Section VII-8: Tender Drawings and Documents

A- Tender Drawings
B- Tender Documents

Section VII-8
A: Tender Drawings

List of Drawings

S. No	TITLE	REVISED/NEW DRAWING NO.
1	**ALIGNMENT PLAN & L-SECTION:**	
1.	Plan and longitudinal section (29.5KM to 33.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-29-33KM_A0
2.	Plan and longitudinal section (33.0KM to 35.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-33-35KM_A0
3.	Plan and longitudinal section (35.0KM to 40.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-35-40KM_A0
4.	Plan and longitudinal section (40.0KM to 45.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-40-45KM_A0
5.	Plan and longitudinal section (45.0KM to 50.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-45-50KM_A0
6.	Plan and longitudinal section (55.0KM to 61.5KM)	GC-HRIDC-C2-DRW-ALN-P&P-01001_A1
7.	Plan connectivity towards Patli	GC-HRIDC-C2-DRW-ALN-P&P-03001_A1
8.	Plan connectivity towards Sultanpur	GC-HRIDC-C2-DRW-ALN-P&P-04001_A1
9.	Connectivity towards sultanpur from badsa	GC-HRIDC-C2-DRW-ALN-P&P-05001_A0
2	**ESP/YARD PLAN**	
1.	ESP of Patli Station	GC-HRIDC-C2-DRW-ALN-ESP-001_A0
2.	Engineering scale plan New Patli Junction CH:58135.513 f/Prithala	GC-HRIDC-C2-DRW-STN-ESP-NPA01_A1
3.	Engineering scale plan Sultanpur Kaliawas junction CH: 3674.74m f/Badsa KM:6/375	GC-HRIDC-C2-DRW-STN-ESP-SUL01_A1
4.	ESP of Dhulawat Station	GC-HRIDC-C23-DRW-STN-ESP-DHU01_A0
5.	Engineering scale plan Chandla Dungerwas station yard CH:42700m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-CDU01_A0
6.	Engineering scale plan Pachgaon station yard CH: 46260m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-PCG01_A0
3	**STATION BUILDING**	
1.	Conceptual general arrangement drawing - New Patli station	GC-HRIDC-C23-DRW-STN-SAD-NPA01_A0 (Sheet No 1 of 2, Sheet No 2 of 2)
2.	Conceptual general arrangement drawing of sultanpur station building	GC-HRIDC-C23-DRW-STN-SAD-SUL01_A0
3.	Conceptual general arrangement drawing - Dhulawat station	GC-HRIDC-C23-DRW-STN-SAD-DHU01_A0 (Sheet No 1 of 2, Sheet No 2 of 2)
4.	Conceptual general arrangement drawing - Chandla Dungerwas station	GC-HRIDC-C23-DRW-STN-SAD-CDU01_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
5.	Conceptual general arrangement drawing - Pachgaon station	GC-HRIDC-C23-DRW-STN-SAD-PCG01_A0
4 BRIDGES		
4.1 MINOR BRIDGES		
4.1.1 MAIN LINE		
1.	Conceptual general arrangement drawing for Syphon no. 72, 2x3x2 RCC box (Syphon) at CH:30528	GC-HRIDC-C23-DRW-BRD-GAD-01072_A0
2.	Conceptual general arrangement drawing for Syphon no. 73, 2x5x2.5 RCC box (Syphon) at CH:30839	GC-HRIDC-C23-DRW-BRD-GAD-01073_A0
3.	Conceptual general arrangement drawing for road under bridge no. 74, 2x6.2x5.65 RCC box at CH:31145	GC-HRIDC-C23-DRW-BRD-GAD-01074_A0
4.	Conceptual general arrangement drawing for road under bridge no. 75, 1x6x4 RCC box at CH:31365	GC-HRIDC-C23-DRW-BRD-GAD-01075_A0
5.	Conceptual general arrangement drawing for road under bridge no. 76, 1x6x4 RCC box at CH:32022	GC-HRIDC-C23-DRW-BRD-GAD-01076_A0
6.	Conceptual general arrangement drawing for road under bridge no. 77, 1x6x4.5 RCC box at CH:33155	GC-HRIDC-C23-DRW-BRD-GAD-01077_A0
7.	Conceptual general arrangement drawing for proposed RUB no. 78, 1x2x2 RCC box at CH:33269.230	GC-HRIDC-C23-DRW-BRD-GAD-01078_A0
8.	General arrangement drawing Bridge no. 79,86,91,94&116 Pipe culvert 1x1.8 span	GC-HRIDC-C23-DRW-BRD-GAD-PIPE_A0
9.	Conceptual general arrangement drawing for road under bridge no. 80, 2x7x5.65 RCC box at CH:33675.045	GC-HRIDC-C23-DRW-BRD-GAD-01080_A0
10.	Conceptual general arrangement drawing for road under bridge no. 80A, 1x6.0 x5 RCC box at CH:33975	GC-HRIDC-C23-DRW-BRD-GAD-01080A_A0
11.	Conceptual general arrangement drawing for road under bridge no. 81, 2x5x5.65 RCC box at CH:34280.218	GC-HRIDC-C23-DRW-BRD-GAD-01081_A0
12.	Conceptual general arrangement drawing for road under bridge no. 83, 1x5x3 RCC box at CH:35371.018	GC-HRIDC-C23-DRW-BRD-GAD-01083_A0
13.	Conceptual general arrangement drawing for road under bridge no. 84, 1x5x3 RCC box at CH:35916.064	GC-HRIDC-C23-DRW-BRD-GAD-01084_A0
14.	Conceptual general arrangement drawing for road under bridge no. 85, 2x7x5.65 RCC box at CH:36984.118	GC-HRIDC-C23-DRW-BRD-GAD-01085_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
15.	Conceptual general arrangement drawing for road under bridge no. 87, 1x5x3.15 RCC box at CH:37804.099	GC-HRIDC-C23-DRW-BRD-GAD-01087_A0
16.	Conceptual general arrangement drawing for road under bridge no. 88, 2x5.5x5.65 RCC box at CH:38456.750	GC-HRIDC-C23-DRW-BRD-GAD-01088_A0
17.	Conceptual general arrangement drawing for balancing culvert bridge no. 88A, 1x3x2 RCC box at CH:39155	GC-HRIDC-C23-DRW-BRD-GAD-01088A_A0
18.	Conceptual general arrangement drawing for road under bridge no. 89, 1x5x3 RCC box at CH:39552.508	GC-HRIDC-C23-DRW-BRD-GAD-01089_A0
19.	Conceptual general arrangement drawing for road under bridge no. 90, 2x5.5x5.65 RCC box at CH: 40003.467	GC-HRIDC-C23-DRW-BRD-GAD-01090_A0
20.	Conceptual general arrangement drawing for road under bridge no. 92, 1x4x2.5 RCC box at CH: 40671.025	GC-HRIDC-C23-DRW-BRD-GAD-01092_A0
21.	Conceptual general arrangement drawing for road under bridge no. 93, 1x4x3 RCC box at CH: 41312.174	GC-HRIDC-C23-DRW-BRD-GAD-01093_A0
22.	Conceptual general arrangement drawing for balancing culvert bridge no. 95, 1x2x2 RCC box at CH:41925.899	GC-HRIDC-C23-DRW-BRD-GAD-01095_A0
23.	Conceptual general arrangement drawing for road under bridge no. 96, 2x7x5.65 RCC box at CH: 41962.645	GC-HRIDC-C23-DRW-BRD-GAD-01096_A0
24.	Conceptual general arrangement drawing for pipe culvert bridge no. 97, 1x2x2 RCC box at CH: 42238.900	GC-HRIDC-C23-DRW-BRD-GAD-01097_A0
25.	Conceptual general arrangement drawing for road under bridge no. 98, 1x6x2.5 RCC box at CH: 42578.906	GC-HRIDC-C23-DRW-BRD-GAD-01098_A0
26.	Conceptual general arrangement drawing for road under bridge no. 99, 2x7x5.65 RCC box at CH: 43506.883	GC-HRIDC-C23-DRW-BRD-GAD-01099_A0
27.	Conceptual general arrangement drawing for road under bridge no. 100, 1x4x3.1 RCC box at CH: 43758.291	GC-HRIDC-C23-DRW-BRD-GAD-01100_A0
28.	Conceptual general arrangement drawing for balancing culvert bridge no. 102, 1x4x5 RCC box at CH: 44281.401	GC-HRIDC-C23-DRW-BRD-GAD-01102_A0
29.	Conceptual general arrangement drawing for balancing culvert bridge no. 103, 1x4x5 RCC box at CH: 44401.641	GC-HRIDC-C23-DRW-BRD-GAD-01103_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
30.	Conceptual general arrangement drawing for road under bridge no. 104, 1x6x5 RCC box at CH: 44420.238	GC-HRIDC-C23-DRW-BRD-GAD-01104_A0
31.	Conceptual general arrangement drawing for balancing culvert bridge no. 108, 1x6x6 RCC box at CH: 46635.175	GC-HRIDC-C23-DRW-BRD-GAD-01108_A0
32.	Conceptual general arrangement drawing for road under bridge no. 109, 1x6x6 RCC box at CH: 46768.341	GC-HRIDC-C23-DRW-BRD-GAD-01109_A0
33.	Conceptual general arrangement drawing for road under bridge no. 110, 1x5x5 RCC box at CH: 46915.023	GC-HRIDC-C23-DRW-BRD-GAD-01110_A0
34.	Conceptual general arrangement drawing for road under bridge no. 111, 2x5x5 RCC box at CH: 47300.018	GC-HRIDC-C23-DRW-BRD-GAD-01111_A0
35.	Conceptual general arrangement drawing for road under bridge no. 112, 1x4x4 RCC box at CH: 47500.360	GC-HRIDC-C23-DRW-BRD-GAD-01112_A0
36.	Conceptual general arrangement drawing for road under bridge no. 113, 1x4x3 RCC box at CH: 47824.336	GC-HRIDC-C23-DRW-BRD-GAD-01113_A0
37.	Conceptual general arrangement drawing for road under bridge no. 114, 1x4x4 RCC box at CH: 48093.515	GC-HRIDC-C23-DRW-BRD-GAD-01114_A0
38.	Conceptual general arrangement drawing for road under bridge no. 115, 1x4x4 RCC box at CH: 48231.618	GC-HRIDC-C23-DRW-BRD-GAD-01115_A0
39.	Conceptual general arrangement drawing for road under bridge no. 118, 1x4x4 RCC box at CH: 48794.629	GC-HRIDC-C23-DRW-BRD-GAD-01118_A0
40.	Conceptual general arrangement drawing for road under bridge no. 119, 2x5x3.6 RCC box at CH: 49167.307	GC-HRIDC-C23-DRW-BRD-GAD-01119_A0
41.	Conceptual general arrangement drawing for pipe culvert bridge no. 120, 1x1.2 RCC box at CH: 49583.348	GC-HRIDC-C23-DRW-BRD-GAD-01120_A0
42.	Conceptual general arrangement drawing for balancing culvert bridge no. 137, 1x5x4 RCC box at CH:56117.426	GC-HRIDC-C23-DRW-BRD-GAD-01137_A0
43.	Conceptual general arrangement drawing for road under bridge no. 138, 1x5x4 RCC box at CH:56290.652	GC-HRIDC-C23-DRW-BRD-GAD-01138_A0
44.	Conceptual general arrangement drawing for balancing culvert bridge no. 139, 1x5x4 RCC box at CH: 56465.029	GC-HRIDC-C23-DRW-BRD-GAD-01139_A0

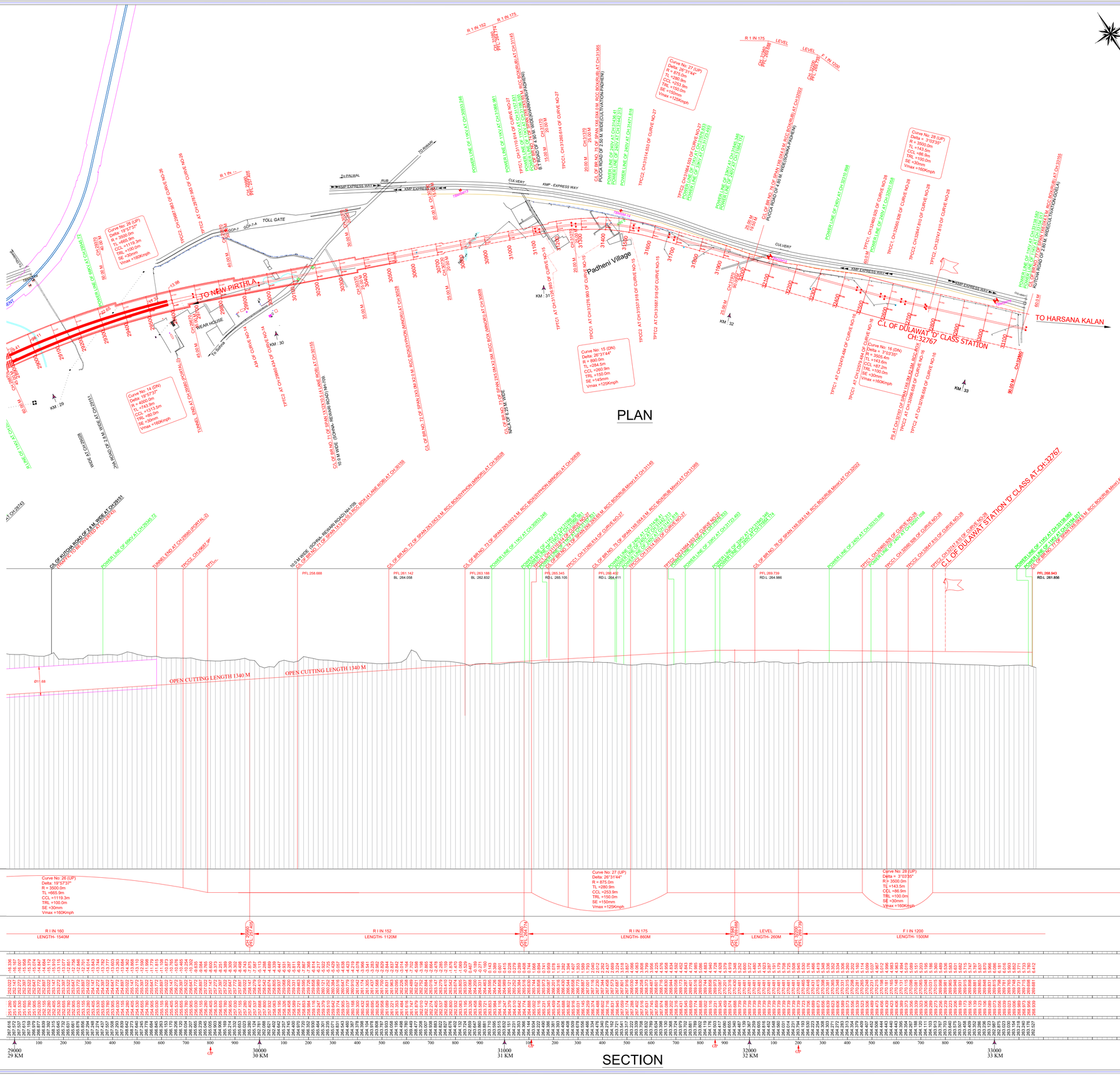
S. No	TITLE	REVISED/NEW DRAWING NO.
45.	Conceptual general arrangement drawing for balancing culvert bridge no. 140, 1x5x4 RCC box at CH: 56755.035	GC-HRIDC-C23-DRW-BRD-GAD-01140_A0
46.	Conceptual general arrangement drawing for road + balancing culvert bridge no. 141, 1x5x4+ 1x2x2 RCC box at CH: 57167.991	GC-HRIDC-C23-DRW-BRD-GAD-01141_A0
47.	Conceptual general arrangement drawing for balancing culvert bridge no. 142, 1x5x4 RCC box at CH: 57546.023	GC-HRIDC-C23-DRW-BRD-GAD-01142_A0
48.	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_A0
49.	Conceptual general arrangement drawing for road balancing culvert bridge no. 144, 1x2x2 RCC box at CH: 57987.046	GC-HRIDC-C23-DRW-BRD-GAD-01144_A0
50.	Conceptual general arrangement drawing for road under bridge no. 145, 1x5x3 RCC box at CH: 58203.149	GC-HRIDC-C23-DRW-BRD-GAD-01145_A0
51.	Conceptual general arrangement drawing for balancing culvert bridge no. 146, 1x2x2 RCC box at CH: 58564.993	GC-HRIDC-C23-DRW-BRD-GAD-01146_A0
52.	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_A0
53.	Conceptual general arrangement drawing for road + balancing culvert bridge no. 149, 1x5x3 + 1x2x2 RCC box at CH:60161.343	GC-HRIDC-C23-DRW-BRD-GAD-01149_A0
54.	Conceptual general arrangement drawing for balancing culvert bridge no. 154, 1x2x2 RCC box at CH: 61163.504	GC-HRIDC-C23-DRW-BRD-GAD-01154_A0
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_A0
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_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
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_A0
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_A0
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_A0
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_A0
2.	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_A0
3.	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_A0
4.2 MAJOR BRIDGES		
4.2.1 MAIN LINE		
1.	Conceptual general arrangement drawing for 4 lane ROB RCC Box bridge no. 71, 1x12x10.5 RCC box at CH:30155	GC-HRIDC-C23-DRW-BRD-GAD-01071_A0
2.	Conceptual general arrangement drawing for PSC U Slab bridge no. 82, 2x12.2 RCC box at CH:34899.045	GC-HRIDC-C23-DRW-BRD-GAD-01082_A0
3.	Conceptual general arrangement drawing for PSC I Girder bridge no. 101, 1x18.3 RCC box at CH: 44246.344	GC-HRIDC-C23-DRW-BRD-GAD-01101_A0
4.	Conceptual general arrangement drawing for PSC I Girder bridge no. 105, 1x18.3 RCC box at CH: 44570.310	GC-HRIDC-C23-DRW-BRD-GAD-01105_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
5.	Conceptual general arrangement drawing for OWG Composite Girder bridge no. 106, 4x18.3 +1x30.5 +8x24.4 + 1x76.2 +2x24.4+1x61 OWG Composite girder at CH: 45495.969	GC-HRIDC-C23-DRW-BRD-GAD-01106_A0 (Sheet 1 of 2 and Sheet 2 of 2)
6.	Conceptual general arrangement drawing for PSC I Girder bridge no. 117, 1x18.3 RCC box at CH: 48663.628	GC-HRIDC-C23-DRW-BRD-GAD-01117_A0
7.	Conceptual general arrangement drawing for proposed major ROR bridge no. 136, 18.3+76.2+18.3 CG + Open Web Girder at CH: 55724.752	GC-HRIDC-C23-DRW-BRD-GAD-01136_A0
8.	Conceptual general arrangement drawing for proposed major RUB no. 147, 1x45.7 Open Web Girder at CH: 59106.085	GC-HRIDC-C23-DRW-BRD-GAD-01147_A0 (Sheet 1 of 2 and Sheet 2 of 2)
9.	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_A0 (Sheet 1 of 2 and Sheet 2 of 2)
10.	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_A0 (Sheet 1 of 2 and Sheet 2 of 2)
11.	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_A0 (Sheet 1 of 2 and Sheet 2 of 2)
12.	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_A0 (Sheet 1 of 2 and 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, 1x45.7 Open Web Girder at CH: 951.499 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04001_A0 (Sheet 1 of 2 and Sheet 2 of 2)
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_A0

