN AT BOTTOM

(SCALE 1:50)



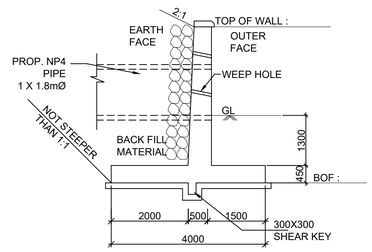
SECTION A–A

(SCALE 1:50)



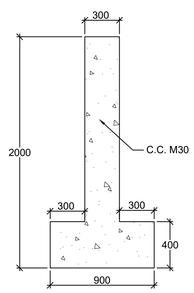
HALF ELEVATION HALF SECTION

(SCALE 1:50)



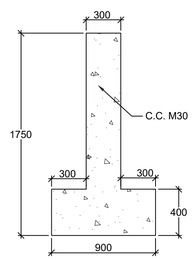
SECTION B-B

(SCALE 1:75)



DROP WALL

(SCALE 1:25)



CURTAIN WALL

(SCALE 1:25)

LEGEND

F.L	FORMATION LEVEL
R.L	RAIL LEVEL
G.L	GROUND LEVEL
BOF	BOTTOM OF FOUNDATION
PROP.	PROPOSED
EXG.	EXISTING
THK.	THICKNESS
CH.	CHAINAGE
PCC	PLAIN CEMENT CONCRETE
RCC	REINFORCED CEMENT CONCRETE
BR.	BRIDGE

CONSTRUCTION DEPTH

1) RAIL (60kg)	172 mm
2) RUBBER PAD	10 mm
3) WIDER PSC SLEEPER HEIGHT AT RAIL SEAT	210 mm
4) MINIMUM BALLAST THK.	350 mm
TOTAL	742 mm

COLOR CODE LEGEND

RED	-	PROPOSED
CONTINUOUS	-	VISIBLE
DOTTED	-	INVISIBLE
BLACK	-	EXISTING

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. STRUCTUIRE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M.BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
4. PLACEMENT LEVEL OF PIPE AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF DRAINAGE &NATURAL GROUND PROFILE.
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   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
6. SEISMIC ZONE- IV
7. EXPOSURE CONDITION- MODERATE.
8. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
9. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
10. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
11. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

Sr. No.	Chainage (in m)	Br. No.	Span	Prop. RL	Prop. FL	GL	Clear Height	Track on	No. of tracks	T c/c	RW	P	f	H	L	REMARK
1	33450.000	82	1 x 1.8m	269.494	268.752	263.704	1.800	Straight	2	5.3	4.425	3.9	3.098	5.048	45.795	56.1°, SKEW
2	37317.678	90	1 x 1.8m	263.671	262.929	257.025	1.800	Curve	2	5.34	4.425	3.9	3.954	5.904	50.305	55.19°, SKEW
3	40357.531	96	1 x 1.8m	258.271	257.529	252.484	1.800	Curve	2	5.674	4.425	3.9	3.095	5.045	25.616	
4	41666.651	99	1 x 1.8m	261.692	260.950	254.888	1.800	Straight	2	5.3	4.425	3.9	4.112	6.062	29.157	
5	48594.592	122	1 x 1.8m	259.892	259.150	253.423	1.800	Straight	2	5.3	4.425	3.9	3.777	5.727	27.817	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

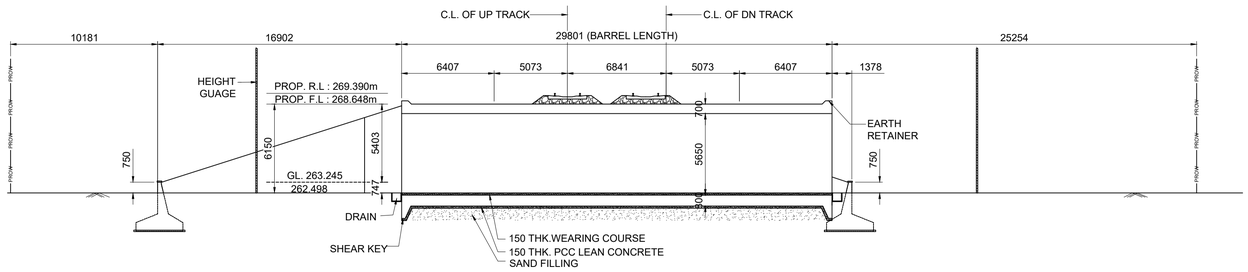
TITLE:-

GENERAL ARRANGEMENT DRAWING
BRIDGE NO. 82,90,96,99,&122 PIPE CULVERT 1X1.8 SPAN

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-PIPE_A1

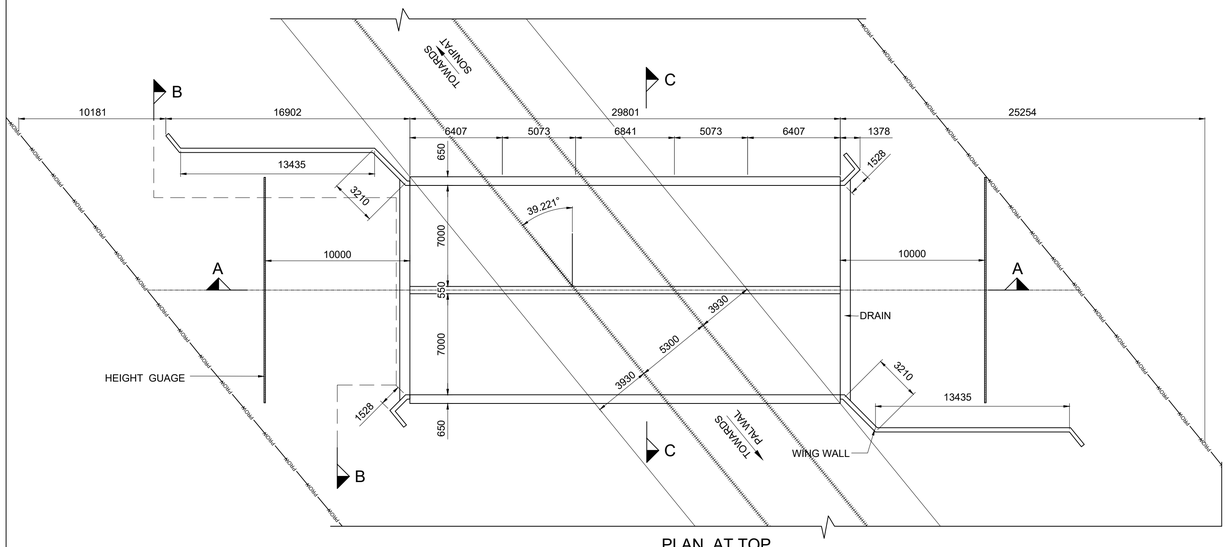
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	08-12-2022



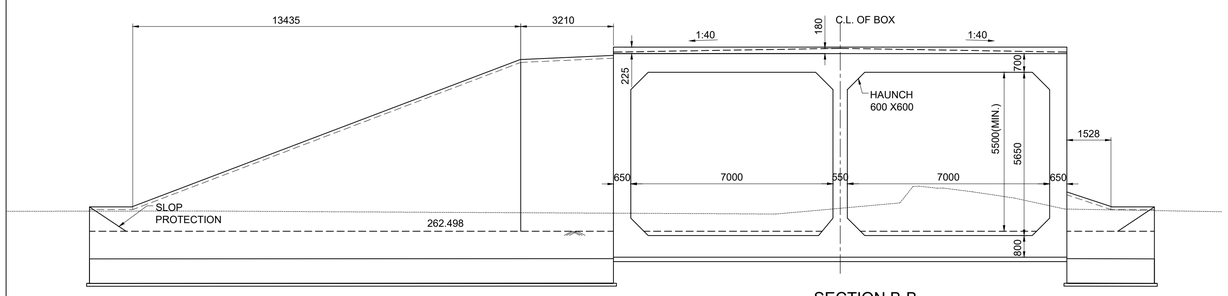
SECTIONAL ELEVATION AT A-A

SCALE 1:200



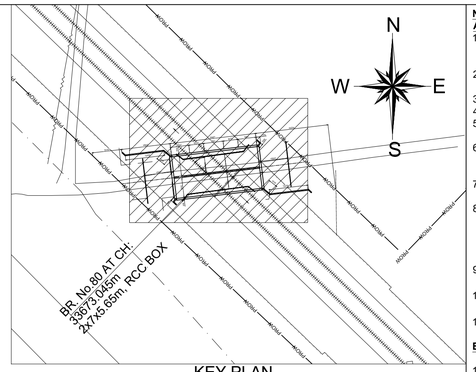
PLAN AT TOP

SCALE 1:200



SECTION B-B

SCALE 1:100

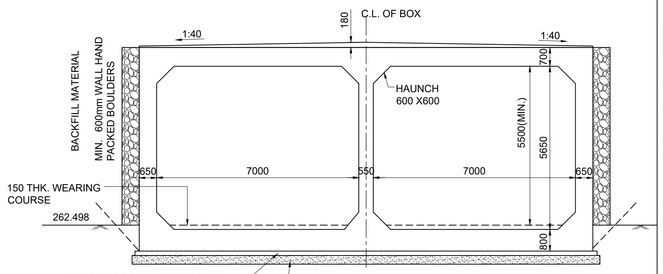


KEY PLAN

(NOT TO SCALE)

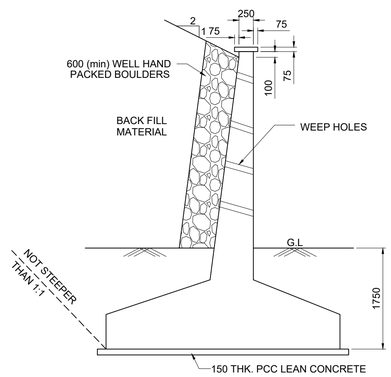
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



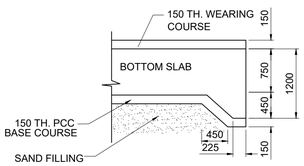
SECTION C-C

SCALE 1:100



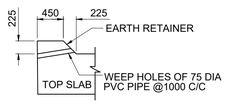
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

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3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
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B) TECHNICAL NOTES :

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13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
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CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
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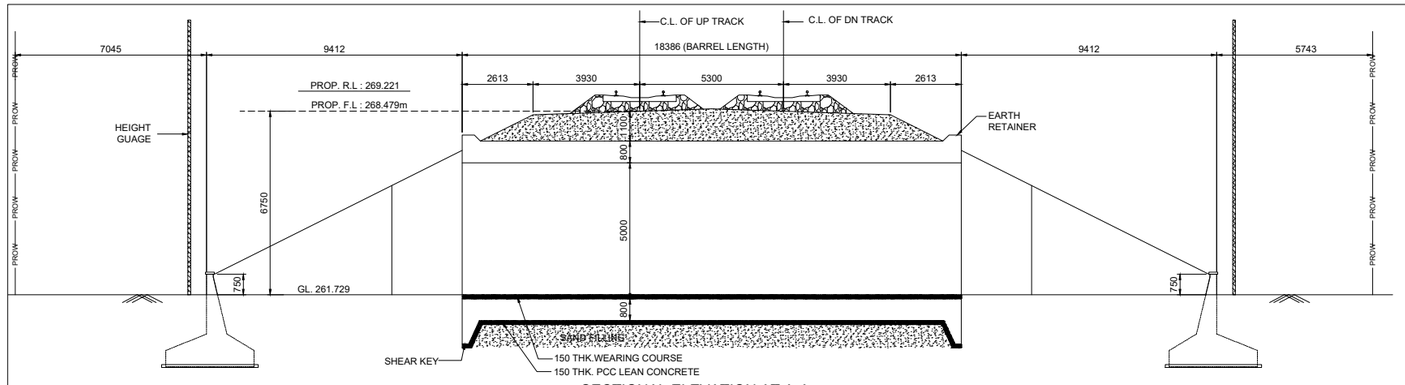
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 083 SPAN
2×7.0×5.650 RCC BOX AT CH: 33673.045

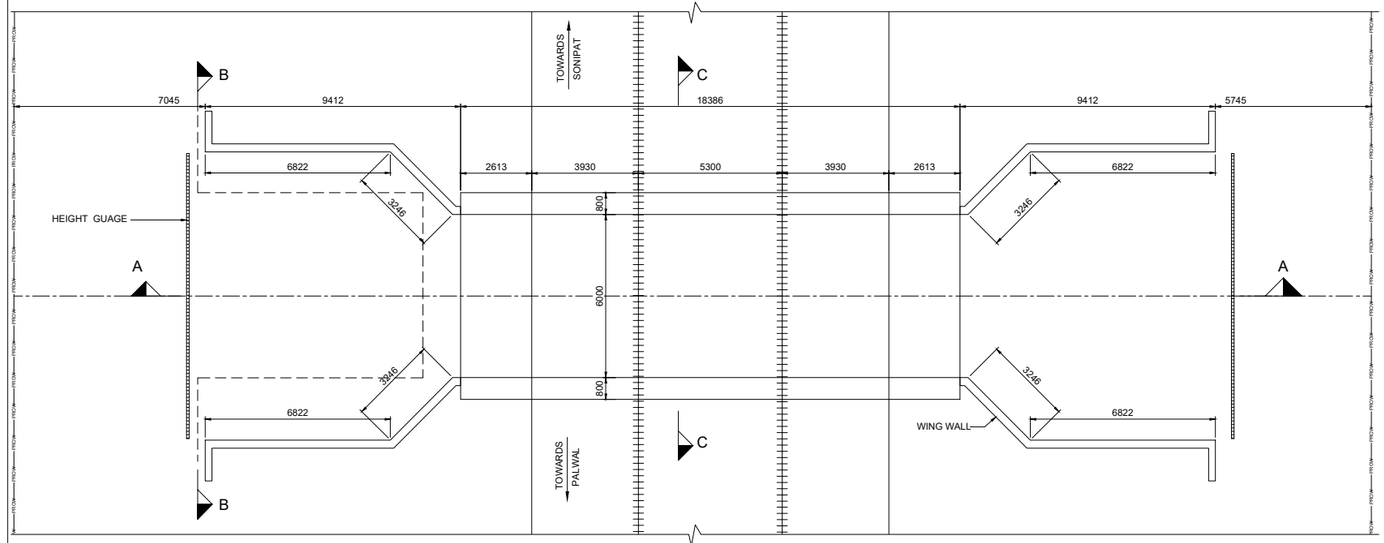
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01083_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



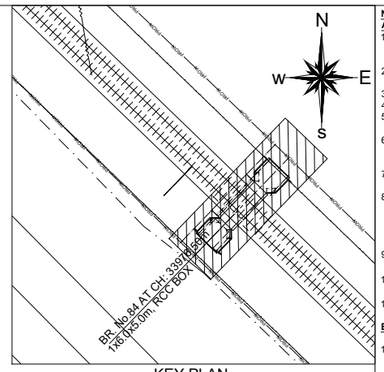
SECTIONAL ELEVATION AT A-A

SCALE 1:100



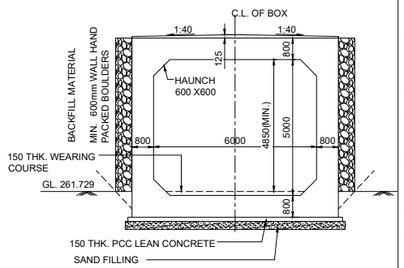
PLAN AT TOP

SCALE 1:100



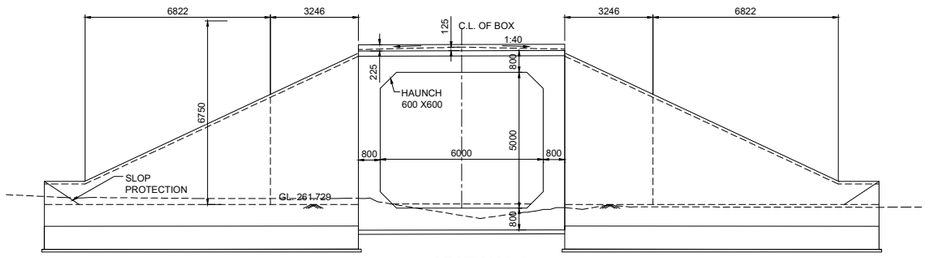
KEY PLAN

(NOT TO SCALE)



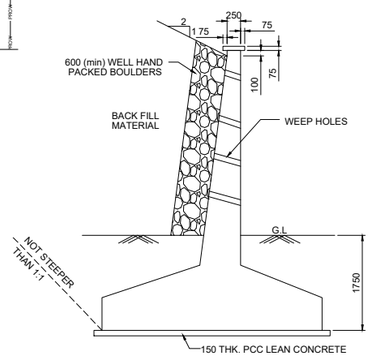
SECTION C-C

SCALE 1:100



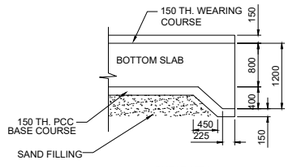
SECTION B-B

SCALE 1:100



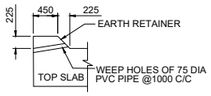
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

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15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

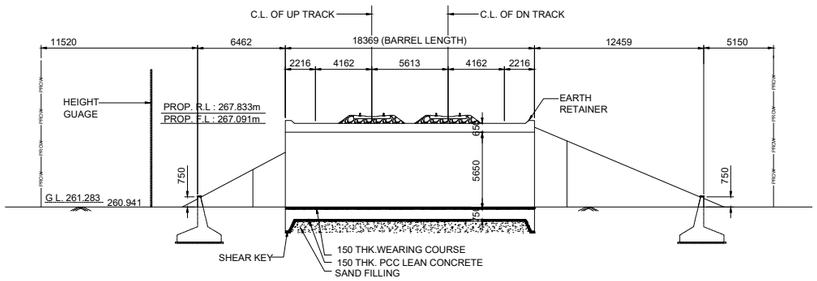
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 084 SPAN
1×6.0×5.0 RCC BOX AT CH: 33976.50

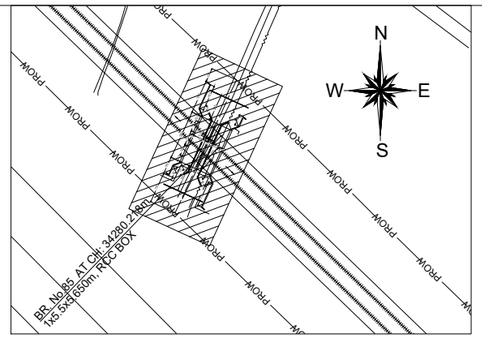
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01084_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



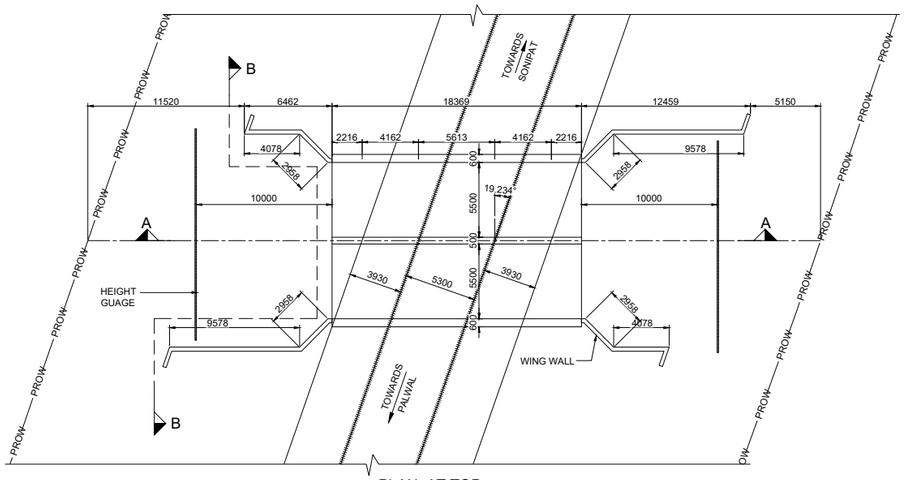
SECTIONAL ELEVATION AT A-A

SCALE 1:200



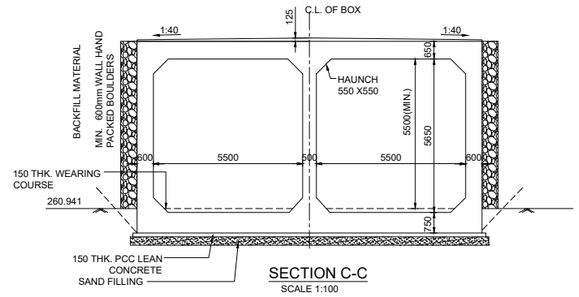
KEY PLAN

(NOT TO SCALE)



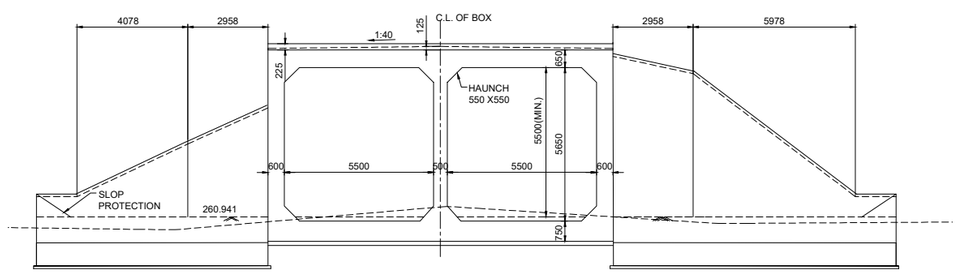
PLAN AT TOP

SCALE 1:200



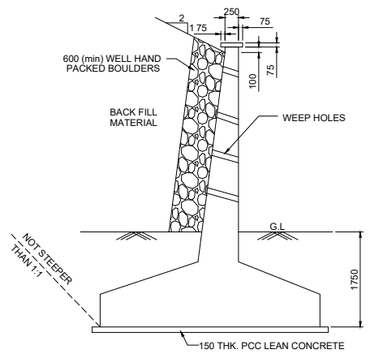
SECTION C-C

SCALE 1:100



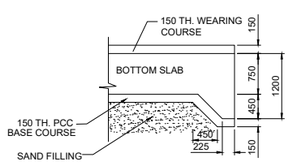
SECTION B-B

SCALE 1:100



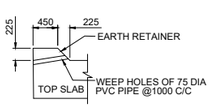
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

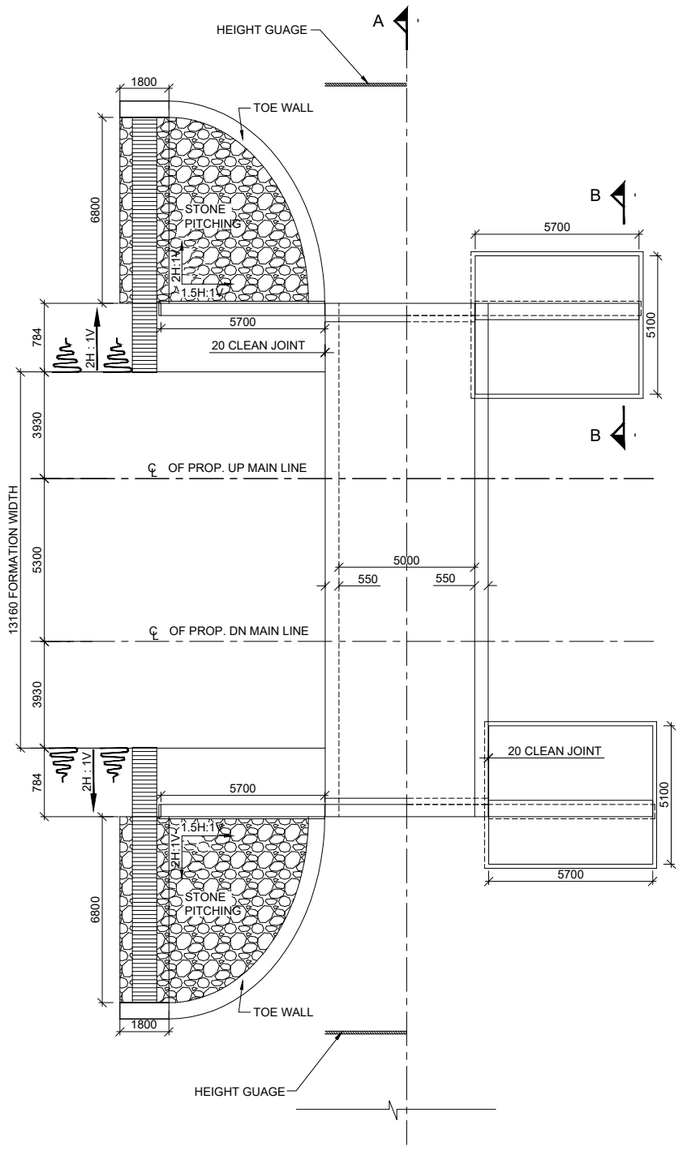
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 085 SPAN
2×5.5×5.650 RCC BOX AT CH: 34280.218

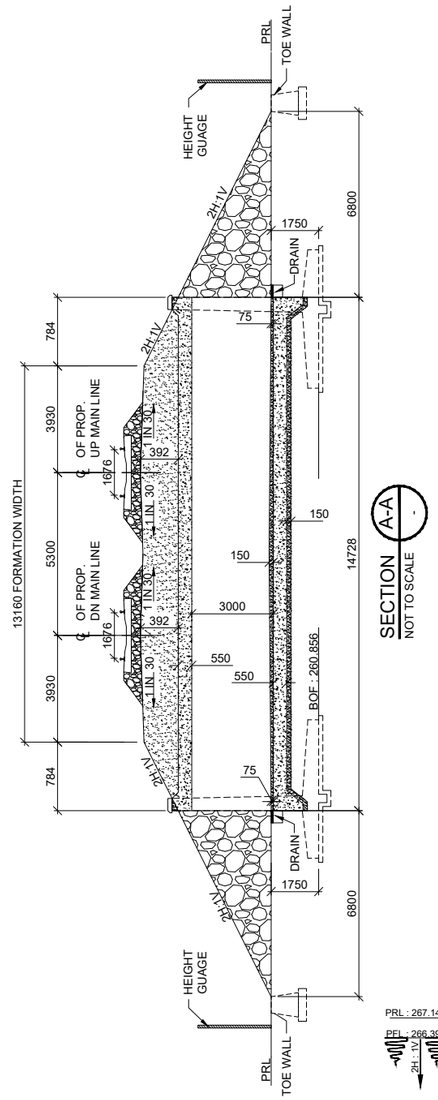
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01085_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



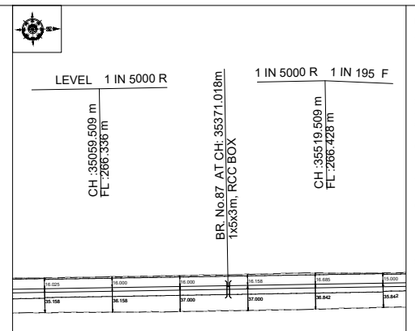
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



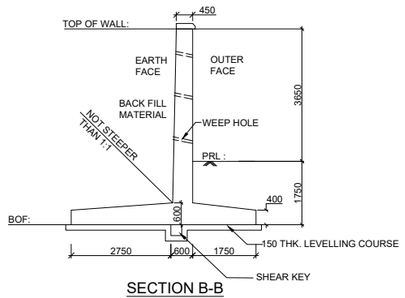
SECTION A-A

NOT TO SCALE



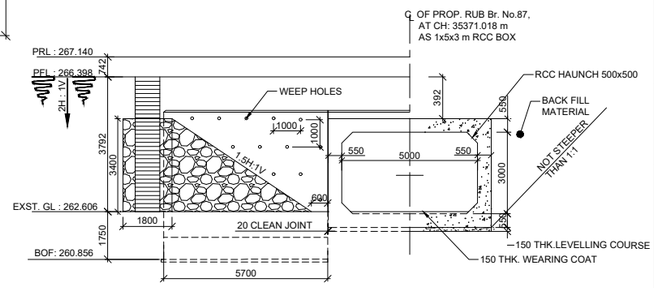
KEY PLAN

NOT TO SCALE



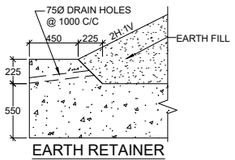
SECTION B-B

(NOT TO SCALE)



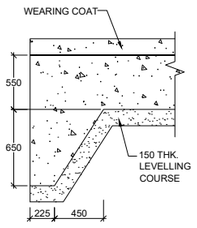
HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

NOTES :

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2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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8. EXPOSURE CONDITION- MODERATE.
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11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

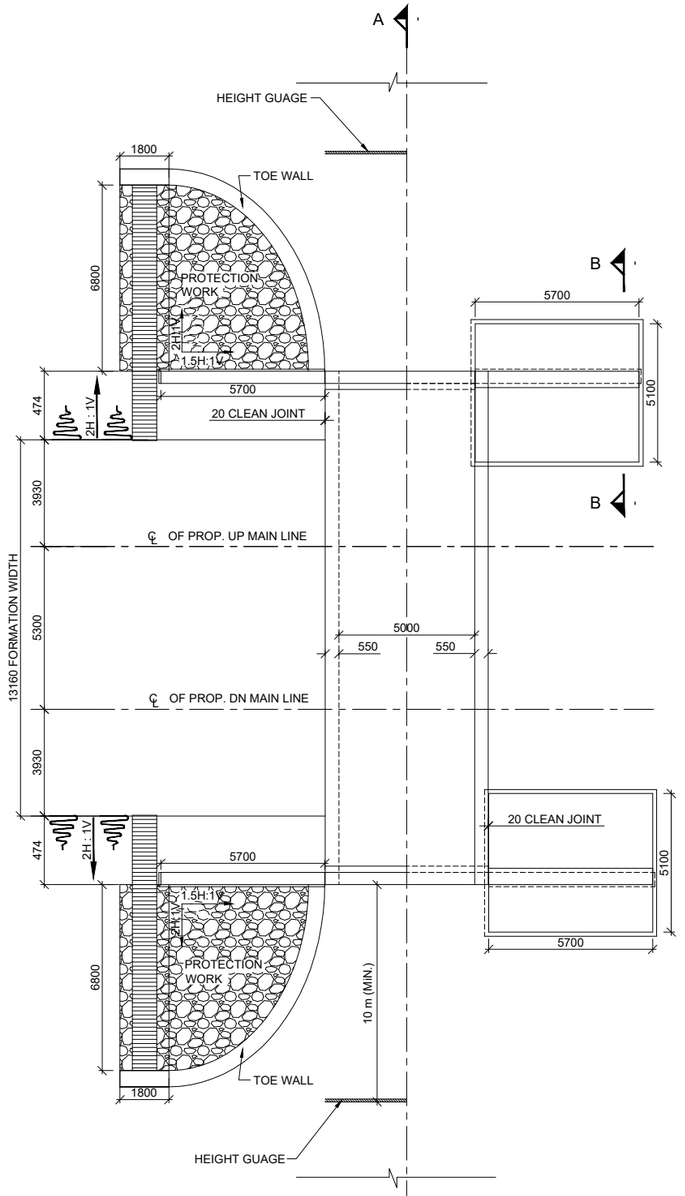
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 87 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 35371.018m

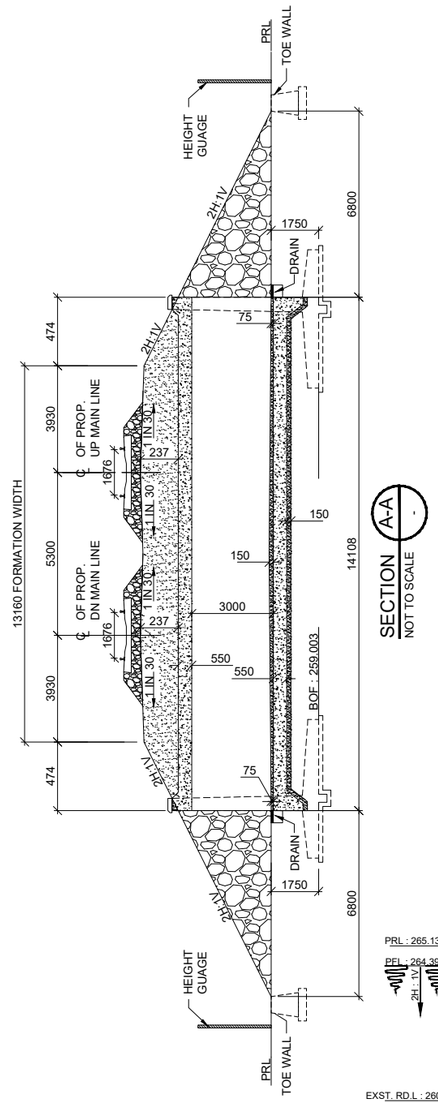
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-0087_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



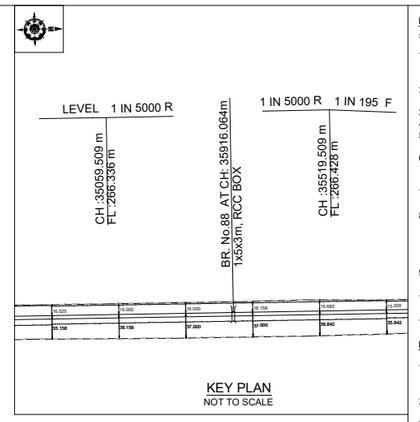
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



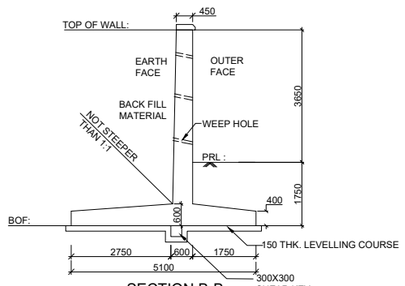
SECTION A-A

NOT TO SCALE



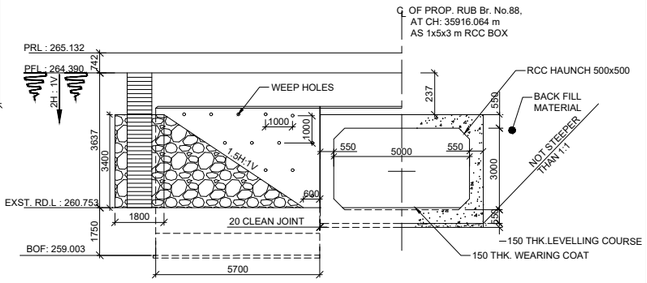
KEY PLAN

NOT TO SCALE



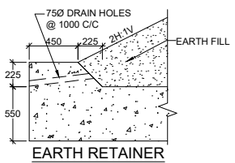
SECTION B-B

(NOT TO SCALE)



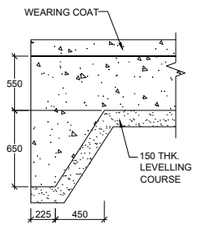
HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

NOTES :

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10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

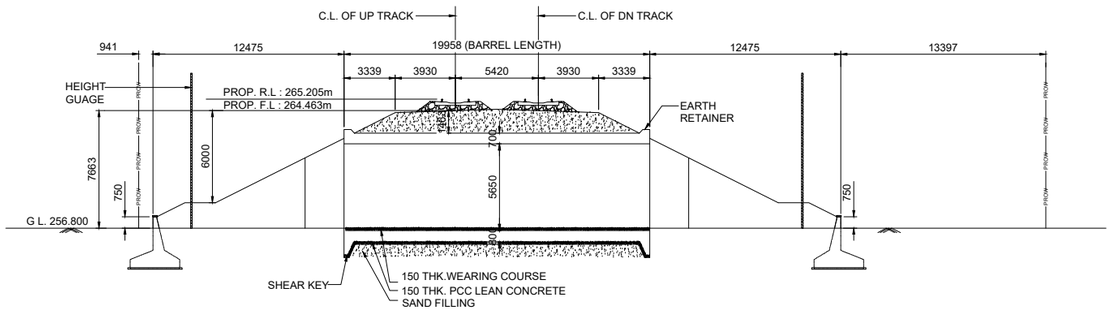
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

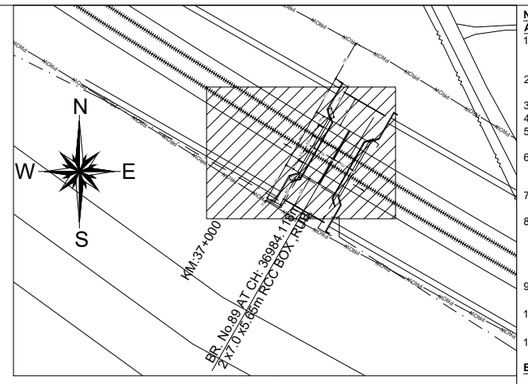
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 88 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 35916.064m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-0088_A1	1 OF 1

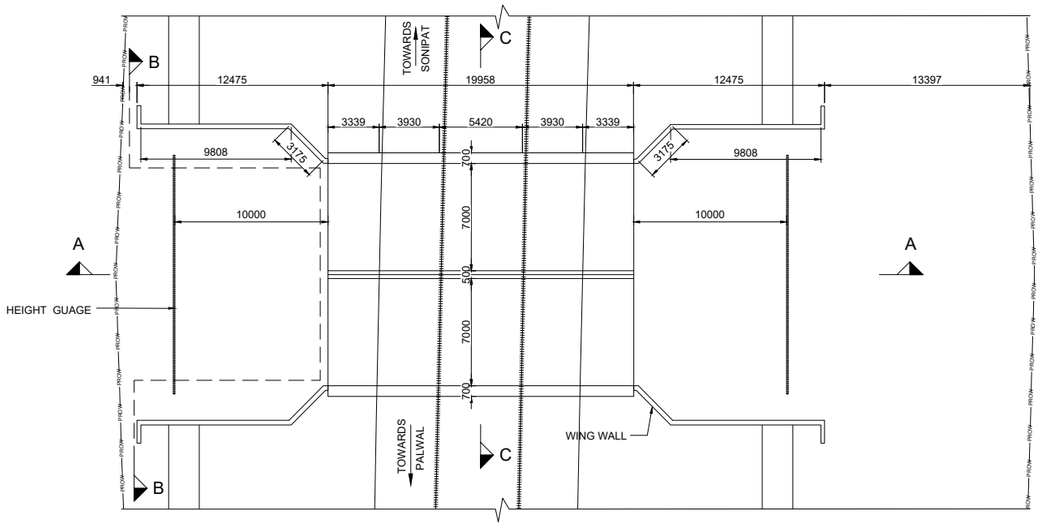
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



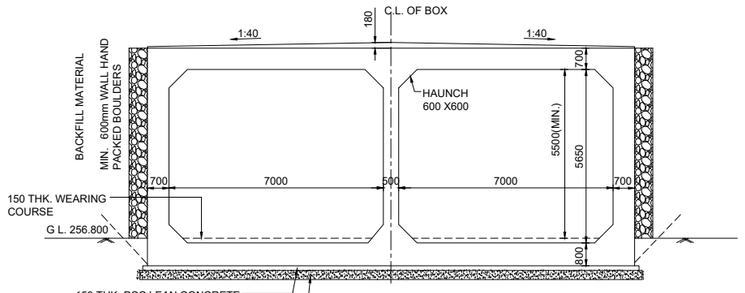
SECTIONAL ELEVATION AT A-A
SCALE 1:200



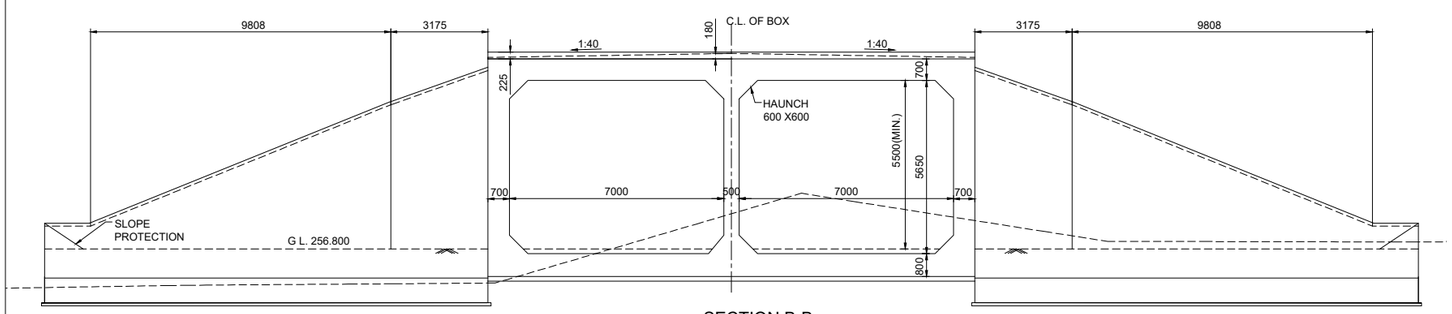
KEY PLAN
(NOT TO SCALE)



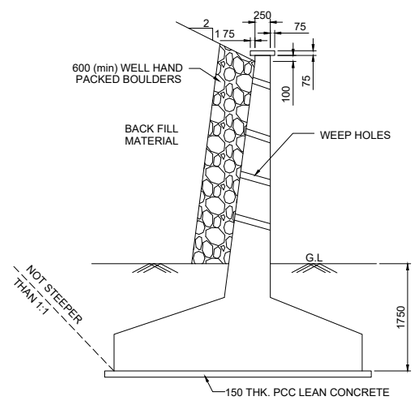
PLAN AT TOP
SCALE 1:200



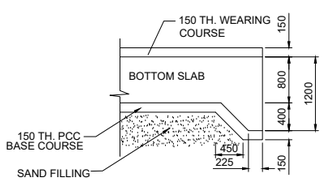
SECTION C-C
SCALE 1:100



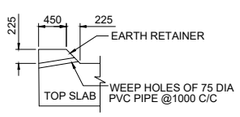
SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE REOKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

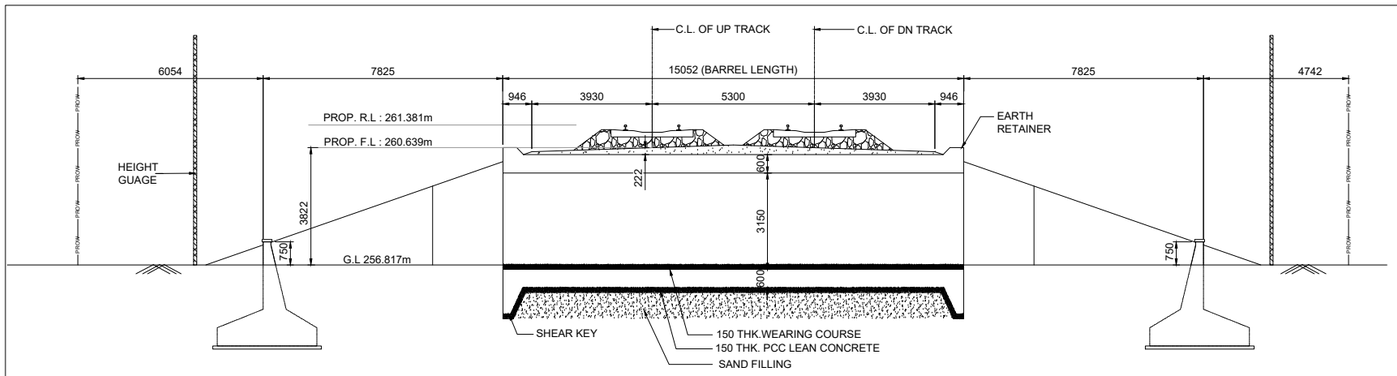
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 089 SPAN 2×7.0×5.65
RCC BOX AT CH: 36984.118

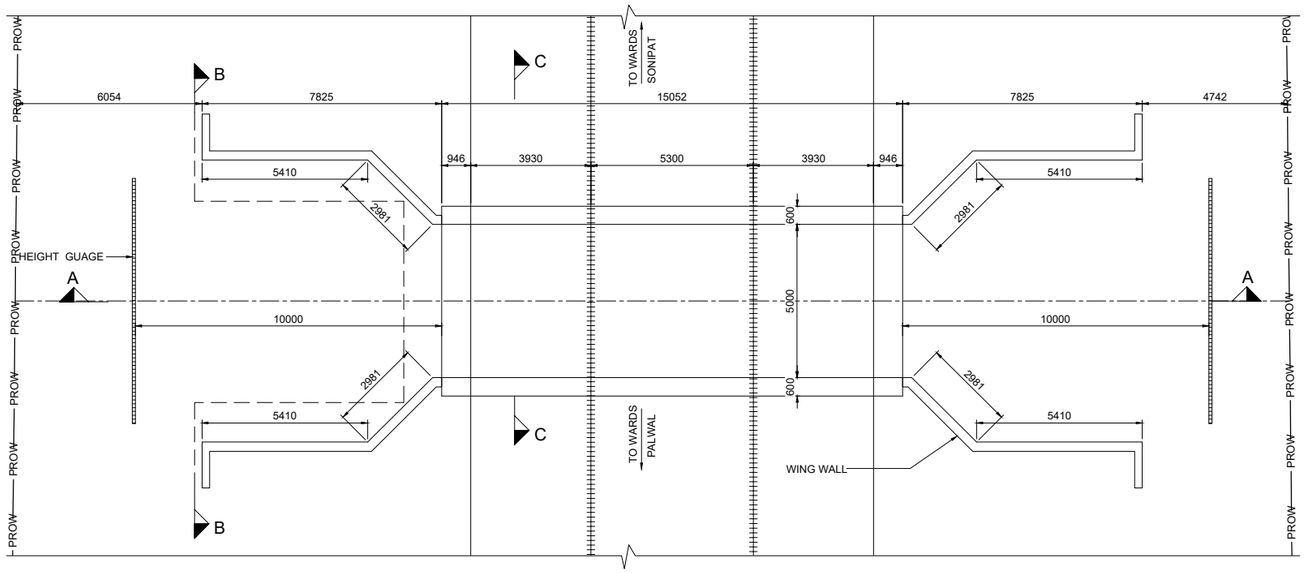
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01089_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



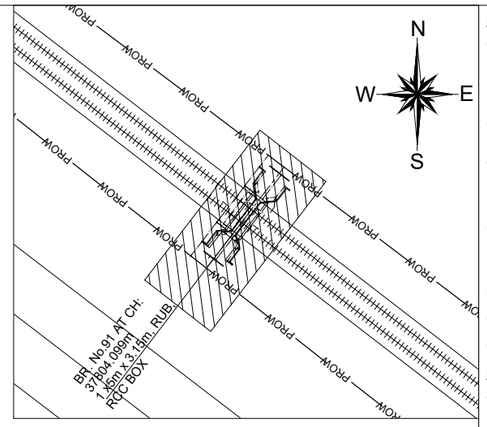
SECTIONAL ELEVATION AT A-A

SCALE 1:100



PLAN AT TOP

SCALE 1:100

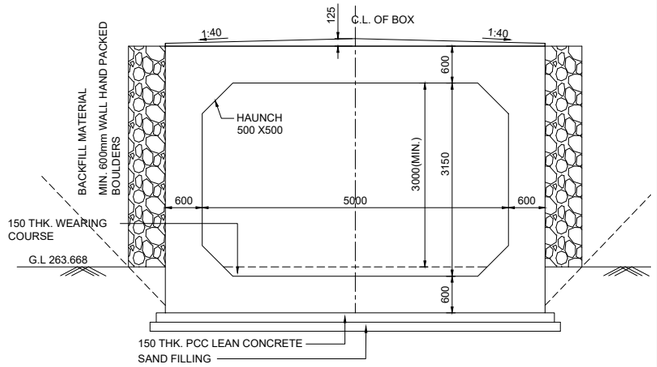


KEY PLAN

(NOT TO SCALE)

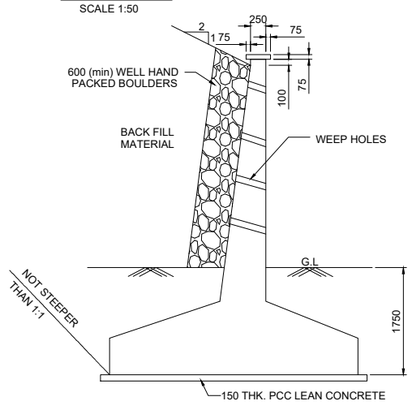
SECTION B-B

SCALE 1:50



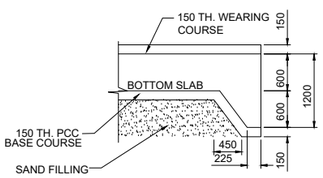
SECTION C-C

SCALE 1:50



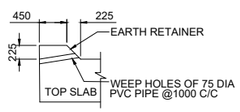
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

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1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
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15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

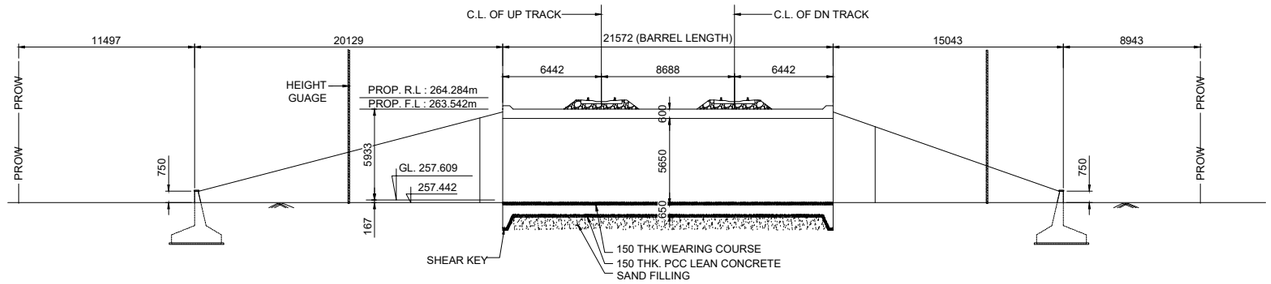
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 091 SPAN
1×5.0×3.15 RCC BOX AT CH: 37804.099

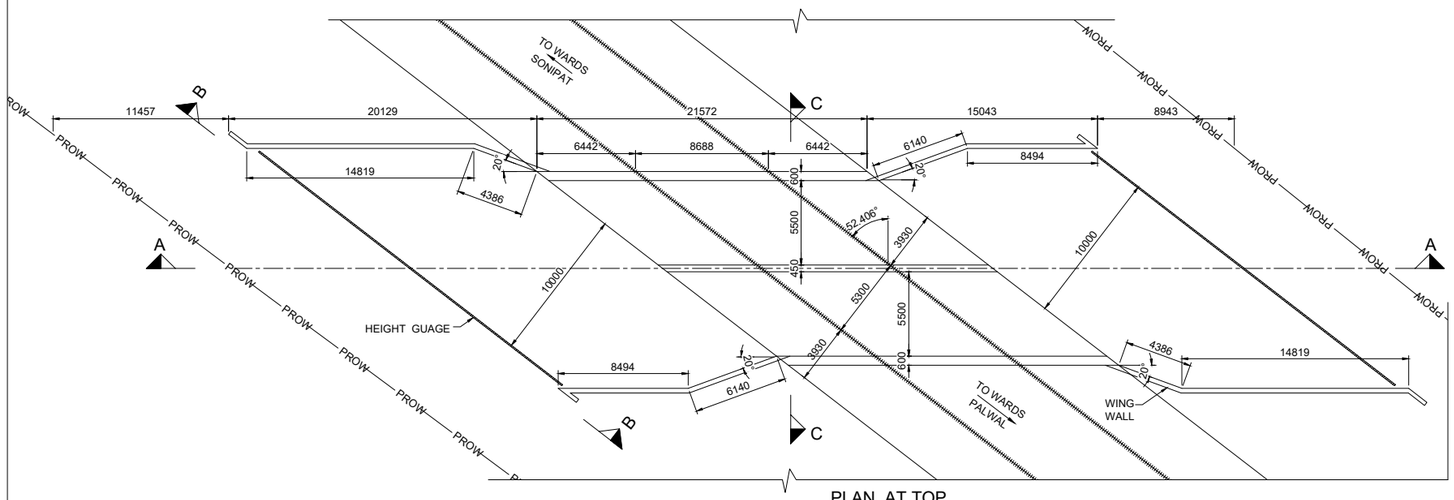
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01091_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



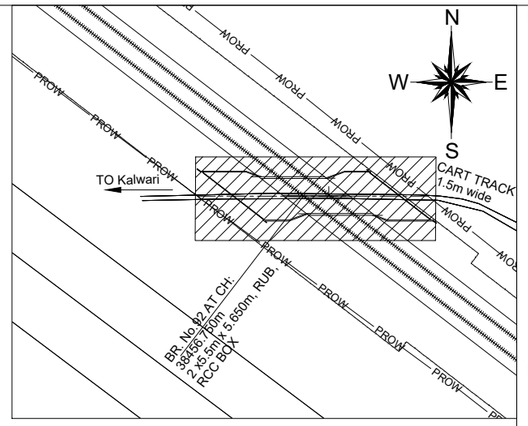
SECTIONAL ELEVATION AT A-A

SCALE 1:200



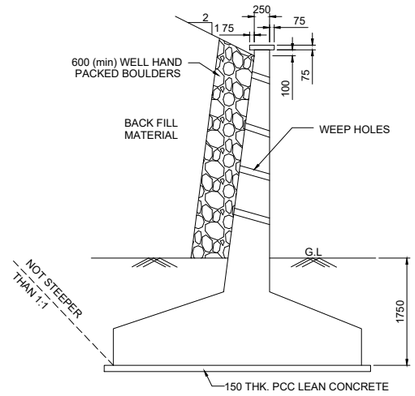
PLAN AT TOP

SCALE 1:200



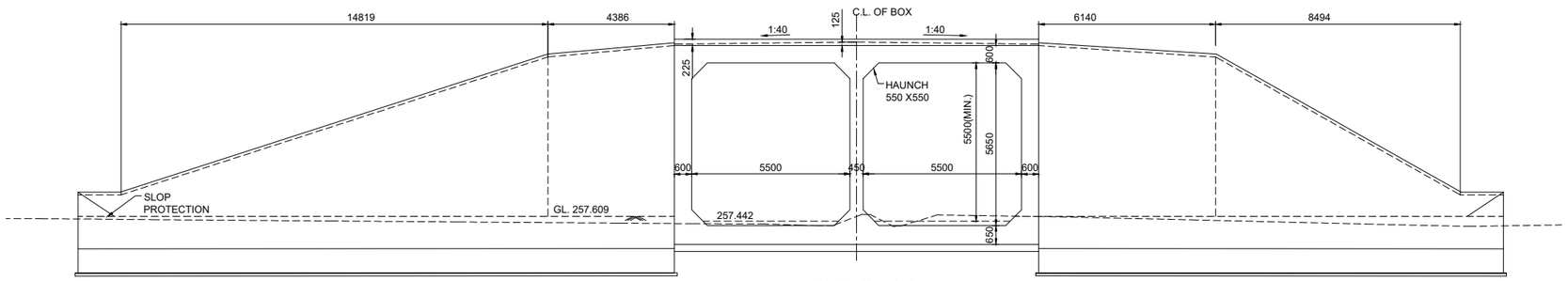
KEY PLAN

(NOT TO SCALE)



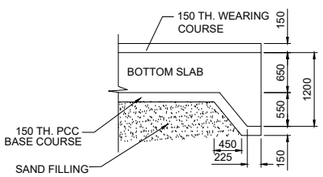
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



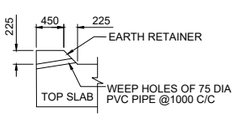
SECTION B-B

SCALE 1:100



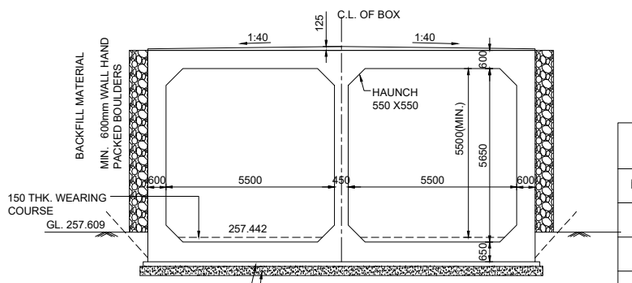
SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50



SECTION C-C

SCALE 1:100

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY THE HEIGHT OF

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

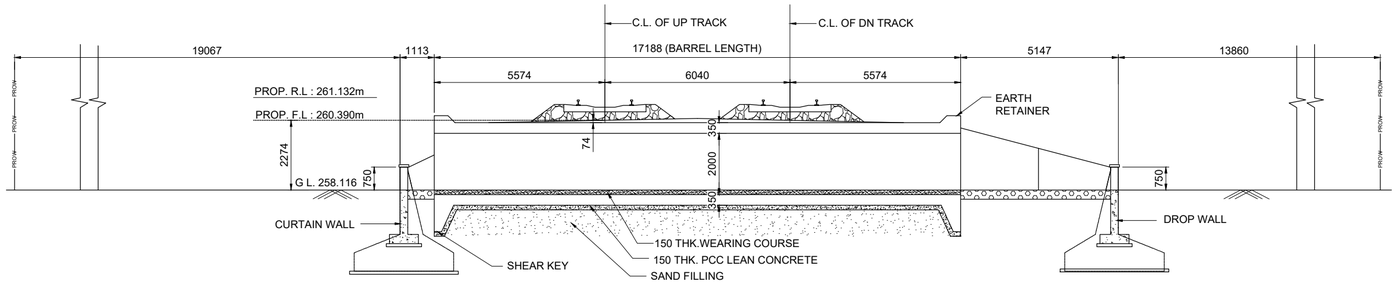
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 092 SPAN
2×5.5×5.650 RCC BOX AT CH: 38456.750

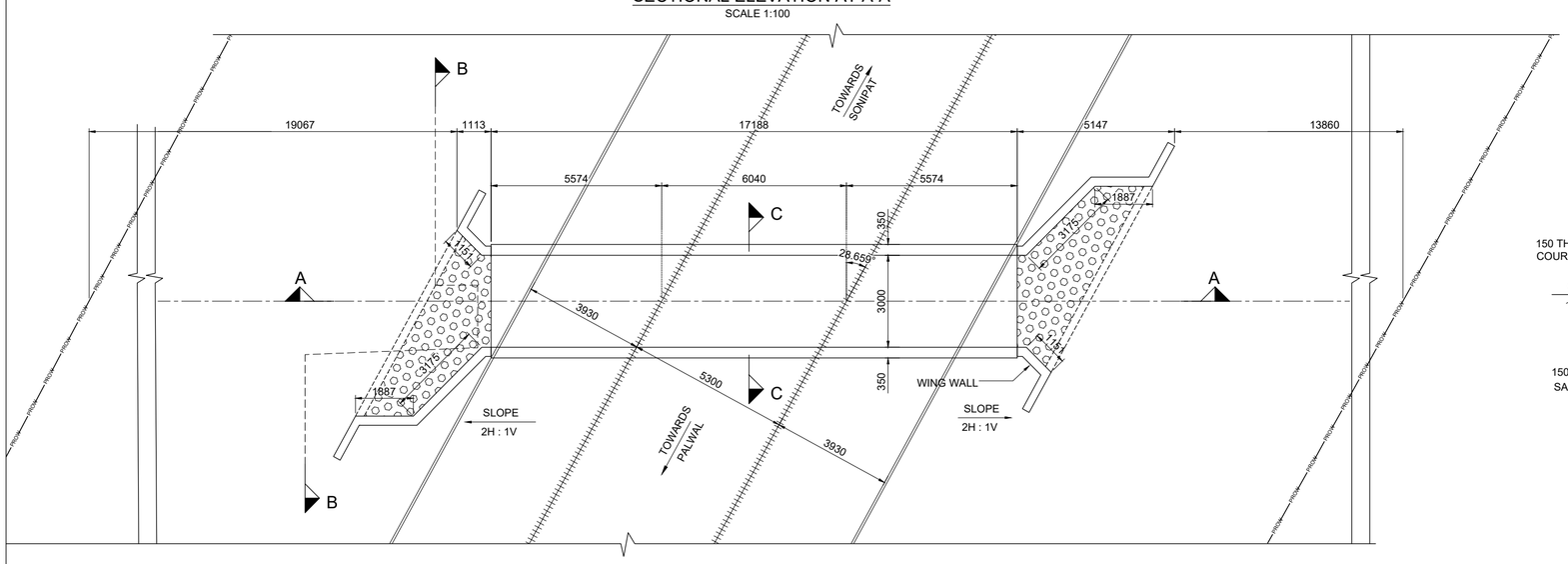
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01092_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



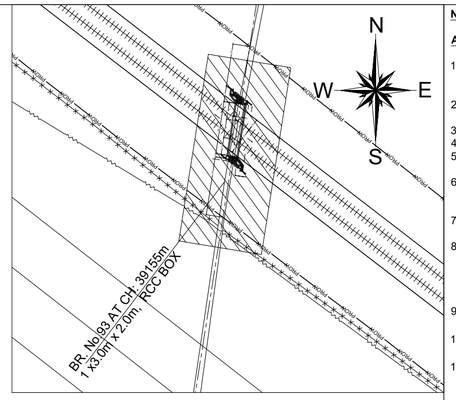
SECTIONAL ELEVATION AT A-A

SCALE 1:100



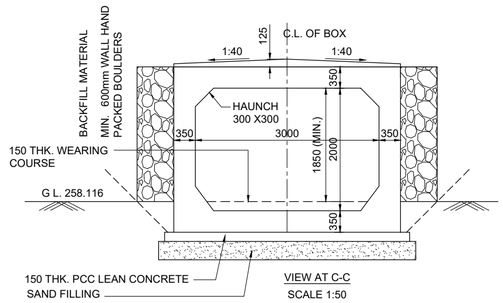
PLAN AT TOP

SCALE 1:100



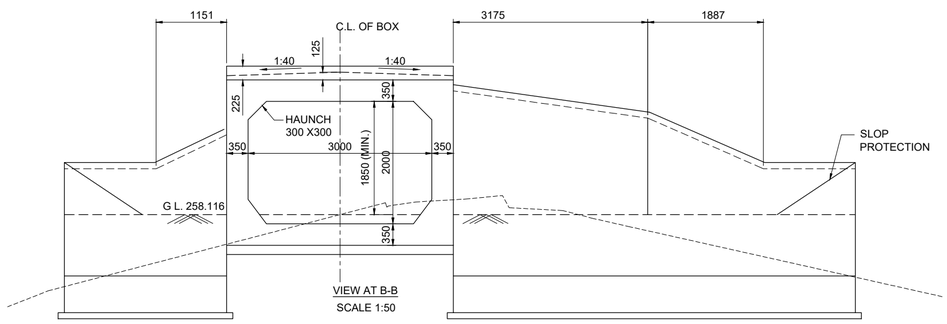
KEY PLAN

(NOT TO SCALE)



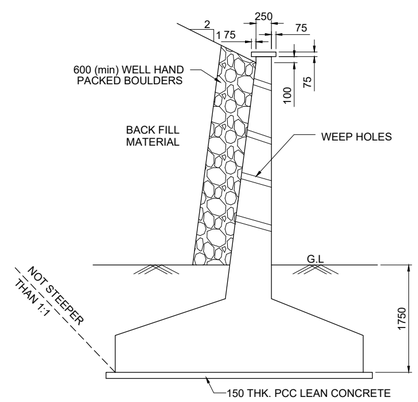
VIEW AT C-C

SCALE 1:50



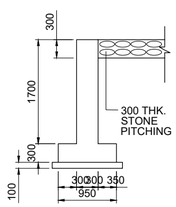
VIEW AT B-B

SCALE 1:50



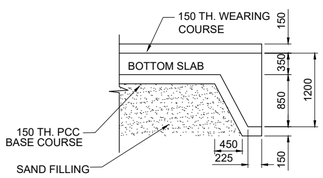
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



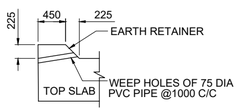
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

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CONSULTANT:

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RITES Limited in consortium with SMEC International Pty. Ltd.

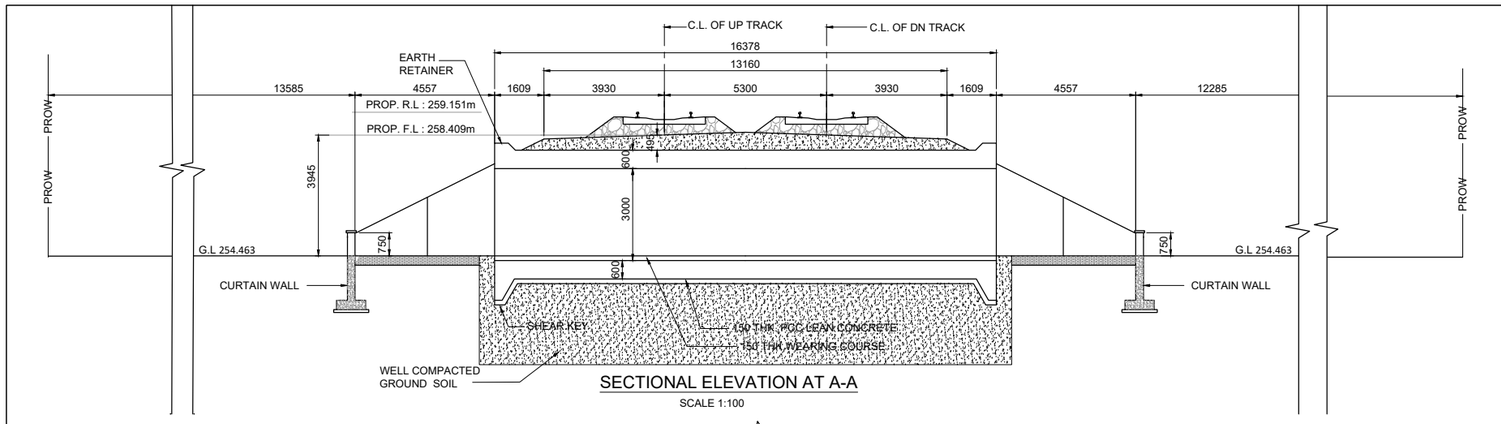
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 093 SPAN 1×3.0×2.0 RCC BOX AT CH: 39155

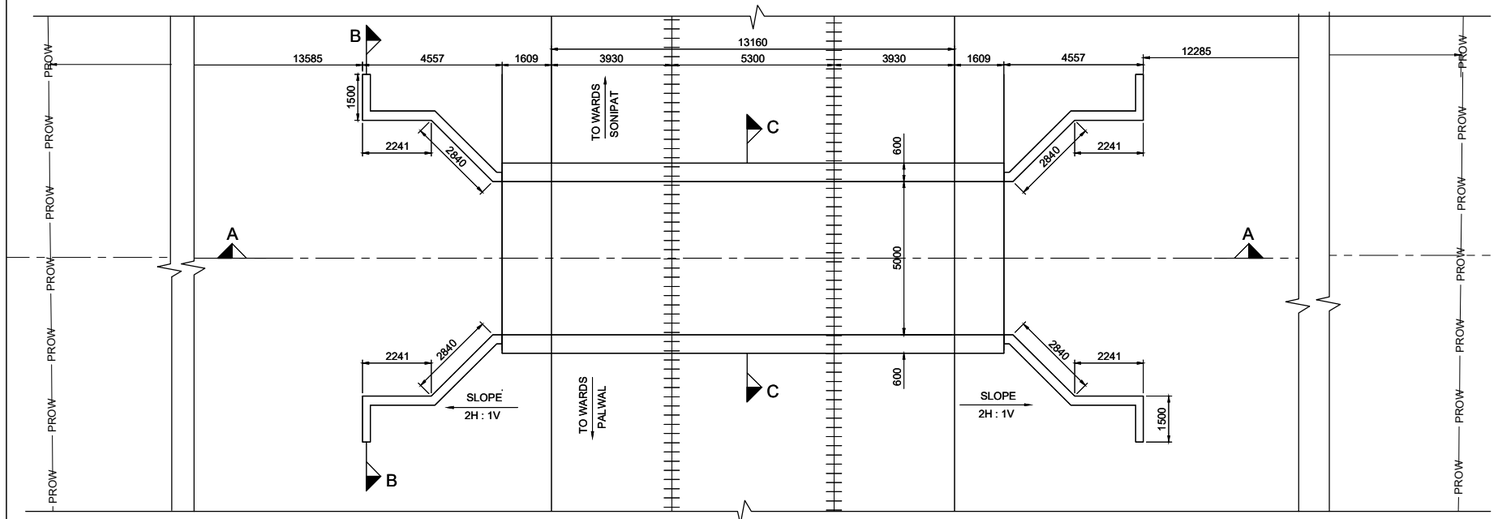
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01093_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



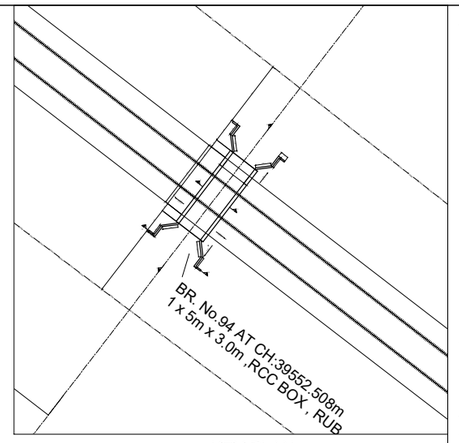
SECTIONAL ELEVATION AT A-A

SCALE 1:100



PLAN AT TOP

SCALE 1:100

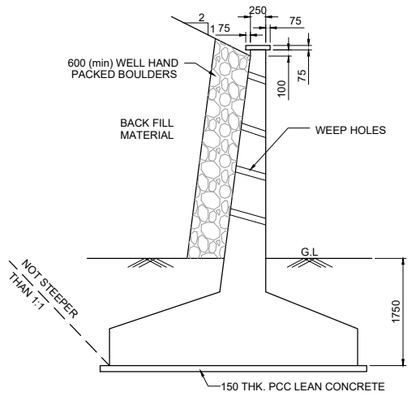


KEY PLAN

(NOT TO SCALE)

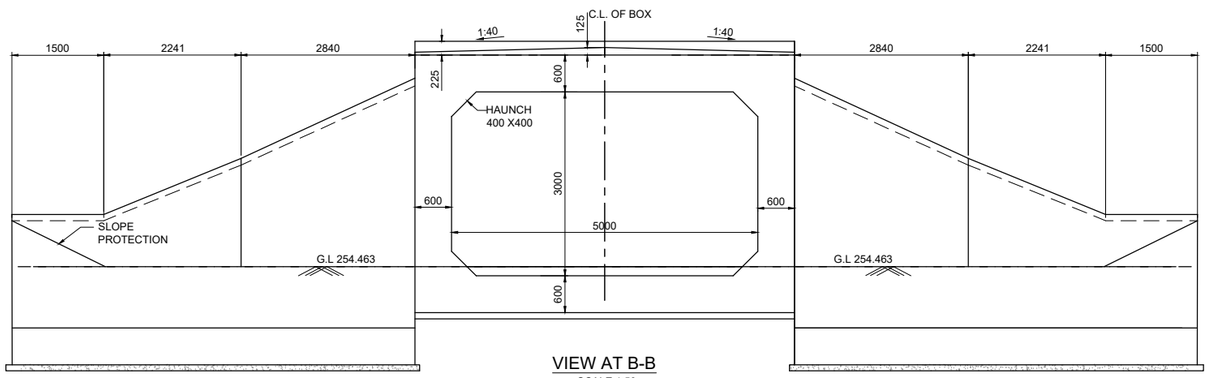
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL



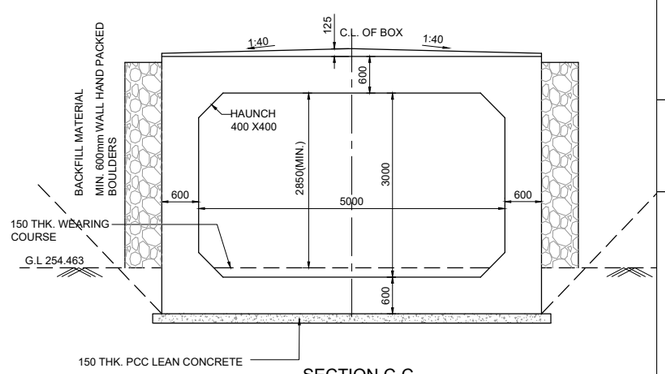
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



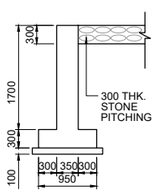
VIEW AT B-B

SCALE 1:50



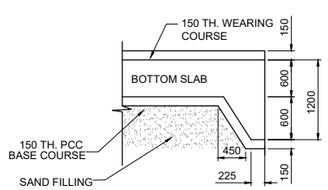
SECTION C-C

SCALE 1:50



DROP / CURTAIN WALL DETAILS

SCALE 1:50



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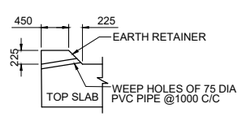

EARTH RETAINER

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CONSULTANT:

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RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

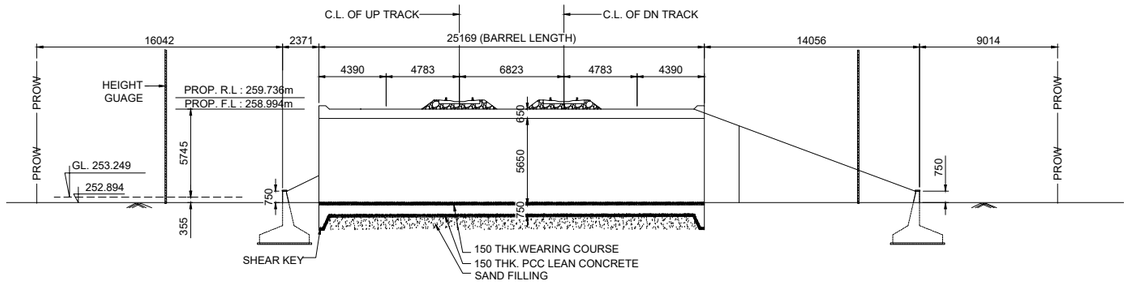
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR ROAD UNDER BRIDGE NO. 094 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 39552.508

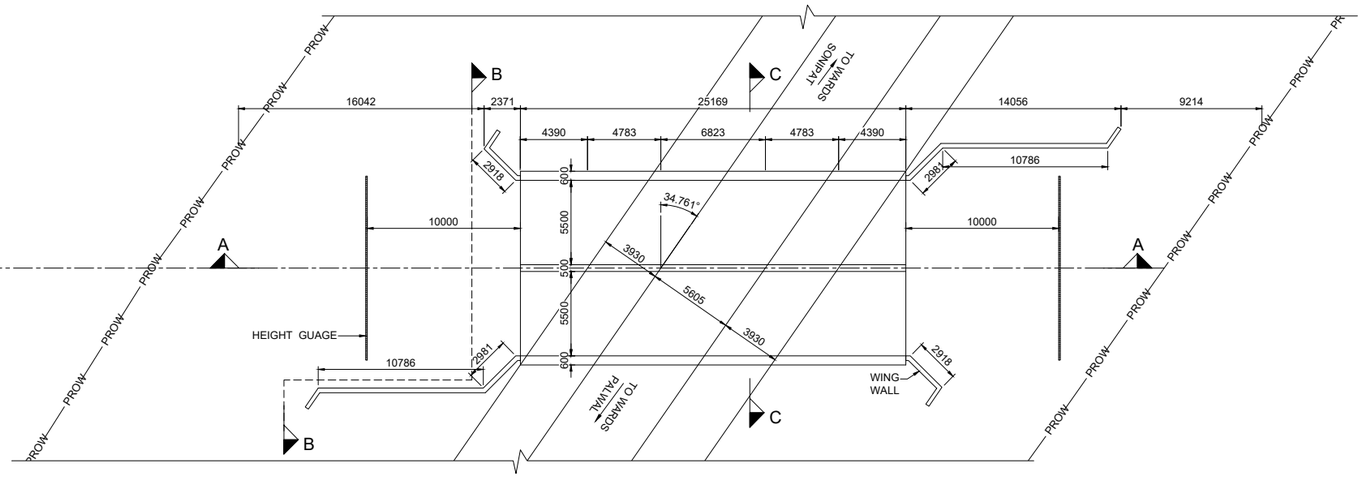
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01094_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



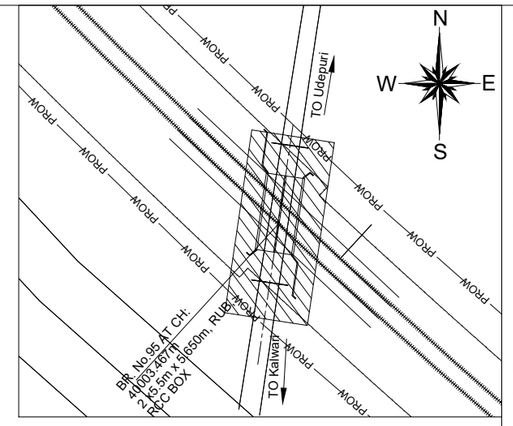
SECTIONAL ELEVATION AT A-A

SCALE 1:200



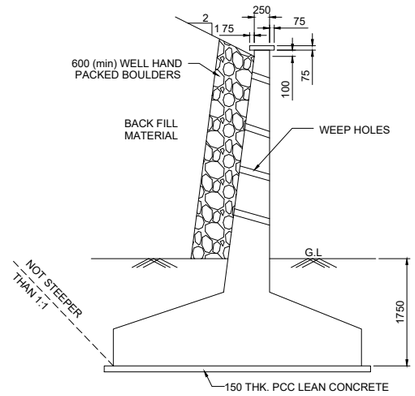
PLAN AT TOP

SCALE 1:200



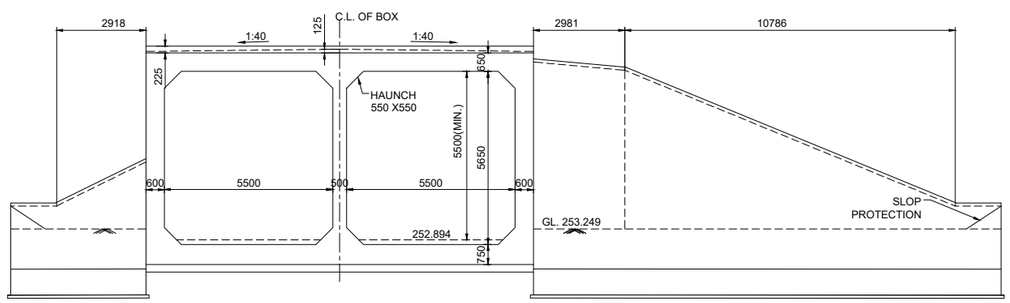
KEY PLAN

(NOT TO SCALE)



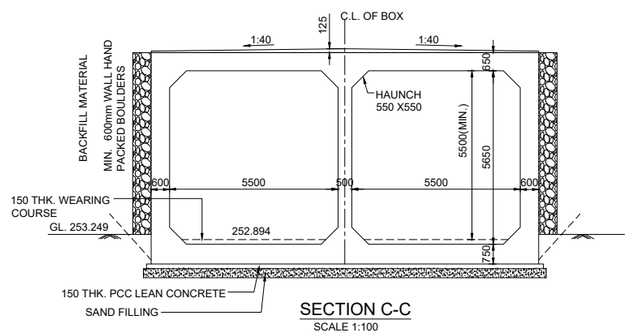
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



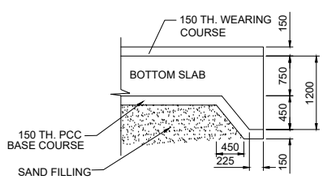
SECTION B-B

SCALE 1:100



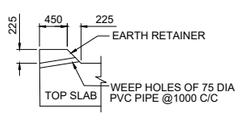
SECTION C-C

SCALE 1:100



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY THE HEIGHT OF

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

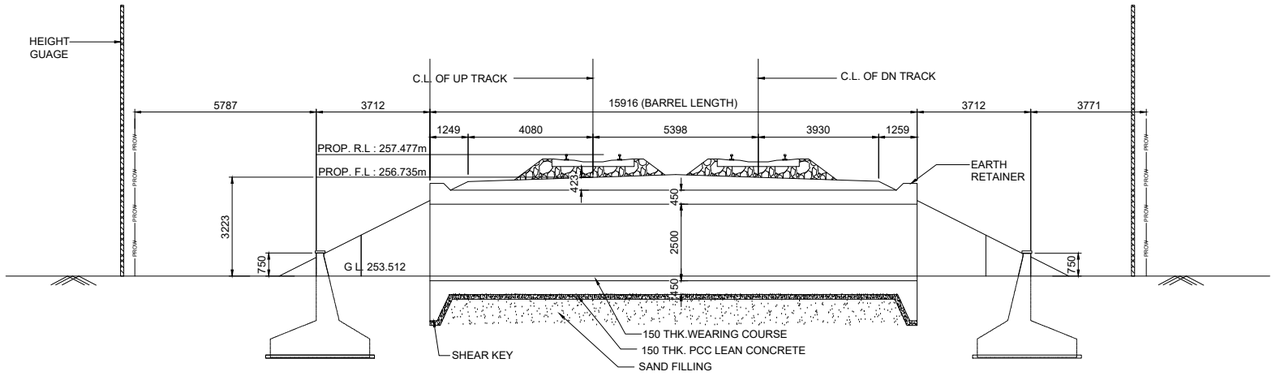
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 095 SPAN 2×5.5×5.650 RCC BOX AT CH: 40003.467

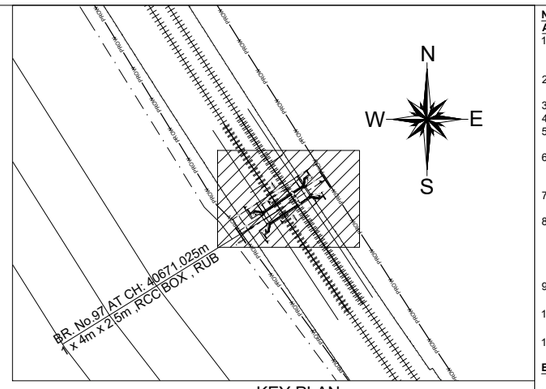
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01095_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



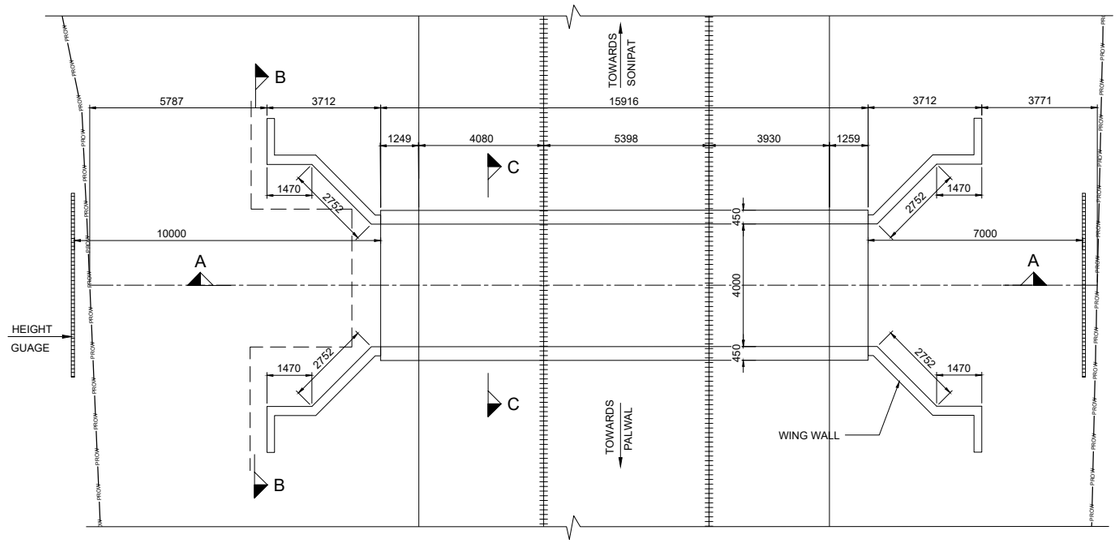
SECTIONAL ELEVATION AT A-A

SCALE 1:100



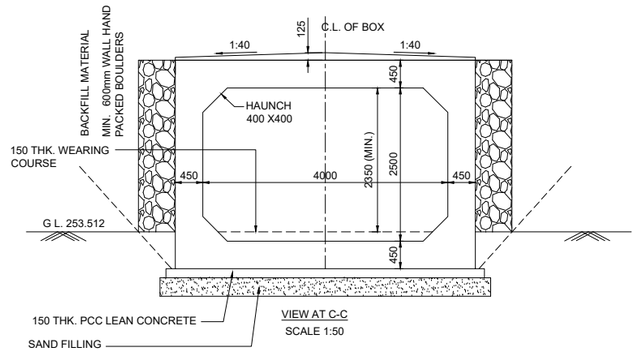
KEY PLAN

(NOT TO SCALE)



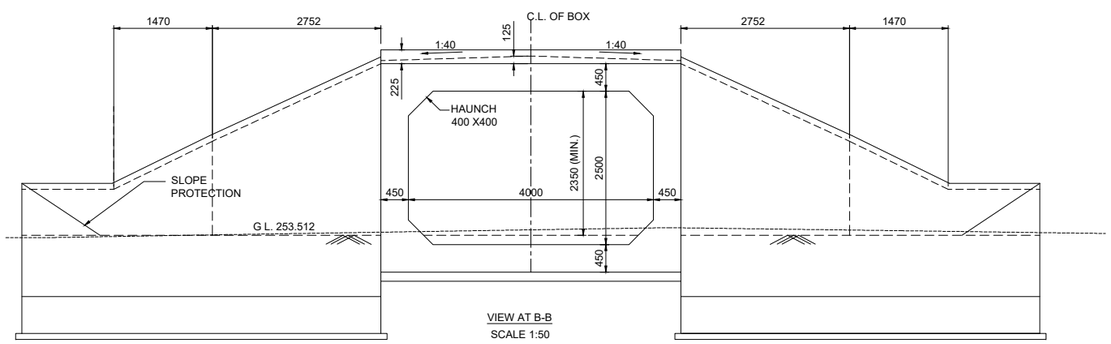
PLAN AT TOP

SCALE 1:100



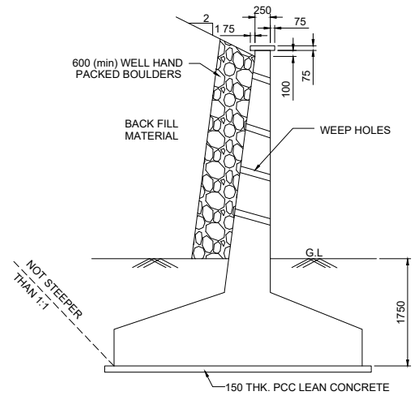
VIEW AT C-C

SCALE 1:50



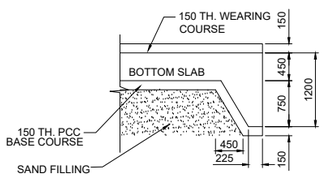
VIEW AT B-B

SCALE 1:50



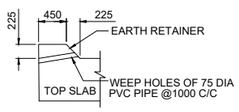
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE REOKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

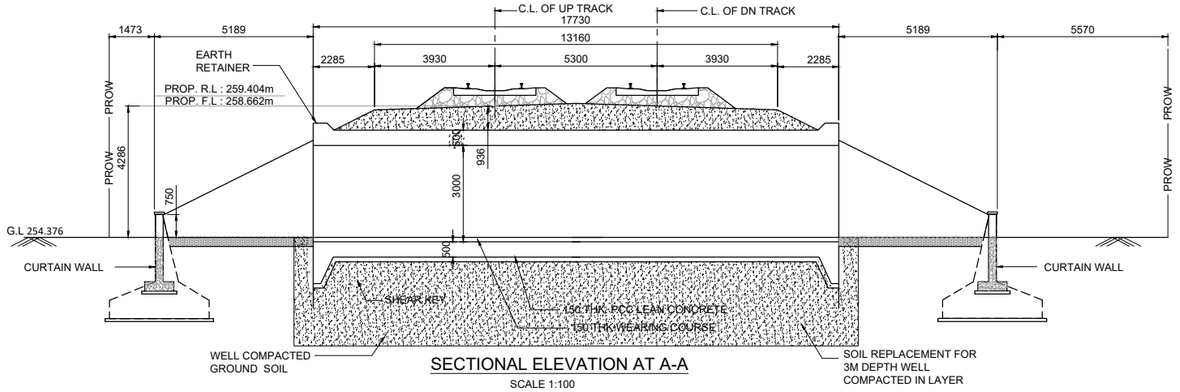
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 097 SPAN
1×4.0×2.5 RCC BOX AT CH: 40671.025

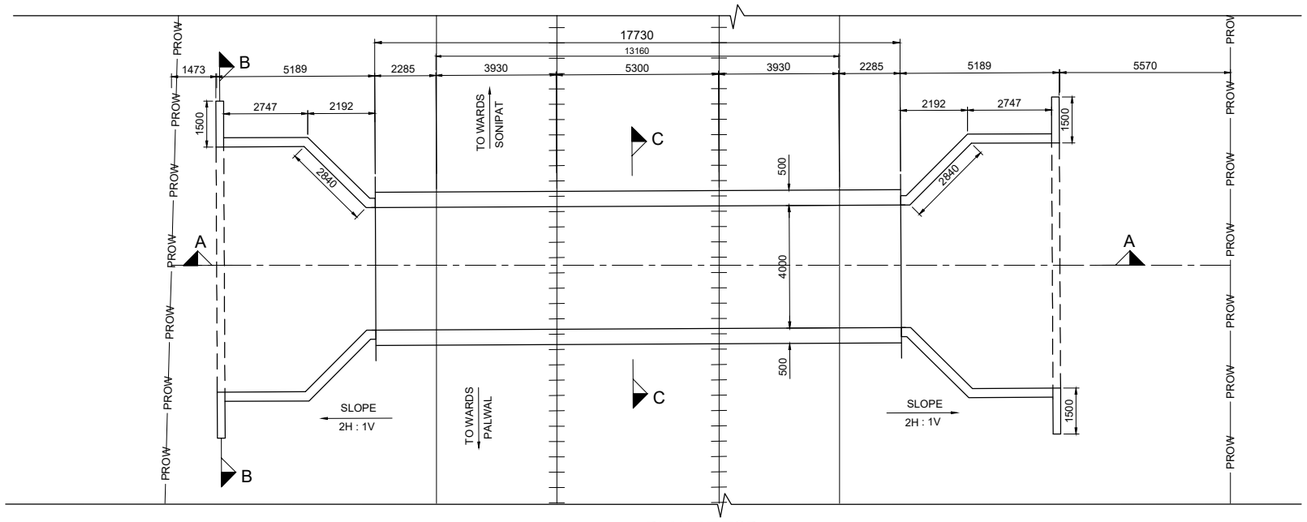
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01097_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