S. No	TITLE	REVISED/NEW DRAWING NO.
5	**MISCELLANEOUS DRAWINGS (CONCEPTUAL PLAN)**	
1.	Jurisdictional Sketch for civil works C-23 package	GC-HRIDC-C23-SK-CIVIL-001_A0
2.	Typical embankment/cutting profile	GC-HRIDC-SK-GEN-001
3.	S&T hut	GC-HRIDC-SK-GEN-002
4.	Mini platform shelter	GC-HRIDC-SK-GEN-003
5.	R.C. pre-cast fencing for end platform	GC-HRIDC-SK-GEN-004
6.	Station name board (M.S. steel board)	GC-HRIDC-SK-GEN-005
7.	Proposed toilet block on island platforms	GC-HRIDC-SK-GEN-006
8.	Proposed toilet block on end platforms	GC-HRIDC-SK-GEN-007
9.	Drains for Embankment	GC-HRIDC-SK-GEN-008
10.	Steel barricade	GC-HRIDC-SK-GEN-009
11.	Water booth with one side taps arrangement (end platform)	GC-HRIDC-SK-GEN-010
12.	Water booth with both side taps arrangement (island platform)	GC-HRIDC-SK-GEN-011
13.	Bank/cutting benching at interface locations	GC-HRIDC-SK-GEN-012
14.	Ticket counter for new patli station	GC-HRIDC-SK-GEN-013
15.	Toe wall	GC-HRIDC-SK-GEN-014
16.	Typical details of protection work	GC-HRIDC-SK-GEN-015
17.	Barbed wire fencing	GC-HRIDC-SK-GEN-016
18.	Drainage arrangement (New Patli)	GC-HRIDC-C23-SK-CIVIL-002
19.	Drainage arrangement (Sultanpur)	GC-HRIDC-C23-SK-CIVIL-003
20.	Drainage arrangement (Dhulawat)	GC-HRIDC-C23-SK-CIVIL-004
21.	Drainage arrangement (Chandla Dungerwas)	GC-HRIDC-C23-SK-CIVIL-005
22.	Drainage arrangement (Pachgaon)	GC-HRIDC-C23-SK-CIVIL-006
23.	Circulating area – New Patli	GC-HRIDC-C23-SK-CIVIL-007
24.	Plan showing earmarked area for contractor's facilities and site office	GC-HRIDC-C23-SK-CIVIL-008
25.	Type plan powder toilet for divyangs	N.R.H.Q.E PLAN NO. HQ/20/11-2021

1.ALIGNMENT PLAN & L-SECTION: GRADIENT



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. STANDARD 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.

LIST OF TBM			
TBM No.	Easting	Northing	Elevation
SM-13	695251.956	3123437.877	271.518
SM-14	694735.927	3123849.313	266.755
SM-15	694312.485	3124326.267	269.081
SM-16	693619.439	3124959.064	264.629

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		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHHATEY RAM *PS*		SHIV OM DWIVEDI *CPM/HRIDC*	
SUDHIR AGRAWAL *SPD/CIVIL*		RAJU SOLANKI *DGM/CIVIL/SOUTH*	
KRISHAN CHAND SAINSI *CRE/CIVIL*			

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:

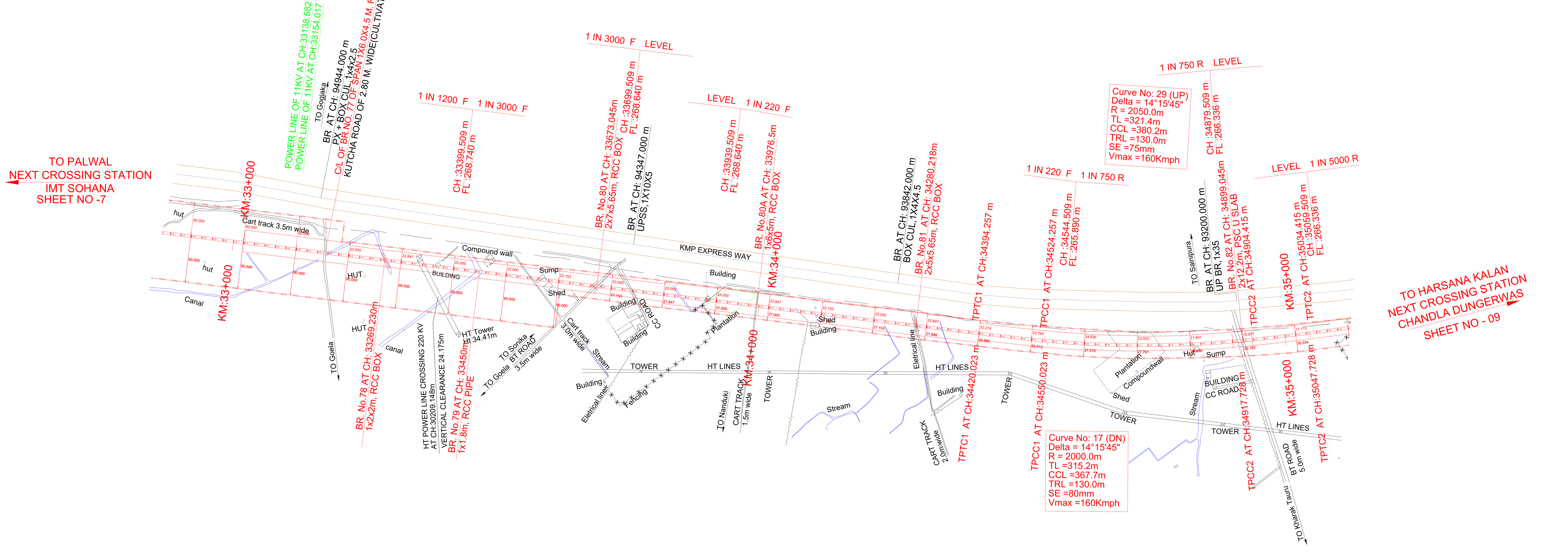
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

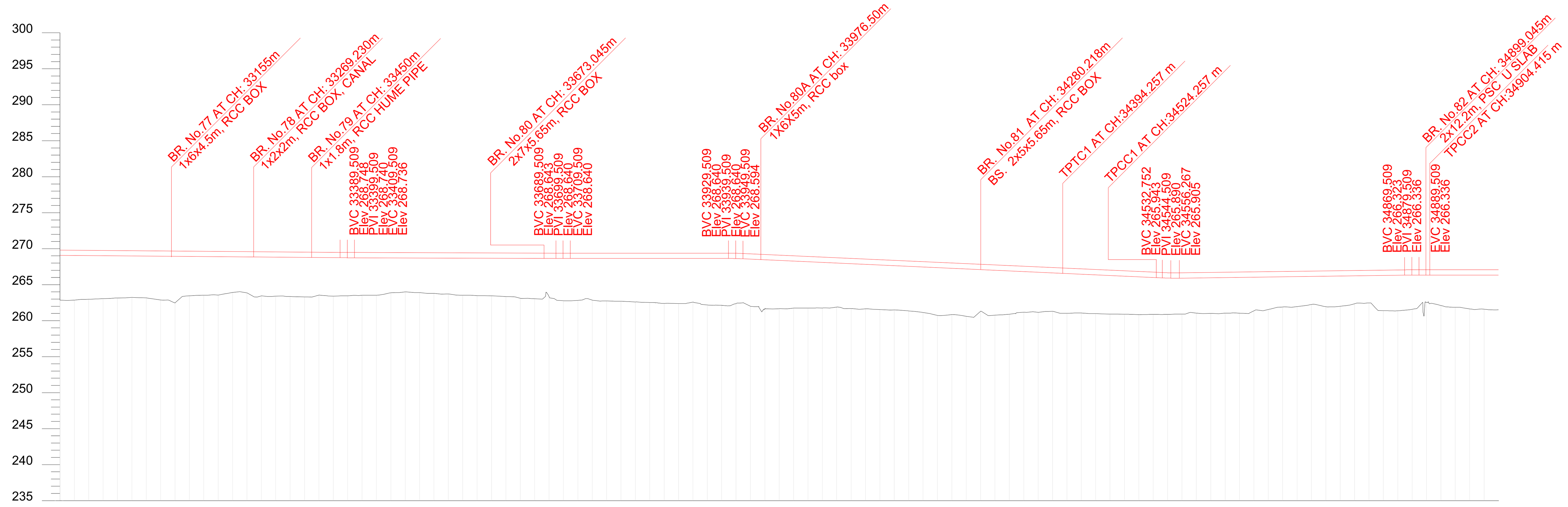
GENERAL CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

SIGN	GC/HORC DRG. NO:-	GC-HRIDC-ALL-DRW-ALN-PAP-29-33KM_A0	ISSUE DE: 11.11.2022
TITLE:	PLAN & LONGITUDINAL SECTION (29 KM TO 33.0 KM)		
N.R.H.Q.E.(P) PLAN NO:			
DIVISION PLAN NO :			
SCALE	HORIZONTAL 1: 4000 / VERTICAL 1:400		
SMC DRG. NO:-	SMC/HRIDC/TUNNELS:- (R-4)		
CONSULTANT:	S.M. CONSULTANTS An ISO 9001 Company Bhubaneswar | Balasore | Secunderabad | South Andaman | New Delhi Web: www.smcindia.com, E-Mail: support@smcindia.com		
DRAWN BY:- L.MOHANTY	CHECKED BY:- SIVRAM J		R. K. VASHISHT PROJECT ENGINEER
RELEASED FOR	PRELIMINARY FOR APPROVAL	TENDER	CONSTRUCTION





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

VERTICAL ALIGNMENT: L=1180.004m 1 IN 1200 F; L=20.000m R=-40000.24m; L=280.000m 1 IN 3000 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	GROUND LEVELS	PROPOSED FORMATION LEVEL	PROPOSED RAIL LEVEL	DEPTH OF CUTTING (-) HIGHT OF BANKING (+)
33000.0	262.843	269.072	269.814	+6.229
33020.0	262.854	269.056	269.798	+6.202
33040.0	262.977	269.039	269.781	+6.062
33060.0	263.065	269.022	269.764	+5.957
33080.0	263.157	269.006	269.748	+5.849
33100.0	263.242	268.989	269.731	+5.747
33120.0	263.168	268.972	269.714	+5.804
33140.0	262.861	268.956	269.698	+6.095
33160.0	262.470	268.939	269.681	+6.469
33180.0	263.458	268.922	269.664	+5.464
33200.0	263.527	268.906	269.648	+5.379
33220.0	263.551	268.889	269.631	+5.338
33240.0	263.915	268.872	269.614	+4.957
33260.0	263.860	268.856	269.598	+4.996
33280.0	263.445	268.839	269.581	+5.394
33300.0	263.415	268.822	269.564	+5.407
33320.0	263.357	268.806	269.548	+5.449
33340.0	263.305	268.789	269.531	+5.484
33360.0	263.550	268.772	269.514	+5.222
33380.0	263.402	268.756	269.498	+5.354
33400.0	263.446	268.741	269.483	+5.295
33420.0	263.524	268.733	269.475	+5.209
33440.0	263.536	268.726	269.468	+5.190
33460.0	263.872	268.719	269.461	+4.847
33480.0	263.998	268.713	269.455	+4.715
33500.0	263.897	268.706	269.448	+4.809
33520.0	263.799	268.699	269.441	+4.900
33540.0	263.703	268.693	269.435	+4.990
33560.0	263.528	268.686	269.428	+5.158
33580.0	263.479	268.679	269.421	+5.200
33600.0	263.450	268.673	269.415	+5.223
33620.0	263.354	268.666	269.408	+5.312
33640.0	263.101	268.659	269.401	+5.558
33660.0	263.048	268.653	269.395	+5.605
33680.0	263.350	268.646	269.388	+5.296
33700.0	262.769	268.640	269.382	+5.871
33720.0	262.825	268.640	269.382	+5.815
33740.0	262.859	268.640	269.382	+5.781
33760.0	262.743	268.640	269.382	+5.897
33780.0	262.700	268.640	269.382	+5.940
33800.0	262.598	268.640	269.382	+6.042
33820.0	262.532	268.640	269.382	+6.108
33840.0	262.408	268.640	269.382	+6.232
33860.0	262.371	268.640	269.382	+6.269
33880.0	262.580	268.640	269.382	+6.060
33900.0	262.180	268.640	269.382	+6.460
33920.0	262.136	268.640	269.382	+6.504
33940.0	262.372	268.627	269.369	+6.255
33960.0	261.999	268.546	269.288	+6.547
33980.0	261.639	268.456	269.198	+6.817
34000.0	261.657	268.365	269.107	+6.708
34020.0	261.756	268.274	269.016	+6.518
34040.0	261.764	268.183	268.925	+6.419
34060.0	261.762	268.092	268.834	+6.330
34080.0	261.886	268.001	268.743	+6.115
34100.0	261.686	267.910	268.652	+6.224
34120.0	261.650	267.819	268.561	+6.169
34140.0	261.544	267.728	268.470	+6.184
34160.0	261.492	267.637	268.379	+6.145
34180.0	261.357	267.546	268.288	+6.189
34200.0	261.144	267.456	268.198	+6.312
34220.0	260.735	267.365	268.107	+6.630
34240.0	260.841	267.274	268.016	+6.433
34260.0	260.609	267.183	267.925	+6.574
34280.0	261.289	267.092	267.834	+5.803
34300.0	260.758	267.001	267.743	+6.243
34320.0	260.901	266.910	267.652	+6.009
34340.0	261.171	266.819	267.561	+5.648
34360.0	261.169	266.728	267.470	+5.559
34380.0	261.300	266.637	267.379	+5.337
34400.0	261.020	266.546	267.288	+5.526
34420.0	261.061	266.456	267.198	+5.395
34440.0	260.974	266.365	267.107	+5.391
34460.0	260.913	266.274	267.016	+5.361
34480.0	260.887	266.183	266.925	+5.296
34500.0	260.838	266.092	266.834	+5.254
34520.0	260.881	266.001	266.743	+5.120
34540.0	260.865	265.917	266.659	+5.052
34560.0	260.911	265.910	266.652	+4.999
34580.0	261.049	265.937	266.679	+4.888
34600.0	260.998	265.964	266.706	+4.966
34620.0	261.043	265.990	266.732	+4.947
34640.0	261.037	266.017	266.759	+4.980
34660.0	261.373	266.044	266.786	+4.671
34680.0	261.549	266.070	266.812	+4.521
34700.0	261.906	266.097	266.839	+4.191
34720.0	261.952	266.124	266.866	+4.172
34740.0	262.242	266.150	266.892	+3.908
34760.0	261.953	266.177	266.919	+4.224
34780.0	262.009	266.204	266.946	+4.195
34800.0	262.358	266.230	266.972	+3.872
34820.0	262.461	266.257	266.999	+3.796
34840.0	261.397	266.284	267.026	+4.887
34860.0	261.372	266.310	267.052	+4.938
34880.0	261.579	266.333	267.075	+4.754
34900.0	262.547	266.336	267.078	+3.789
34920.0	262.109	266.336	267.078	+4.227
34940.0	261.865	266.336	267.078	+4.471
34960.0	261.638	266.336	267.078	+4.698
34980.0	261.597	266.336	267.078	+4.739
35000.0	261.528	266.336	267.078	+4.808

LONGITUDINAL PROFILE
HORIZONTAL-1:5000, 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
- 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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	(signed)	SHIV OM DWIVEDI CPM/HRIDC	(signed)
SUDHIR AGRAWAL DPD/CIVIL	(signed)	RAJU SOLANKI DGM/C/SOUTH	(signed)
KRISHAN CHAND SAINSI CRE/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 Member of the Surbana Jurong Group

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-33-35KM_A0 | ISSUE Dt: 11.11.2022

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

CONSULTANTS :
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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/R3 | SHEET No. 6 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

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	[signature]	SHIV OM DWIVEDI CPM/HRIDC	[signature]
SUDHIR AGRAWAL DPD/CIVIL	[signature]	RAJU SOLANKI DGM/C/SOUTH	[signature]
KRISHAN CHAND SAINSI CRE/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.

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-35-40KM_A0 | ISSUE Dt: 11.11.2022

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

CONSULTANTS : AARVEE ASSOCIATES
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architects engineers & consultants pvt.ltd.
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Tel: 91-40-23737633; Fax: 91-40-23736277
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TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO.AA/2245/AL/DR/P&P/R3 | SHEET No. 7 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 CENTRE 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: R =2850m; TRL=110m; L=584.423m; TRL=80m R =4005m TRL=80m; L=888.143m; TRL=80m R =4005m TRL=80m; L=960.565m; TRL=180m; R =955m; TRL=180m; L=119.887m; TRL=130m; R =-2050m; TRL=130m; L=312.276m; TRL=110m; R =455m; TRL=110m

VERTICAL ALIGNMENT: L=120.000m LEVEL; L=20.000m R=4000.04m; L=457.778m 1 IN 200 F; L=24.444m R=-4000.03m; L=517.102m 1 IN 900 R; L=21.362m R=-4000.09m; L=848.077m 1 IN 155 R; L=22.473m R=4000.09m; L=1287.527m 1 IN 1200 R; L=22.473m R=-4000.09m; L=298.764m 1 IN 155 R; L=20.000m R=5847.46m; L=524.838m 1 IN 330 R; L=20.000m R=-6602.17m; L=655.000m 1 IN 165 R; L=20.000m R=18892.99m; L=274.880m 1 IN 200 R

CHAINAGES	GROUND LEVELS	PROPOSED FORMATION LEVEL	PROPOSED RAIL LEVEL	DEPTH OF CUTTING (-) HIGHT OF BANKING (+)
40000.0	253.176	258.994	259.736	+5.818
40020.0	253.011	258.994	259.736	+5.983
40040.0	252.900	258.994	259.736	+6.094
40060.0	252.833	258.990	259.732	+6.157
40080.0	252.764	258.917	259.659	+6.153
40100.0	252.731	258.817	259.559	+6.086
40120.0	252.771	258.717	259.459	+5.946
40140.0	252.626	258.617	259.359	+5.991
40160.0	252.628	258.517	259.259	+5.889
40180.0	252.579	258.417	259.159	+5.838
40200.0	252.472	258.317	259.059	+5.845
40220.0	252.442	258.217	258.959	+5.775
40240.0	252.347	258.117	258.859	+5.770
40260.0	252.338	258.017	258.759	+5.679
40280.0	252.365	257.917	258.659	+5.552
40300.0	252.587	257.817	258.559	+5.230
40320.0	252.548	257.717	258.459	+5.169
40340.0	252.476	257.617	258.359	+5.141
40360.0	252.485	257.517	258.259	+5.032
40380.0	252.641	257.417	258.159	+4.776
40400.0	252.743	257.317	258.059	+4.574
40420.0	252.823	257.217	257.959	+4.394
40440.0	252.735	257.117	257.859	+4.382
40460.0	252.969	257.017	257.759	+4.048
40480.0	252.875	256.917	257.659	+4.042
40500.0	252.859	256.817	257.559	+3.958
40520.0	252.914	256.717	257.459	+3.803
40540.0	253.045	256.624	257.366	+3.579
40560.0	253.136	256.611	257.353	+3.475
40580.0	253.284	256.634	257.376	+3.350
40600.0	253.320	256.656	257.398	+3.336
40620.0	253.344	256.678	257.420	+3.334
40640.0	253.506	256.700	257.442	+3.194
40660.0	253.468	256.722	257.464	+3.254
40680.0	253.547	256.745	257.487	+3.198
40700.0	253.538	256.767	257.509	+3.229
40720.0	253.578	256.789	257.531	+3.211
40740.0	253.579	256.811	257.553	+3.232
40760.0	253.567	256.834	257.576	+3.267
40780.0	253.577	256.856	257.598	+3.279
40800.0	253.567	256.878	257.620	+3.311
40820.0	253.589	256.900	257.642	+3.311
40840.0	253.582	256.922	257.664	+3.340
40860.0	253.596	256.945	257.687	+3.349
40880.0	253.606	256.967	257.709	+3.361
40900.0	253.646	256.989	257.731	+3.343
40920.0	253.784	257.011	257.753	+3.227
40940.0	253.930	257.034	257.776	+3.104
40960.0	253.720	257.056	257.798	+3.336
40980.0	253.718	257.078	257.820	+3.360
41000.0	253.763	257.100	257.842	+3.337
41020.0	253.859	257.122	257.864	+3.263
41040.0	253.969	257.145	257.887	+3.176
41060.0	254.019	257.167	257.909	+3.148
41080.0	253.963	257.194	257.936	+3.231
41100.0	254.091	257.294	258.036	+3.203
41120.0	254.157	257.423	258.165	+3.266
41140.0	254.035	257.552	258.294	+3.517
41160.0	253.976	257.681	258.423	+3.705
41180.0	253.824	257.810	258.552	+3.986
41200.0	253.742	257.939	258.681	+4.197
41220.0	253.978	258.068	258.810	+4.090
41240.0	254.058	258.197	258.939	+4.139
41260.0	254.073	258.326	259.068	+4.253
41280.0	254.069	258.455	259.197	+4.386
41300.0	254.343	258.584	259.326	+4.241
41320.0	254.398	258.713	259.455	+4.315
41340.0	254.385	258.842	259.584	+4.457
41360.0	254.412	258.972	259.714	+4.560
41380.0	254.565	259.101	259.843	+4.536
41400.0	254.642	259.230	259.972	+4.588
41420.0	254.678	259.359	260.101	+4.681
41440.0	253.868	259.488	260.230	+5.620
41460.0	253.451	259.617	260.359	+6.166
41480.0	253.223	259.746	260.488	+6.523
41500.0	253.250	259.875	260.617	+6.625
41520.0	254.442	260.004	260.746	+5.562
41540.0	254.978	260.133	260.875	+5.155
41560.0	255.029	260.262	261.004	+5.233
41580.0	255.032	260.391	261.133	+5.359
41600.0	255.025	260.520	261.262	+5.495
41620.0	255.025	260.649	261.391	+5.624
41640.0	255.034	260.778	261.520	+5.744
41660.0	254.816	260.907	261.649	+6.091
41680.0	255.033	261.036	261.778	+6.003
41700.0	255.075	261.165	261.907	+6.090
41720.0	255.217	261.294	262.036	+6.077
41740.0	255.350	261.423	262.165	+6.073
41760.0	255.413	261.552	262.294	+6.139
41780.0	255.440	261.681	262.423	+6.241
41800.0	255.611	261.810	262.552	+6.199
41820.0	255.613	261.939	262.681	+6.326
41840.0	255.616	262.068	262.810	+6.452
41860.0	255.621	262.197	262.939	+6.576
41880.0	255.624	262.326	263.068	+6.702
41900.0	255.627	262.455	263.197	+6.828
41920.0	255.533	262.584	263.326	+7.051
41940.0	255.494	262.713	263.455	+7.219
41960.0	255.431	262.807	263.549	+7.376
41980.0	255.435	262.828	263.570	+7.393
42000.0	255.468	262.845	263.587	+7.377
42020.0	255.692	262.862	263.604	+7.170
42040.0	255.833	262.878	263.620	+7.045
42060.0	255.793	262.895	263.637	+7.102
42080.0	255.808	262.912	263.654	+7.104
42100.0	255.909	262.928	263.670	+7.019
42120.0	256.109	262.945	263.687	+6.836
42140.0	256.208	262.962	263.704	+6.754
42160.0	256.180	262.978	263.720	+6.798
42180.0	256.240	262.995	263.737	+6.755
42200.0	256.212	263.012	263.754	+6.800
42220.0	256.300	263.028	263.770	+6.728
42240.0	256.253	263.045	263.787	+6.792
42260.0	256.323	263.062	263.804	+6.739
42280.0	256.311	263.078	263.820	+6.767
42300.0	256.304	263.095	263.837	+6.791
42320.0	256.449	263.112	263.854	+6.663
42340.0	256.554	263.128	263.870	+6.574
42360.0	256.552	263.145	263.887	+6.593
42380.0	256.617	263.162	263.904	+6.545
42400.0	256.707	263.178	263.920	+6.471
42420.0	256.845	263.195	263.937	+6.350
42440.0	257.181	263.212	263.954	+6.031
42460.0	257.054	263.228	263.970	+6.174
42480.0	257.281	263.245	263.987	+5.964
42500.0	257.332	263.262	264.004	+5.930
42520.0	257.256	263.278	264.020	+6.022
42540.0	257.291	263.295	264.037	+6.004
42560.0	257.334	263.312	264.054	+5.978
42580.0	257.456	263.328	264.070	+5.872
42600.0	257.494	263.345	264.087	+5.851
42620.0	257.424	263.362	264.104	+5.938
42640.0	257.499	263.378	264.120	+5.879
42660.0	257.479	263.395	264.137	+5.916
42680.0	257.513	263.412	264.154	+5.899
42700.0	257.582	263.428	264.170	+5.846
42720.0	257.558	263.445	264.187	+5.887
42740.0	257.525	263.462	264.204	+5.937
42760.0	257.604	263.478	264.220	+5.874
42780.0	257.641	263.495	264.237	+5.854
42800.0	257.710	263.512	264.254	+5.802
42820.0	257.665	263.528	264.270	+5.863
42840.0	257.795	263.545	264.287	+5.750
42860.0	257.902	263.562	264.304	+5.660
42880.0	257.928	263.578	264.320	+5.650
42900.0	257.766	263.595	264.337	+5.829
42920.0	257.813	263.612	264.354	+5.799
42940.0	257.866	263.628	264.370	+5.762
42960.0	257.862	263.645	264.387	+5.783
42980.0	257.980	263.662	264.404	+5.682
43000.0	258.189	263.678	264.420	+5.489
43020.0	258.232	263.695	264.437	+5.463
43040.0	258.288	263.712	264.454	+5.424
43060.0	258.235	263.728	264.470	+5.493
43080.0	258.275	263.745	264.487	+5.470
43100.0	258.360	263.762	264.504	+5.402
43120.0	258.450	263.778	264.520	+5.328
43140.0	258.376	263.795	264.537	+5.419
43160.0	258.232	263.812	264.554	+5.580
43180.0	258.141	263.828	264.570	+5.687
43200.0	257.998	263.845	264.587	+5.847
43220.0	257.932	263.862	264.604	+5.930
43240.0	258.091	263.878	264.620	+5.787
43260.0	258.271	263.901	264.643	+5.630
43280.0	258.252	263.999	264.741	+5.747
43300.0	258.306	264.128	264.870	+5.822
43320.0	258.300	264.257	264.999	+5.957
43340.0	257.975	264.386	265.128	+6.411
43360.0	258.000	264.515	265.257	+6.515
43380.0	258.035	264.644	265.386	+6.609
43400.0	258.282	264.773	265.515	+6.491
43420.0	258.427	264.902	265.644	+6.475
43440.0	258.424	265.031	265.773	+6.607
43460.0	258.421	265.160	265.902	+6.739
43480.0	259.148	265.289	266.031	+6.141
43500.0	259.400	265.418	266.160	+6.018
43520.0	258.780	265.547	266.289	+6.767
43540.0	258.469	265.676	266.418	+7.207
43560.0	258.523	265.805	266.547	+7.282
43580.0	258.544	265.932	266.674	+7.388
43600.0	258.594	266.010	266.752	+7.416
43620.0	258.520	266.071	266.813	+7.551
43640.0	258.437	266.131	266.873	+7.694
43660.0	258.426	266.192	266.934	+7.766
43680.0	258.413	266.253	266.995	+7.840
43700.0	258.204	266.313	267.055	+8.109
43720.0	258.406	266.374	267.116	+7.968
43740.0	258.410	266.435	267.177	+8.025
43760.0	258.336	266.495	267.237	+8.159
43780.0	259.408	266.556	267.298	+7.148
43800.0	259.229	266.616	267.358	+7.387
43820.0	258.989	266.677	267.419	+7.688
43840.0	258.674	266.738	267.480	+8.064
43860.0	258.405	266.798	267.540	+8.393
43880.0	258.746	266.859	267.601	+8.113
43900.0	259.130	266.920	267.662	+7.790
43920.0	259.130	266.980	267.722	+7.850
43940.0	258.784	267.041	267.783	+8.257
43960.0	258.690	267.101	267.843	+8.411
43980.0	258.195	267.162	267.904	+8.967
44000.0	258.110	267.223	267.965	+9.113
44020.0	258.089	267.283	268.025	+9.194
44040.0	258.092	267.344	268.086	+9.252
44060.0	258.125	267.405	268.147	+9.280
44080.0	258.165	267.465	268.207	+9.300
44100.0	258.166	267.526	268.268	+9.360
44120.0	256.655	267.586	268.328	+10.931
44140.0	257.412	267.679	268.421	+10.267
44160.0	256.721	267.801	268.543	+11.080
44180.0	256.217	267.922	268.664	+11.705
44200.0	256.558	268.043	268.785	+11.485
44220.0	256.393	268.164	268.906	+11.771
44240.0	255.481	268.285	269.027	+12.804
44260.0	256.327	268.407	269.149	+12.080
44280.0	253.955	268.528	269.270	+14.573
44300.0	253.500	268.649	269.391	+15.149
44320.0	254.089	268.770	269.512	+14.681
44340.0	254.604	268.891	269.633	+14.287
44360.0	255.568	269.013	269.755	+13.445
44380.0	255.368	269.134	269.876	+13.766
44400.0	255.728	269.255	269.997	+13.527
44420.0	255.531	269.376	270.118	+13.845
44440.0	255.816	269.497	270.239	+13.681
44460.0	255.928	269.619	270.361	+13.691
44480.0	255.901	269.740	270.482	+13.839
44500.0	255.973	269.861	270.603	+13.888
44520.0	256.431	269.982	270.724	+13.551
44540.0	256.778	270.104	270.846	+13.326
44560.0	258.349	270.225	270.967	+11.876
44580.0	258.752	270.346	271.088	+11.594
44600.0	259.363	270.467	271.209	+11.104
44620.0	260.074	270.588	271.330	+10.514
44640.0	260.640	270.710	271.452	+10.070
44660.0	261.098	270.831	271.573	+9.733
44680.0	260.298	270.952	271.694	+10.654
44700.0	259.658	271.073	271.815	+11.415
44720.0	260.314	271.194	271.936	+10.880
44740.0	260.283	271.316	272.058	+11.033
44760.0	260.185	271.437	272.179	+11.252
44780.0	260.202	271.558	272.300	+11.356
44800.0	260.430	271.678	272.420	+11.248
44820.0	260.746	271.784	272.526	+11.038
44840.0	260.890	271.884	272.626	+10.994
44860.0	260.860	271.984	272.726	+11.124
44880.0	260.889	272.084	272.826	+11.195
44900.0	260.884	272.184	272.926	+11.300
44920.0	259.955	272.284	273.026	+12.329
44940.0	259.079	272.384	273.126	+13.305
44960.0	260.572	272.484	273.226	+11.912
44980.0	260.588	272.584	273.326	+11.996
45000.0	260.664	272.684	273.426	+12.020

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	[signature]	SHIV OM DWIVEDI CPM/HRIDC	[signature]
SUDHIR AGRAWAL DPD/CIVIL	[signature]	UMA. M. RAO. DGM/C/WEST	[signature]
KRISHAN CHAND SAINSI CRE/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.

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

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-40-45KM_A0 | ISSUE Dt: 11.11.2022

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

CONSULTANTS : AARVEE ASSOCIATES
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

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

DRG.NO.AA/2245/AL/DR/P&P/R3 | SHEET No. 8 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

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	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	[signature]	SHIV OM DWIVEDI CPM/HRIDC	[signature]
SUDHIR AGRAWAL DPD/CIVIL	[signature]	UMA. M. RAO. DGM/C/WEST	[signature]
KRISHAN CHAND SAINSI CRE/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.