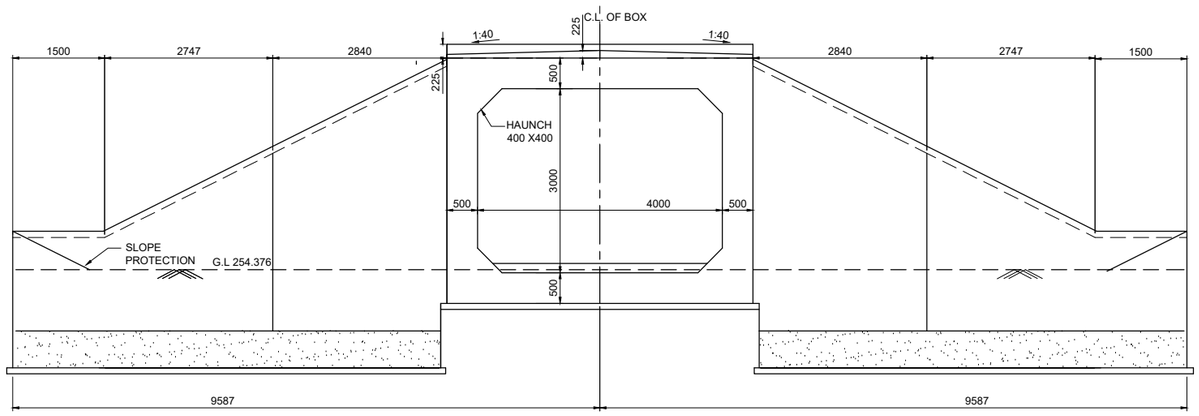
SECTIONAL ELEVATION AT A-A

SCALE 1:100



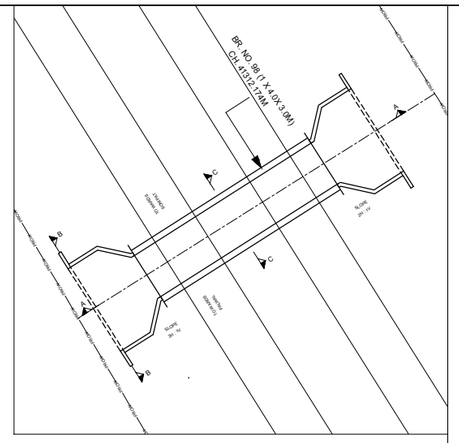
PLAN AT TOP

SCALE 1:100



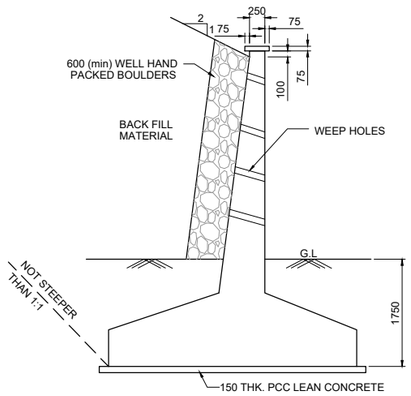
VIEW AT B-B

SCALE 1:50



KEY PLAN

(NOT TO SCALE)

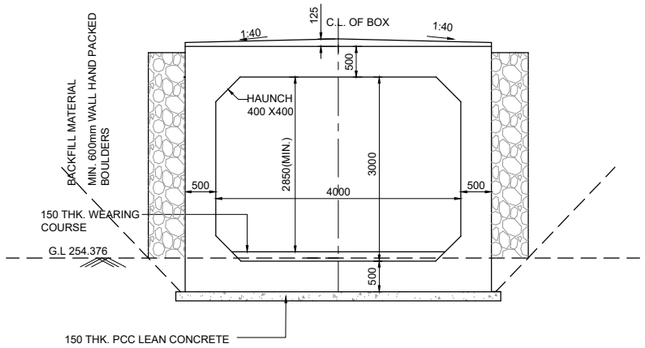


TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

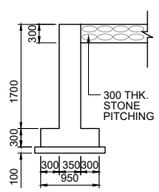
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



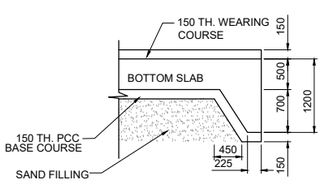
SECTION C-C

SCALE 1:50



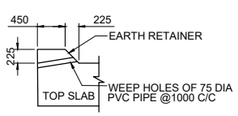
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
16. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
17. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
18. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
19. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

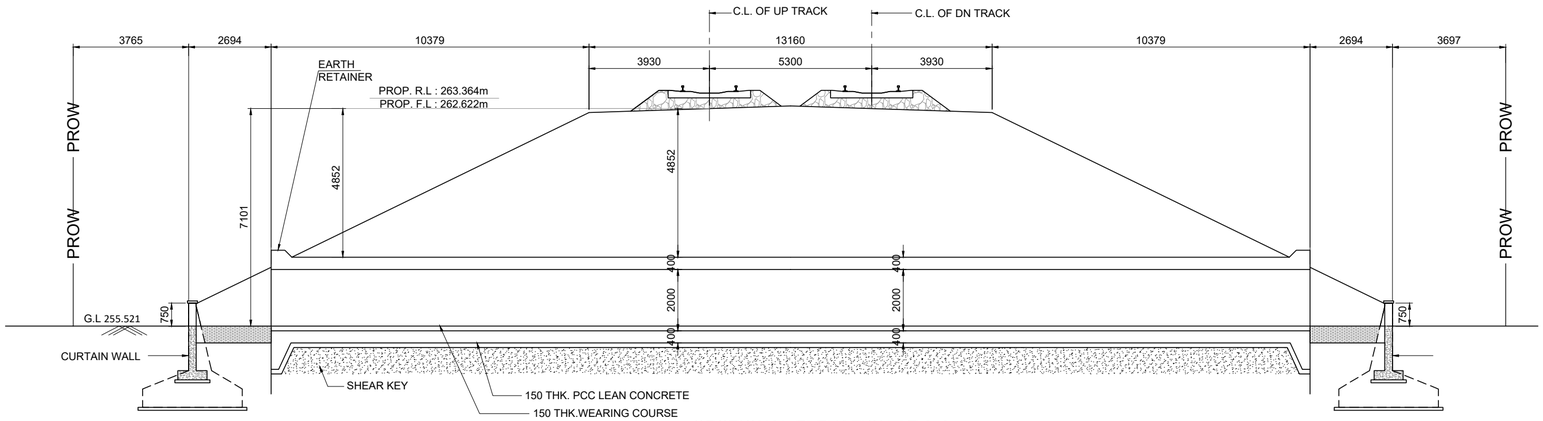
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 098 SPAN 1.0X4.0X3.0 RCC BOX AT CH: 41312.174

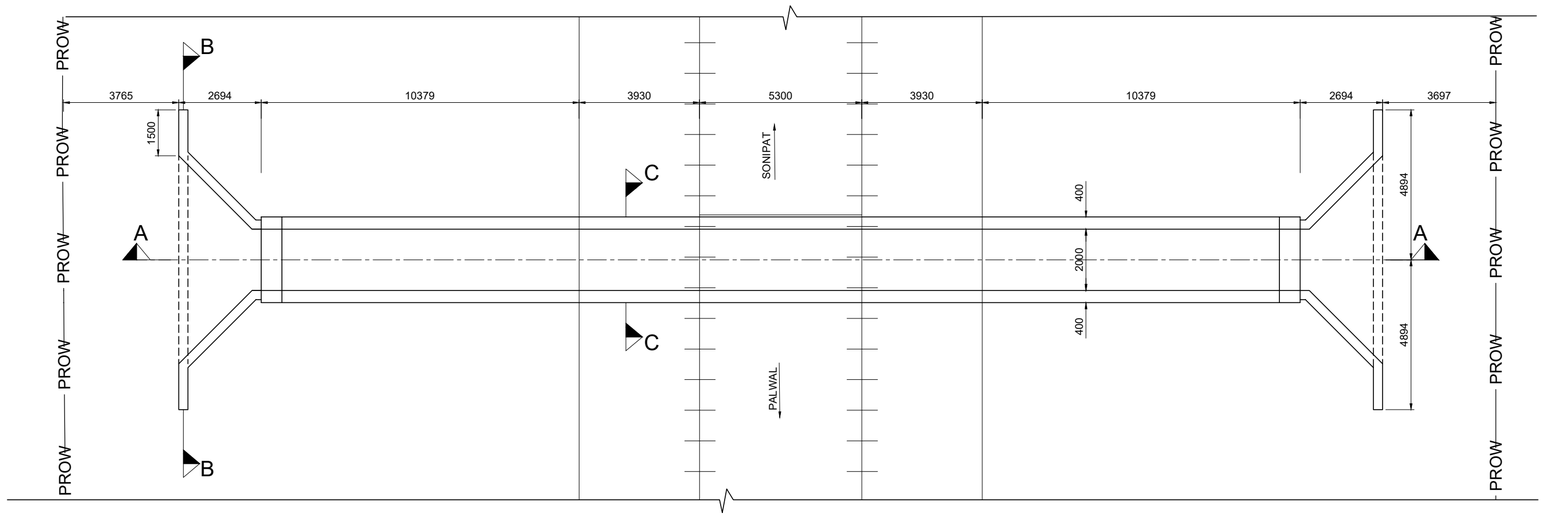
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01098_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



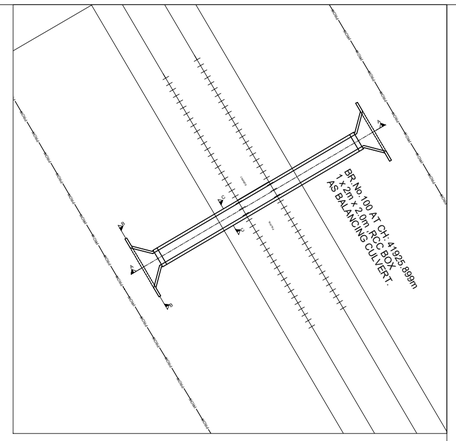
SECTIONAL ELEVATION AT A-A

SCALE 1:100



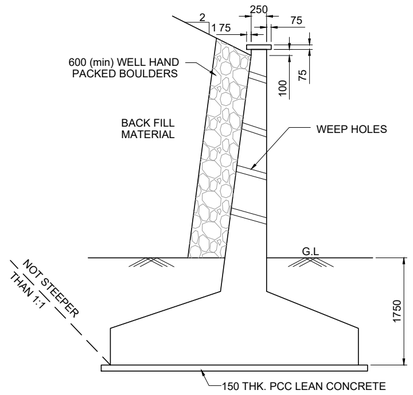
PLAN AT TOP

SCALE 1:100



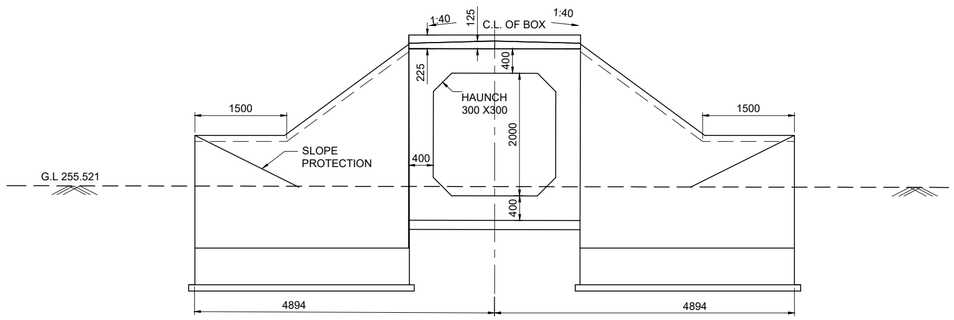
KEY PLAN

(NOT TO SCALE)



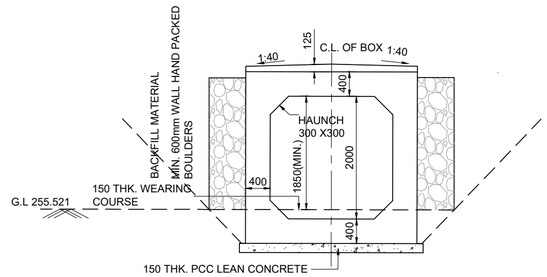
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



VIEW AT B-B

SCALE 1:50

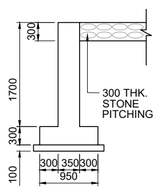


SECTION C-C

SCALE 1:50

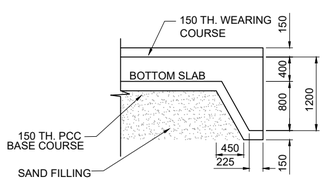
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



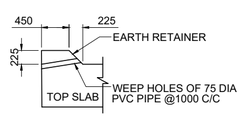
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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    GRADE OF CONCRETE :
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PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

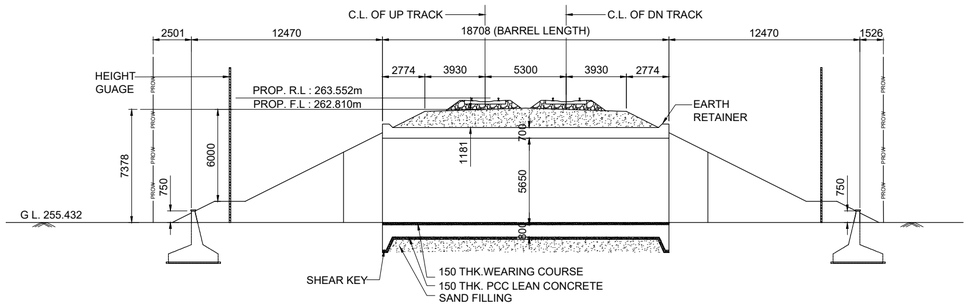
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO. 100
SPAN 1.0X2.0X2.0 RCC BOX AT CH: 41925.899

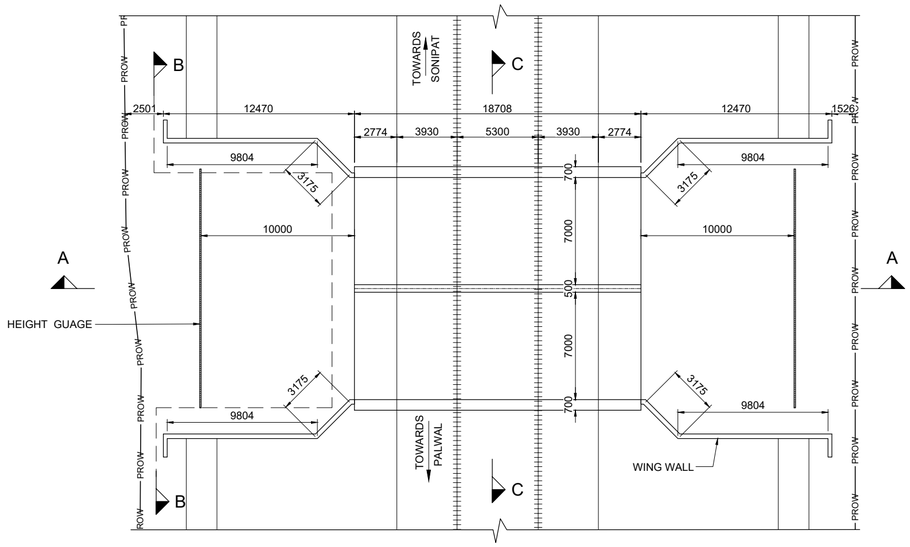
DRG. NO.	SHEET NO.
GC-HRIDC-C2-3-DRW-BRD-GAD-01100_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



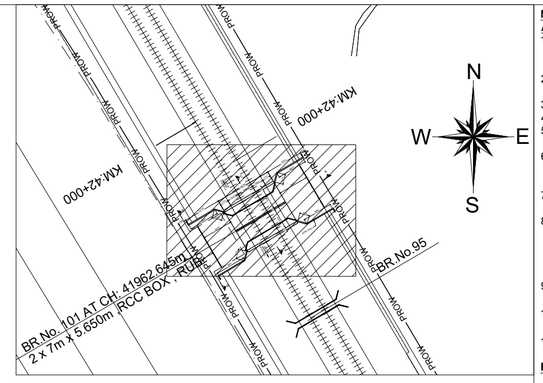
SECTIONAL ELEVATION AT A-A

SCALE 1:200



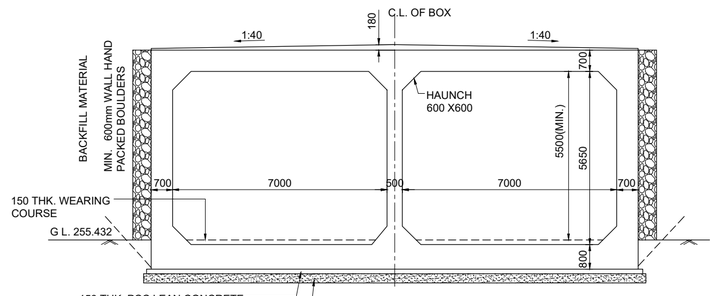
PLAN AT TOP

SCALE 1:200



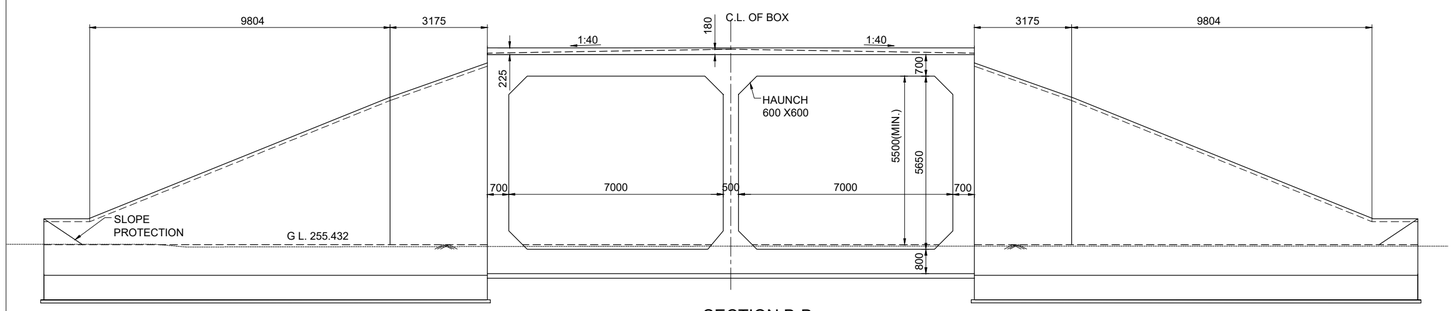
KEY PLAN

(NOT TO SCALE)



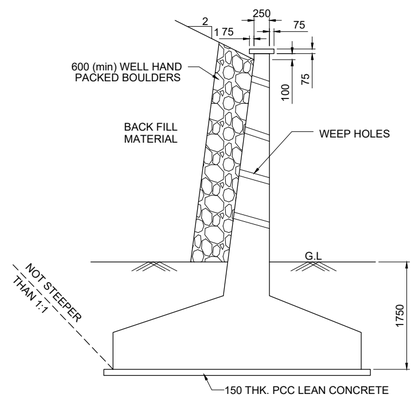
SECTION C-C

SCALE 1:100



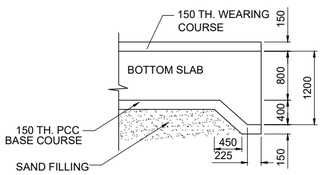
SECTION B-B

SCALE 1:100



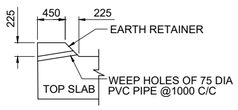
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

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15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

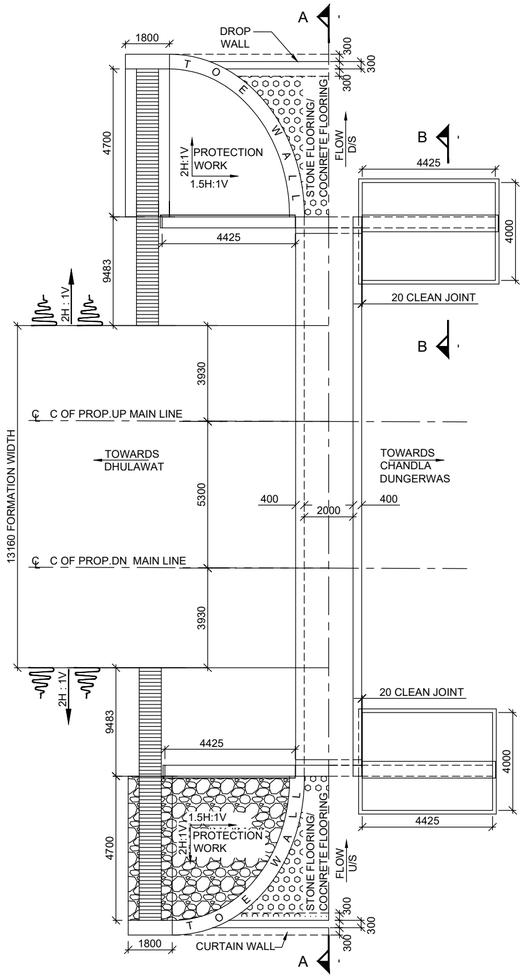
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 101 SPAN
2×7.0×5.650 RCC BOX AT CH: 41962.645

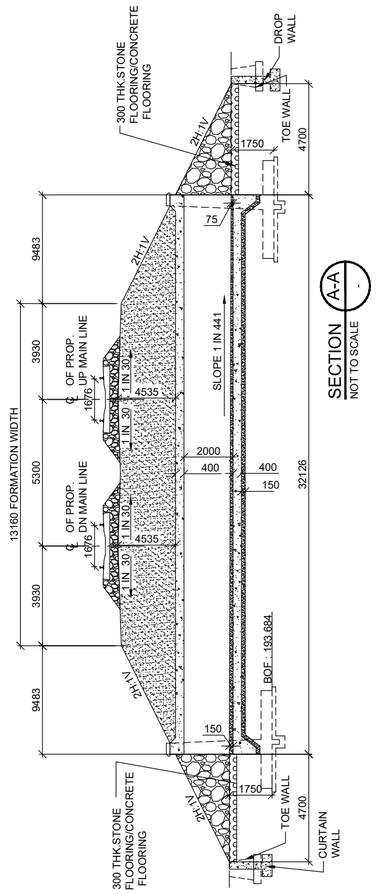
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01101_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



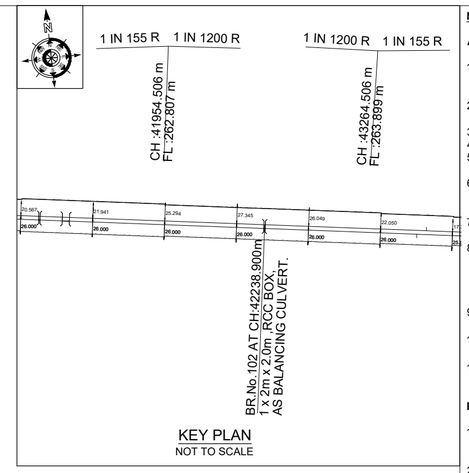
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



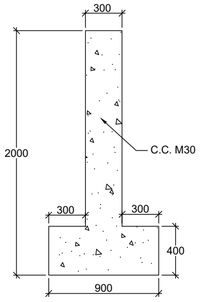
SECTION A-A

NOT TO SCALE



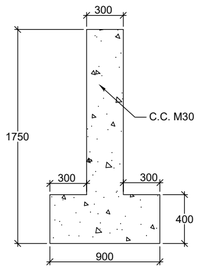
KEY PLAN

NOT TO SCALE



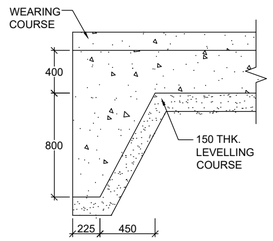
DROP WALL

(NOT TO SCALE)



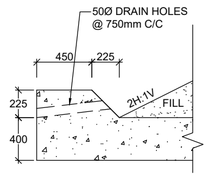
CURTAIN WALL

(NOT TO SCALE)



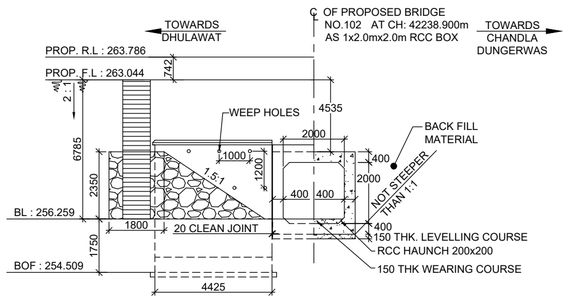
SHEAR KEY

(NOT TO SCALE)



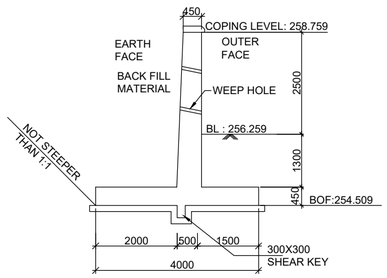
BALLAST RETAINER

(NOT TO SCALE)



HALF ELEVATION HALF SECTION

NOT TO SCALE



SECTION B-B

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

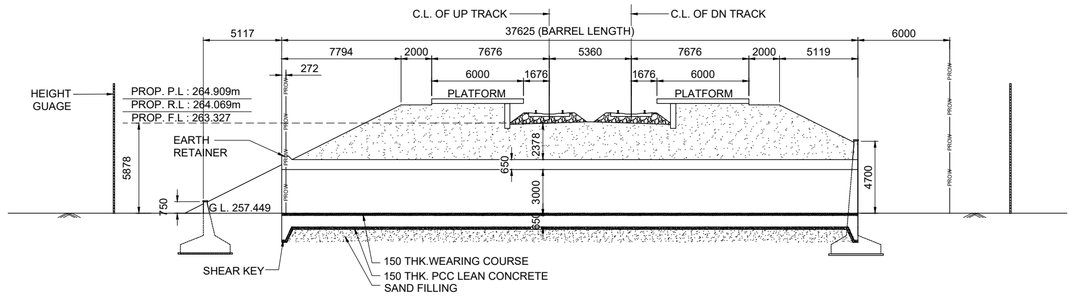
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 102 SPAN 1.0X2.0X2.0 RCC BOX AT CH: 42238.900m

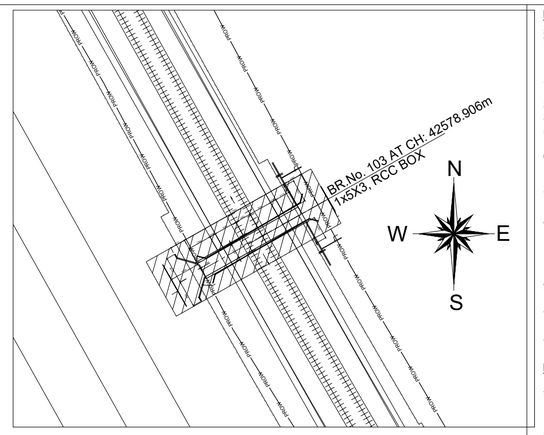
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01102_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



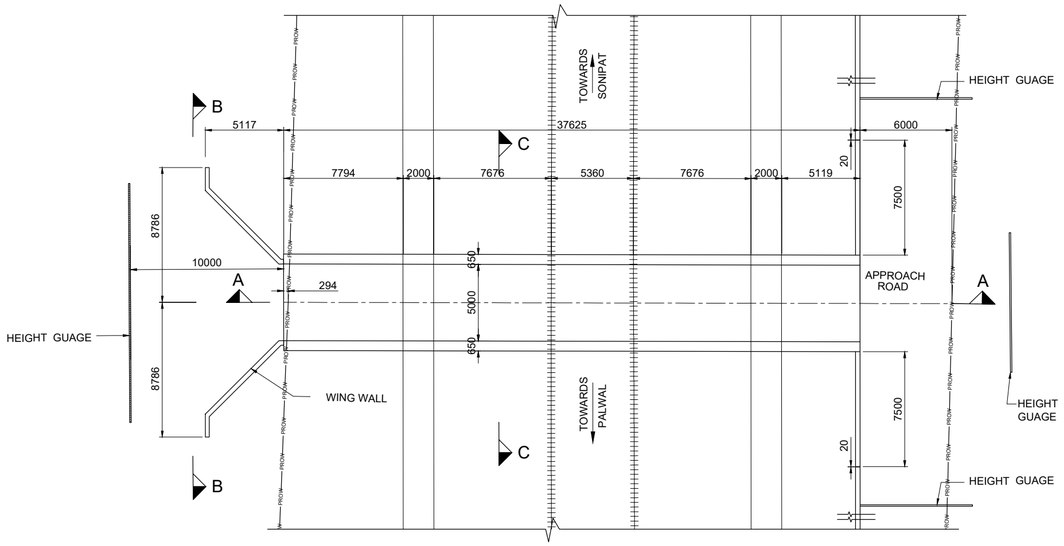
SECTIONAL ELEVATION AT A-A

SCALE 1:200



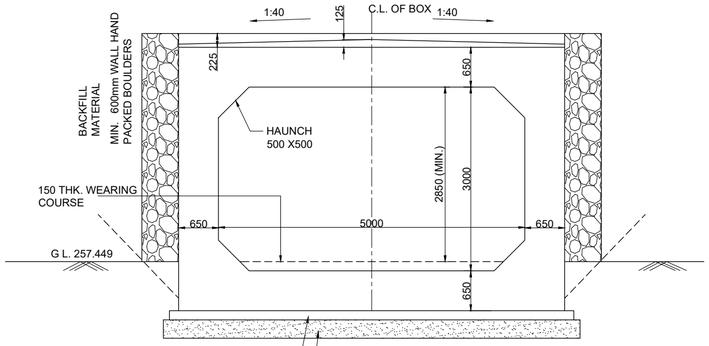
KEY PLAN

(NOT TO SCALE)



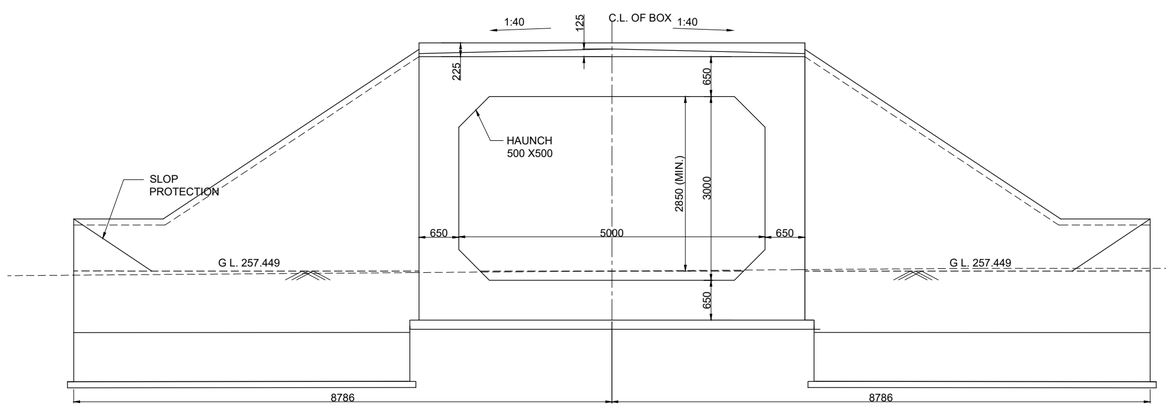
PLAN AT TOP

SCALE 1:200



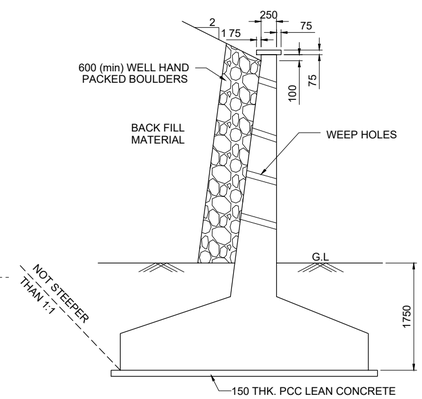
SECTION C-C

SCALE 1:50



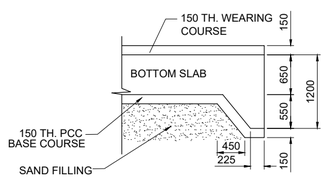
SECTION B-B

SCALE 1:50



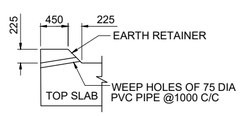
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

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13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

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RITES THE INFRASTRUCTURE PEOPLE | SMEC

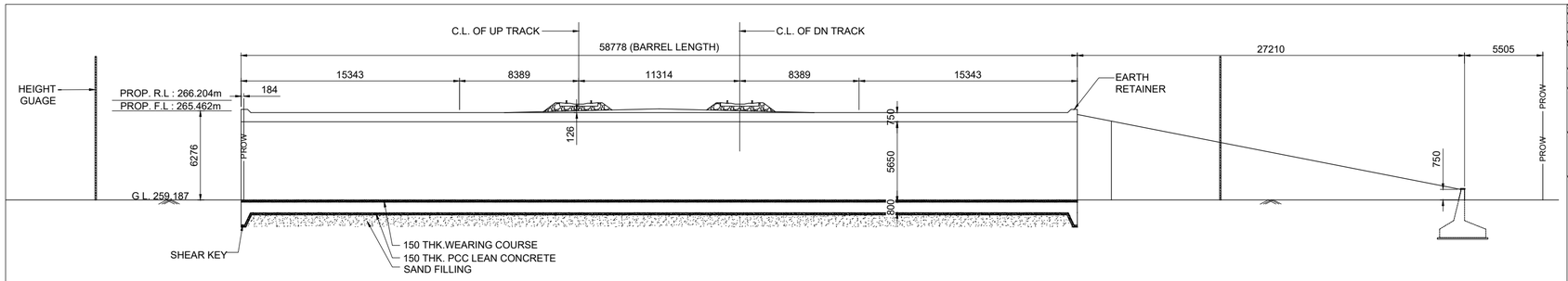
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

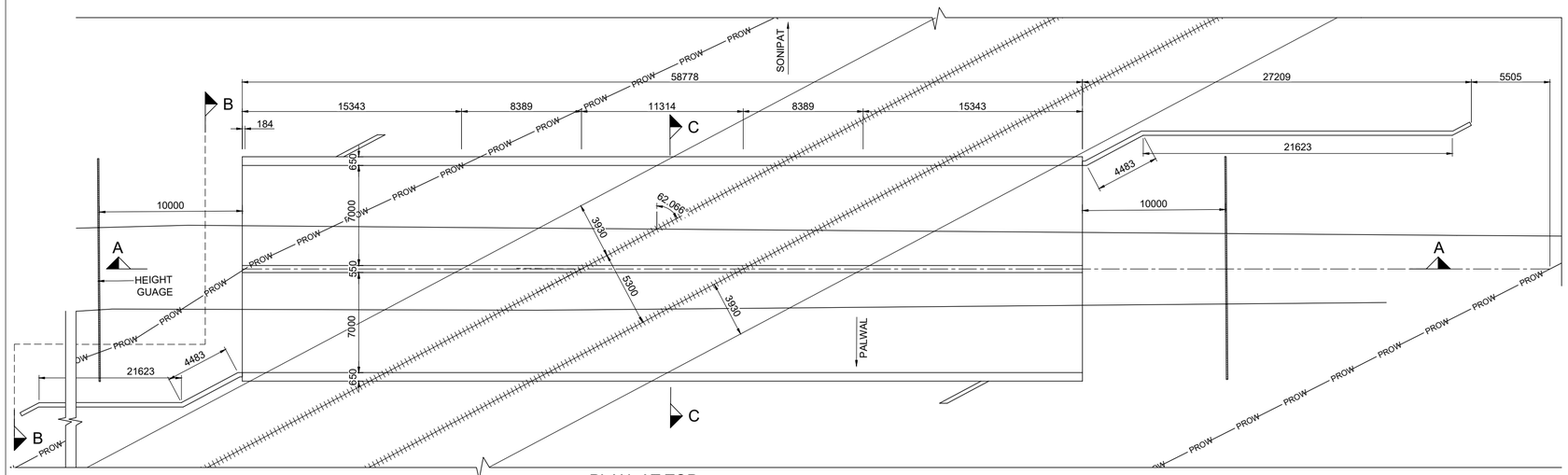
PROPOSED RUB NO. 103 SPAN
1×5.0×3.0 RCC BOX AT CH: 42578.906

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01103_A1	1 OF 1

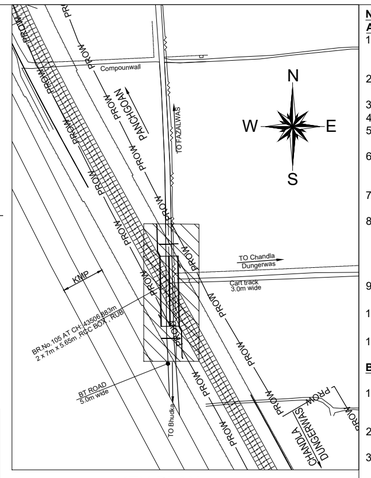
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



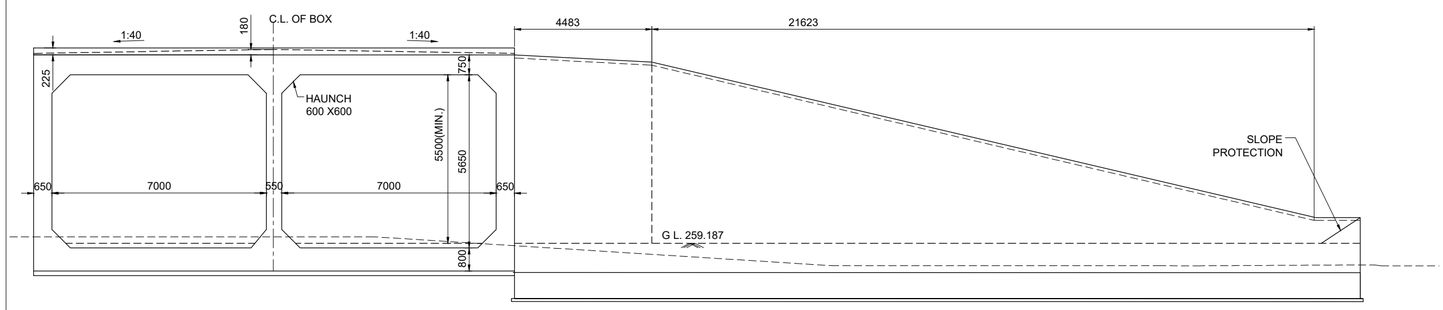
SECTIONAL ELEVATION AT A-A
SCALE 1:200



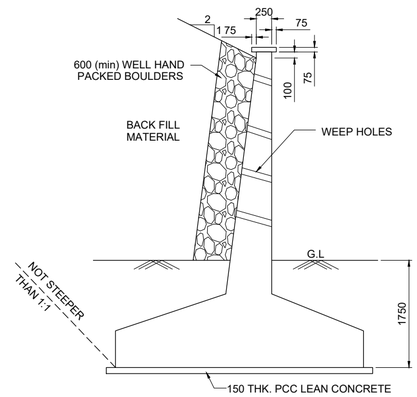
PLAN AT TOP
SCALE 1:200



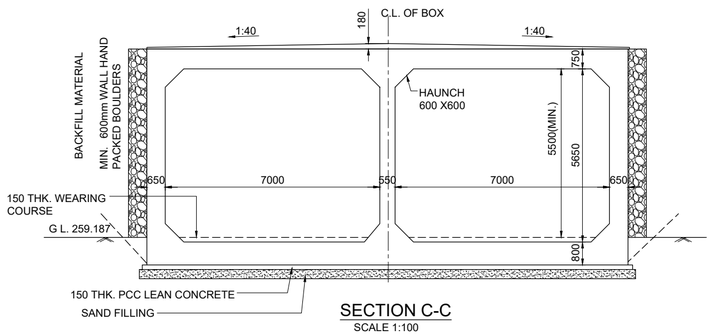
KEY PLAN
(NOT TO SCALE)



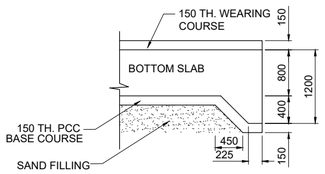
SECTION B-B
SCALE 1:100



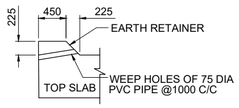
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SECTION C-C
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

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3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
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15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

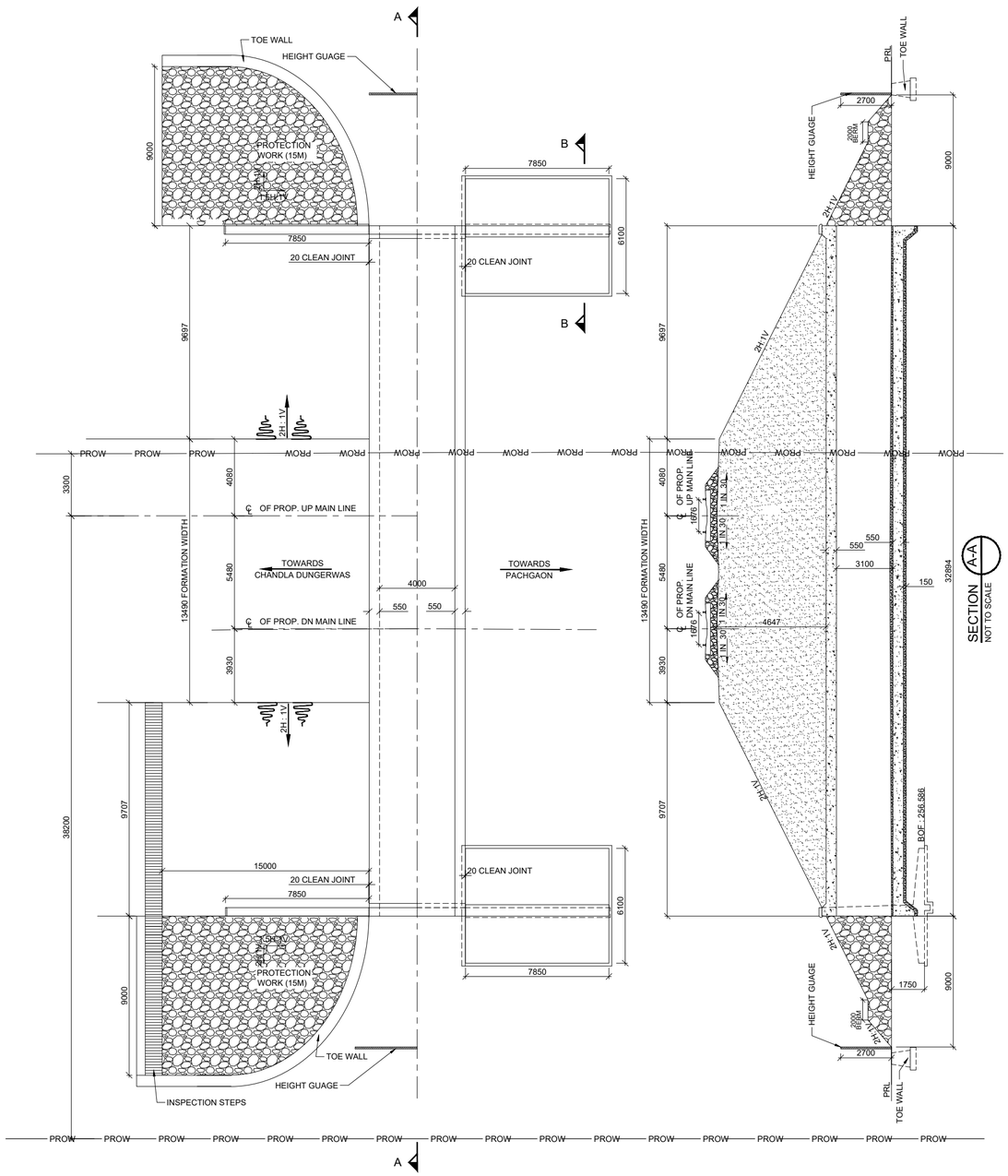
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 105 SPAN
2×7.0×5.650 RCC BOX AT CH: 43506.883

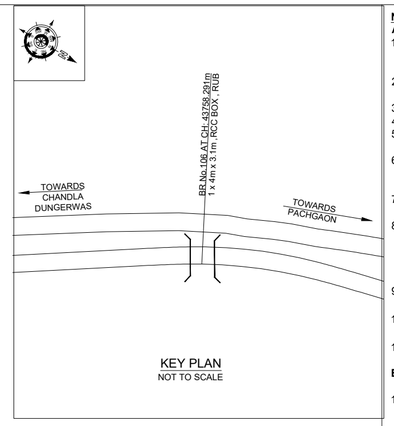
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01105_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



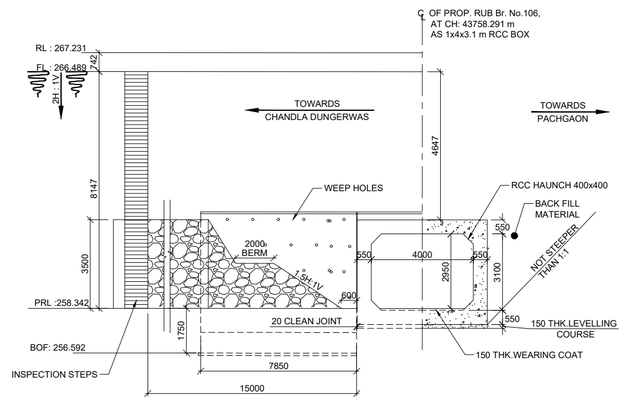
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



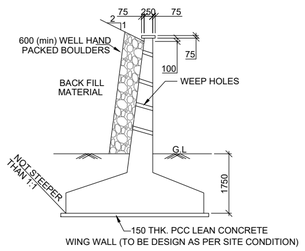
KEY PLAN

NOT TO SCALE



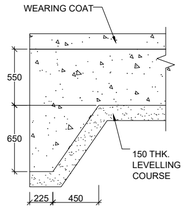
HALF ELEVATION HALF SECTION

NOT TO SCALE



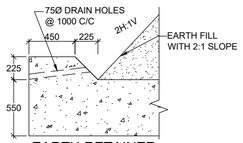
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

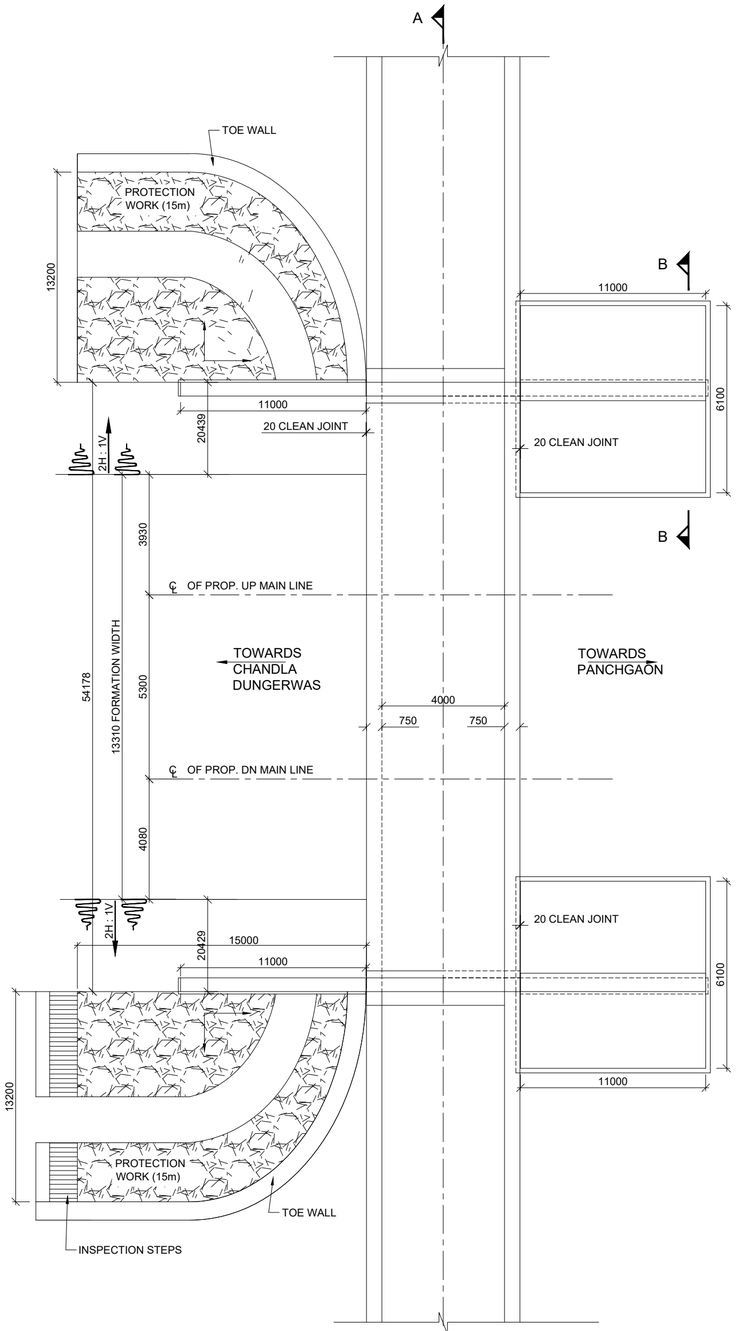
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 106 SPAN 1.0X4.0X3.1 RCC BOX AT CH: 43758.291m

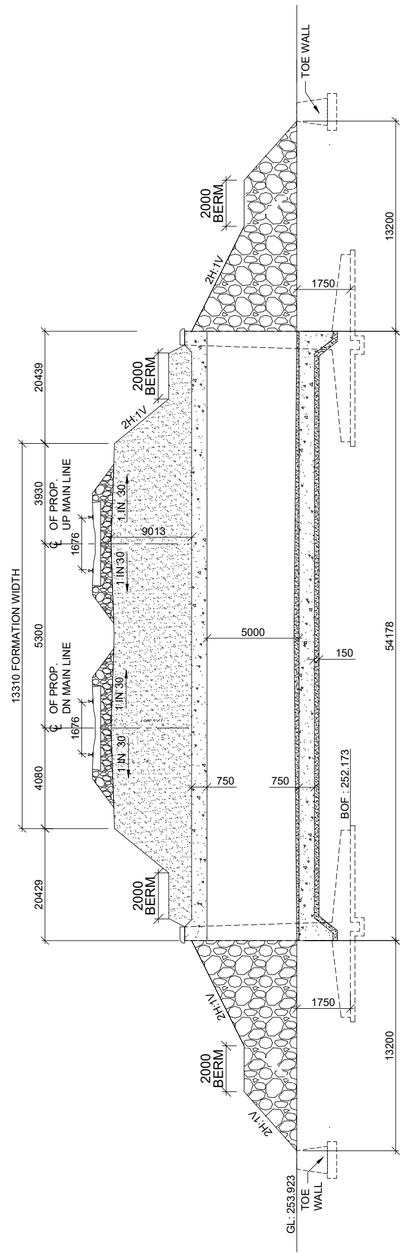
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01106_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



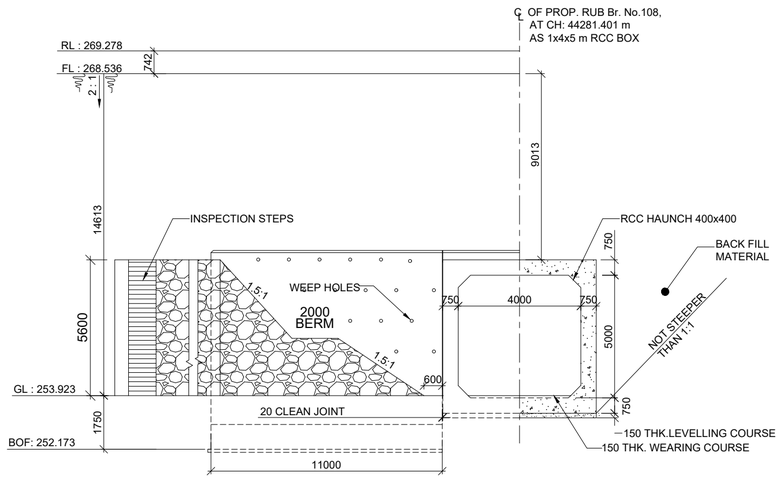
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



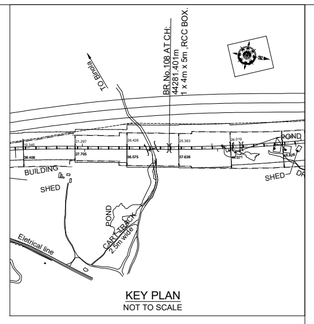
SECTION A-A

NOT TO SCALE



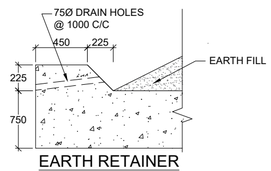
HALF ELEVATION HALF SECTION

NOT TO SCALE



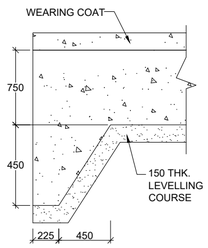
KEY PLAN

NOT TO SCALE



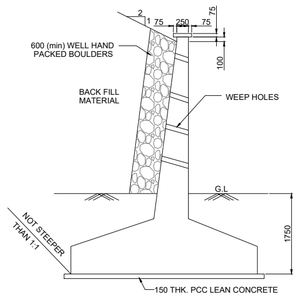
EARTH RETAINER

(NOT TO SCALE)



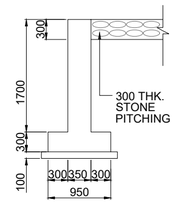
SHEAR KEY

(NOT TO SCALE)



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



DROP / CURTAIN WALL DETAILS

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M. WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

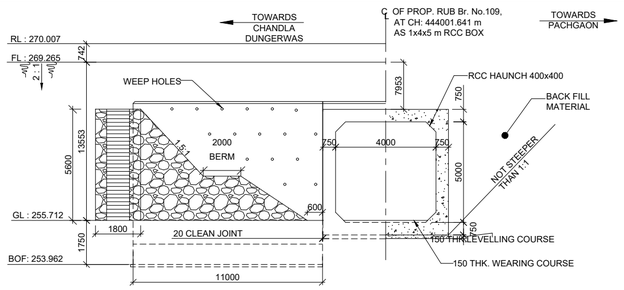
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 108 SPAN 1.0X4.0X5.0 RCC BOX AT CH: 44281.401m

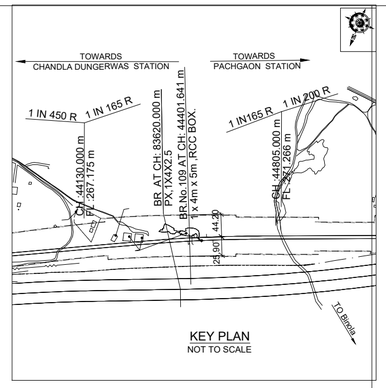
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01108_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



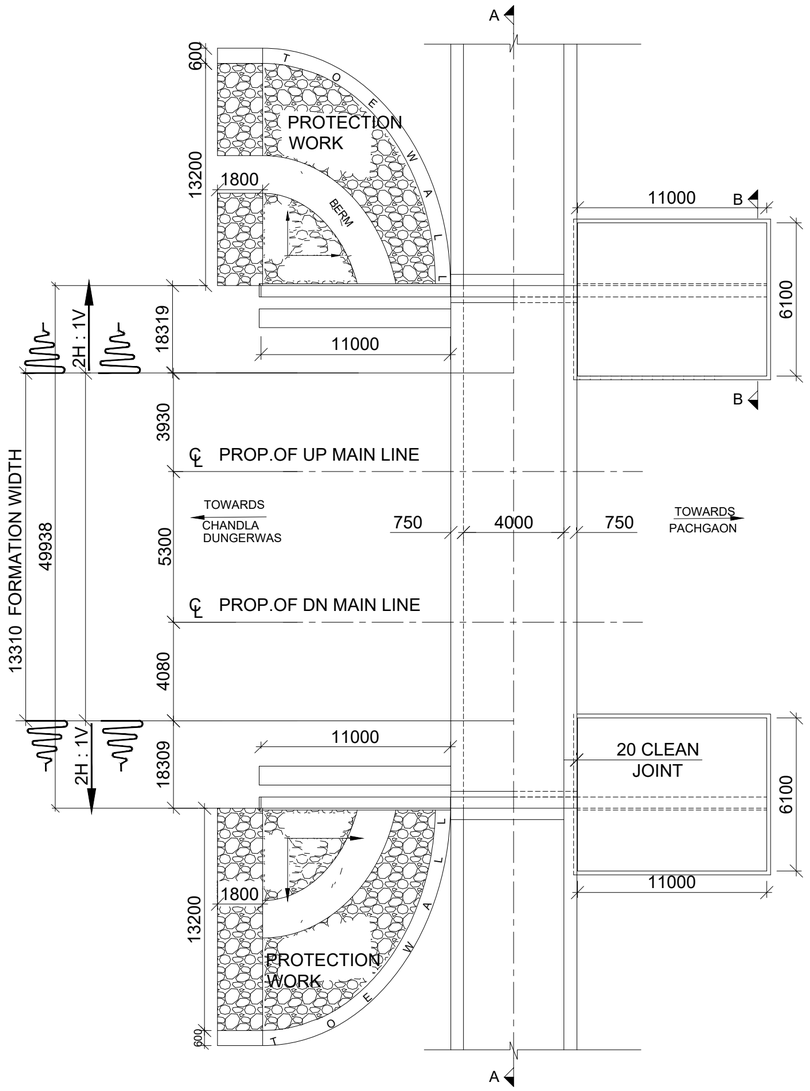
HALF ELEVATION HALF SECTION

NOT TO SCALE



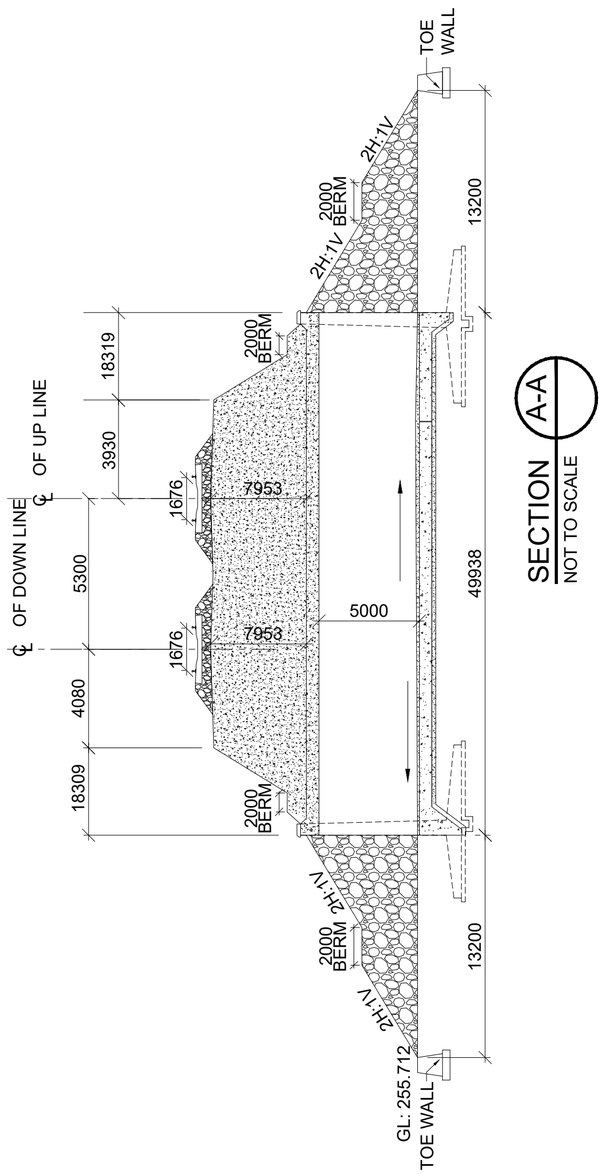
KEY PLAN

NOT TO SCALE



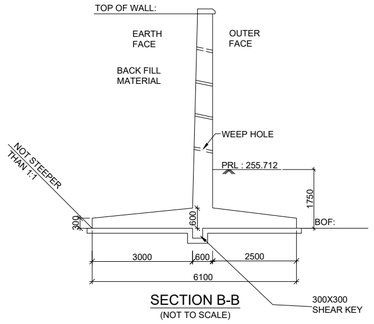
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



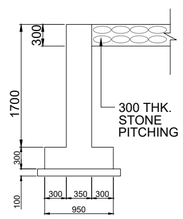
SECTION A-A

NOT TO SCALE



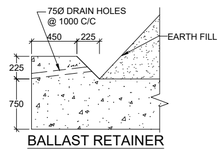
SECTION B-B

(NOT TO SCALE)



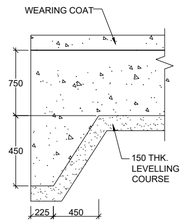
DROP / CURTAIN WALL DETAILS

SCALE 1:50



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

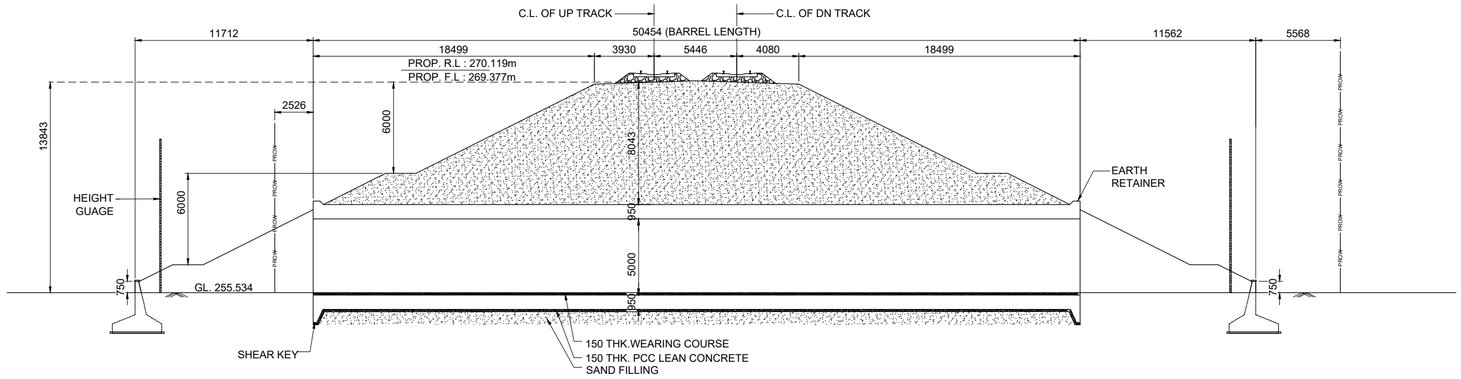
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 109 SPAN 1.0X4.0X5.0 RCC BOX AT CH: 44401.641m

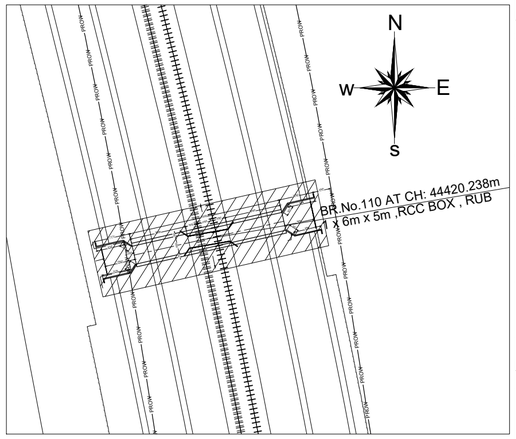
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01109_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



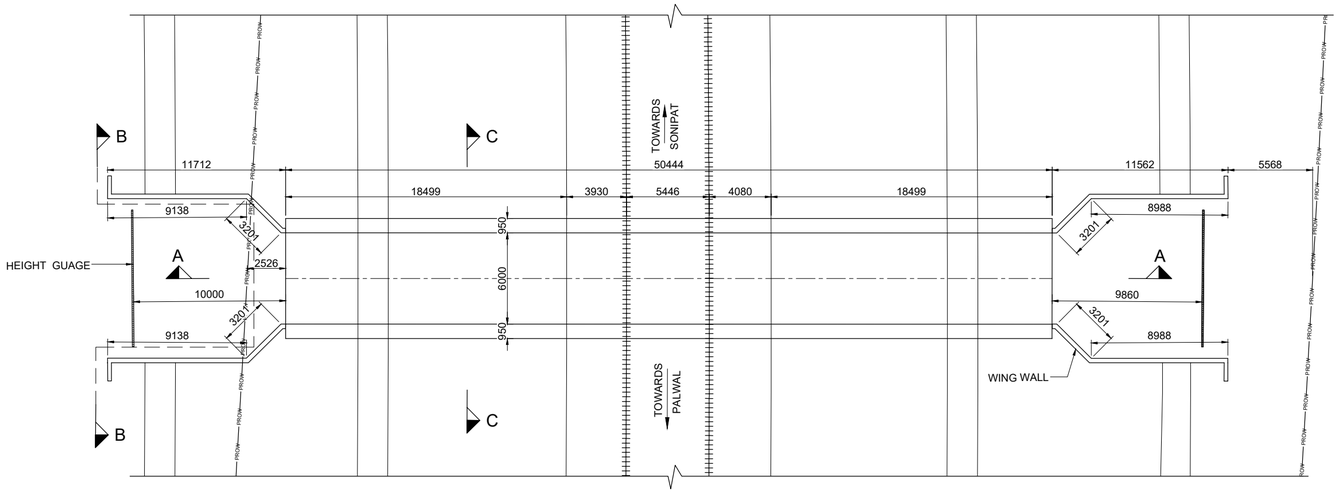
SECTIONAL ELEVATION AT A-A

SCALE 1:200



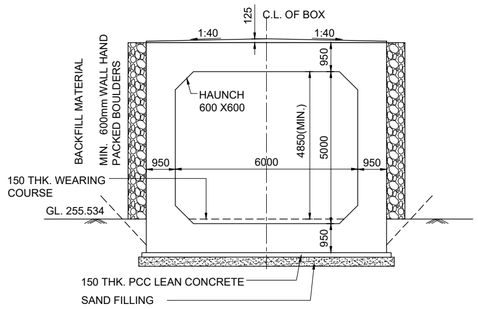
KEY PLAN

(NOT TO SCALE)



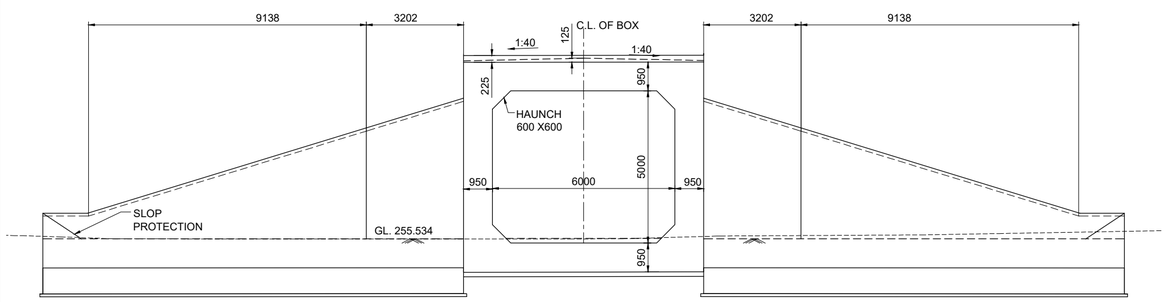
PLAN AT TOP

SCALE 1:200



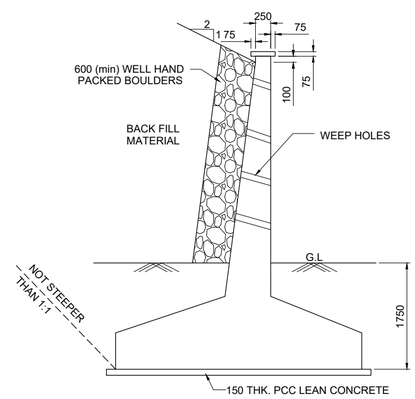
SECTION C-C

SCALE 1:100



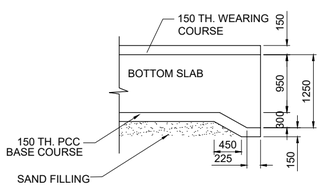
SECTION B-B

SCALE 1:100



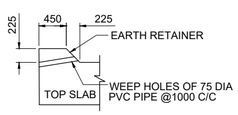
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

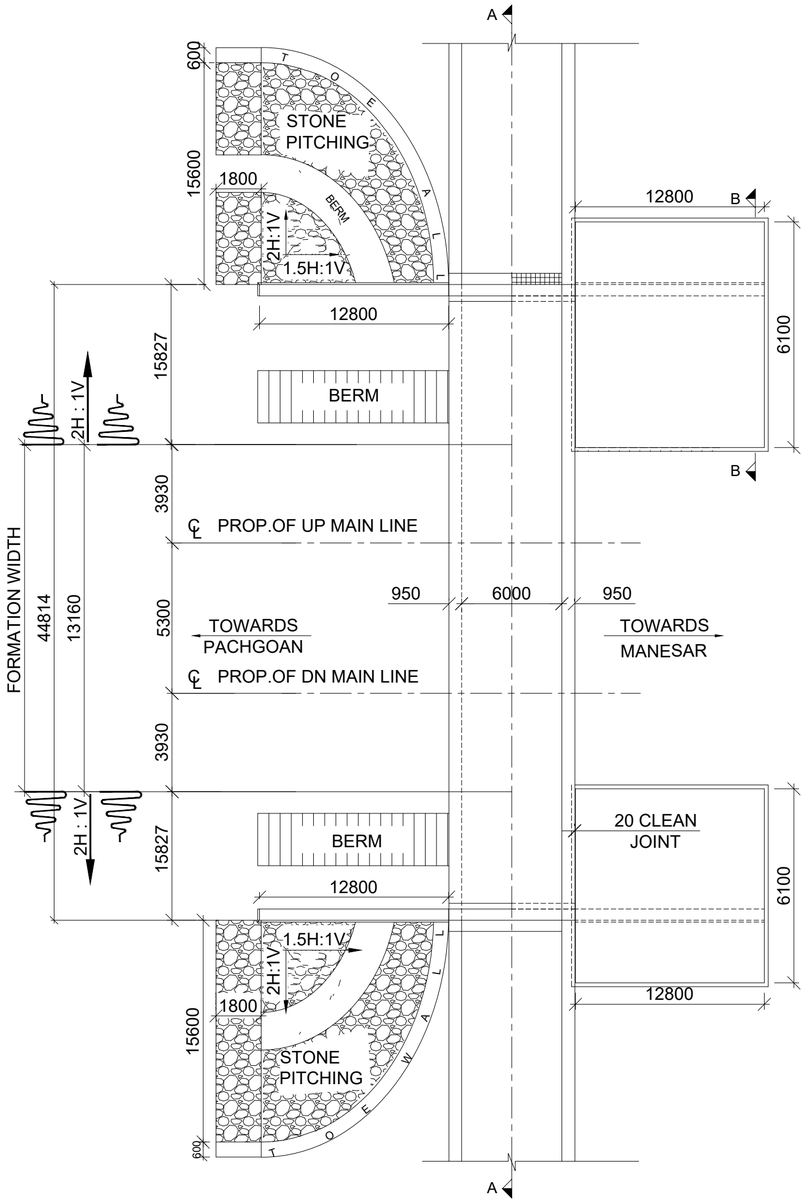
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 110 SPAN
1×6.0×5.0RCC BOX AT CH: 44420.238

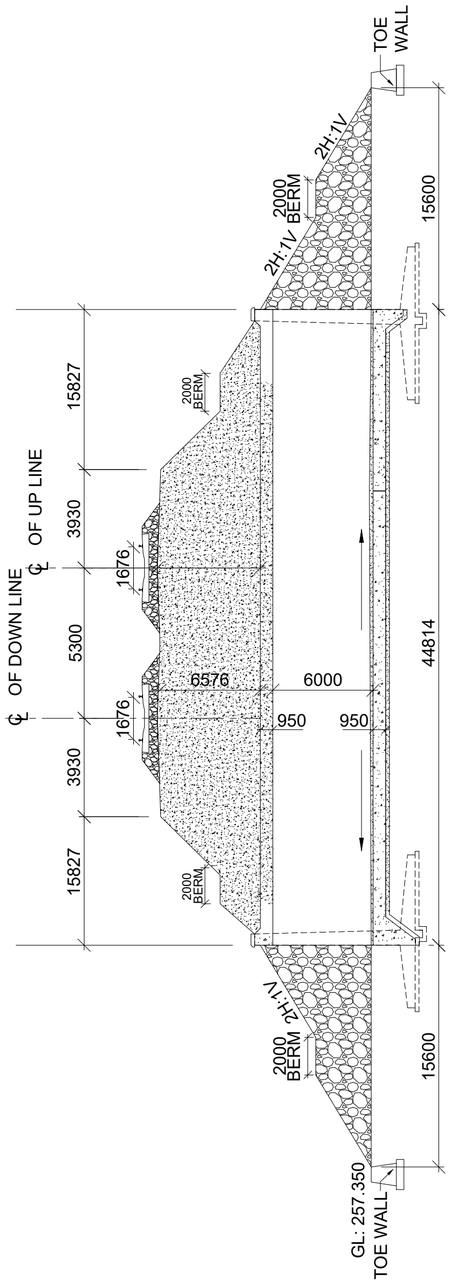
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01110_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



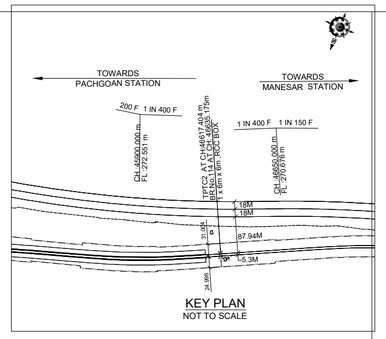
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



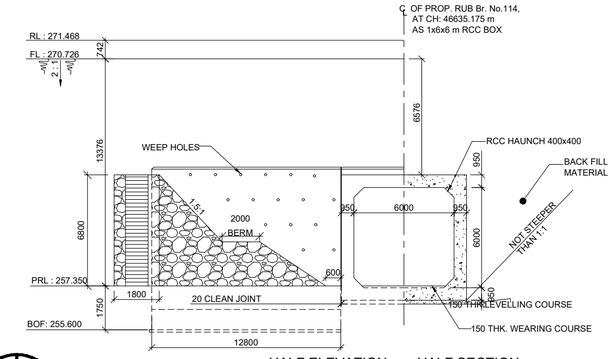
SECTION A-A

NOT TO SCALE



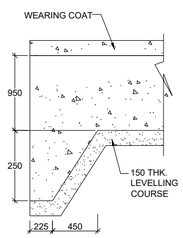
KEY PLAN

NOT TO SCALE



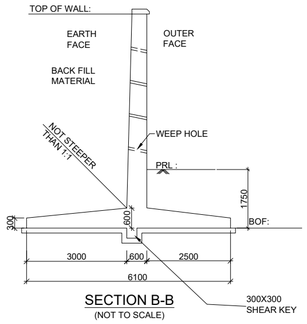
HALF ELEVATION HALF SECTION

NOT TO SCALE



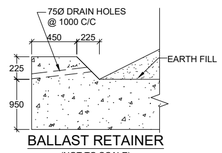
SHEAR KEY

(NOT TO SCALE)



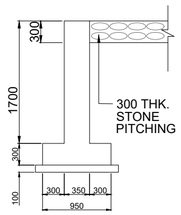
SECTION B-B

(NOT TO SCALE)



BALLAST RETAINER

(NOT TO SCALE)



DROP / CURTAIN WALL DETAILS

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

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8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
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12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

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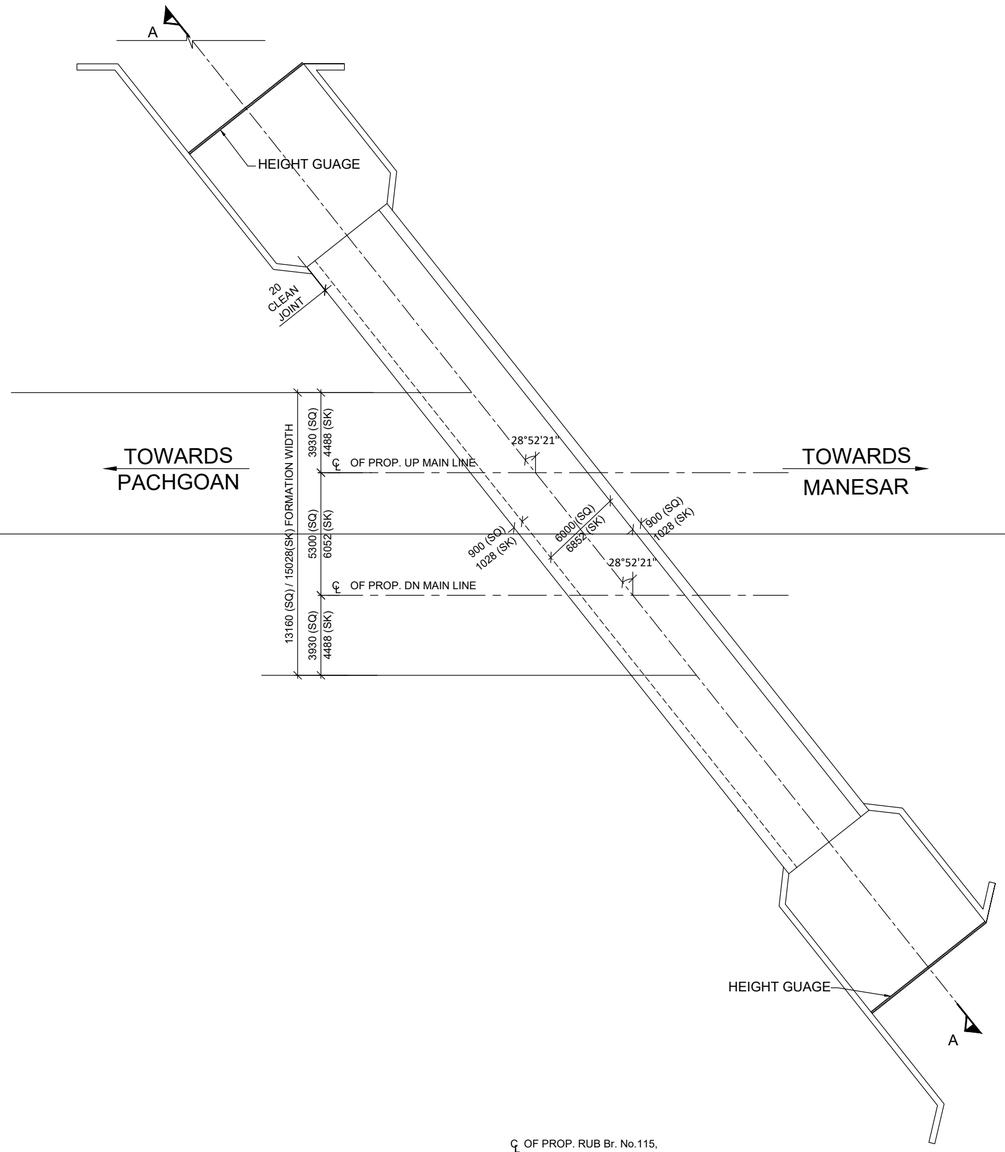
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 114 SPAN 1.0X6.0X6.0 RCC BOX AT CH: 46635.175m

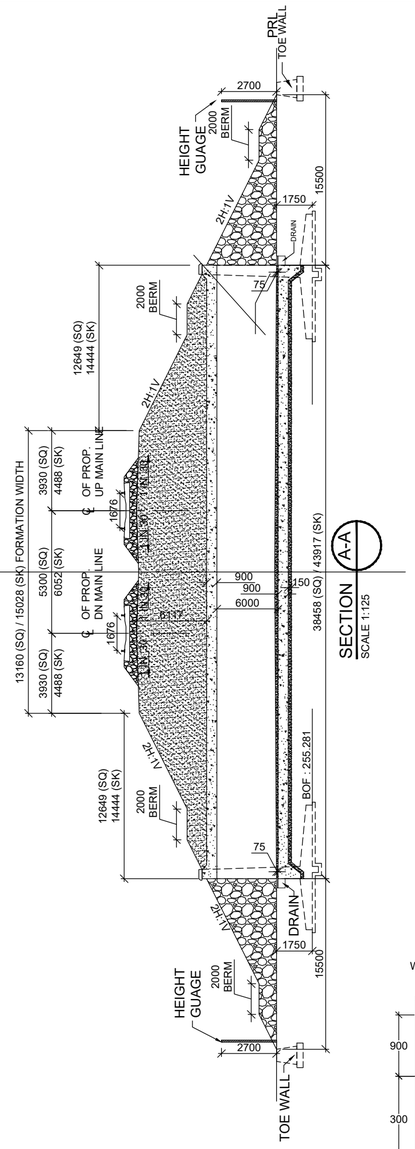
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01114_A1	1 OF 1

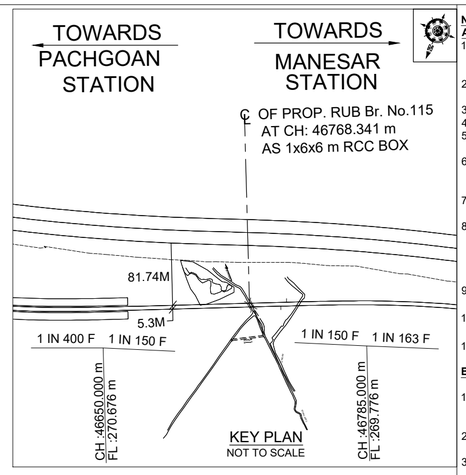
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

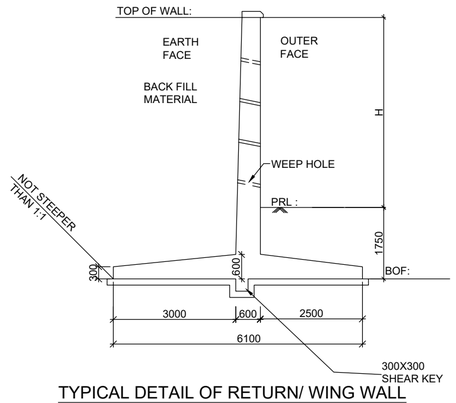


PLAN AT TOP

SCALE 1 : 125

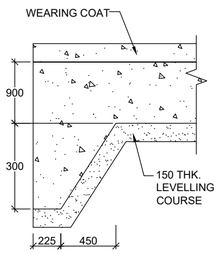






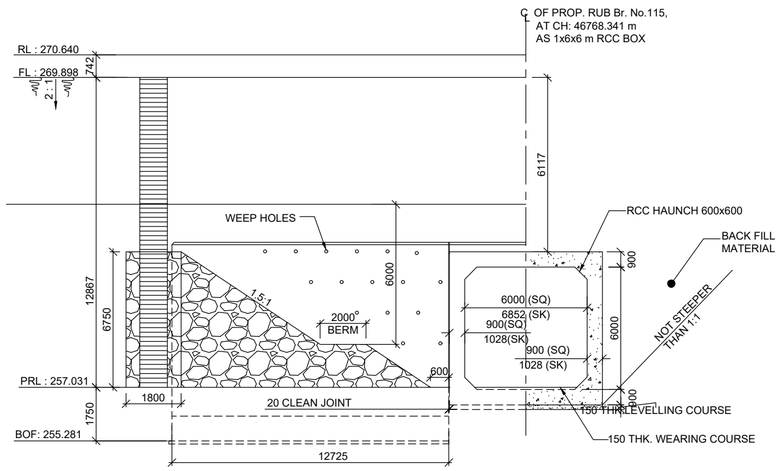
TYPICAL DETAIL OF RETURN/ WING WALL

(NOT TO SCALE)



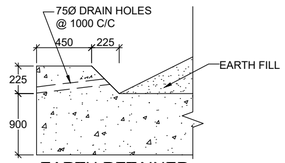
SHEAR KEY

(NOT TO SCALE)



HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

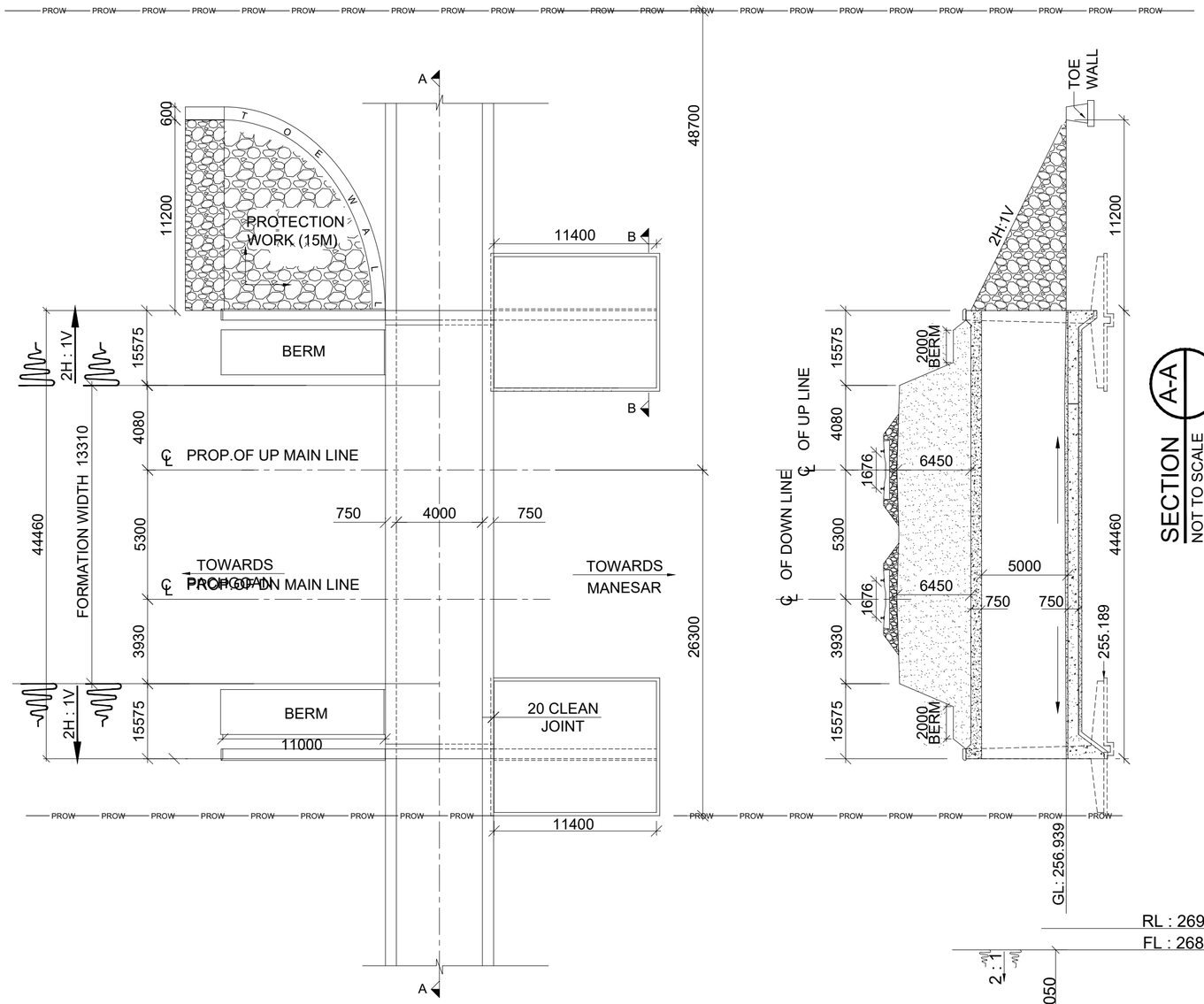
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 115 SPAN 1.0X6.0X6.0 RCC BOX AT CH: 46768.341m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01115_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

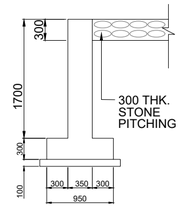


HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE

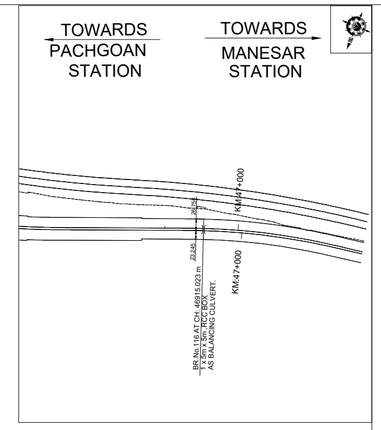
SECTION A-A

NOT TO SCALE



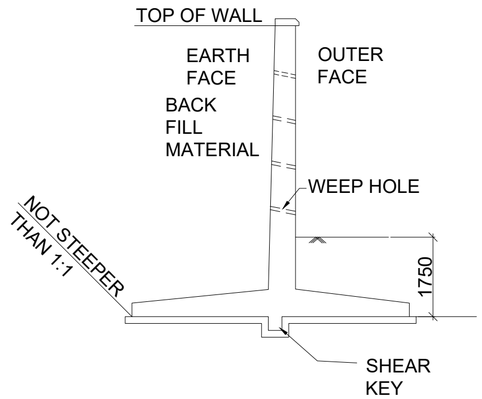
DROP / CURTAIN WALL DETAILS

SCALE 1:50



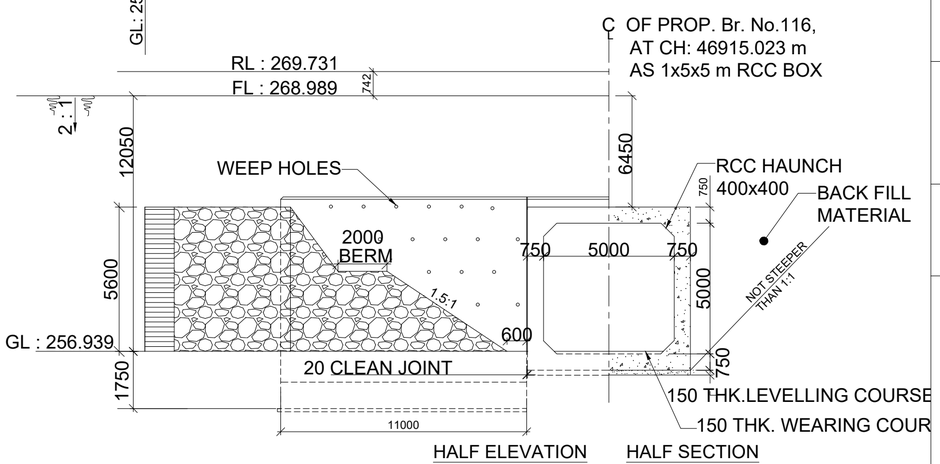
KEY PLAN

NOT TO SCALE



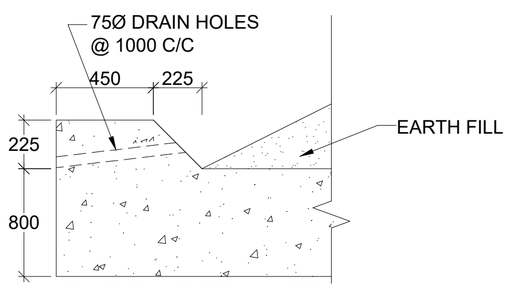
SECTION B-B

(NOT TO SCALE)



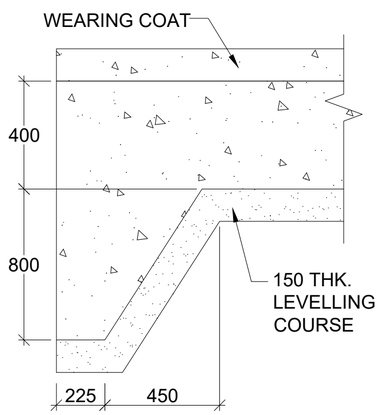
HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE REOKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

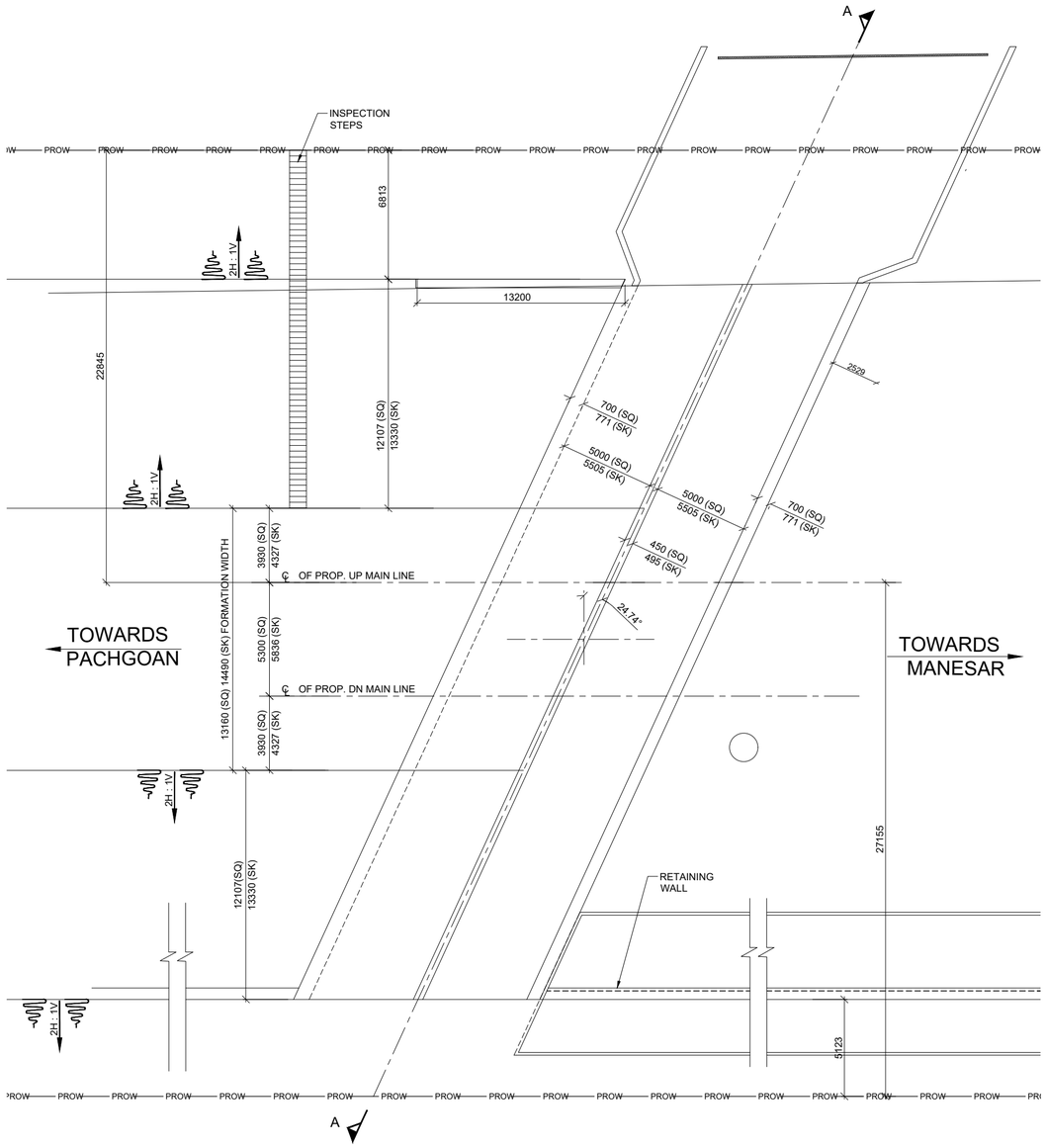
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 116 SPAN 1.0X5.0X5.0 RCC BOX AT CH: 46915.023m

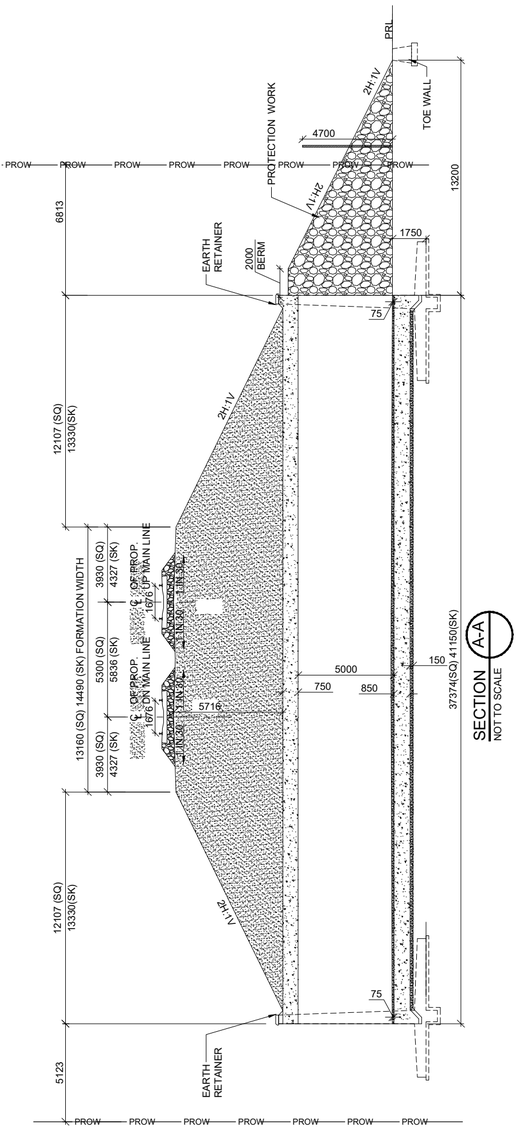
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01116_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



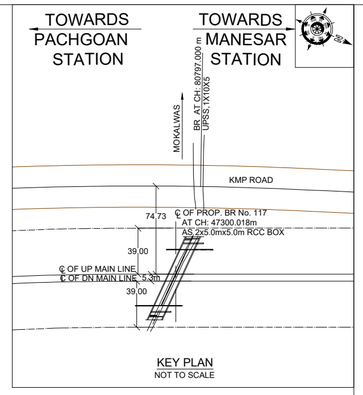
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



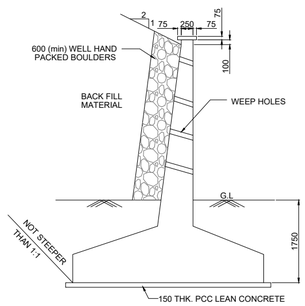
SECTION A-A

NOT TO SCALE



KEY PLAN

NOT TO SCALE



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
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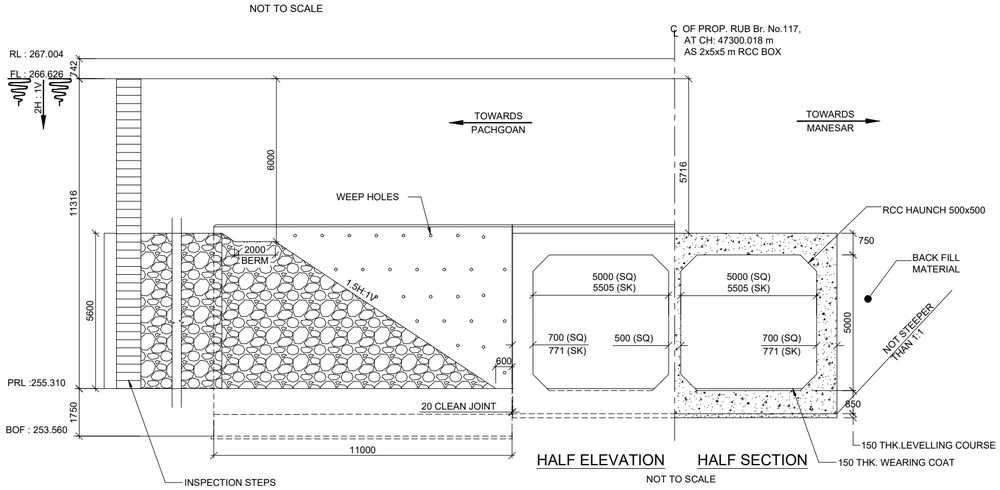
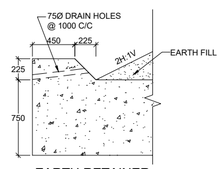
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.