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

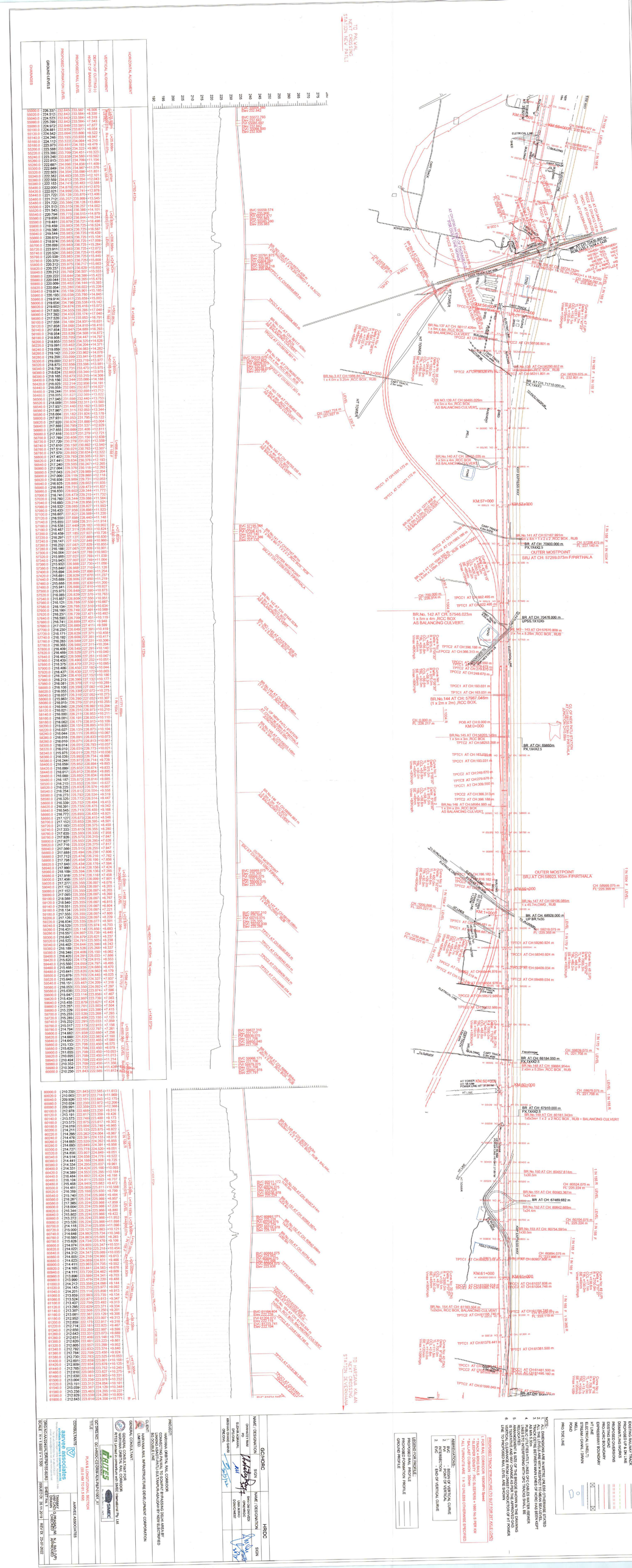
GC DRG.NO.	GC-HRIDC-ALL-DRW-ALN-P&P-45-50KM_A0	ISSUE Dt: 11.11.2022

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

CONSULTANTS : AARVEE ASSOCIATES
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

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

DRG.NO.AA/2245/AL/DR/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


CHAINAGES
GROUND LEVELS
PROPOSED FORMATION LEVEL
PROPOSED RAIL LEVEL
DEPTH OF CUTTING (+)
DEPTH OF BANKING (+)
VERTICAL ALIGNMENT
HORIZONTAL ALIGNMENT
KM 55+000
KM 56+000
KM 57+000
KM 58+000
KM 59+000
KM 60+000
KM 61+000
KM 62+000
KM 63+000
KM 64+000
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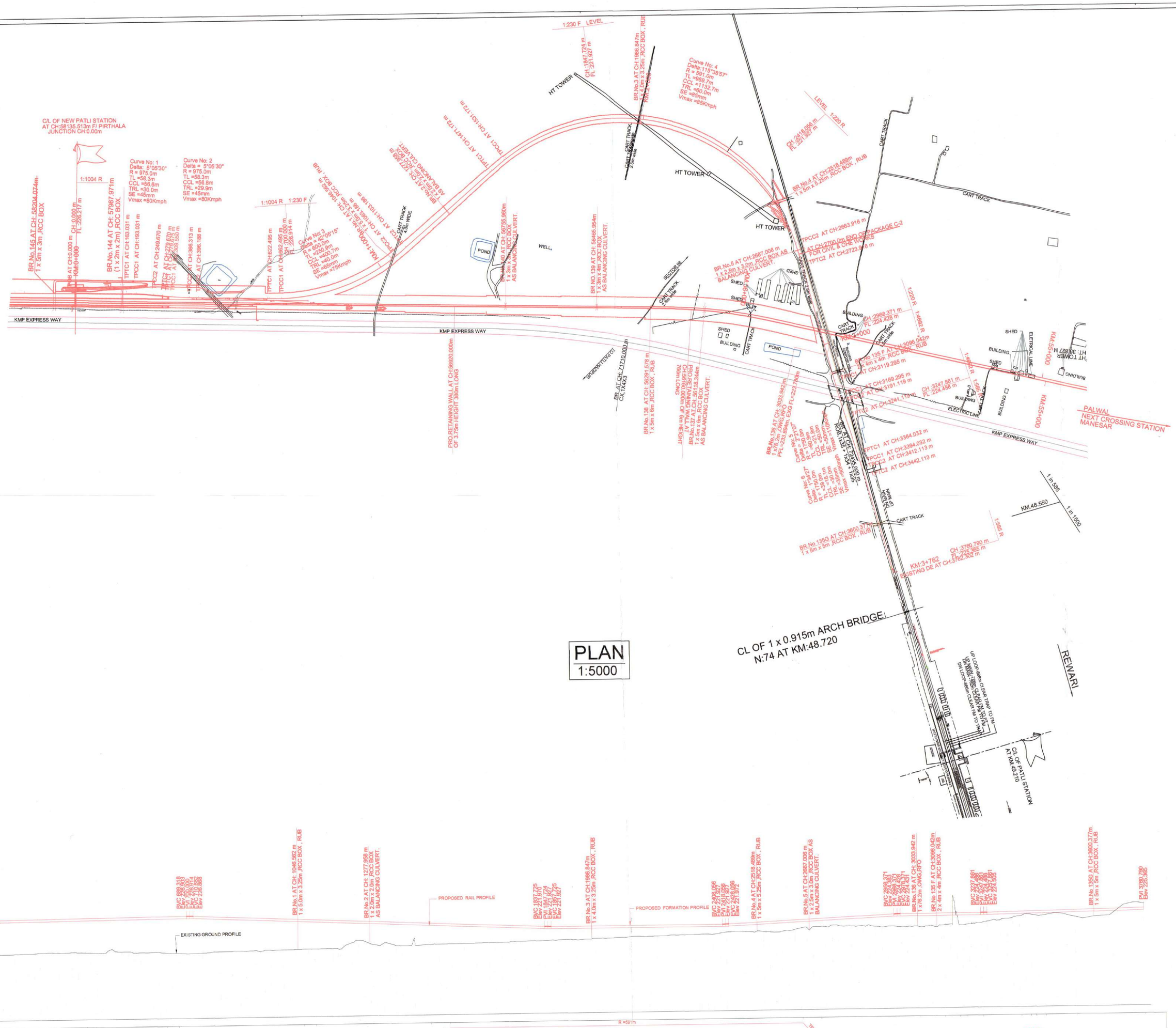
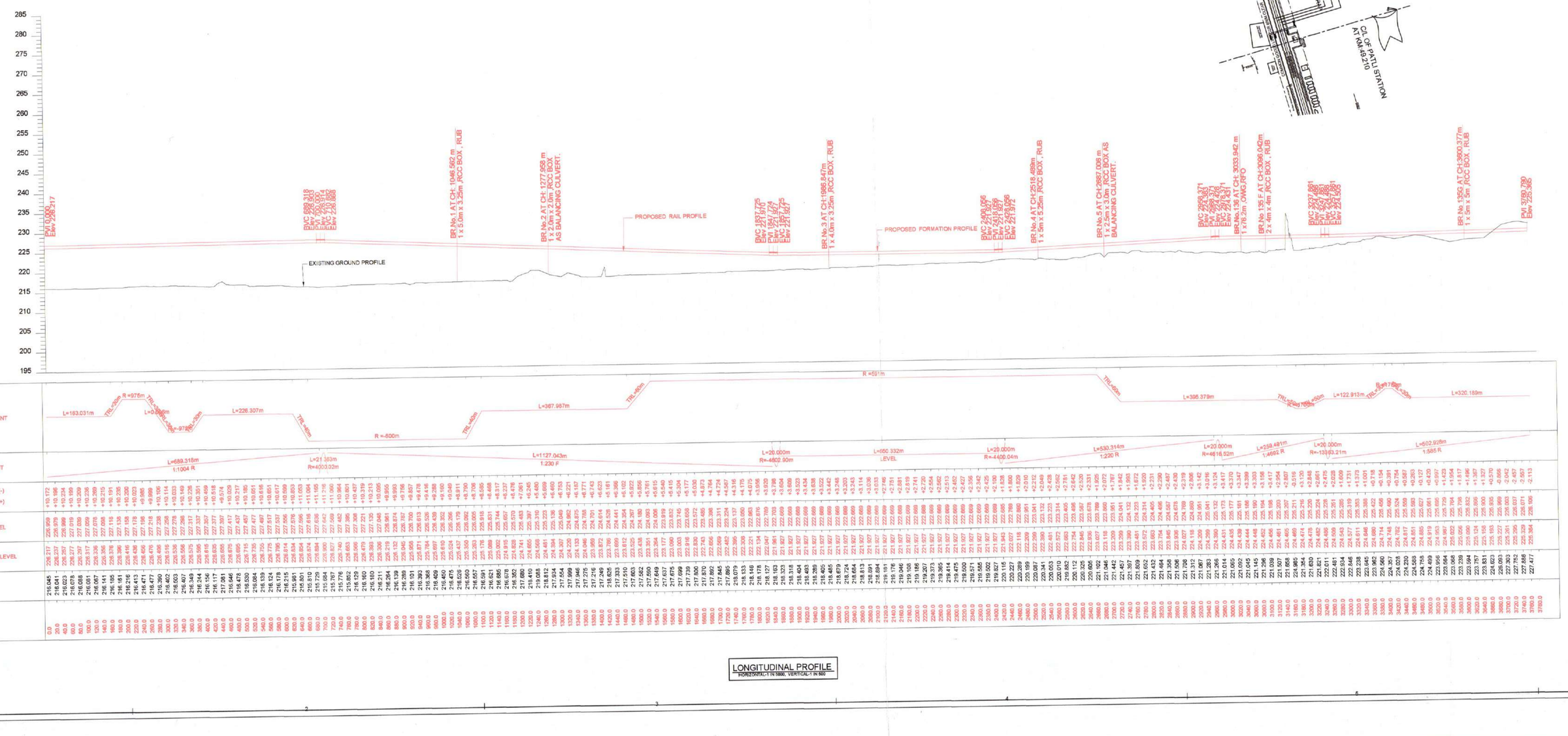
KM 74+000
KM



PLAN
1:5000



LONGITUDINAL PROFILE
HORIZONTAL SCALE : 1:5000 VERTICAL : 1:100

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.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DMRVED/ CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA M.RAO DGM/GM/WEST	
KRISHAN CHAND SAINSI CRED/CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR/KASAULDAH 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.

GC DRG.NO: GC-HRIDC-C2-DRW-AL1-PAP-03001_A1

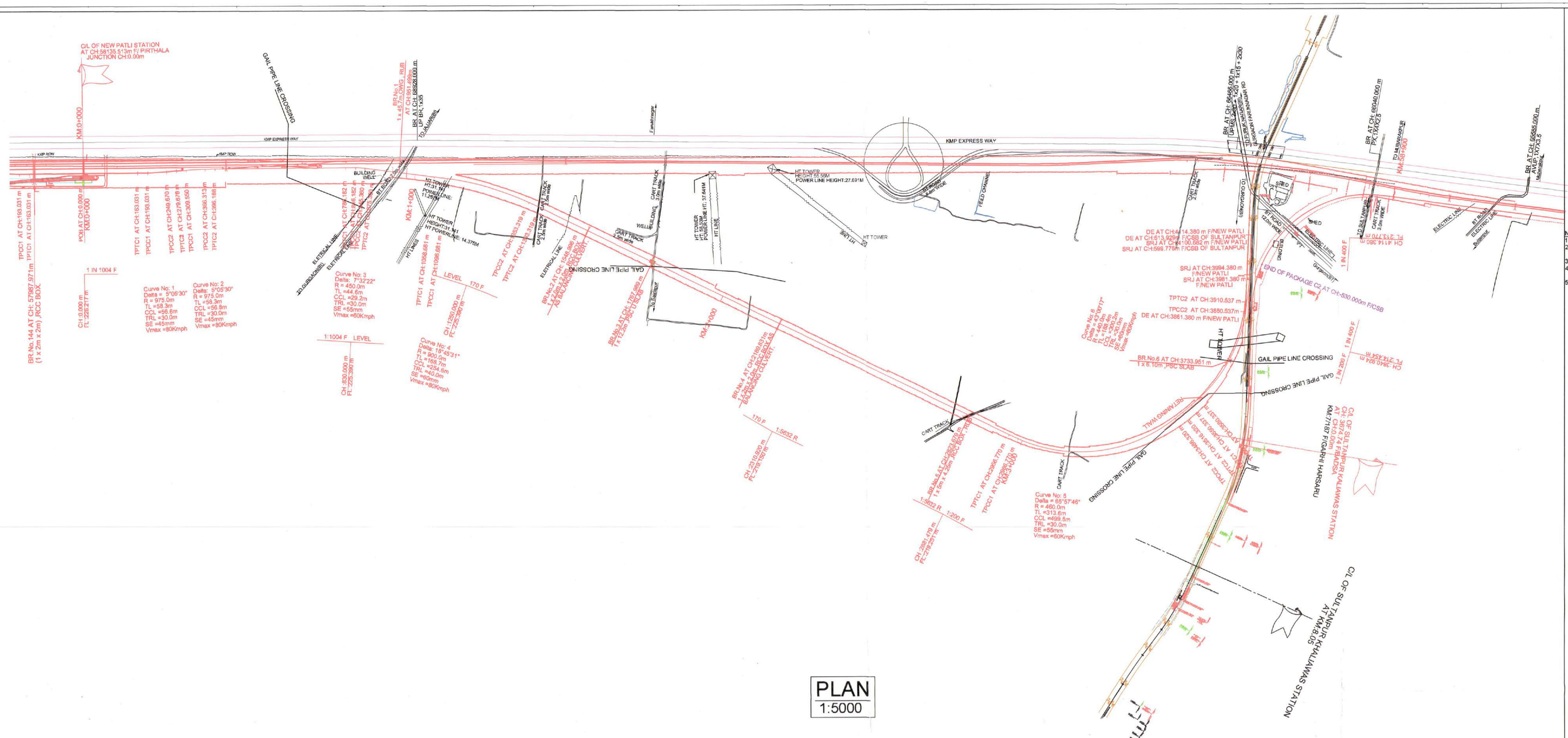
TITLE:
PLAN
CONNECTIVITY TOWARDS PATLI

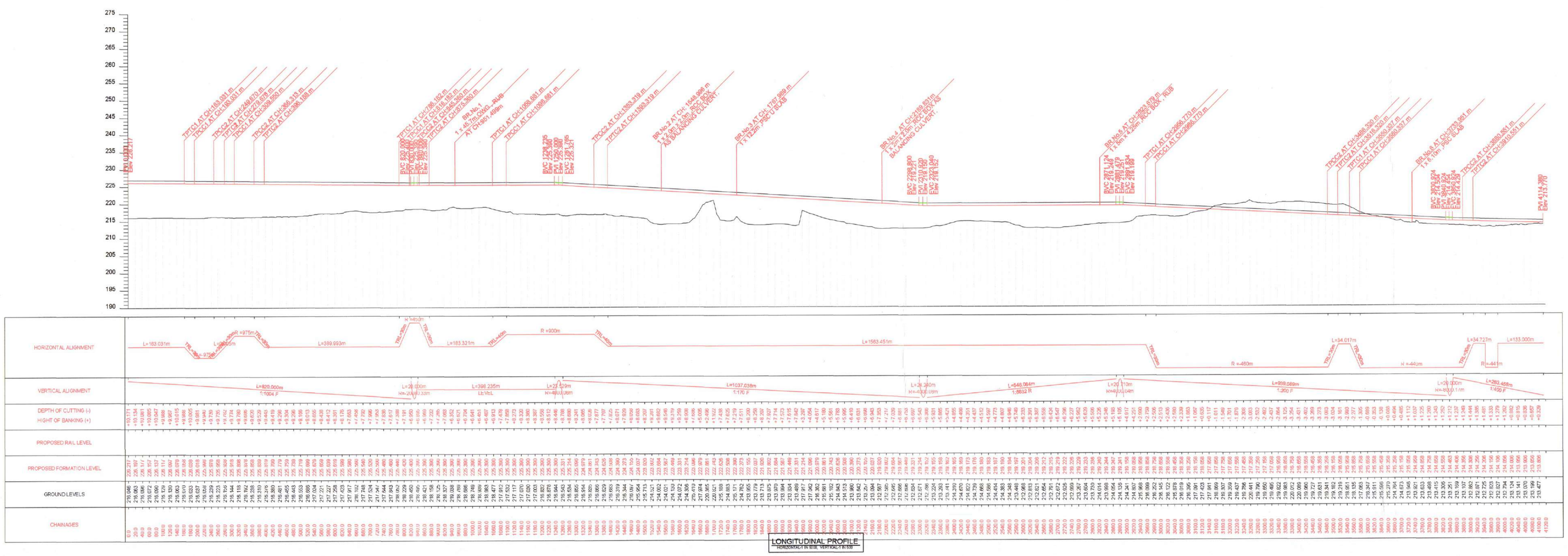
CONSULTANTS:
aarvee associates
architects engineers & consultants pvt.ltd.
Raviraj Residency, Siddiqar Colony Main Rd., Hyderabad-82. India
Tel: 91-40-23737535, Fax: 91-40-23736277
e-mail: rsbaysp@aarvea.net; web:www.aarvee.net

AARVEE ASSOCIATES

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

DRG.NO. AA/2245/ALIDR/PSP/REV-2
SCALE : 1:1000
SHEET No. 1
ISSUED Dt: 26.11.2016
REV Dt: 28-07-2022





LEGEND:

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

NOTE:-

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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 = 1680 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 :

- EXISTING RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE

GC/HORC			HRIDC		
NAME / DESIGNATION	SIGN		NAME / DESIGNATION	SIGN	
CHAHATEY RAM PD			SHIV OM DWIVEDI CPM/HRIDC		
SUDHIR AGRAWAL DPD/OVIL			UMA M RAO DGM/GWEST		
KRISHAN CHAND SAINSI CREO/OVIL					

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAOTA BY NEW ELECTRIFIED BW 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.

GC DRG.NO.: GC-HRIDC-2-DRW-ALN-PLP-04001_A1

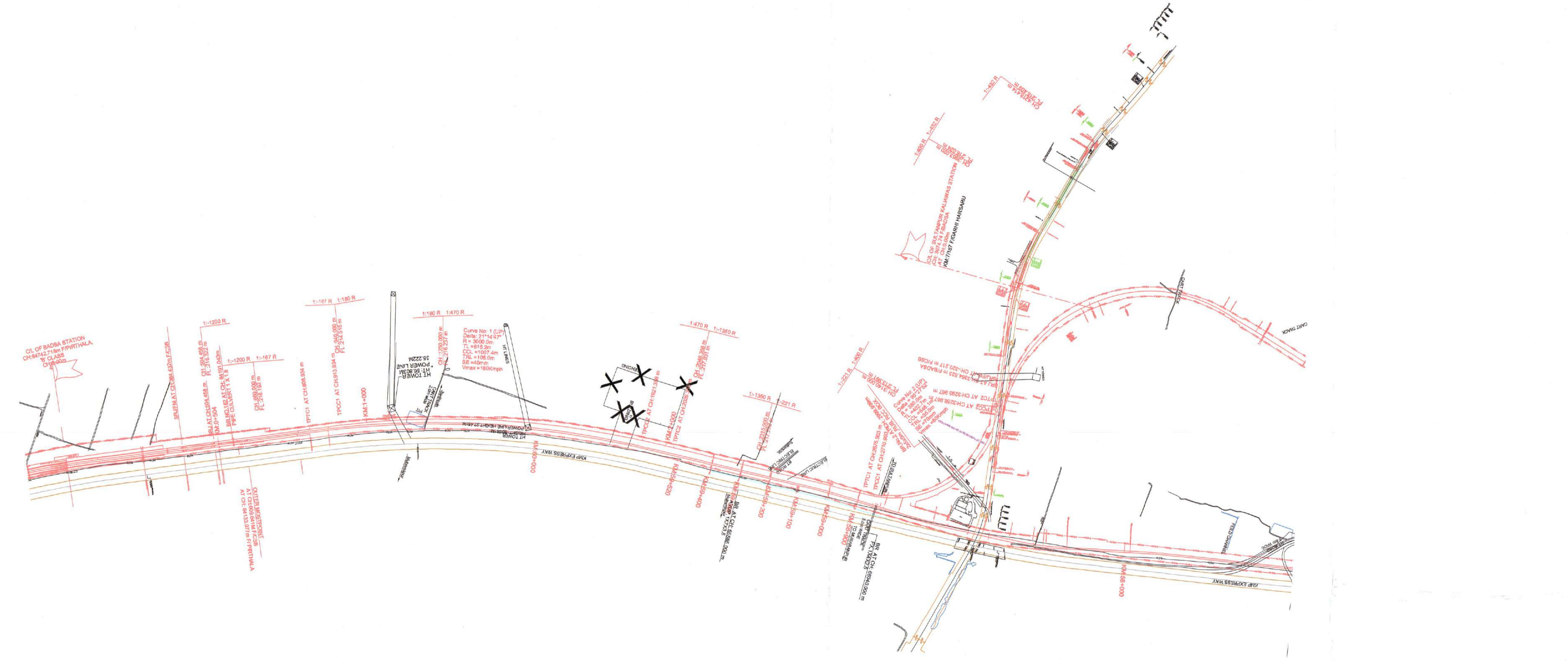
TITLE:
PLAN
CONNECTIVITY TOWARDS SULTANPUR

CONSULTANTS:
aarvee associates
architects engineers & consultants pvt ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23736133, Fax: 91-40-23736277
e-mail: railway@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES

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

DRG NO. AA/2245/ALIDR/SP/REV-2 | SHEET No: 1
SCALE : Hr 1:5000, V = 1:500 | ISSUED Dt: 26.11.2019 | REV Dt: 26-07-2022



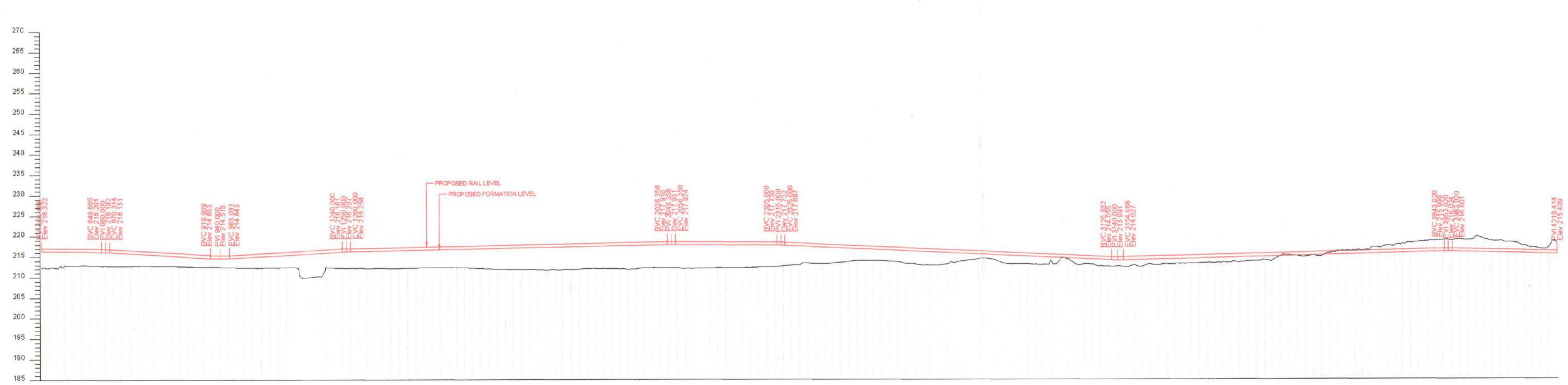
LEGEND:
- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

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: 180KMPH 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



CHAINAGES	GROUND LEVELS	PROPOSED FORMATION LEVEL	PROPOSED RAIL LEVEL	DEPTH OF CUTTING (-) HIGHT OF BANKING (+)
500.0				
520.0	212.212	216.309	217.051	+4.097
540.0	212.336	216.292	217.034	+3.956
560.0	212.893	216.276	217.018	+3.383
580.0	212.865	216.259	217.001	+3.394
600.0	212.911	216.242	216.984	+3.331
620.0	212.883	216.226	216.968	+3.343
640.0	212.848	216.209	216.951	+3.361
660.0	212.803	216.179	216.921	+3.376
680.0	212.735	216.073	216.815	+3.338
700.0	212.784	215.953	216.695	+3.169
720.0	212.781	215.833	216.575	+3.052
740.0	212.810	215.713	216.455	+2.903
760.0	212.820	215.593	216.335	+2.773
780.0	212.774	215.474	216.216	+2.700
800.0	212.779	215.354	216.096	+2.575
820.0	212.739	215.234	215.976	+2.495
840.0	212.697	215.114	215.856	+2.417
860.0	212.646	214.994	215.736	+2.348
880.0	212.579	214.874	215.616	+2.295
900.0	212.580	214.755	215.497	+2.175
920.0	212.548	214.636	215.378	+2.088
940.0	212.502	214.582	215.324	+2.080
960.0	212.438	214.627	215.369	+2.189
980.0	212.381	214.737	215.479	+2.356
1000.0	212.328	214.848	215.590	+2.520
1020.0	212.303	214.959	215.701	+2.656
1040.0	212.293	215.070	215.812	+2.777
1060.0	212.330	215.182	215.924	+2.852
1080.0	212.372	215.293	216.035	+2.921
1100.0	212.446	215.404	216.146	+2.958
1120.0	212.411	215.515	216.257	+3.104
1140.0	209.826	215.626	216.368	+5.800
1160.0	210.010	215.737	216.479	+5.727
1180.0	210.173	215.848	216.590	+5.675
1200.0	212.443	215.959	216.701	+3.516
1220.0	212.295	216.070	216.812	+3.775
1240.0	212.234	216.181	216.923	+3.947
1260.0	212.213	216.258	217.000	+4.045
1280.0	212.257	216.301	217.043	+4.044
1300.0	212.144	216.343	217.085	+4.199
1320.0	212.212	216.386	217.128	+4.174
1340.0	212.246	216.428	217.170	+4.182
1360.0	212.179	216.471	217.213	+4.292
1380.0	212.176	216.514	217.256	+4.338
1400.0	212.236	216.556	217.298	+4.320
1420.0	212.276	216.599	217.341	+4.323
1440.0	212.299	216.641	217.383	+4.342
1460.0	212.333	216.684	217.426	+4.351
1480.0	212.337	216.726	217.468	+4.389
1500.0	212.350	216.769	217.511	+4.419
1520.0	212.379	216.811	217.553	+4.432
1540.0	212.337	216.854	217.596	+4.517
1560.0	212.228	216.896	217.638	+4.668
1580.0	212.125	216.939	217.681	+4.814
1600.0	212.017	216.982	217.724	+4.965
1620.0	211.937	217.024	217.766	+5.087
1640.0	211.889	217.067	217.809	+5.178
1660.0	211.859	217.109	217.851	+5.250
1680.0	211.857	217.152	217.894	+5.295
1700.0	211.820	217.194	217.936	+5.374
1720.0	211.758	217.237	217.979	+5.479
1740.0	211.749	217.279	218.021	+5.530
1760.0	211.806	217.322	218.064	+5.516
1780.0	211.810	217.364	218.106	+5.554
1800.0	211.870	217.407	218.149	+5.537
1820.0	211.926	217.449	218.191	+5.523
1840.0	212.052	217.492	218.234	+5.440
1860.0	212.059	217.535	218.277	+5.476
1880.0	212.070	217.577	218.319	+5.507
1900.0	212.004	217.620	218.362	+5.616
1920.0	211.960	217.662	218.404	+5.702
1940.0	211.876	217.705	218.447	+5.829
1960.0	211.996	217.747	218.489	+5.751
1980.0	212.220	217.790	218.532	+5.570
2000.0	212.271	217.832	218.574	+5.561
2020.0	212.239	217.875	218.617	+5.636
2040.0	212.259	217.917	218.659	+5.658
2060.0	212.207	217.921	218.663	+5.714
2080.0	212.119	217.906	218.648	+5.787
2100.0	212.092	217.891	218.633	+5.799
2120.0	212.132	217.876	218.618	+5.744
2140.0	212.164	217.862	218.604	+5.698
2160.0	212.214	217.847	218.589	+5.633
2180.0	212.240	217.832	218.574	+5.592
2200.0	212.257	217.817	218.559	+5.560
2220.0	212.273	217.802	218.544	+5.529
2240.0	212.270	217.788	218.530	+5.518
2260.0	212.402	217.773	218.515	+5.371
2280.0	212.449	217.758	218.500	+5.309
2300.0	212.520	217.743	218.485	+5.223
2320.0	212.703	217.707	218.449	+5.004
2340.0	212.880	217.619	218.361	+4.739
2360.0	212.971	217.528	218.270	+4.557
2380.0	213.396	217.437	218.179	+4.041
2400.0	213.268	217.347	218.089	+4.079
2420.0	213.272	217.256	217.998	+3.984
2440.0	213.390	217.165	217.907	+3.775
2460.0	213.555	217.075	217.817	+3.520
2480.0	213.785	216.984	217.726	+3.199
2500.0	213.990	216.893	217.635	+2.903
2520.0	214.006	216.803	217.545	+2.797
2540.0	214.001	216.712	217.454	+2.711
2560.0	213.974	216.621	217.363	+2.647
2580.0	213.783	216.530	217.272	+2.747
2600.0	213.686	216.440	217.182	+2.754
2620.0	213.266	216.349	217.091	+3.083
2640.0	213.262	216.258	217.000	+2.996
2660.0	212.899	216.168	216.910	+3.269
2680.0	212.901	216.077	216.819	+3.176
2700.0	212.890	215.986	216.728	+3.096
2720.0	213.136	215.896	216.638	+2.760
2740.0	213.477	215.805	216.547	+2.328
2760.0	213.891	215.714	216.456	+1.823
2780.0	214.073	215.624	216.366	+1.551
2800.0	214.369	215.533	216.275	+1.164
2820.0	214.453	215.442	216.184	+0.989
2840.0	214.172	215.352	216.094	+1.180
2860.0	213.425	215.261	216.003	+1.836
2880.0	213.157	215.170	215.912	+2.013
2900.0	213.164	215.080	215.822	+1.916
2920.0	213.162	214.989	215.731	+1.827
2940.0	213.059	214.898	215.640	+1.839
2960.0	213.017	214.808	215.550	+1.791
2980.0	213.584	214.717	215.459	+1.133
3000.0	214.338	214.626	215.368	+0.288
3020.0	214.260	214.536	215.278	+0.276
3040.0	212.964	214.445	215.187	+1.481
3060.0	213.148	214.354	215.096	+1.206
3080.0	213.073	214.263	215.005	+1.190
3100.0	212.616	214.173	214.915	+1.557
3120.0	212.545	214.082	214.824	+1.537
3140.0	212.546	214.016	214.758	+1.470
3160.0	212.374	214.041	214.783	+1.667
3180.0	212.802	214.091	214.833	+1.289
3200.0	212.506	214.141	214.883	+1.635
3220.0	213.061	214.191	214.933	+1.130
3240.0	212.906	214.241	214.983	+1.335
3260.0	213.133	214.291	215.033	+1.158
3280.0	213.112	214.341	215.083	+1.229
3300.0	213.232	214.391	215.133	+1.159
3320.0	213.222	214.441	215.183	+1.219
3340.0	213.294	214.491	215.233	+1.197
3360.0	213.354	214.541	215.283	+1.187
3380.0	213.390	214.591	215.333	+1.201
3400.0	213.665	214.641	215.383	+0.976
3420.0	213.492	214.691	215.433	+1.199
3440.0	213.543	214.741	215.483	+1.198
3460.0	213.769	214.791	215.533	+1.022
3480.0	213.885	214.841	215.583	+0.956
3500.0	214.136	214.891	215.633	+0.755
3520.0	214.006	214.941	215.683	+0.935
3540.0	215.059	214.991	215.733	-0.068
3560.0	215.255	215.041	215.783	-0.214
3580.0	215.062	215.091	215.833	+0.029
3600.0	214.900	215.141	215.883	+0.241
3620.0	215.195	215.191	215.933	-0.004
3640.0	214.935	215.241	215.983	+0.306
3660.0	215.682	215.291	216.033	-0.391
3680.0	216.233	215.341	216.083	-0.892
3700.0	216.254	215.391	216.133	-0.863
3720.0	216.402	215.441	216.183	-0.961
3740.0	216.319	215.491	216.233	-0.828
3760.0	216.721	215.541	216.283	-1.180
3780.0	217.113	215.591	216.333	-1.522
3800.0	217.546	215.641	216.383	-1.905
3820.0	217.557	215.691	216.433	-1.866
3840.0	218.100	215.741	216.483	-2.359
3860.0	218.333	215.791	216.533	-2.542
3880.0	218.454	215.841	216.583	-2.613
3900.0	218.589	215.891	216.633	-2.698
3920.0	218.765	215.941	216.683	-2.824
3940.0	218.866	215.991	216.733	-2.875
3960.0	218.857	216.007	216.749	-2.850
3980.0	219.041	215.961	216.703	-3.080
4000.0	218.917	215.915	216.657	-3.002
4020.0	219.575	215.869	216.611	-3.706
4040.0	219.193	215.822	216.564	-3.371
4060.0	218.691	215.776	216.518	-2.915
4080.0	218.699	215.730	216.472	-2.969
4100.0	218.375	215.683	216.425	-2.692
4120.0	218.170	215.637	216.379	-2.533
4140.0	217.461	215.591	216.333	-1.870
4160.0	217.087	215.544	216.286	-1.543
4180.0	216.696	215.498	216.240	-1.198
4200.0	217.293	215.452	216.194	-1.841
4220.0				

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA M.RAO DGM/CIVIL/EST	
KRISHAN CHAND SAINSI CRE/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

GC DRG NO.: GC-HRIDC-C2-DRW-ALN-P&P-08001_A0

TITLE:
CONNECTIVITY TOWARDS SULTANPUR FROM BADSA

CONSULTANTS: AARVEE ASSOCIATES
aarvee associates
architects engineers & consultants pvt ltd