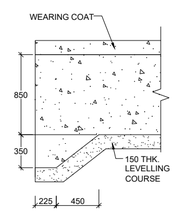
HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

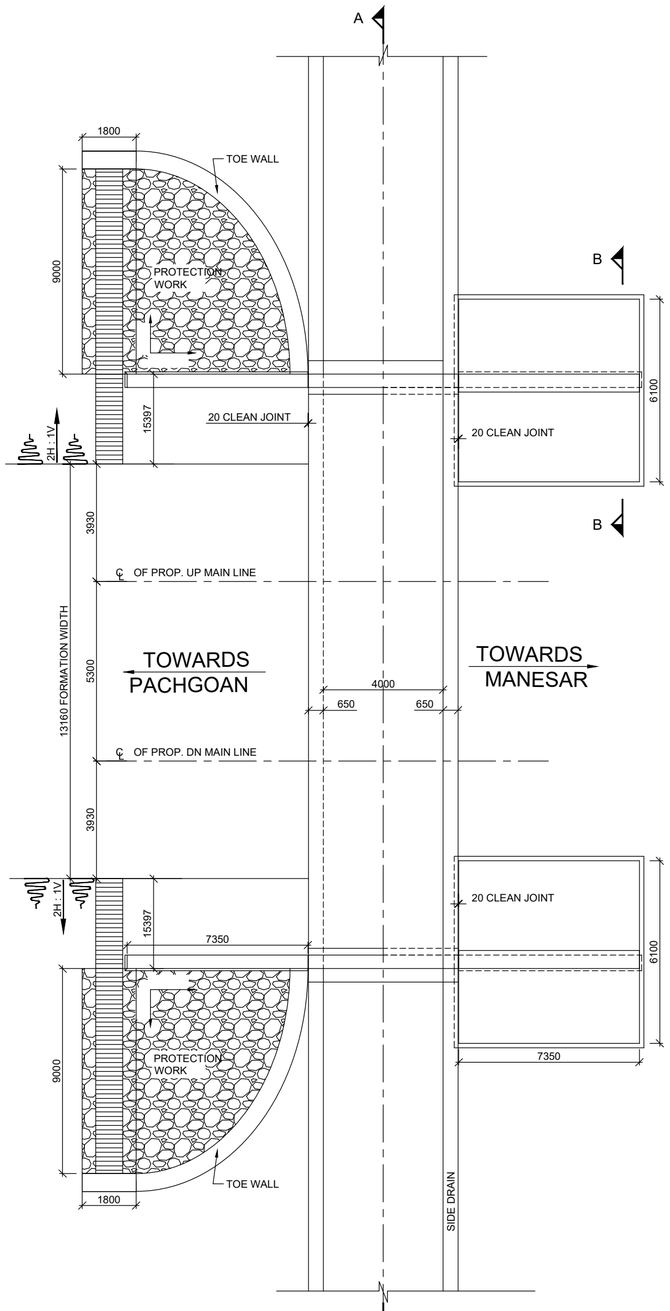
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 117 SPAN 2.0X5.0X5.0 RCC BOX AT CH: 47300.018m

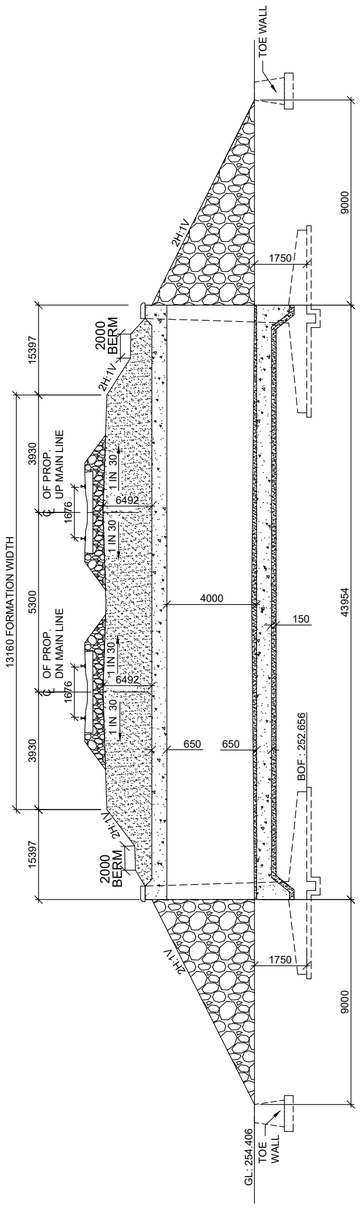
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01117_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



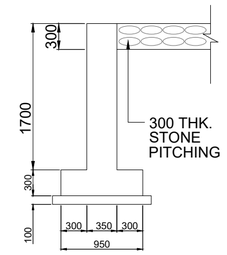
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



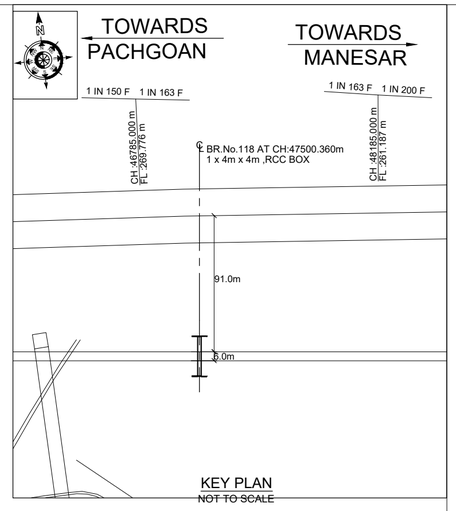
SECTION A-A

NOT TO SCALE



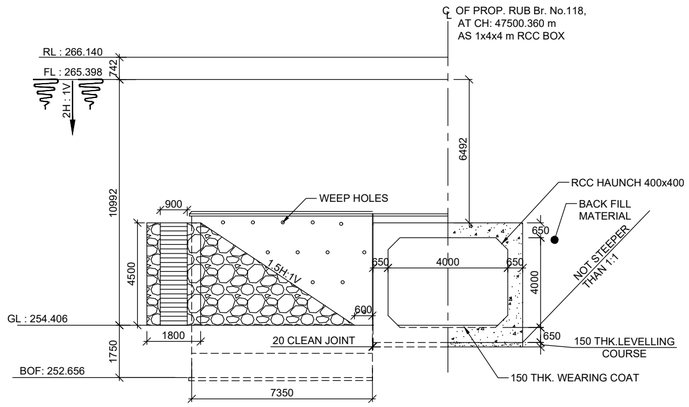
DROP / CURTAIN WALL DETAILS

SCALE 1:50



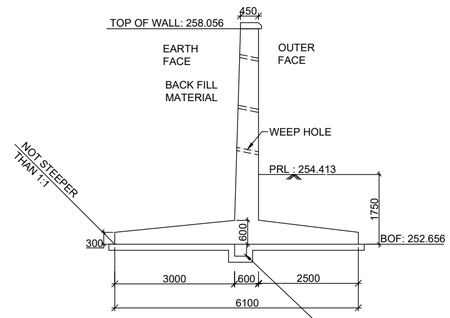
KEY PLAN

NOT TO SCALE



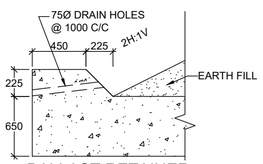
HALF ELEVATION HALF SECTION

NOT TO SCALE



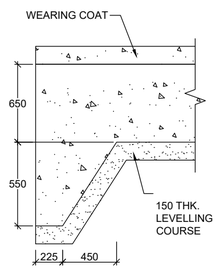
SECTION B-B

(NOT TO SCALE)



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
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9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
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PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

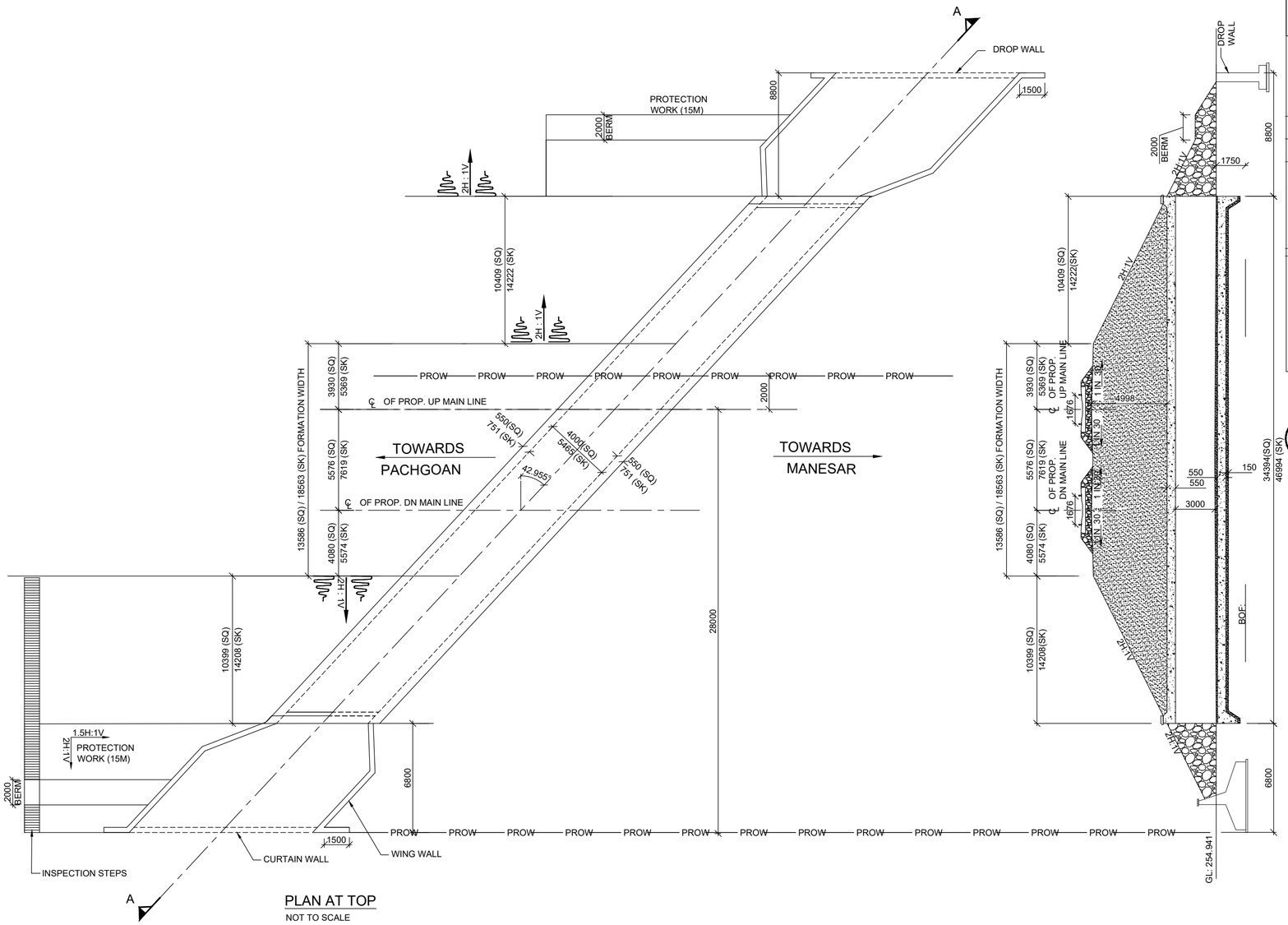
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT NO 118 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 47500.360m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01118_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

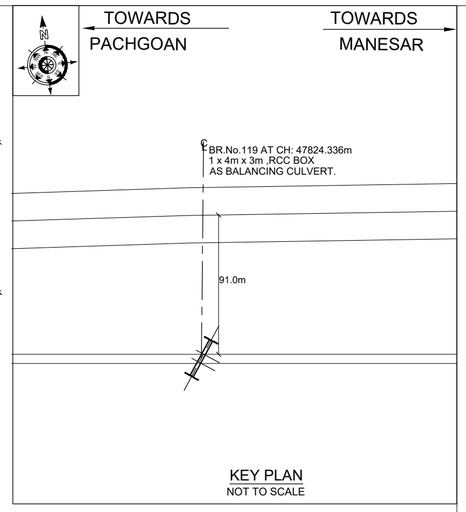


PLAN AT TOP

NOT TO SCALE

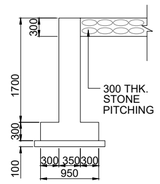
SECTION A-A

NOT TO SCALE



KEY PLAN

NOT TO SCALE



DROP/ CURTAIN WALL DETAILS

SCALE 1:50

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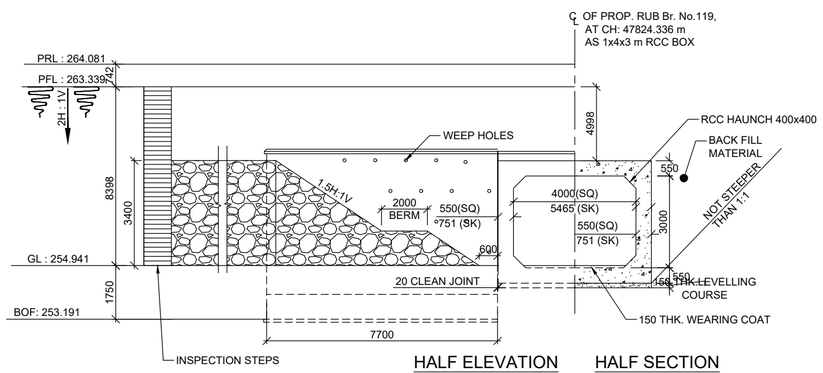
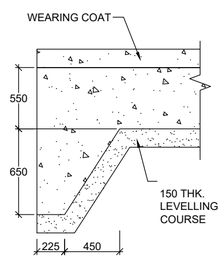
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
BOF	BOTTOM OF FOUNDATION



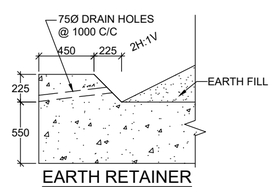
HALF ELEVATION HALF SECTION

NOT TO SCALE



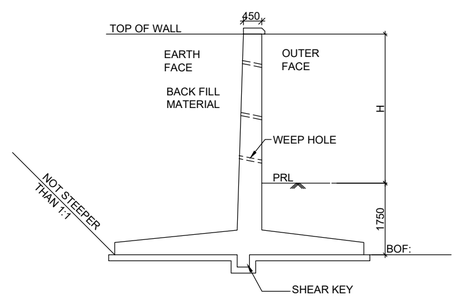
SHEAR KEY

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)



TYPICAL DETAIL OF RETURN / WING WALL

(NOT TO SCALE)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

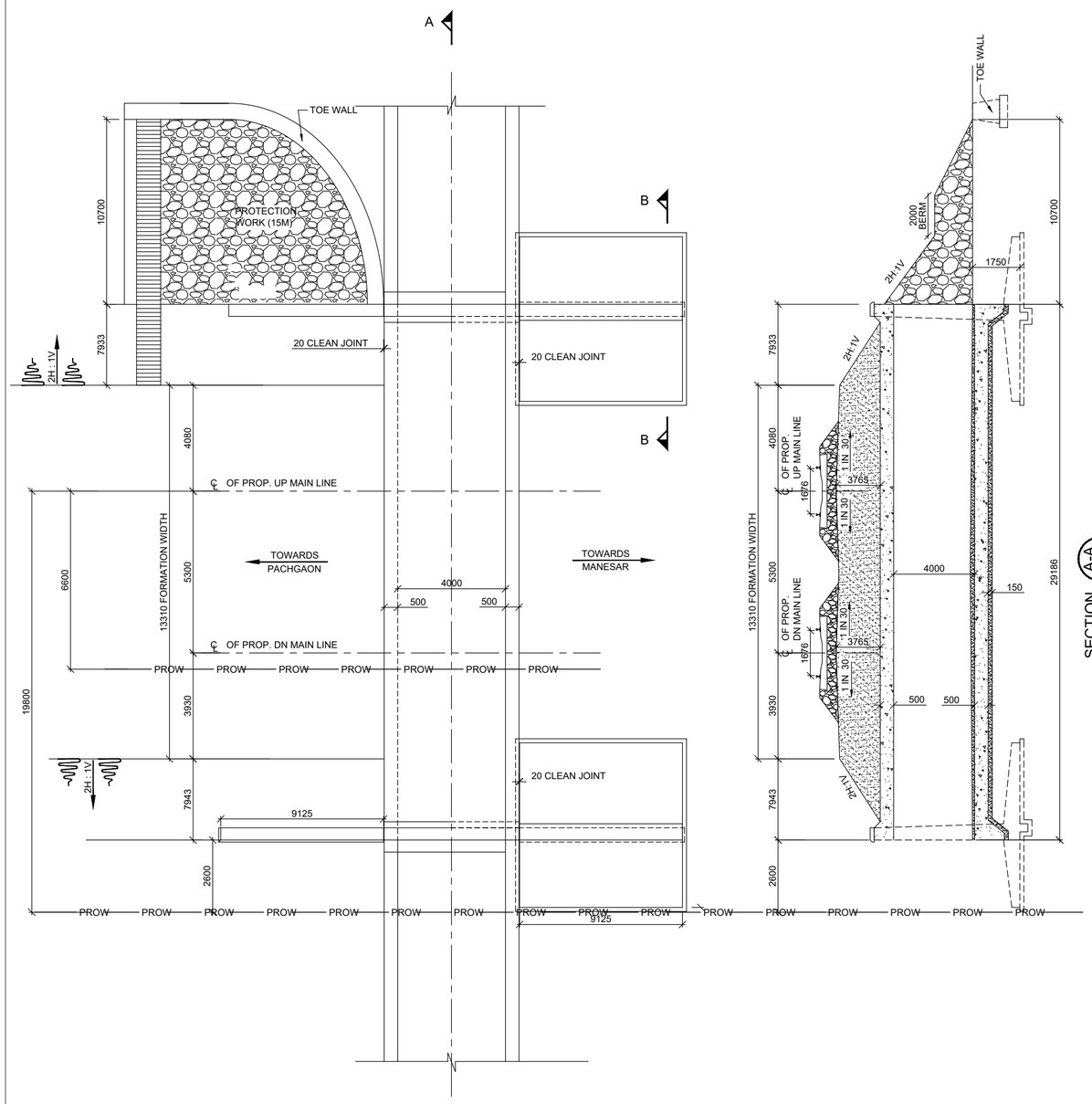
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 119 SPAN 1.0X4.0X3.0 RCC BOX AT CH: 47824.336m

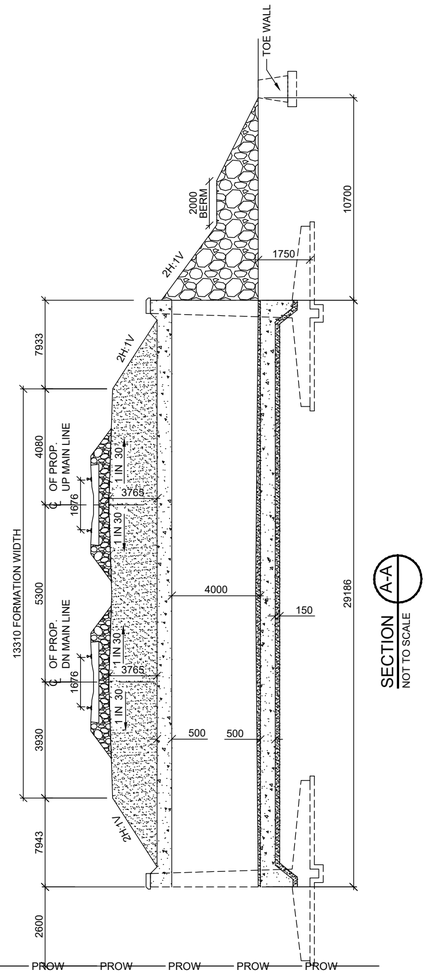
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01119_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



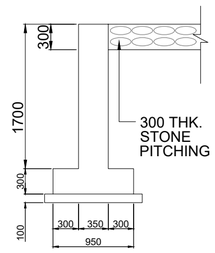
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



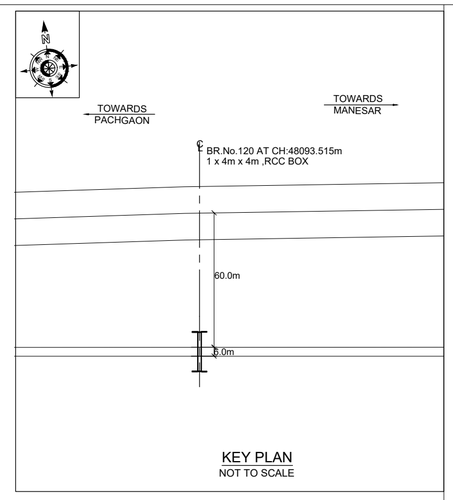
SECTION A-A

NOT TO SCALE



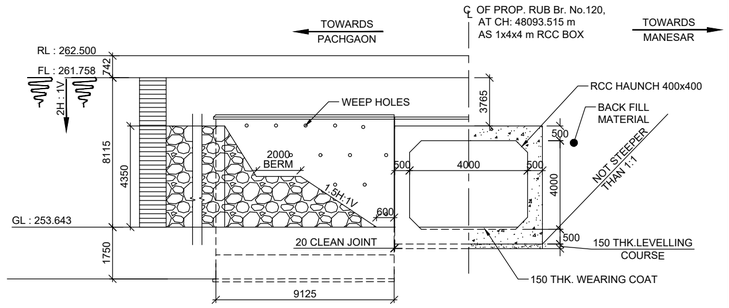
DROP / CURTAIN WALL DETAILS

SCALE 1:50



KEY PLAN

NOT TO SCALE



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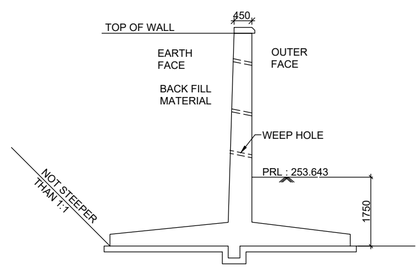
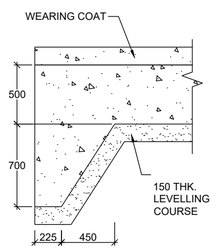


SECTION B-B

(NOT TO SCALE)

A



SHEAR KEY

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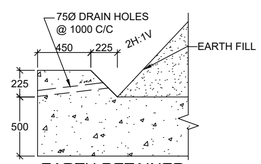

EARTH RETAINER

(NOT TO SCALE)

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CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

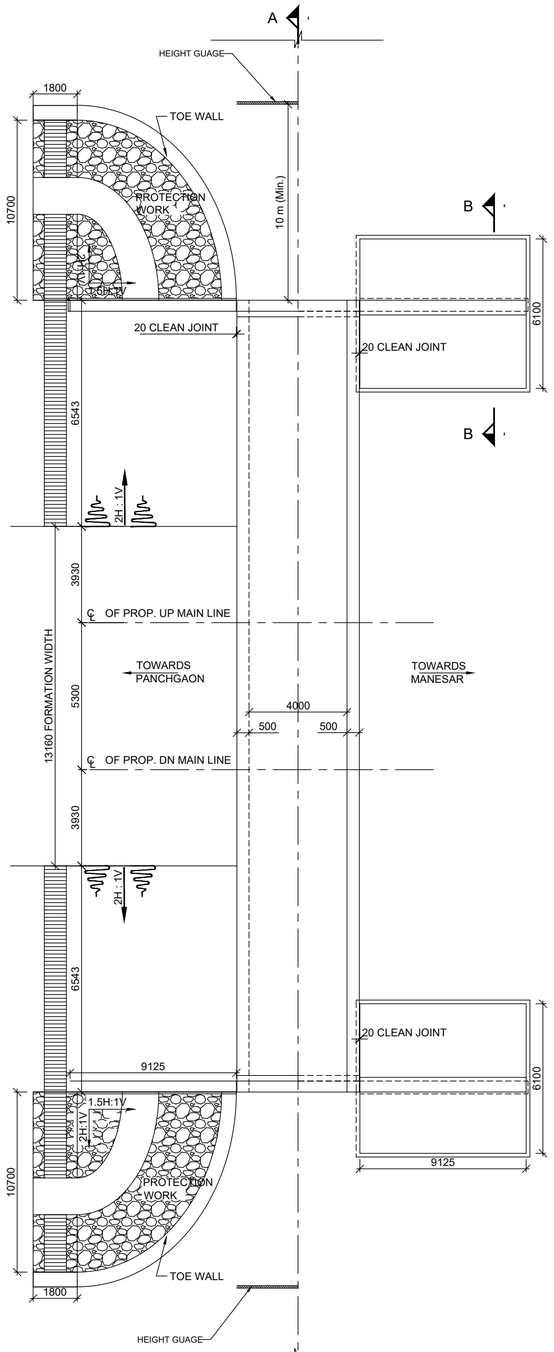
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 120 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48093.515m

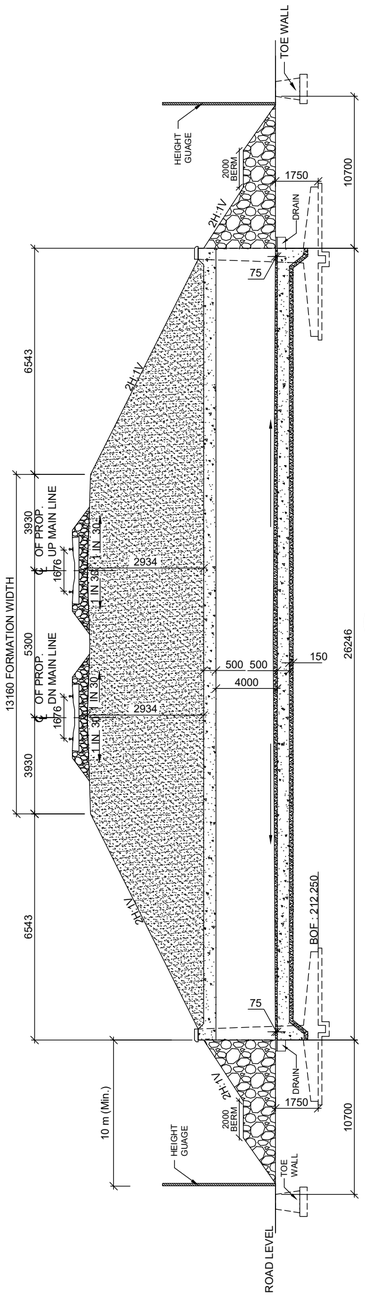
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01120_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



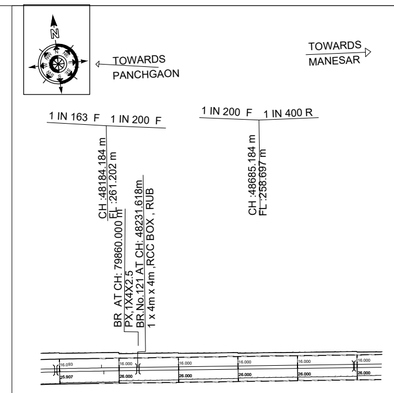
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



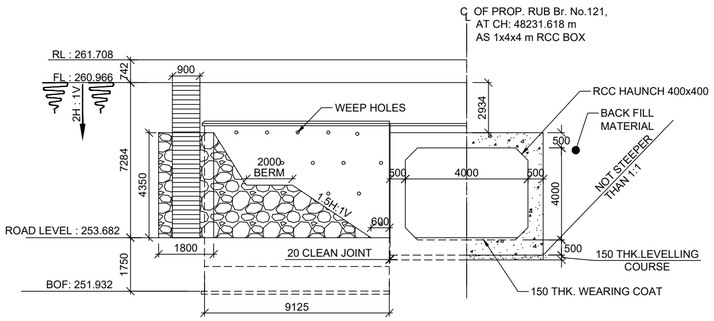
SECTION A-A

NOT TO SCALE



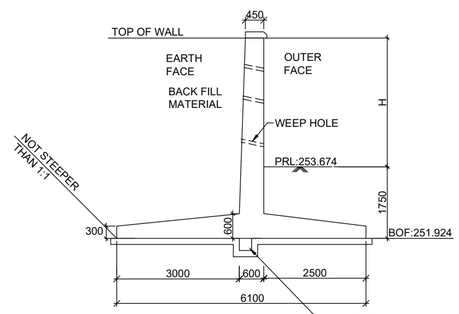
KEY PLAN

NOT TO SCALE



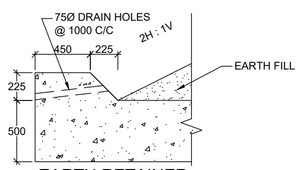
HALF ELEVATION HALF SECTION

NOT TO SCALE



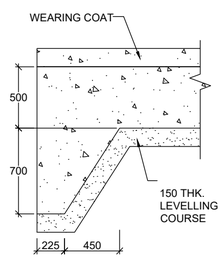
SECTION B-B

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

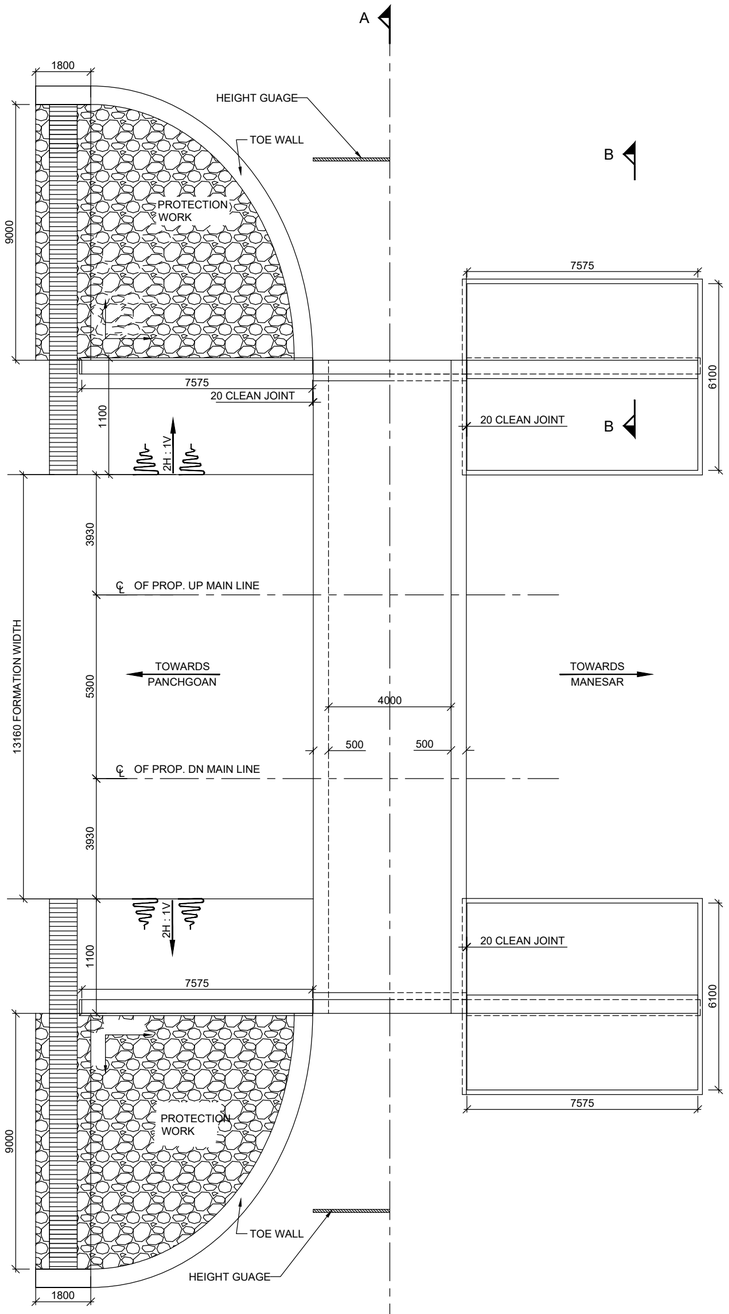
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 121 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48231.618m

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

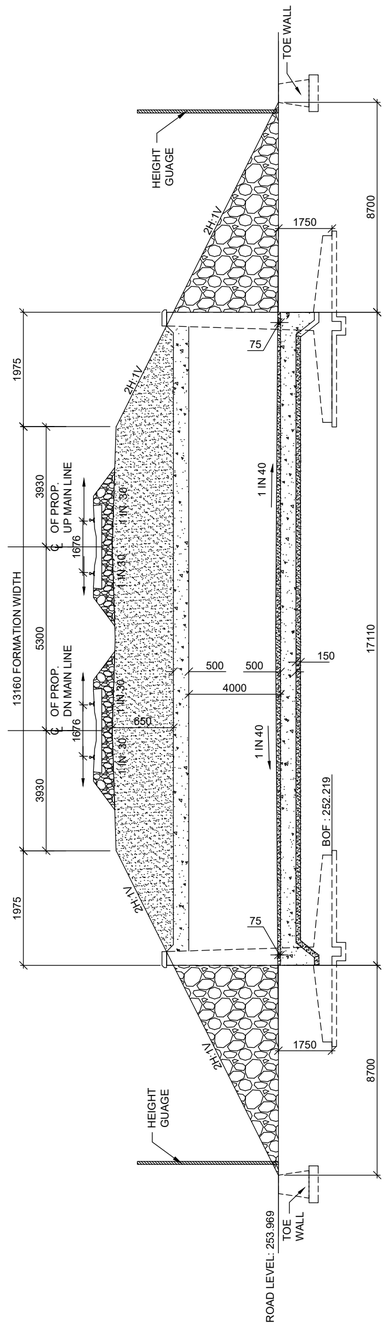
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01121_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



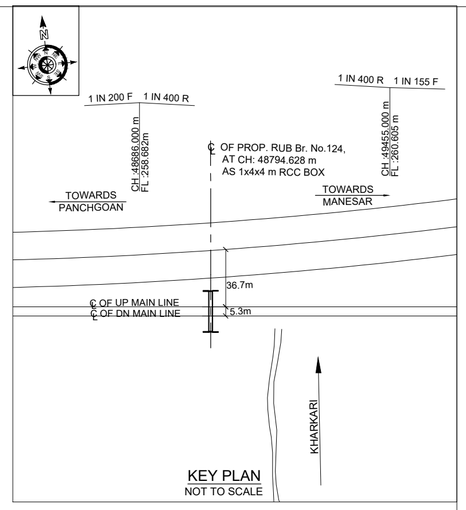
HALF PLAN AT TOP | HALF PLAN AT BOTTOM

NOT TO SCALE



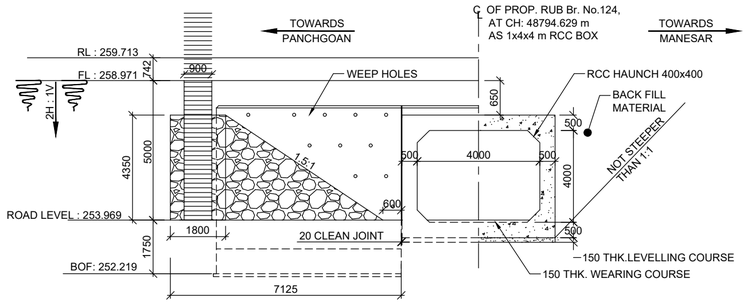
SECTION A-A

NOT TO SCALE



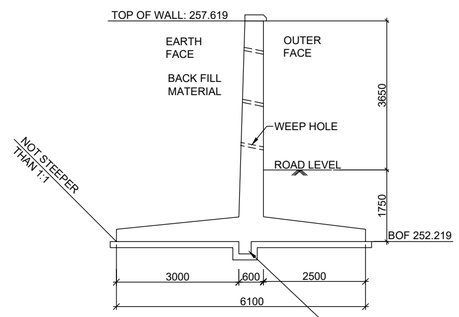
KEY PLAN

NOT TO SCALE



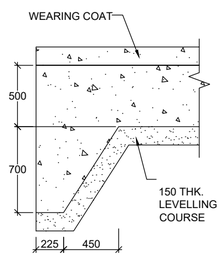
HALF ELEVATION | HALF SECTION

NOT TO SCALE



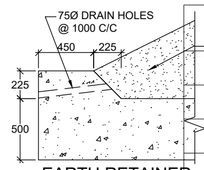
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
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B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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PROJECT:
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CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
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CONSULTANT:
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RITES Limited in consortium with SMEC International Pty. Ltd.

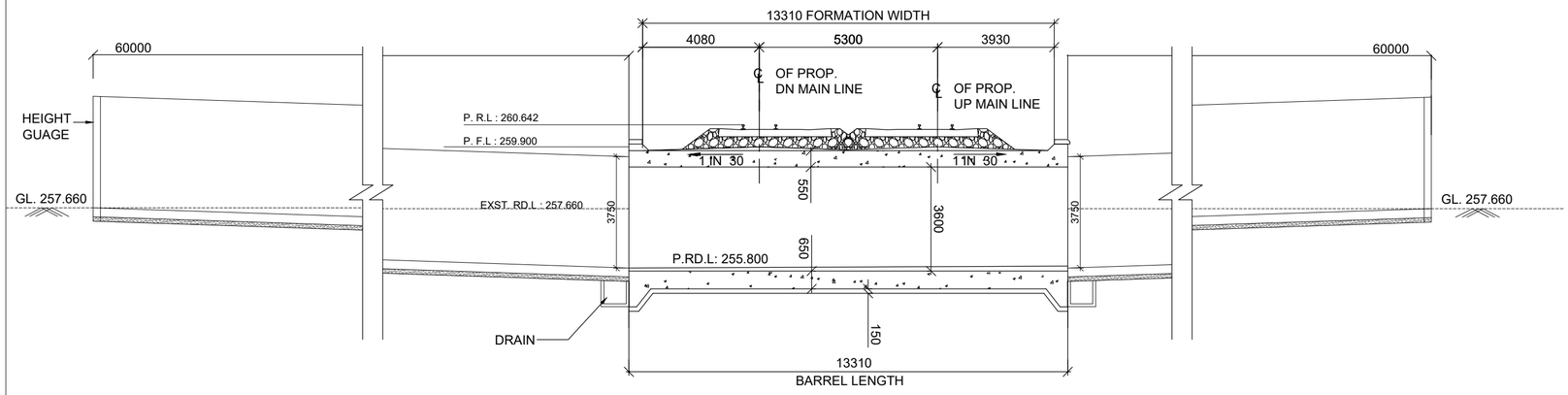
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 124
SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48794.629m

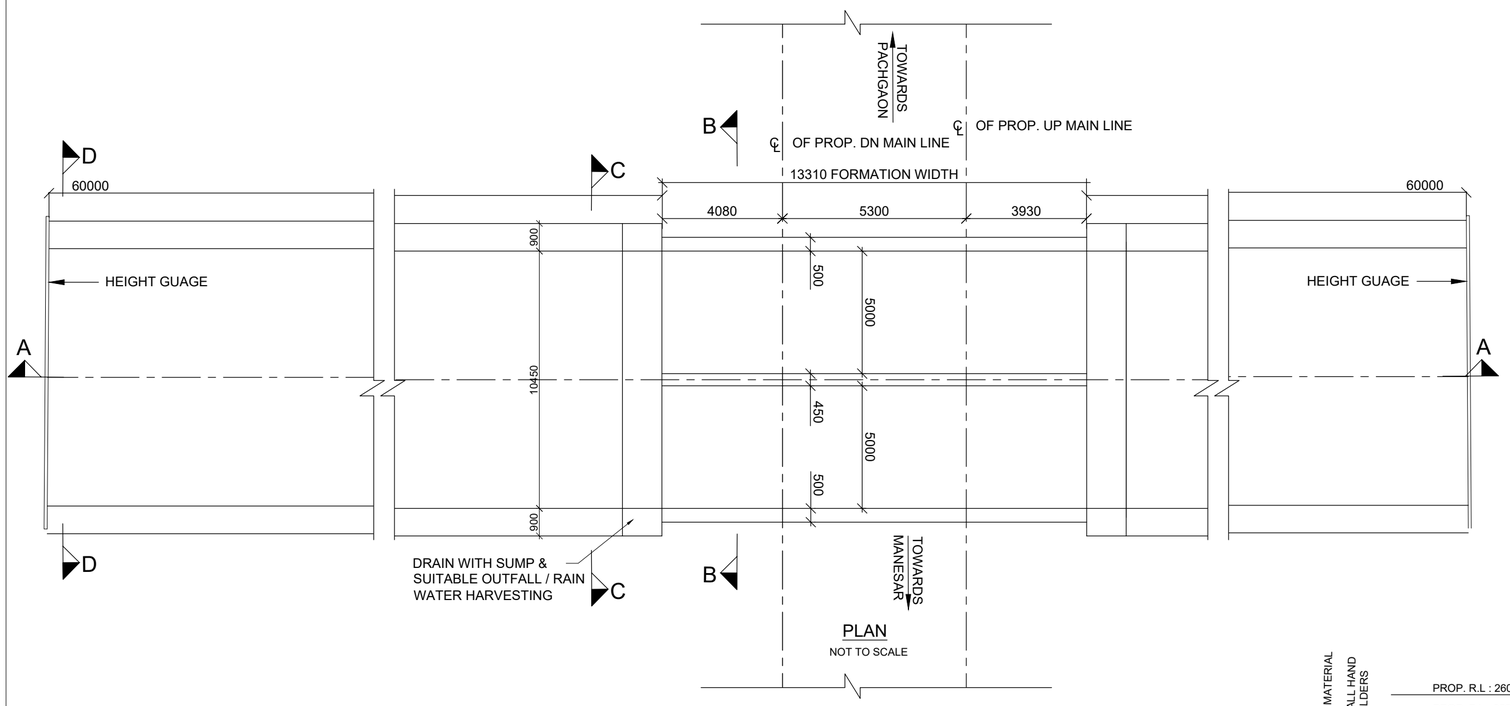
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01124_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



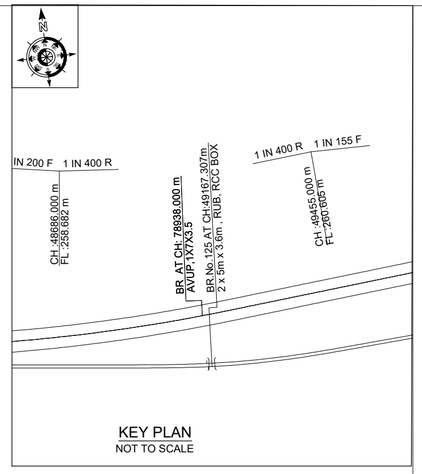
SECTION A-A

NOT TO SCALE



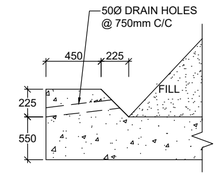
PLAN

NOT TO SCALE



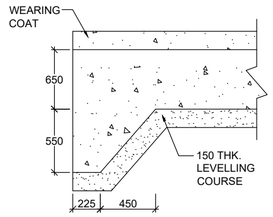
KEY PLAN

NOT TO SCALE



EARTH RETAINER

(SCALE 1:25)

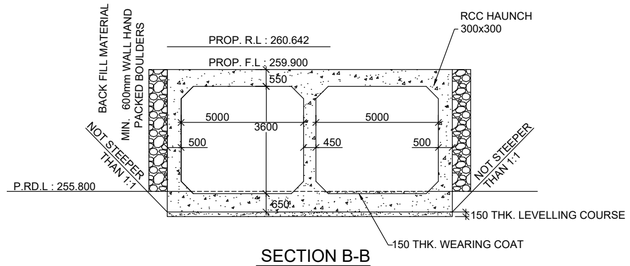


SHEAR KEY

(SCALE 1:25)

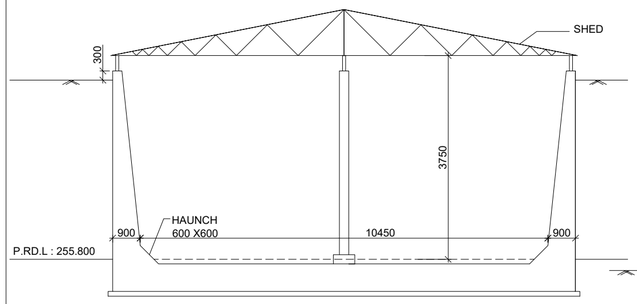
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL



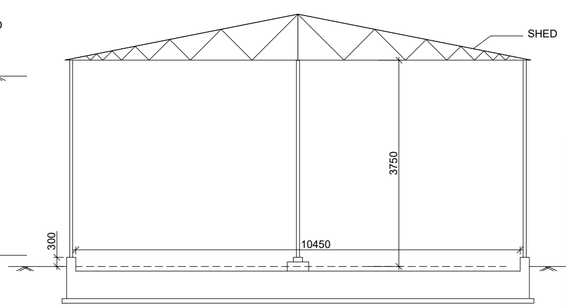
SECTION B-B

NOT TO SCALE



SECTION C-C

NOT TO SCALE



SECTION D-D

NOT TO SCALE

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL.NO WEEP HOLE SHALL BE PROVIDED IN RETAINING WALL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.
18. SHED SHALL BE PROVIDED OVER THE RAMP.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

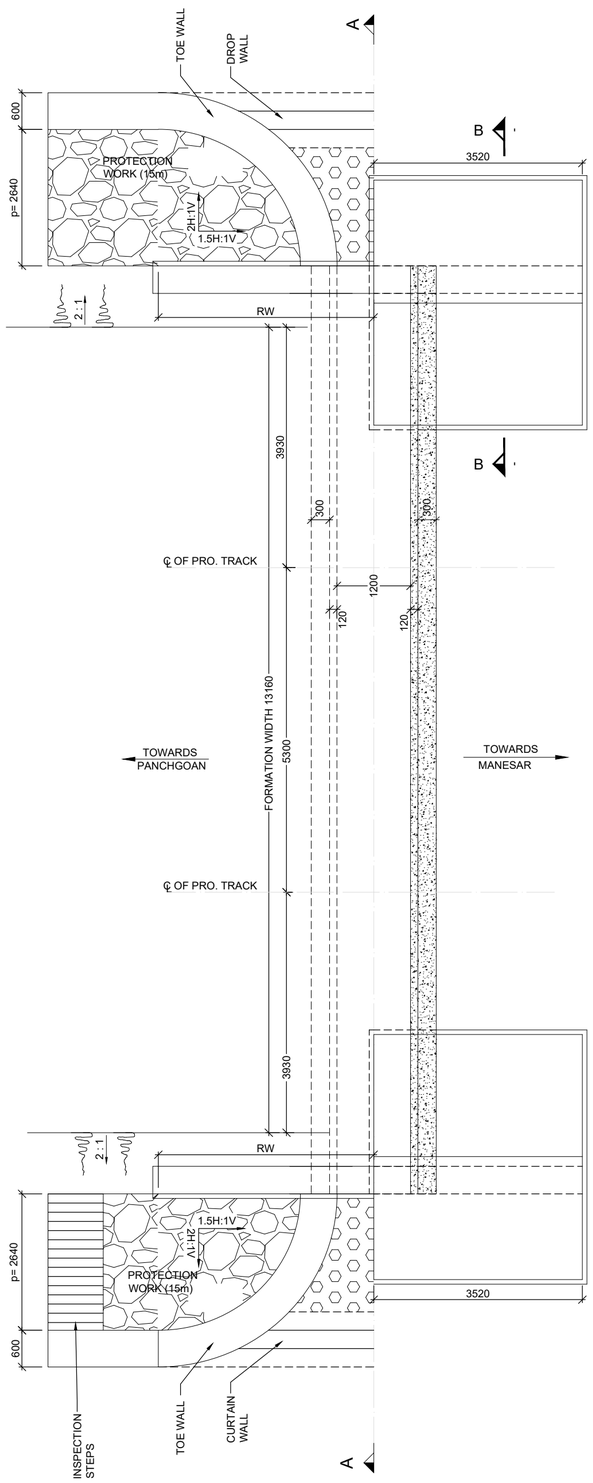
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 125 SPAN 2.0X5.0X3.6 RCC BOX AT CH: 49167.307m

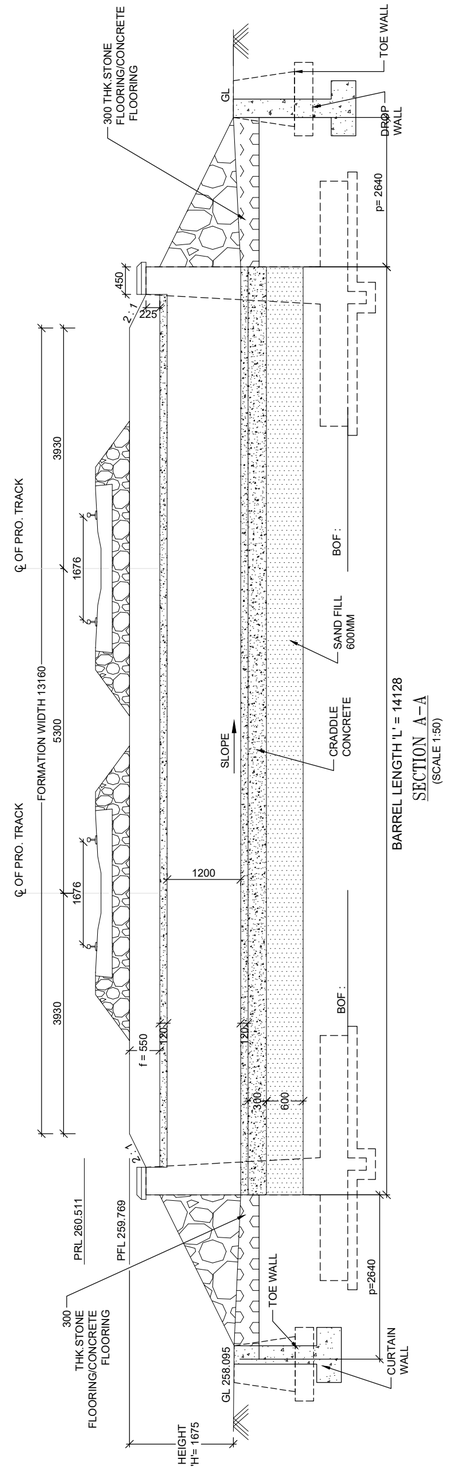
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01125_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



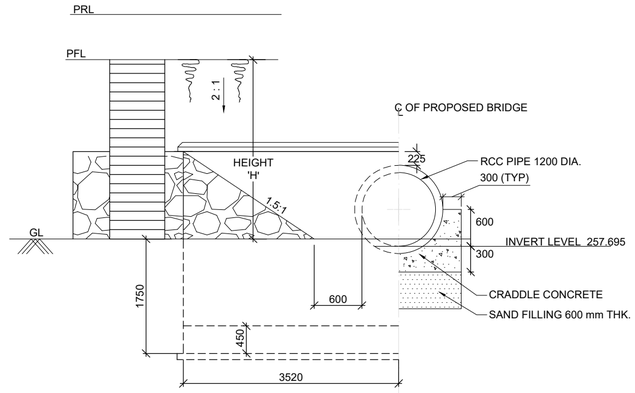
HALF PLAN AT TOP HALF PLAN AT BOTTOM

(SCALE 1:50)



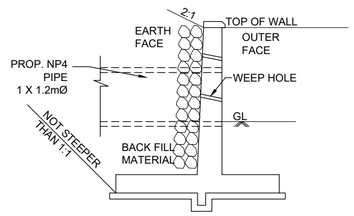
SECTION A–A

(SCALE 1:50)



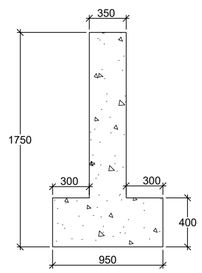
HALF ELEVATION HALF SECTION

(SCALE 1:50)



SECTION B-B

(SCALE 1:75)



CURTAIN / DROP WALL

(SCALE 1:25)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. STRUCTUIRE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
4. PLACEMENT LEVEL OF PIPE AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF DRAINAGE &NATURAL GROUND PROFILE.
5. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
6. SEISMIC ZONE- IV
7. EXPOSURE CONDITION- MODERATE.
8. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
9. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
10. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
11. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

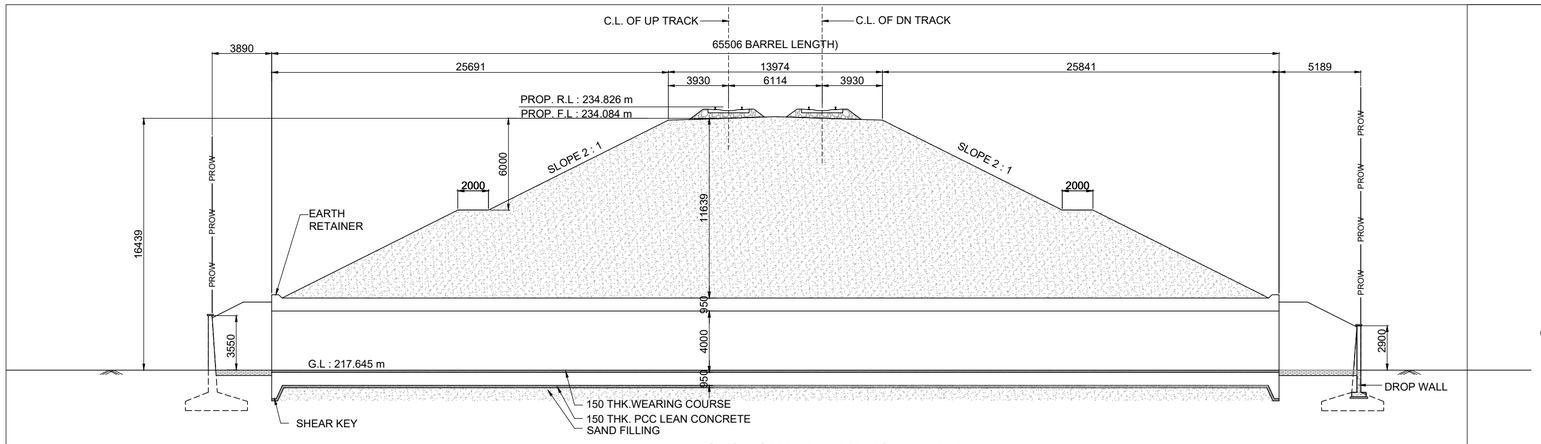
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT FOR BRIDGE NO. 126 PIPE CULVERT 1X1.2 SPAN, AT CH: 49583.348m

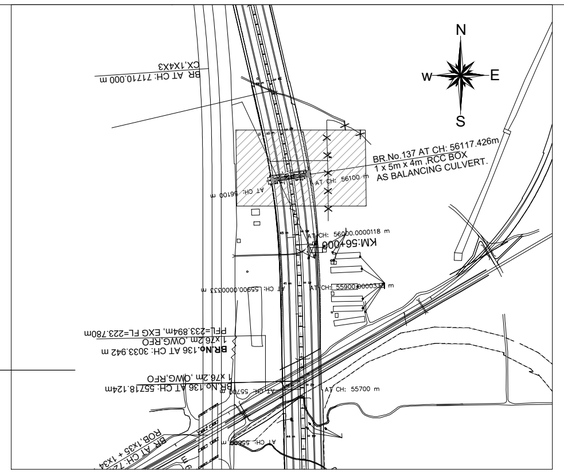
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01126_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



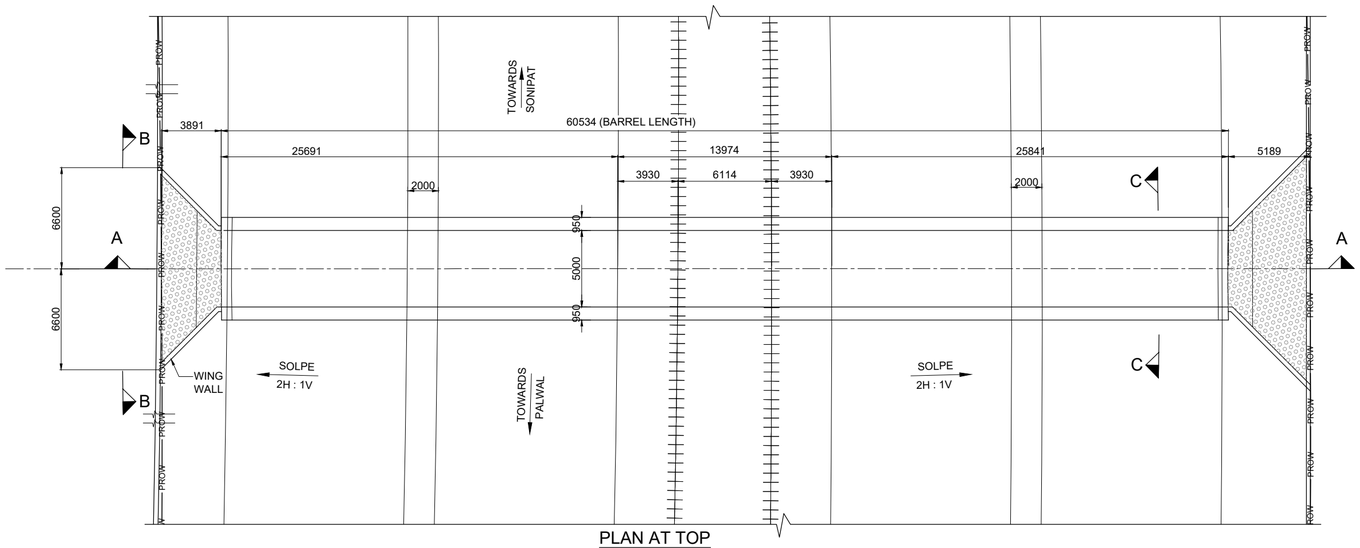
SECTIONAL ELEVATION AT A-A

SCALE 1:200



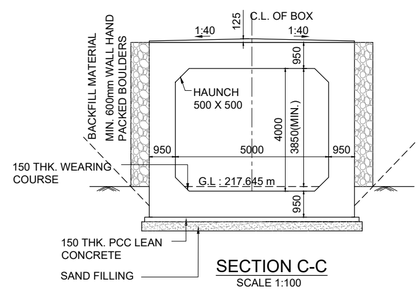
KEY PLAN

SCALE 1:NTS



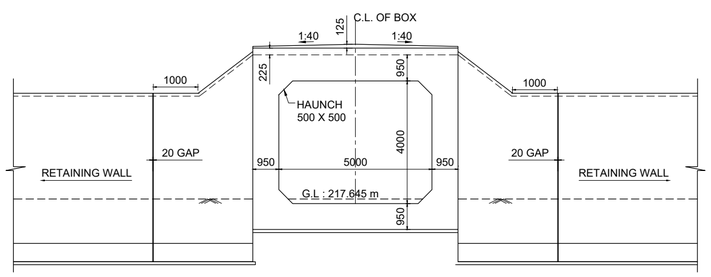
PLAN AT TOP

SCALE 1:200



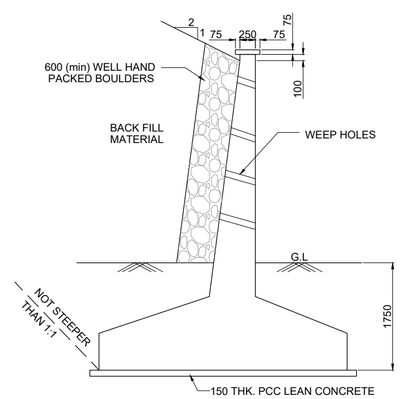
SECTION C-C

SCALE 1:100



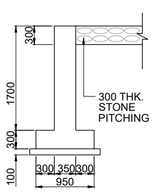
VIEW AT B-B

SCALE 1:100



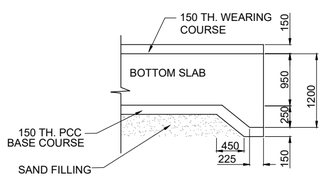
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



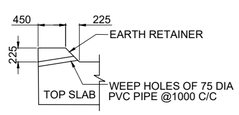
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

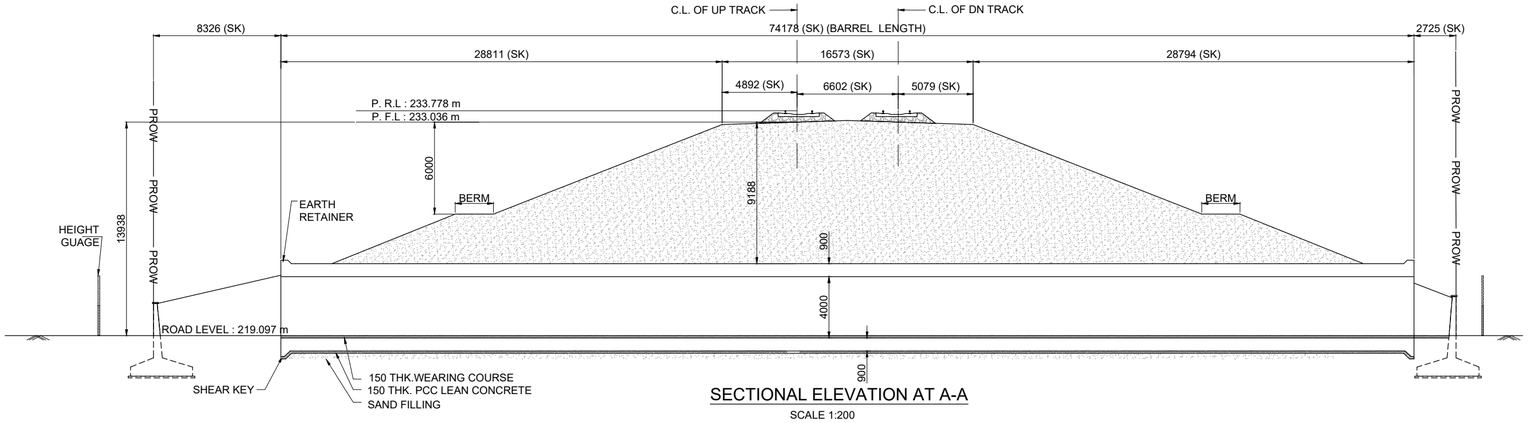
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 137
SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56117.426

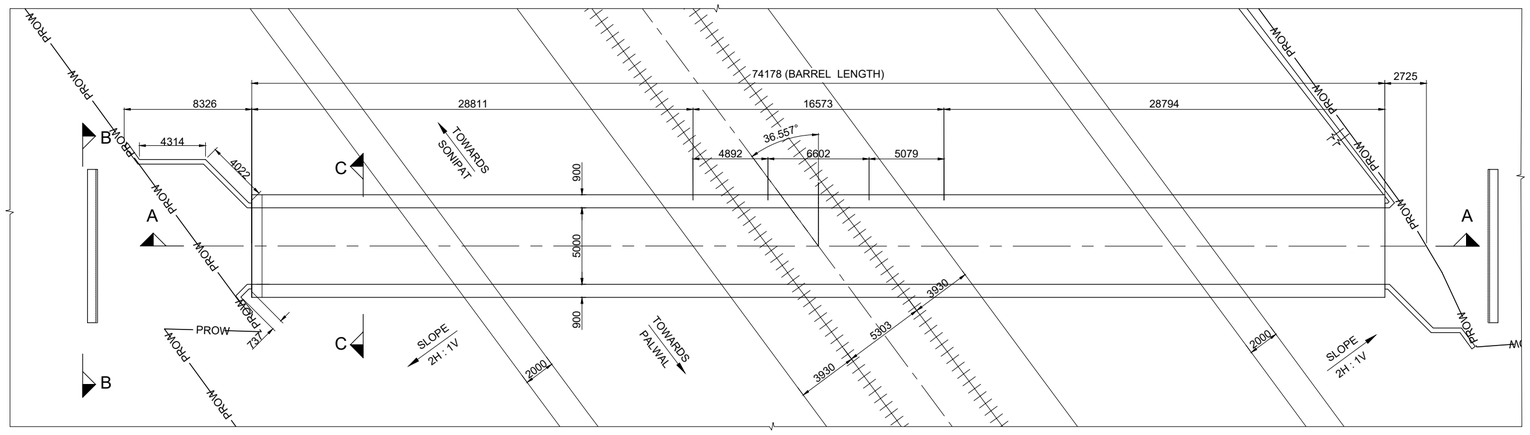
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01137_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



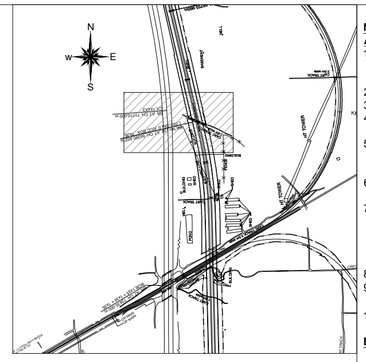
SECTIONAL ELEVATION AT A-A

SCALE 1:200



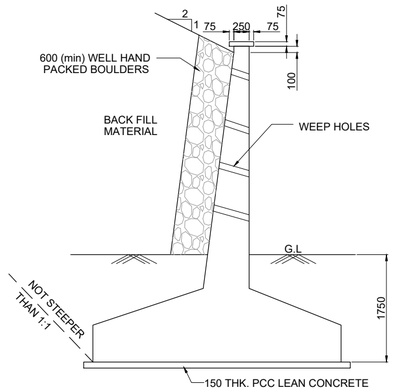
PLAN AT TOP

SCALE 1:200



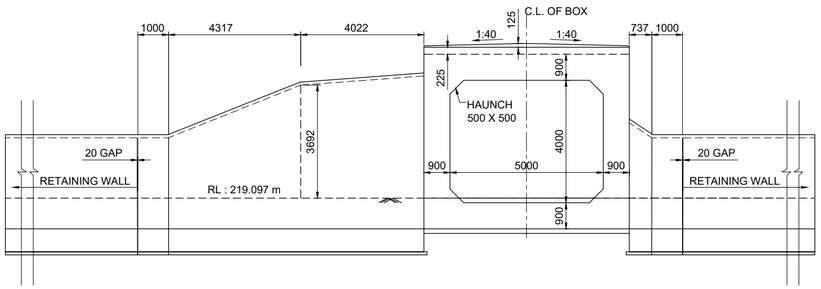
KEY PLAN

SCALE 1:NTS



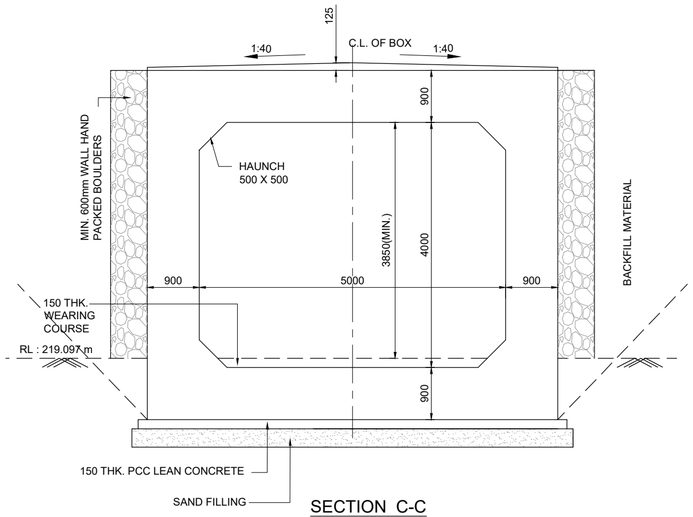
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



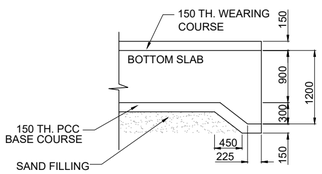
VIEW AT B-B

SCALE 1:50



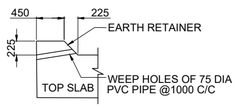
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

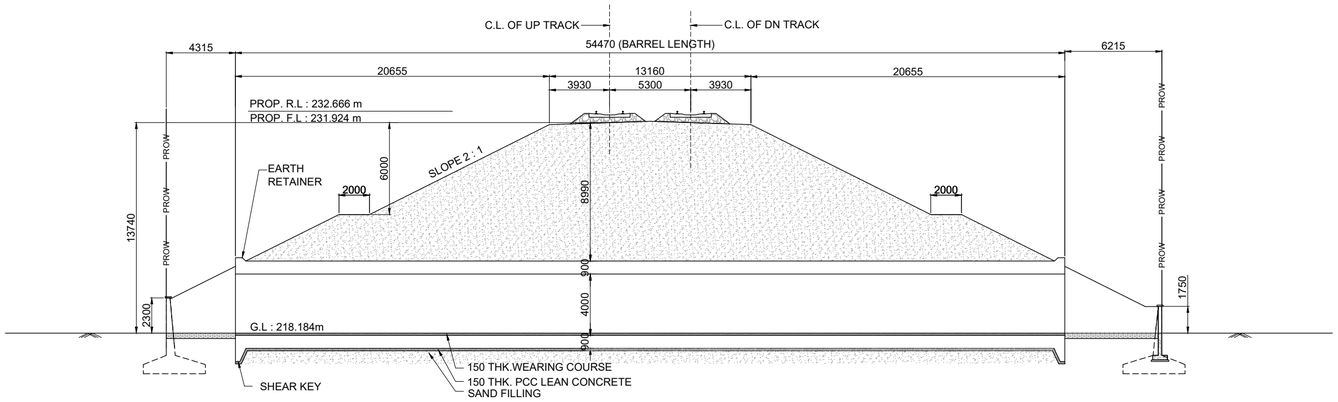
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 138
SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56290.652

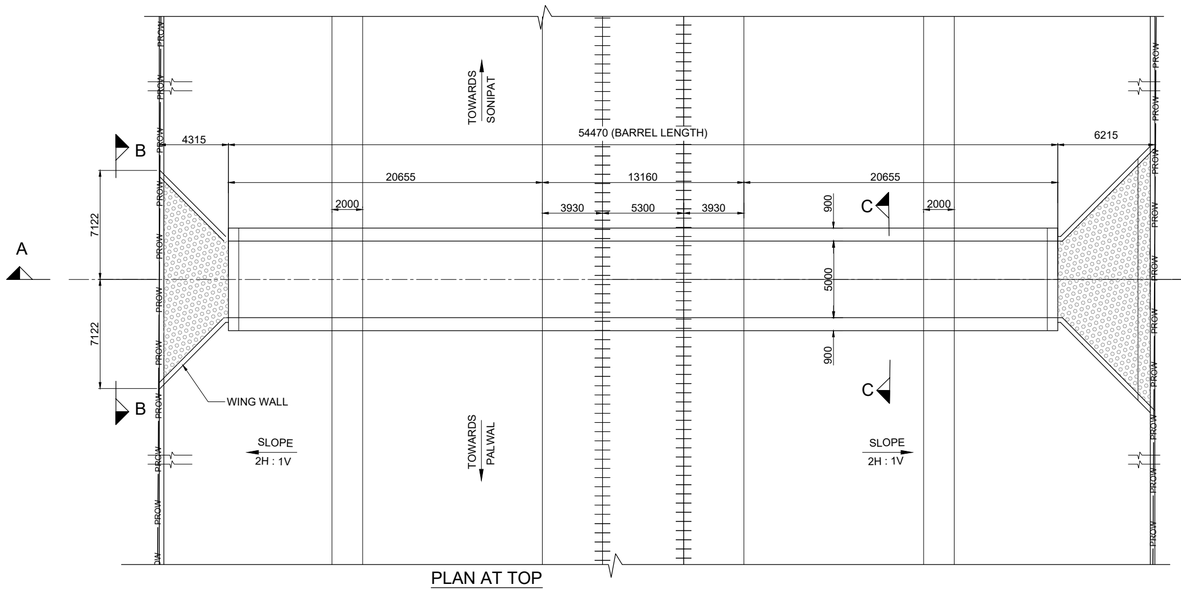
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01138_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



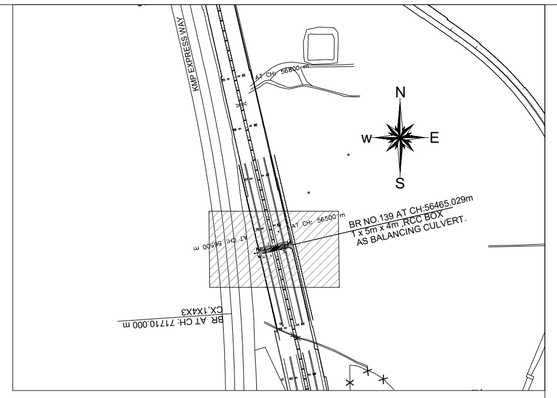
SECTIONAL ELEVATION AT A-A

SCALE 1:200



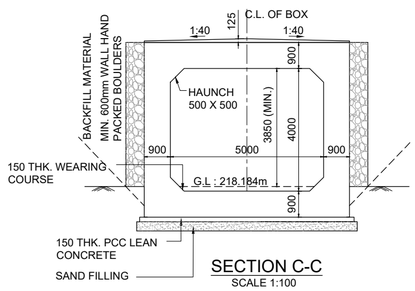
PLAN AT TOP

SCALE 1:200



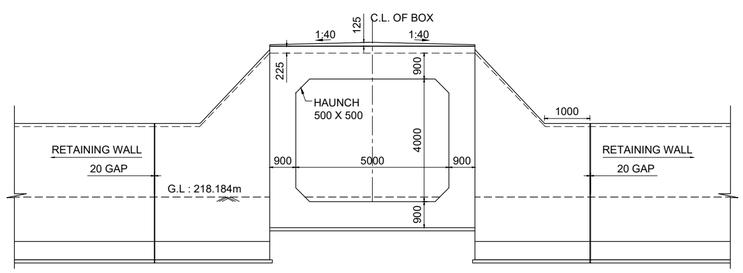
KEY PLAN

SCALE 1:NTS



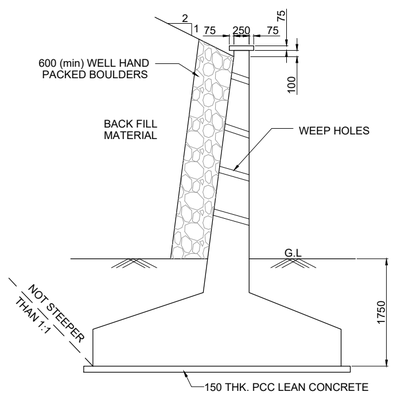
SECTION C-C

SCALE 1:100



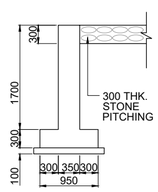
VIEW AT B-B

SCALE 1:100



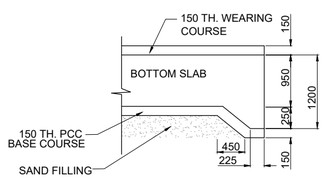
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



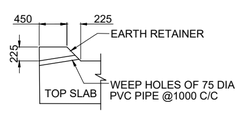
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

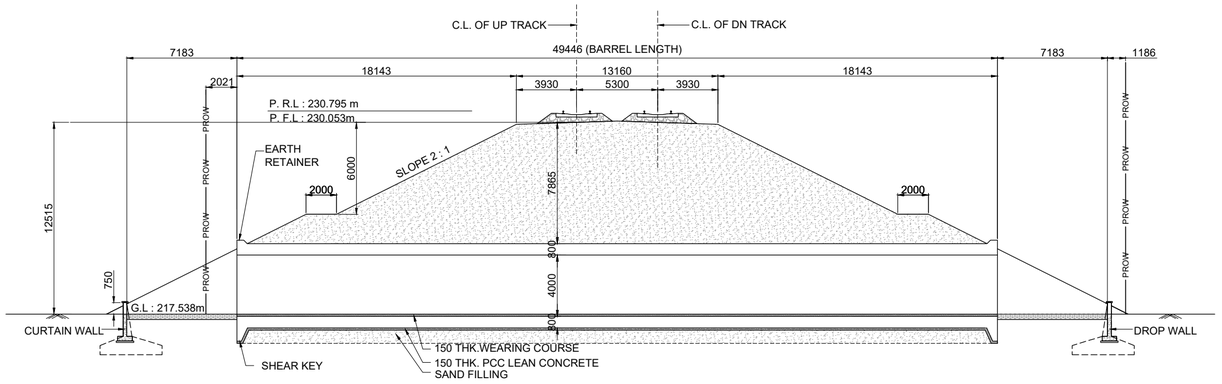
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 139 SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56465.029

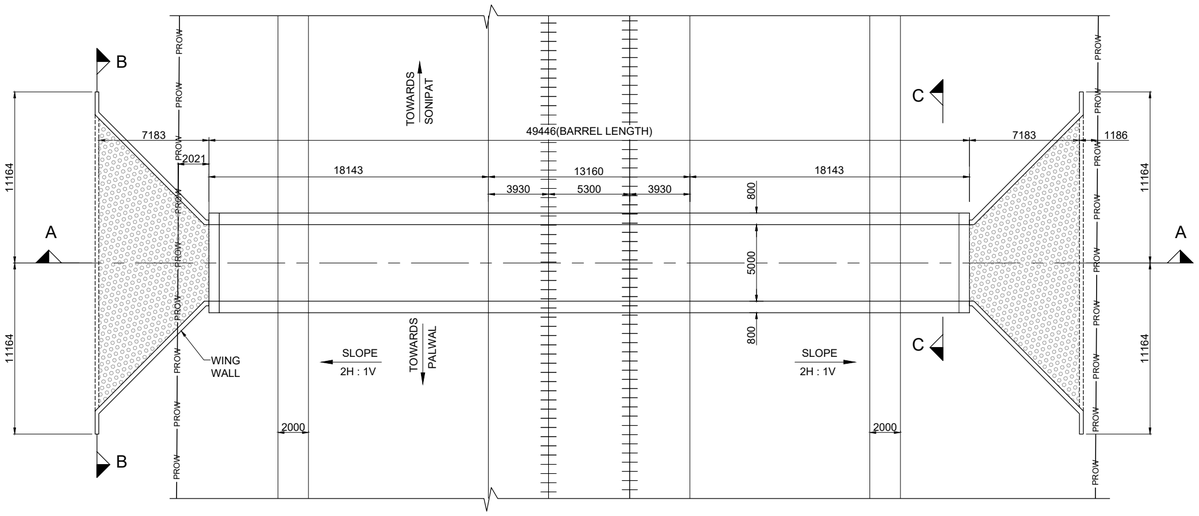
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01139_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



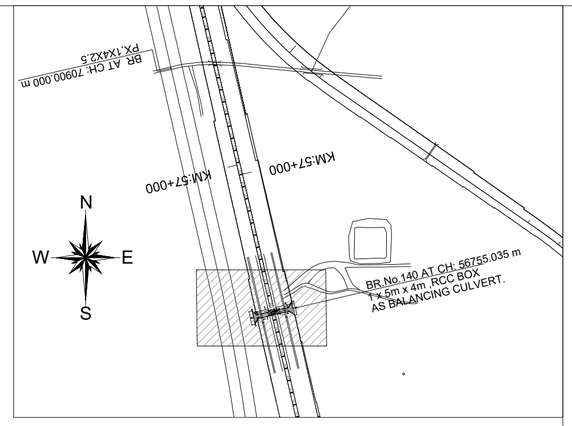
SECTIONAL ELEVATION AT A-A

SCALE 1:200



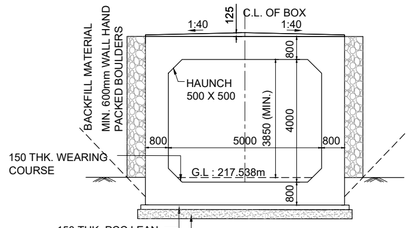
PLAN AT TOP

SCALE 1:200



KEY PLAN

SCALE 1:NTS



SECTION C-C

SCALE 1:100

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROPOSED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
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13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
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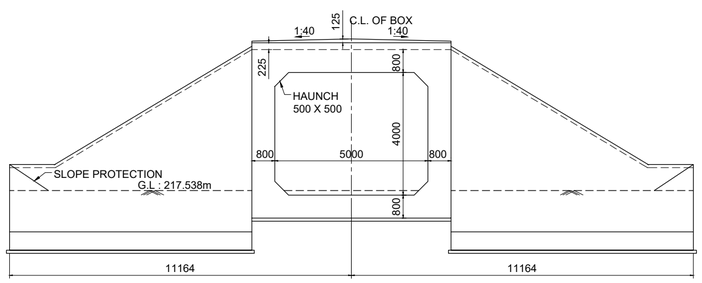
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

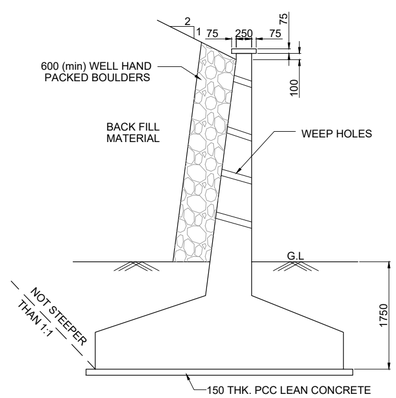
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL



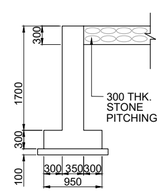
VIEW AT B-B

SCALE 1:100



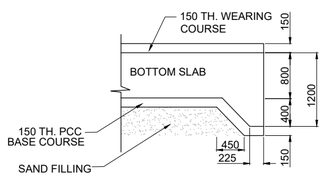
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



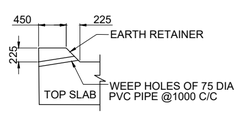
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

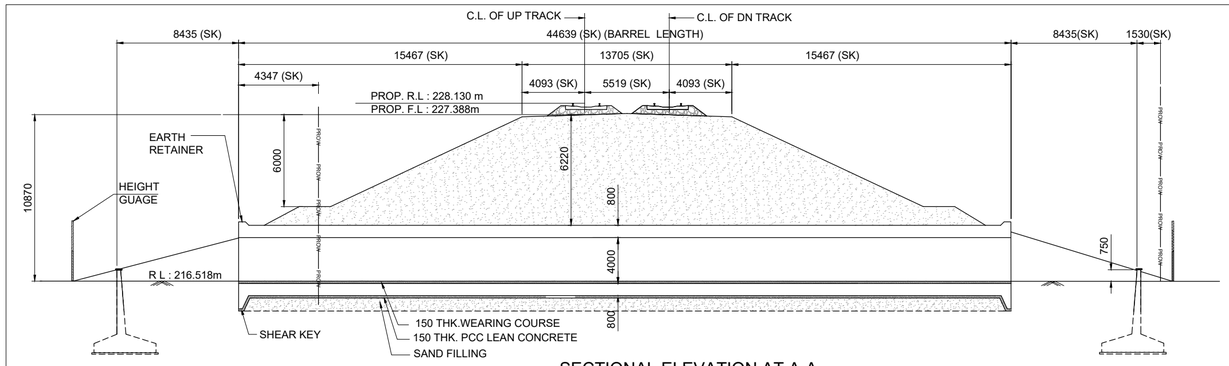
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 140 SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56755.035