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

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

2.ESP/YARD PLAN

LEGEND

NAME BOARD	
TP	
PT	
HAND PUMP(H.P)	
WIRE FENCE	
DS, DE	
OHE	
LAND TO BE REQUIRED	

N.R.H.Q.E. PLAN NO: DLI-08-07-2022

NOTES :-

1. ALL CHAINAGES ARE TAKEN FROM C.L OF PATLI STATION BUILDING AS 0.00 M .
2. ALL CHAINAGES AND LEVELS ARE IN METRES.
3. THIS DRAWING IS PREPARED BASED ON DATA COLLECTED FROM SITE & WILL SUPERSEDE DRG. NO N.R.H.Q.E PLAN NO DLI/14/03-2007/R-3 (APPROVED ON 21.12.2018).ALL EXISTING DETAILS ARE AS PER EXISTING SITE FEATURES AND CONDITIONS.THE GRADIENTS ARE MARKED AS PER SITE SURVEY AND NO REGRADING IS PROPOSED.
4. TRACK CIRCUIT FIT FOR PSC SLEEPERS SHALL BE PROVIDED THROUGH OUT THE YARD INCLUDING 400 M FROM OUTER MOST PT ON EITHER END WITH GLUED INSULATED JOINTS AS REQUIRED BY THE S&T DEPT.
5. RULLING GRADIENT OF EXISTING IR LINE IS 1 IN 200 AND HORC LINE IS 1 IN 150.
6. STAGGERED GLUED JOINTS ARE TO BE PROVIDED FOR TOKEN LESS BLOCK WORKING SYSTEM.
7. LONG PSC SLEEPERS ARE TO BE PROVIDED FOR P&C TO FIX PT MACHINE.
8. 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
9. PRECAUTION OF OFC / SIGNALING CABLES SHOULD BE TAKEN DURING EXECUTION OF WORK.
10. OHE MASTS SHALL NOT BE LOCATED IN BETWEEN TRACKS WHEREVER TRACK CENTER IS LESS THAN 5.30 M.
11. EXISTING PASSENGER AMENITIES ARE TO BE MAINTAINED OR IMPROVED.
12. ALL EXISTING BRIDGES & OTHER STRUCTURES ARE EXACTLY AS PER FIELD SURVEY & ACCORDINGLY CHAINAGES ARE CORRECTED FROM CENTRE OF STATION BUILDING.
13. ALL LT/HT OVER HEAD/UNDERGROUND POWER LINE CROSSINGS ARE TO BE MODIFIED AS PER THE REGULATION FOR ELECT.TRACK CROSSING, WHERE EVER REQUIRED AS PER RB/RDSO/IRSOD.
14. THIS SUPERSESSION OF REVISION -3 IS DONE DUE TO CONSTRUCTION OF HORC's TWO CONNECTING LINES AT DELHI END AS PROPOSED, WHICH WILL BE CONECTED TO HORC LINE AT MANESAR & NEW PATLI STATION OF HORC.
15. RAILWAY BOUNDARY SHOWN IN THE ESP SHOULD NOT BE REFERRED FOR ISSUE / DISPUTES RELATED TO LAND.N.R BOUNDARY IS AS PER LAND PLAN WITH RESTORATION LABLE IS **DD01262 AND DD01263.**
16. THERE IS REQUIREMENT OF EXTENSION OF BRIDGES FALLING IN THIS YARD.
17. ONE HOT AXLE SIDING IS THERE IN LINE NO1 (COMMON LOOP) AND ITS RELOCATION & MERGING WITH SHUNTING NECK IS PROPOSED TO INCREASE CSR OF LINE NO 1.
18. NOMENCLATURE OF COMMON GOODS LINE TO BE CHANGED AS COMMON LOOP LINE.
19. LEVEL CROSSING NO. 35 AND 36 HAVE BEEN CLOSED DUE TO CONSTRUCTION OF LHS AT KM 45.925 AND 47.402 RESPECTIVELY.
20. ***WORK SANCTIONED VIDE RAILWAY BOARD LETTER NO.2019/JV-CELL/HARYANA/PROJECT/06 DATED, 21.10.2020 &LETTER EVEN NO DATED.29.10.2020. (PINK BOOK 2022-23 ITEM NO.1194)***
21. ***PROVISION OF 6.1 M WIDE FOB(ref: PROPOSED & SHORTLISTED DELHI DIVISION PLAN HEAD NO.53),RAISING OF PLATFORM TO HIGH LEVEL (ref:PROCESSED BY DELHI DIVISION PLAN HEAD 53),SAND HUMP ON DLI END & OVERRUN ON RE END ISOLATION FOR LINE NO 4&5 WILL BE EXECUTED BY DIVISION'S.***
22. TRACK MACHINE SIDING IS PROVIDED AT MANESAR STATION ON HORC LINE AT ABOUT 6.0 KM AWAY.
23. REGRADING SHALL BE DONE BETWEEN CH 652.63 TO 1308.00 & 1513.0 TO 1870.00 FOR R&d LOOP LINE.
24. THE LAND ACQUISITION IF REQUIRED TO EXECUTE STANDARD LAYOUT OF SAND HUMP MAY BE DONE BY HRIDC AT CH.919.08, 448.93 & 611.00 M.
25. ROR IS AN OWG SPAN OF 76.2M WITH BOTH ABUTMENTS PLANNED OUTSIDE RAILWAY BOUNDARY AND KEEPING VERTICAL CLEARANCE AS PER SOD-04 OF HIGH RISE OHE
26. ALL SAND HUMPS SHALL BE CONSTRUCTED AS PER RDSO STANDARD DRAWING NO. T-347.

Signature block

CE/P&D	SANJAY KUMAR SRIVASTAVA Digitally signed by SANJAY KUMAR SRIVASTAVA Date:2022.07.13 12:38:45 +05'30'
CTPM	SANJAY BAJPAI Digitally signed by SANJAY BAJPAI Date:2022.07.13 11:37:11 +05'30'
DRM-DLI	DIMPY GARG Digitally signed by DIMPY GARG Date:2022.06.14 07:04:41 +05'30'
ADRM-INFRA-DLI	ANUPUM SINGH Digitally signed by ANUPUM SINGH Date:2022.06.14 06:33:20 +05'30'
SRDEN-CO-DLI	AMIT KUMAR Digitally signed by AMIT KUMAR Date:2022.06.14 02:54:17 +05'30'
SRDOM- DLI	RAJNEESH KUMAR SRIVASTAVA Digitally signed by RAJNEESH KUMAR SRIVASTAVA Date:2022.06.10 02:39:58 +05'30'
SRDCM-DLI	Basant Kumar Digitally signed by Basant Kumar Date:2022.07.01 03:48:38 +05'30'
SRDSTE-DLI	ANURAG ANAND Digitally signed by ANURAG ANAND Date:2022.06.10 05:00:09 +05'30'
SRDME-CNW-DLI	ANANT KUMAR Digitally signed by ANANT KUMAR Date:2022.07.01 05:08:33 +05'30'
SRDEE-TRD-DLI	ATAMJEET SINGH Digitally signed by ATAMJEET SINGH Date:2022.06.13 02:07:10 +05'30'
SRDEN-5-DLI	SUMAN BALHARA Digitally signed by SUMAN BALHARA Date:2022.06.13 01:21:29 +05'30'
ADEN-DEE	JORA SINGH Digitally signed by JORA SINGH Date:2022.06.10 01:24:20 +05'30'

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD	-SD-	SHIV OM DWIVEDI CPM/HRIDC	-SD-
SUDHIR AGRAWAL DPD/CIVIL	-SD-	UMA.M.RAO DGM/C-1	-SD-
AJAY VIJAYVARGIYA DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL	-SD-	DGM/Elect.	
AMARNATH SINGH CRE/S&T	-SD-		

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

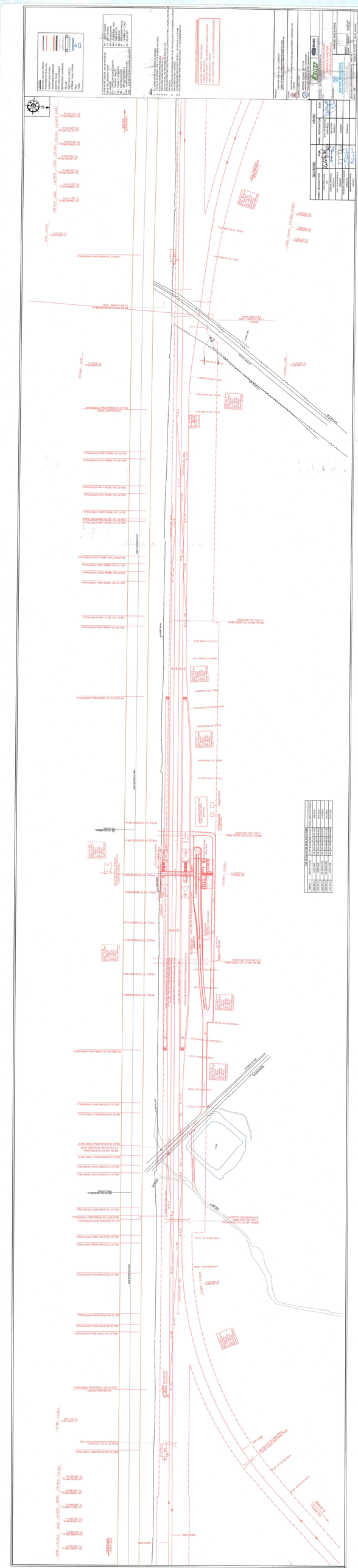
RITES Limited in consortium with SMEC International Pty. Ltd.

SIGN

GC/HORC DRG. NO:-	GC-HRIDC-C2-DRW-ALN-ESP-001-A0
DRAWING NAME	ESP OF PATLI STATION
N.R.H.Q.E. PLAN NO:	DLI-08-07-2022
DIVISION PLAN NO :	Y-4/PT/DLI/2022
SCALE	1:1000 1MM:1METRE
SMC DRG. NO:-	SMC/HRIDC/PS/ESP/2 (R-5)
CONSULTANT:	S.M. CONSULTANTS An ISO 9001 Company Bhubaneswar / Balasore / Secunderabad / South Andaman / New Delhi Web : www.smcindia.com , E-Mail : support@smcindia.com
DRAWN BY:-	R.DAS
CHECKED BY:-	A. A SAMANT

A. A. SAMANT PROJECT INCHARGE

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
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND
- GAIL PIPELINE

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	Rt - 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 DISTRIBUTED 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
- * 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 SULTANPUR KALIAWAS YARD						
LINE NO	LINE NOTATION	START (F/CSB)		END (F/CSB)		TOTAL LENGTH OF CSR (m)
LINE NO-1	LOOP LINE	SRJ	320.217	SRJ	439.783	760.000
LINE NO-2	MAIN LINE	FM	320.217	FM	439.783	760.000

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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	[signature]	SHIV OM DWIVEDI CPM/HRIDC	[signature]
SUDHIR AGRAWAL DPD/CIVIL	[signature]	UMA M RAO DGM/C/WEST	
AJAY VIJAYVARGIYA DPD/EST	[signature] 25.7.22	AM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL	[signature] 29/07/22	DGM/Elect.	
AMARNATH SINGH CRE/S&T	[signature] 28-07-2022		

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 Member of the Surbana Jurong Group

GC DRG NO.: GC-HRIDC-C2-DRW-STN-ESP-SUL01_A1

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

CONSULTANTS: AARVEE ASSOCIATES
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

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 Dt: 26.11.2019 | REV Dt: 28-07-2022

F/PIRTHALA, CH: m 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
* TRACK = 60KG RAILS
* SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
* BALLAST CUSHION : 350mm
* ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD	(signed)	SHIV OM DWIVEDI CPM/HRIDC	(signed)
SUDHIR AGRAWAL DPD/CIVIL	(signed)	UMA.M.RAO DGM/C/WEST	(signed)
AJAY VIJAYVARGIYA DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL	(signed)	DGM/Elect.	
AMARNATH SINGH CRE/S&T	(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 Member of the Surbana Jurong Group

GC DRG.NO. GC-HRID-C23-DRW-STN-ESP-CDU01_A0 | ISSUED Dt: 11.11.2022

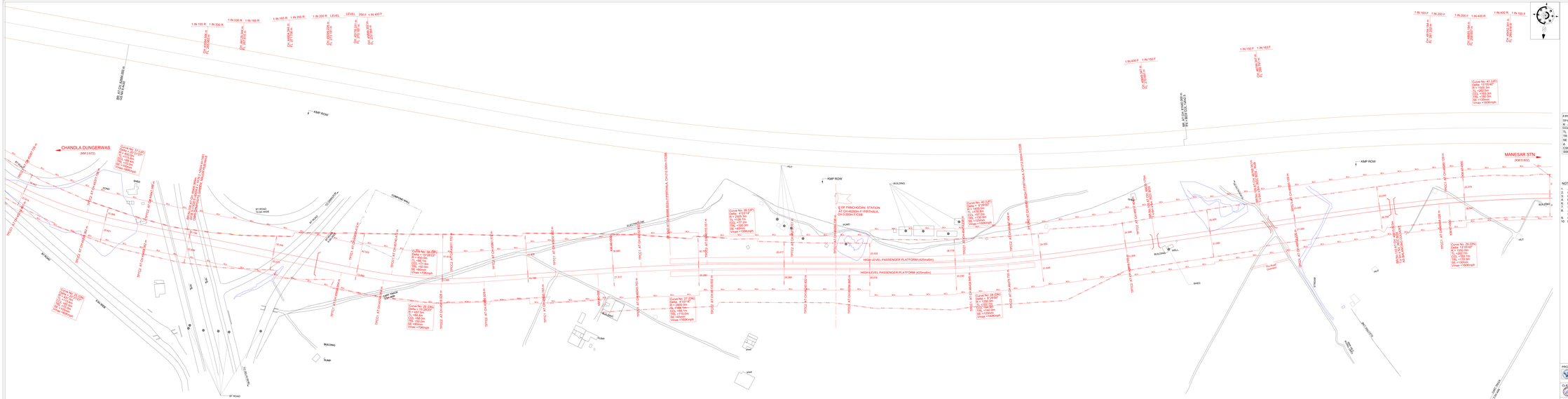
TITLE :
ENGINEERING SCALE PLAN
CHANDLA DUNGERWAS STATION YARD
CH: 42700m F/ PIRTHALA

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-04/REV-4 | SHEET No. 1
SCALE : 1:1000 | ISSUED Dt: 26.11.2019 | REV Dt: 29-07-2022



LEGEND:

EXISTING RAILWAY TRACK	
PROPOSED UP & DN LINE	
DISMANTLING WORKS	
PROPOSED DIVERSIONS	
EXISTING ROADS	
RYO HORC BOUNDARY	
EXPRESSWAY BOUNDARY	
HT LINE	
ELECTRICAL LINES,TL	
STREAM / CANAL / DRAIN	
WELL	
POND	

F PIRTHALA, CH	m FCSB-FROM CENTER LINE OF BRIDGE
TPT & TPZ - TANGENT POINT	EXTENDED
CC - CENTRE	LH - LEFT HANDED
CCL - CIRCULAR CURVE LENGTH	RH - RIGHT HANDED
TL - TANGENT LENGTH	SKJ - STOCK RAIL JOINT
TR - TRANSITION LENGTH	TS - TRAP SWITCH
SE - SUPERELEVATION	DE - DEAD END
CR - CLEAR STANDING ROOM	R - RESULTANT RADIUS
CWR - CLEAR STANDING ROOM	D - DEGREE OF CURVE
SSP - SUB SECTIONING & PARALLING POST	RH - RELAY HUT

NOTE:

1. ALL DIMENSIONS ARE SHOWN IN METRES.
2. ALL LEVELS ARE WITH REF TO RAIL LEVEL AT STATION BUILDING.
3. EXISTING WORK SHOWN IN BLACK.
4. PROPOSED WORK SHOWN IN RED.
5. ALL TRACKS ARE LAID WITH 60 KG UTS RAIL ON PSC SLEEPER STD. WI.
6. STD WI ELECTRONIC INTERLOCKING WITH MACL SIGNALLING WILL BE PROVIDED.
7. ALL POINTS AND CROSSINGS ARE TO BE PROVIDED WITH FAN SHAPED CURVED SWITCHES IN CONCRETE SLEEPER.
8. CHAINAGES ARE REKONED FROM C L OF PIRTHALA STATION.
9. RULING GRADIENT FOR THIS SECTION IS 1 IN 150 COMPENSATED

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

1. FOR RAIL CORRIDOR, 160KM/Hr Speed
* TRACK = 60KG RAILS
* SLEEPER DENSITY : PSC SLEEPERS = 1660 Nos S PER KM
* BALLAST CUSHION : 350mm
* ALL TURNOUTS ARE : 1 in 12 UNLESS OTHERWISE SPECIFIED

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

(WEST PART OF RAIL CONNECTIVITY BETWEEN DELHI AND IR HUB AT JHARLI (GANOTA) AND RAILWAYS AVAILABLE UP TO NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited & SMEC India Pvt. Ltd.

GC/HORC			HRIDC		
NAME / DEGINATION	SIGN		NAME / DEGINATION	SIGN	
CHANATEY RAM PD			BHIV OM DWIVEDI CPM/HRIDC		
SUDHIR AGRAWAL DPO/DVA			UMA M.RAO DGM/CHIEF		
AJAY VIJAYVARGIYA DPO/EET					
KRISHAN CHAND SAINDI DRE/DVA			DGM/S&T		
AMARNATH SINGH DRE/S&T			DGM/Elect.		

GC DRG NO. GC-HRDC-CC(DWH)-STN-EP-PO/01 A0 ISSUED ON 11.11.2022

TITLE

ENGINEERING SCALE PLAN
PACHAGAON STATION YARD
CH 46260 m F/ PIRTHALA

CONSULTANTS:

aarvee associates
architects engineers & consultants pvt.ltd.

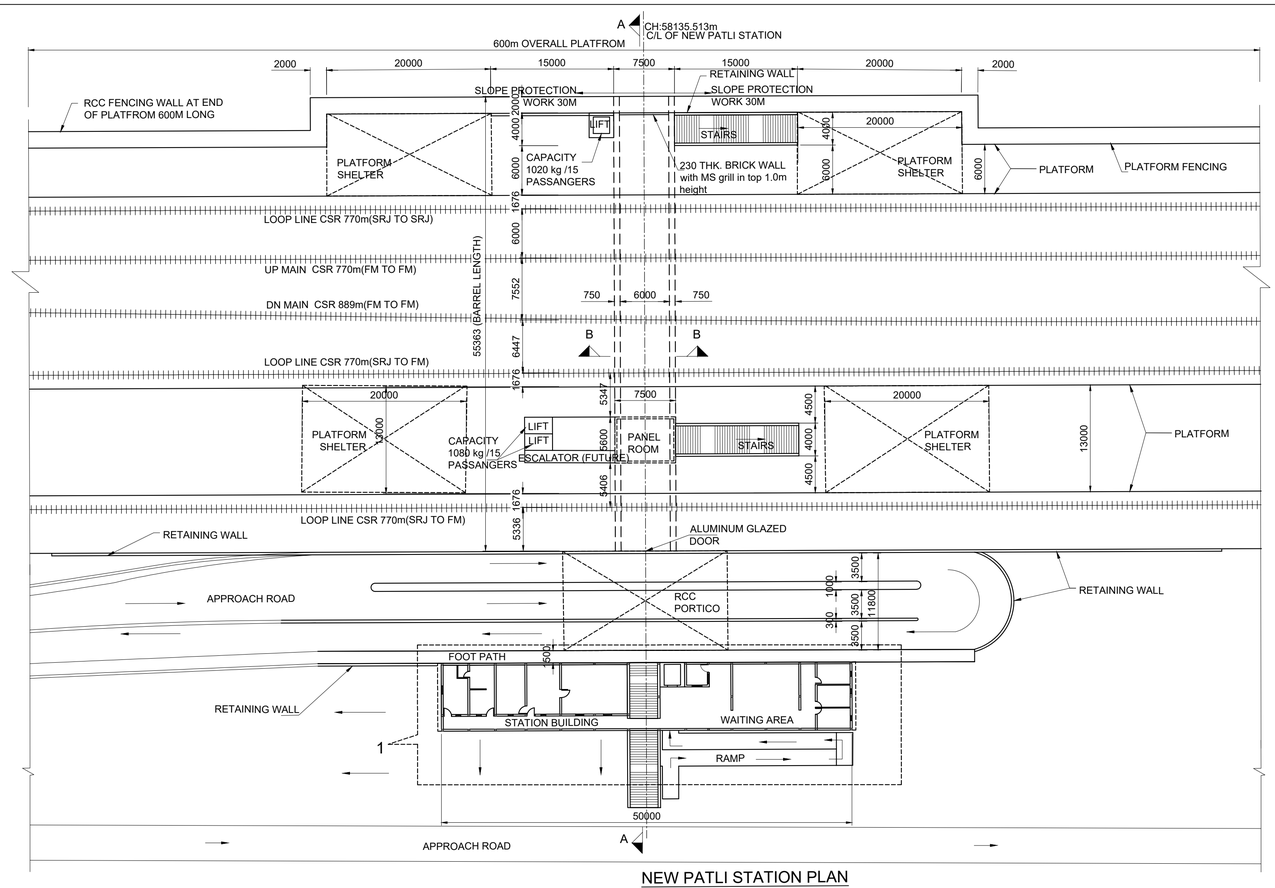
AARVEE ASSOCIATES

MANDEEP SINGH DHILLON	S PRASAD (M) CHECKED	R.J. RAO (VP) APPROVED

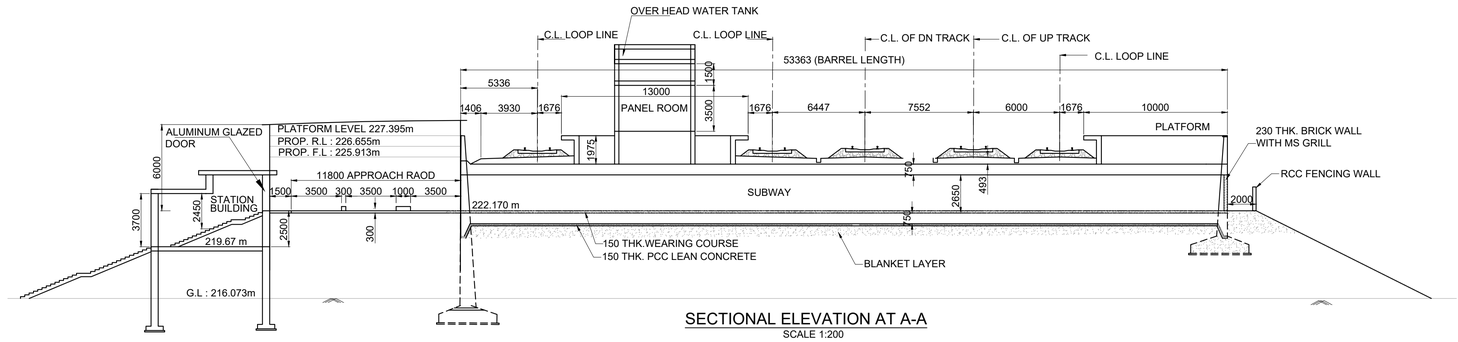
DRG NO. AAPL/12/24/HRDC/ESP/DWEV-C SHEET No. 1

SCALE : 1:1000 ISSUED ON 28.11.2019 REV ON 29.07.2022

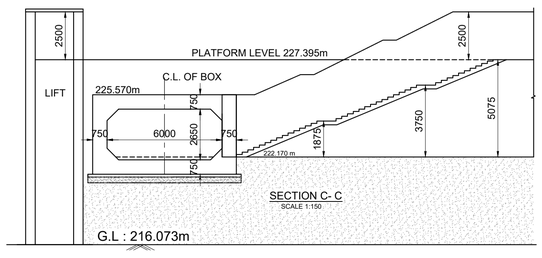
3.STATION BUILDING

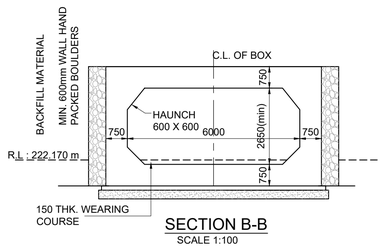


NEW PATLI STATION PLAN
(SCALE 1:350

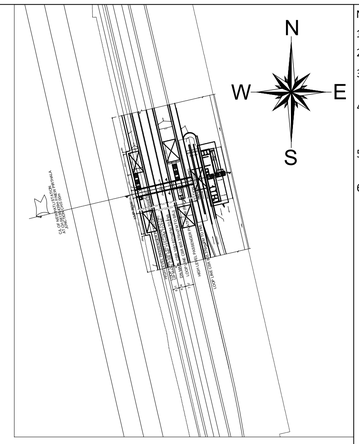


SECTIONAL ELEVATION AT A-A
SCALE 1:200





SECTION B-B
SCALE 1:100



KEY PLAN
SCALE 1:NTS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. SUBWAY AND LIFT-WELL SHALL BE PLACED AT FIRM BED/ STRATA / PILE FOUNDATION.
4. 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.
5. BEARING CAPACITY SHALL BE ENSURED AT TOP OF FILL BY PLATE LOAD TEST (MINIMUM TWO LOCATION) BEFORE CASTING OF SUBWAY.
6. STEEL HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL		DGM/Elect.	
AMARNATH SINGH CRE/S&T			

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

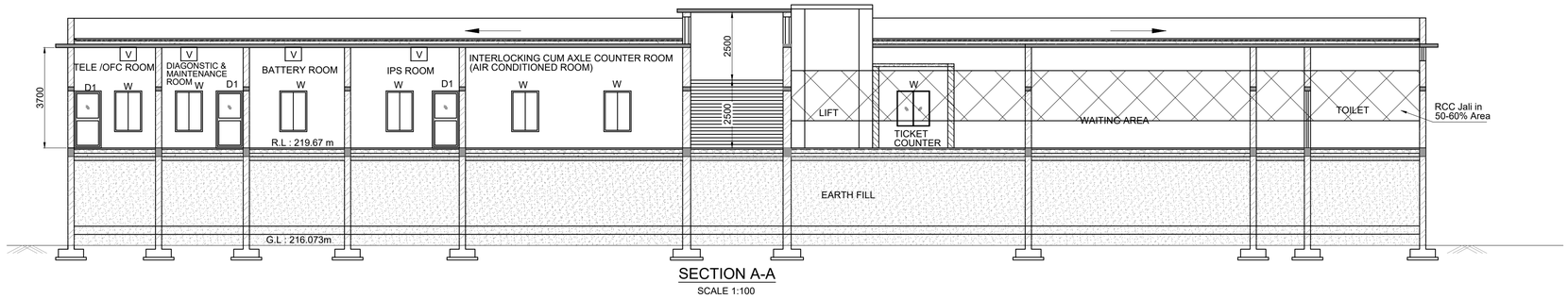
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

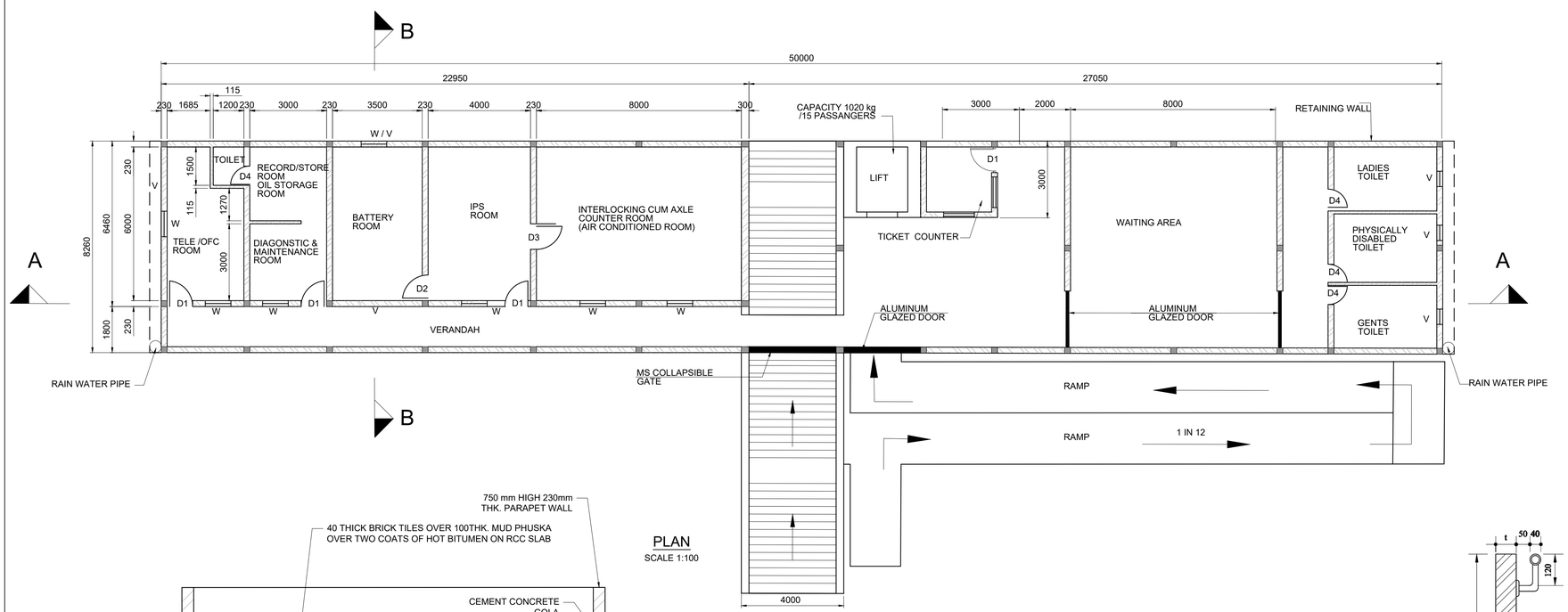
TITLE:-
CONCEPTUAL GENERAL ARRANGEMENT DRAWING NEW PATLI STATION

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A0	1 OF 2

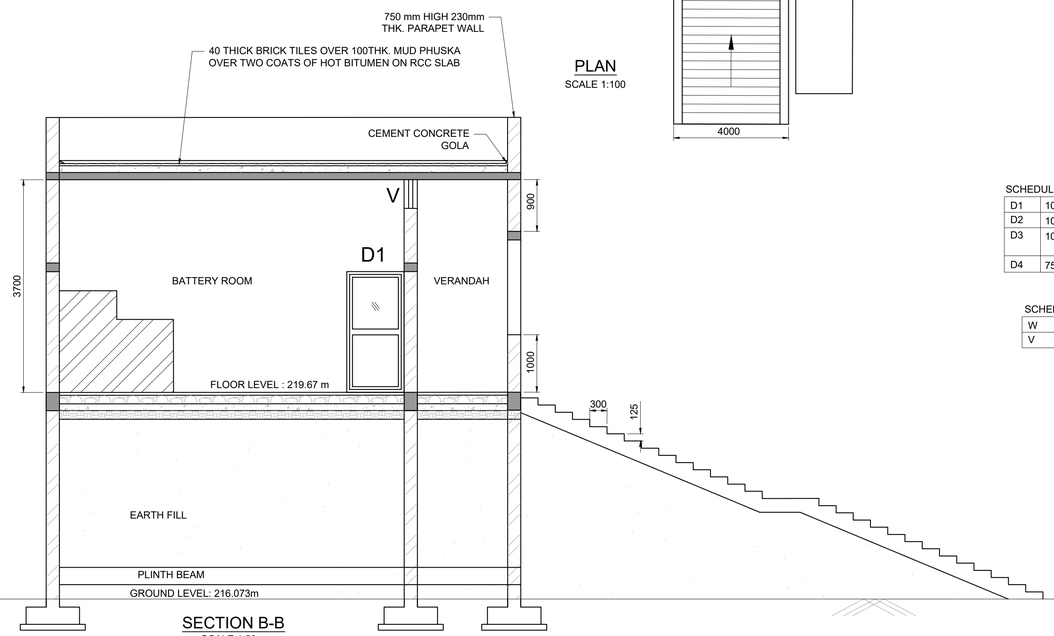
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



SECTION A-A
SCALE 1:100



PLAN
SCALE 1:100



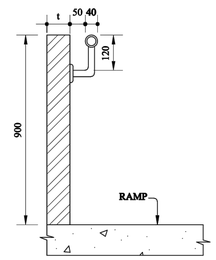
SECTION B-B
SCALE 1:50

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	



FIXING DETAIL OF HANDRAIL TO THE WALL

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL WALLS ARE OF 230MM THICK & PARTITION WALLS ARE OF 115MM.
3. THE LOCATION OF THE BUILDING SHALL BE AS CLOSE TO CENTER OF YARD AS POSSIBLE. THE EXACT LOCATION OF THE BUILDING SHALL BE DECIDED BY CONCERNED ENGINEER .
4. THE FLOOR LEVEL OF PANEL ROOM SHALL BE AT LEAST 300 MM ABOVE PLATFORM LEVEL.
5. FOUNDATIONS TO BE DESIGNED FOR G+1 FLOORS.
6. R.C.C. PLINTH BAND & LINTEL BAND TO BE PROVIDED IN ALL WALLS.
7. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.
8. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
9. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED FOR DRAINAGE DISCHARGE AND FOR EFFLUENT DISCHARGE REFER SEPARATE DRAINAGE PLAN.
10. TICKET COUNTER REFER DRAWING NO. GC-HRIDC-C2-DRG-SAD-GMD-013_A0 SHEET 1 OF 1.
11. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL		DGM/Elect.	
AMARNATH SINGH CRE/S&T			

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

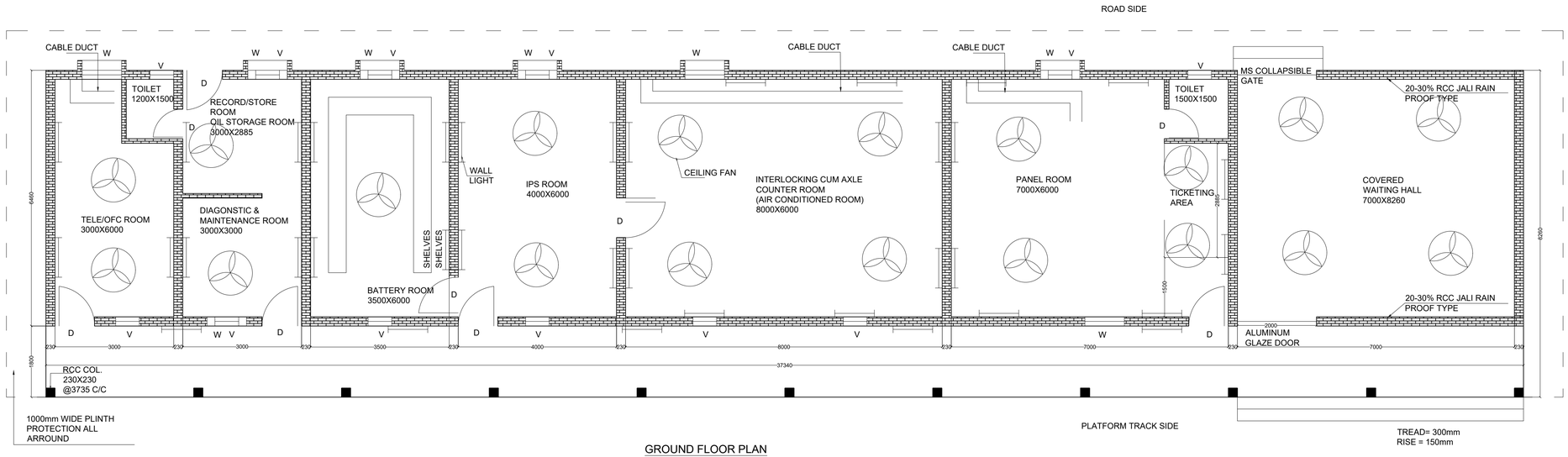
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 GENERAL ARRANGEMENT DRAWING NEW PATLI STATION

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A0	2 OF 2

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



GROUND FLOOR PLAN

(STATION BUILDING)

LEGEND

D- PANELED DOOR
W- WINDOW
V- 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.