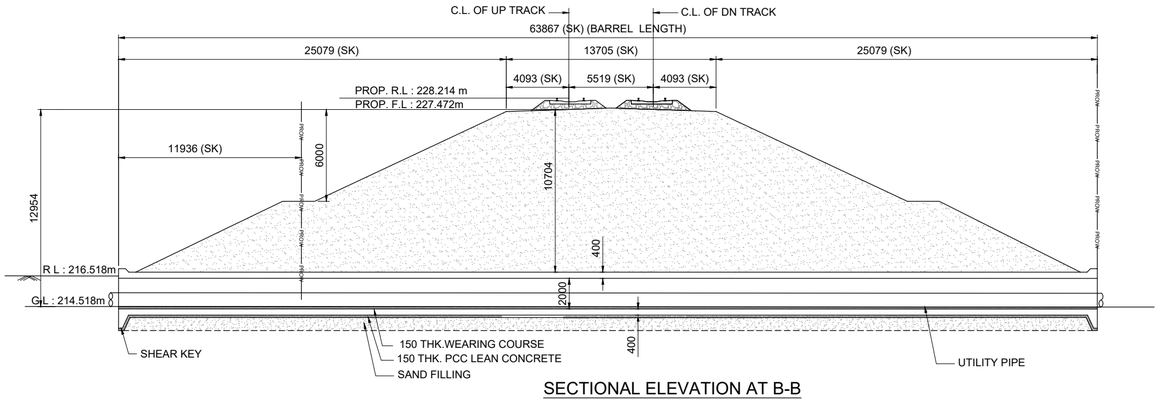
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01140_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



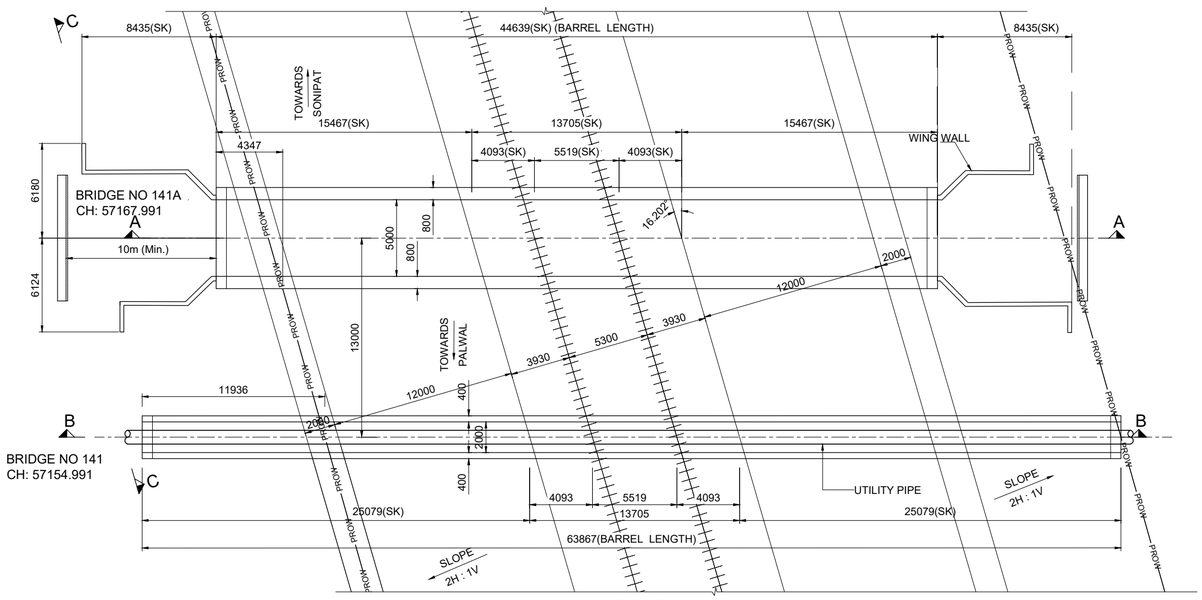
SECTIONAL ELEVATION AT A-A

SCALE 1:200



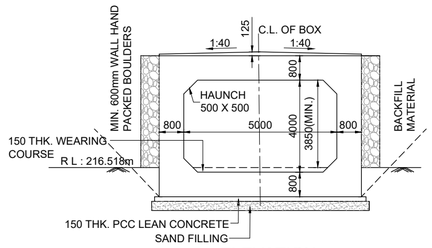
SECTIONAL ELEVATION AT B-B

SCALE 1:200



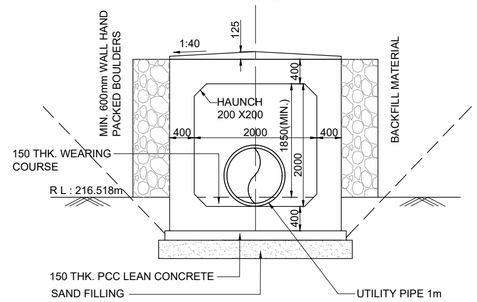
PLAN AT TOP

SCALE 1:200



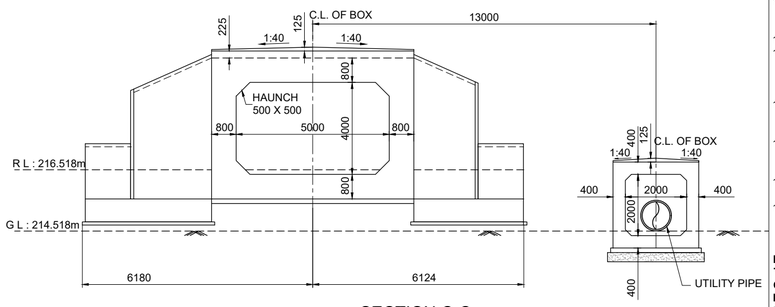
ELEVATION

SCALE 1:100



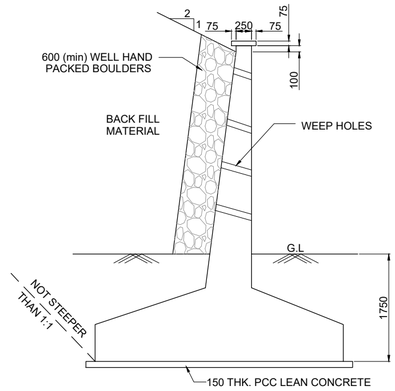
ELEVATION

SCALE 1:50



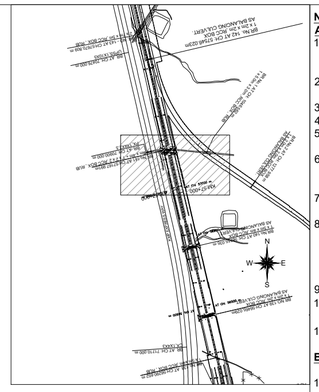
SECTION C-C

SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



KEY PLAN

SCALE 1:NTS

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

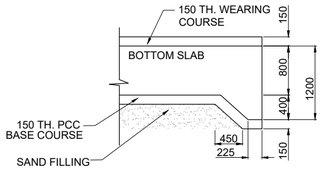
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

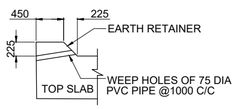
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES — THE INFRASTRUCTURE PEOPLE | SMEC



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

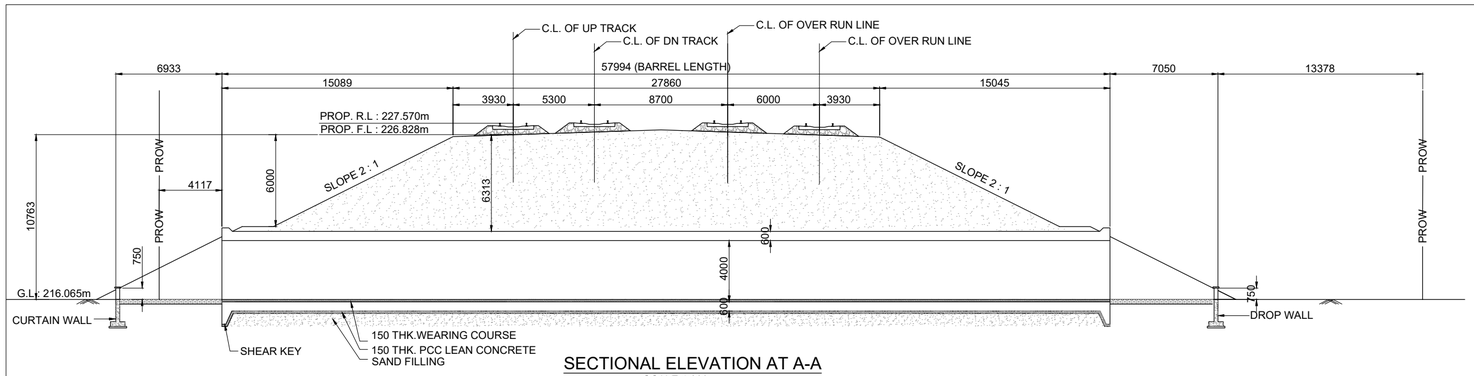
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD + BALANCING CULVERT BRIDGE NO 141/ 141A 1x2x2+1x5x4 RCC BOX AT CH: 57154.991/57167.991

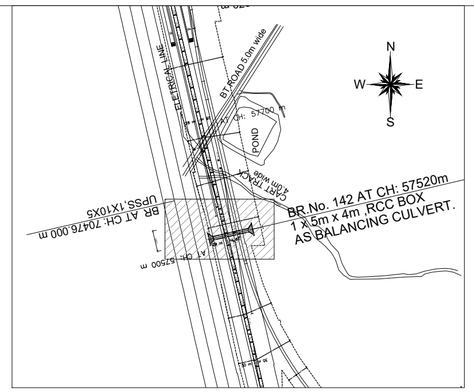
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01141_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



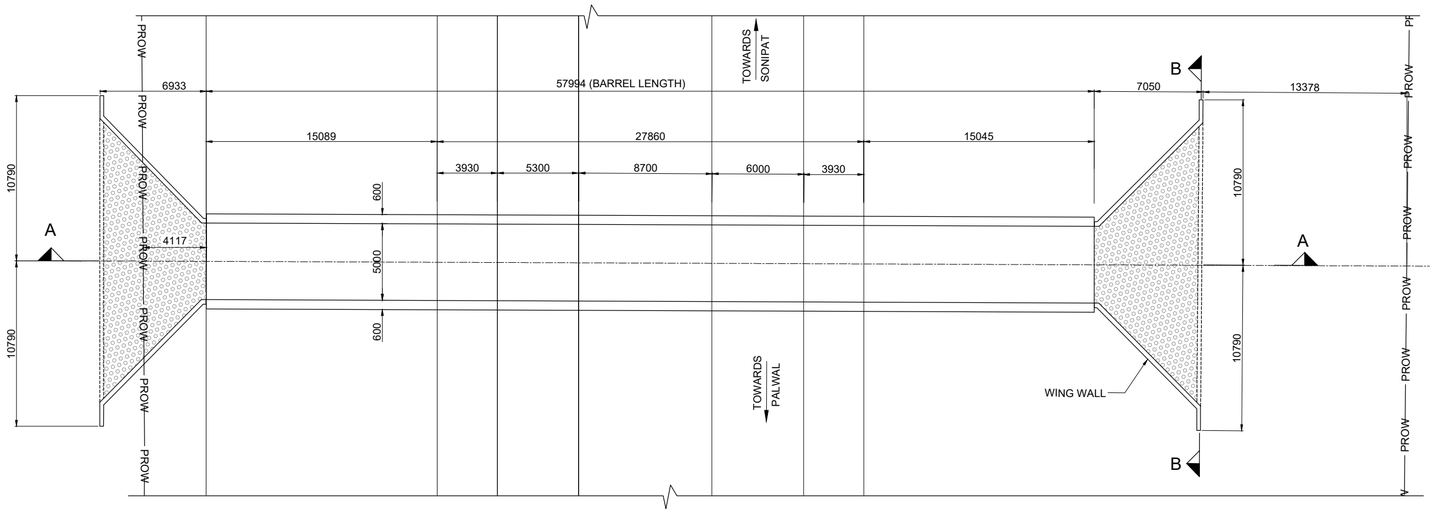
SECTIONAL ELEVATION AT A-A

SCALE 1:200



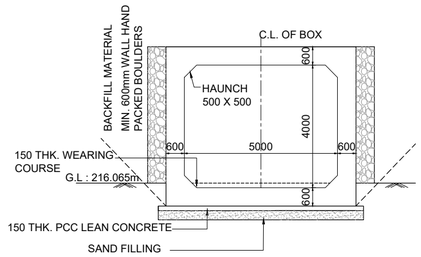
KEY PLAN

SCALE 1:NTS



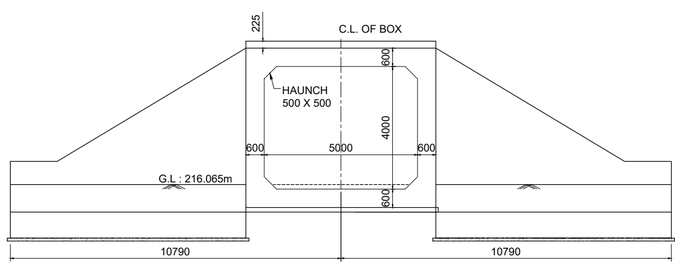
PLAN AT TOP

SCALE 1:200



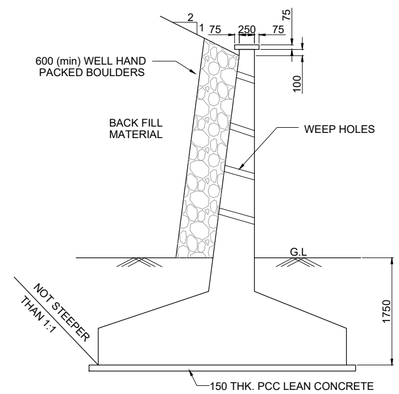
ELEVATION

SCALE 1:50



VIEW AT B-B

SCALE 1:50



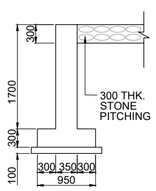
WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

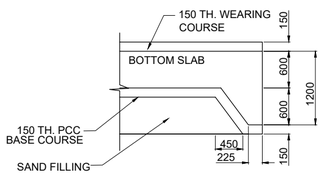
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



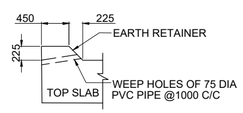
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

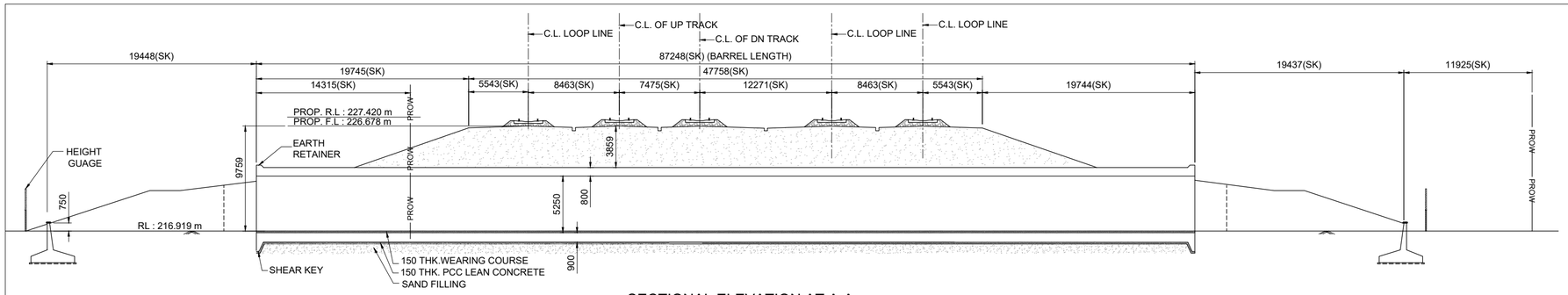
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:-CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 142 1X5.0X4.0m RCC BOX AT CH.57520

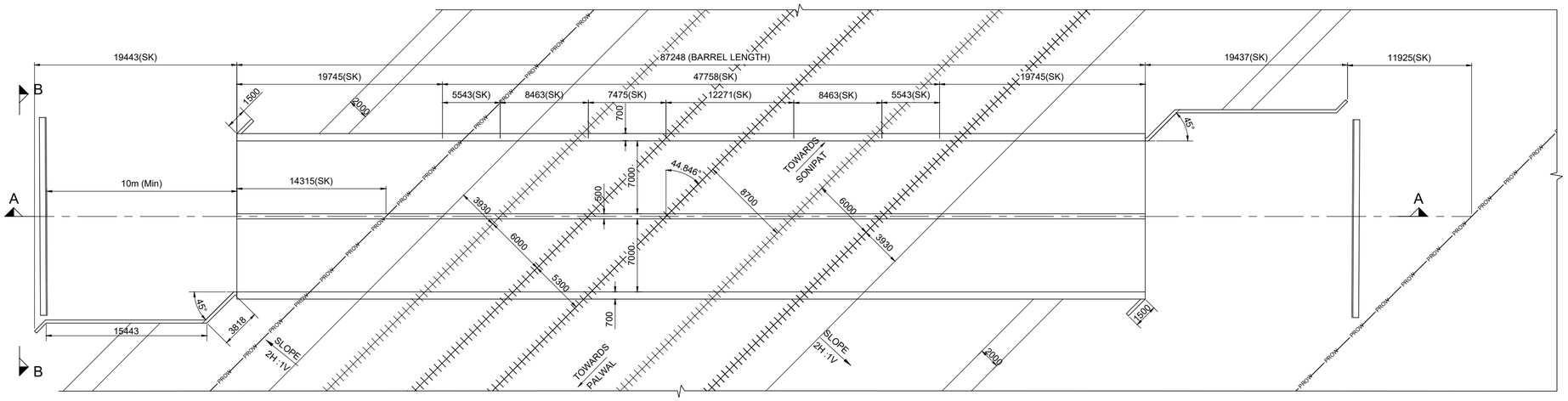
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01142_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



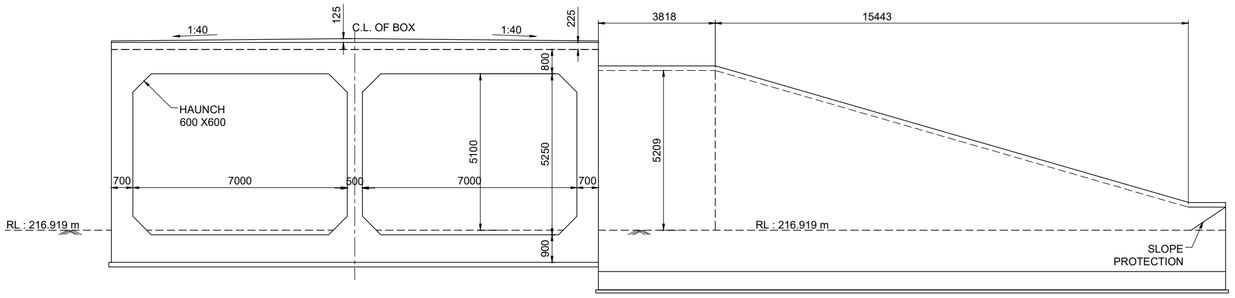
SECTIONAL ELEVATION AT A-A

SCALE 1:250



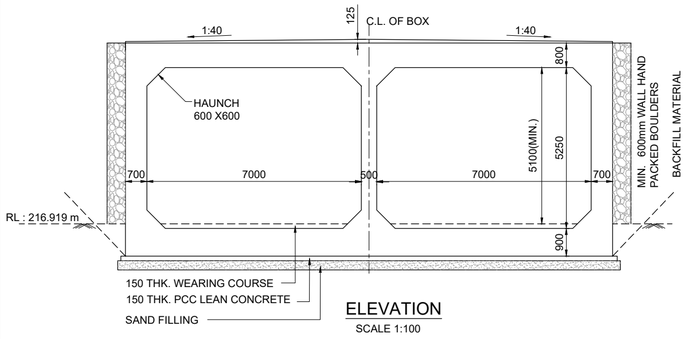
PLAN AT TOP

SCALE 1:250



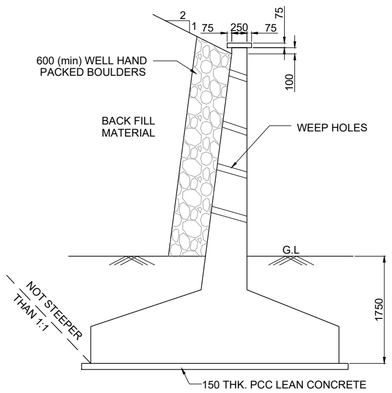
SECTION B-B

SCALE 1:100



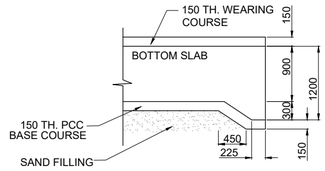
ELEVATION

SCALE 1:100



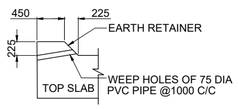
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50

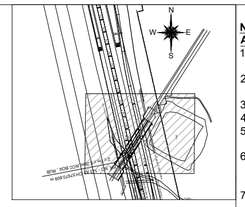


EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL



KEY PLAN

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M00001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

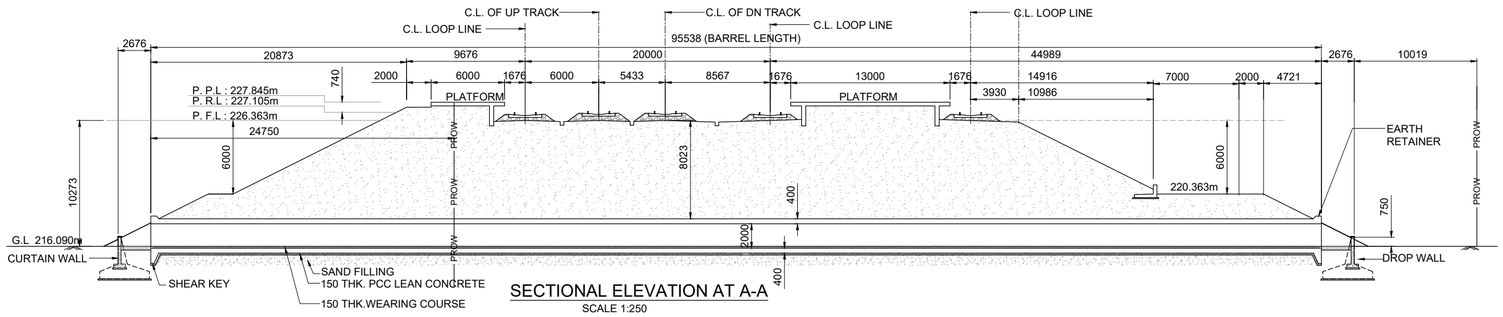
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 143 SPAN
2.0X7.0X5.25 RCC BOX AT CH: 57670.809

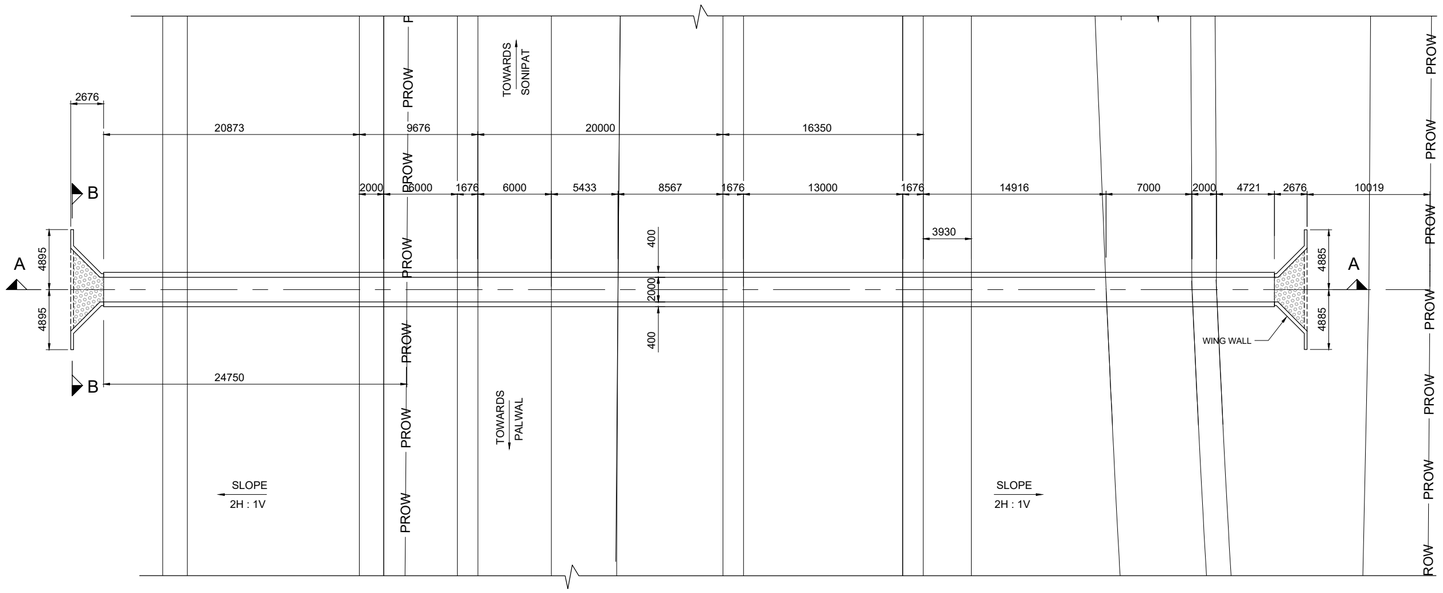
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01143_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



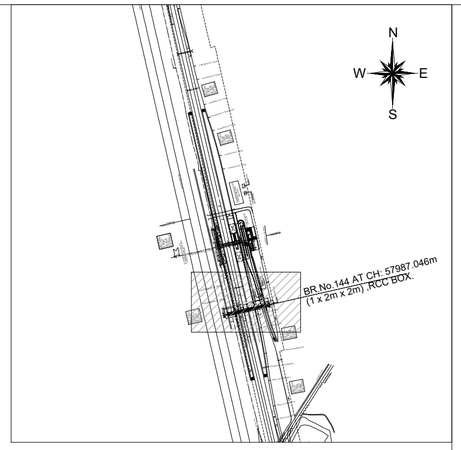
SECTIONAL ELEVATION AT A-A

SCALE 1:250



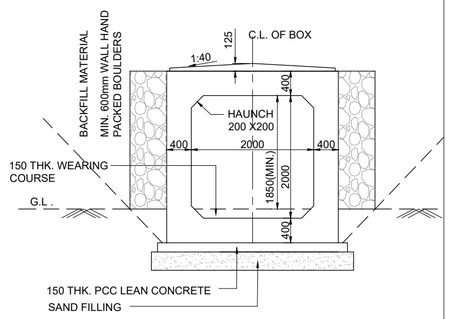
PLAN AT TOP

SCALE 1:250



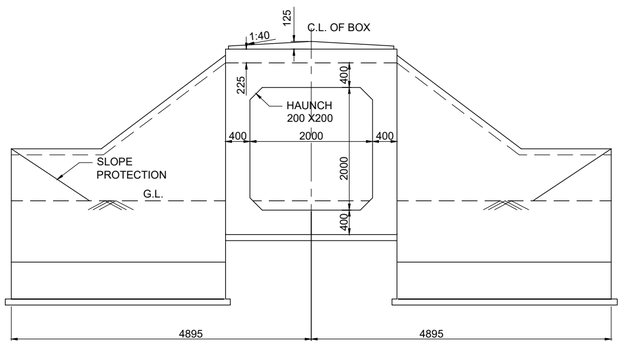
KEY PLAN

SCALE 1:NTS



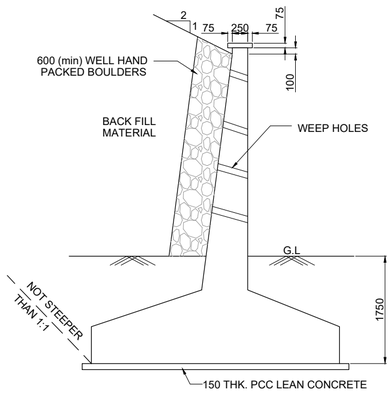
ELEVATION

SCALE 1:50



VIEW AT B-B

SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

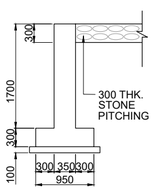
NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

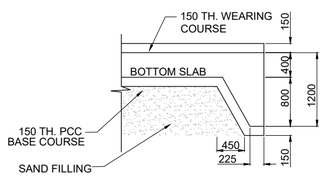
B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.



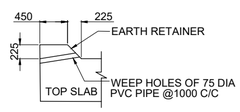
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

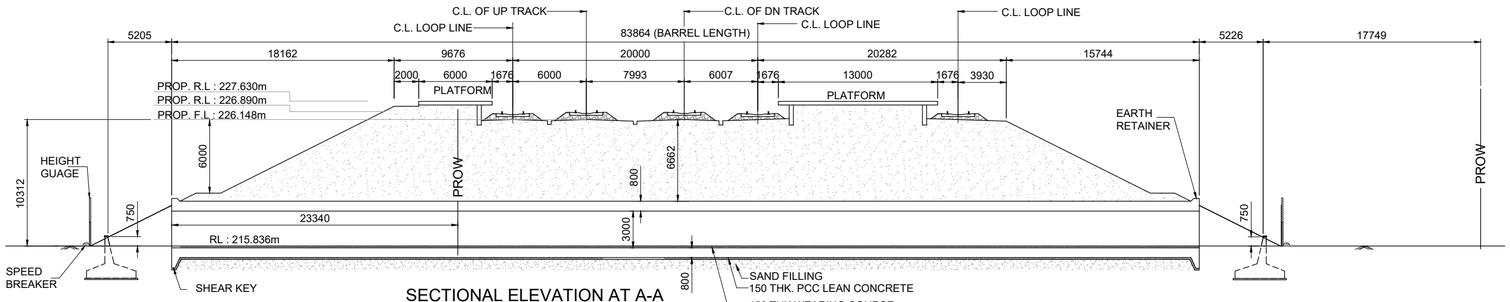
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 144 SPAN 1.0X2.0X2.0 RCC BOX AT CH: 57987.046

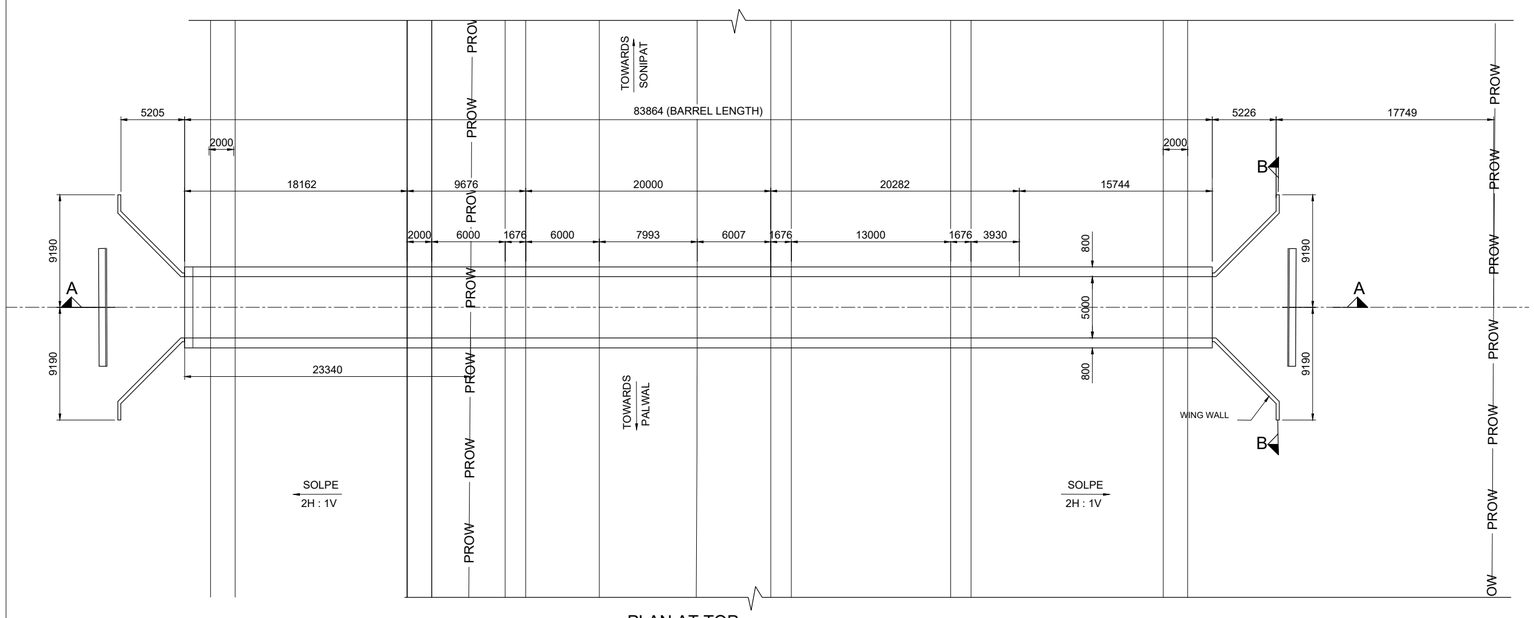
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_01144_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



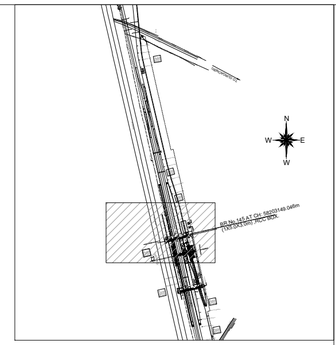
SECTIONAL ELEVATION AT A-A

SCALE 1:250



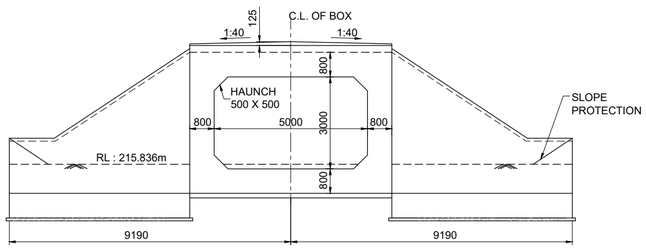
PLAN AT TOP

SCALE 1:250



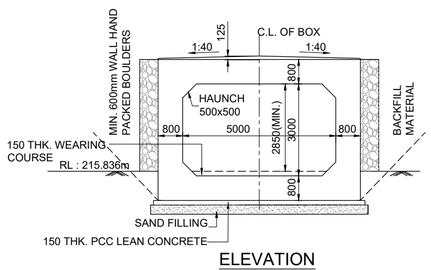
KEY PLAN

SCALE 1:NTS



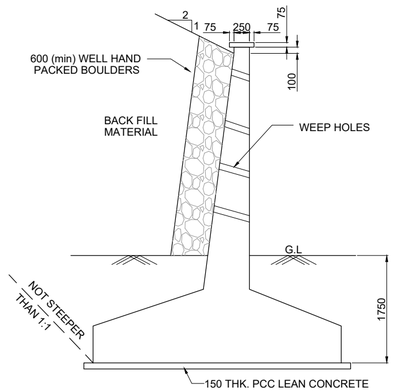
SECTION B-B

SCALE 1:100



ELEVATION

SCALE 1:100

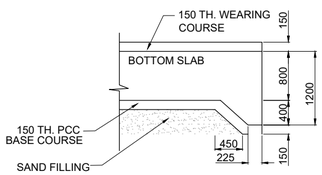


TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

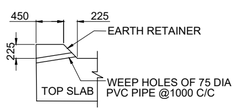
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

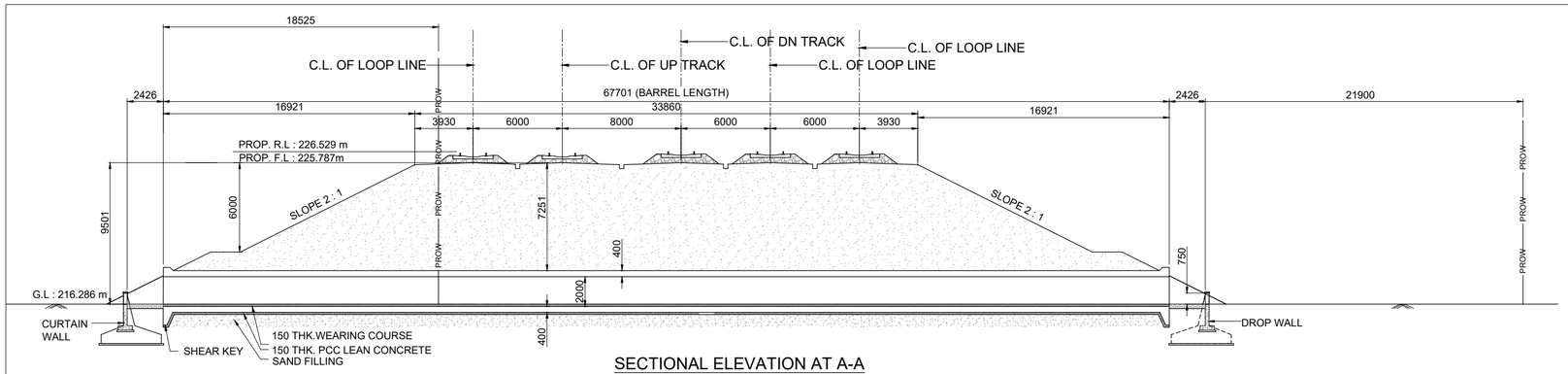
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 145
1X5.0X3.0m RCC BOX AT CH. 58203.149m

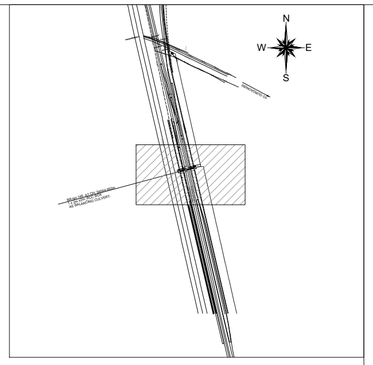
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01145_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



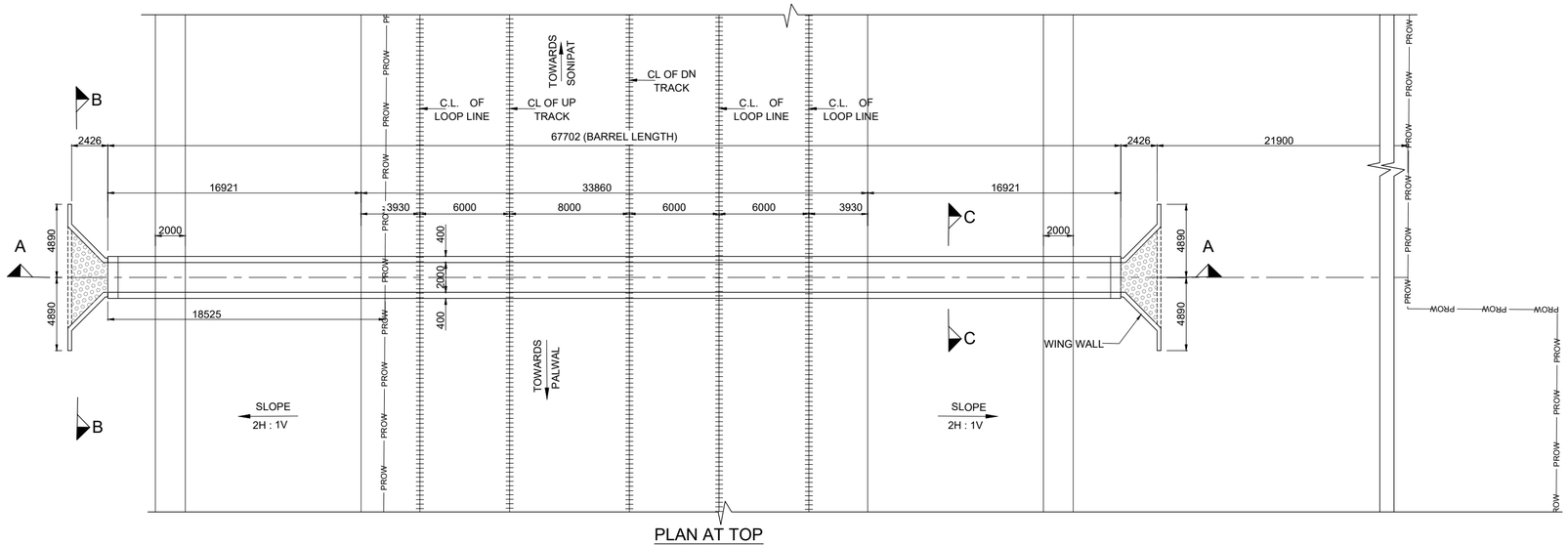
SECTIONAL ELEVATION AT A-A

SCALE 1:200



KEY PLAN

SCALE 1:NTS



PLAN AT TOP

SCALE 1:200

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
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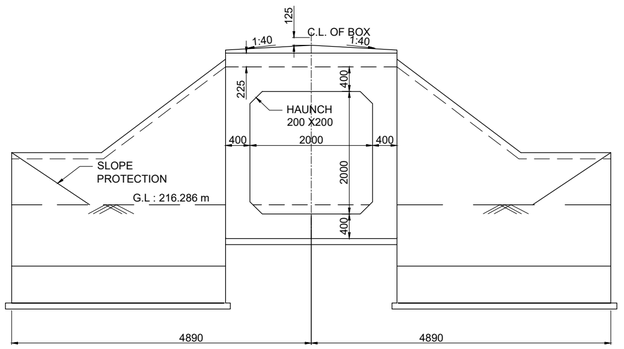
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

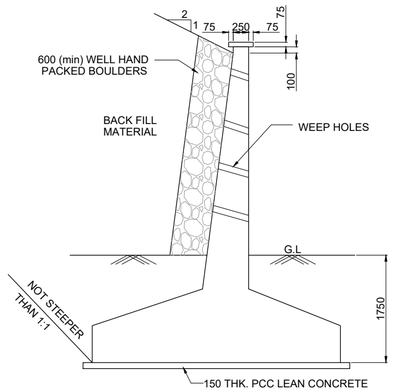
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



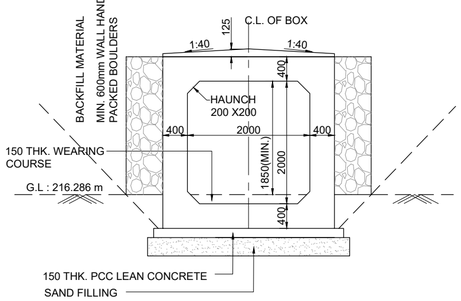
VIEW AT B-B

SCALE 1:50



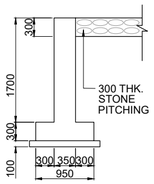
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



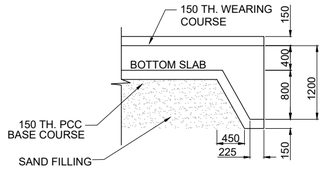
SECTION

SCALE 1:50



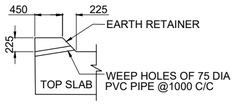
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

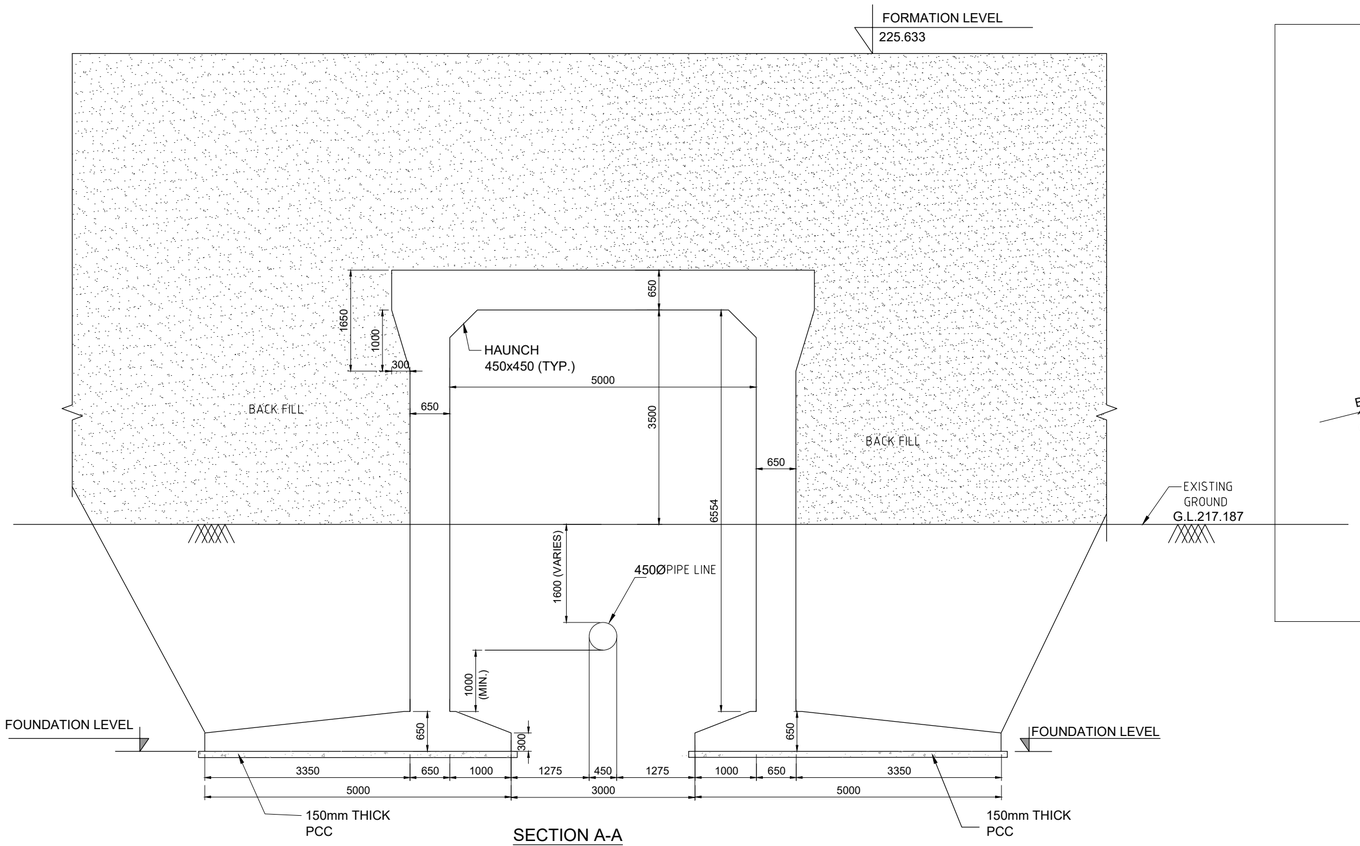
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO 146
1X2.0X2.0m RCC BOX AT CH. 58564.993m

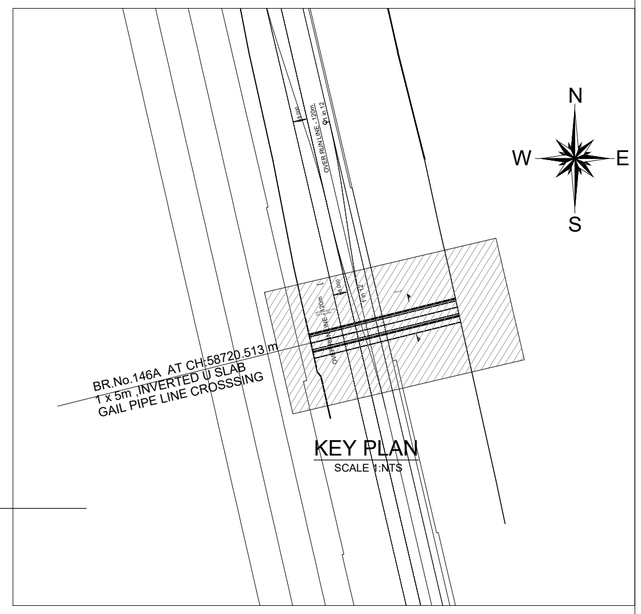
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01146_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



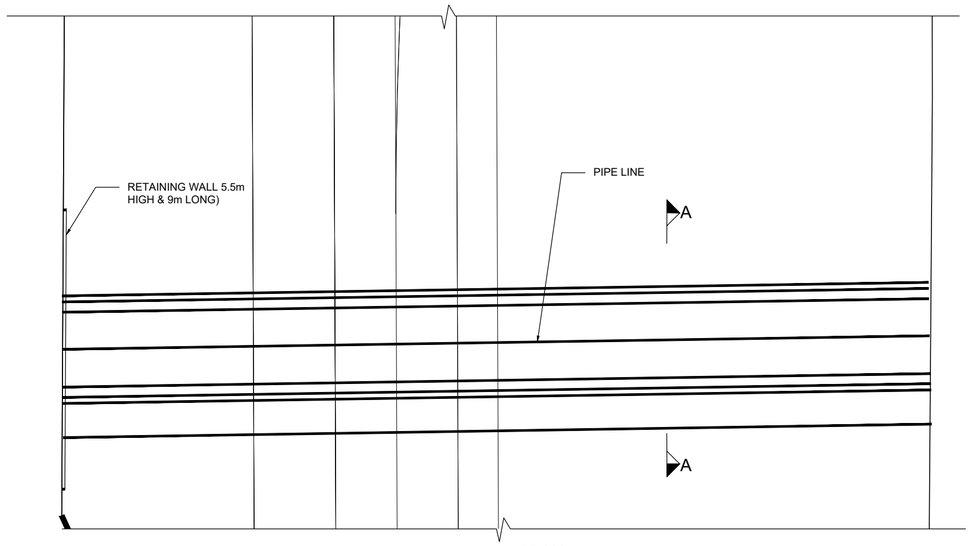
SECTION A-A

SCALE 1:50



KEY PLAN

SCALE 1:NTS



PLAN

SCALE 1:300

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BRIDGE AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF STRUCTURE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

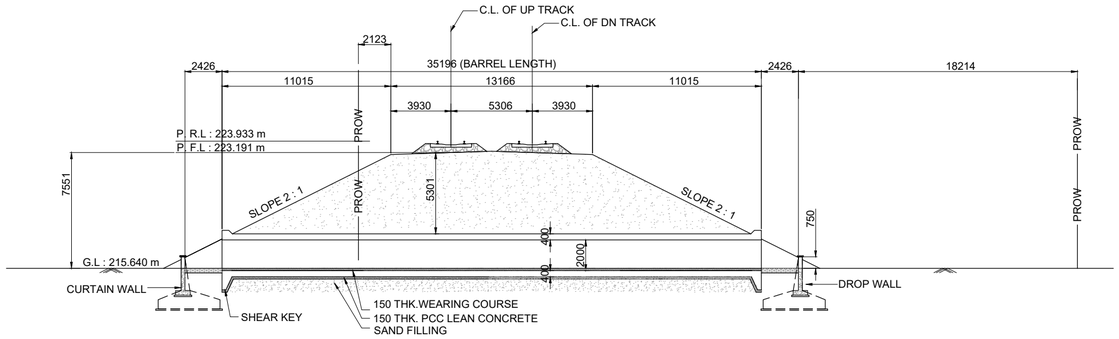
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BRIDGE NO.146A - 5 m CLEAR SPAN INVERTED U OVER GAIL PIPE LINE CROSSING AT CH. 58720.513m

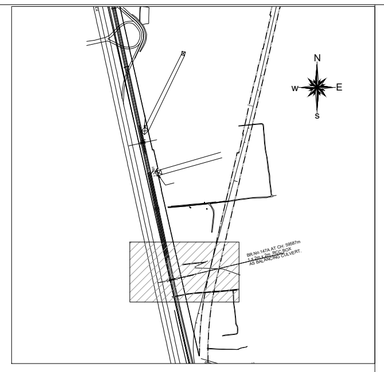
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01146_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



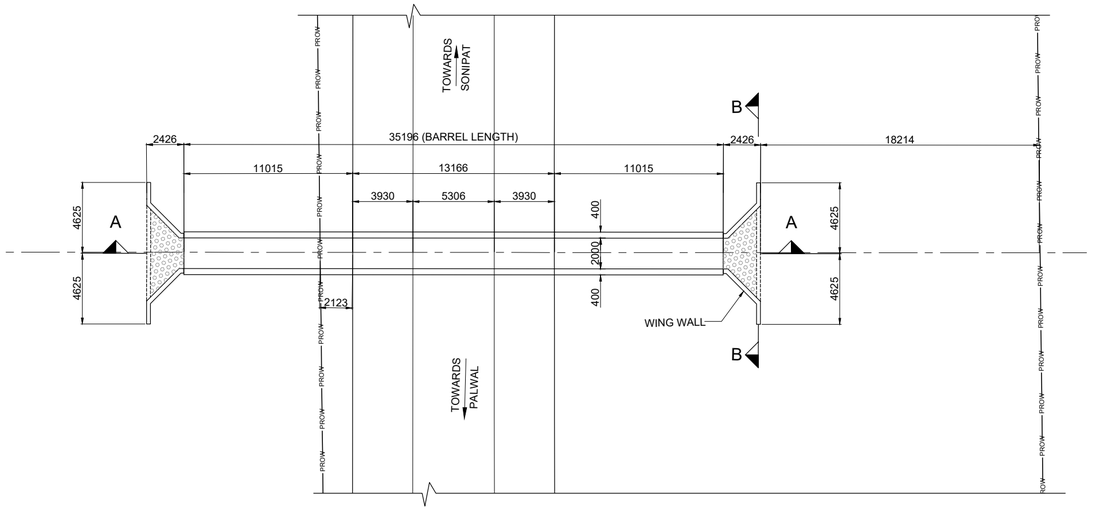
SECTIONAL ELEVATION AT A-A

SCALE 1:200



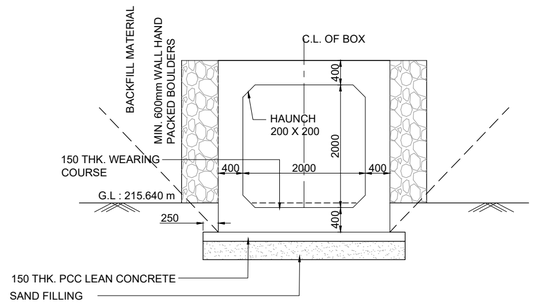
KEY PLAN

SCALE 1:NTS



PLAN AT TOP

SCALE 1:200



ELEVATION

SCALE 1:50

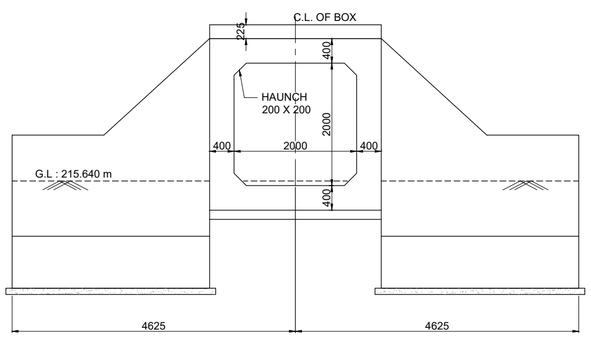
NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

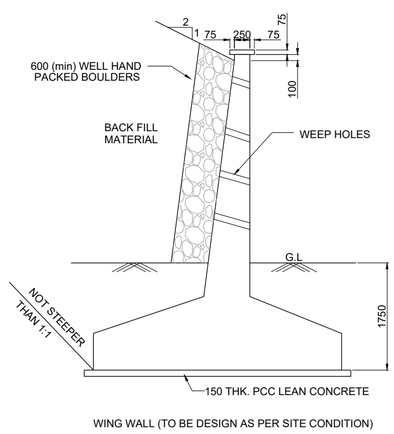
B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDE ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.



VIEW AT B-B

SCALE 1:50



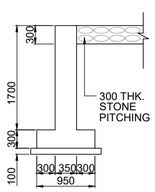
WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

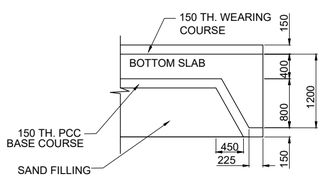
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL



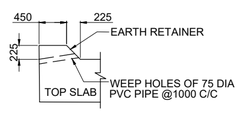
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

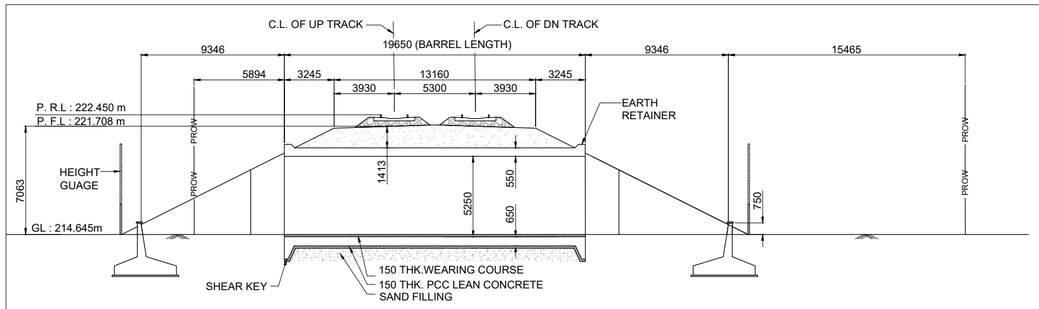
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

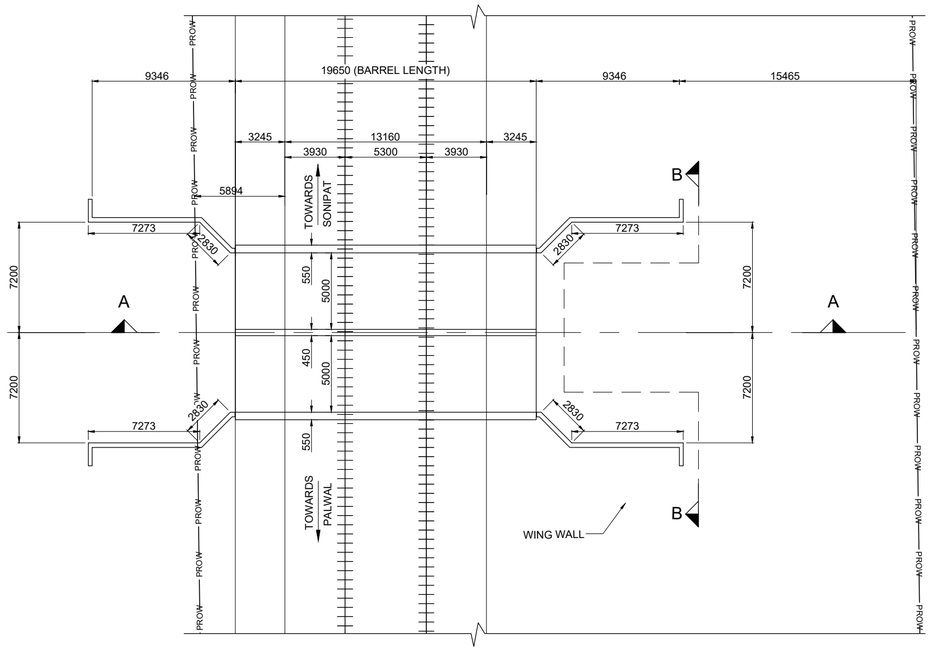
TITLE:-GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 147A 1X2.0X2.0m RCC BOX AT CH. 59587.000m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRW-GAD-01147A_A0	1 OF 1

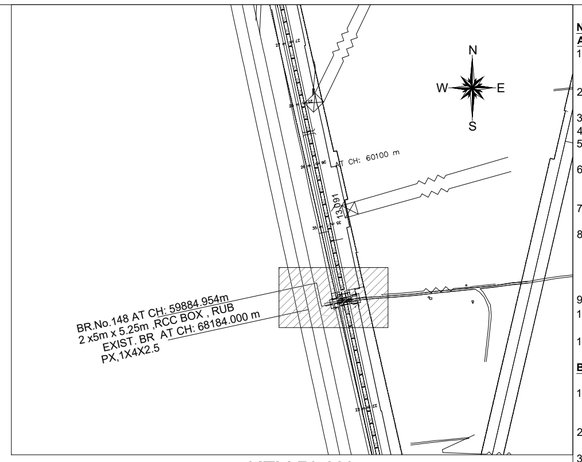
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



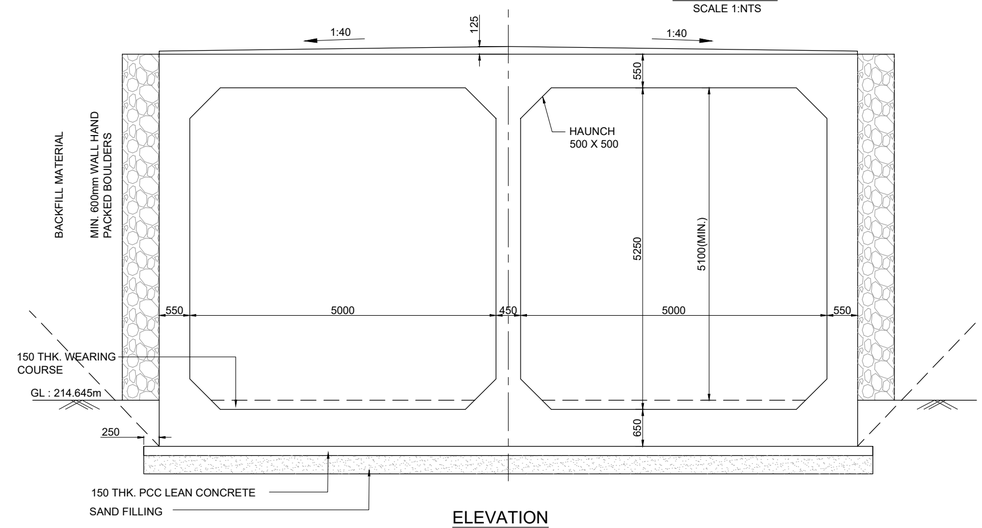
SECTIONAL ELEVATION AT A-A
SCALE 1:200



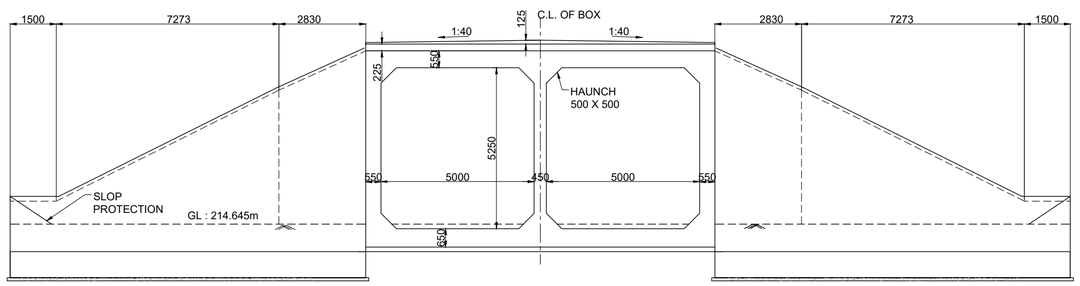
PLAN AT TOP
SCALE 1:200



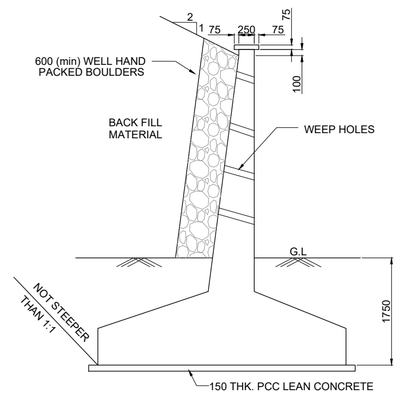
KEY PLAN
SCALE 1:NTS



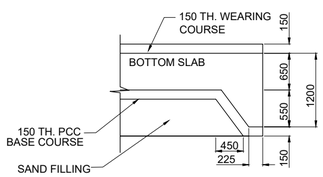
ELEVATION
SCALE 1:50



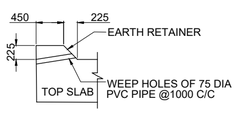
VIEW AT B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

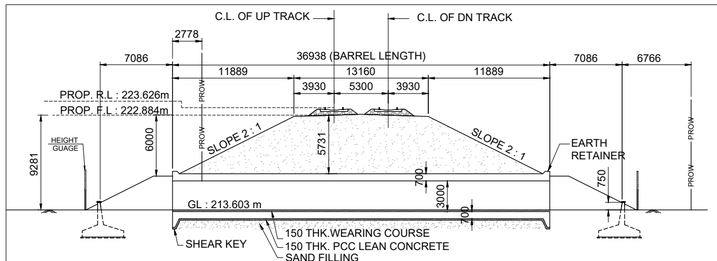
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 148 SPAN
2.0X5.0X5.25 RCC BOX AT CH.59884.954

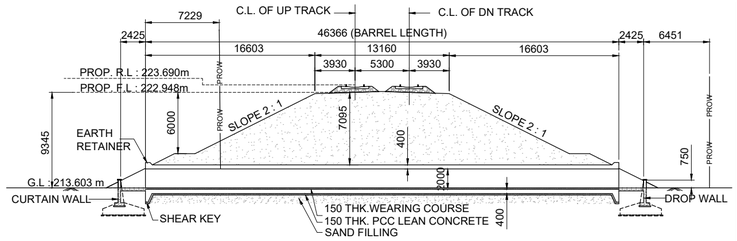
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01148_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



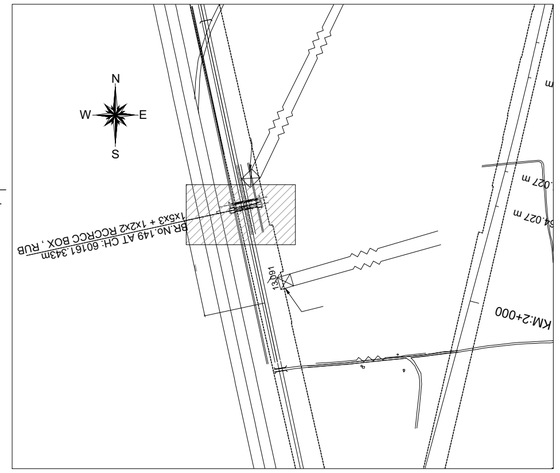
SECTIONAL ELEVATION AT A-A

SCALE 1:300



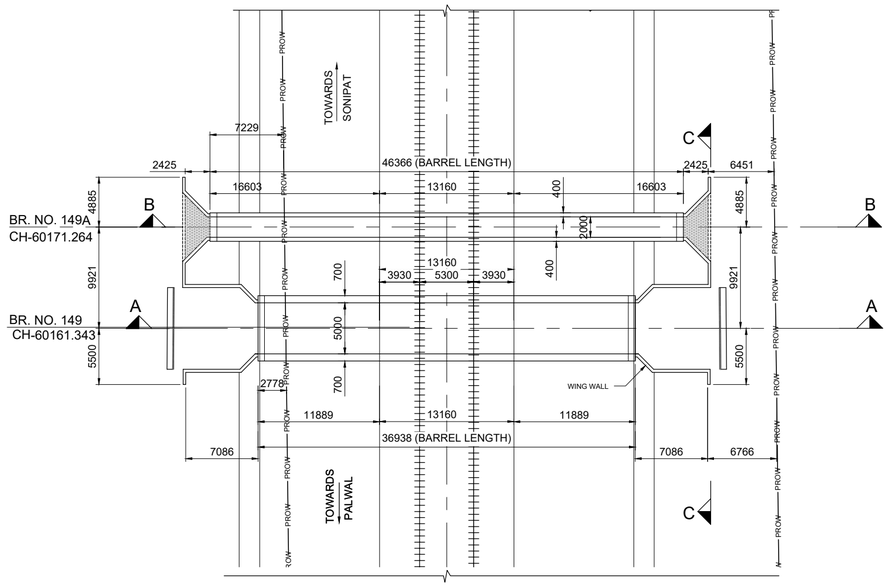
SECTIONAL ELEVATION AT B-B

SCALE 1:300



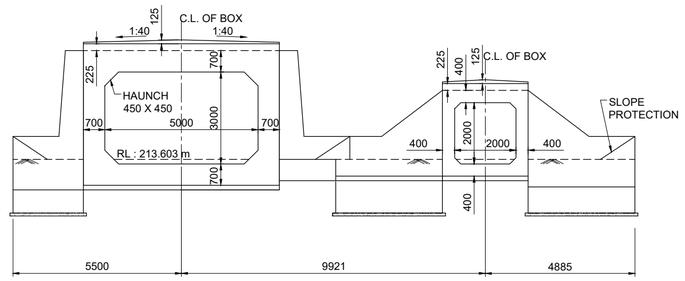
KEY PLAN

SCALE 1:NTS



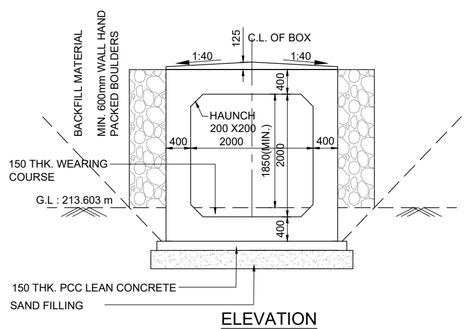
PLAN AT TOP

SCALE 1:200



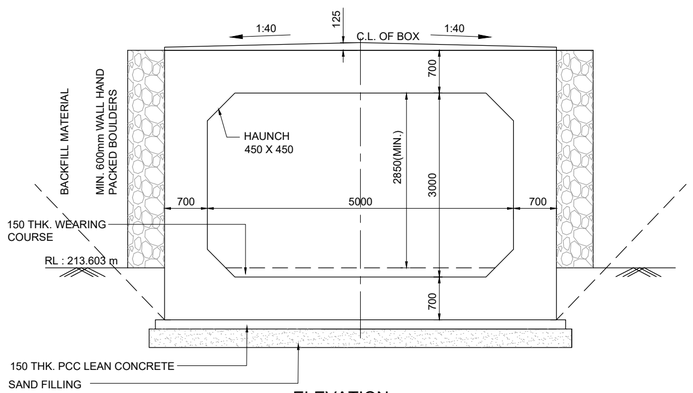
VIEW AT C-C

SCALE 1:100



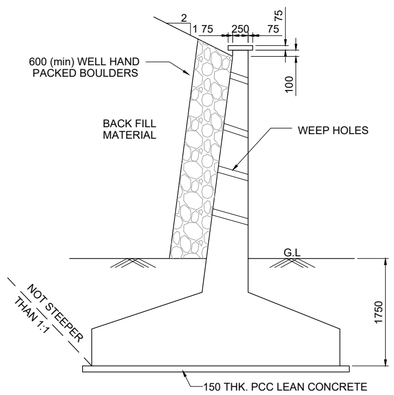
ELEVATION

SCALE 1:50



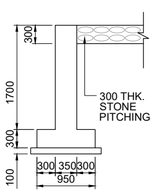
ELEVATION

SCALE 1:50



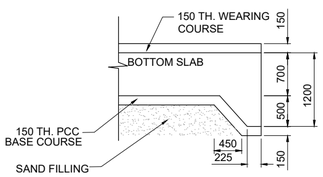
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



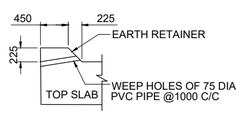
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

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7. SEISMIC ZONE- IV
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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

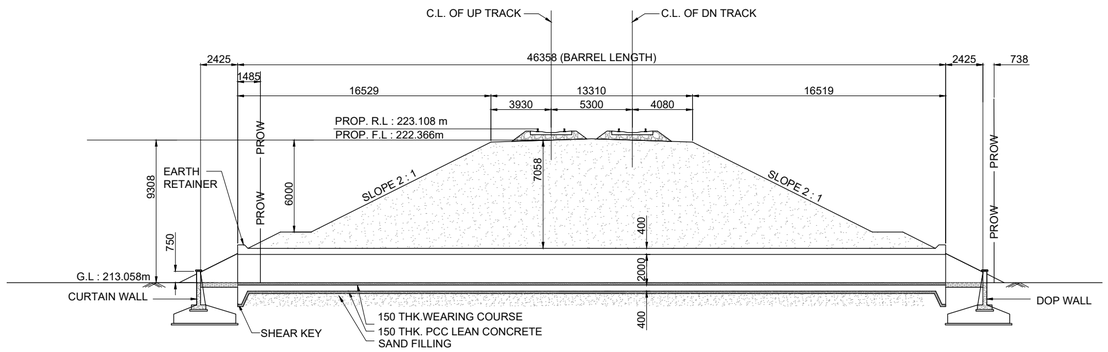
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD+BALANCING CULVERT BRIDGE NO 149/149A
1x5x3 + 1x2x2 RCC BOX AT CH. 60161.343m/60171.264m

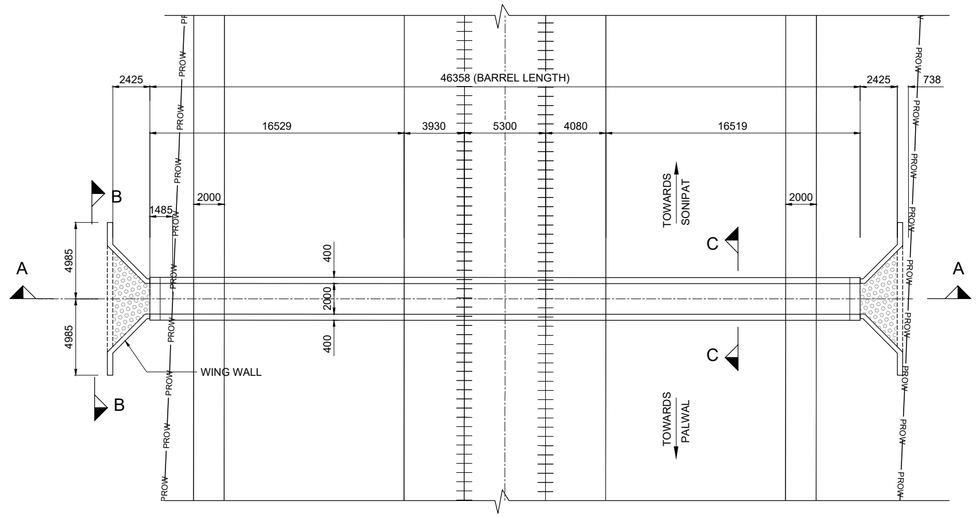
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01149_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



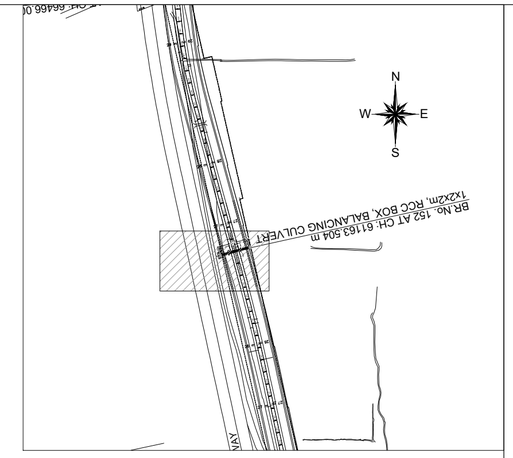
SECTIONAL ELEVATION AT A-A

SCALE 1:200



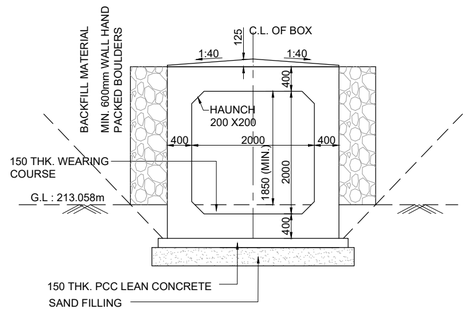
PLAN AT TOP

SCALE 1:200



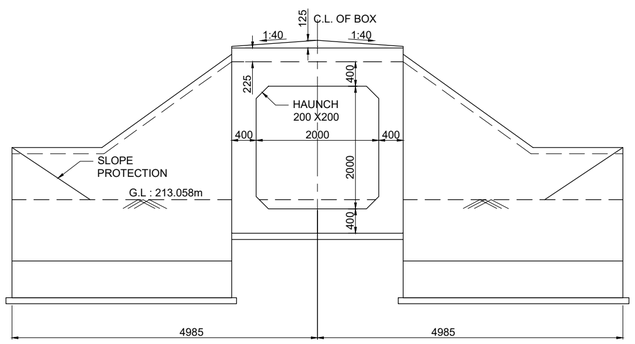
KEY PLAN

SCALE 1:NTS



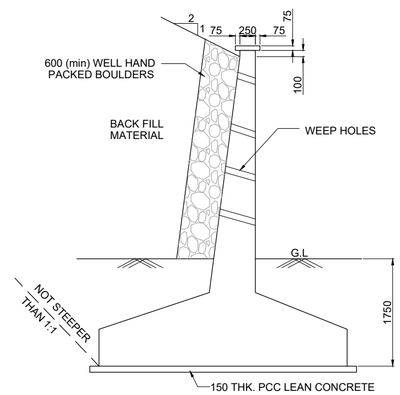
ELEVATION

SCALE 1:50



VIEW AT B-B

SCALE 1:50

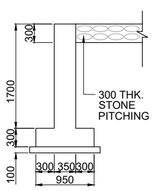


TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

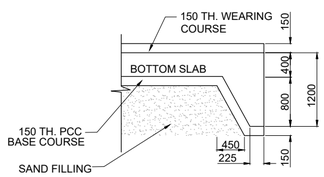
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



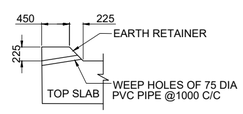
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

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11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO 154
SPAN 1.0X2.0X2.0 RCC BOX AT CH.61163.504

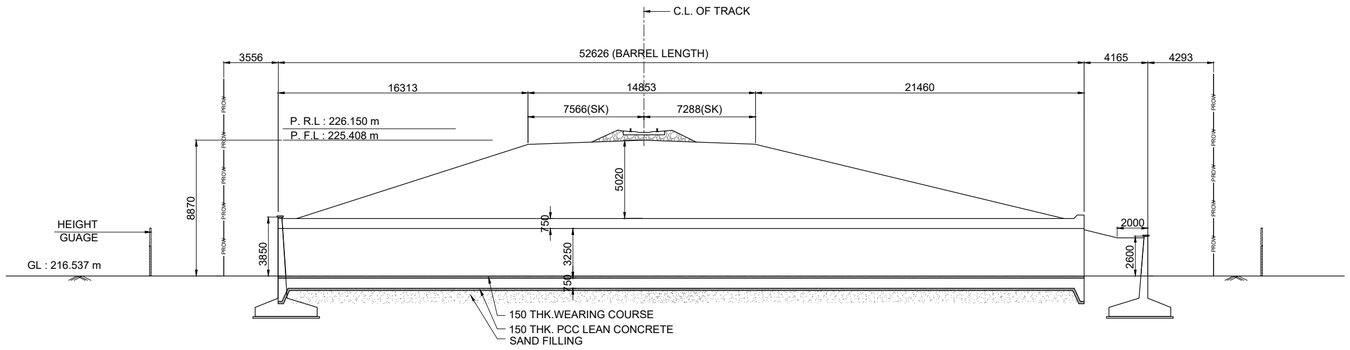
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01154_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

4 Minor Bridges

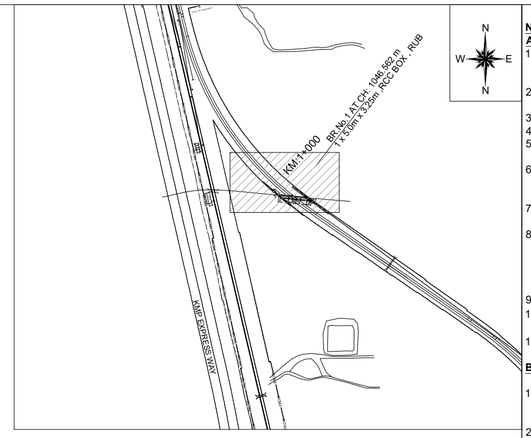
4.1.2 Connecting Line

A. New Patli to Patli



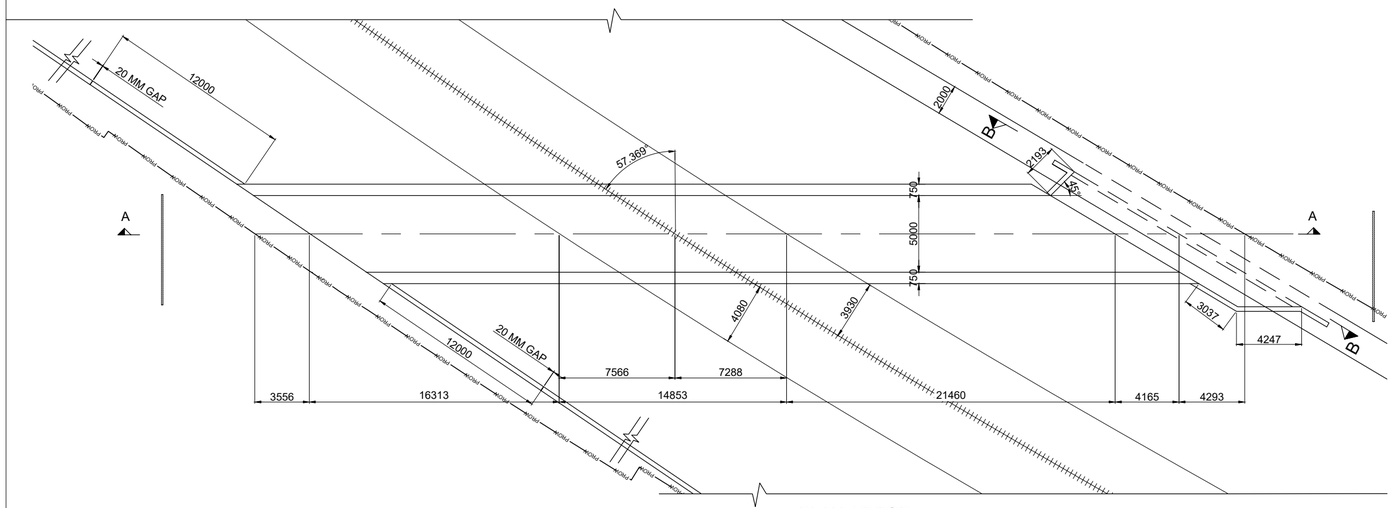
SECTIONAL ELEVATION AT A-A

SCALE 1:200



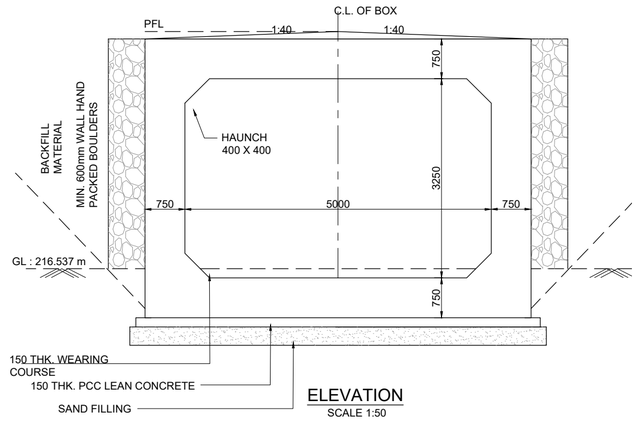
KEY PLAN

SCALE 1:NTS



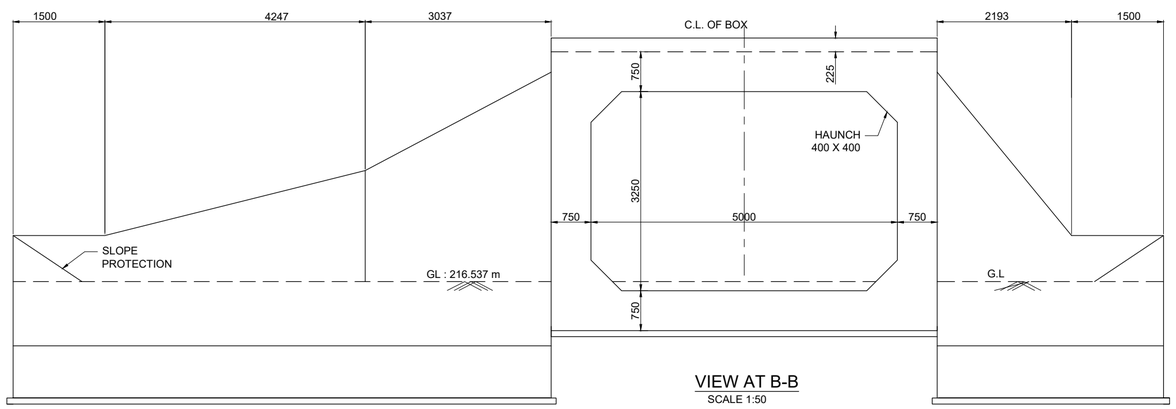
PLAN AT TOP

SCALE 1:200



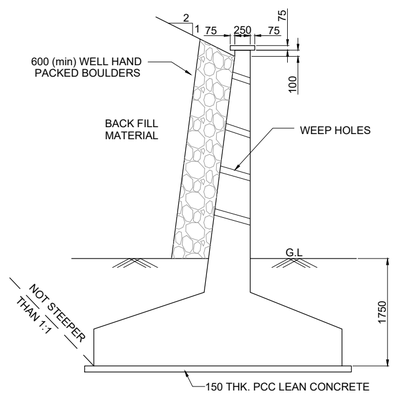
ELEVATION

SCALE 1:50



VIEW AT B-B

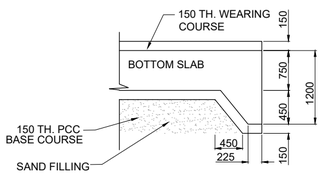
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

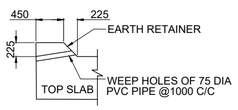
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PRPPOSED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

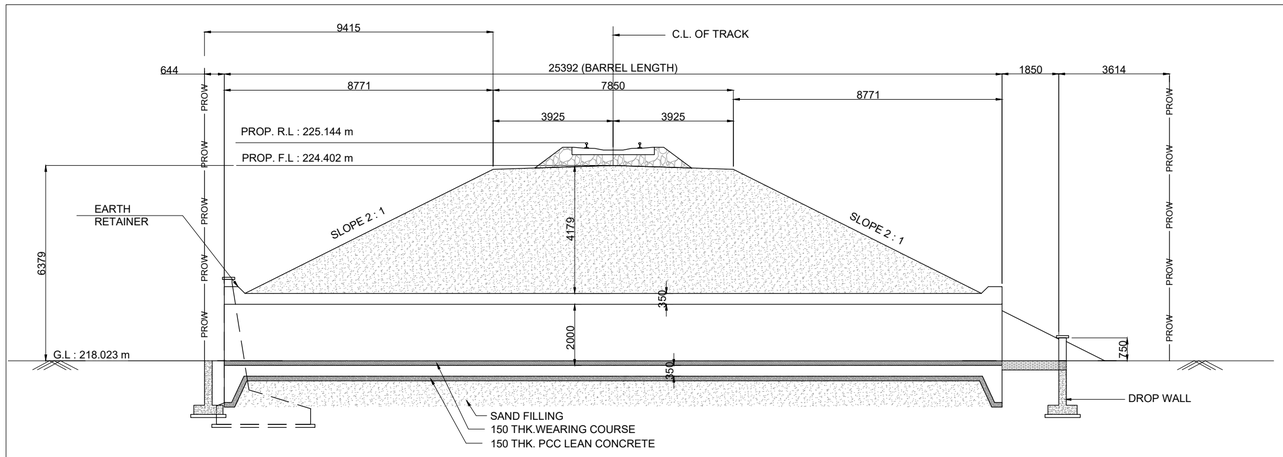
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

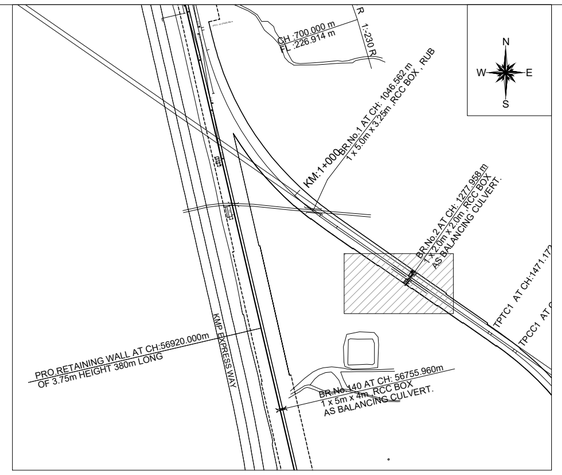
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO.1 - 1X5.0X3.25m RCC BOX
AT CH. 1046.562m (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03001_A1	1 OF 1

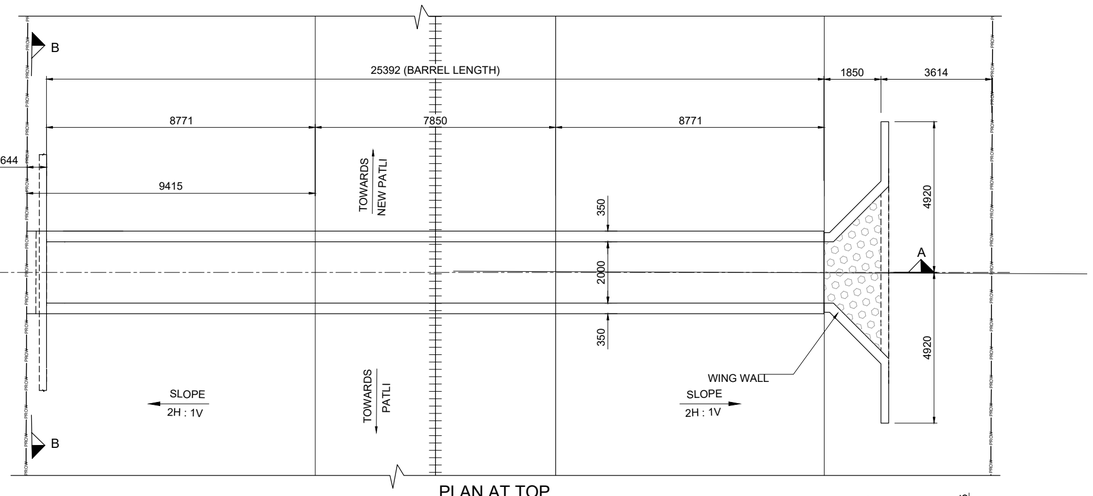
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



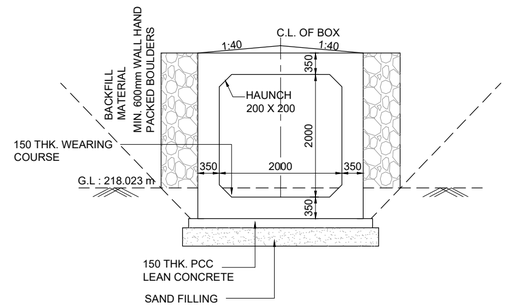
SECTIONAL ELEVATION AT A-A
SCALE 1:100



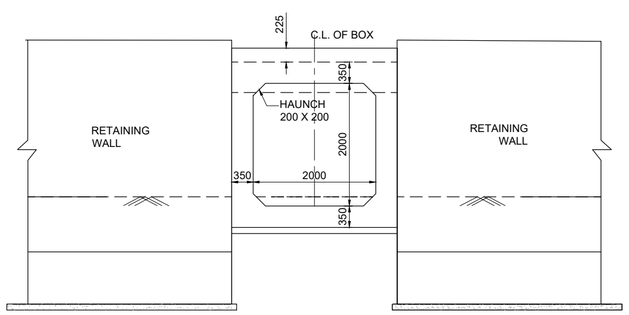
KEY PLAN
SCALE 1:NTS



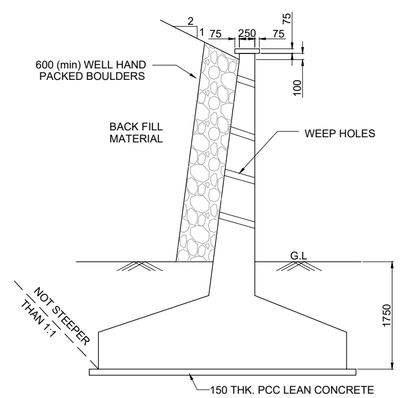
PLAN AT TOP
SCALE 1:100



ELEVATION
SCALE 1:50

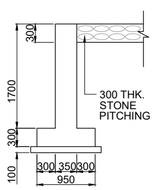


VIEW B-B
SCALE 1:50

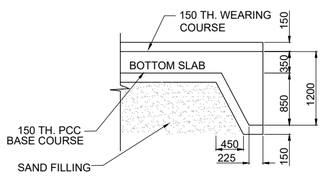


WING WALL (TO BE DESIGN AS PER SITE CONDITION)

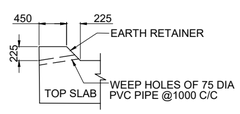
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT CHINAGE & LEVELS WHICH ARE IN METERS. NO DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
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11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

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3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
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8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
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12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

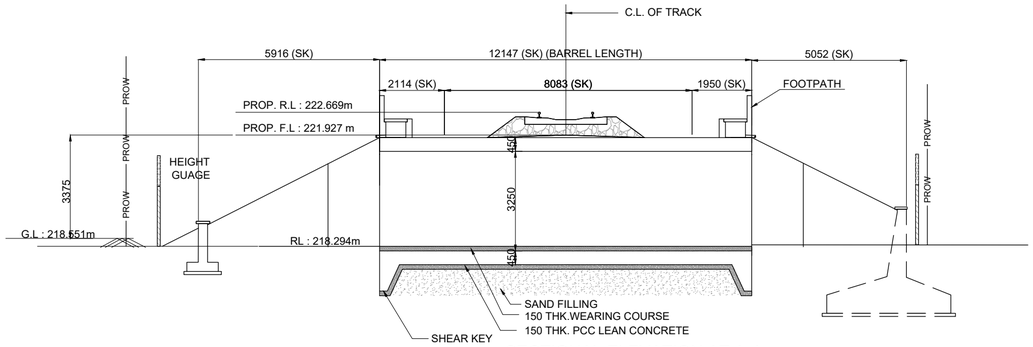
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT NO.2 -1X2.0X2.0m RCC BOX AT CH. 1277.958m (CONNECTING LINE NEW PATLI TO PATLI)

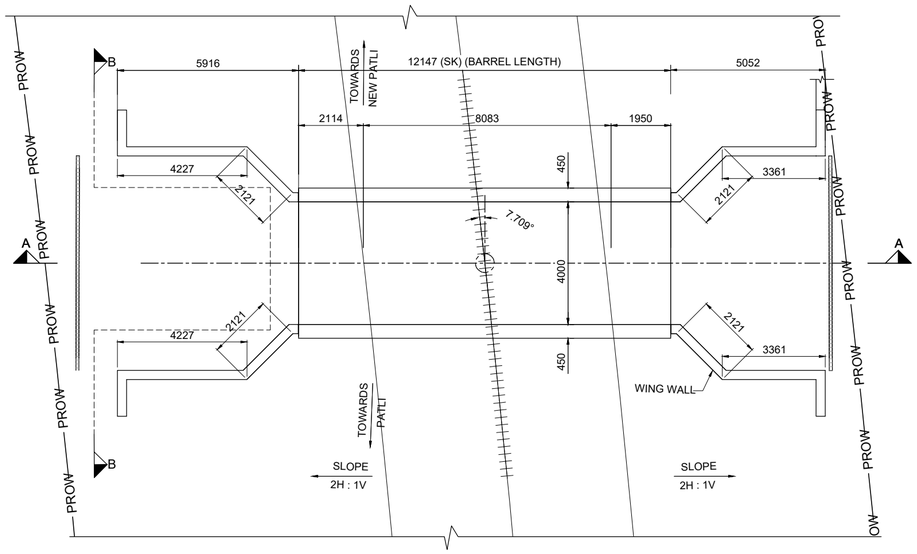
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03002_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



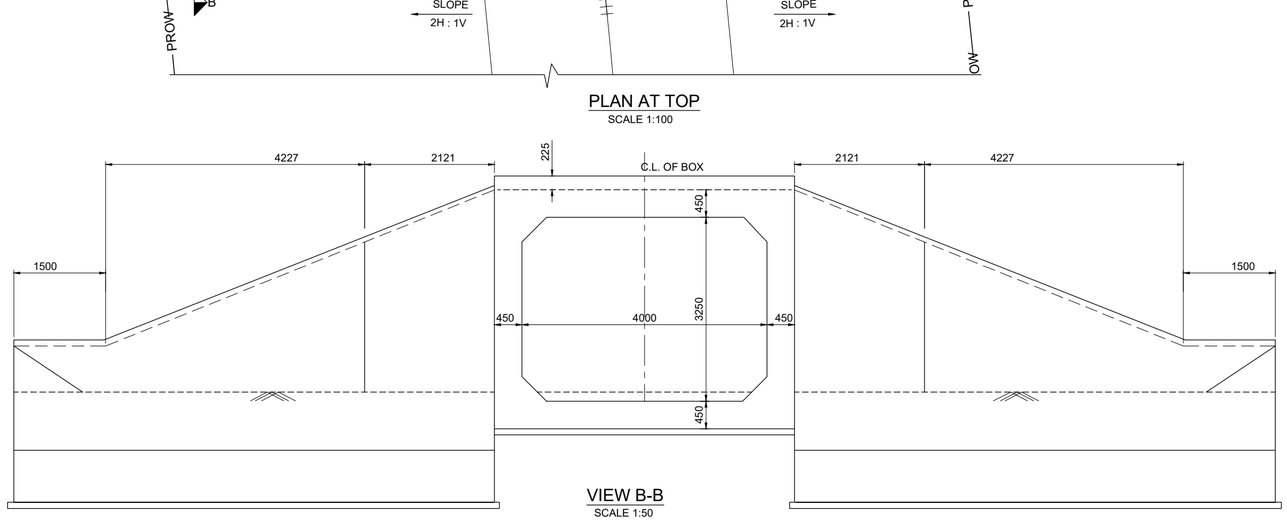
SECTIONAL ELEVATION AT A-A

SCALE 1:100



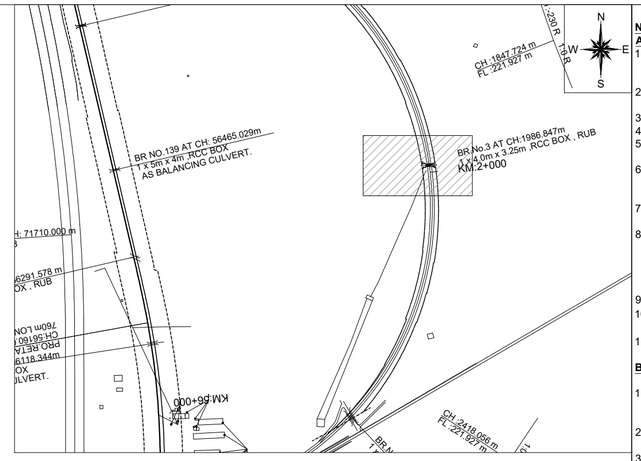
PLAN AT TOP

SCALE 1:100



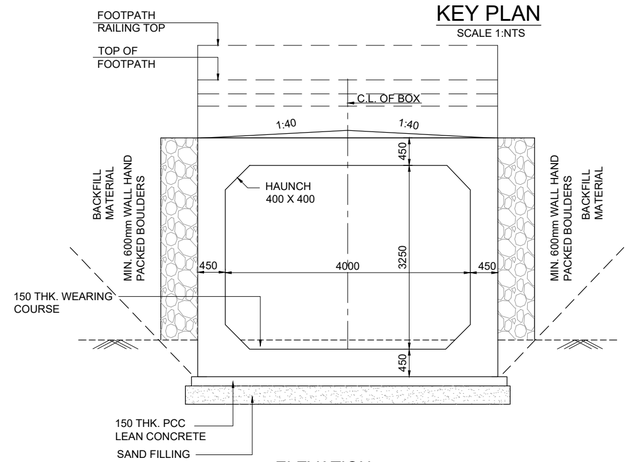
VIEW B-B

SCALE 1:50



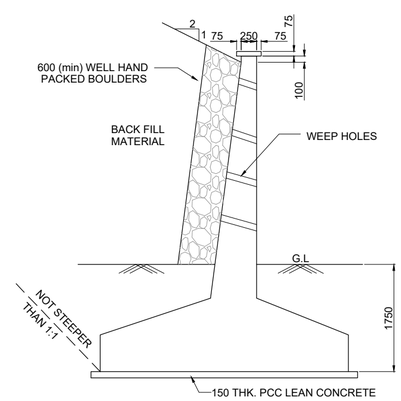
KEY PLAN

SCALE 1:NTS



ELEVATION

SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

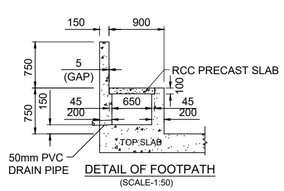
A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT CHAINAGE & LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

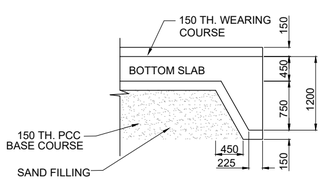
B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

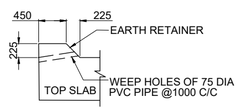


DETAIL OF FOOTPATH
(SCALE-1:50)



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

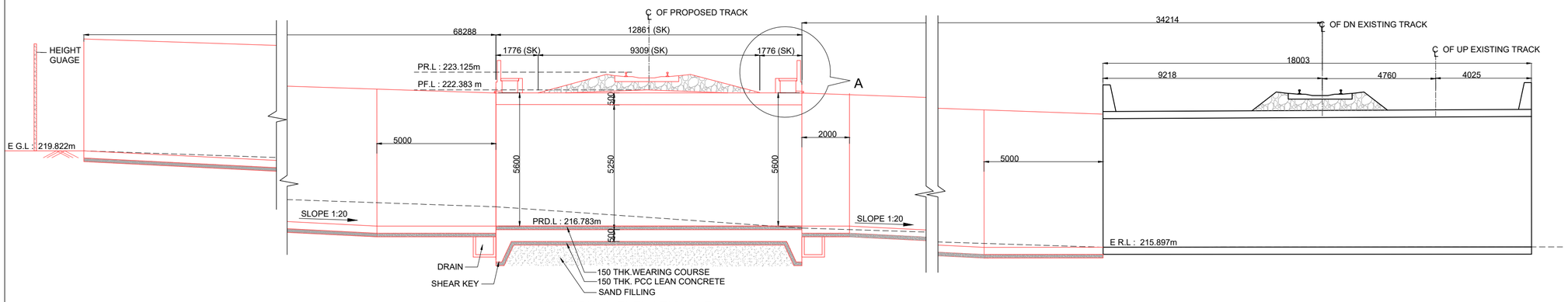
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO.3 - 1X4.0X3.25m RCC BOX AT CH. 1986.847m (CONNECTING LINE NEW PATLI TO PATLI)

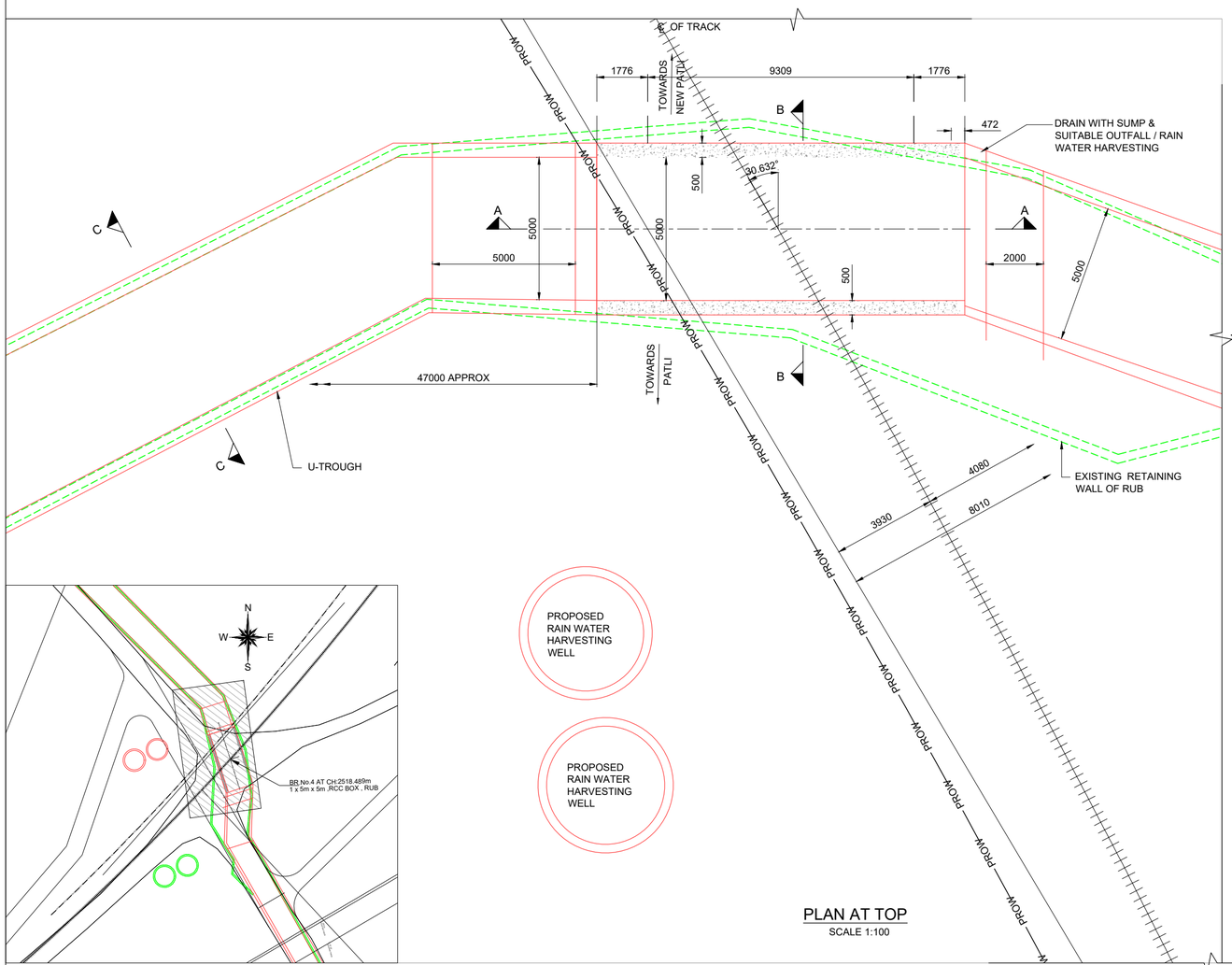
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03003_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



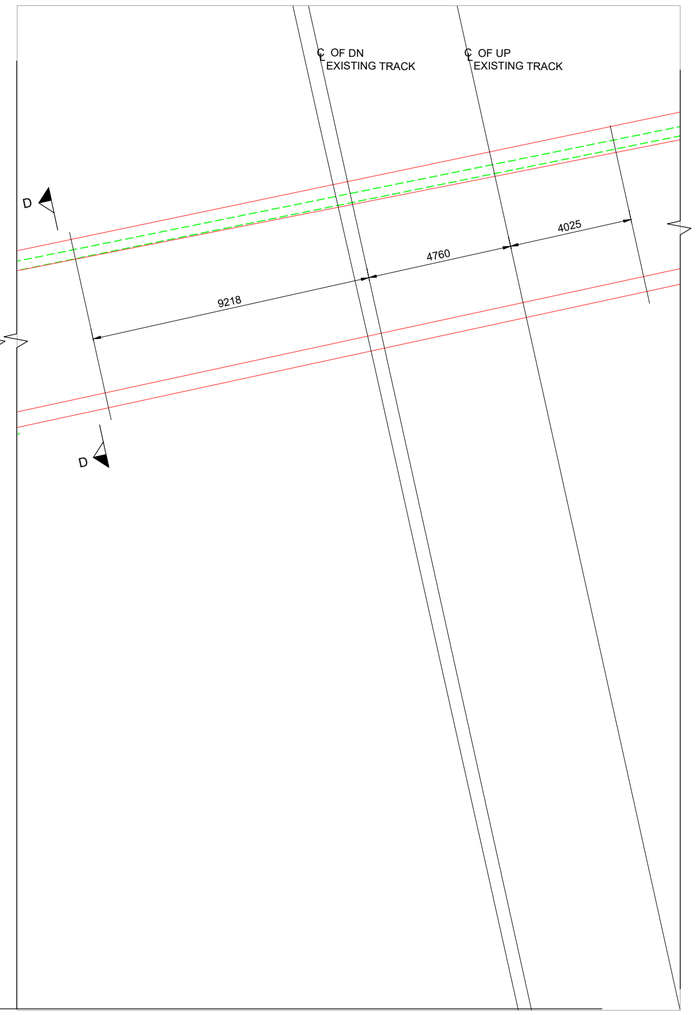
SECTIONAL ELEVATION AT A-A

SCALE 1:100



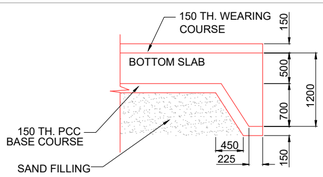
PLAN AT TOP

SCALE 1:100



KEY PLAN

SCALE 1:NTS



SHEAR KEY

SCALE 1:50

LEGEND	
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL
ERL	EXISTING ROAD LEVEL
EGL	EXISTING GROUND LEVEL
	PROPOSED
	DISMANTEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL.NO WEEP HOLE SHALL BE PROVIDED IN RETAINING WALL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.
18. SHED SHALL BE PROVIDED OVER THE RAMP.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

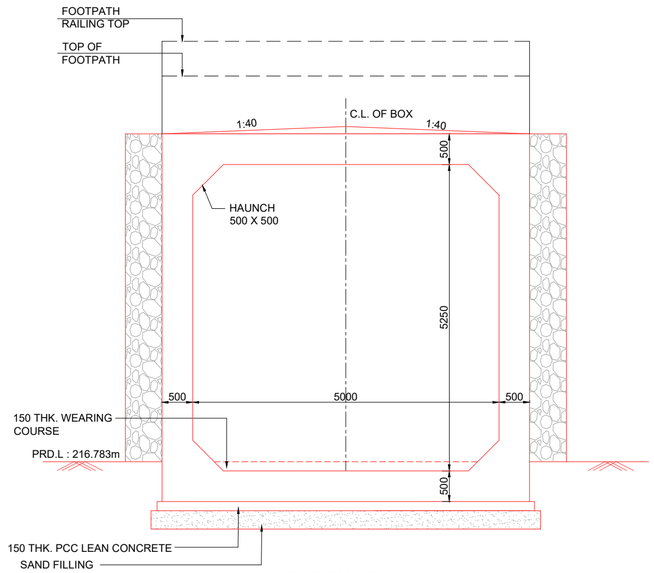
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR ROAD UNDER BRIDGE NO.4 - 1X5.0X5.25m RCC BOX AT CH. 2518.489m (CONNECTING LINE NEW PATLI TO PATLI)

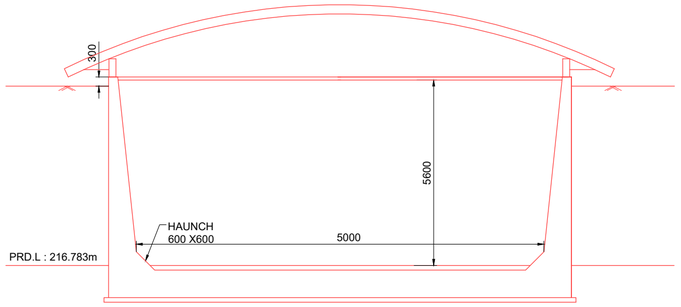
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03004_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



SECTION B-B

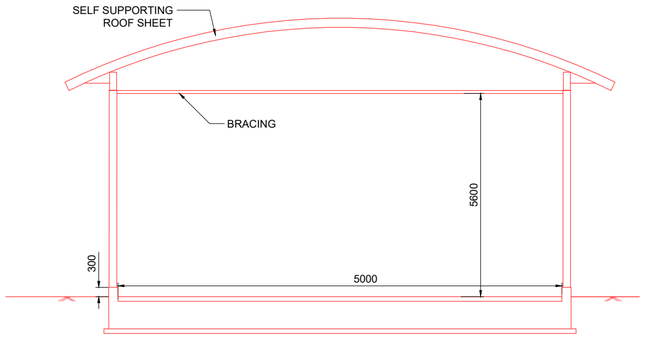
SCALE 1:50



SECTION D-D

NTS

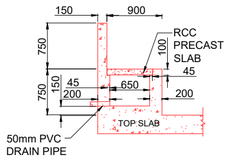
COVER SHED ON APPROACH ROAD



SECTION C-C

NTS

COVER SHED ON APPROACH ROAD



DETAIL OF A

(SCALE-1:50)

(FOOTPATH)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

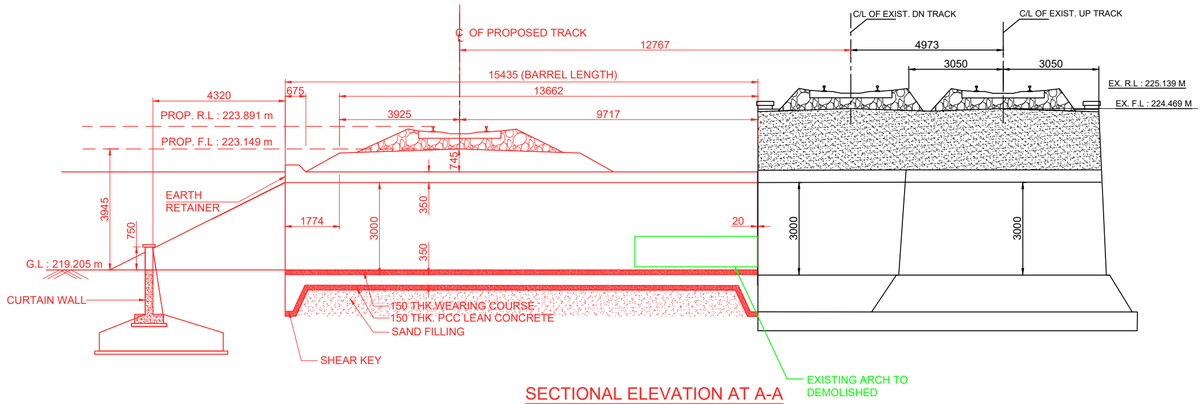
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:-CONCEPTUAL GENERAL ARRANGEMENT DRAWING

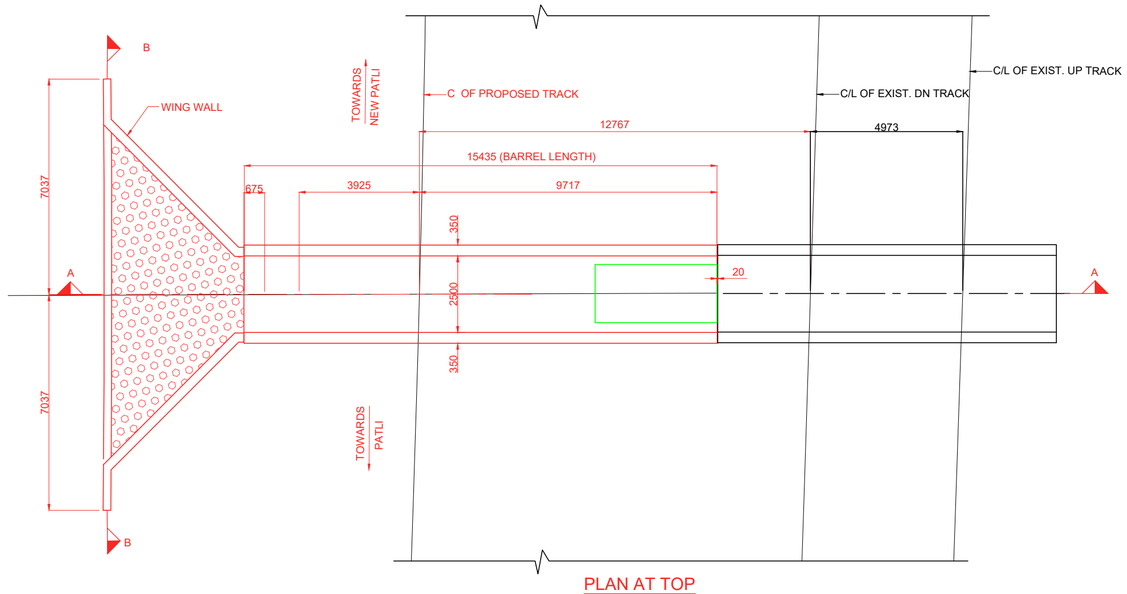
FOR ROAD UNDER BRIDGE NO.4 - 1X5.0X5.25m RCC BOX AT CH. 2518.489m (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03004_A1	2 OF 2

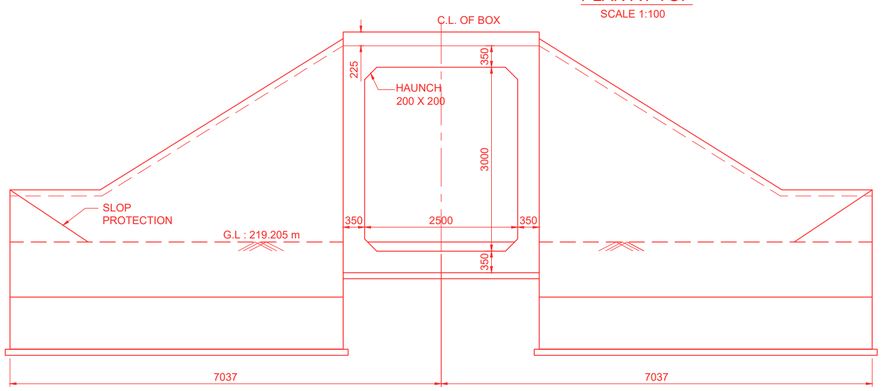
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



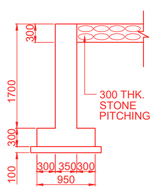
SECTIONAL ELEVATION AT A-A
SCALE 1:100



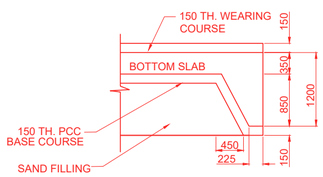
PLAN AT TOP
SCALE 1:100



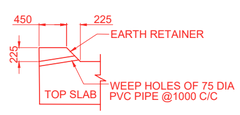
VIEW B-B
SCALE 1:50



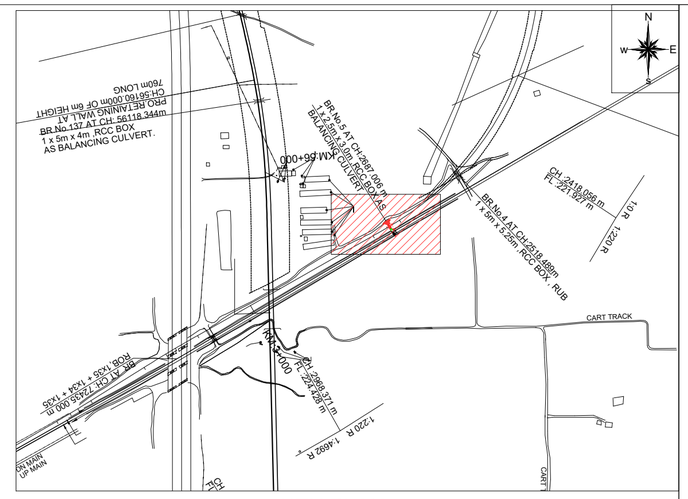
CURTAIN WALL DETAILS
SCALE 1:50



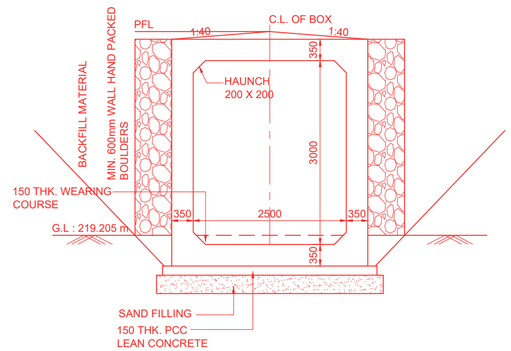
SHEAR KEY
SCALE 1:50



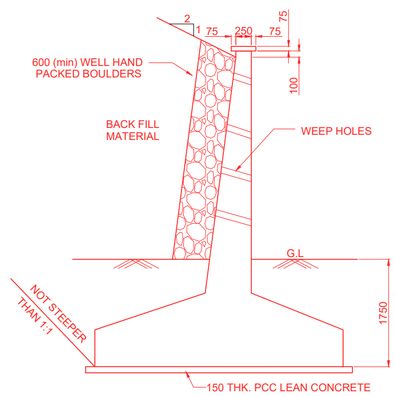
EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
	PROPOSED
	DISMANTEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERTNO.5 - 1X2.5X3.0mRCC BOX AT CH. 2687.006 AND EXIST BOX. SIZE- 1X2.5X3.0 (CONNECTING LINE NEW PATLI TO PATLI)

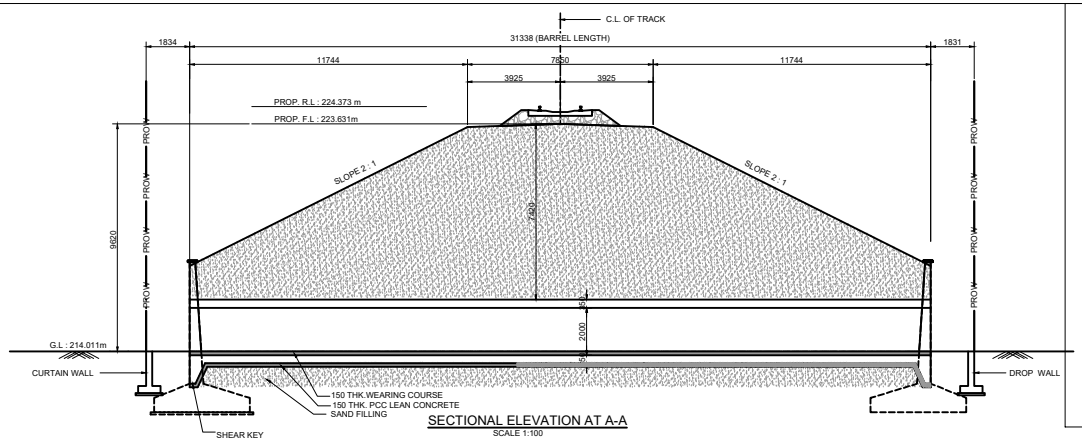
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03005_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

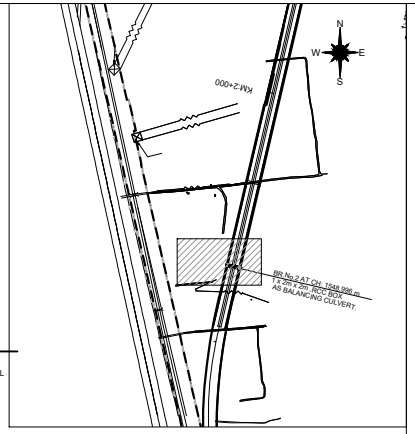
4 Minor Bridges

4.1.2 Connecting Line

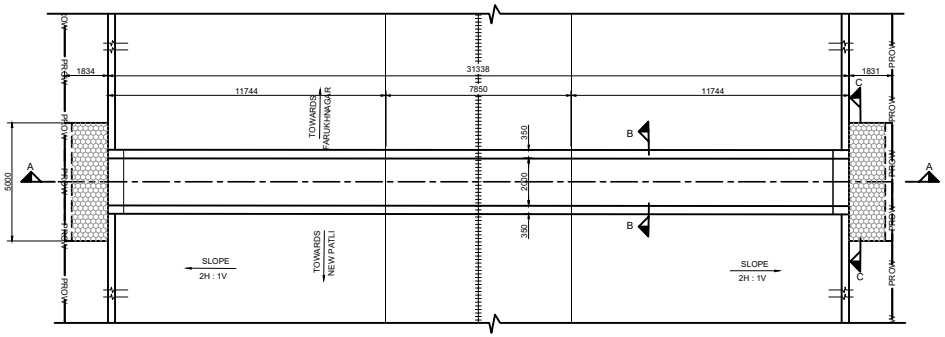
B. New Patli to Sultanpur



SECTIONAL ELEVATION AT A-A
SCALE 1:100



KEY PLAN
SCALE 1:NTS



PLAN AT TOP
SCALE 1:100

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M. WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
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   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
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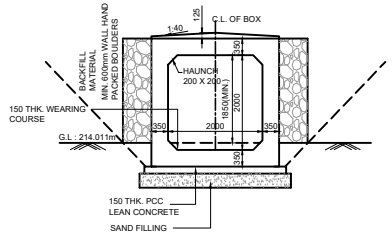
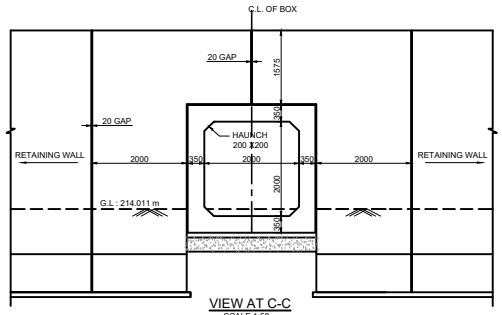
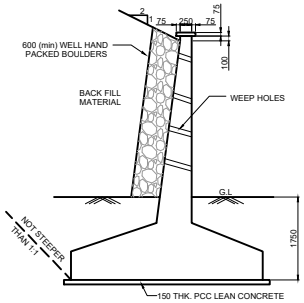
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.



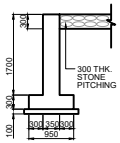
SECTION B-B
SCALE 1:50



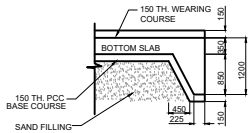
VIEW AT C-C
SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

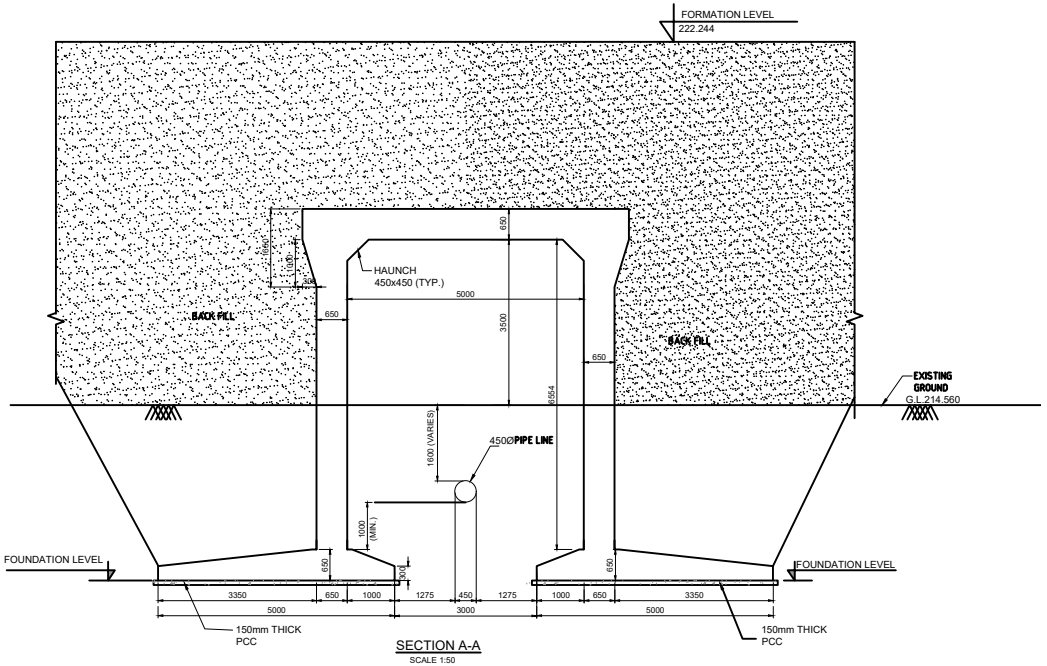
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

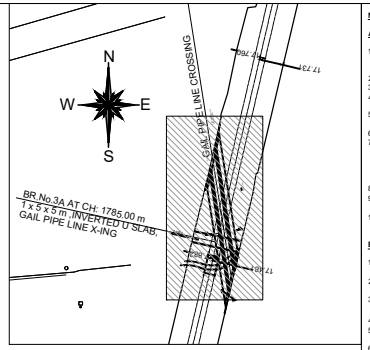
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO.2 - 1X2.0X2.0m RCC BOX AT CH.1548.996 (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04002_A1	1 OF 1

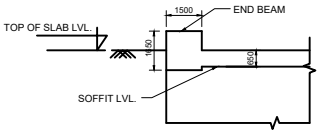
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



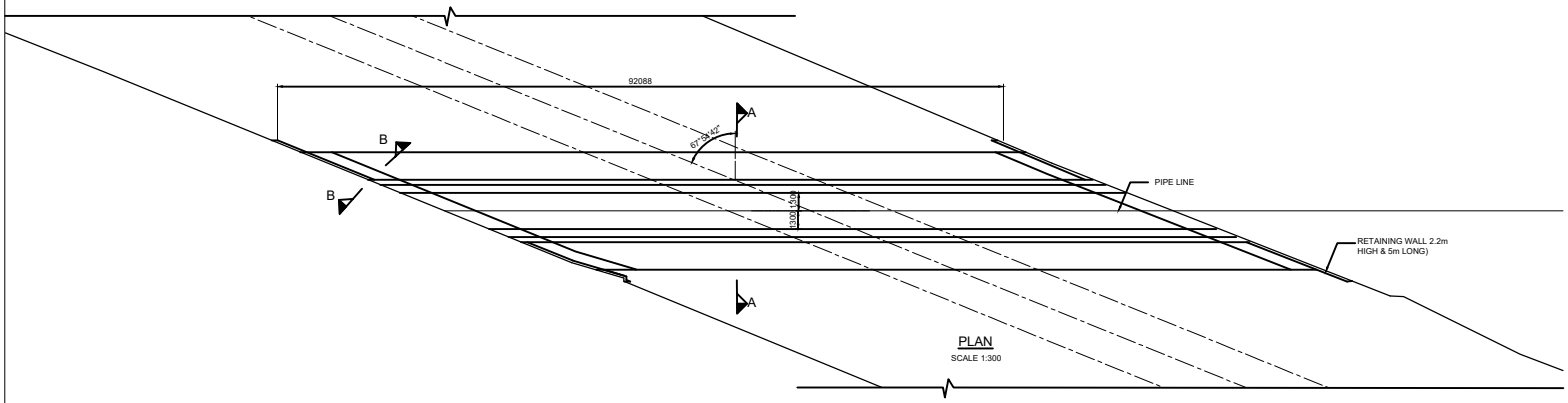
SECTION A-A
SCALE 1:50



KEY PLAN
SCALE 1:NTS



SECTION B-B
SCALE 1:50



PLAN
SCALE 1:300

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL, BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF STRUCTURE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
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   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
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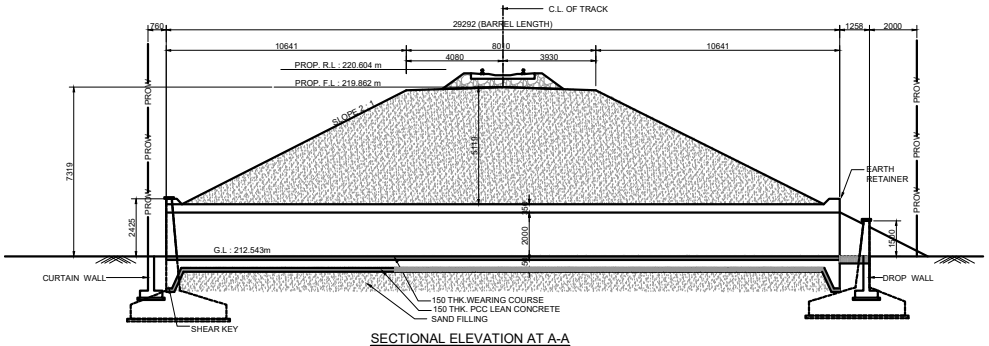
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

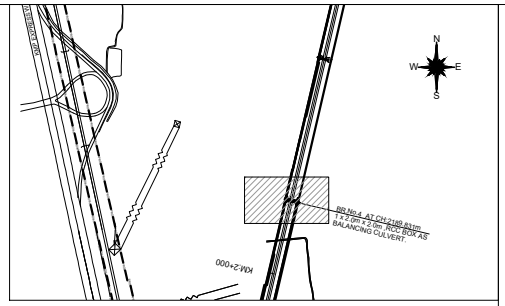
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BRIDGE NO.3A - 5 m CLEAR SPAN INVERTED U OVER GAIL PIPE LINE CROSSING AT CH. 1785m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03003A_A0	1 OF 1

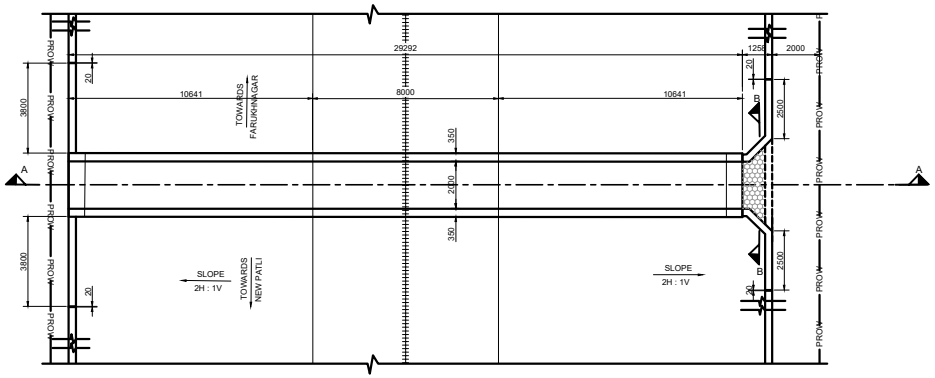
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



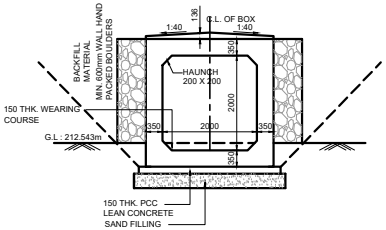
SECTIONAL ELEVATION AT A-A
SCALE 1:100



KEY PLAN
SCALE 1:NTS



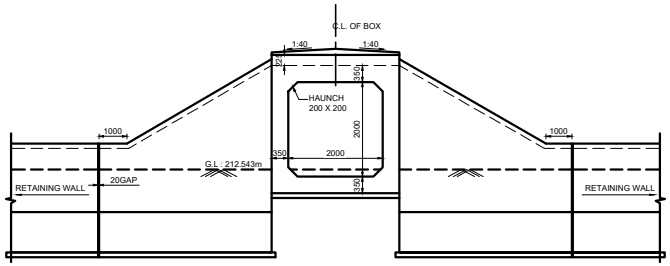
PLAN AT TOP
SCALE 1:100



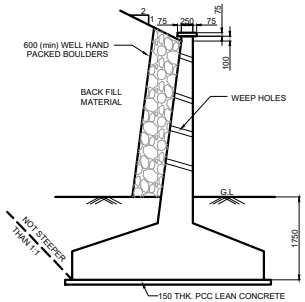
ELEVATION
SCALE 1:50

LEGEND

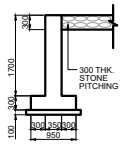
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



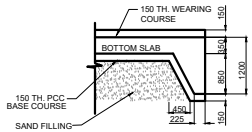
VIEW B-B
SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50

NOTES :

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3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT,HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
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   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

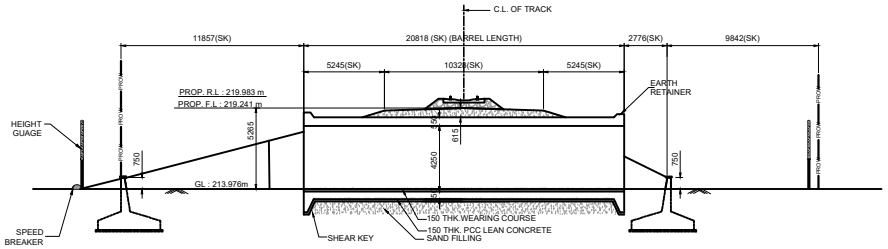
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO.4 - 1X2.0X2.0m RCC BOX AT CH. 2189.831m (CONNECTING LINE NEW PATLI TO SULTAANPUR)

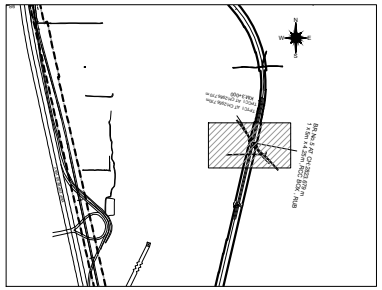
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04004_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



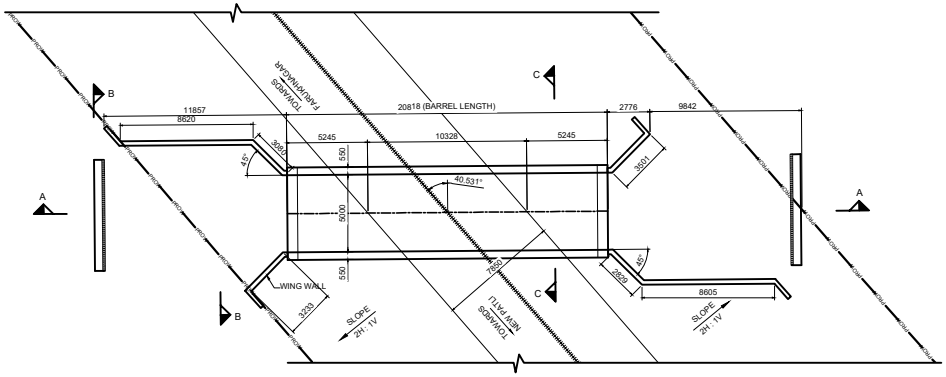
SECTIONAL ELEVATION AT A-A

SCALE 1:150



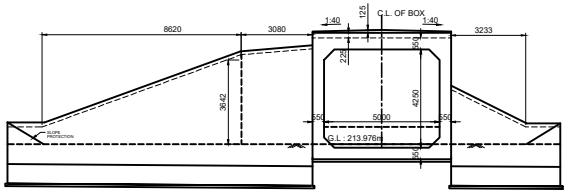
KEY PLAN

SCALE 1:NTS



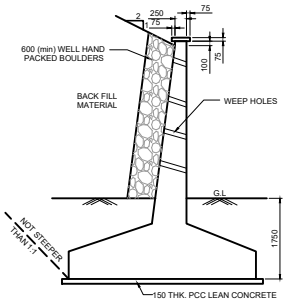
PLAN AT TOP

SCALE 1:150



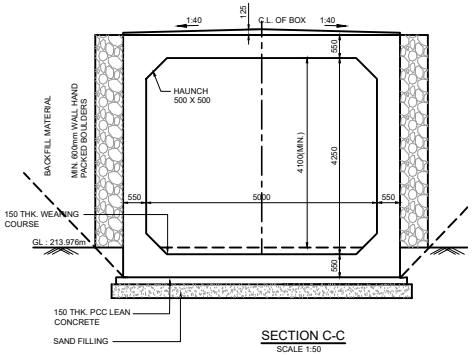
VIEW AT B-B

SCALE 1:100



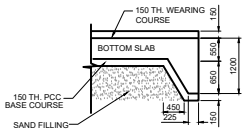
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



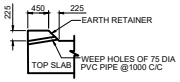
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE:- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST.
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

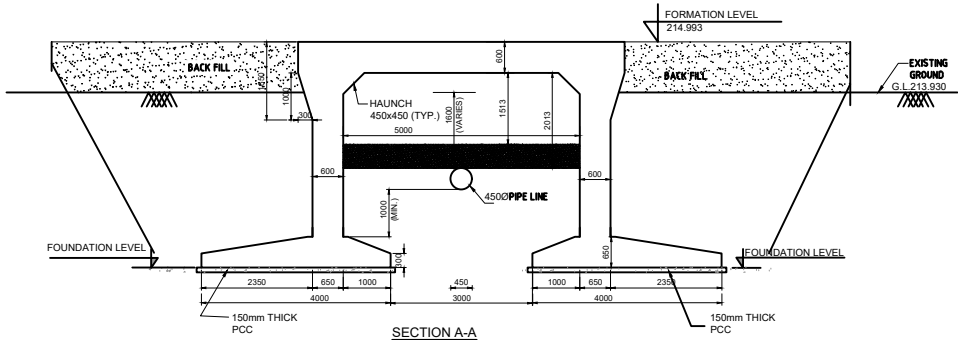
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

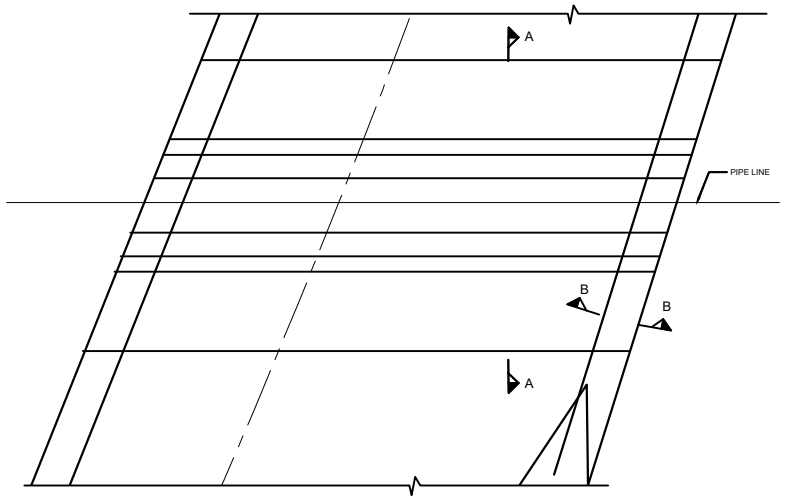
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO.5 - 1X5.0X4.25m RCC BOX AT CH. 2823.679 m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04005_A1	1 OF 1

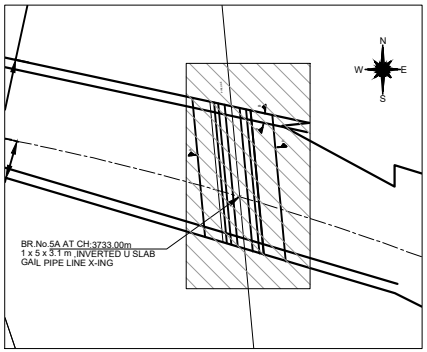
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



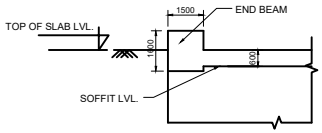
SECTION A-A
SCALE 1:50



PLAN
SCALE 1:100



KEY PLAN
SCALE 1:NTS



SECTION B-B
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M.BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
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8. SEISMIC ZONE- IV
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11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
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15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
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16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

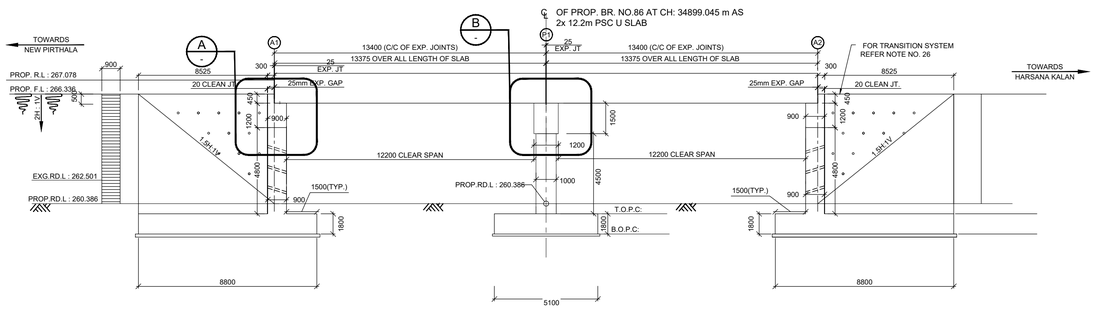
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BRIDGE NO.5A - 5 m CLEAR SPAN INVERTED U OVER GAIL PIPE LINE CROSSING AT CH. 3733m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_04005A_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

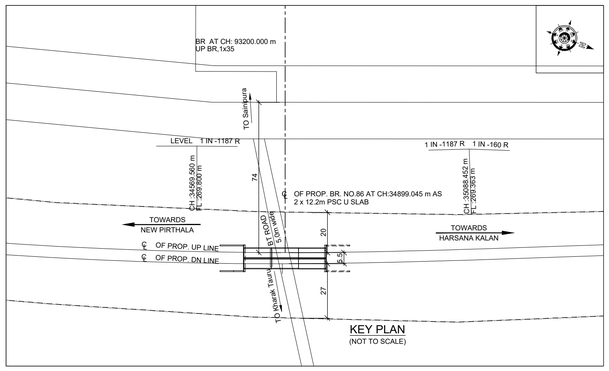
4.2 Major Bridges

4.2.1 Main Line



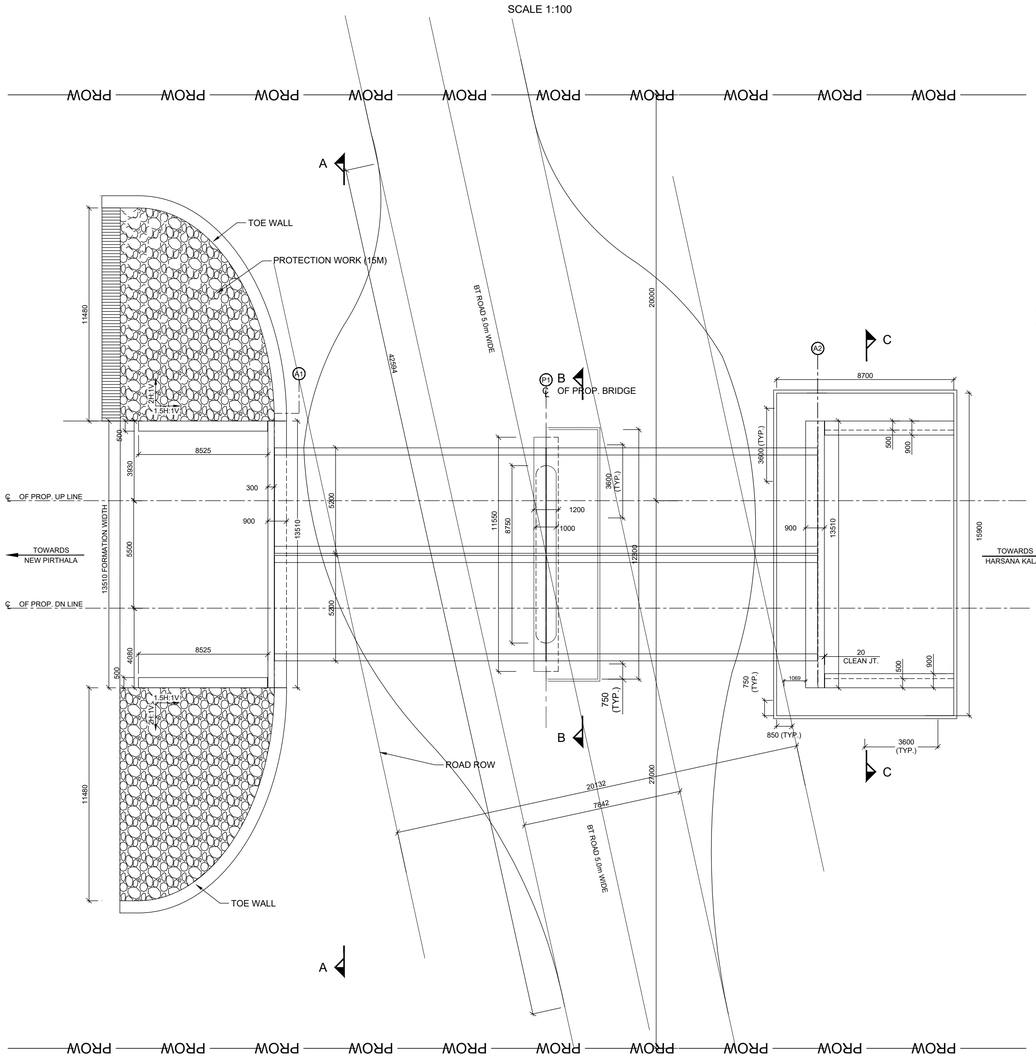
ELEVATION

SCALE 1:100



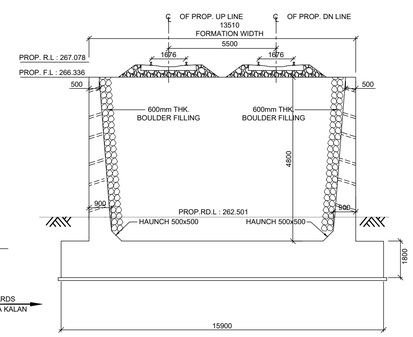
KEY PLAN

(NOT TO SCALE)



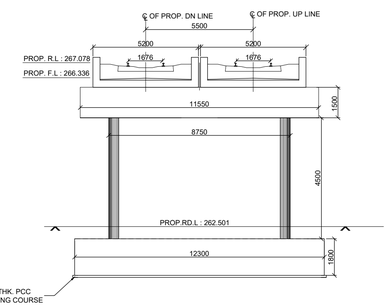
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 100



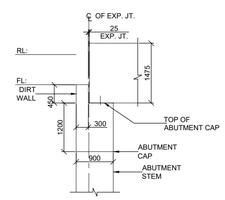
SECTION C-C

SCALE 1 : 100



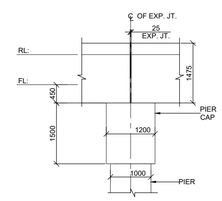
SECTION B-B

SCALE 1 : 100



DETAIL A

SCALE 1:50



DETAIL B

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER.
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - III.
   vii) STANDARD OF LOADING :
   SUPER-STRUCTURE - 25T (RDSO STANDARD) &
   SUB-STRUCTURE - 32.5T - 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE & TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL,ROAD LEVEL, FORMATION LEVEL AND RAIL LEVEL AND ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UPTO 30M, BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURNWALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THE DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. FOR TOE WALL DETAILS REFER SEPARATE SKETCH NO. GC-HRIDC-SK-GEN-014.
26. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

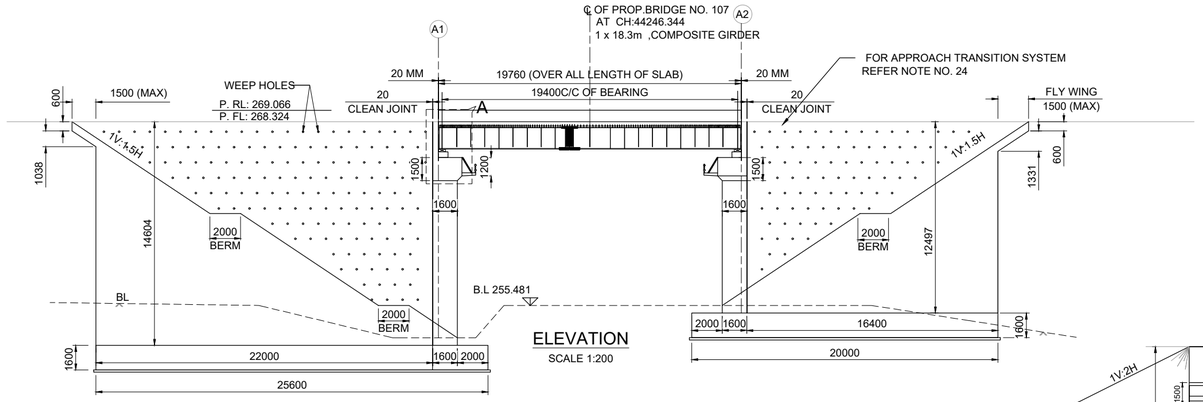
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR MAJOR BRIDGE NO 86 AT CH: 34899.045m AS 2X12.2m PSC U SLAB

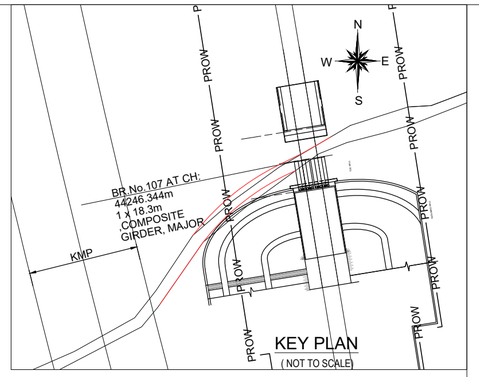
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01086_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



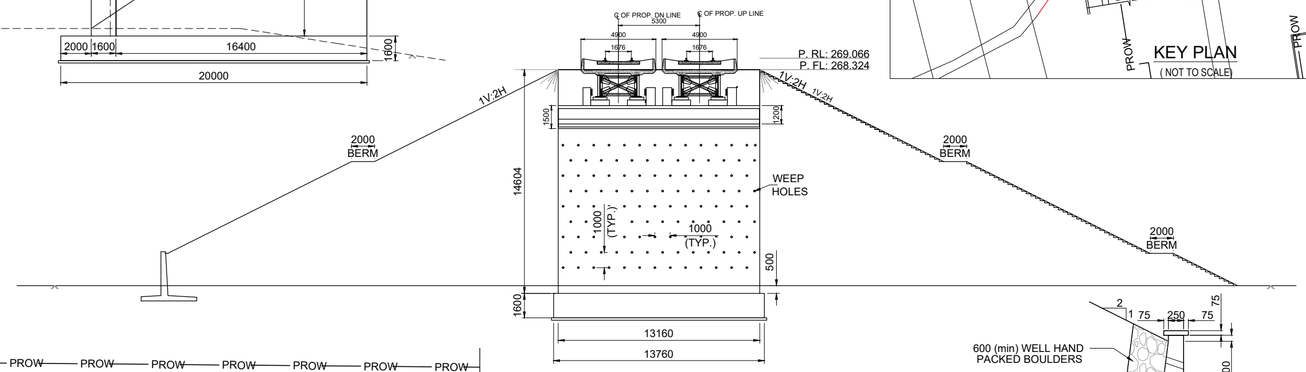
ELEVATION

SCALE 1:200



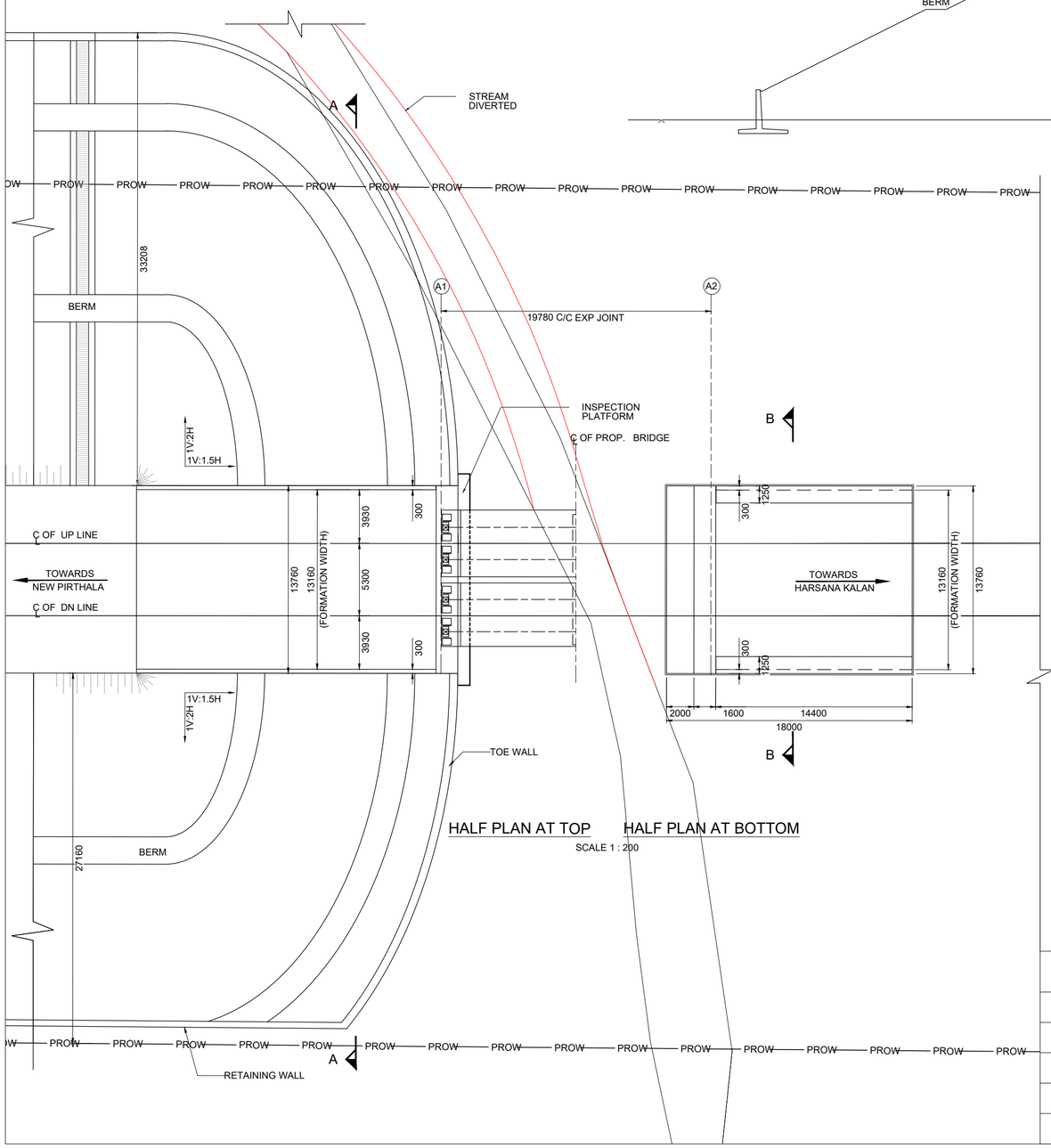
KEY PLAN

(NOT TO SCALE)



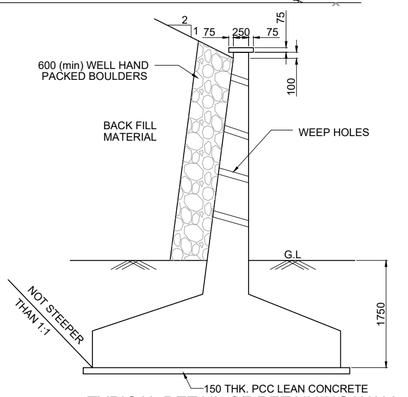
SECTION A-A

(SCALE 1:200)



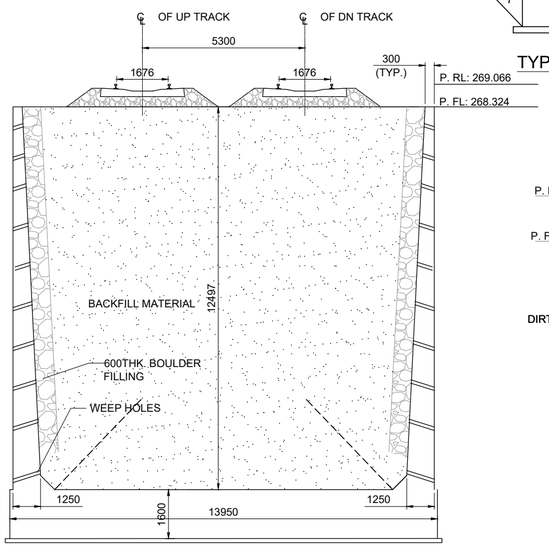
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



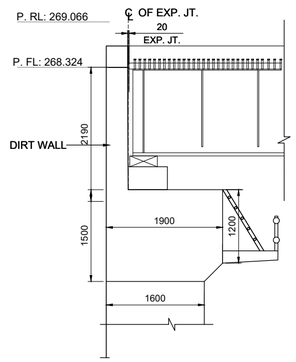
TYPICAL DETAIL OF RETAINING WALL

SCALE 1:50



SECTION B-B

SCALE 1:100



DETAIL -A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) EXPOSURE CONDITION - MODERATE.
   v) SEISMIC ZONE - IV
   vi) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. ROAD LEVEL & FORMATION LEVEL AND RAIL LEVEL SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. STONE PITCHING ON SLOPES OF BANK ON APPROACHES OF BRIDGE MAY BE PROVIDED AS DIRECTED BY ENGINEER.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL / WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
18. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
19. THE SPECIFICATIONS FOR THE PSC I GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-11753/R1 TO 11753/7R1
20. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
21. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
22. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
23. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
24. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
25. PATHWAY ARRANGEMENT SHELL BE PROVIDED ON OUTER SIDES OF THE COMPOSITE GIRDER. PATHWAY SHELL BE PROVIDED AS PER RDSO DWG. NO.CBS-0046 (CG).

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

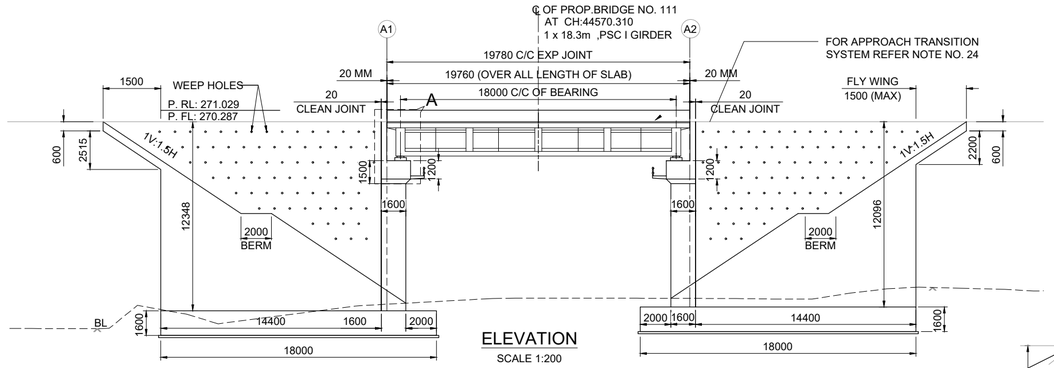
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR BRIDGE NO.107 AT CH: 44246.344m 1 x 18.3 m COMPOSITE GIRDER

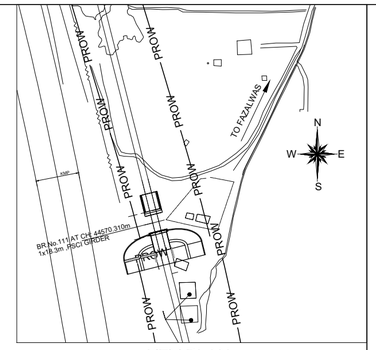
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01107_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



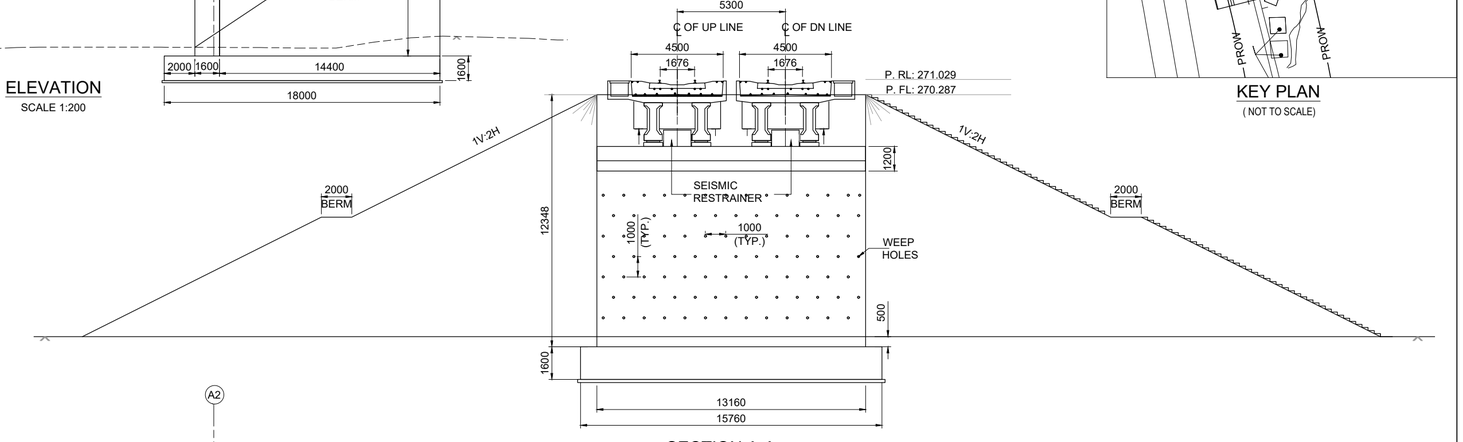
ELEVATION

SCALE 1:200



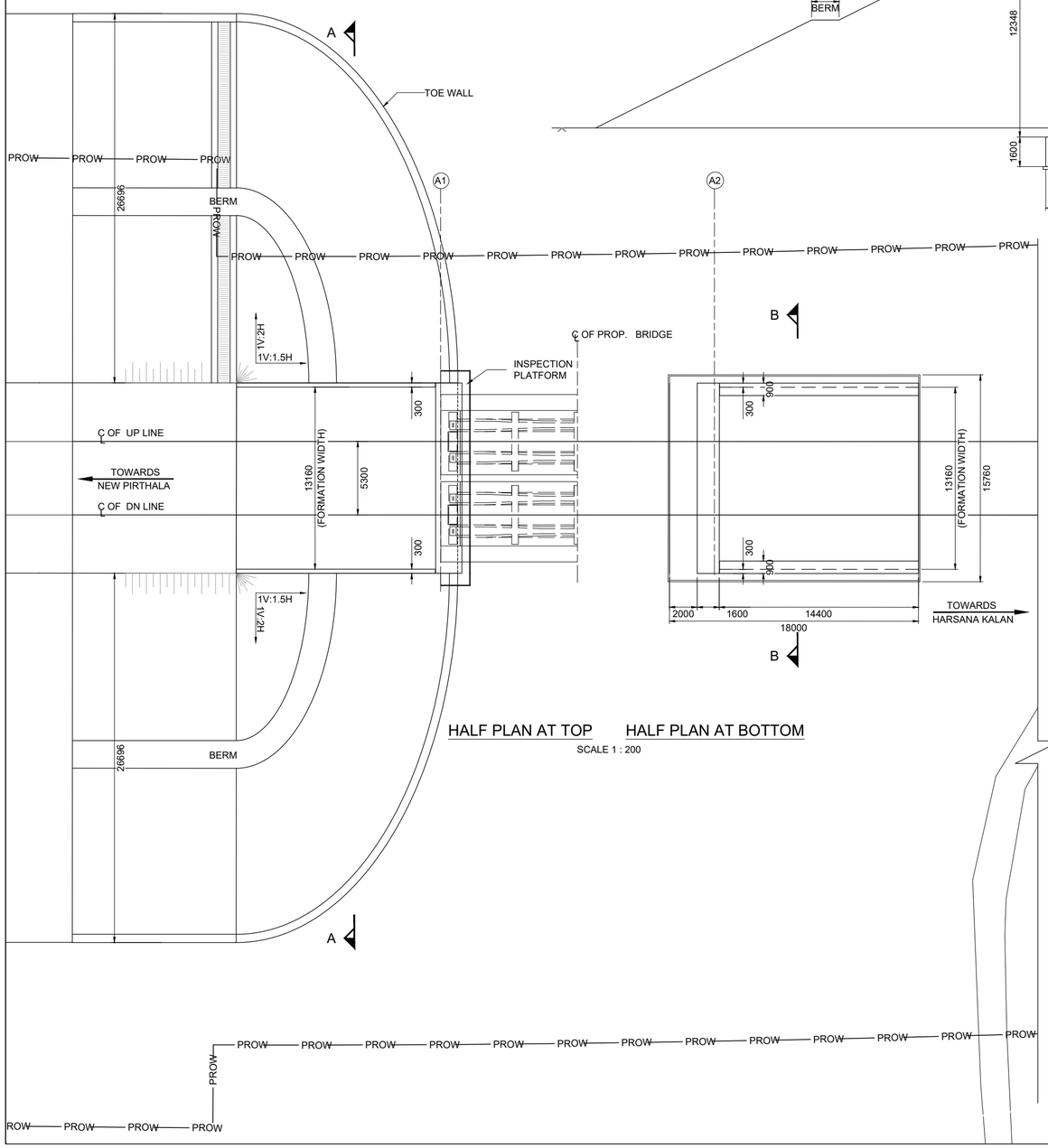
KEY PLAN

(NOT TO SCALE)



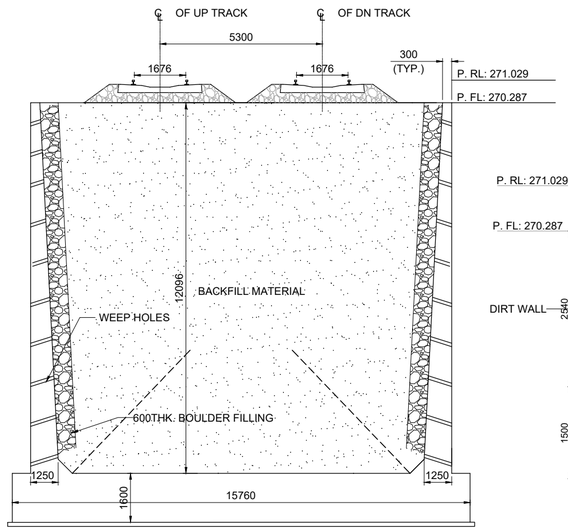
SECTION A-A

(SCALE 1:150)



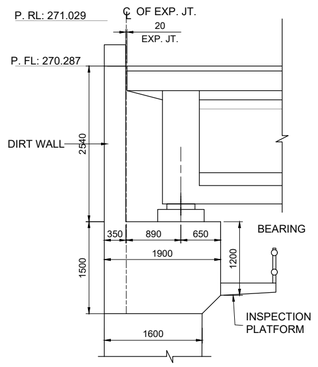
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



SECTION B-B

SCALE 1:100



DETAIL -A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. ROAD LEVEL & FORMATION LEVEL AND RAIL LEVEL SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. STONE PITCHING ON SLOPES OF BANK ON APPROACHES OF BRIDGE MAY BE PROVIDED AS DIRECTED BY ENGINEER.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
18. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
19. THE SPECIFICATIONS FOR THE PSC I GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-10273 TO 10273/4
20. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
21. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
22. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
23. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
24. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

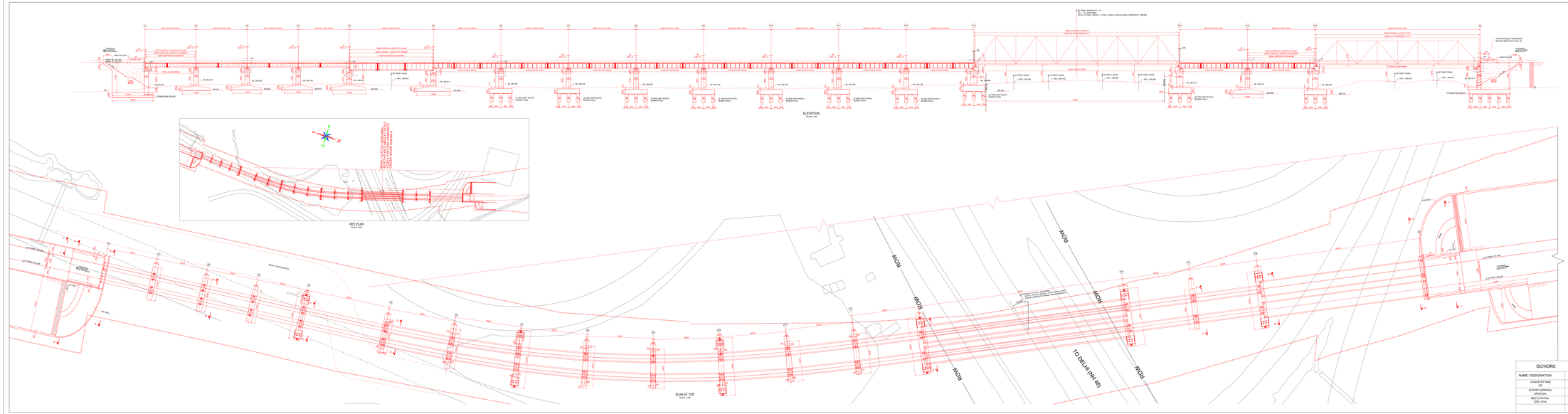
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUALGENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO.111 AT CH: 44570.310 m AS 1 x 18.3 m PSC I GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01111_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CODE:
   i) IRC BRIDGE SUBSTRUCTURE AND FOUNDATION CODE (IS:)
   ii) IRC BRIDGE DESIGN CODE
   iii) IRC BRIDGE RULES (IS:)
   iv) IRC BRIDGE LOADING
   v) EARTQUAKE CONDITION - MODERATE
   vi) WIND CONDITION - 44 m/s
   vii) STANDARD OF LOADING – SUPER STRUCTURE (S.O.P. (RDSO)/STANDARD CIVIL)(PCPR
   viii) STANDARD OF LOADING – SUBSTRUCTURE AND FOUNDATION (S.O.P. (RDSO)/STANDARD
   CIVIL)
4. ALL DIMENSIONS, DIMENSIONS AND LEVELS ARE INDICATIVE AND THERE MAY BE CHANGE DURING DETAIL DESIGN.
5. ALL DIMENSIONS AND DIMENSIONS PROVISION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL CONCRETE WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRC CONCRETE BRIDGE CODE.
7. ALL REINFORCEMENT SHALL BE:
   i) FOR MAIN REINFORCEMENT STEEL
   ii) FOR DISTRIBUTION STEEL
   iii) FOR LEGS AND COUPLING – MS ANGLE
8. ALL STEEL REINFORCEMENT SHALL BE MECHANICALLY WELDED AND VIBRATED.
9. IRC DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe 500D CONFORMING TO IS : 1786:2008 SHALL BE USED FOR REINFORCEMENT.
11. IRC:5-2015, & RDSO LEVEL CLEARANCE DRAWING AND RDSO LEVEL PLAN,WARPING SHALL BE ADOPTED FOR ALL BRIDGES ON RAILWAY LINE.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 30°.
13. ALL EXPOSED CONCRETE SURFACES SHALL BE FINISHED WITH BITUMEN OR CONCRETE OF BRIDGE SHALL BE DONE AS PER INSTITUTE OF CIVIL ENGINEERS.
14. ALL CONCRETE WORKS SHALL BE DONE IN ACCORDANCE WITH IRC CONCRETE CODE (2013)
15. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR PITCH AS PER IRC CONCRETE CODE.
16. CURVES SHALL BE DONE AS PER CLAUSE NO 5.2.3F IRC:CONCRETE BRIDGE CODE
17. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION BY CONTRACTOR AS PER PARA 820 OF RBWM WITH UPDATED CORRECTION SLIPS
18. ALL DIMENSIONS
19. THE SPECIFICATION FOR THE SUPERSTRUCTURE WEBER IS COMPOSITE GIRDER SUPERSTRUCTURE WITH 30 M COMPOSITE GIRDER RESIDE 17.5M RT TO 17.5M RT, 30 M COMPOSITE GIRDER RESIDE 17.5M RT TO 17.5M RT, 30 M OPEN WEB GIRDER RESIDE 17.5M RT TO 17.5M RT, 30 M OPEN WEB GIRDER RESIDE
20. CONCRETING WILL BE DONE IN ACCORDANCE WITH IRC CONCRETE BRIDGE CODE WITH CONVENTIONAL REINFORCED STEEL
21. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION
22. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED AND NOT TO BE REPRODUCED WITHOUT
23. ARRANGEMENT FOR FOUNDATION WILL BE PROVIDED AS PER RDSO DWG. NO.
24. ALL DIMENSIONS ARE IN MM
25. TROLLEY REFUGE SHALL BE PROVIDED ON OPPOSITE SIDES OF PIERS AS PER RDSO
26. PROTECTION WORK ON SLOPES OF BANK UP TO 20M AS PER RDSO
27. PROTECTION WORK ON SLOPES OF BANK UP TO 20M AFTER RDSO - ON APPROVALS OF ENGINEER - IN CHARGE
28. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE
29. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METER
30. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES WALL AS PER RDSO
31. ARRANGEMENT FOR FOUNDATION WILL BE PROVIDED AS PER RDSO DWG. NO. ON APPROVALS OF ENGINEER. FOR DETAILS REFER SECTION NO. GC-HRIDC-06-GEN-018.

CONSTRUCTION DEPTH	
1. ballast cushion	300 mm
2. Sleeper	175 mm
3. Rail	150 mm
TOTAL	625 mm

CONSTRUCTION DEPTH	
1. Ballast cushion	300 mm
2. Sleeper	175 mm
3. Rail	150 mm
4. Concrete slabs	200 mm
5. Concrete Pedestal	300 mm
6. Concrete Plate Bed	0 mm
7. Rail	150 mm
8. Ballast/Fillet Fog	300 mm
TOTAL	1425 mm

COLOUR CODE LEGEND
EXISTING
CONCRETE

TRACK DETAILS	
PRO P.L.	27.000 m
VERTICAL SUMMIT	27.000 m
VERTICAL SUMMIT	26.000 m
VERTICAL SUMMIT	27.000 m

CONSTRUCTION DEPTH:	
	PROP. LINE
1. Ballast	300 mm
2. Sleeper	175 mm
3. Rail Support	150 mm
4. Rail	150 mm
TOTAL	775 mm

LEGEND:

P.L.	PROFILE LEVEL
F.L.	FOUNDATION LEVEL
R.L.	REDUCED LEVEL
B.C.L.	BOTTOM OF CUT LEVEL
B.C.C.L.	BOTTOM OF THE CUT LEVEL
B.F.L.	BOTTOM OF FILL LEVEL
C.L.	CENTRE LINE
P.C.P.	PROPOSED CUT POINT
P.F.P.	PROPOSED FILL POINT
P.C.C.	PROPOSED CONCRETE
T.W.	TRAVEL WAY
B.C.	BRIDGE CONTROL

DESIGNATION OF PROPOSED BRIDGE		
SL.NO.	Item	
1	STRAIGHT OH	30000 (M)
2	STRAIGHT OH	30000 (M)
3	FOUNDATION (COB - 01)	27.000 (M)
4	SUPER SINGLE	27.000 (M)
5	Original ground level	30.000 (M)
6	Type of Girder	Girder

ROAD	30000
ROAD	30000
ROAD	27.000
ROAD	27.000
ROAD	30.000
Girder	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAKATEY RAM PO		R.R. KUMAR GM(PR)/HRIDC	
SUDHIR AGRAWAL DGM(C)-I		UMA KUNAS DGM(C)-I	
REETU PATOL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAUTI/PATLI-BULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

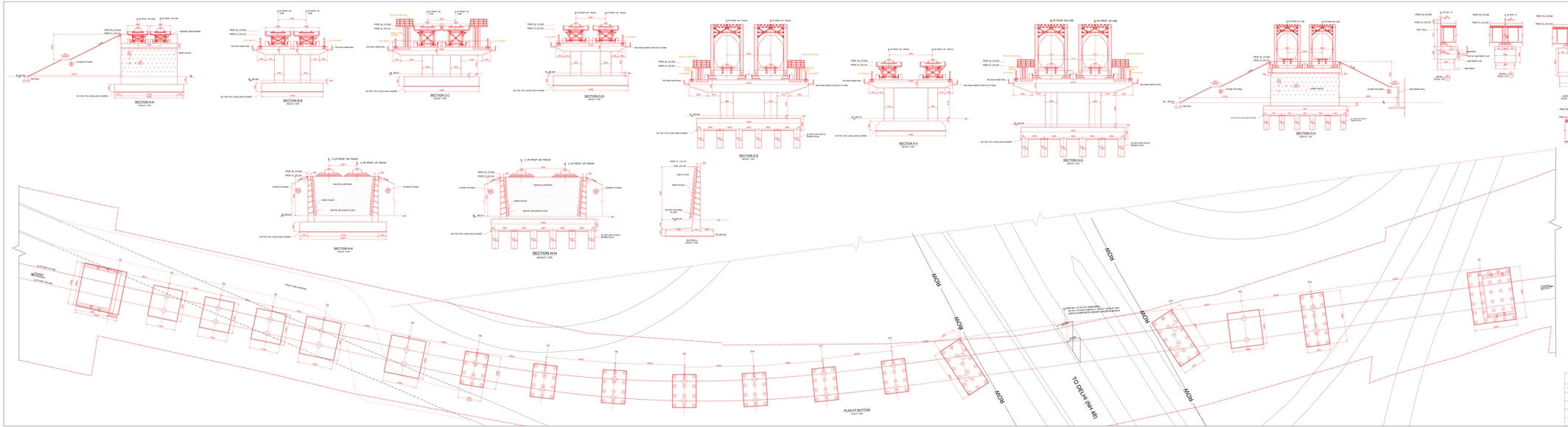
RITES — SMEC — Member of the Sofema Group

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROP. MAJOR RUB NO.112, AT CH: 45468.985m – 45718.500 (= 1430.500 GCG / 45824.8 EQG / 1479.2(DRG) / 2250.8 HG(DG) / 1451(DRG)

DRG. NO.	SHEET NO.
GC-HRIDC-C-23-DRG-BRD-GAD-01112_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	08-12-2022



NOTES:
1. FOR GENERAL NOTES REFER SHEET 1 OF 2

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASKOTI-PATLI-DULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES | SMEC Member of the Hulchera Group

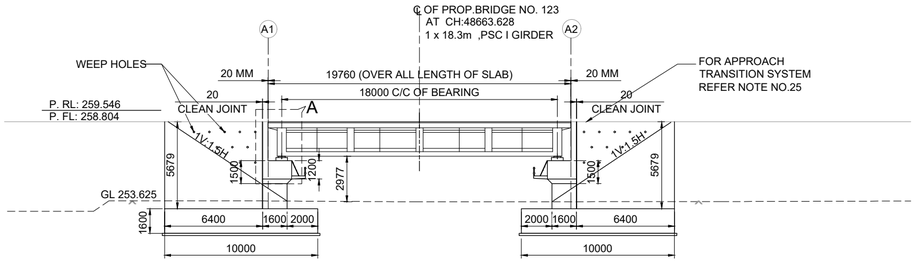
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHANDEY RAM PO		R.K. KUMAR DGM(P&W)HRIDC	
SUDHIR AGRAWAL CE(C)-I/HORC		UMA MUNJI DGM(C)-I	
REETU PATAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROP. MAJOR RUB NO.112, AT CH. 45495.985m
(41.9.3(CC) + 1X30.5(CC) + 1X50.4 (GG)+1X76.2(GRG) +2X24.4(CC)+1X61(CWG)

DRG. NO. GC-HRIDC-123-DRG-BRD-GAD-01112_A1

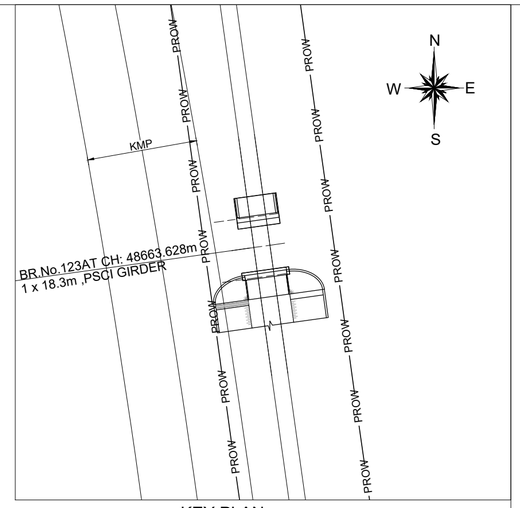
SHEET NO. 2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	08-12-2022



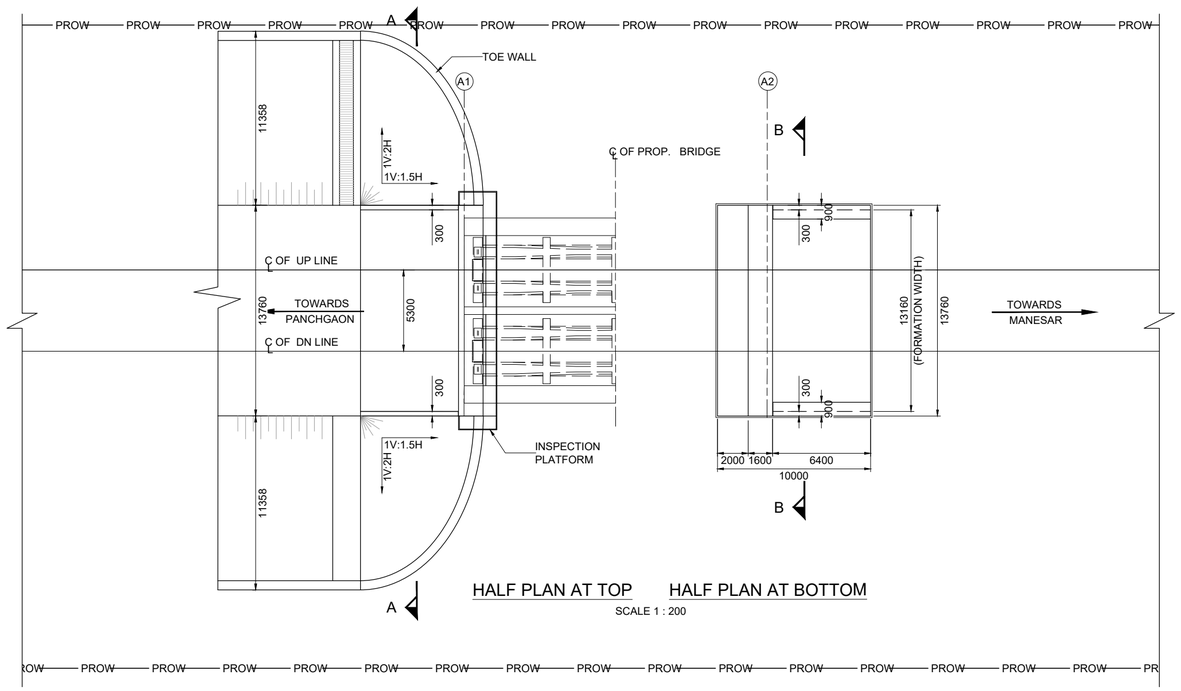
ELEVATION

SCALE 1:200



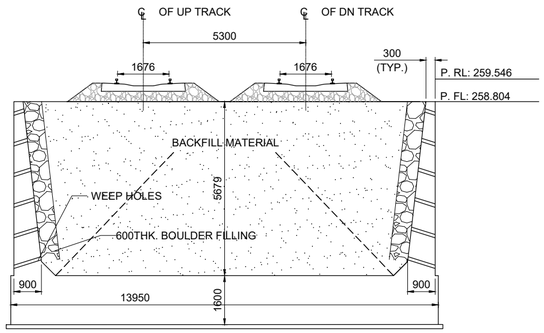
KEY PLAN

(NOT TO SCALE)



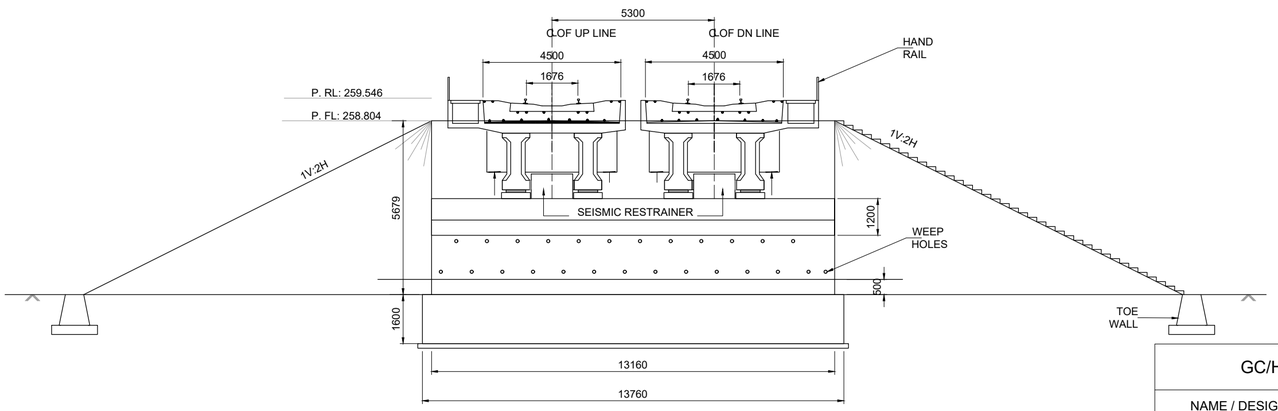
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



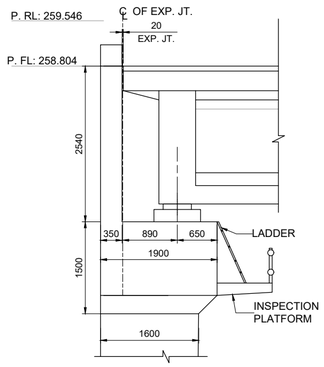
SECTION B-B

SCALE 1:100



SECTION A-A

(SCALE 1:100)



DETAIL -A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) EXPOSURE CONDITION - MODERATE.
   v) SEISMIC ZONE - IV
   vi) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR PILE & PILE CAP----------M35
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. ROAD LEVEL & FORMATION LEVEL AND RAIL LEVEL SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL / WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
18. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
19. THE SPECIFICATIONS FOR THE PSC I GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-10273 TO 10273/4
20. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
21. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

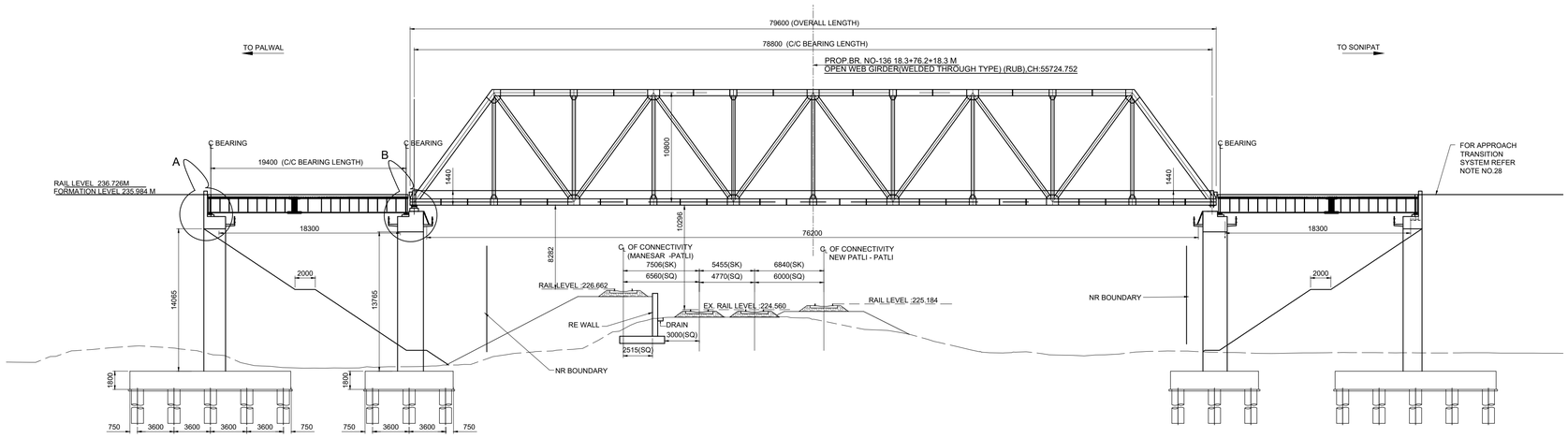
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED VIADUCT BR NO.123 AT CH: 48663.628m AS 1 x 18.3 m PSC I GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01123_A1	1 OF 1

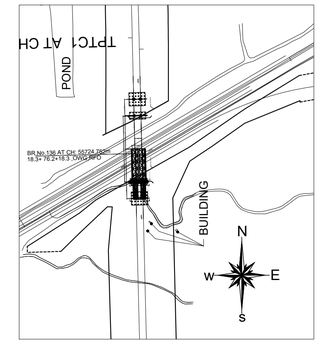
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



DATUM - 205.00					
FORMATION LEVEL	235.984	235.984	235.984	235.984	235.984
GROUND LEVEL	220.218	218.994	223.665	220.413	220.362
CHAINAGE	55666.052	55685.352	55724.752	55764.152	55783.452

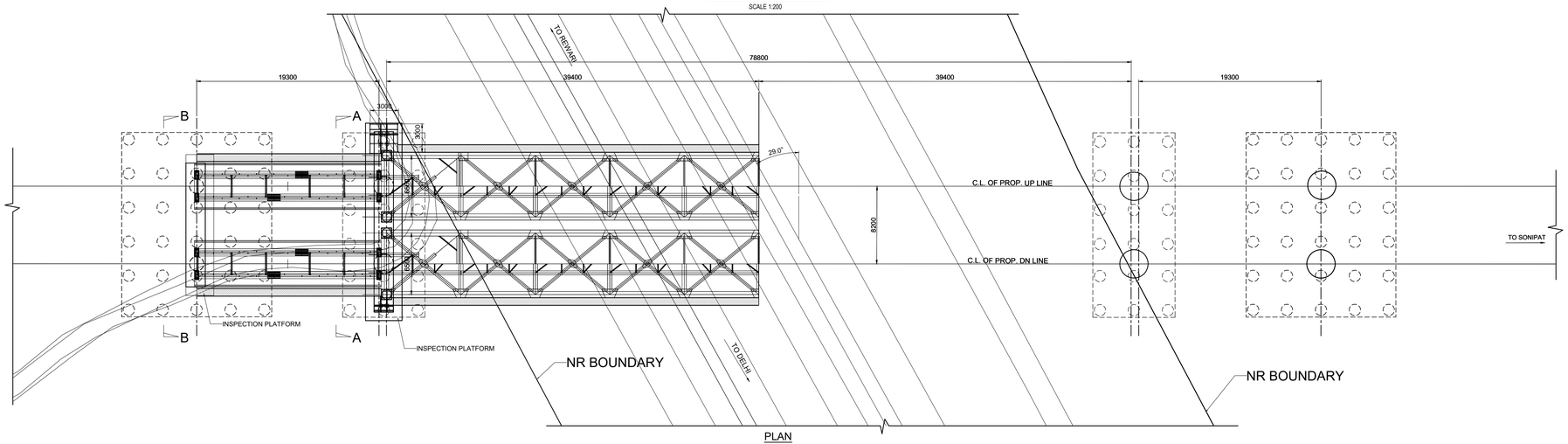
SECTIONAL ELEVATION

SCALE 1:200



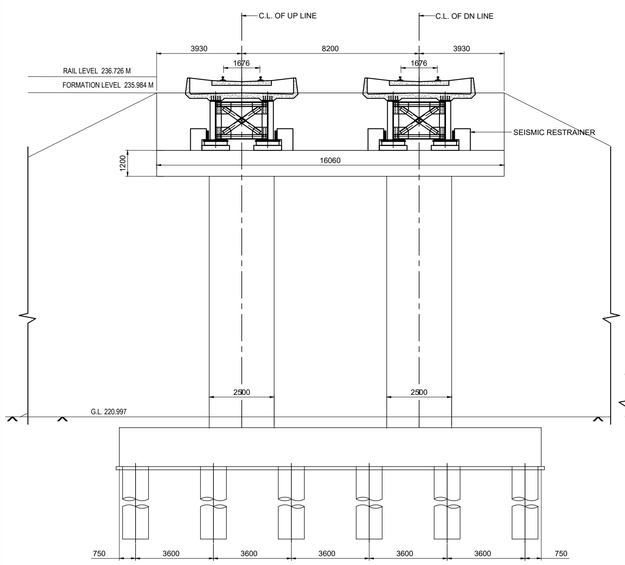
KEYPLAN

(NOT TO SCALE)



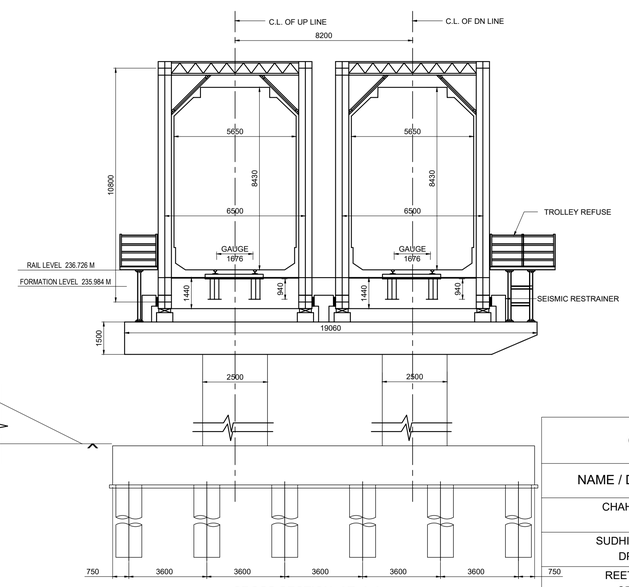
PLAN

SCALE 1:200



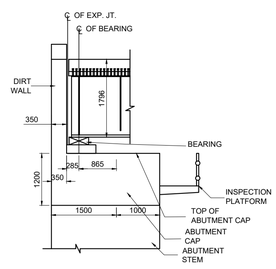
CROSS SECTION AT B-B

(SCALE 1:100)



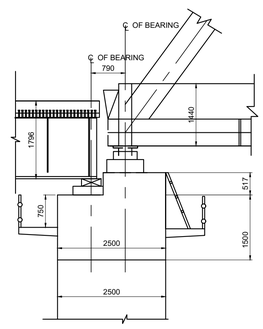
CROSS SECTION AT A-A

(SCALE 1:100)



DETAILS AT "A"

SCALE 1:50



DETAILS AT "B"

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG),SUPER STRUCTURE-25T (RDSO STANDARD CG) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHALL BE PILE FOUNDATION. NO.OF PILES & SIZE OF SUBSTRUCTURE SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BACK FILL BEHIND RETURN WALL / WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
16. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
17. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
18. THE SPECIFICATIONS FOR THE OPEN WEB GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-17101 TO 17118 AND COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-11753/1R1 TO 11753/7R1.
19. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
20. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
21. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
22. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
23. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045(FOR OWG) & CBS-0046 (FOR CG).
24. TROLLEY REFUGE SHALL BE PROVIDED ON OPPOSITE SIDES OF EACH CENTRAL PIER.
25. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP .
26. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
27. PROVISION FOR OHE MAST SHALL BE KEPT ON PIER CAP REQUIREMENT.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

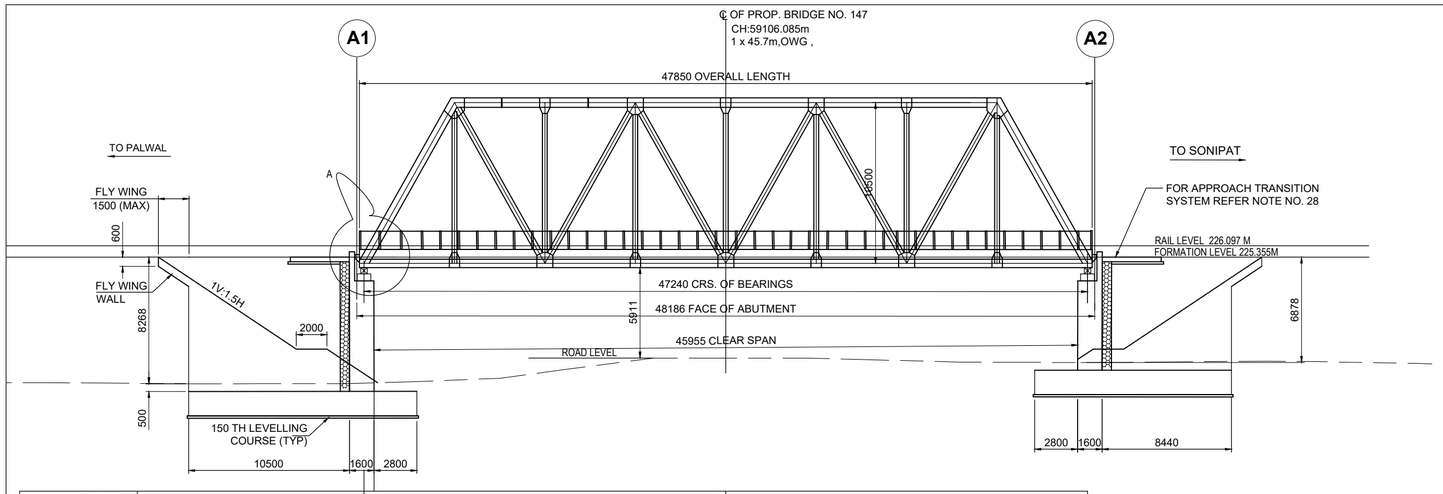
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR ROR BRIDGE NO.136, 18.3(CG)+76.2(OWG)+18.3 (CG) AT CH: 55724.752m

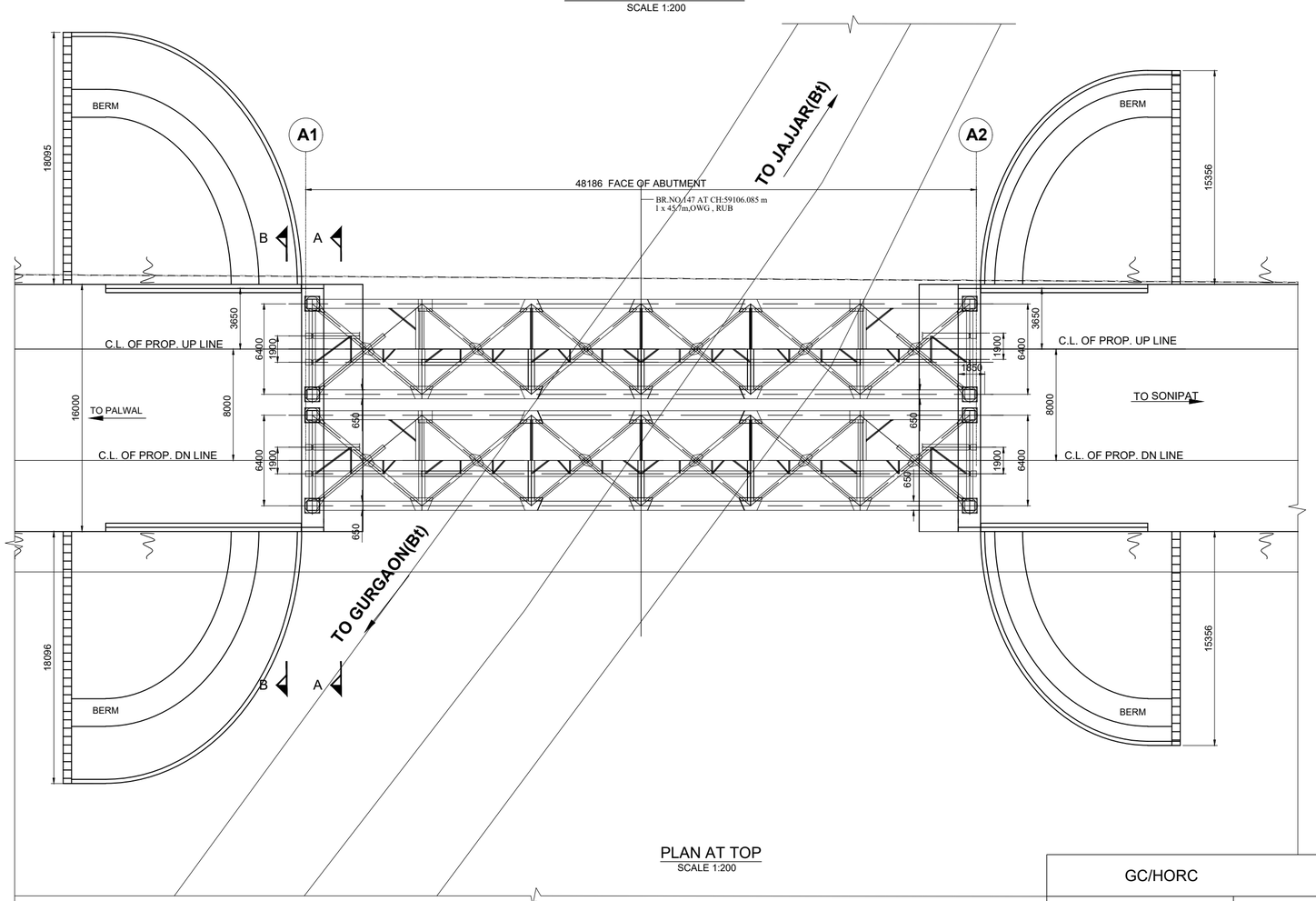
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01136_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

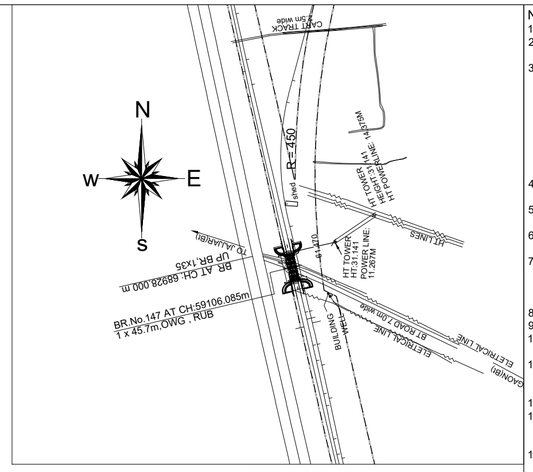


FORMATION LEVEL	225.355	225.355	225.355
GROUND LEVEL	217.127	218.766	218.476
CHAINAGE	59082.465	59106.085	59129.705

SECTIONAL ELEVATION
SCALE 1:200



PLAN AT TOP
SCALE 1:200



KEY PLAN
SCALE 1:NTS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG), SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE OPEN WEB GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-17081 TO 17098
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045 (FOR OWG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

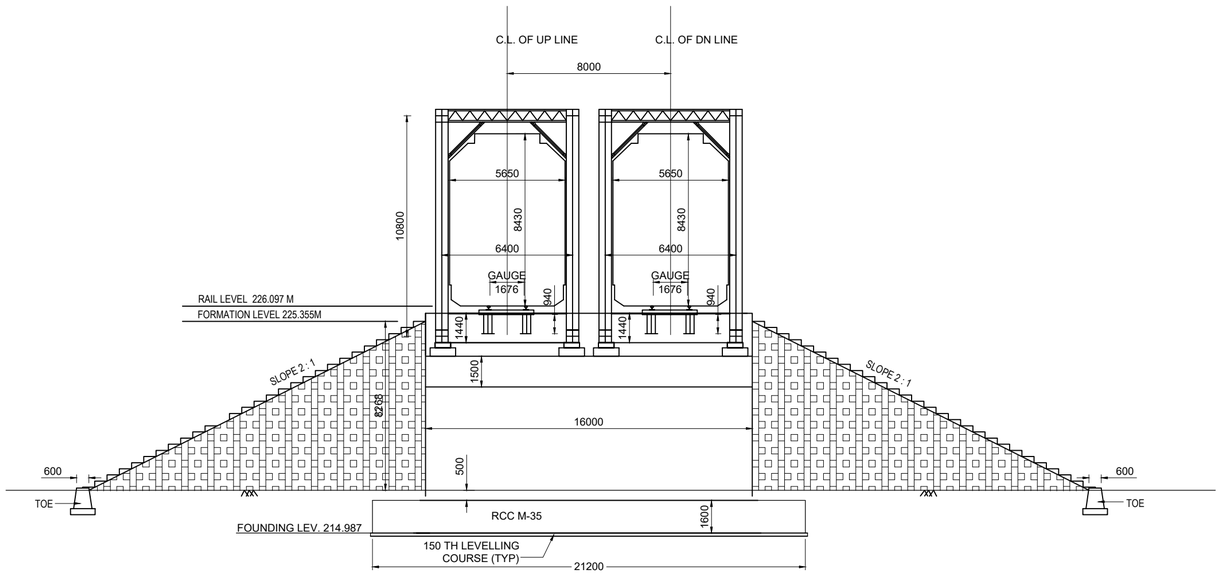
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.147 AT CH:59106.085m 1 x 45.7m,OPEN WEB GIRDER

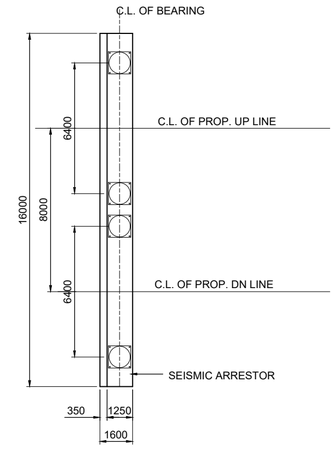
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01147_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



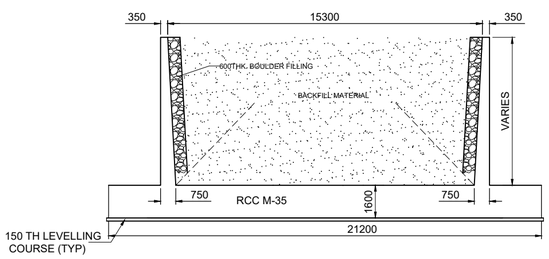
CROSS SECTION AT A-A (ABUTMENT)

SCALE 1:150



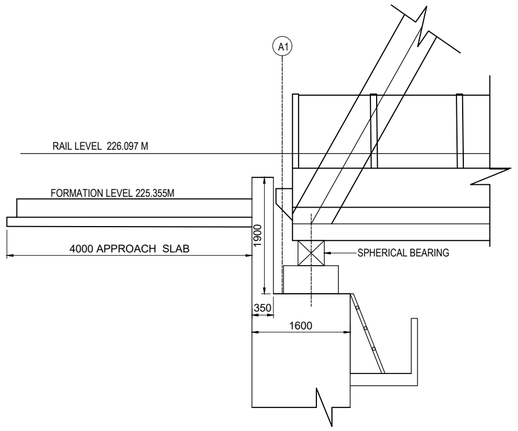
TYPICAL DETAILS OF ABUTMENT CAP

SCALE 1:150



CROSS SECTION AT B-B

SCALE 1:150



DETAILS AT "A"

SCALE 1:50

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER.
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

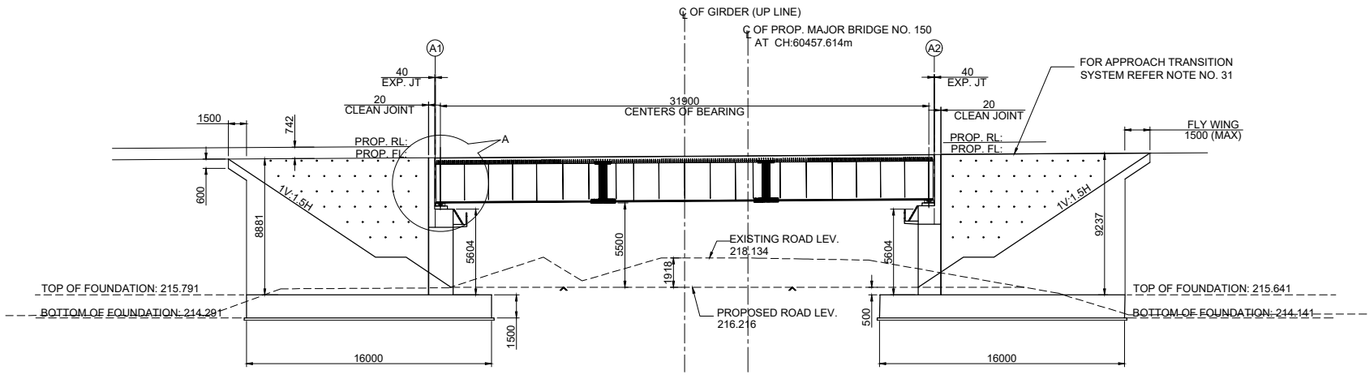
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.147 AT
59106.085 m 1 x 45.7m,OPEN WEB GIRDER

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01147_A1
SHEET NO. 2 OF 2

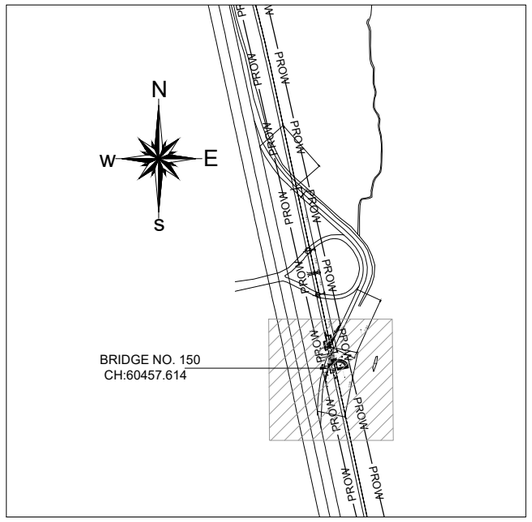
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



FORMATION LEVEL	224.666	224.796	224.872
GROUND LEVEL	216.224	217.991	216.862
CHAINAGE	60437.522	60457.614	60469.422

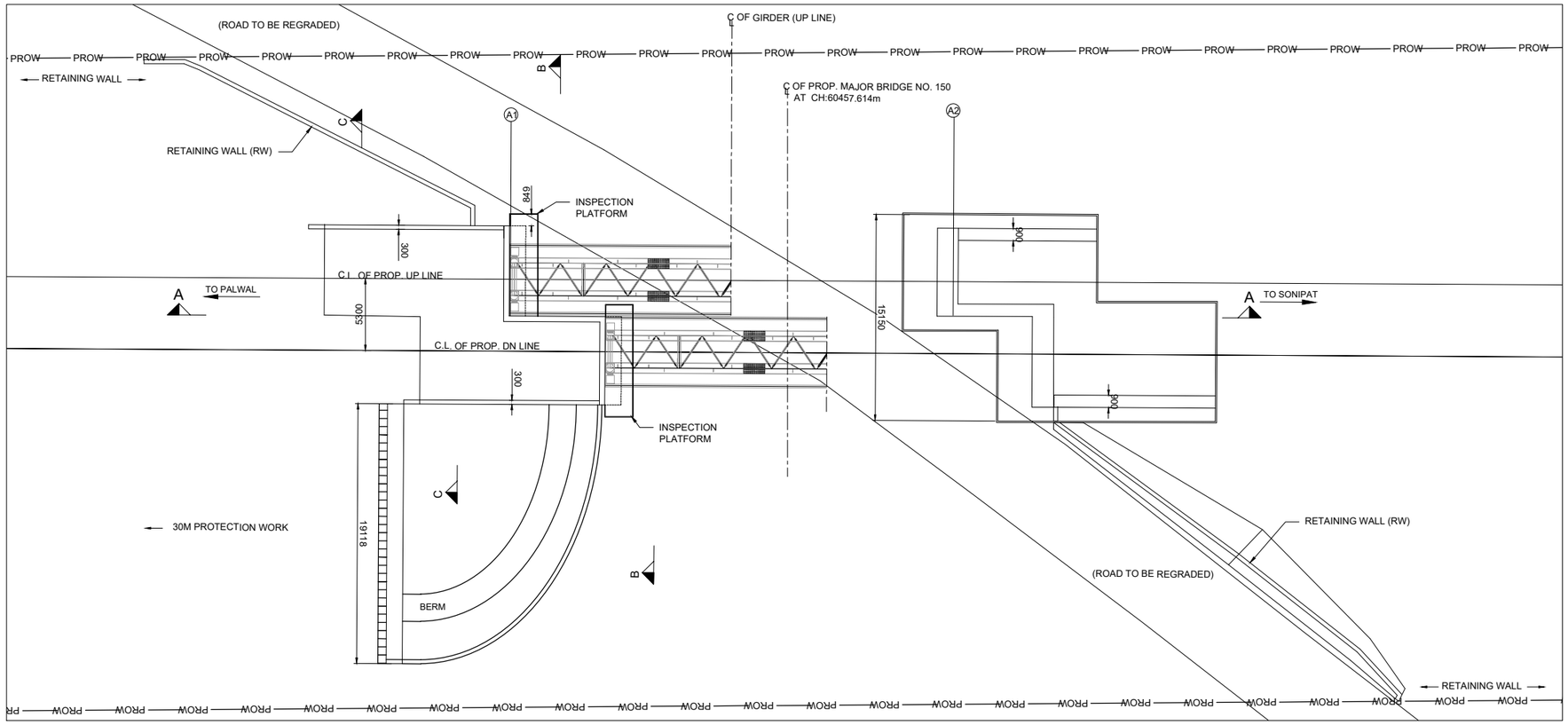
SECTIONAL ELEVATION

SCALE 1:200



KEY PLAN

SCALE 1:NTS



HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN & WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL OF RETURN & WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11754/R2 TO 11754/6.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046 (FOR CG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. EXISTING ROAD SHALL BE FIRST DIVERTED TEMPORARILY TO THE EXSITING ROAD STANDARDS.
28. THEREAFTER EXISTING ROAD SHALL BE LOWERED AS SHOWN IN THE DRAWING. L-SECTION OF LOWERED ROAD SHALL BE GOT APPROVED FROM THE ENGINEER BEFORE START OF WORK.
29. PROTECTIVE BARRIERS FOR ABUTMENTS SHALL BE PROVIDED AS APPROVED BY THE ENGINEER.
30. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BRIDGE AFTER PROTECTION WORK.
31. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

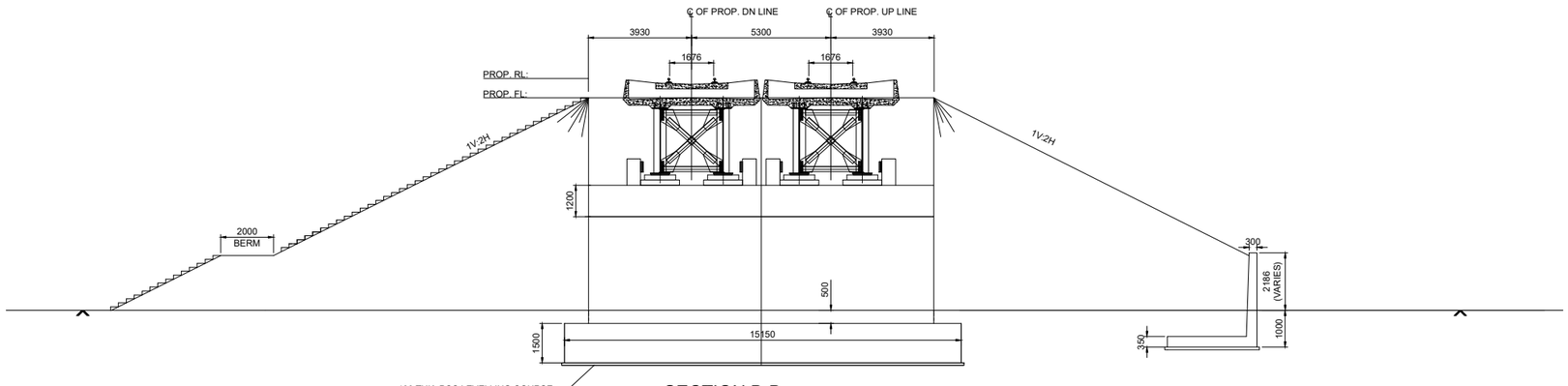
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.150,
1 x 30.5m COMPOSITE GIRDER AT CH: 60457.614m

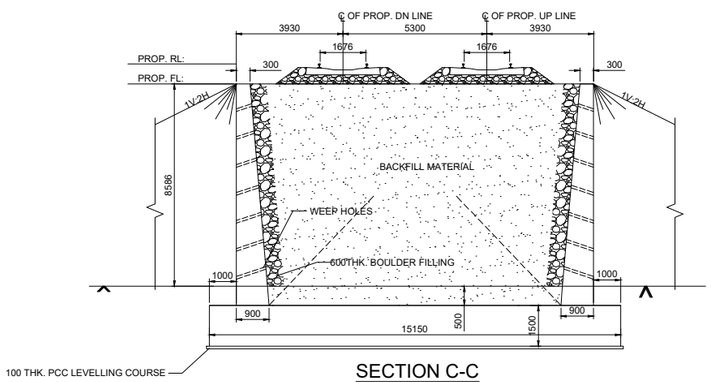
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01150_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



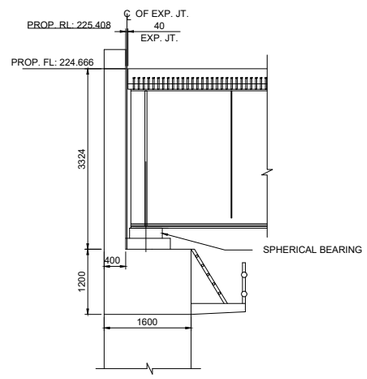
SECTION B-B

SCALE 1:100



SECTION C-C

SCALE 1:100



DETAIL- A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

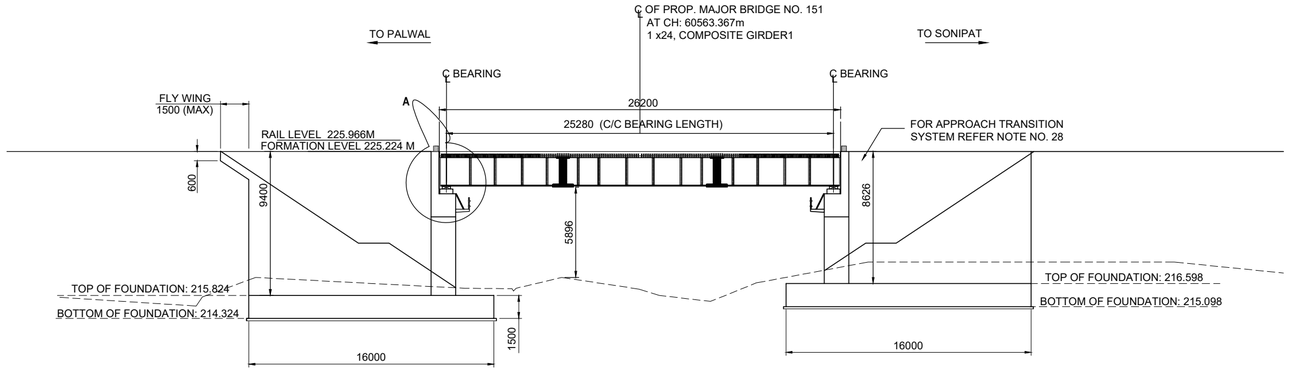
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.150,
1 x 30.5m COMPOSITE GIRDER AT CH: 60457.614m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01150_A1	2 OF 2

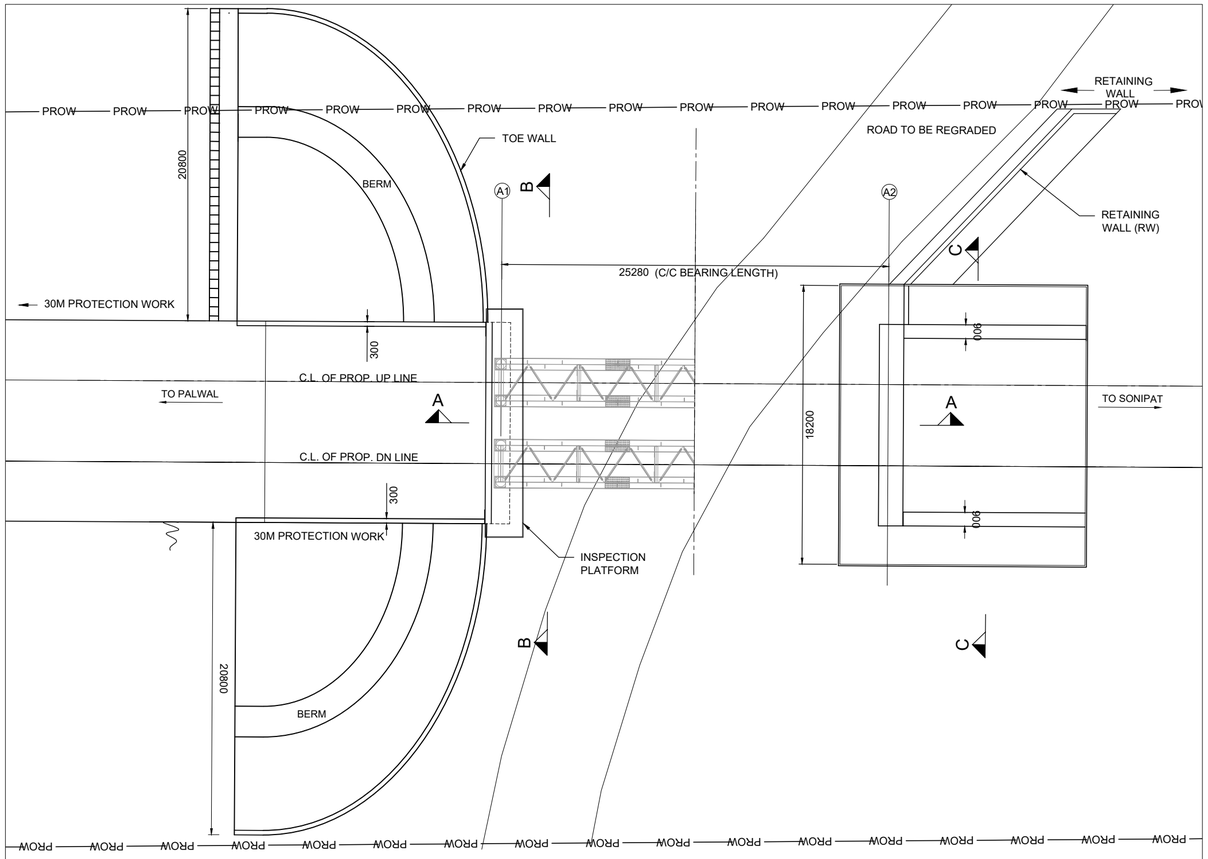
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



FORMATION LEVEL	225.224	225.224	225.224
GROUND LEVEL	216.358	216.223	217.583
CHAINAGE	60550.727	60563.367	60767.004

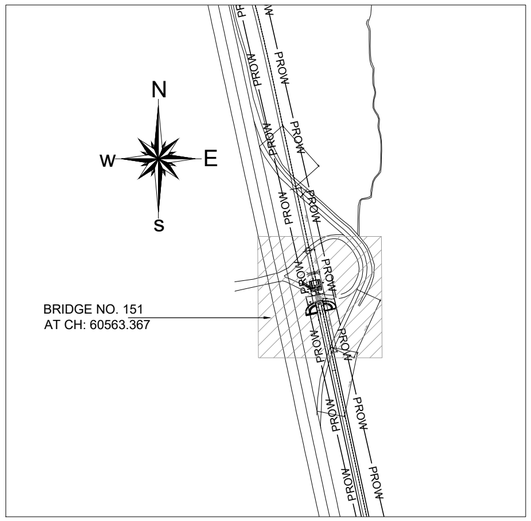
SECTIONAL ELEVATION

SCALE 1:200



HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



KEY PLAN

SCALE 1:NTS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11751/R1 TO 11751/8.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. PATHWAY SHALL BE PROVIDED ON OUTER SIDE OF CG. RDSO DWG. NO. CBS-0046 (FOR CG.) SHALL BE FOLLOWED FOR ARRANGEMENT OF PATHWAY.
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY APPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

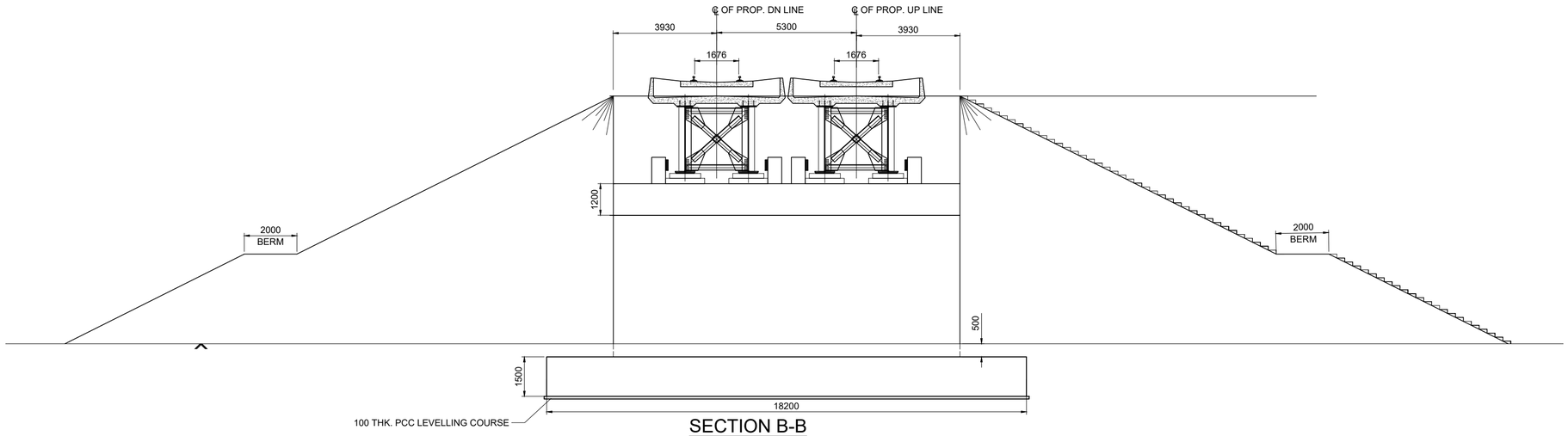
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.151,
1 x 24.4m COMPOSITE GIRDER AT CH: 60563.367m

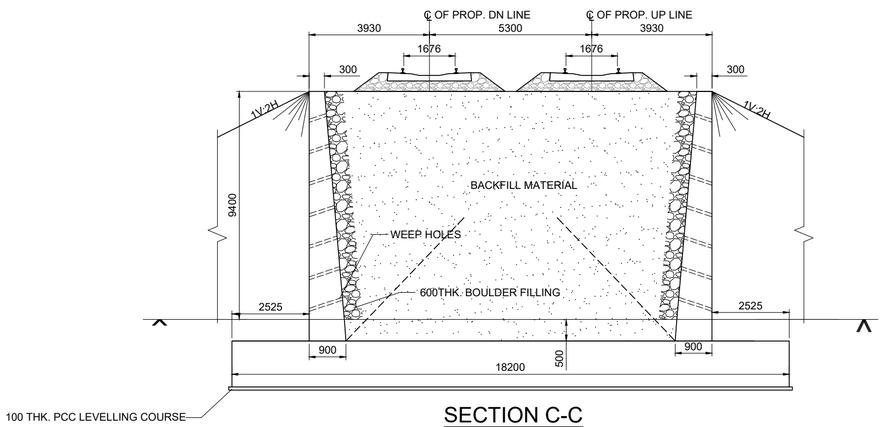
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01151_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



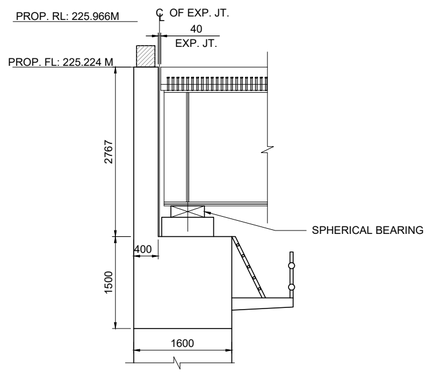
SECTION B-B

SCALE 1:100



SECTION C-C

SCALE 1:100



DETAIL- A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

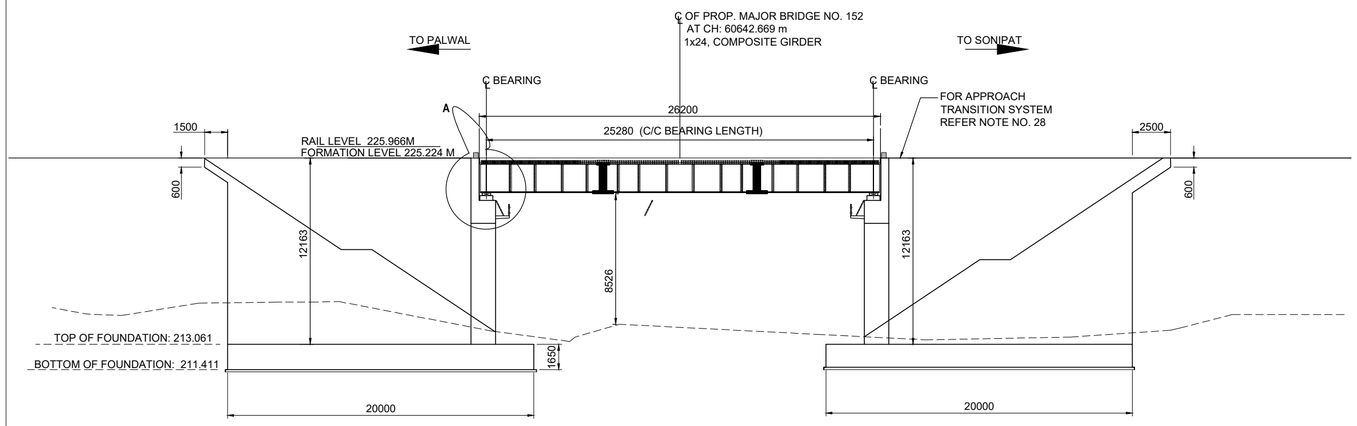
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.151,
1 x 24.4m COMPOSITE GIRDER AT CH: 60563.367m

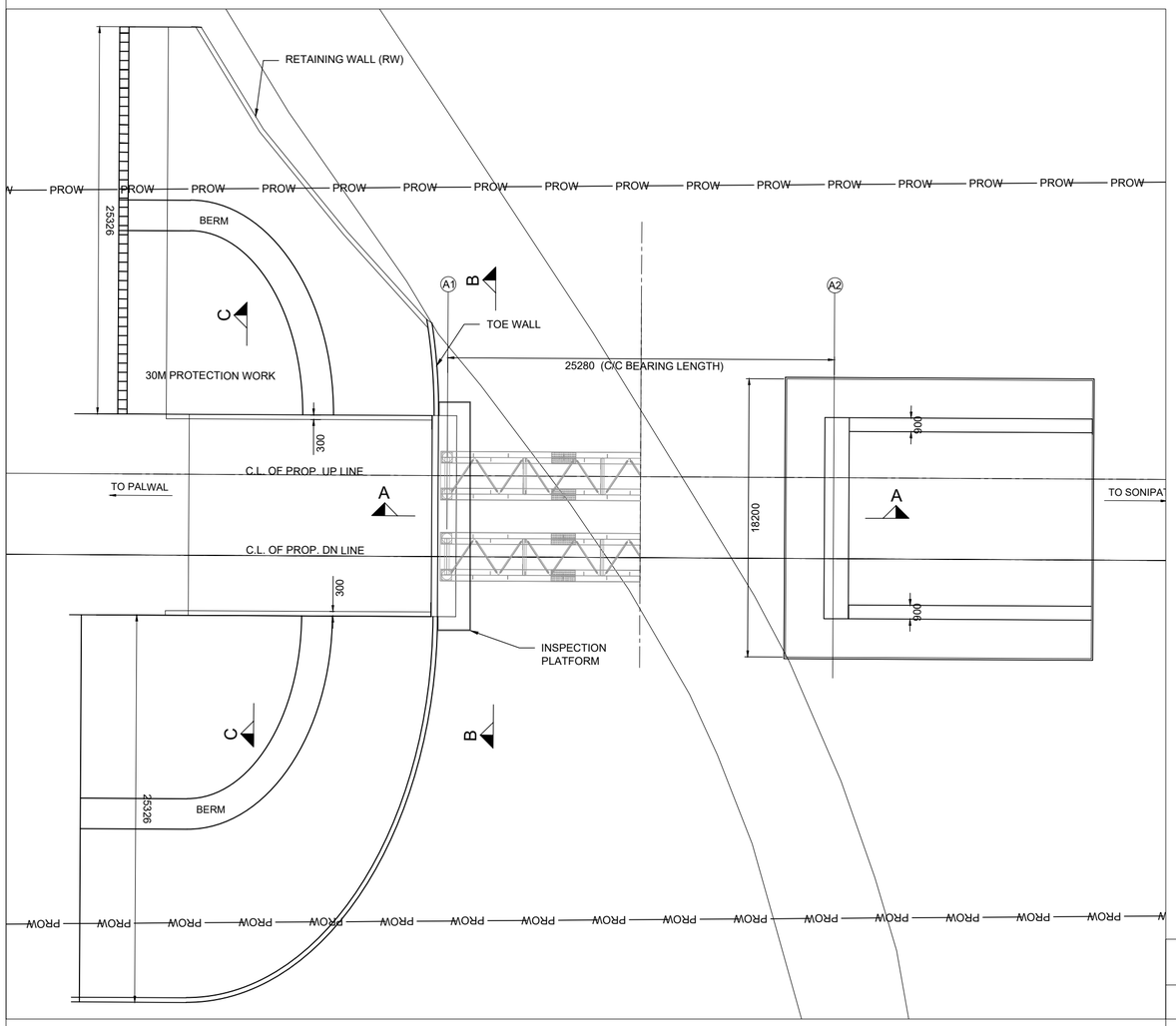
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01151_A1	2 OF 2

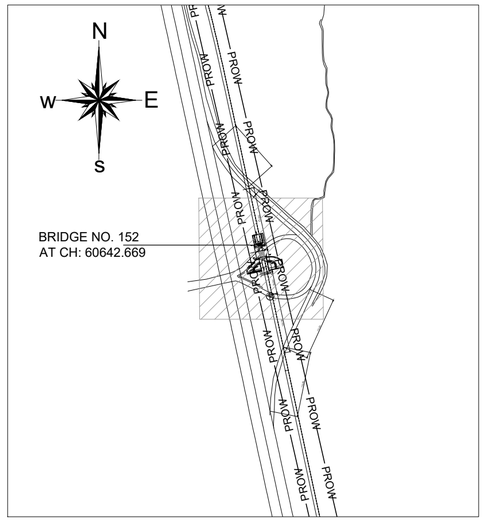
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



FORMATION LEVEL	225.224	225.224	225.224
GROUND LEVEL	213.996	214.178	213.528
CHAINAGE	60630.029	60642.669	60655.309

SECTIONAL ELEVATION
SCALE 1:200





KEY PLAN
SCALE - N.T.S

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11751/R1 TO 11751/8.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. PATHWAY SHALL BE PROVIDED ON OUTER SIDE OF CG. RDSO DWG. NO. CBS-0046 (FOR CG.) SHALL BE FOLLOWED FOR ARRANGEMENT OF PATHWAY.
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

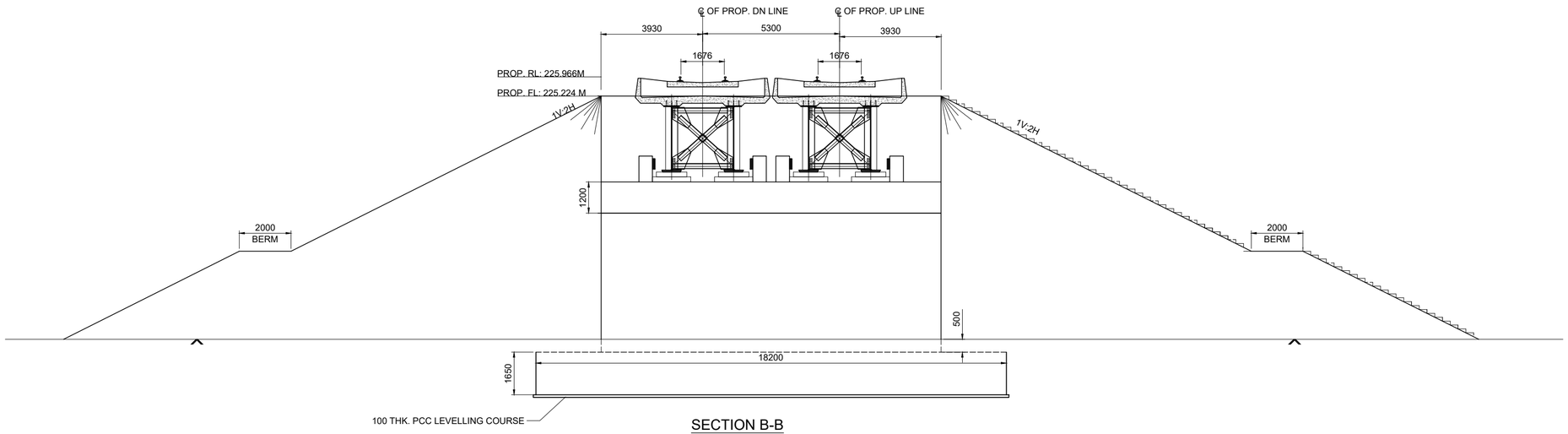
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.152,
1 x 24.4m COMPOSITE GIRDER AT CH: 60642.669 m

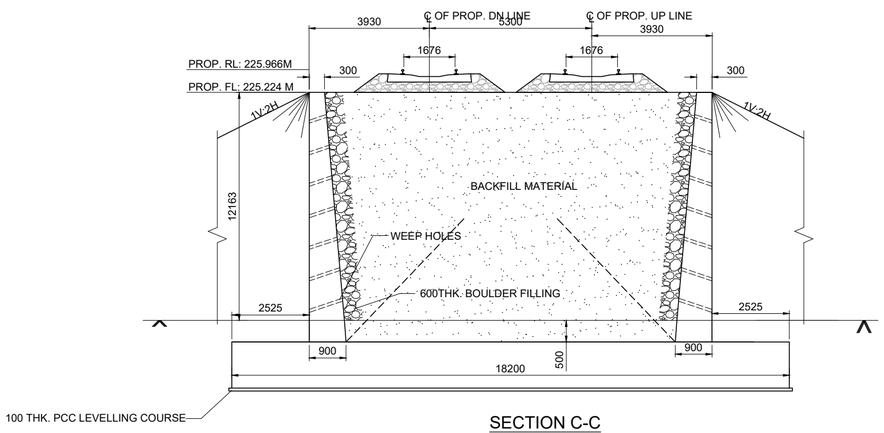
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01152_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

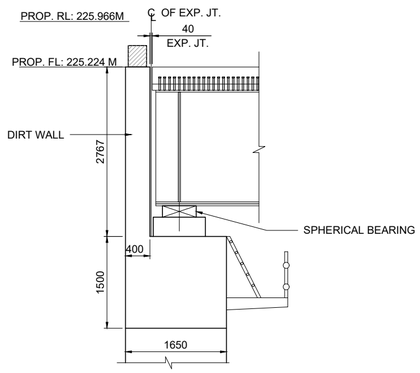
NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED



SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



DETAIL- A
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

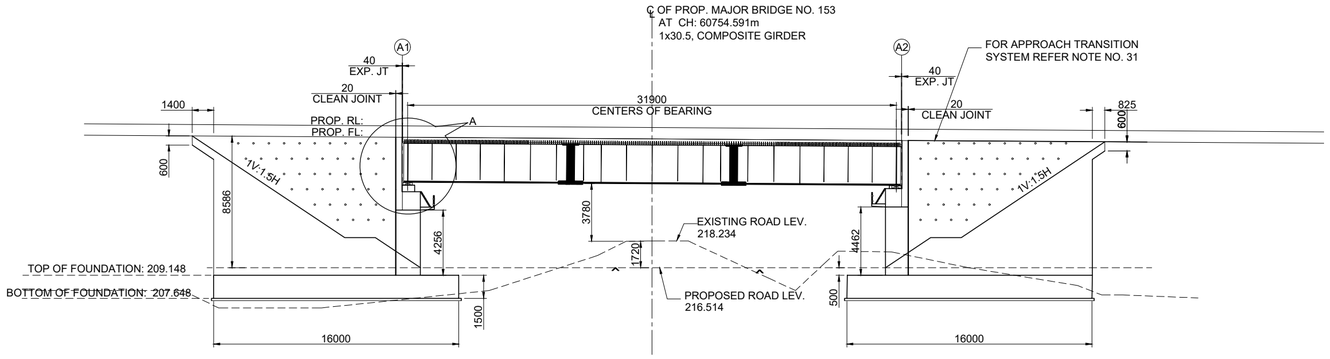
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.152,
1 x 24.4m COMPOSITE GIRDER AT CH: 60642.669 m

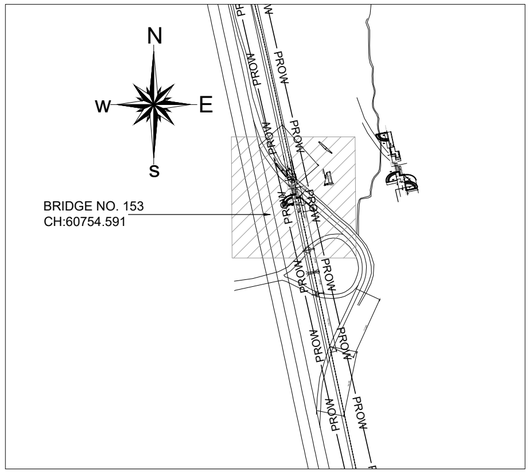
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01152_A1	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

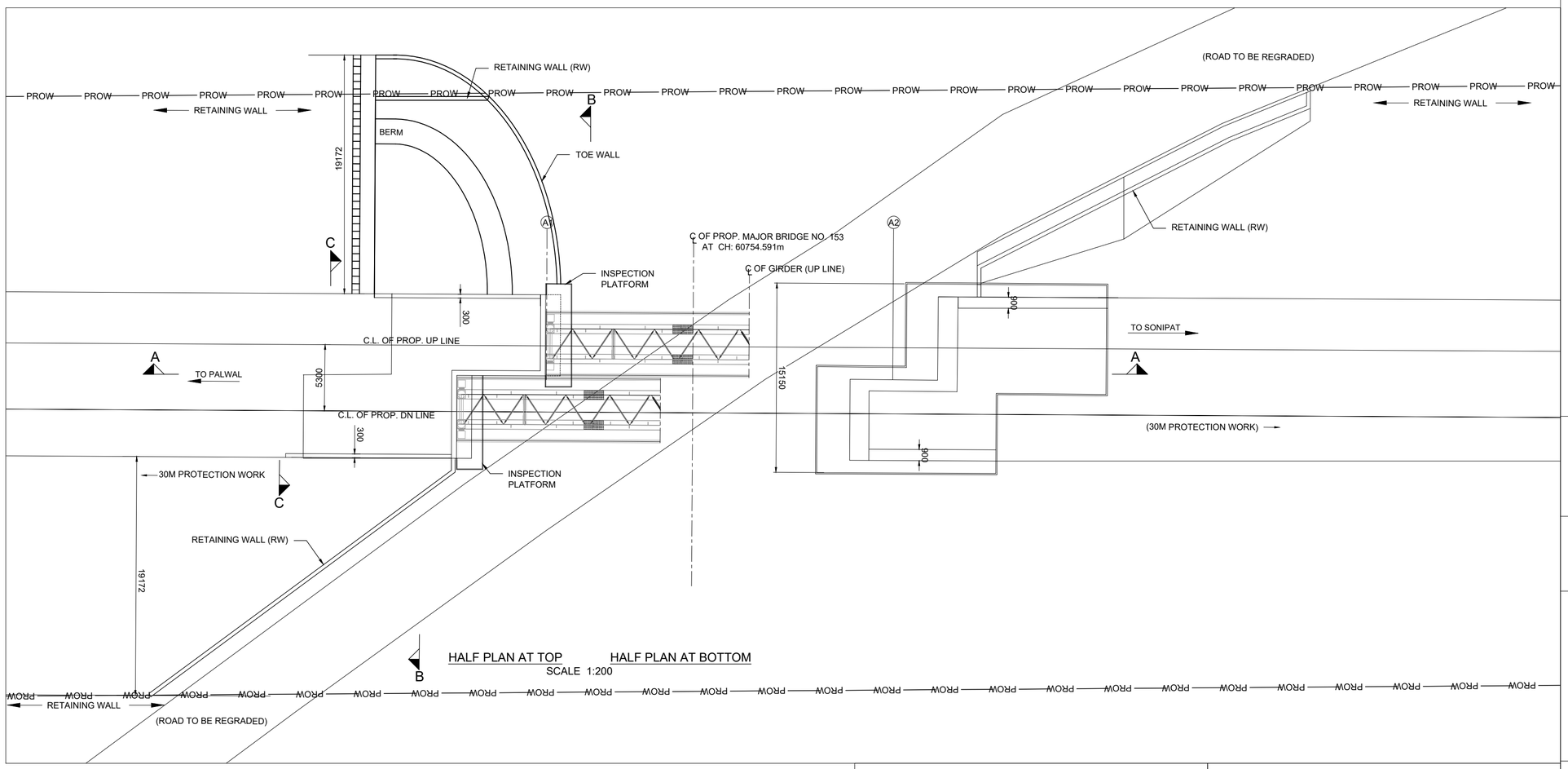


FORMATION LEVEL	224.898	224.898	224.898
GROUND LEVEL	214.948	218.234	215.865
CHAINAGE	60743.12	60754.591	60775.02

SECTIONAL ELEVATION
SCALE 1:200



KEY PLAN
SCALE - N.T.S



HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1:200

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11754/R2 TO 11754/6.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046 (FOR CG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. EXISTING ROAD SHALL BE FIRST DIVERTED TEMPORARILY TO THE EXSITING ROAD STANDARDS.
28. THEREAFTER EXISTING ROAD SHALL BE LOWERED AS SHOWN IN THE DRAWING. L-SECTION OF LOWERED ROAD SHALL BE GOT APPROVED FROM THE ENGINEER BEFORE START OF WORK.
29. PROTECTIVE BARRIERS FOR ABUTMENTS SHALL BE PROVIDED AS APPROVED BY THE ENGINEER.
30. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
31. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.153,
1 x 30.5 m COMPOSITE GIRDER AT 60754.591m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01153_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
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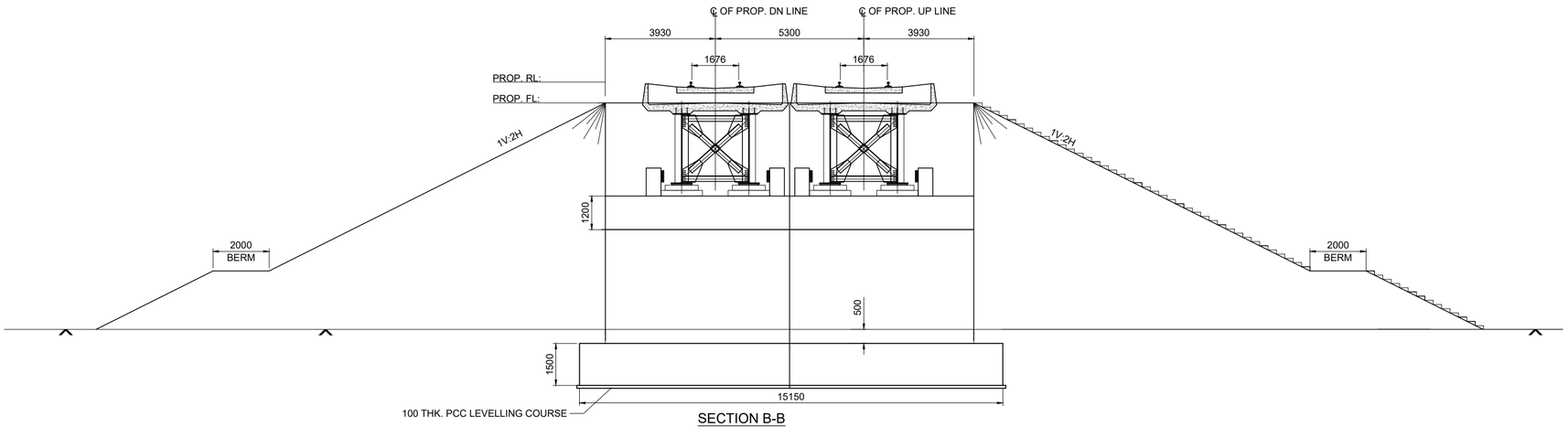
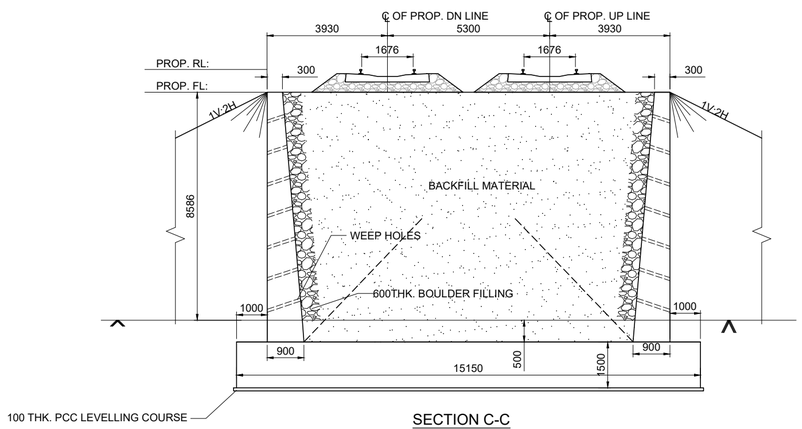
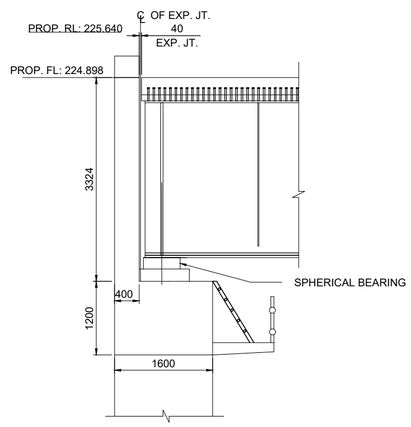


SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



DETAIL- A
SCALE 1:50

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.153,
1 x 30.5 m COMPOSITE GIRDER AT 60754.591m

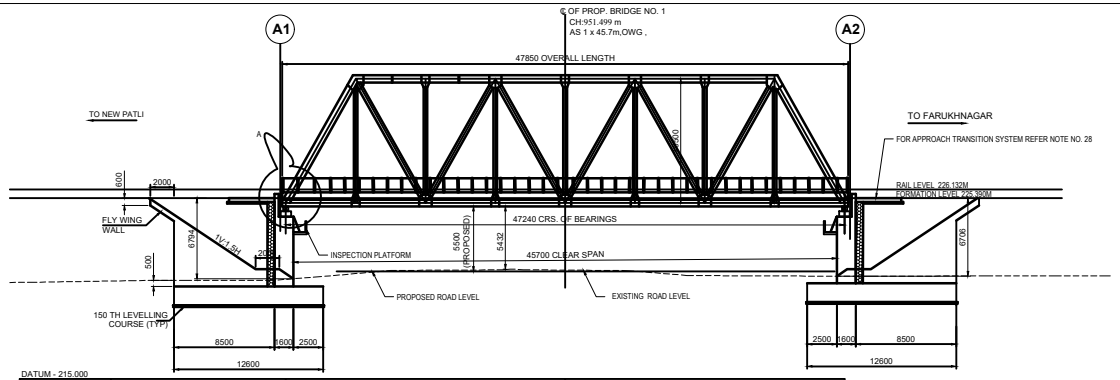
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01153_A1	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

4 Major Bridges

4.2.2 Connecting Line

A New Patli-Sultanpur

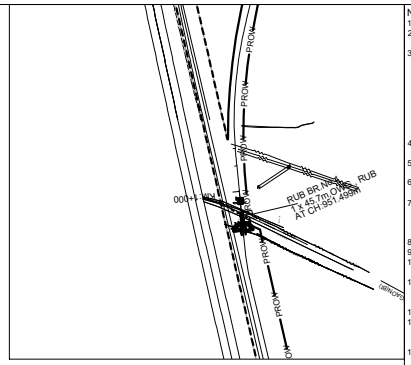


DATUM - 215.000

FORMATION LEVEL	225.390	225.390	225.390
GROUND LEVEL	218.416	219.958	218.684
CHAINAGE	928.370	951.499	975.119

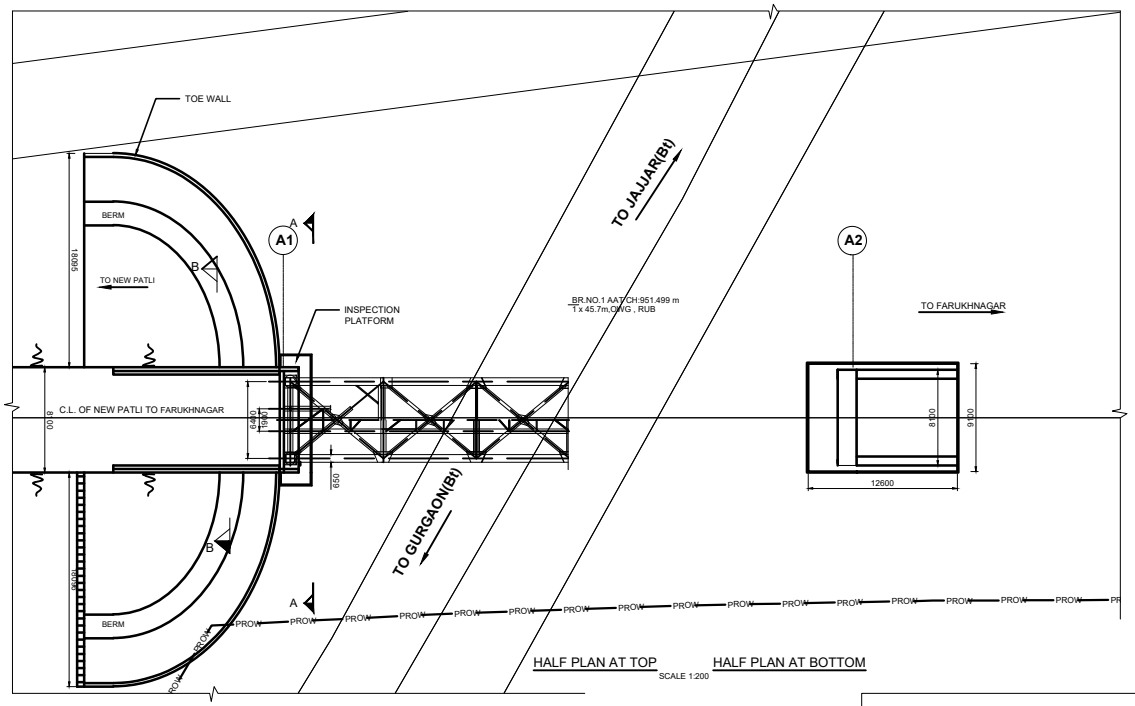
SECTIONAL ELEVATION

SCALE 1:200



KEY PLAN

SCALE 1:NTS



HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1:200

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   - i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   - ii) IRS CONCRETE BRIDGE CODE 2014.
   - iii) IRS BRIDGE RULES 2014.
   - iv) IS 2911 PART-1 SECTION-2.
   - v) EXPOSURE CONDITION - MODERATE.
   - vi) SEISMIC ZONE - IV
   - vii) STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG), SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   - i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   - ii) FOR FOUNDATION ----------M35
   - iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE OPEN WEB GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-17081 TO 17098
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045 (FOR OWG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

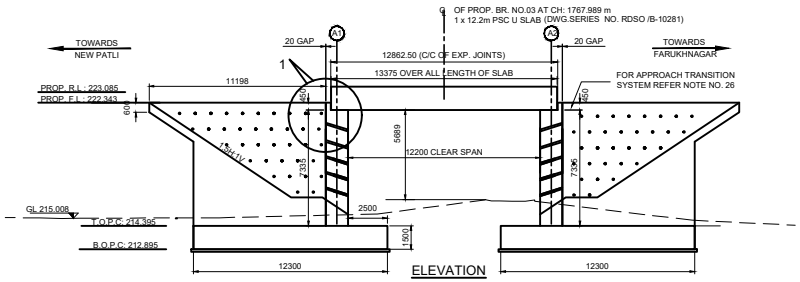
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

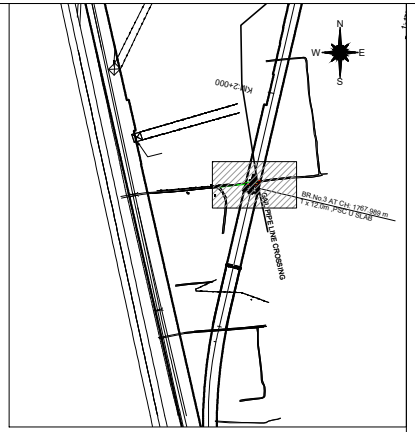
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO. 1 AT CH:951.499 m 1 x 45.7m,OPEN WEB GIRDER(CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04001_A1	1 OF 1

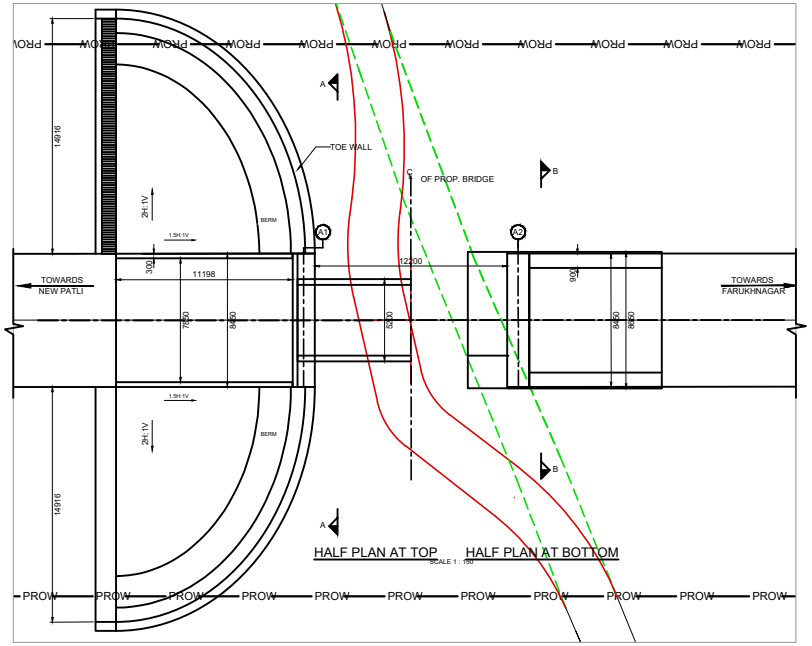
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



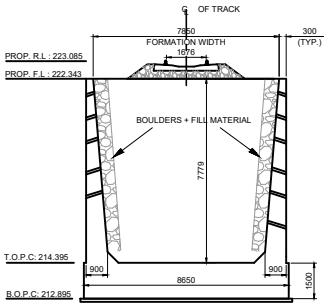
ELEVATION
SCALE 1:150



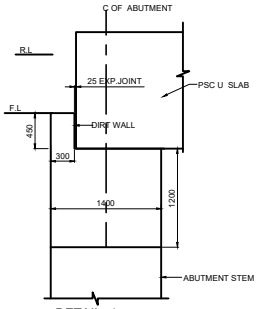
KEY PLAN
SCALE 1:NTS



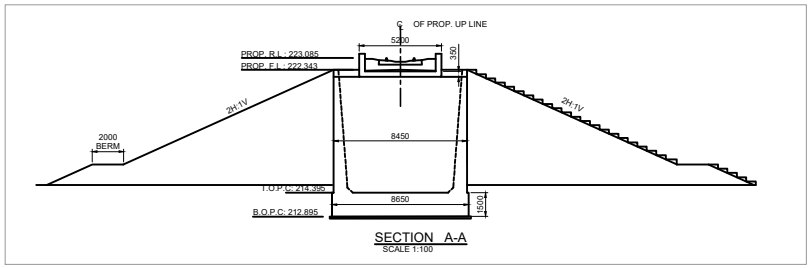
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 150



SECTION B-B
SCALE 1:100



DETAIL -1
SCALE 1:30



SECTION A-A
SCALE 1:100

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE & TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE.
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
8. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
9. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
10. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
11. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
12. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
26. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
	PROPOSED ROAD
	DISMANTEL ROAD

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

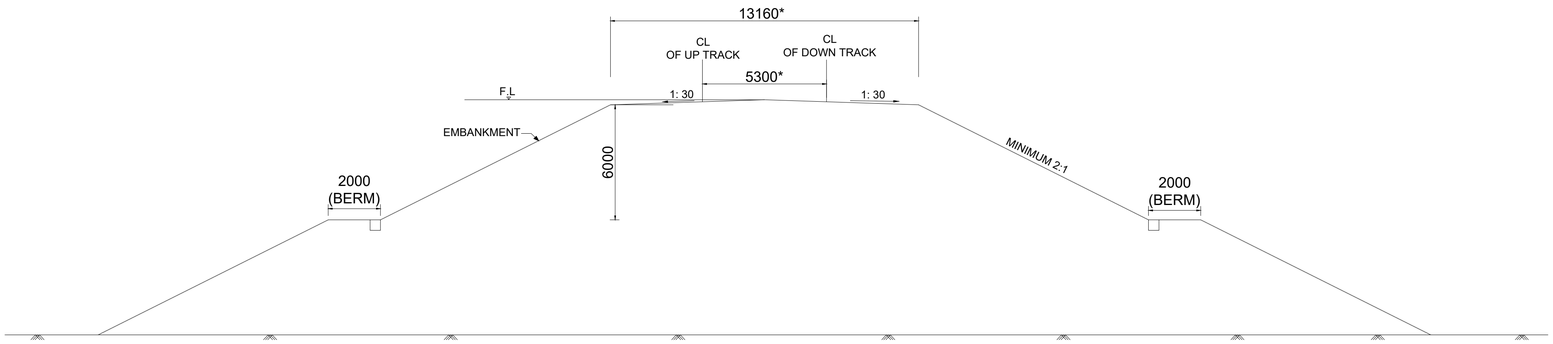
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO. 3, 1 x 12.2m PSC U SLAB AT CH.1767.989 (CONNECTING LINE NEW PATLI TO SULTANPUR)

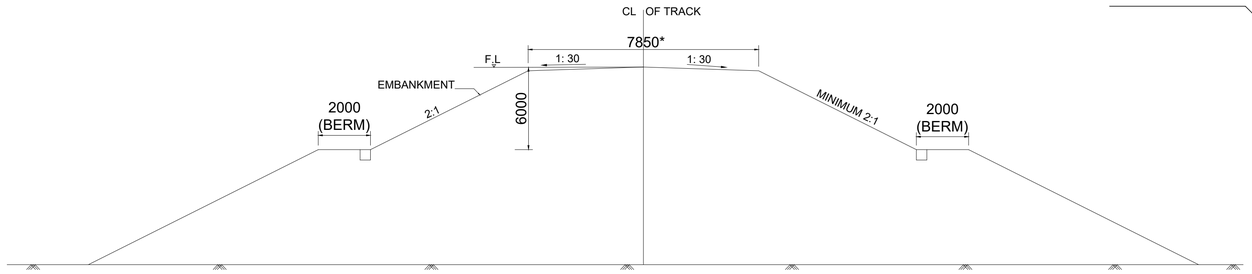
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04003_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

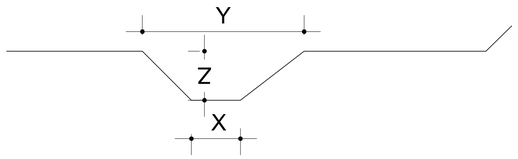
5 Miscellaneous Drawings (Conceptual Plan)



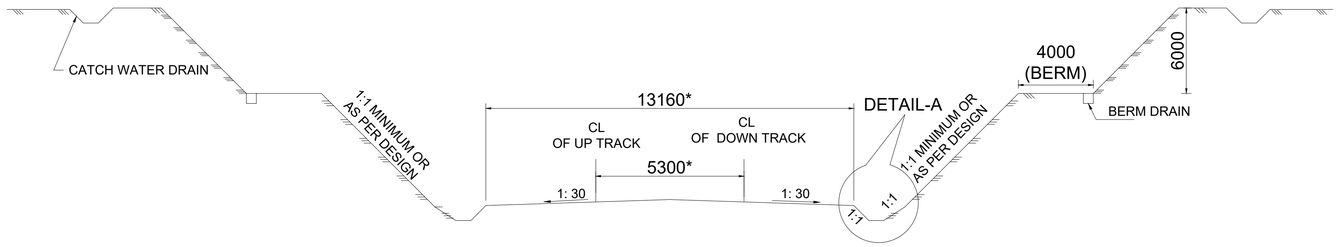
TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR DOUBLE TRACK)



TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR SINGLE TRACK)



DETAIL-A



TYPICAL CROSS-SECTION OF CUTTING
(FOR DOUBLE TRACK)

NOTES:
1. ALL DIMENSION ARE IN MM.
2. DEPTH OF BALLAST CUSHION SHOULD BE PROVIDED AS PER PARA 212(2) OF IRPWM.
3. CROSS SLOPE OF 1IN 30 SHALL BE PROVIDED.
4. MINIMUM FORMATION WIDTH OF 13160 MM SHALL BE ENSURED FOR NEW WORKS IN BOTH EMBANKMENT AND IN CUTTING (EXCLUDING SIDE DRAIN)
5. * FORMATION WIDTH SHALL BE INCREASED BASED ON CURVE & SUPER ELEVATION AS PER IRSOD.
6. X, Y, Z DIMENSIONS SHALL BE AS PER DESIGN.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

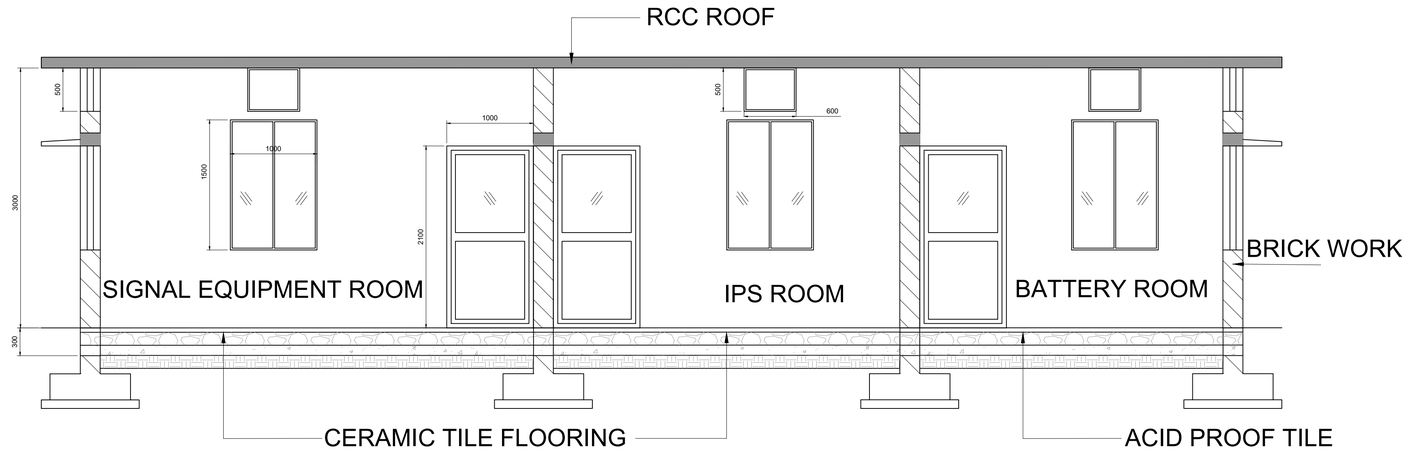
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
TYPICAL EMBANKMENT/CUTTING PROFILE

DRG. NO. GC-HRIDC-SK-GEN-001_A1 | SHEET NO.

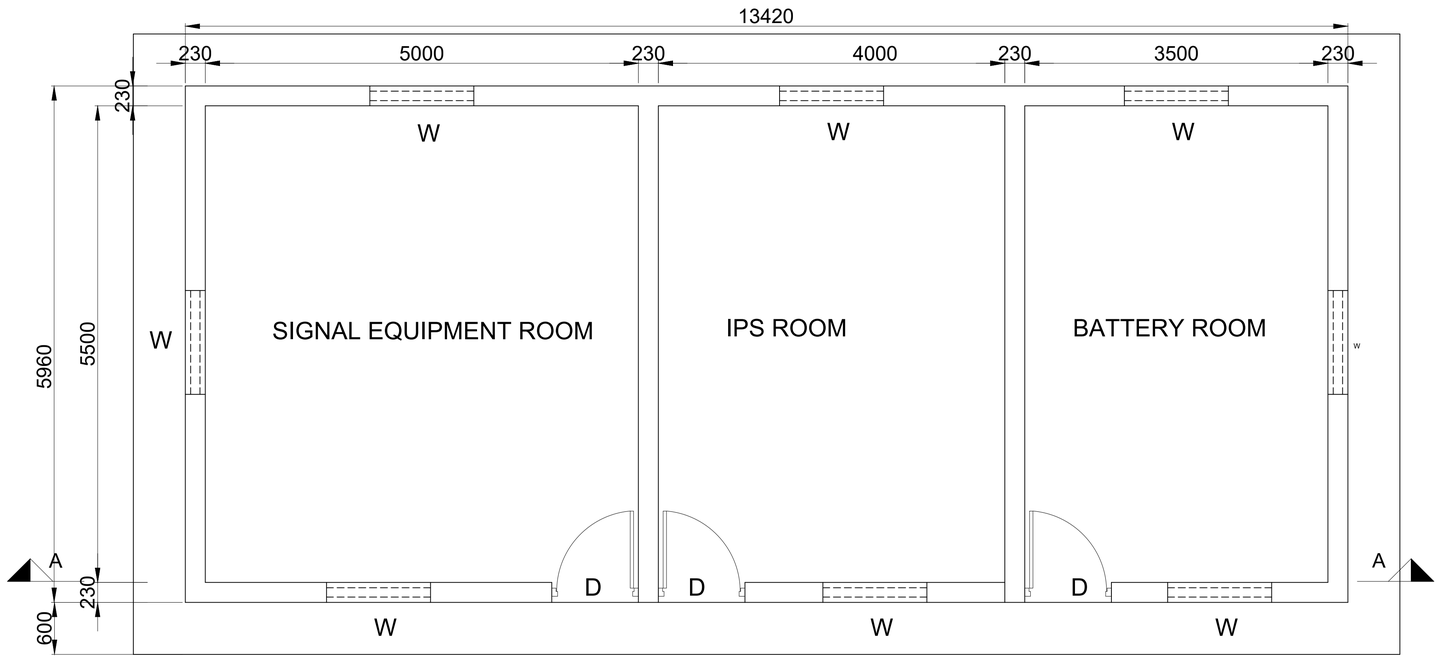
SCALE : AS SHOWN | ISSUE DATE 28.12.2022



SECTIONAL ELEVATION A-A

SCHEDULE

DOOR	2100x1000
WINDOW	1000x1500
VENTILATOR	600x500



PLAN

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. PLINTH LEVEL SHALL BE KEPT AT LEAST 300mm ABOVE THE GROUND LEVEL.
3. DPC SHALL BE PROVIDED ABOVE PLINTH LEVEL.
4. FOUNDATION SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. DOOR & WINDOW FRAMES SHALL BE OF STEEL.
6. DOOR SHUTTERS SHALL BE 35mm THICK FLUSH DOORS.
7. WINDOWS AND VENTILATORS SHALL BE AS PER RELEVANT IS CODES.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

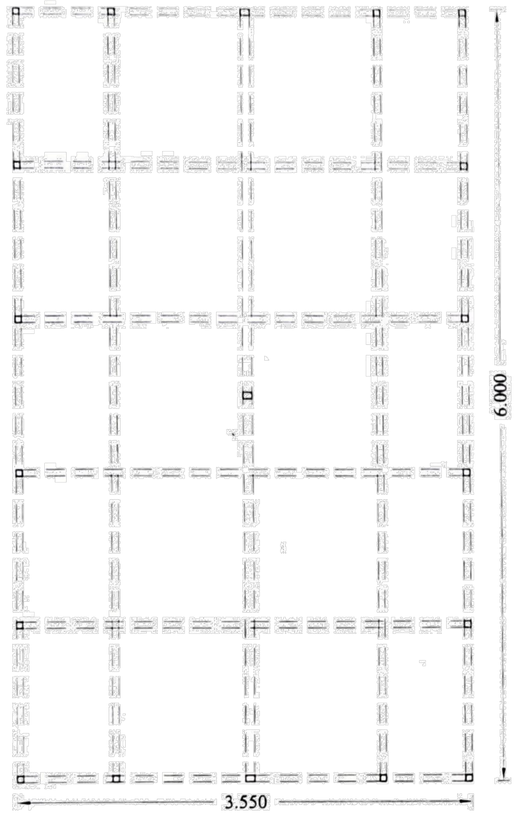
TITLE:- CONCEPTUAL PLAN S & T HUT

DRG. NO. GC-HRIDC-SK-GEN-002_A1

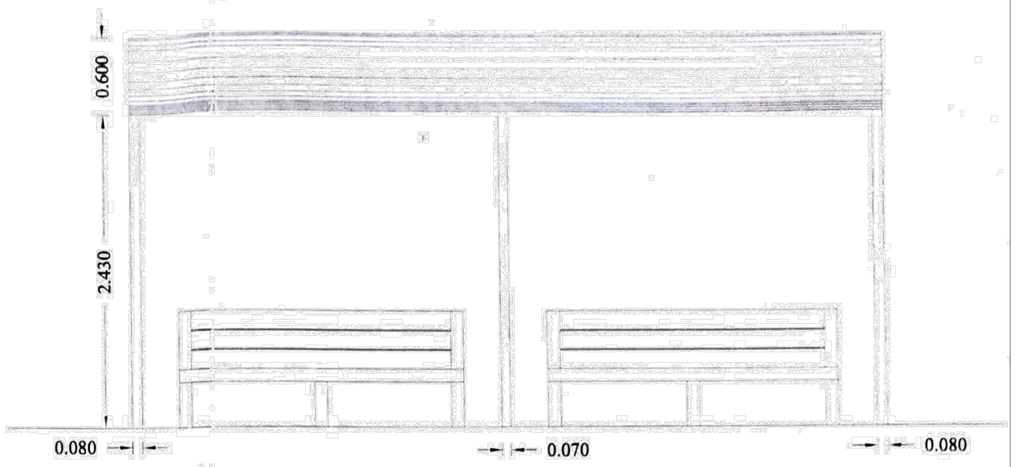
SHEET NO. 1 OF 1

SCALE : AS SHOWN

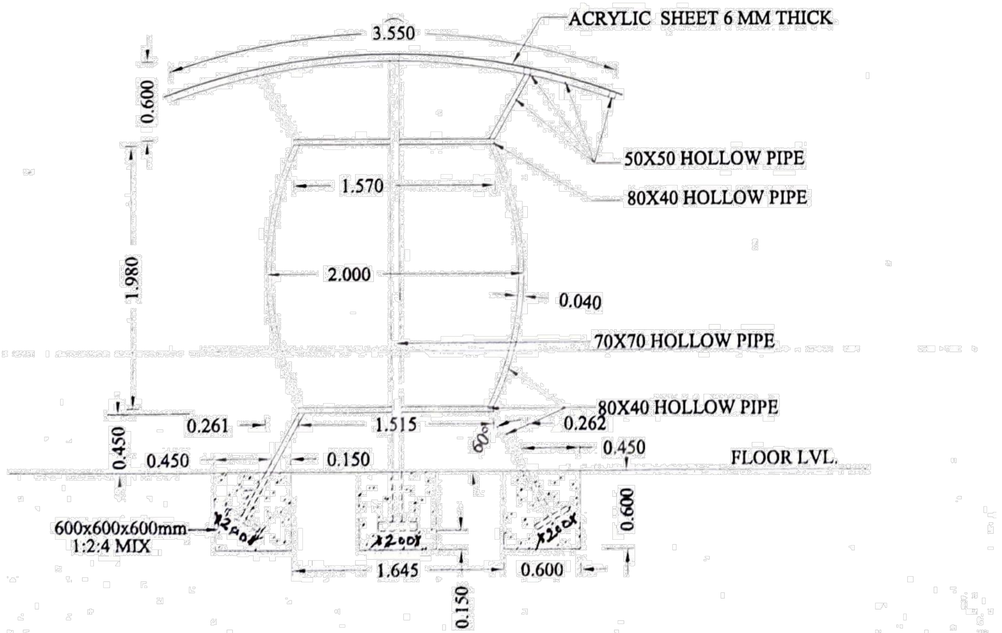
ISSUE DATE 28.12.2022



PLAN



FRONT VIEW



CROSS SECTION

Note:-

1- All dimensions are in meter unless otherwise mentioned in the drawing.
2- 6mm thick Multi-wall Translucent Polycarbonate sheet both side UV Protected and in curved shape including Aluminum top and bottom profile with EPDM gasket,their fixing with S.S. Pipe purlins self tapping screw etc. on structure roof of shelter
3- This sketch is only for architectural purpose. Hollow Circular/ square/ rectangular sections of S.S. shall be used. Size mentioned in the drawing are tentative and shall be as per detailed design.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

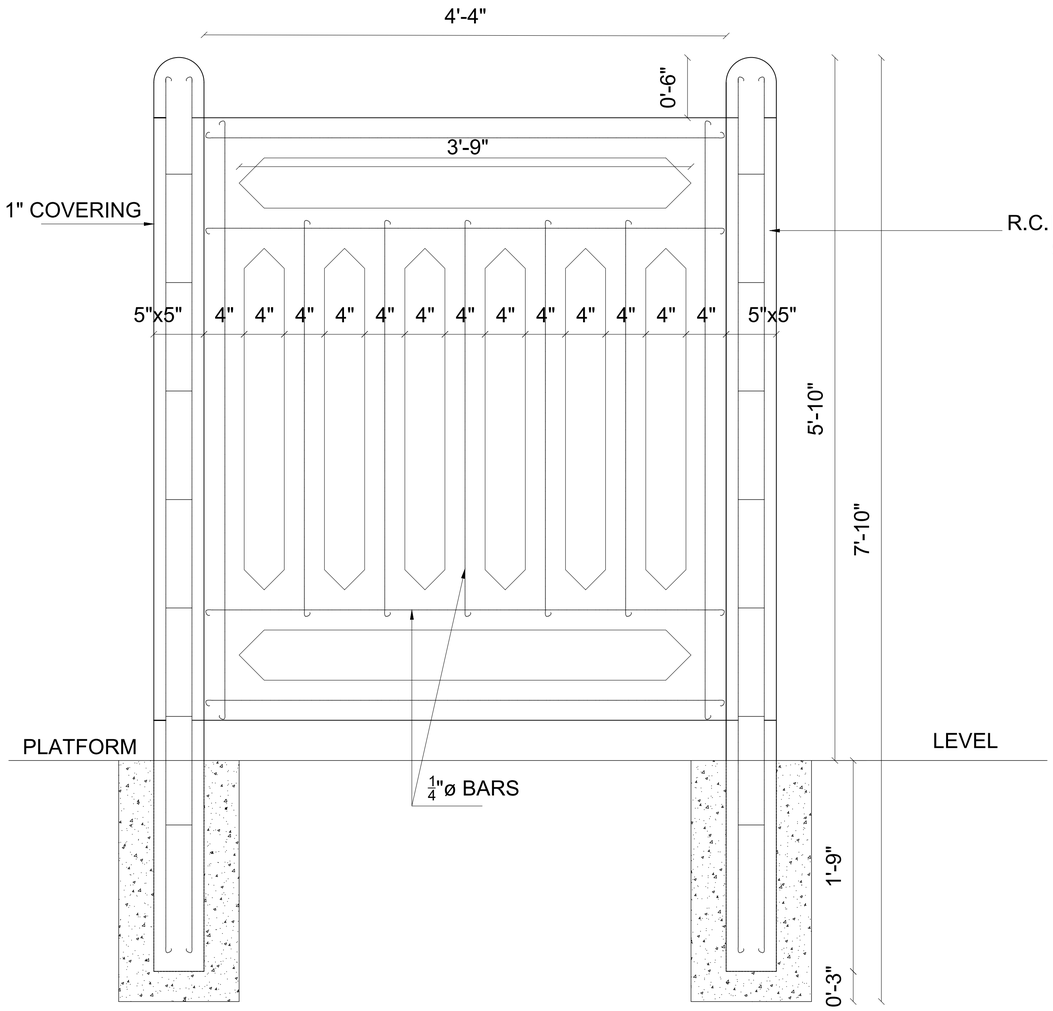
TITLE:- CONCEPTUAL PLAN
MINI PLATFORM SHELTER

DRG. NO. GC-HRIDC-SK-GEN-003_A1

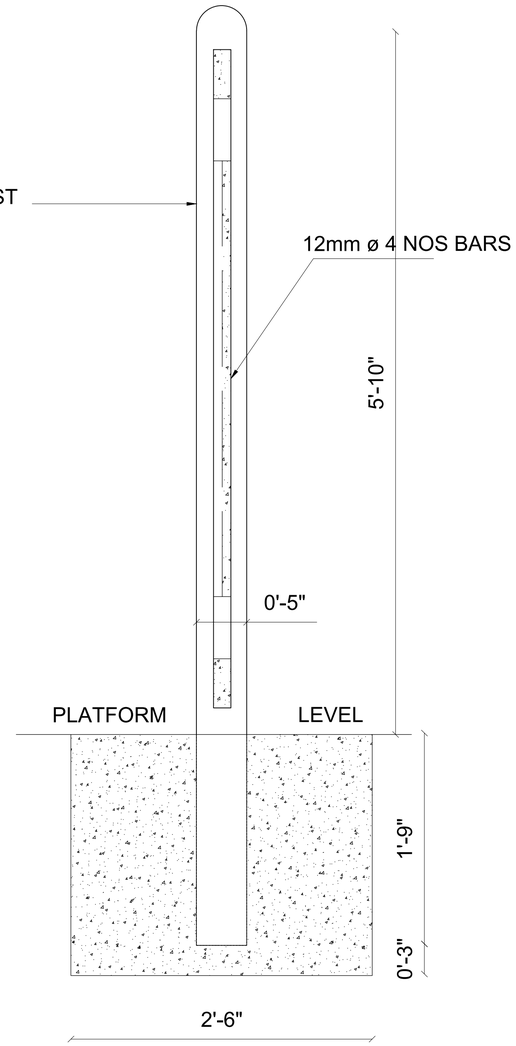
SHEET NO. 1 OF 1

SCALE : AS SHOWN

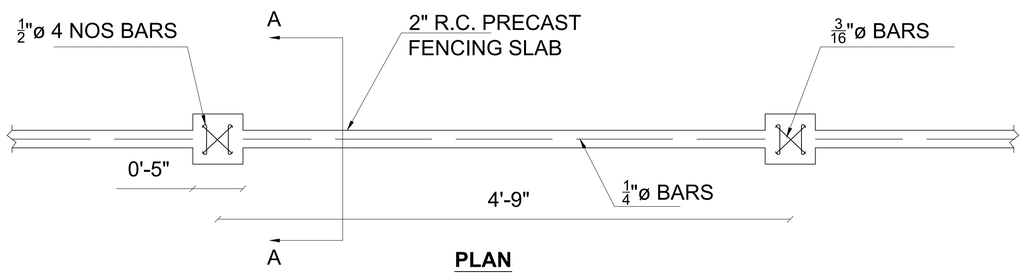
ISSUE DATE 28.12.2022



ELEVATION



SECTION AT A-A



PLAN

NOTES:
1. ALL DIMENSION ARE IN INCHES UNLESS OR OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

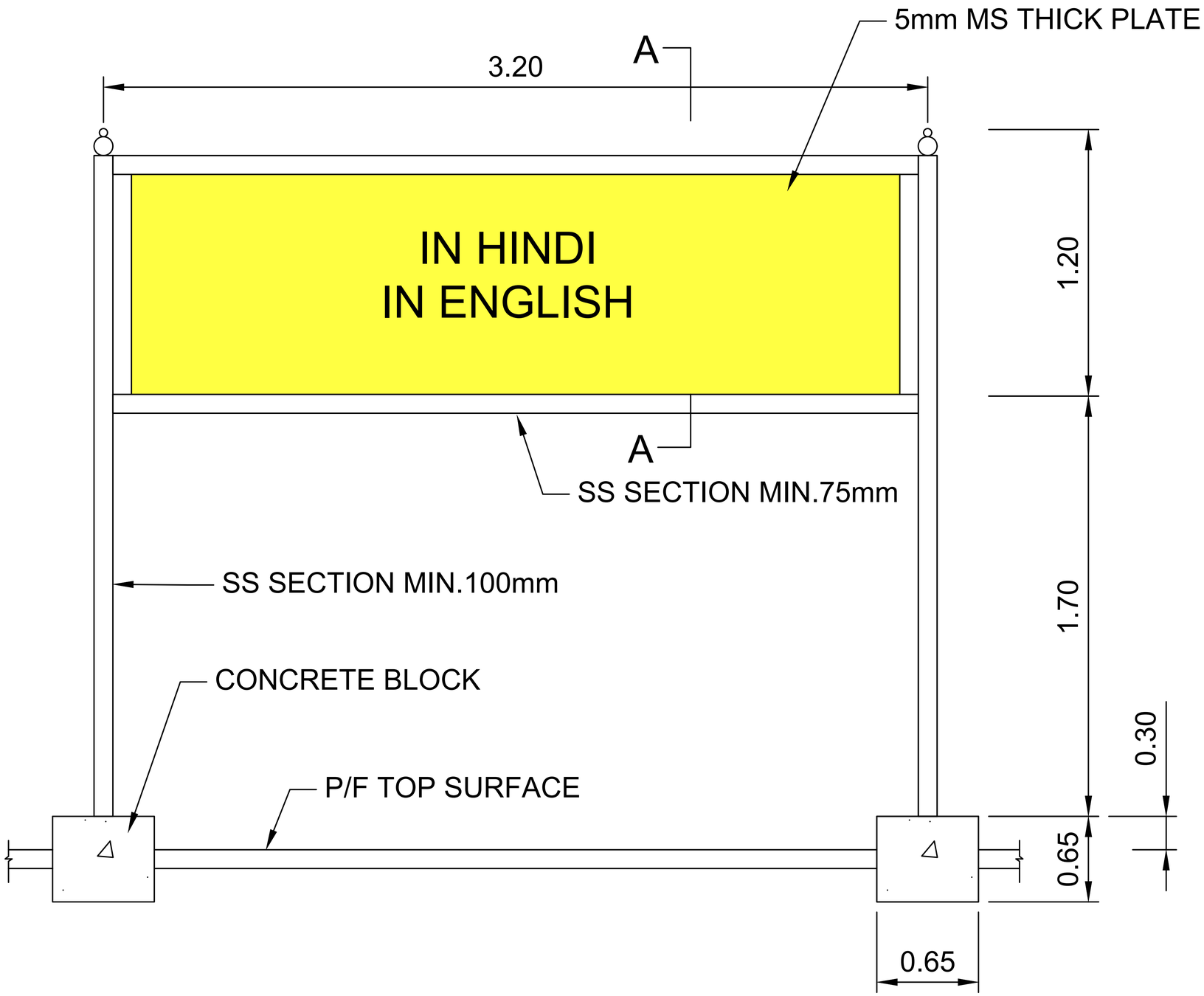
TITLE:- CONCEPTUAL PLAN
R.C. PRE-CAST FENCING FOR END PLATFORM

DRG. NO. GC-HRIDC-SK-GEN-004

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



Notes:

1. THE PRINCIPAL NAME BOARDS PAINTED ON BOTH FACES SHOULD BE FIXED AT BOTH THE ENDS OF THE PLATFORM AND GENERALLY ORIENTED AT RIGHT ANGLE TO THE TRACK.
2. THE ACTUAL ANGEL AT WHICH THE NAME BOARD ARE FACED SHOULD BE DETERMINED BY THE SITE CONDITIONS ENSURING THE CRITERIA THAT THE NAME BOARDS ARE CLEARLY VISIBLE FROM APPROACHING TRAINS.
3. BOARD TO BE PAINTED YELLOW WITH BLACK LETTERS.
4. THE STATION NAME SHALL BE EXHIBITED IN THE FOLLOWING ORDER: REGIONAL LANGUAGE, HINDI AND ENGLISH.
5. HEIGHT OF LETTERS SHALL BE 300 MM, THICKNESS IN PROPORTIONS TO THE STYLE OF THE SCRIPT.
6. THE LOWER EDGE OF THE PRINCIPAL BOARD SHOULD BE 2M ABOVE THE PLATFORM.
7. THE PAINTING WORK SHALL BE COMMENCE ONLY AFTER THE SATISFACTORY SURFACE PREPARATION INSPECTED AND APPROVED BY THE ENGINEER.
8. 2 COATS OF APPROVED BRAND YELLOW PAINT SHALL BE APPLIED OVER THE ONE COAT OF PRIMER.
9. THE APPLIED COAT OF PAINT SHALL BE UNIFORM AND FREE FROM BRUSH MARKS, SACK MARKS, BLEMISHES ETC.
10. SS SECTION SIZE TO BE ADOPTED SHALL BE BASED UPON DETAILED DESIGN. SIZE SHALL NOT BE LESS THAN THAT MENTION DRAWING (CIRCULAR /SQUARE/RECTANGLE).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

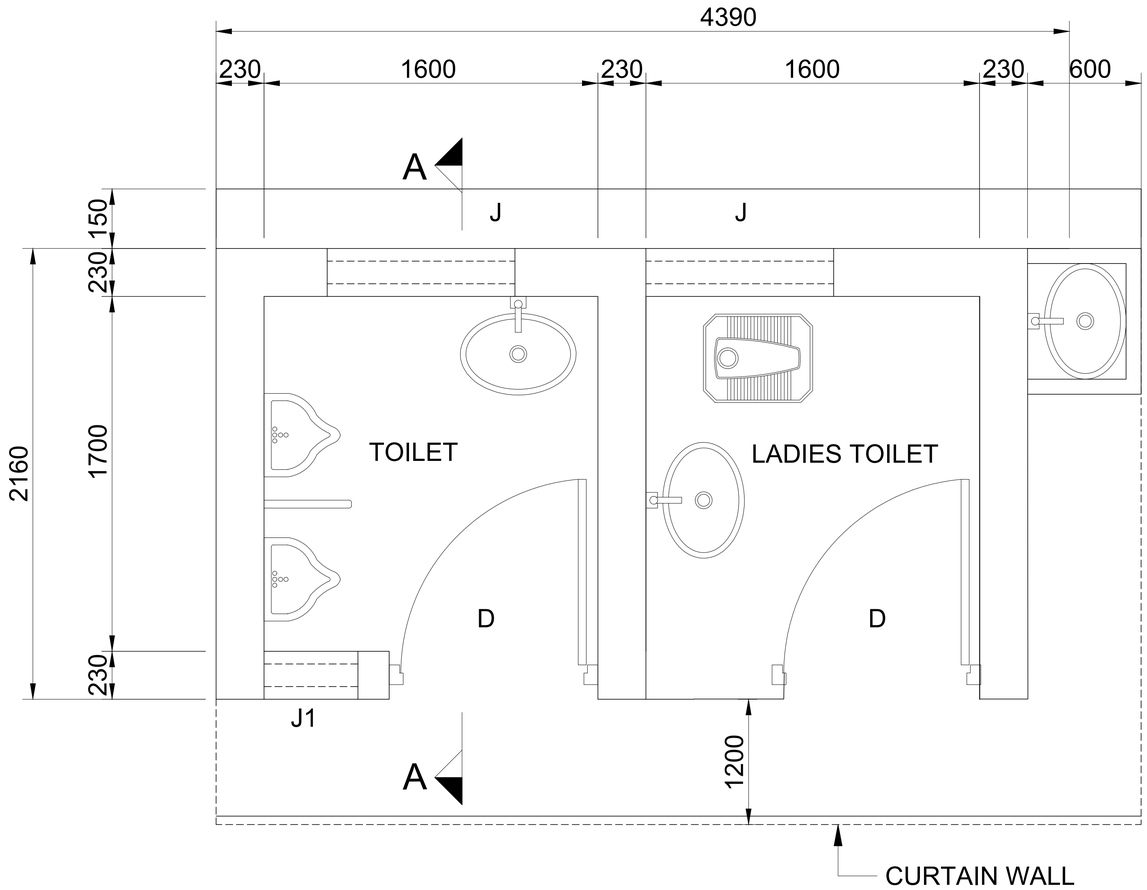
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

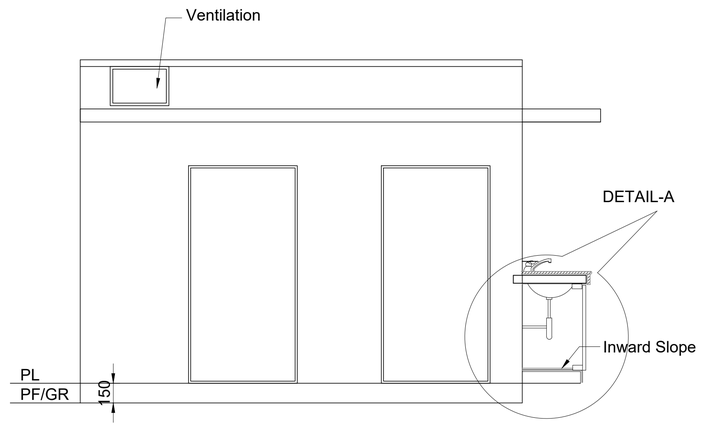
TITLE:- CONCEPTUAL PLAN
STATION NAME BOARD

DRG. NO. GC-HRIDC-SK-GEN-005_A1
SHEET NO.

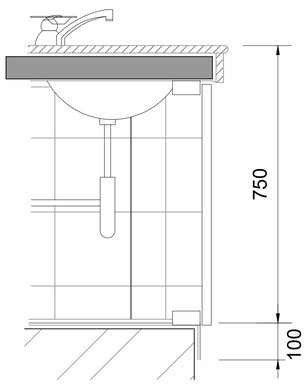
SCALE : AS SHOWN
ISSUE DATE 28.12.2022



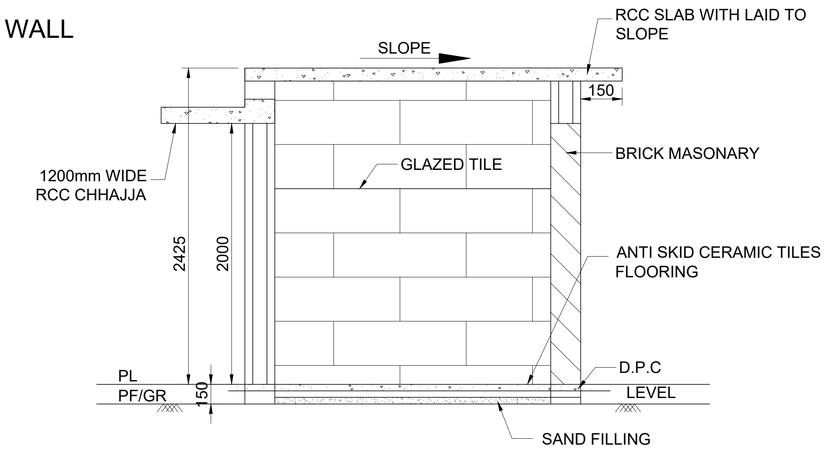
PLAN



FRONT ELEVATION



DETAIL 'A'



SECTION A-A

SCHEDULE OF JOINERY

REF.		SIZE
D	PVC DOOR	900x2000
J	RCC JALI (RAIN PROOF TYPE)	900x600
J1	RCC JALI (RAIN PROOF TYPE)	450x300

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. FLOORING WITH ANTISKID CERAMIC TILES TO BE PROVIDED.
3. INSIDE WALLS SHALL BE PROVIDED WITH GLAZED TILES OF APPROVED QUALITY UPTO CEILING.
4. WHITE GLAZED FLAT BACK LIPPED/ FRONT URINAL 430X260X350MM SIZE WITH PVC AUTOMATIC FLUSHING CISTERN.
5. VITREOUS CHINA SQUATTING TYPE URINAL OF SIZE 450X350X100MM TO CONFORM IS 771-1963 WITH AUTOMATIC FLUSHING CISTERN.
6. WASH BASIN OF SIZE 630MM X 450MM WITH CP BRASS PILLAR TAP OUTSIDE THE TOILET AND 550MM X 400MM WITH CP BRASS PILLAR TAP SHALL BE PROVIDED INSIDE THE TOILETS.
7. PLUMBING TO BE CONCEALED.
8. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY.
9. DRAINAGE IS TO BE CONNECTED TO SOAK PIT OF SUITABLE CAPACITY.
10. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

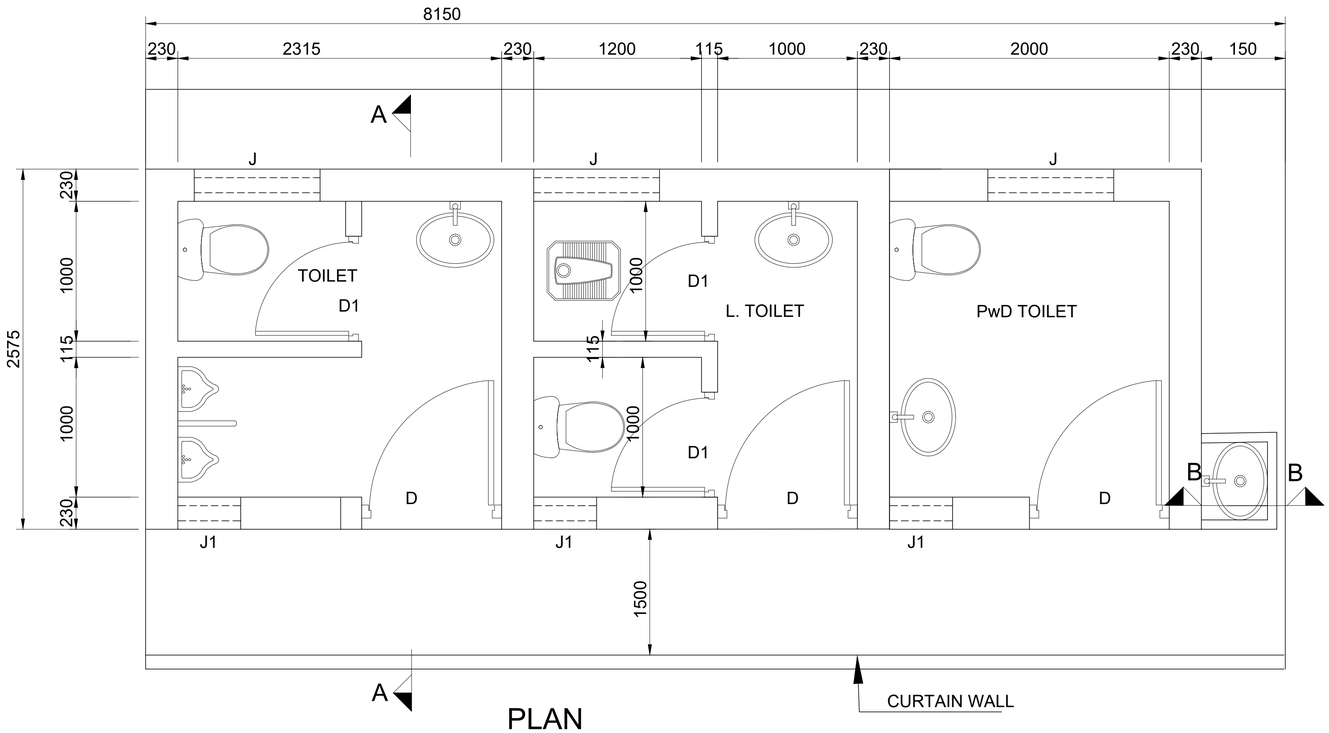
TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON ISLAND PLATFORMS

DRG. NO. GC-HRIDC-SK-GEN-006_A1

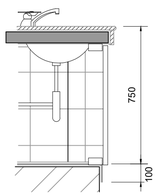
SHEET NO. 1 OF 1

SCALE : AS SHOWN

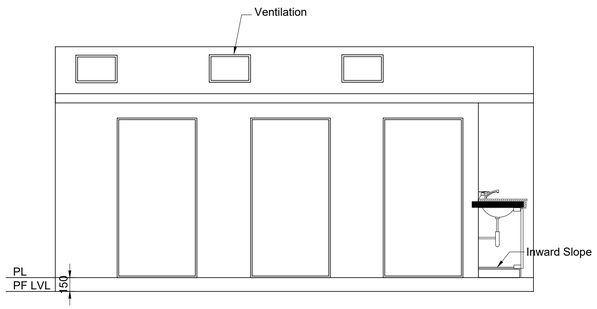
ISSUE DATE 28.12.2022



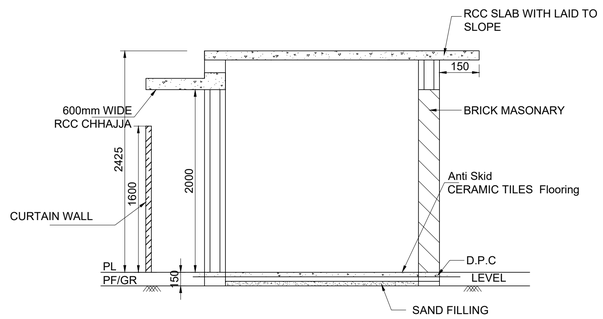
PLAN



SECTION B-B



FRONT ELEVATION



SECTION A-A

SCHEDULE OF JOINERY

REF.		SIZE
D	PVC DOOR	900x2000
J	RCC JALI (RAIN PROOF TYPE)	900x600
J1	RCC JALI (RAIN PROOF TYPE)	450x300

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. FLOORING WITH ANTISKID CERAMIC TILES TO BE PROVIDED.
3. INSIDE WALLS SHALL BE PROVIDED WITH GLAZED TILES OF APPROVED QUALITY UPTO CEILING.
4. WHITE GLAZED FLAT BACK LIPPED/ FRONT URINAL 430X260X350MM SIZE WITH PVC AUTOMATIC FLUSHING CISTERN.
5. VITREOUS CHINA SQUATTING TYPE URINAL OF SIZE 450X350X100MM TO CONFORM IS 771-1963 WITH AUTOMATIC FLUSHING CISTERN.
6. WASH BASIN OF SIZE 630MM X 450MM WITH CP BRASS PILLAR TAP OUTSIDE THE TOILET AND 550MM X 400MM WITH CP BRASS PILLAR TAP SHALL BE PROVIDED INSIDE THE TOILETS.
7. PLUMBING TO BE CONCEALED.
8. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY.
9. DRAINAGE IS TO BE CONNECTED TO SOAK PIT OF SUITABLE CAPACITY.
10. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

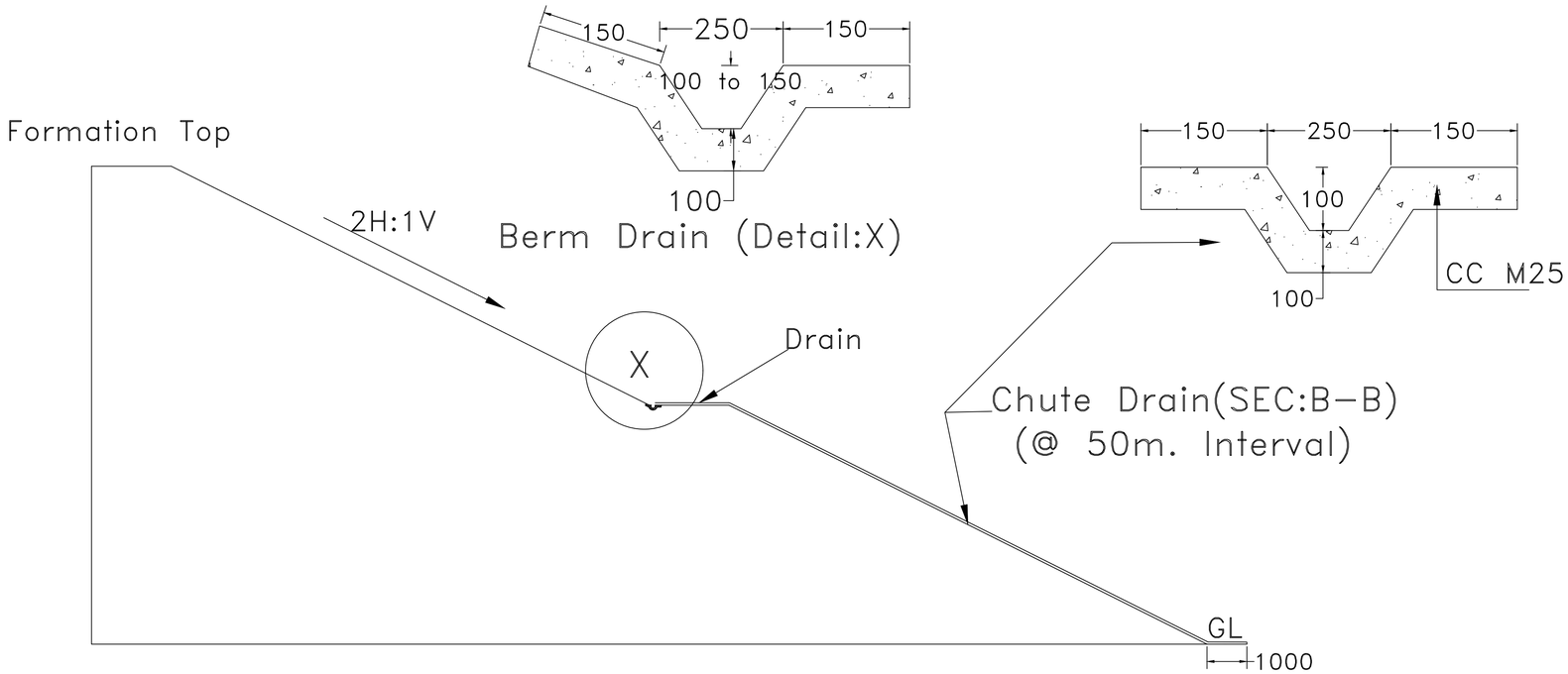
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

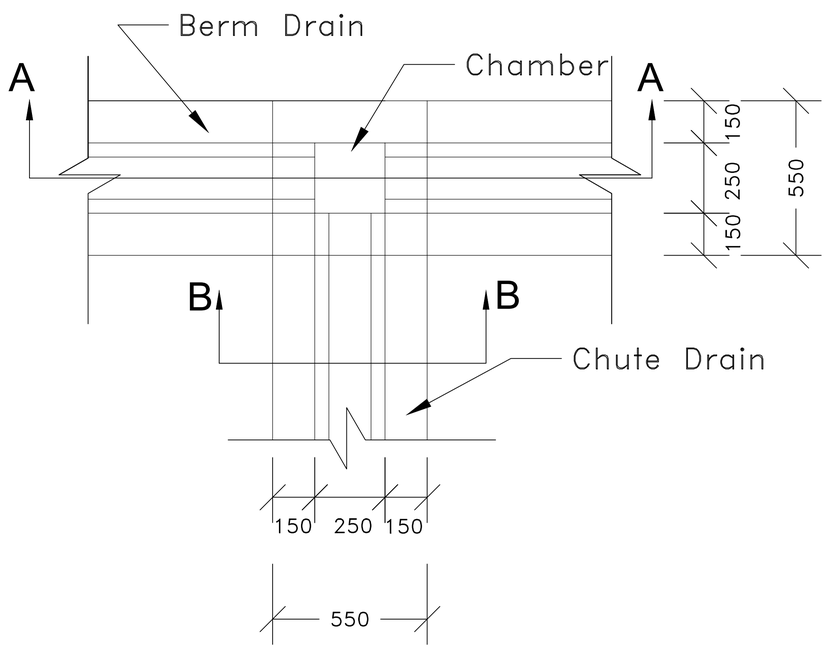
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

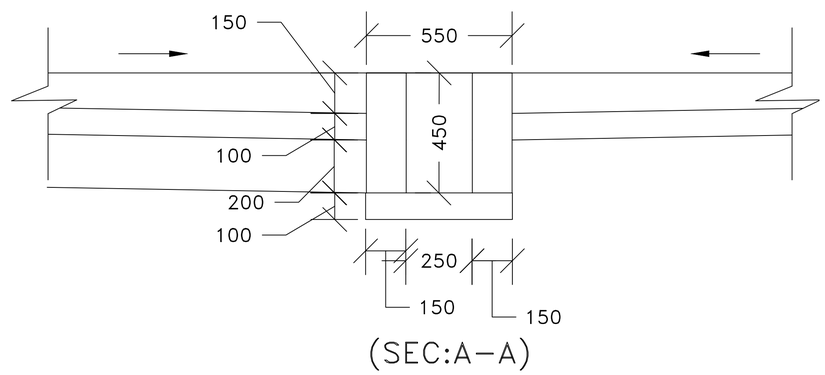
TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON END PLATFORMS

DRG. NO. GC-HRIDC-SK-GEN-007_A1 | SHEET NO. 1 OF1

SCALE : AS SHOWN | ISSUE DATE 28.12.2022







NOTES:-

1. ALL DIMESION ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

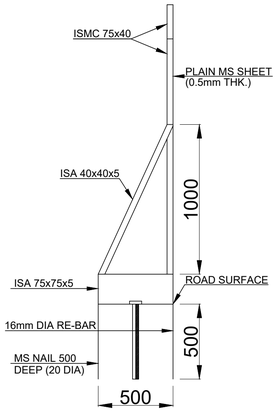
TITLE:- CONCEPTUAL PLAN
DRAINS FOR EMBANKMENT

DRG. NO. GC-HRIDC-SK-GEN-008_A1

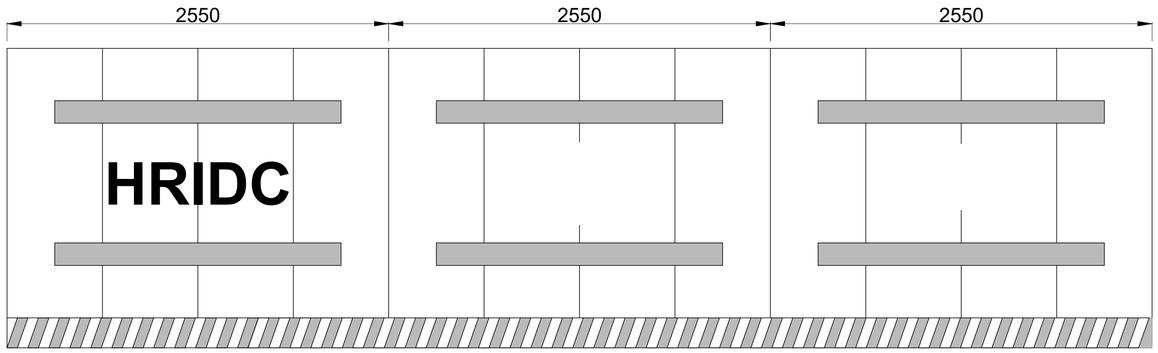
SHEET NO. 1 OF 1

SCALE : AS SHOWN

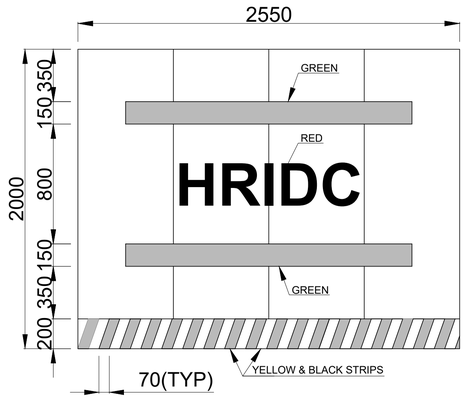
ISSUE DATE 28.12.2022



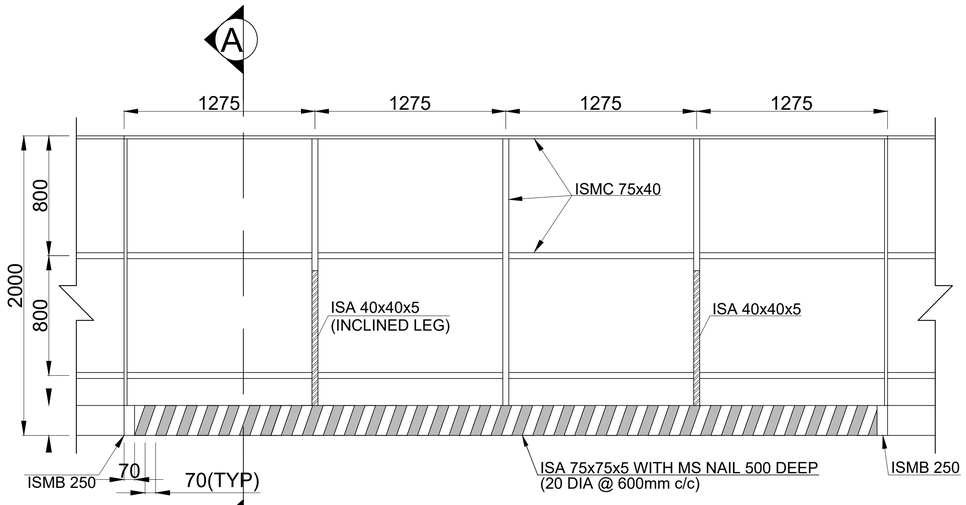
SECTION A-A



ELEVATION OF ONE UNIT OF TEMPORARY BARRICADING



ELEVATION OF ONE SET OF TEMPORARY BARRICADING



DETAIL OF TEMPORARY BARRICADING

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. THIS BARRICADING SHALL BE USED AT LOCATION OF ROAD AND PEDESTRIAN TRAFFIC.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

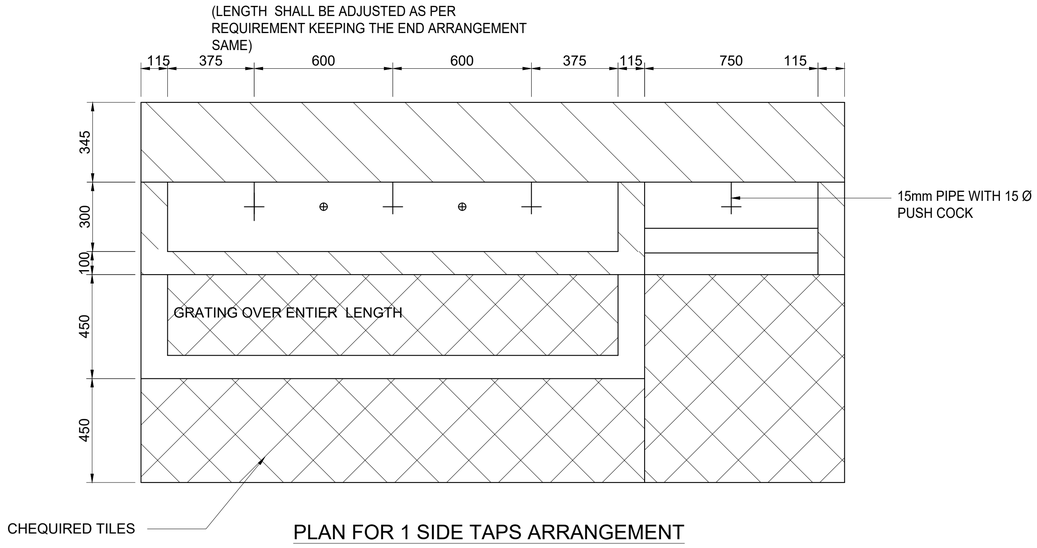
TITLE:- CONCEPTUAL PLAN
STEEL BARRICADE

DRG. NO. GC-HRIDC-SK-GEN-009

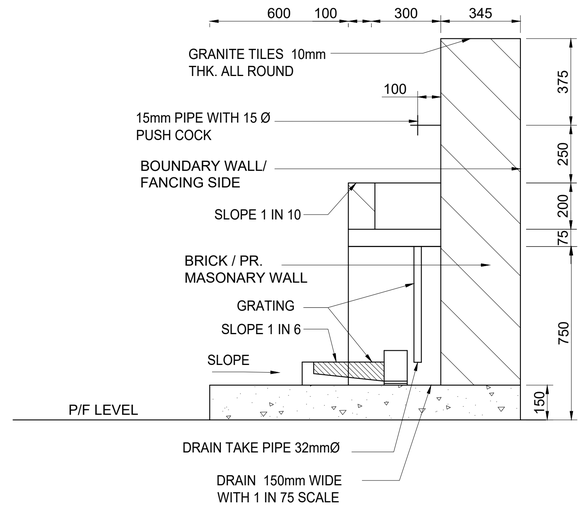
SHEET NO.

SCALE : AS SHOWN

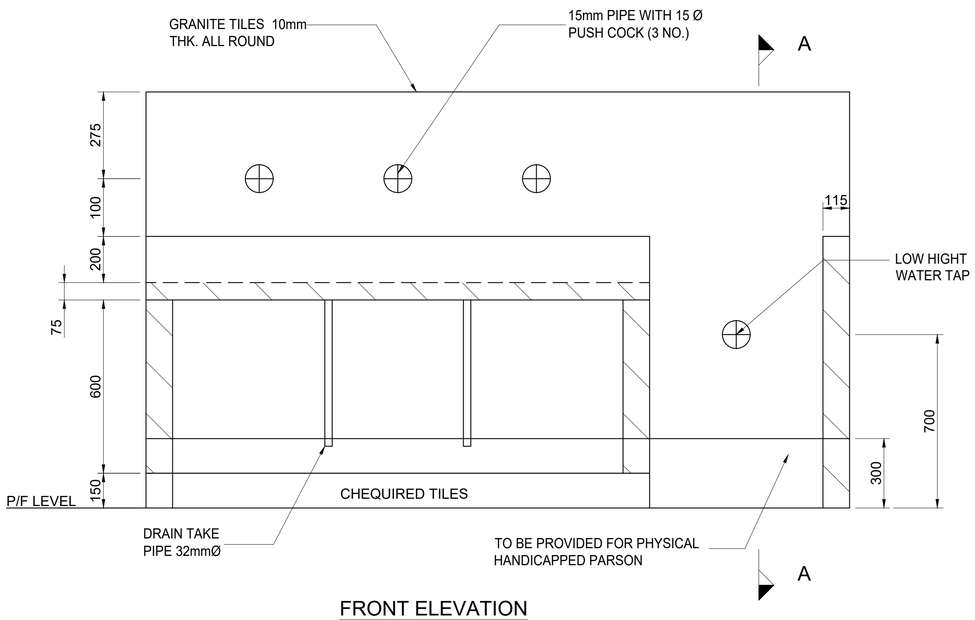
ISSUE DATE 28.12.2022



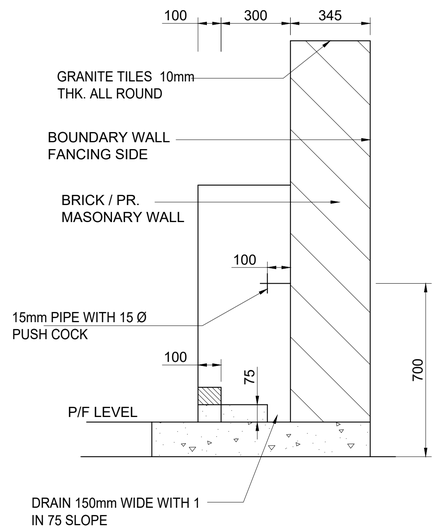
PLAN FOR 1 SIDE TAPS ARRANGEMENT



SECTION FOR ONE SIDE TAPS



FRONT ELEVATION



SECTION AT A-A

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETER
2. LENGTH SHALL BE ADJUSTED AS PER REQUIREMENT KEEPING THE END ARRANGEMENT SAME.
3. ALL EXPOSED SURFACES SHALL BE PROVIDE WITH GRANITE CLADDING.
4. CP BRASS TAPS WITH ANTI-SABOTAGE FITTINGS.
5. LOW HEIGHT WATER TAP TO BE PROVIDED FOR PHYSICALLY HANDICAPPED PERSONS.
6. ALL DIMENSIONS ARE TENTATIVE AND MAY VARY AS PER THE REQUIREMENT.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

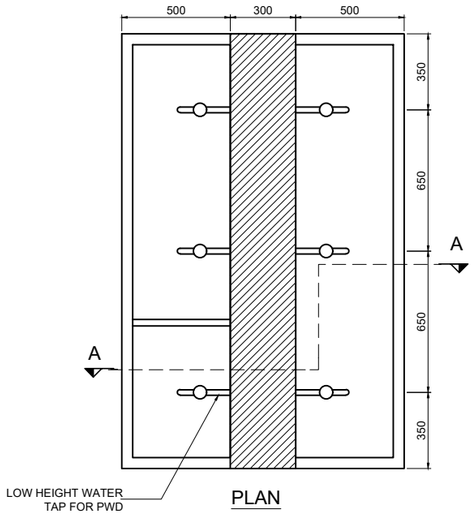
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

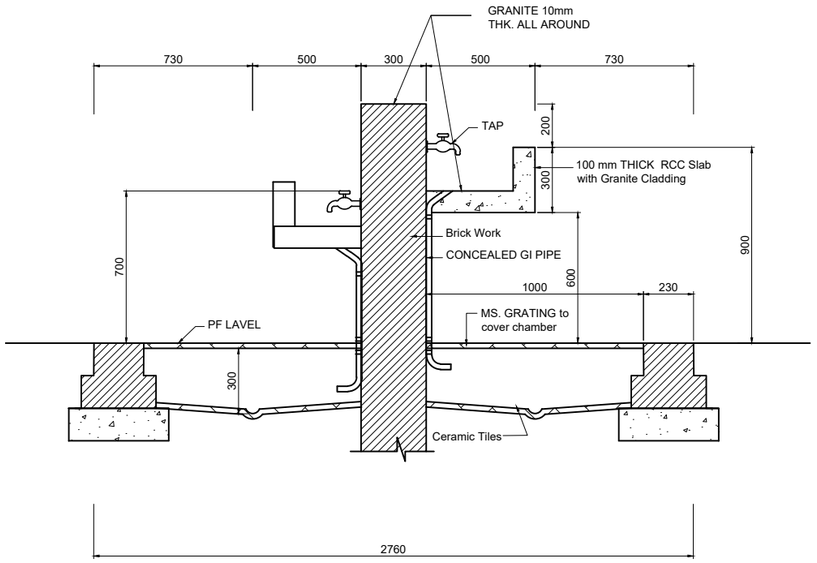
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH ONE SIDE TAPS ARRANGEMENT (END PLATFORM)

DRG. NO. GC-HRIDC-SK-GEN-010_A1
SHEET NO. 1 OF 1

SCALE : AS SHOWN
ISSUE DATE 28.12.2022



PLAN



SECTION A-A

NOTES :

1. ALL DIMENSIONS ARE IN MM .
2. ALL EXPOSED SURFACE SHALL BE OF GRANITE CLADDING
3. CP BRASS TAPS WITH ANTY SABOTAGE FITTINGS.
4. SEPARATE DRAINAGE PLAN SHALL BE REFERRED FOR EFFLUENT DISCHARGE etc.
5. ALL DIMENSIONS ARE TENTATIVE AND MAY VARY AS PER THE REQUIREMENT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

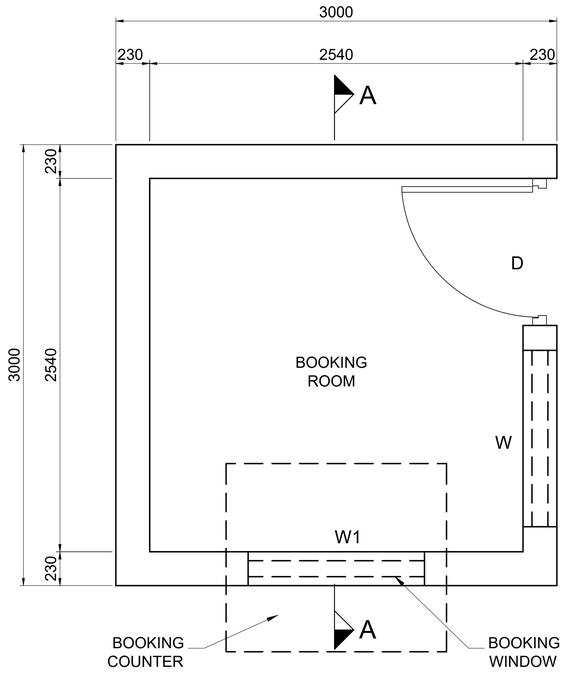
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

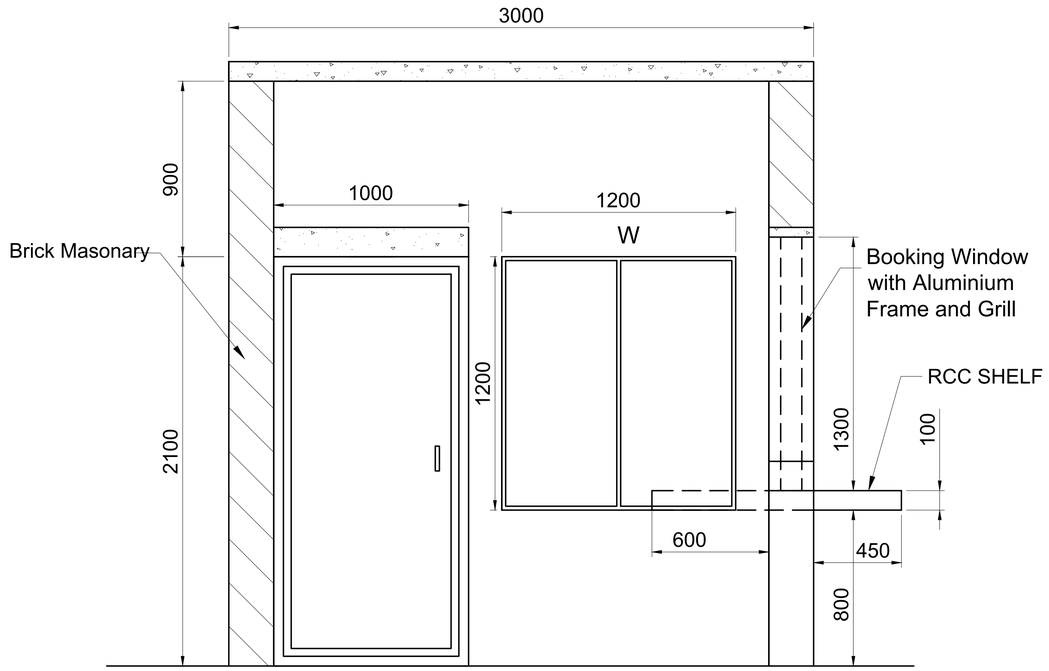
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH BOTH SIDE TAPS ARRANGEMENT (ISLAND PLATFORM)

DRG. NO. GC-HRIDC-SK-GEN-011_A1
SHEET NO.

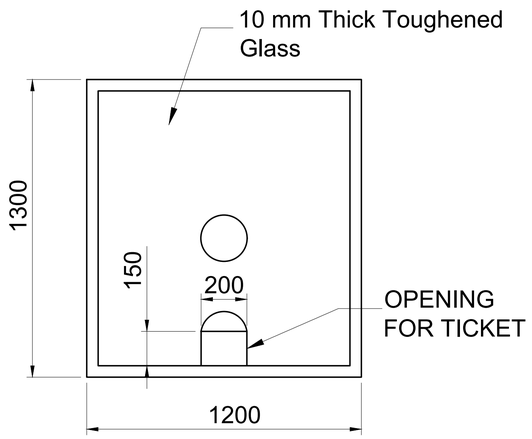
SCALE : AS SHOWN
ISSUE DATE 28.12.2022



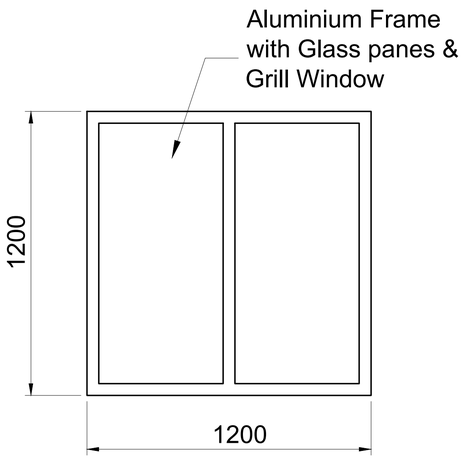
PLAN
(SCALE 1:50)



SECTION A-A
(SCALE 1:50)



DETAIL OF WINDOW (W1)
(SCALE 1:50)



DETAIL OF WINDOW (W)
(SCALE 1:50)

NOTES :

1. ALL DIMENSIONS ARE IN MILIMETERS.
2. DEEPTH OF FOUNDATION TO BE DECIDED AS PER SITE CONDITION.
3. RCC SHELF WITH GRANITE TOP TO BE PROVIDED FOR BOOKING COUNTER.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

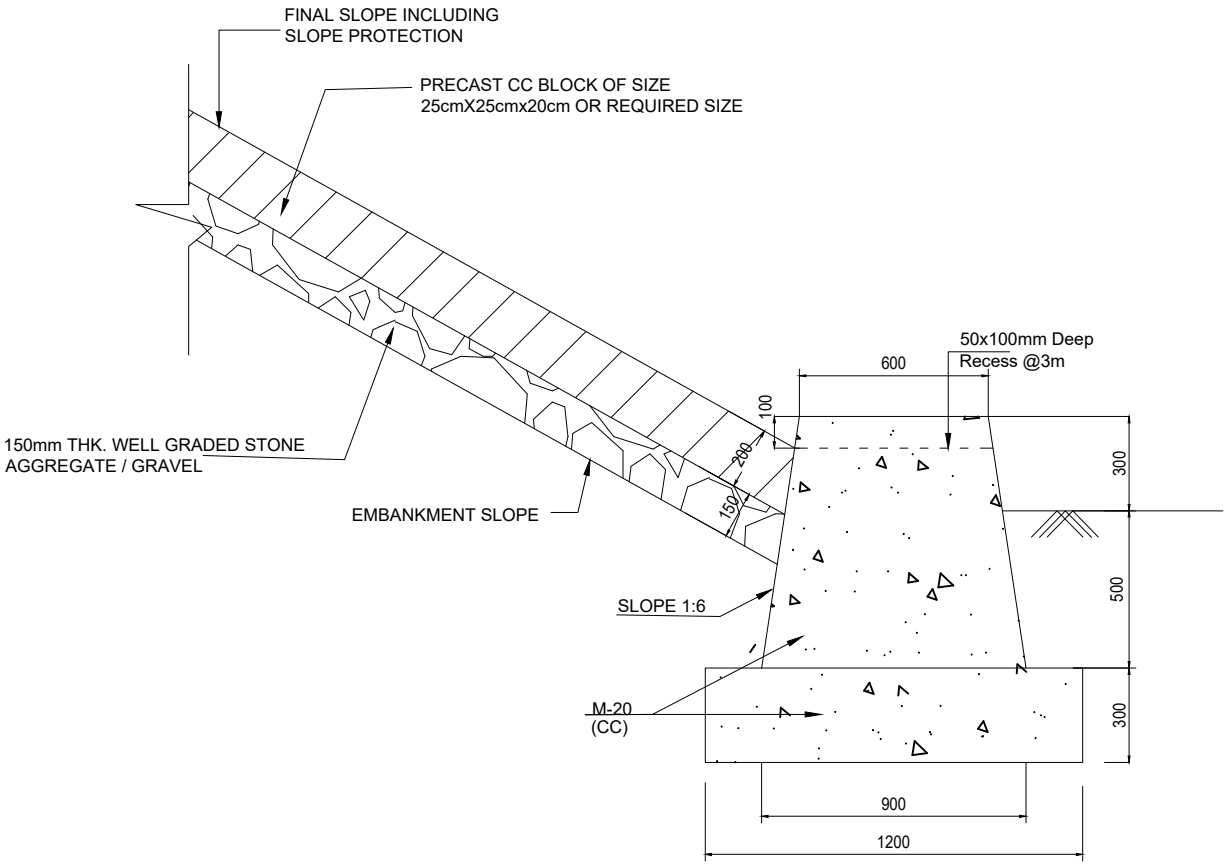
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
TICKET COUNTER FOR
NEW PATLI STATION

DRG. NO. GC-HRIDC-SK-GEN-013
SHEET NO.

SCALE : AS SHOWN
ISSUE DATE 28.12.2022



TOE WALL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS OTHERWISE MENTIONED.
2. M-20 GRADE CONCRETE SHALL BE USED FOR TOE WALL.
3. 25MM EXPANSION GAP SHALL BE PROVIDED AT 30m (MAX.) OF LENGTH OF WALL.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Sarbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

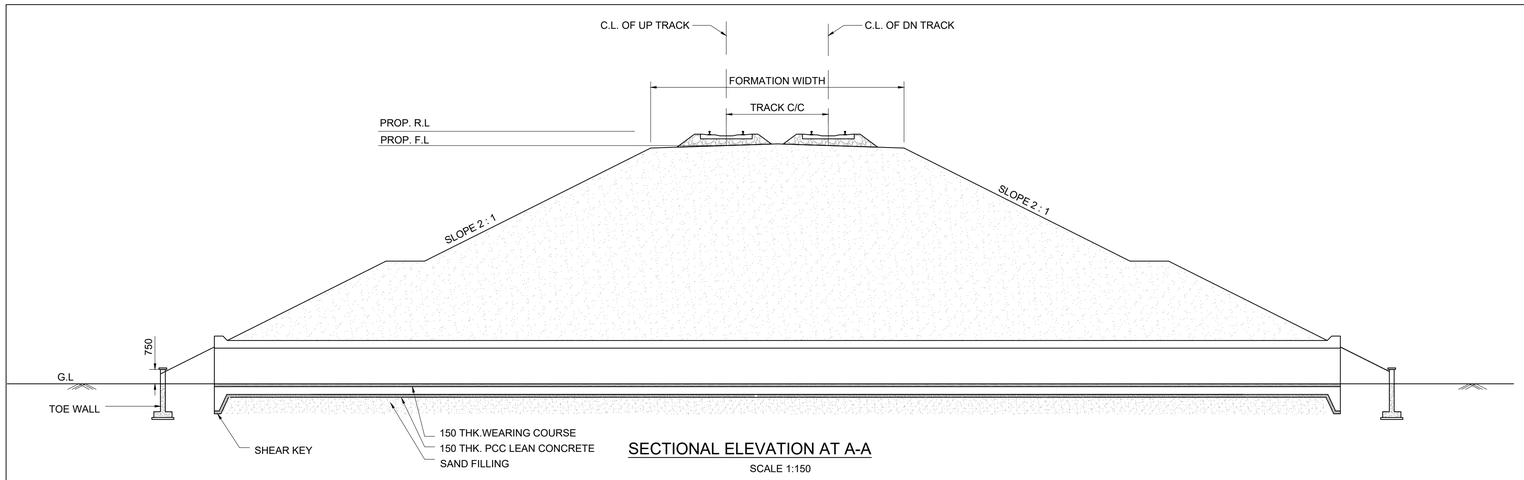
TITLE:- CONCEPTUAL PLAN
CC TOE WALL

DRG. NO. GC-HRIDC-SK-GEN-014_A1

SHEET NO. 1 OF 1

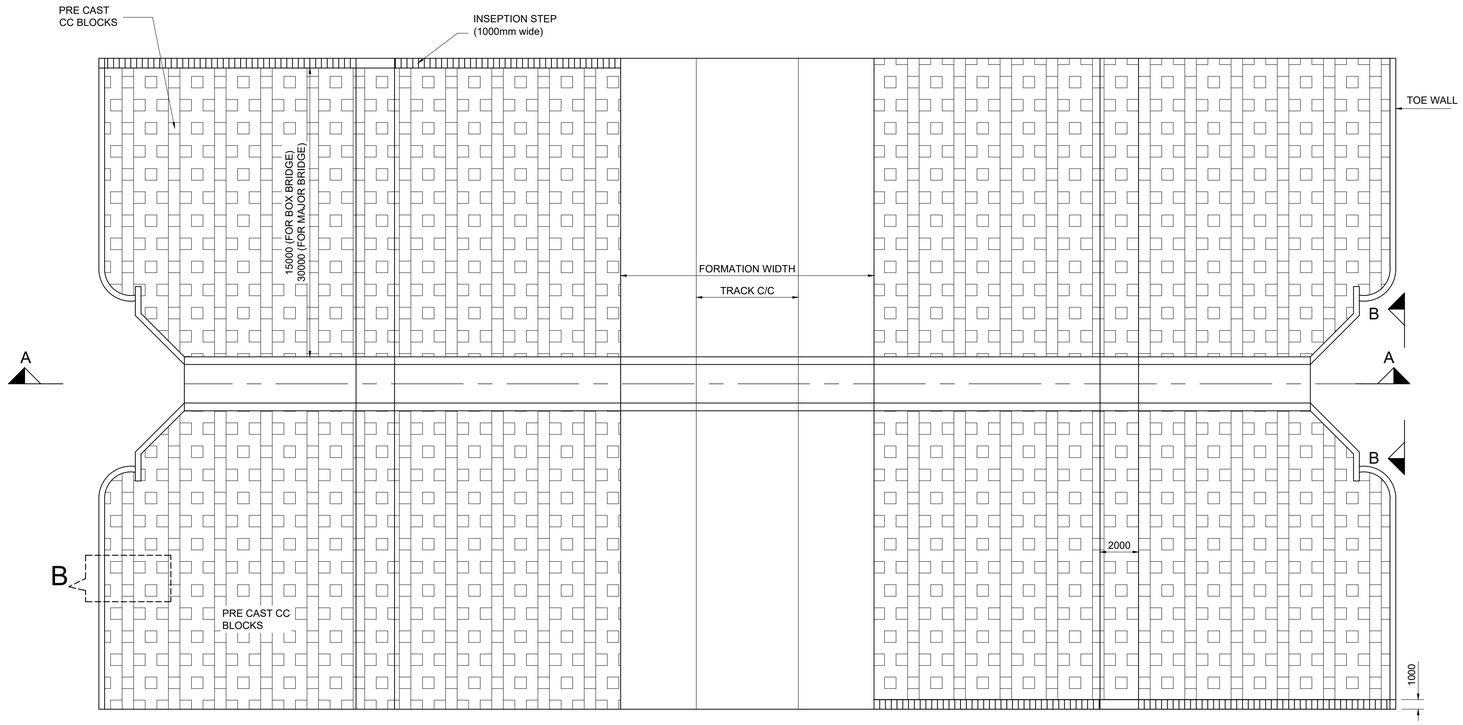
SCALE : AS SHOWN

ISSUE DATE 28.12.2022



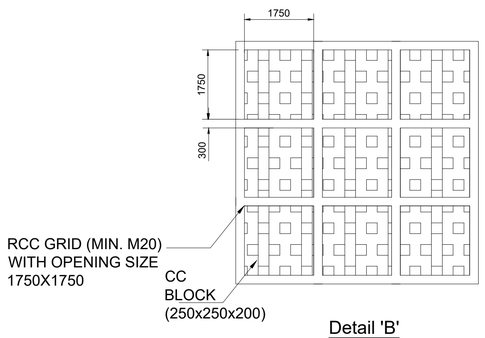
SECTIONAL ELEVATION AT A-A

SCALE 1:150



PLAN AT TOP

SCALE 1:150



Detail 'B'

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. PROTECTION WORK WITH PRECAST CC BLOCK ON BOTH SIDES OF BRIDGES SHALL BE DONE FOR 15m LENGTH AND 30m LENGTH FOR MINOR BRIDGES & MAJOR BRIDGES RESPECTIVELY.
3. THIS DRAWING IS VALID FOR SINGLE/MULTIPLE NO. OF TRACKS. TRACKS SHOWN IN DRAWING ARE SYMBOLIC PRESENTATION ONLY.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

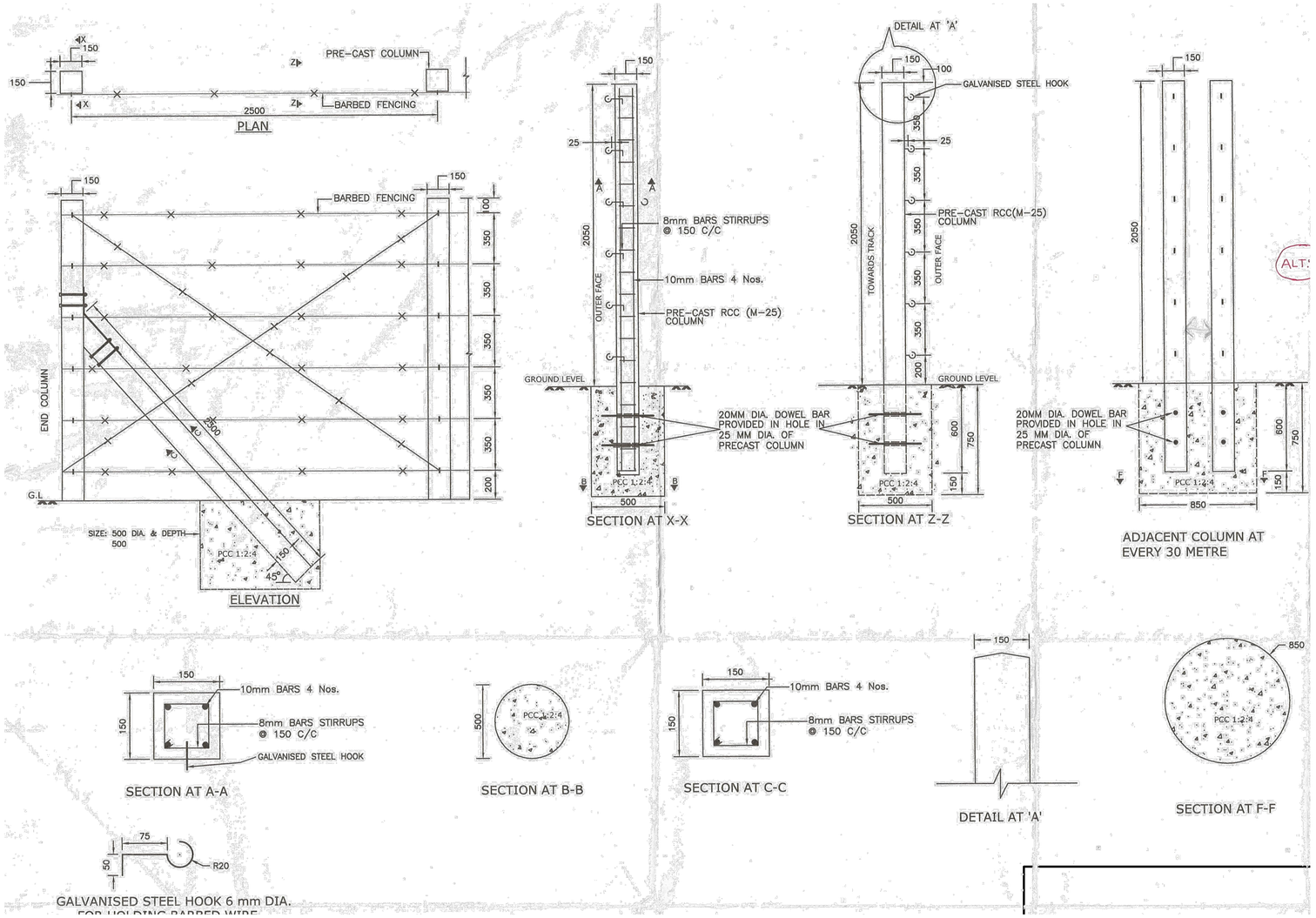
TITLE:- CONCEPTUAL PLAN
TYPICAL DETAILS OF PROTECTION WORK

DRG. NO. GC-HRIDC-SK-GEN-015_A1

SHEET NO.

SCALE : AS SHOWN

ISSUE DATE 28.12.2022

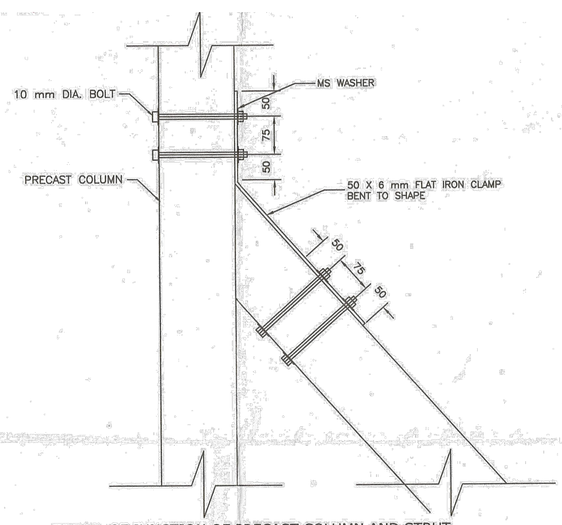


Notes:

1. THIS DRAWING IS BASED ON RDSO DRAWING NO. RDSO/WKS/2019/2.
2. GRADE OF CONCRETE M25.

NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
2. BARBED FENCING SHALL BE MADE OF G.I. BARBED WIRES CONFIRMING TO IS: 278. THE WEIGHT OF G.I. BARBED WIRE SHALL BE AS PER SOR.
3. THE G.I BARBED WIRES SHALL BE FIXED TO THE COLUMNS WITH HOOKS MADE OF 6 mm DIA. GALVANIZED STEEL. ANOTHER END OF GALVANIZED STEEL HOOK SHALL BE PLACED BEHIND STIRRUPS AND TIED WITH STIRRUPS AS PER DRAWING TO PROVIDE STRENGTH.
4. FOR ERECTION OF WIRE FENCING, RECOMMENDATIONS GIVEN IN IS:4996-1984 SHALL BE FOLLOWED. FENCING WIRE SHALL BE TIED TO GALVANISED STEEL HOOKS WITH SHORT PIECE OF LIGHT WIRE.
5. M-25 GRADE CONCRETE SHALL BE USED IN PRECAST COLUMN/ STRUT. COLUMN/ STRUT SHALL BE CAST AT CENTRALIZED DEPOT UNDER CONTROLLED CONDITION AS PER IS :456-2000.
6. TMT BARS OF GRADE FE 415/ 500 OF SPECIFIED DIA. SHALL BE USED. TMT BAR SHALL BE CONFIRMING TO IS:1786 (LATEST).
7. ZONAL RAILWAY MAY PAINT THEIR INITIALS (SUCH AS NR, SER etc.) ON COLUMN AND STRUT.
8. STRUT OR BRACE SHALL BE FIXED WITH END RCC COLUMN BY SUITABLE ARRANGEMENT AS DETAILED IN DRAWING. 50 X 6 mm MS FLAT SHALL BE USED TO CONNECT STRUT/BRACE TO RCC COLUMN. 10 mm DIA. MS BOLT BLACK HEXAGONAL HEAD ROUND NECK WITH HEXAGONAL NUTS AND TWO WASHER SHALL BE USED. AFTER TIGHTING NUT, END OF BOLT SHALL BE HAMMERED TO MAKE ANTITHEFT.
9. SUPPORTING STRUT SHALL BE PROVIDED AT FIRST / END COLUMN OR CHANGE OF DIRECTION.
10. 1:20 SLOPE SHALL BE PROVIDED ON TOP OF COLUMN AT THE TIME OF CASTING.
11. AT EVERY 30 METRE TWO COLUMN SHALL BE GROUTED SIDE BY SIDE.
12. IN UNDULATING AREA, COLUMN SHALL BE PLACED ACCORDINGLY SO THAT BARBED WIRE ARE ALIGNED HORIZONTAL. VERTICALITY OF COLUMN SHALL BE CHECKED DURING ERECTION.
13. FOUNDATION SHALL BE DUG USING AUGAR/ MECHANICAL BORING EARTH SHALL BE RAMMED PROPERLY AND 50 MM SAND SHALL BE PLACED BEFORE FOUNDATION CASTING. FOUNDATION SHALL BE CURED PROPERLY.
14. THIS CATLE FENCE SHALL BE PROVIDED AT RAILWAY BOUNDARY.
15. IS:456(LATEST) SHALL BE FOLLOWED IN ALL R.C.C & P.C.C. WORKS.



DETAIL OF JUNCTION OF PRECAST COLUMN AND STRUT

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

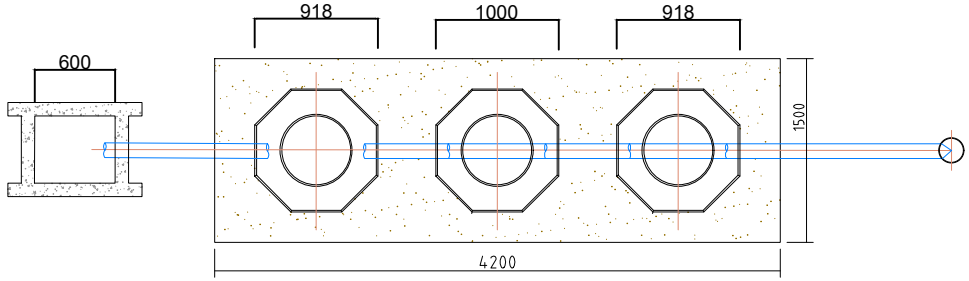
TITLE:- CONCEPTUAL PLAN BARBED WIRE FENCING

DRG. NO. GC-HRIDC-SK-GEN-016_A1

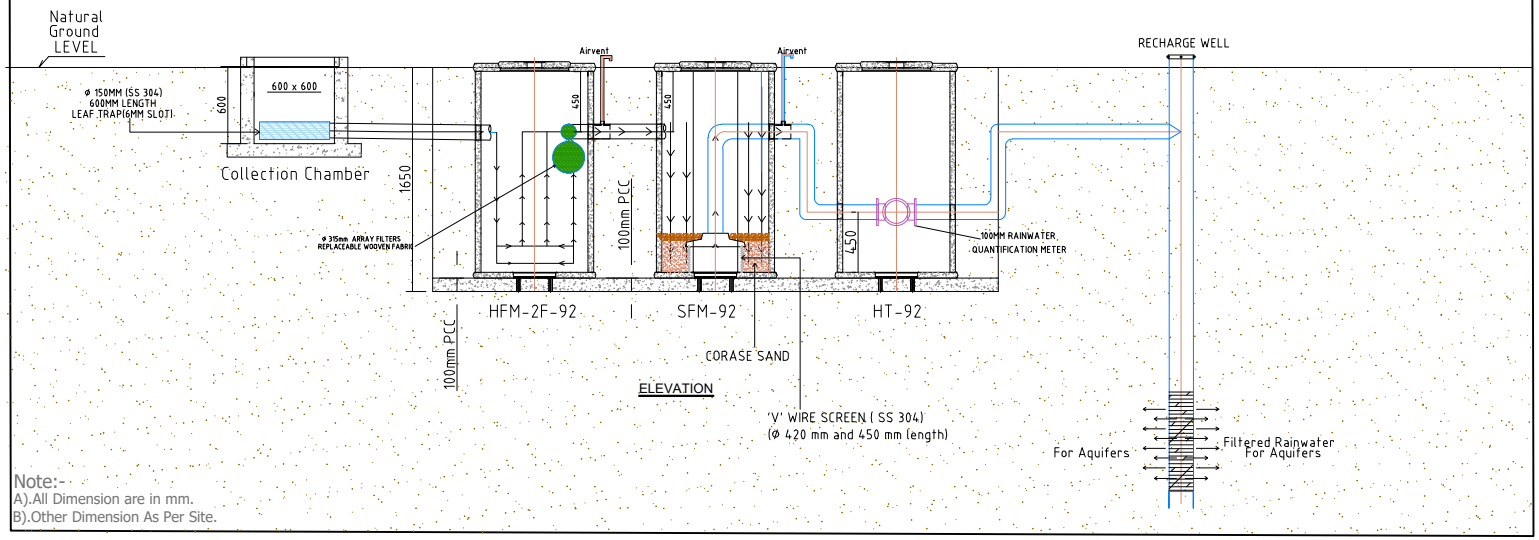
SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



PLAN



ELEVATION

Note:-
A).All Dimension are in mm.
B).Other Dimension As Per Site.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.

2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Sarbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

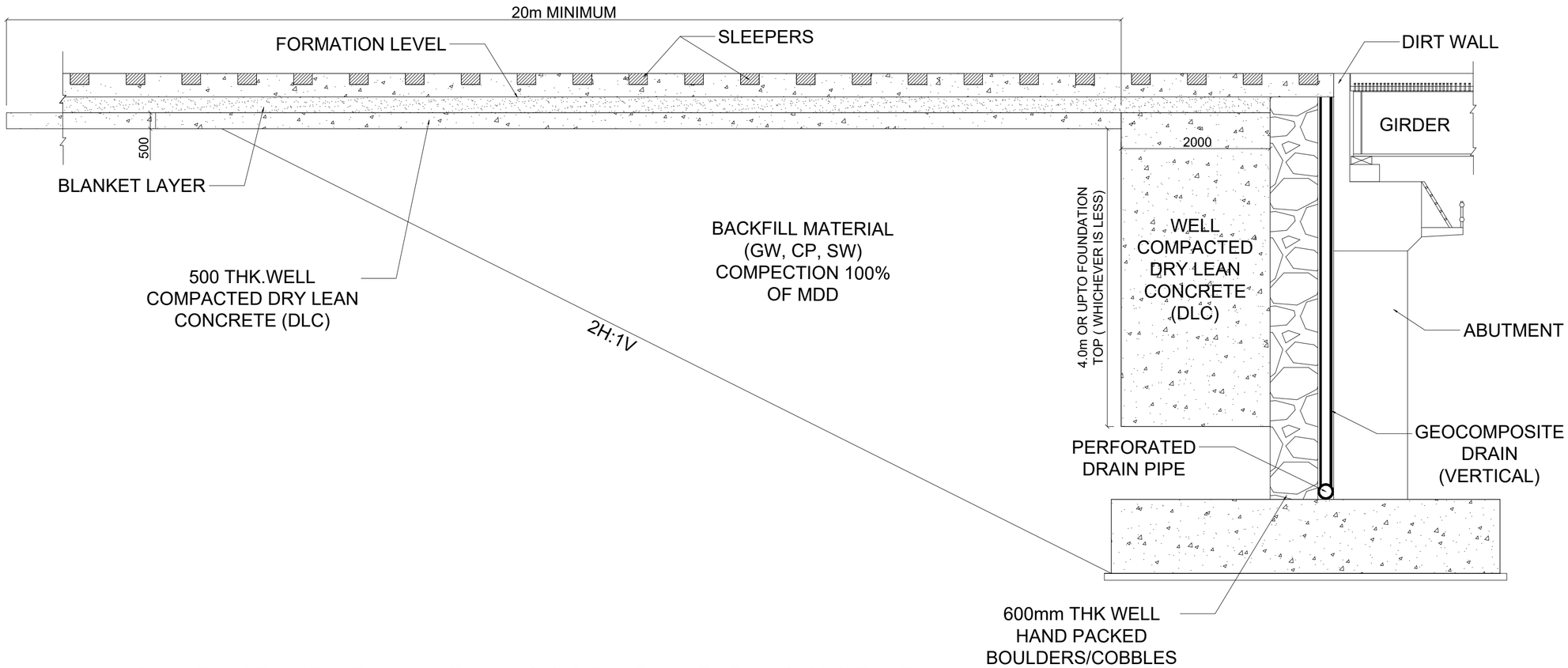
TITLE:- CONCEPTUAL PLAN
RAIN-WATER HARVESTING

DRG. NO. GC-HRIDC-SK-GEN-018

SHEET NO.

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



TRANSITION SYSTEM ON APPROACHES OF BRIDGES

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN.
3. THIS DRAWING IS PREPARED BASED UPON REFER RDSO REPORT NO. GE:R-50 DATED JULY-2021 FOR DETAILS THIS REPORT SHALL BE FOLLOWED.
4. GEOCOMPOSITE DRAINS TO BE USED BEHIND BRIDGE ABUTMENT SHALL BE AS PER RDSO/2018/GE:IRS-006, MARCH-2019 AND COMPREHENSIVE GUIDELINE AND SPECIFICATIONS FOR RAILWAY FORMATION.
5. PROVISION IN RETURN WALL SHALL BE KEPT TO TAKE OUT THE DISCHARGE FROM PERFORATED DRAIN PIPE.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE:-

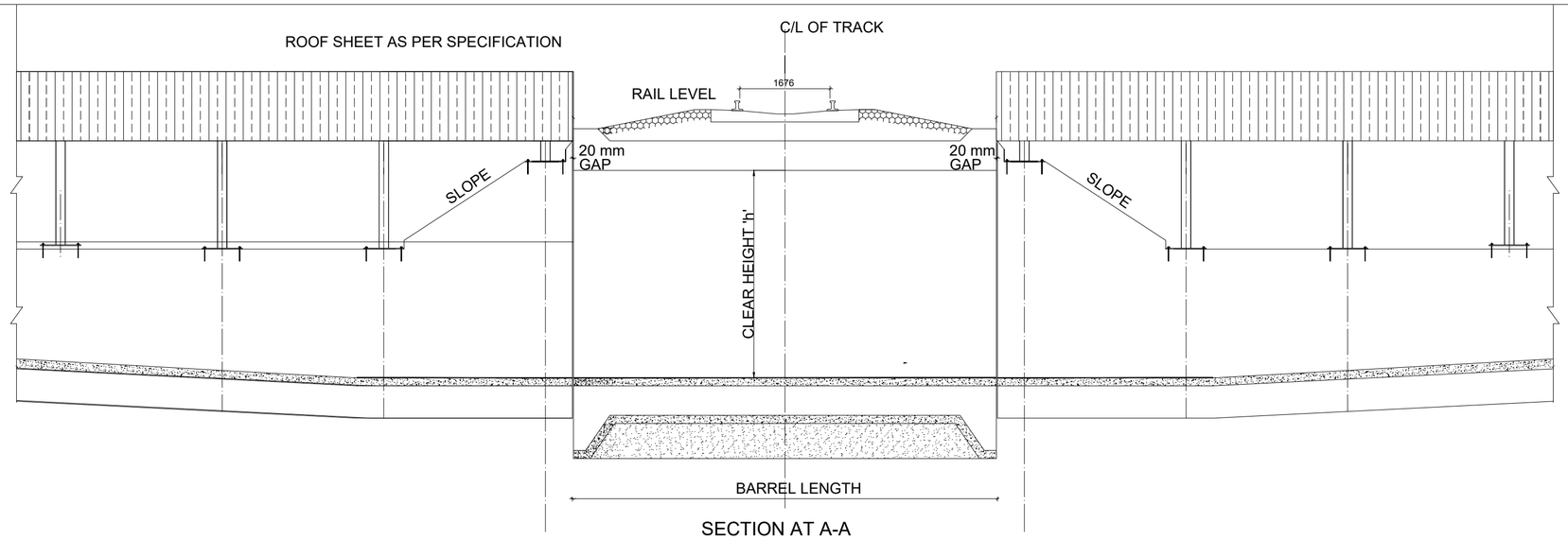
CONCEPTUAL PLAN FOR
TRANSITION SYSTEM OF BRIDGE APPROACHES

DRG. NO. GC-HRIDC-SK-GEN-019

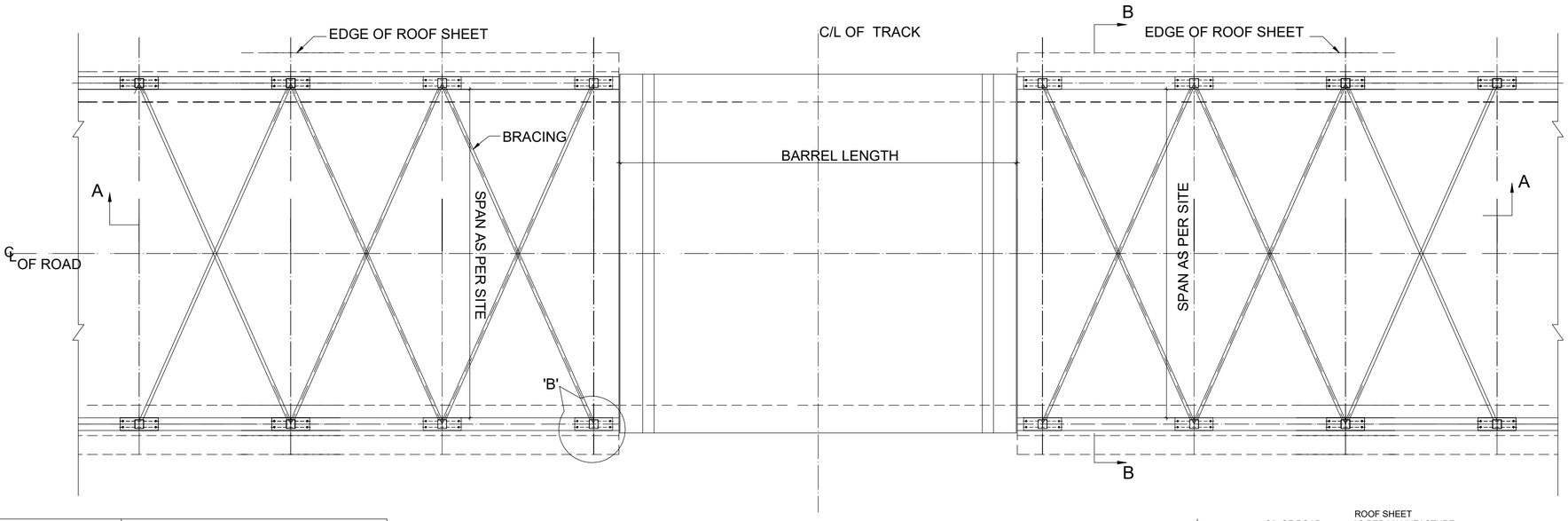
SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



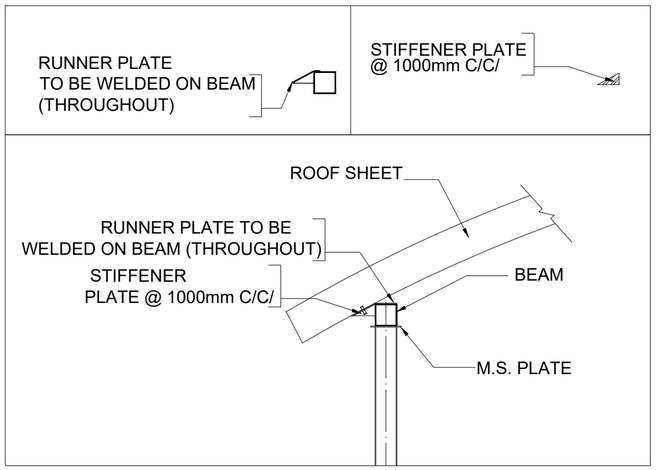
SECTION AT A-A



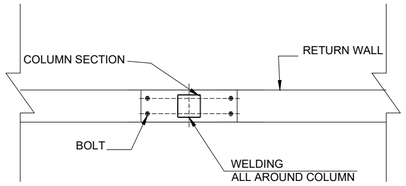
PLAN

NOTES :

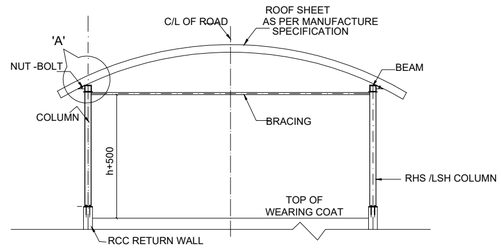
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED OTHERWISE.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. VERIFY ALL SCHEDULE OF DIMENSION BEFORE EXECUTION OF WORK AT SITE. ENGINEER IN CHARGE SHOULD ENSURE THE SAFETY OF TRACK/EXISTING STRUCTURES BEFORE EXECUTION OF WORK.
4. STRUCTURAL STEEL SHALL CONFORM TO IS : 2062.
5. ALL WELD SHALL BE ALL AROUND CONTINUOUS UNLESS OTHERWISE MENTIONED.
6. SIZE AND SPACING OF STRUCTURAL MEMBERS SHALL BE FINALIZED AFTER DETAILED DESIGN.
7. RDSO REPORT NO. RDSO/WKS/2015/3 SHALL BE FOLLOWED FOR SELF-SUPPORTING ROOFING SYSTEM DETAILS, ITS INSTALLATION AND MATERIAL SPECIFICATION.
8. ROOF COVERING SHALL BE OF HIGH QUALITY, HIGH GRADE, PRE COATED GALVALUME SHEET OF MINIMUM THICKNESS 0.9mm.
9. PROFLEX ROOFING SYSTEM SHALL BE ADOPTED FOR SELF-SUPPORTING ROOFING.
10. ROOFING PANELS SHALL BE MECHANICALLY SEAMED (INTERLOCK) AND FREE FROM NOTES, NUT, BOLTS OVERLAPS AND SEALANTS.
13. AFTER ERECTION OF ROOFING, IT SHALL BE BOLTED WITH THE SUPPORTING STRUCTURE BY SELF-SPLITTING SCREWS.



DETAIL AT 'A'
NOT TO SCALE



DETAIL AT 'B'
NOT TO SCALE



SECTION AT B-B
DETAILS OF COVER SHED (COVER ON APPROACH ROAD)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

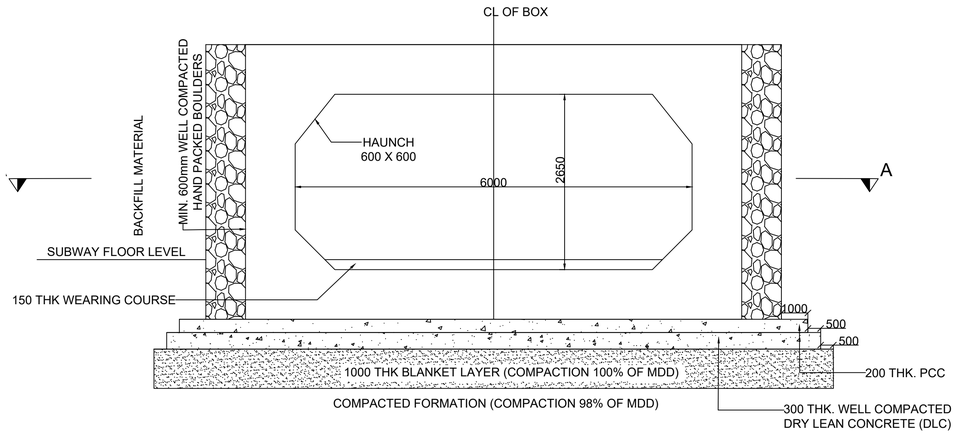
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

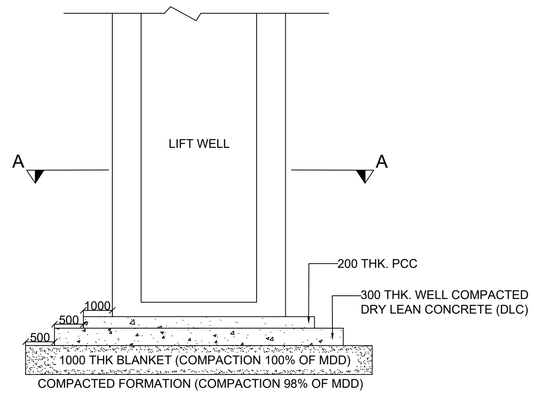
TITLE:- CONCEPTUAL PLAN FOR SELF SUPPORTING ROOF COVERING SHED

DRG. NO. GC-HRIDC-SK-GEN-020
SHEET NO. 1 OF 1

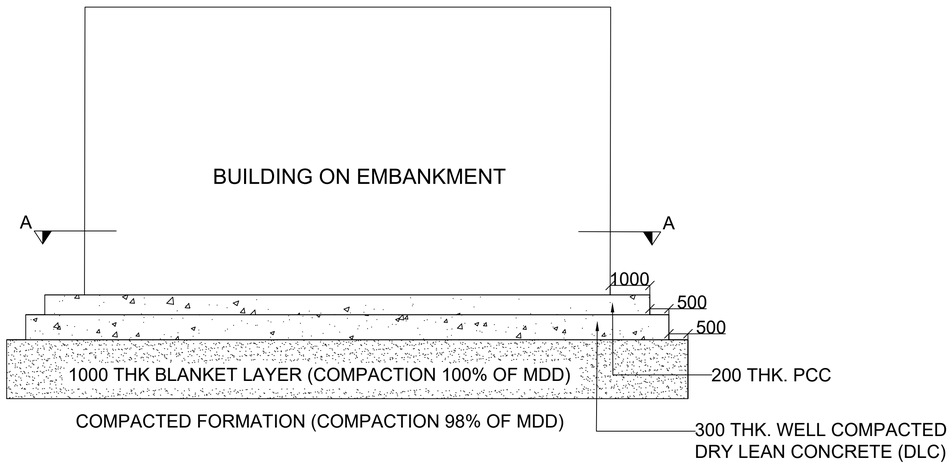
SCALE : AS SHOWN
ISSUE DATE 28.12.2022



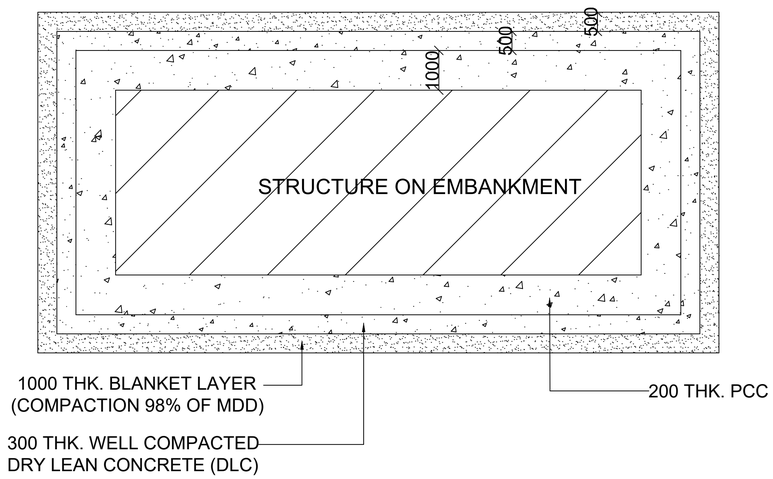
FORMATION DETAIL BELOW SUBWAY BOX



FORMATION DETAIL BELOW LIFT WELL



FORMATION DETAIL BUILDING



SECTION A-A
SCALE : NOT SCALE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. FOR BLANKET LAYER DETAILS FOLLOW RDSO SPECIFICATION NO.: RDSO82020/GR:IRS-004 (COMPREHENSIVE GUIDELINE AND SPECIFICATION FOR RAILWAY FORMATION).

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

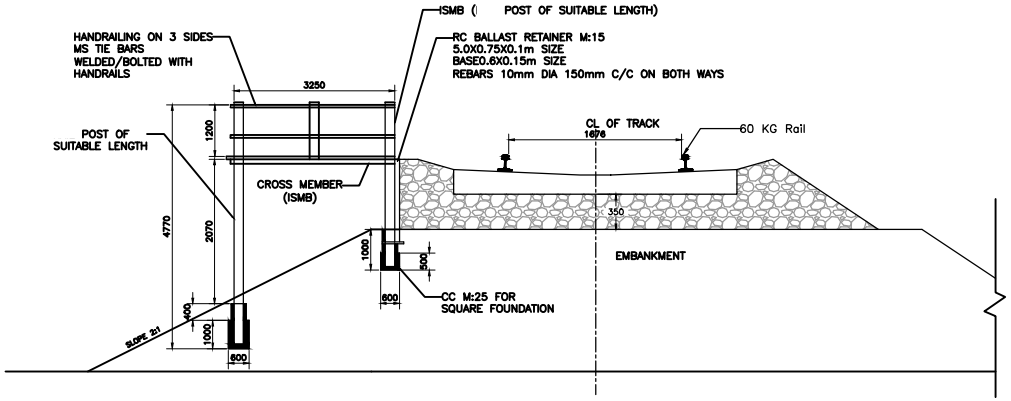
TITLE:- CONCEPTUAL PLAN FOR FORMATION DETAIL BELOW OF SUBWAY,LIFT WELL AND BUILDING

DRG. NO. GC-HRIDC-SK-GEN-021

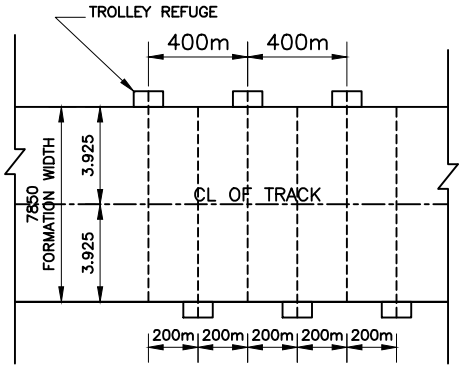
SHEET NO. 1 OF 1

SCALE : AS SHOWN

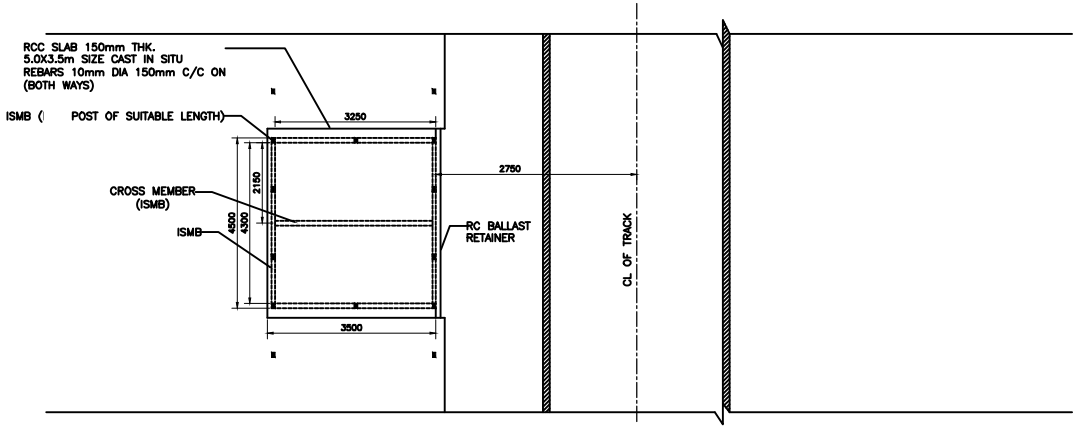
ISSUE DATE 28.12.2022



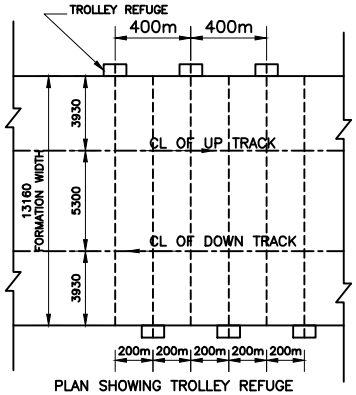
SECTIONAL ELEVATION



PLAN SHOWING TROLLEY REFUGE
SPACING FOR SINGLE TRACK



PLAN



PLAN SHOWING TROLLEY REFUGE
SPACING FOR DOUBLE TRACK

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.

2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

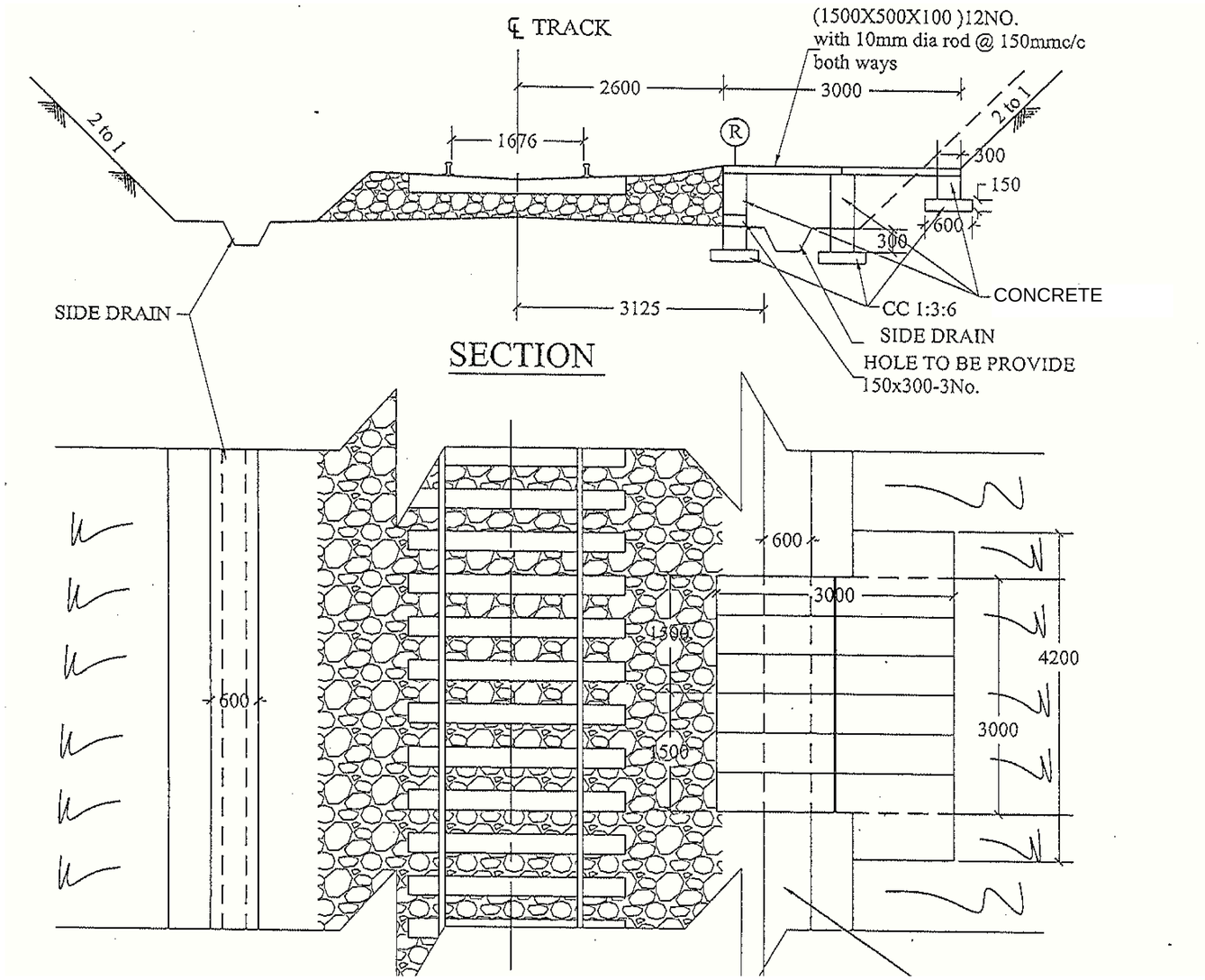
TITLE:- CONCEPTUAL PLAN FOR TROLLEY REFUGE IN EMBANKMENT

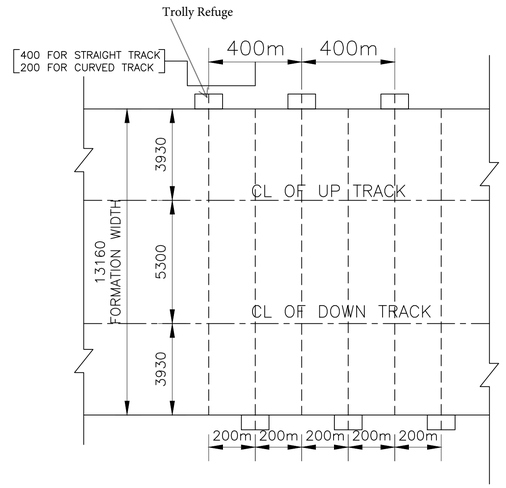
DRG. NO. GC-HRIDC-SK-GEN-022

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022





PLAN SHOWING TROLLEY REFUGE
SPACING FOR DOUBLE TRACK

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. RCC PRECAST SLAB M35 (1500X500X100)

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE:-

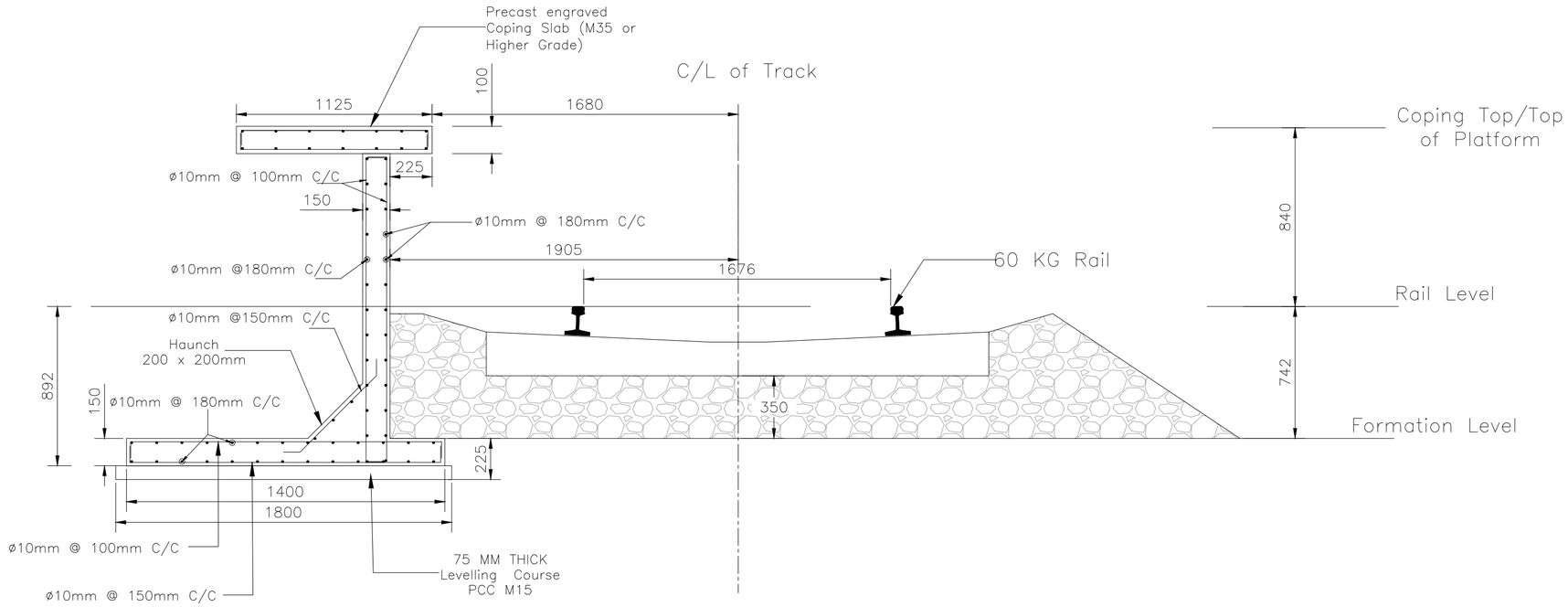
CONCEPTUAL PLAN FOR
TROLLEY REFUGE IN CUTTING

DRG. NO. GC-HRIDC-SK-GEN-023

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



SECTION FOR PLATFORM WALL

NOTES:

1. ALL DIMENSION ARE IN MILLIMETERS EXPECT LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. 25MM CLEAR COVER SHALL BE PROVIDED TO ALL TYPES OF OUTERMOST REINFORCEMENT.
3. #INDICATES HIGH YIELD STRENGTH STEEL Fe-500 D(TMT) CONFORMING TO I.S. 2008.
4. ANCHORAGE SHALL BE 50 X DIA OF BARS & NOT MORE THAN 50% BARS SHALL BE LAPPED AT ONE SECTION. THE DISTANCE BETWEEN TWO LAPS SHALL BE MORE THAN 1.5 TIMES THE LAP LENGTH.
5. 50mm DIA. PVC PIPE AS WEEP HOLES ARE TO BE PROVIDED IN PLATFORM/TOE WALL @1000mm C/C HORIZONTALLY AND VERTICALLY STAGGERED. MINIMUM 50mm DISTANCE BETWEEN PIPE FACE & ALL STEEL MUST BE MAINTAINED.
6. THE BACK FILL IS TO BE PROVIDED CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE CODE. COMPACTION OF BACKFILL SHALL BE DONE AFTER COMPACTING THE SOIL GIVING PASSIVE PRESSURE FROM TRACK SIDE.
7. CONCRETE GRADE OF PLATFORM WALL SHALL BE M:35.
8. IT SHALL BE DESIGNED FOR SEISMIC ZONE IV.
9. COPING SLAB IS NOT MONOLITHICALLY CAST WITH WALL. IT SHALL BE PRESENT ON PLATFORM WALL TOP USING 1:3 CEMENT-SAND MORTAR COPING SHALL BE KEPT AFTER THE COMPACTION OF BACKFILL.
10. SIZE & REINFORCEMENT SHOWN IN DRAWING IS TENTATIVE AND DETAILED DESIGN SHALL TAKE CARE OF THE REQUIREMENT OF SEISMIC ZONE IV.
11. 25MM EXPANSION GAP SHALL BE PROVIDED AFTER EVERY 25m LENGTH.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL SKETCH FOR RCC PLATFORM WALL

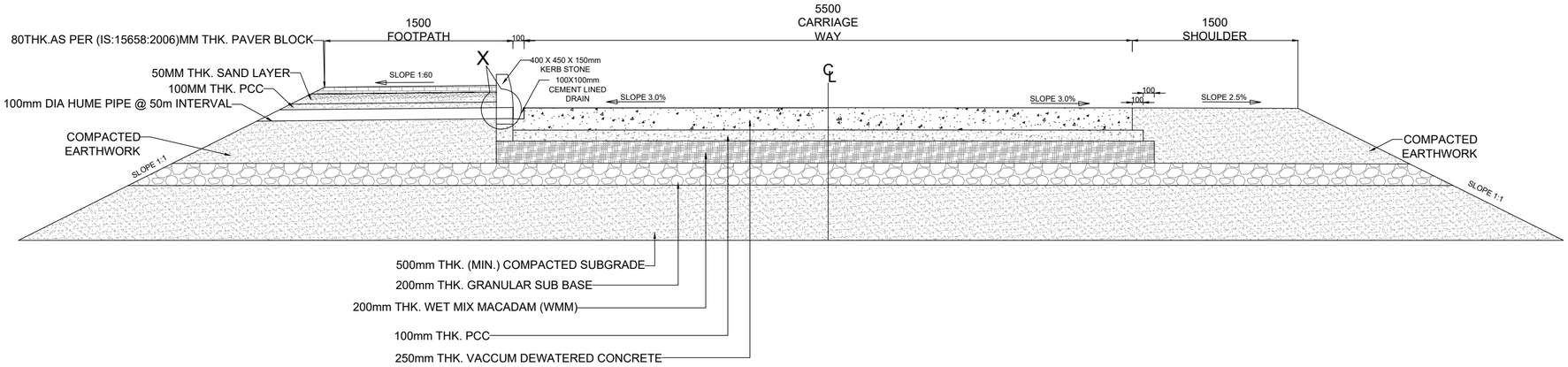
DRG. NO. GC-HRIDC-SK-GEN-024

SHEET NO. 1 OF 1

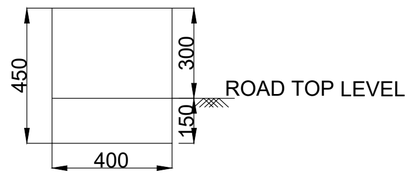
SCALE : AS SHOWN

ISSUE DATE 28.12.2022

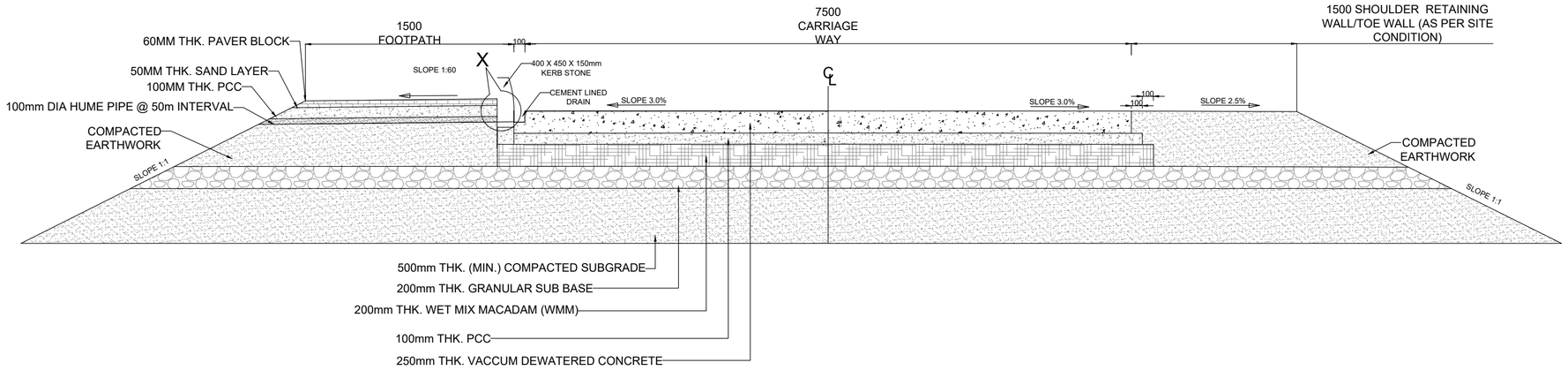
NOTES:
1. ALL DIMENSION ARE IN MILLIMETERS EXPECT LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. ROAD SHALL BE CONSTRUCTED AS PER MORTH STANDARDS.
3. LAYING OF PAVE BLOCK SHALL BE AS PER IRC PROVISION.



TYPICAL CROSS-SECTION OF SINGLE LANE ROAD



DETAIL OF X



TYPICAL CROSS-SECTION OF DOUBLE LANE ROAD

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

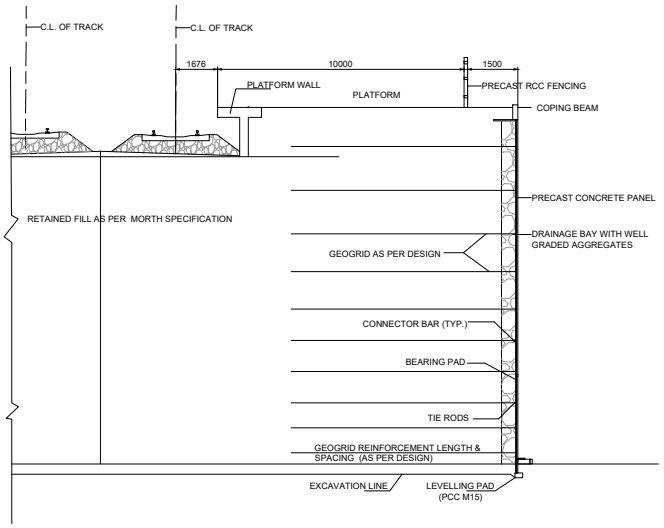
TITLE:- CONCEPTUAL SKETCH FOR SINGLE & DOUBLE LANE ROAD

DRG. NO. GC-HRIDC-SK-GEN-025

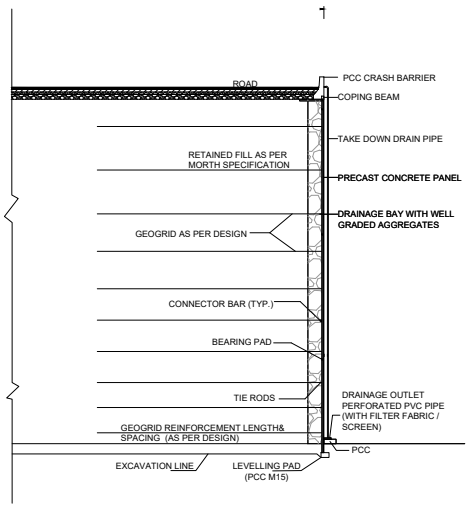
SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



TYPICAL CROSS SECTION OF REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT AND PRECAST PANEL FACING FOR RAIL PLATFROM



TYPICAL CROSS SECTION OF REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT AND PRECAST PANEL FACING FOR ROAD

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED OTHERWISE.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. DESIGNS, DETAILING OF RE WALL SHALL BE AS PER MORTH SPECIFICATION.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Sarbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

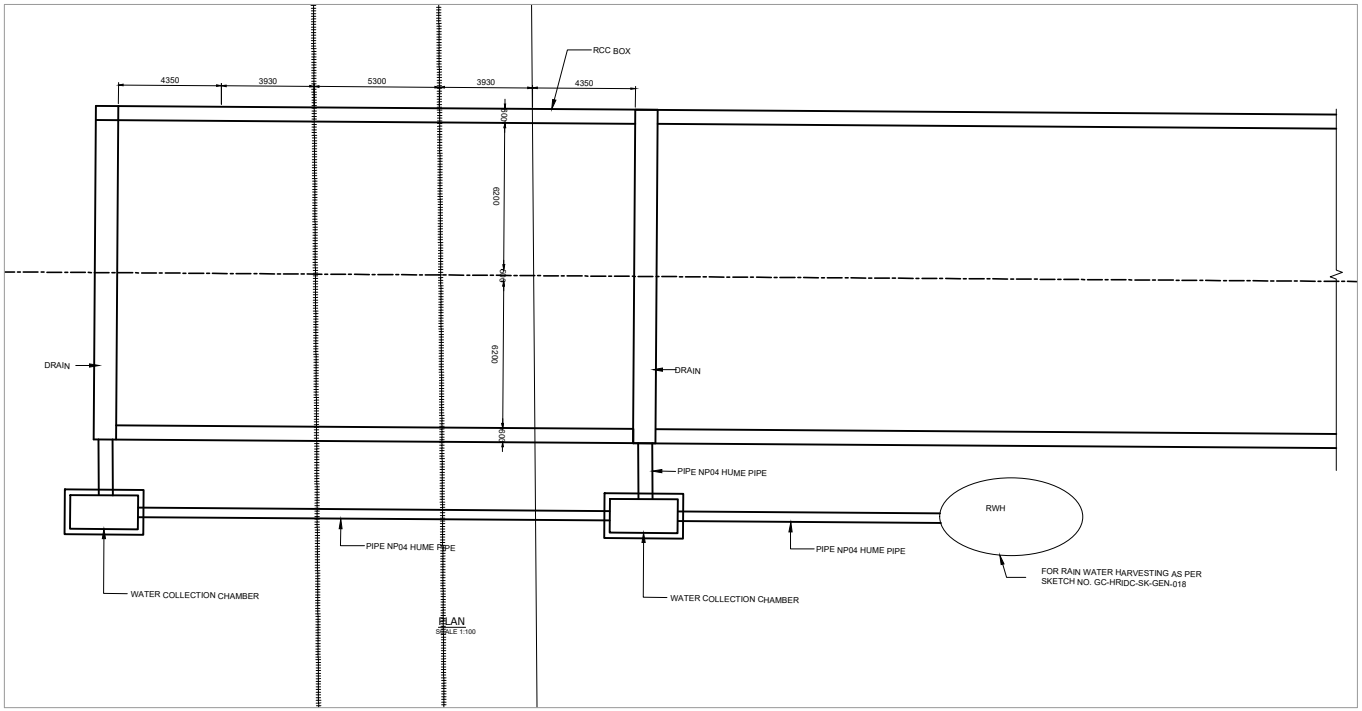
TITLE:- CONCEPTUAL SKETCH FOR REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT

DRG. NO. GC-HRIDC-SK-GEN-026

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. * SIZE OF SUMP SHALL BE AS PER DESIGN DISCHARGE.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Sarbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

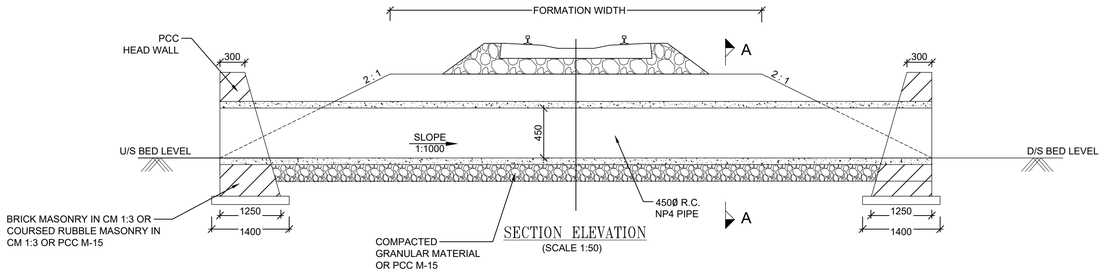
TITLE:- Conceptual Plan for sump

DRG. NO. GC-HRIDC-SK-GEN-027

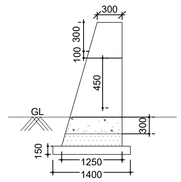
SHEET NO. 1 OF 1

SCALE : AS SHOWN

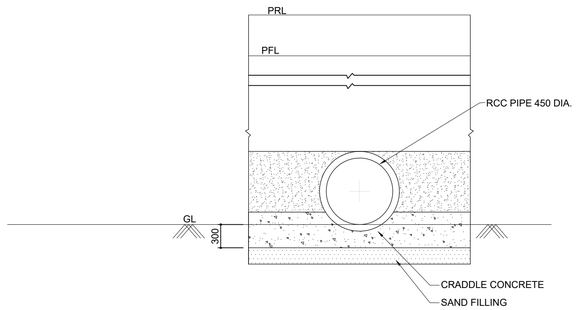
ISSUE DATE 28.12.2022



SECTION ELEVATION
(SCALE 1:50)



DETAIL OF HEAD WALL



SECTION A-A

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. LOOSE/UNSUITABLE SOIL BELOW CULVERTS IS REPLACED WITH SUITABLE GRANULAR MATERIAL.
4. LONGITUDINAL SLOPE OF PIPE SHALL BE MIN. 1 IN 1000.
5. BEDDING CONDITION BELOW NP-04 PIPE SHALL BE AS PER IS:458.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

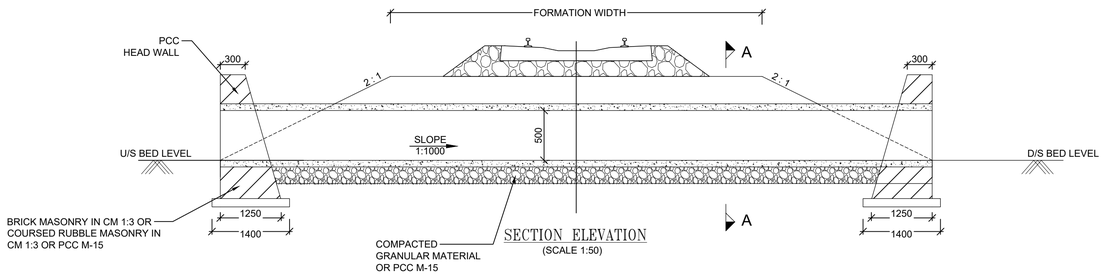
TITLE:- CONCEPTUAL SKETCH FOR NP4 PIPE OF 450mm DIA

DRG. NO. GC-HRIDC-SK-GEN-028

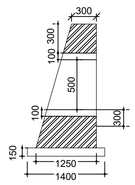
SHEET NO. 1 OF 1

SCALE : AS SHOWN

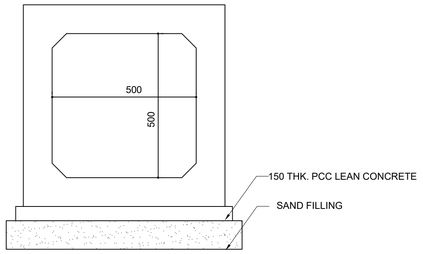
ISSUE DATE 28.12.2022



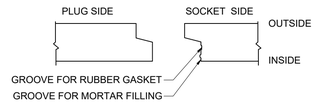
SECTION ELEVATION
(SCALE 1:50)



DETAIL OF HEAD WALL



SECTION B-B



PLUG &SOCKET JOINTS
SEALING MATERIAL RUBBER GASKET
FLANG BOLT CONNECTION

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. LOOSE/UNSUITABLE SOIL BELOW CULVERTS IS REPLACED WITH SUITABLE GRANULAR MATERIAL.
4. STRUCTURE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

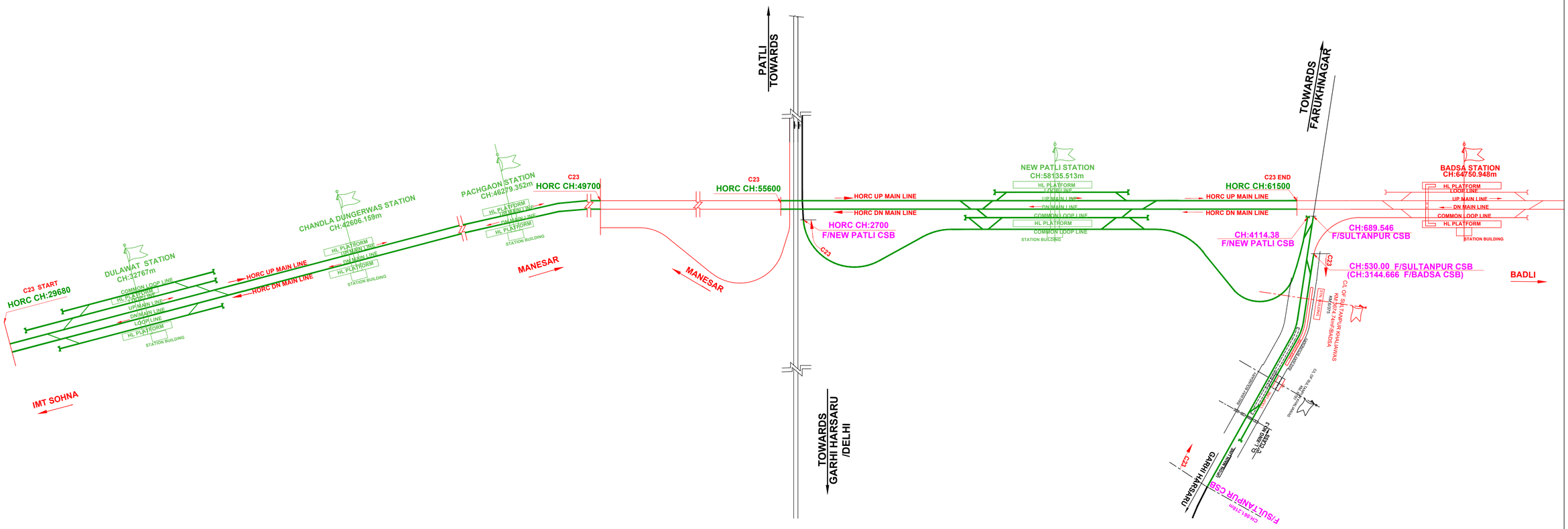
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL SKETCH FOR PRECAST RCC BOX 500 X 500 MM SIZE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-029	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



LEGEND	
WORKS TO BE DONE BY C23 PACKAGE CONTRACTOR	
WORKS TO BE DONE BY OTHER PACKAGE CONTRACTOR	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- **JURISDICTIONAL SKETCH FOR CIVIL WORKS C-23 PACKAGE**

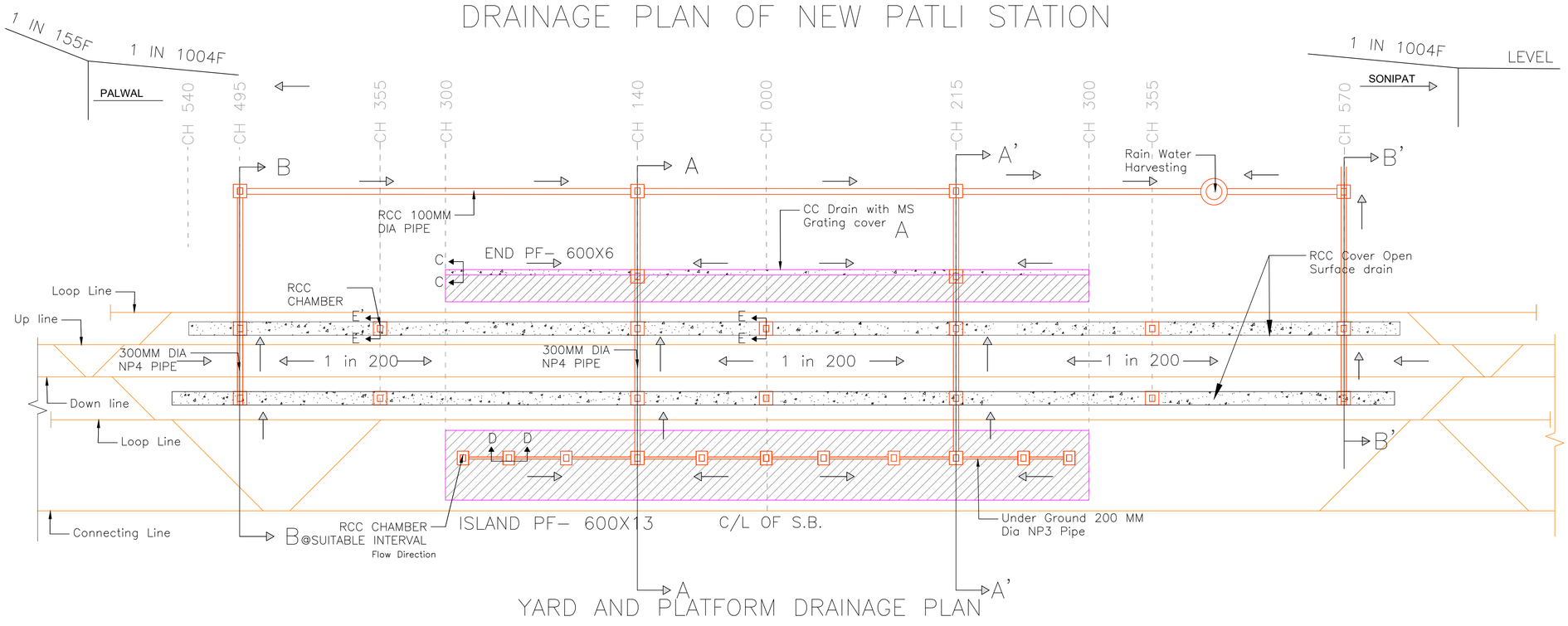
DRG. NO. GC-HRIDC-C23-SK-CIVIL-001_A1

SHEET NO.

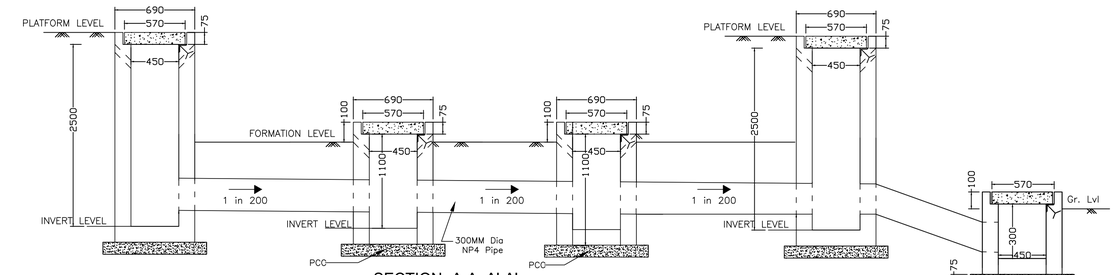
SCALE : AS SHOWN

ISSUE DATE 28.12.2022

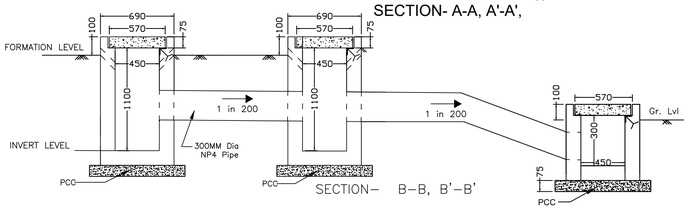
DRAINAGE PLAN OF NEW PATLI STATION



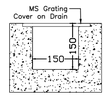
YARD AND PLATFORM DRAINAGE PLAN



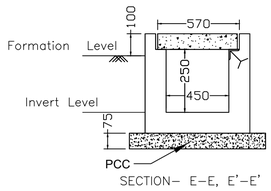
SECTION- A-A, A'-A',



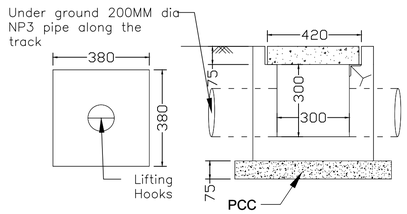
SECTION– B–B, B'–B'



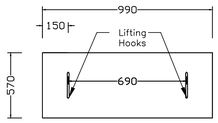
SECTION C–C



SECTION– E–E, E'–E'

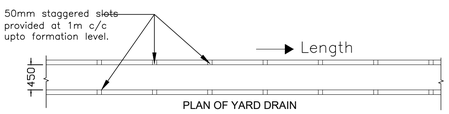


SECTION- D-D

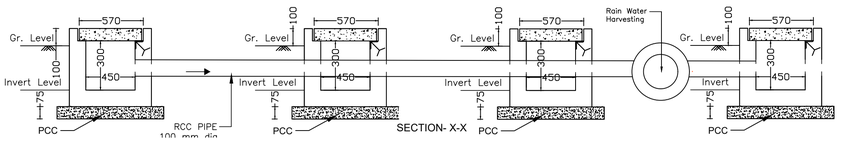


TYP. RCC drain cover with lifting arrangement

CHAINAGE	0	-140	215
FRL	0	139	-214
DRAIN SLOPE	LEVEL	1 IN 200	1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-700	-1075
TOTAL DEPTH	-250.000	-1089.442	-1110.857



PLAN OF YARD DRAIN



SECTION- X-X

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (NEW PATLI)

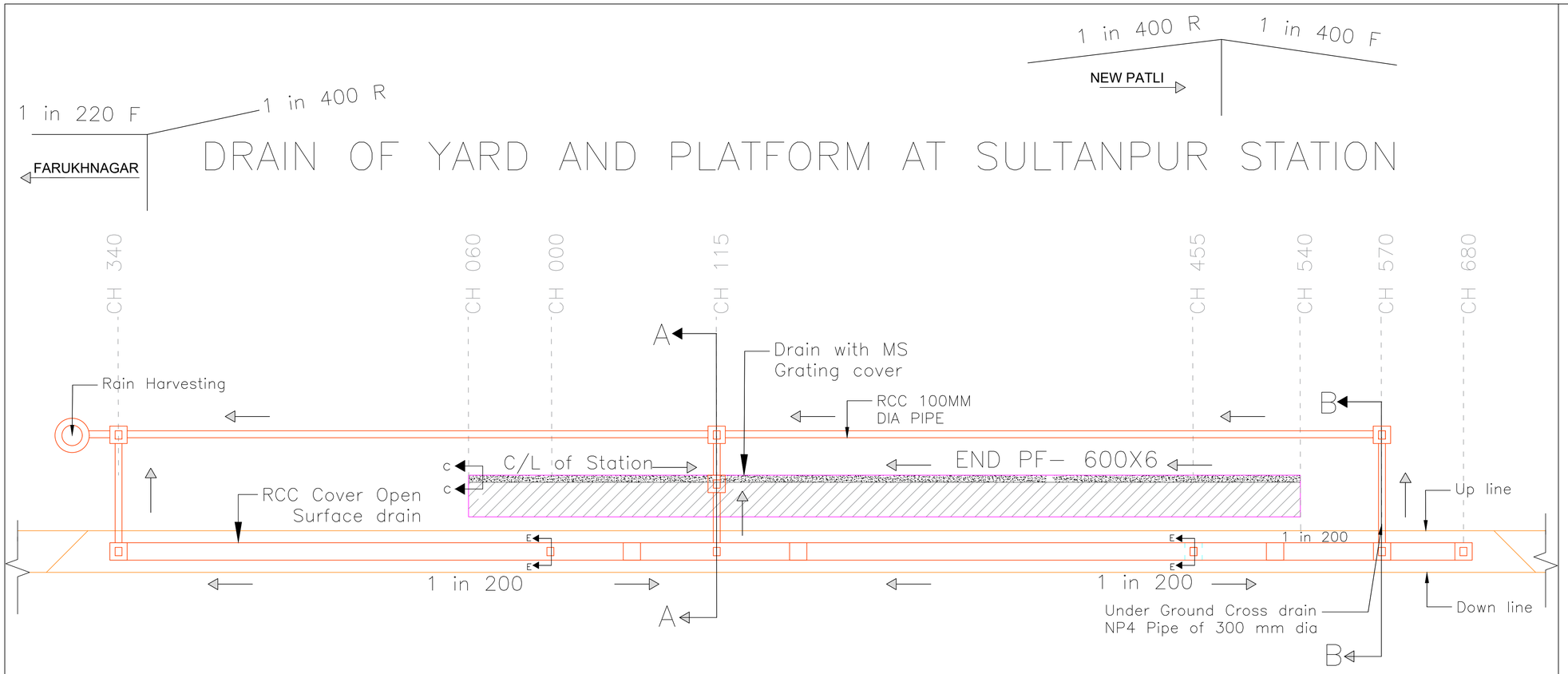
DRG. NO. GC-HRIDC-C23-SK-CIVIL-002_A1

SHEET NO.

SCALE : AS SHOWN

ISSUE DATE 28.12.2022

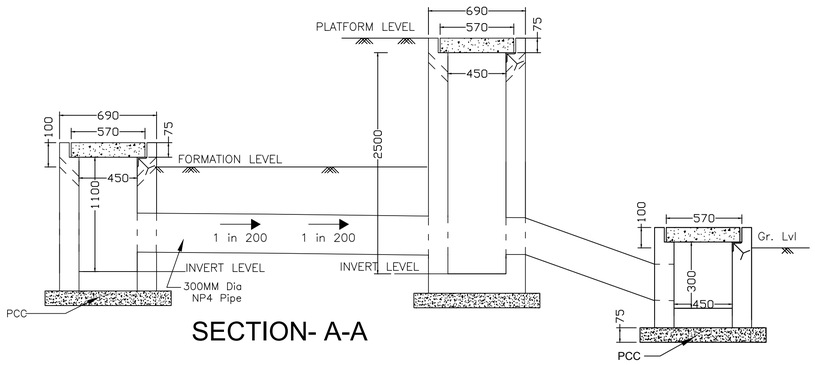
DRAIN OF YARD AND PLATFORM AT SULTANPUR STATION



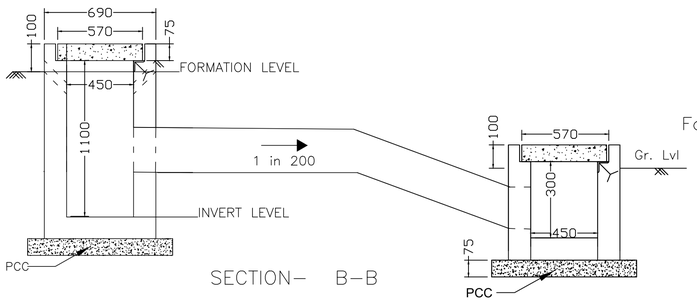
Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

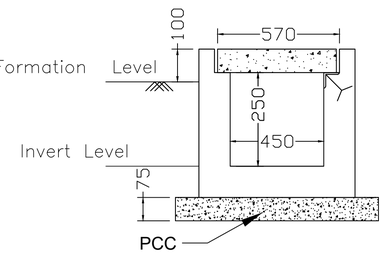
Note:-
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.



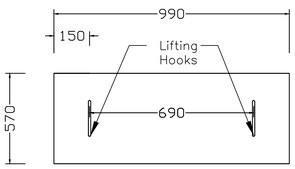
SECTION- A-A



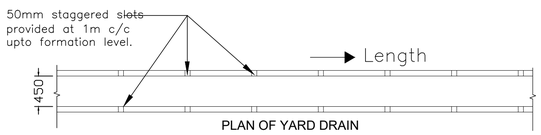
SECTION- B-B



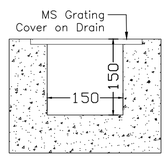
SECTION- E-E, E'-E'



TYP. RCC drain cover with lifting arrangement



PLAN OF YARD DRAIN



SECTION C-C

CHAINAGE	0	-340	115
FRL	0	-850	-288
DRAIN SLOPE	LEVEL	1 IN 200	1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-1700	-575
TOTAL DEPTH	-250.000	-1100.000	-1112.500

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (SULTANPUR)

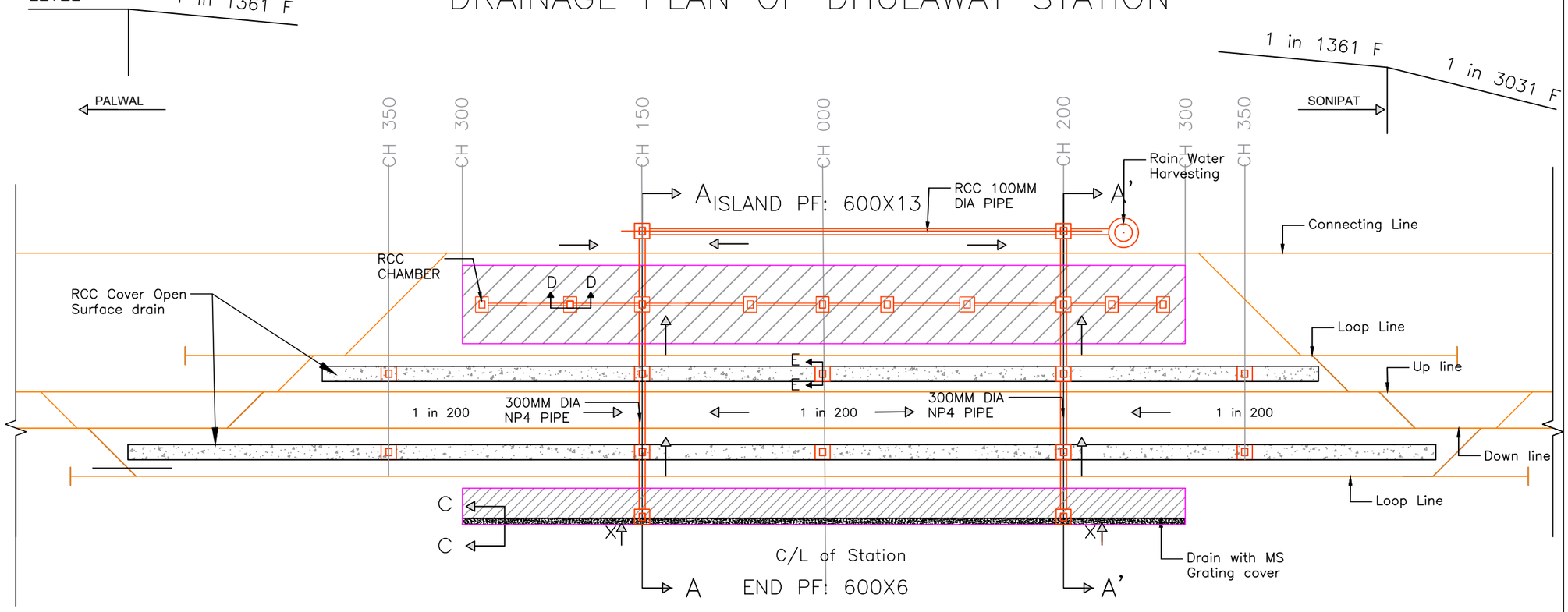
DRG. NO. GC-HRIDC-C23-SK-CIVIL-003_A1

SHEET NO.

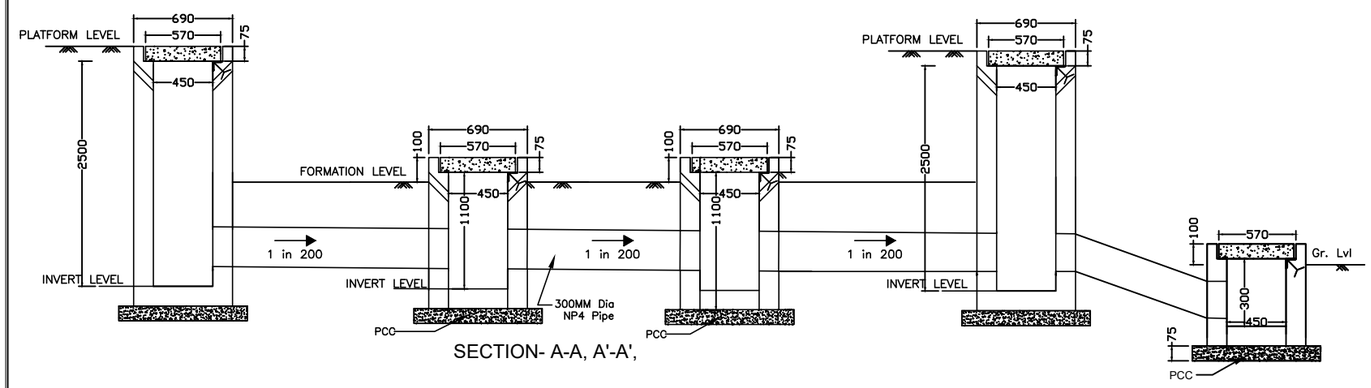
SCALE : AS SHOWN

ISSUE DATE 28.12.2022

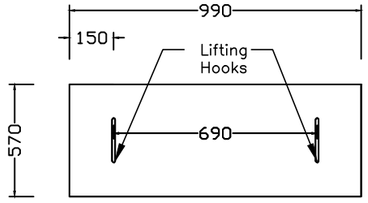
DRAINAGE PLAN OF DHULAWAT STATION



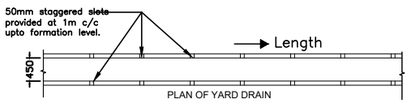
Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

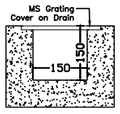


SECTION- A-A, A'-A',



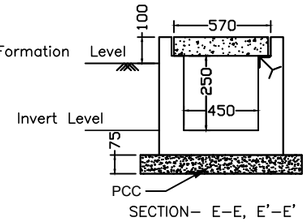
TYP. RCC drain cover with lifting arrangement



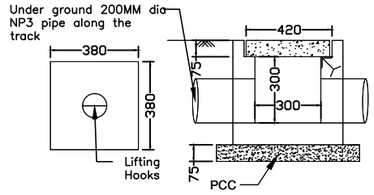


SECTION C–C

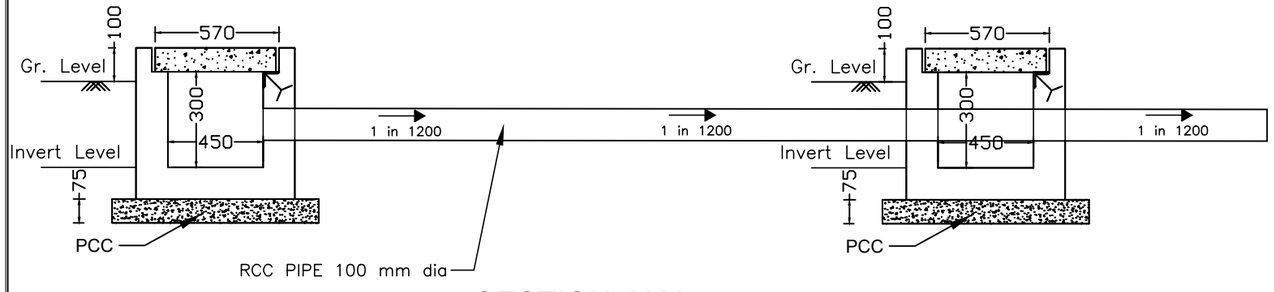
CHAINAGE	0	-150	200
FRL	0	110	-147
DRAIN SLOPE	LEVEL	1 IN 200	1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-750	-1000
TOTAL DEPTH	-250.000	-1110.196	-1103.073



SECTION– E–E, E'–E'



SECTION- D-D



SECTION- X-X

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (DHULWAT)

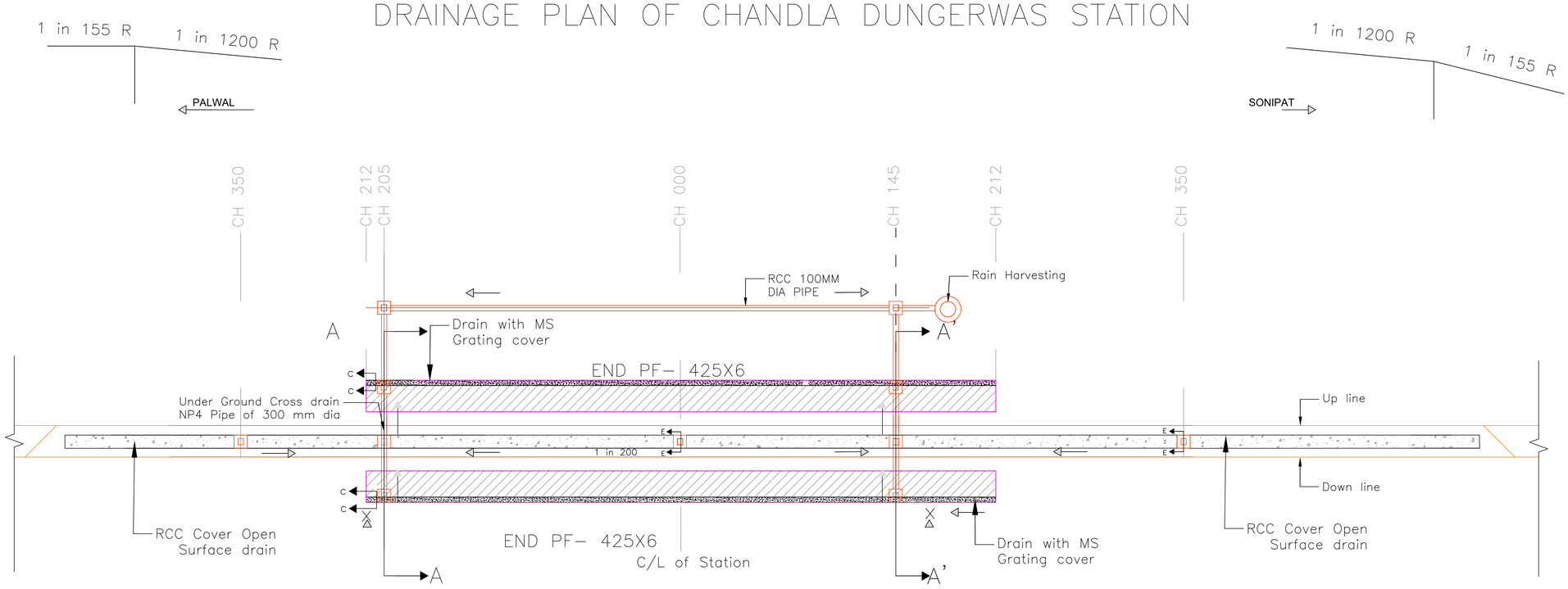
DRG. NO. GC-HRIDC-C23-SK-CIVIL-004_A1

SHEET NO.

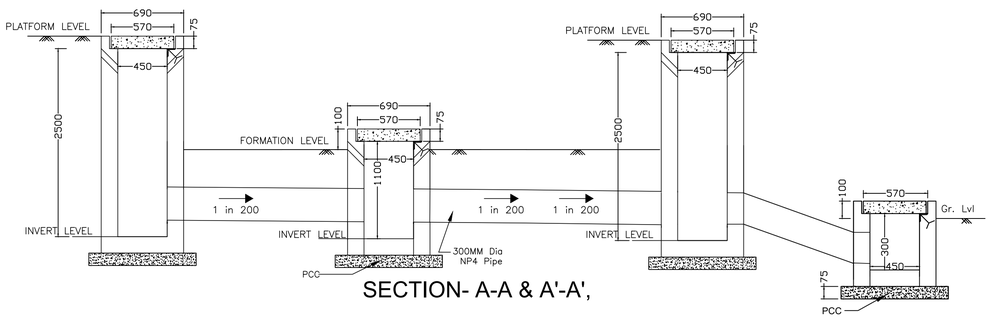
SCALE : AS SHOWN

ISSUE DATE 28.12.2022

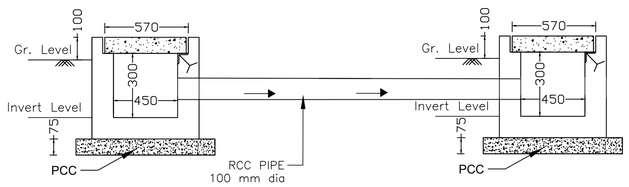
DRAINAGE PLAN OF CHANDLA DUNGERWAS STATION



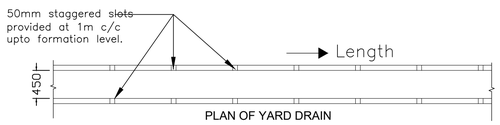
YARD AND PLATFORM DRAINAGE PLAN



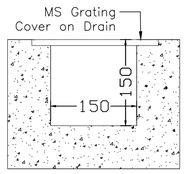
SECTION- A-A & A'-A',



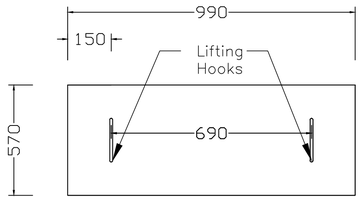
SECTION- X-X



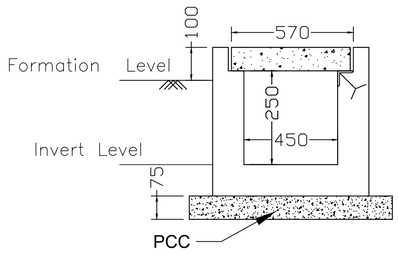
PLAN OF YARD DRAIN



SECTION C–C



TYP. RCC drain cover with lifting arrangement



SECTION– E–E, E'–E'

CHAINAGE	0	-205	145
FRL	0	-171	121
DRAIN SLOPE	LEVEL	1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-1025	-725
TOTAL DEPTH	-250.000	-1104.167	-1095.833

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (CHANDLA DUNGERWAS)

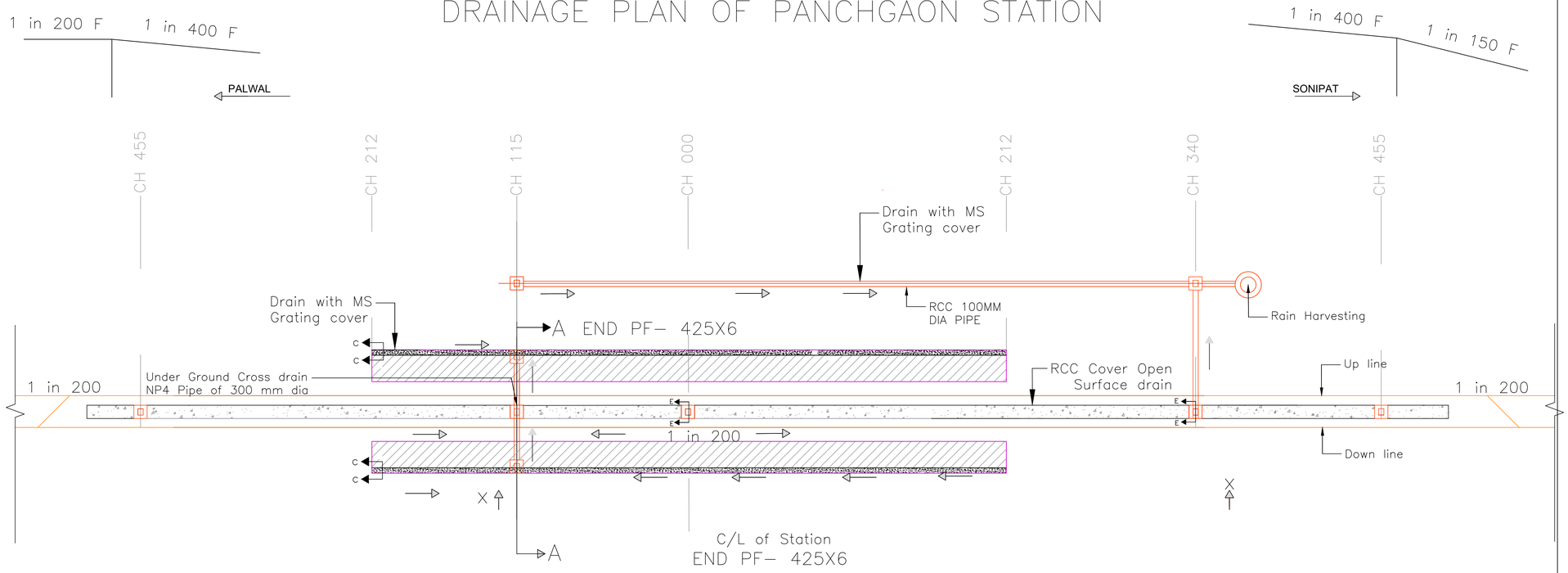
DRG. NO. GC-HRIDC-C23-SK-CIVIL-005_A1

SHEET NO.

SCALE : AS SHOWN

ISSUE DATE 28.12.2022

DRAINAGE PLAN OF PANCHGAON STATION

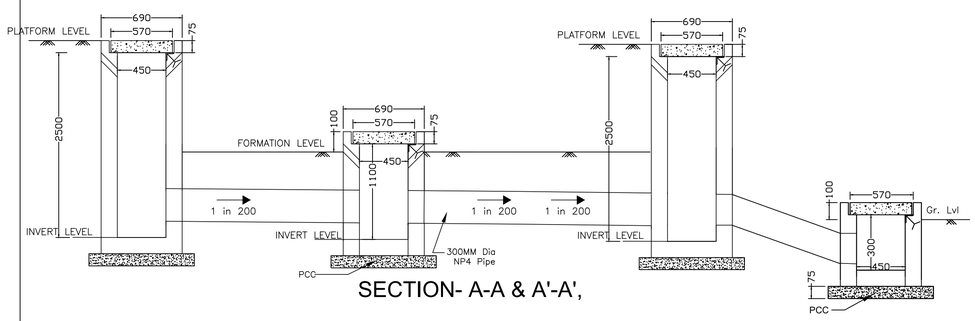


YARD AND PLATFORM DRAINAGE PLAN

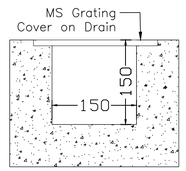
Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

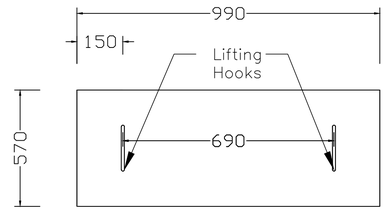
Note:-
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.



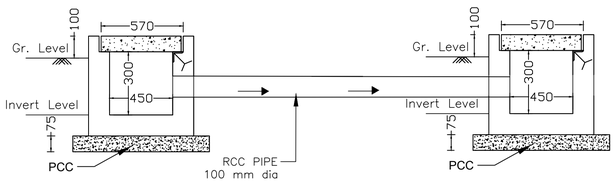
SECTION- A-A & A'-A',



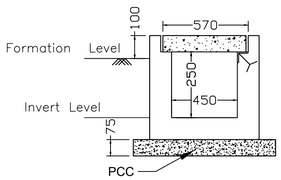
SECTION C-C



TYP. RCC drain cover with lifting arrangement

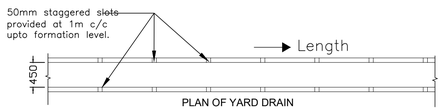


SECTION- X-X



SECTION- E-E, E'-E'

CHAINAGE	0	-115	340
FRL	0	288	-850
DRAIN SLOPE	LEVEL	1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-575	-1700
TOTAL DEPTH	-250.000	-1112.500	-1100.000



PLAN OF YARD DRAIN

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

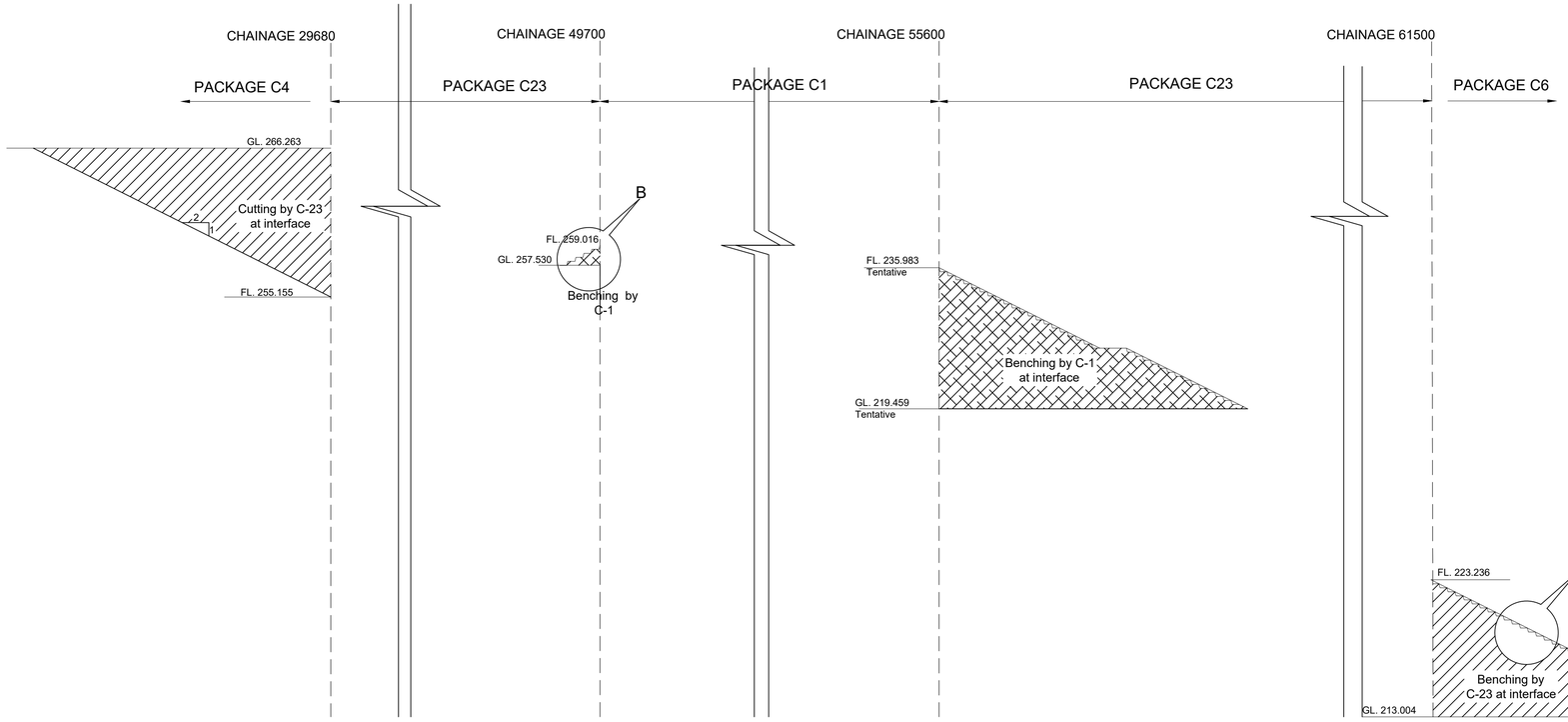
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

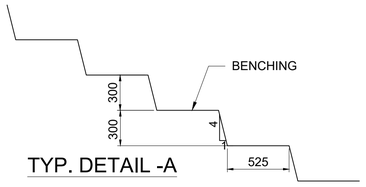
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (PANCHGOAN)

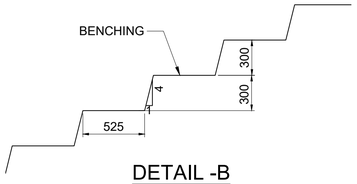
DRG. NO. GC-HRIDC-C23-SK-CIVIL-006_A1
SHEET NO.

SCALE : AS SHOWN
ISSUE DATE 28.12.2022





TYP. DETAIL -A



DETAIL -B

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR OTHER DETAILS REFER RDSO SPECIFICATION NO. RDSO/2020/GE:IRS-004 SEPTEMBER 2020 "COMPREHENSIVE GUIDELINES AND SPECIFICATIONS FOR RAILWAY FORMATION".
3. DETAILS OF HATCHED AS BELOW-
   - AREA IS IN THE SCOPE OF C23
   - AREA IS NOT IN THE SCOPE OF C23

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	Chahatey Ram	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

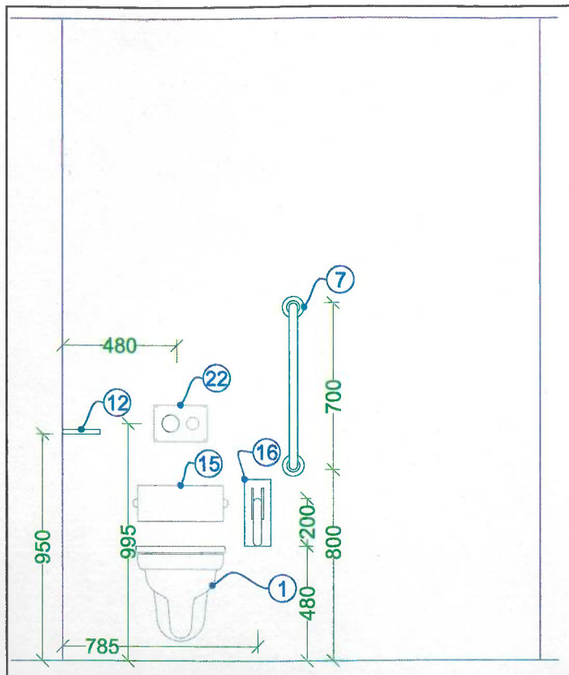
TITLE:- CONCEPTUAL PLAN BANK/CUTTING BENCHING AT INTERFACE LOCATION

DRG. NO. GC-HRIDC-C23-SK-CIVIL-009_A1

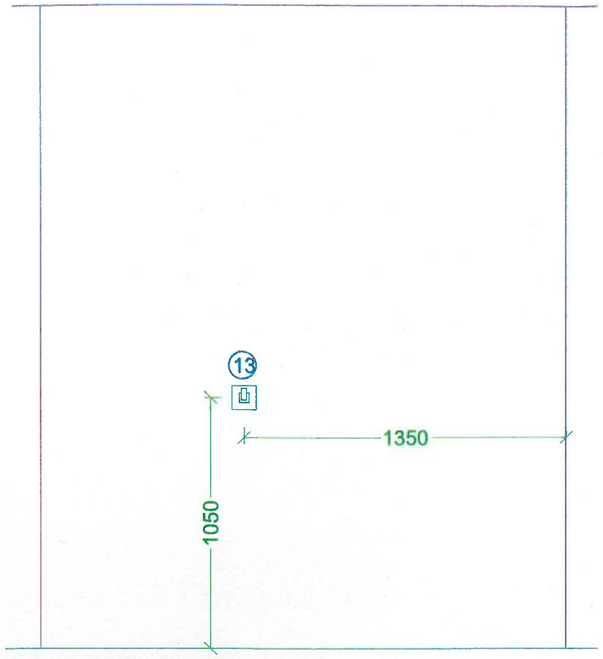
SHEET NO.

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



ELEVATION 'A'



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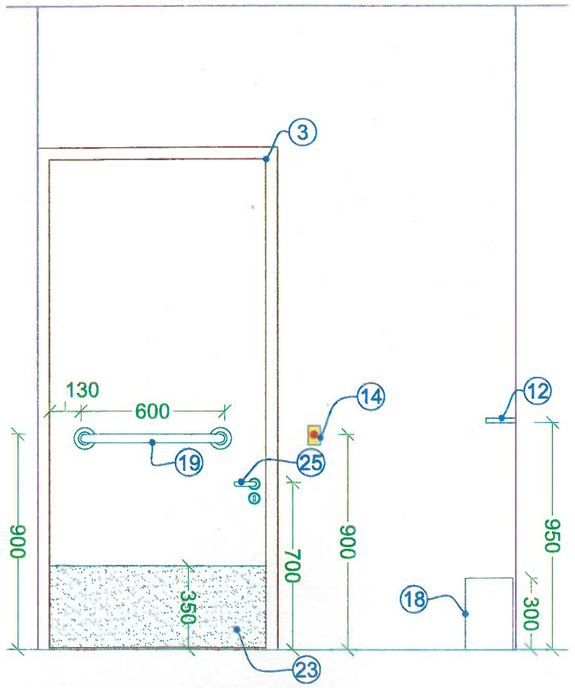
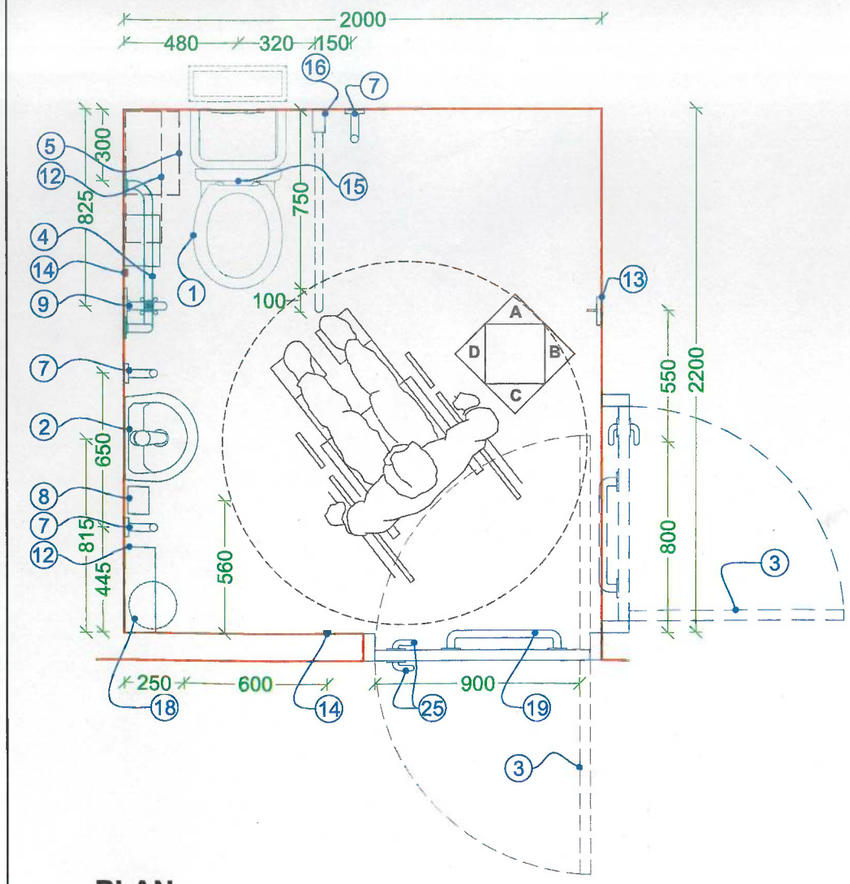


ELEVATION 'C'

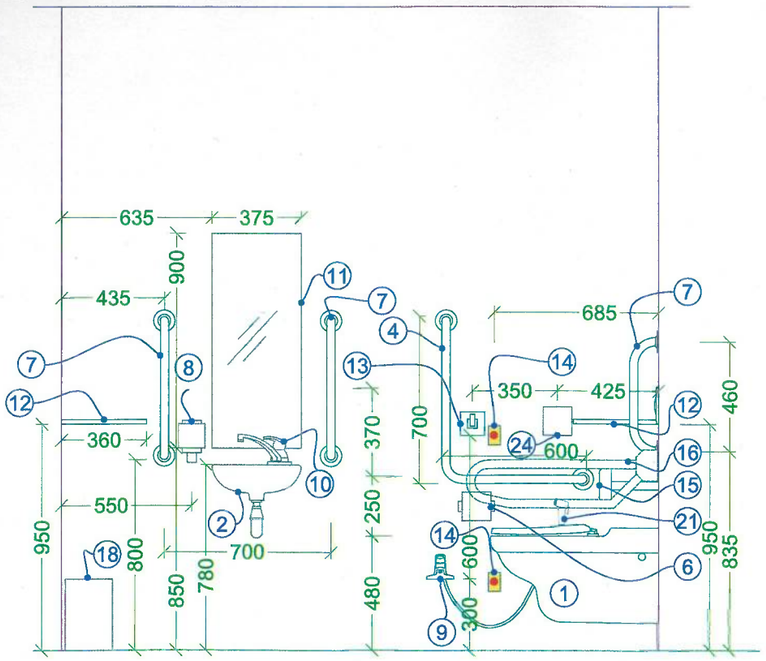


PLAN

Figure 1

Figure 2

Figure 3



ELEVATION 'D'

N.R.H.Q.E. PLAN NO.	: HQ/20/11-2021
TYPE PLAN NO.	: O-104/2021
CANCEL TYPE PLAN NO.	: .....

NOTE:-

1. DO NOT SCALE THIS DRAWING.
2. THIS DRAWING IS TO BE READ WITH ALL RELATED INFORMATION.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BY MAIN CONTRACTOR BEFORE THE COMMENCEMENT OF ANY DRAWING OR WORK WHATSOEVER.
4. ALL DIMENSIONS ARE IN MILLIMETER UNLESS SHOWN OTHERWISE.
5. ALL GRAB RAIL SHOULD BE PROPERLY FIXED TO HANDLE THE MINIMUM LOAD OF 45 kg (100 lbs).
6. ANTI-SKID OR SLIP RESISTANT TILES SHOULD BE USED ON FLOORING.
7. MIRROR SHOULD BE TILTED AT AN ANGLE OF 30° FOR BETTER VISIBILITY OF WHEELCHAIR USER.
8. VENTILATOR (600mm x 600mm) TO BE PROVIDED ACCORDING TO SITE OPENING.
9. ACCESSIBLE TOILET SHOULD HAVE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY (WITH BRAILLE SIGNAGE) DISPLAYED OUTSIDE FOR WHEELCHAIR ACCESS (Figure 1).
10. THERE SHOULD BE ADEQUATE COLOUR & TONAL CONTRAST BETWEEN THE FIXTURES, WALLS & FLOORING. THIS IS TO ENABLE EASY RECOGNITION BY PERSONS WITH VISUAL IMPAIRMENTS.
11. **TOILET LEVEL SHOULD BE KEPT SAME AS LEVEL OF PLATFORM SO AS TO AVOID REQUIREMENT OF RAMP.**
12. **THIS DRAWING IS BASED ON RAILWAY BOARD'S LETTER NO. 2019/Stn.Dev.-I/03/06/Policy/PwDs dated 12.02.2020.**

LEGENDS:-

ITEM NO.	PARTICULARS/ DESCRIPTION OF ITEM
1	WALL HUNG COMMODE
2	WASH BASIN
3	DOUBLE SWING DOOR POSITIONS
4	STAINLESS STEEL WALL MOUNTED L-SHAPE GRAB RAIL
5	STAINLESS STEEL SANITARY NAPKIN DISPOSAL
6	STAINLESS STEEL TISSUE HOLDER
7	STAINLESS STEEL VERTICAL GRAB RAIL
8	SOAP DISPENSER
9	TWO WAY BIB COCK
10	LEVER HANDLE TAP (Figure 2)
11	MIRROR
12	STAINLESS STEEL SHELF
13	SINGLE POST CLOTH HOOK
14	ALARM SWITCH
15	BACK REST (Figure 3)
16	STAINLESS STEEL DROP DOWN RAIL
17	SANITARY DISPOSAL UNIT
18	STAINLESS STEEL DISPOSAL BIN
19	STAINLESS STEEL PULL RAIL
20	ALARM RESET BUTTON
21	HAND JET SPRAY
22	FULL & HALF FLUSH BUTTON
23	KICK PLATE
24	ALARM RESET BUTTON
25	D-LEVER HANDLE

MONA SRIVASTAVA (CE/STN. DEV.)	22/11/21
K.K. SHARMA (DY.CE/STN. DEV.)	22/11/21
MOHD. SHARIF (PREPARED BY: SSE/ARCH.)	10 Nov 2021

NORTHERN RAILWAY

TYPE PLAN

POWDER TOILET FOR DIVYANGS

CASE NO. SD/TP/2021	CANCEL PLAN NO. : NIL
SCALE : 1:25@A3	SHEET NO.: 01 OF 01
N.R.H.Q.E. PLAN NO. :	HQ/20/11-2021