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 / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL		DGM/Elect.	
AMARNATH SINGH CRE/S&T			

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:

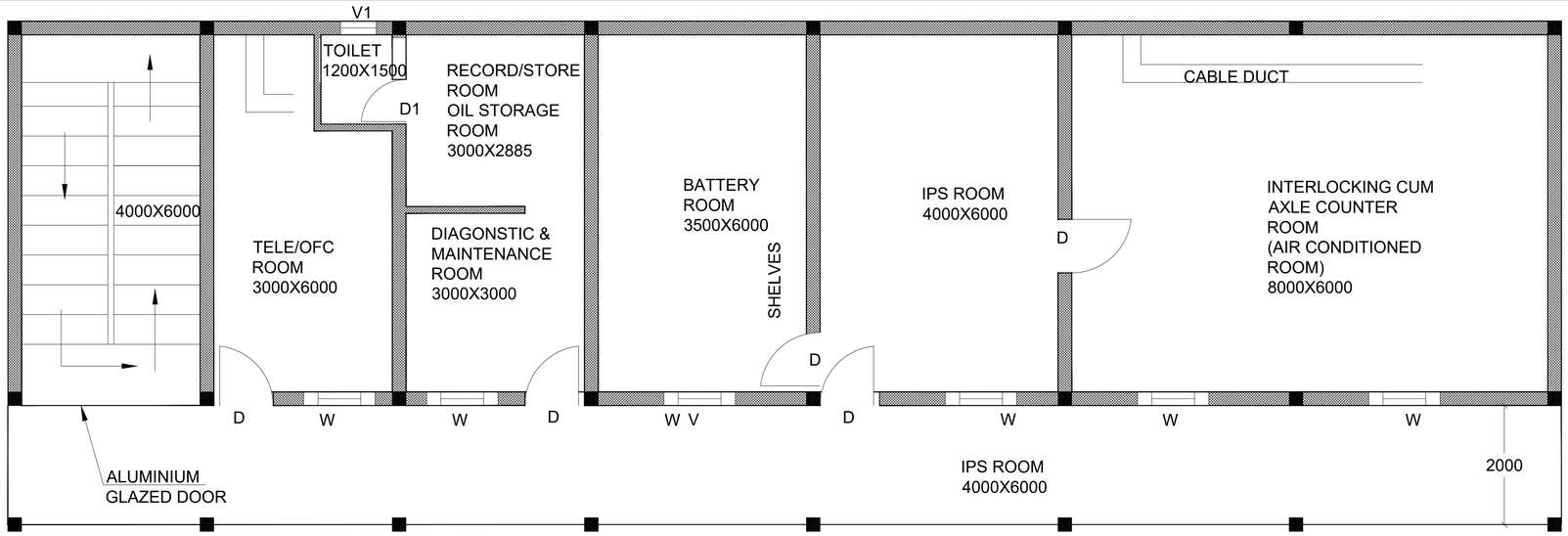
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

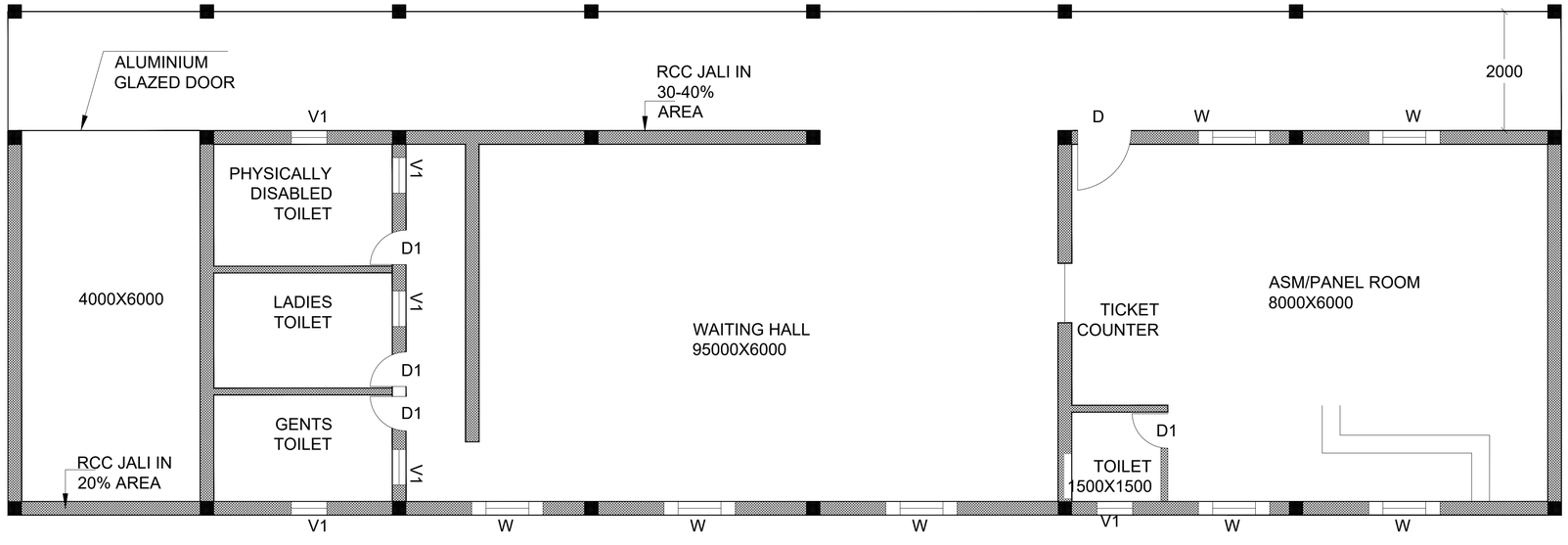
TITLE:-
CONCEPTUAL GENERAL ARRANGEMENT
DRAWING OF **SULTANPUR STATION BUILDING**

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-SUL01_A0	1 OF 1

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



GROUND FLOOR PLAN
STATION BUILDING



FIRST FLOOR PLAN
STATION BUILDING

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 WALLS ARE OF 230MM THICK & PARTITION WALLS ARE OF 115MM.
2. FIRST FLOOR LEVEL SHALL BE AT LEAST 300 MM ABOVE THE LEVEL OF THE PLATFORM OF THE STATION.
3. DETAILING OF TICKET COUNTER SHALL BE AS PER DRAWING NO. GC-HRIDC-C2-DRG-SAD-GMD-013_A0 SHEET 1 OF 1.
4. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL		DGM/Elect.	
AMARNATH SINGH CRE/S&T			

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.

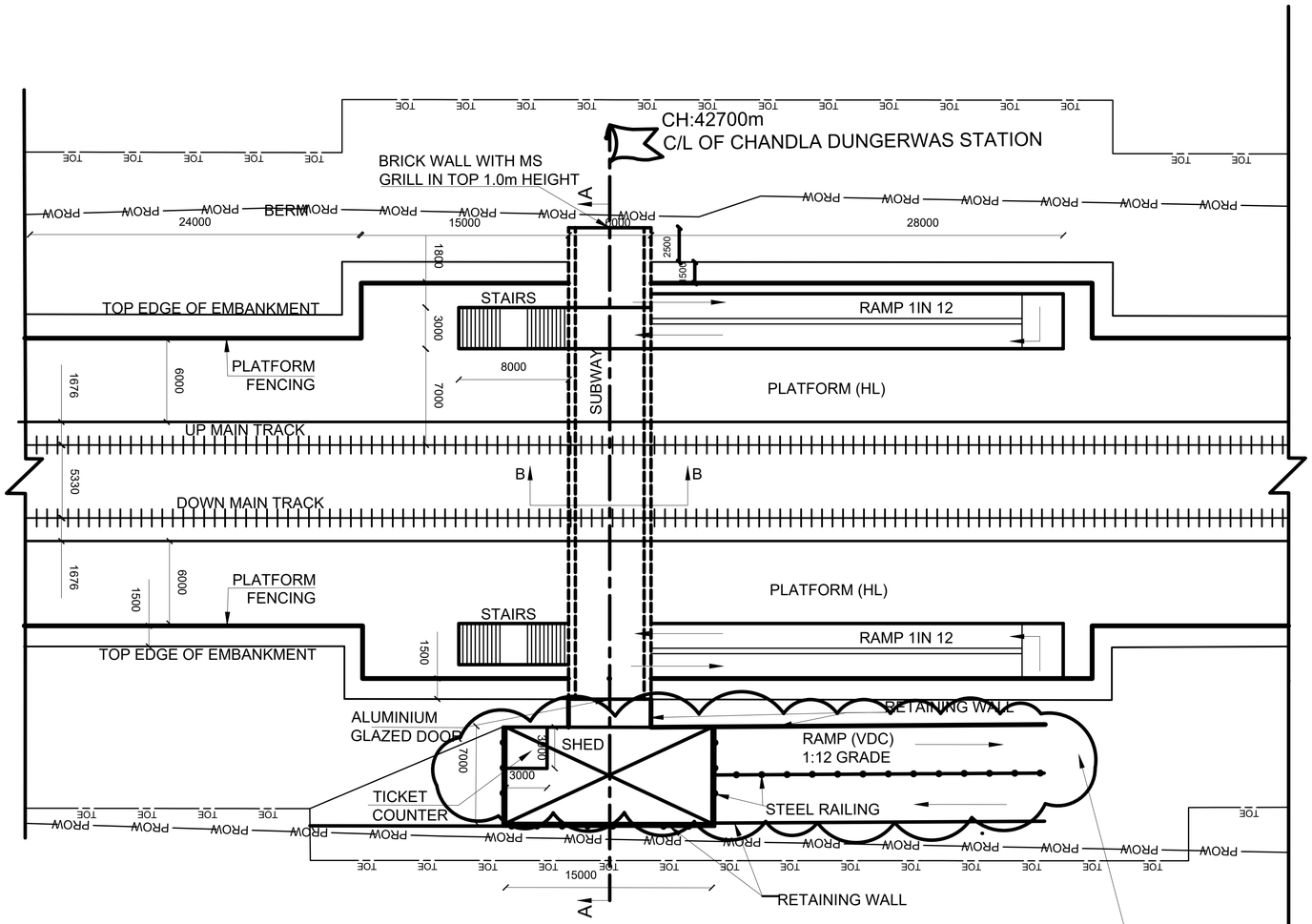
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING OF DHULAWAT STATION

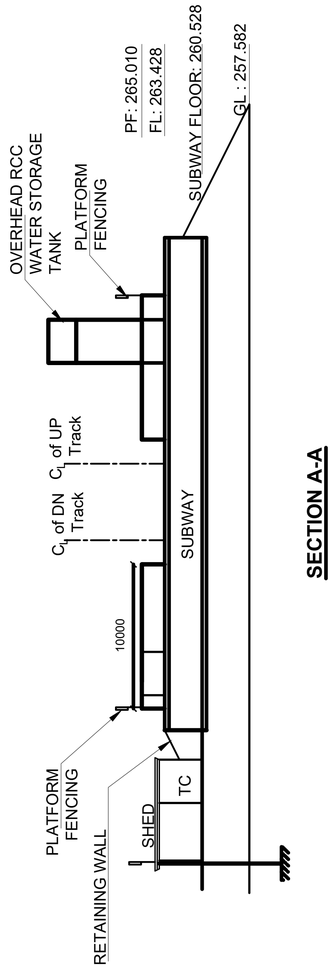
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-DHU01_A0	2 OF 2

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

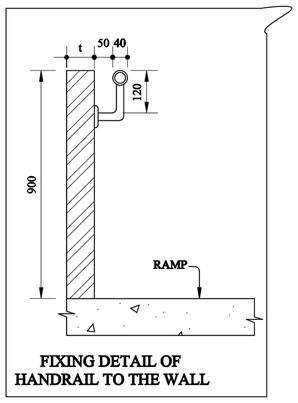
KMP EXPRESSWAY



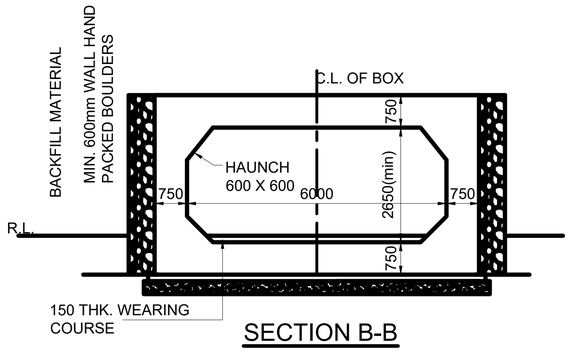
CHANDLA DUNGERWAS STATION PLAN



SECTION A-A



FIXING DETAIL OF HANDRAIL TO THE WALL



SECTION B-B

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. SUBWAY SHALL BE PLACED AT FIRM BED/ STRATA.
4. 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.
5. BEARING CAPACITY SHALL BE ENSURED AT TOP OF FILL BY PLATE LOAD TEST (MINIMUM TWO LOCATION) BEFORE CASTING OF SUBWAY.
6. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
7. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL		DGM/Elect.	
AMARNATH SINGH CRE/S&T			

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

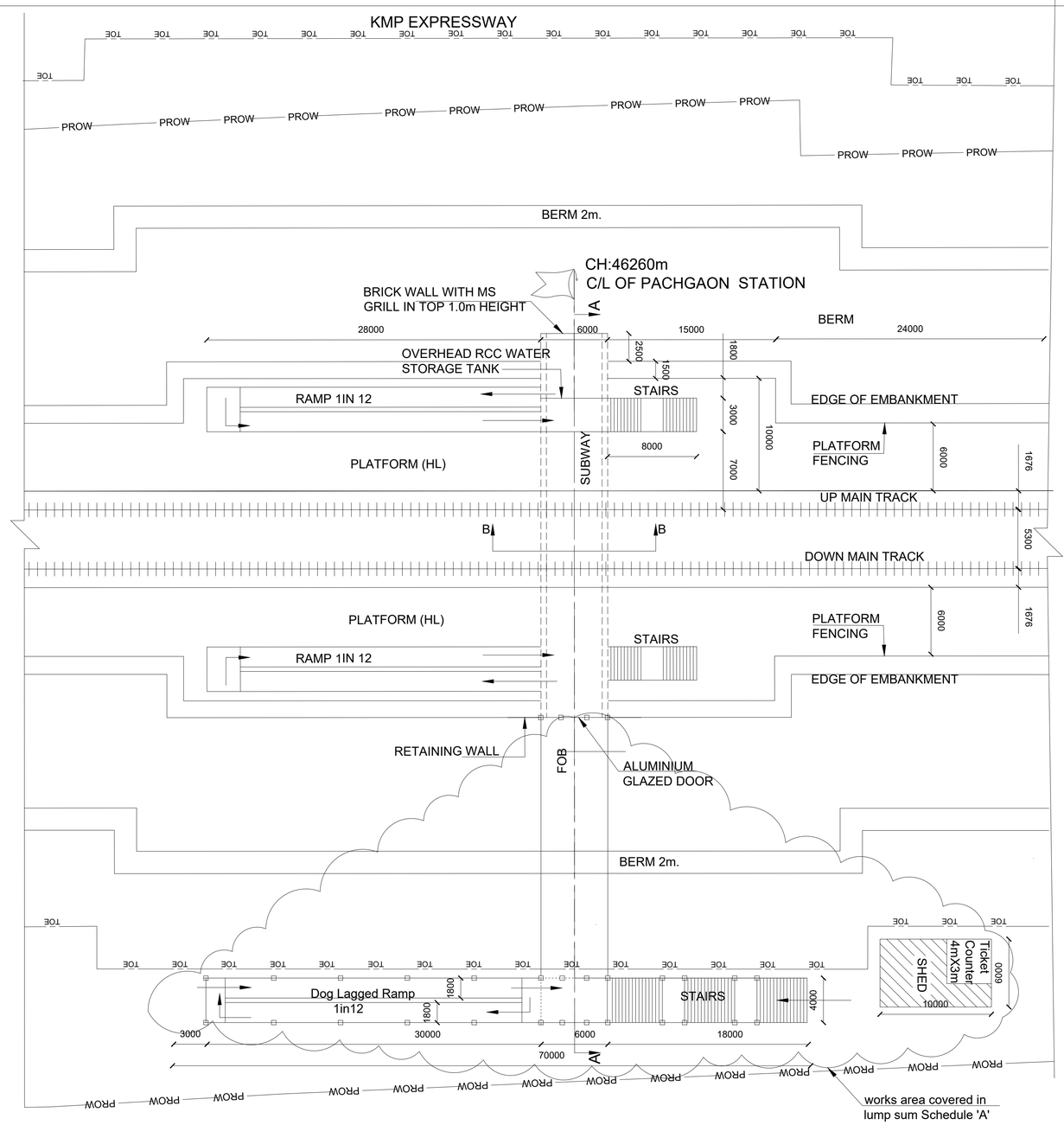
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

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

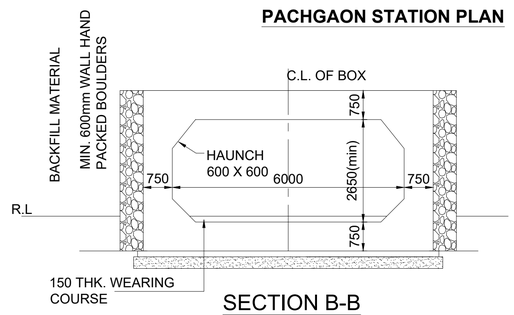
TITLE:-
CONCEPTUAL GENERAL ARRANGEMENT DRAWING CHANDLA DUNGERWAS STATION

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-CDU01_A0	1 OF 1

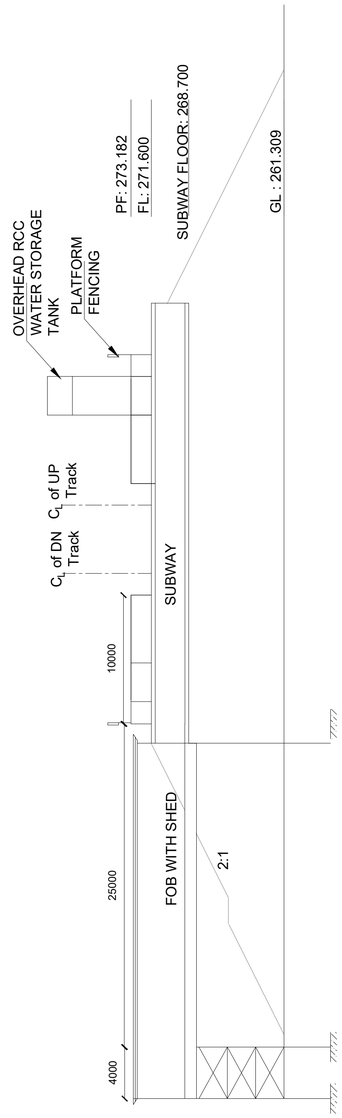
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



PACHGAON STATION PLAN



SECTION B-B



SECTION AT A-A

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. SUBWAY AND LIFT-WELL SHALL BE PLACED AT FIRM BED/ STRATA.
4. 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.
5. BEARING CAPACITY SHALL BE ENSURED AT TOP OF FILL BY PLATE LOAD TEST (MINIMUM TWO LOCATION) BEFORE CASTING OF SUBWAY.
6. RAMP OF FOB SHALL BE AS PER RDSO DRAWING NO. RDSO/WKS/2013/001.
7. DETAILING OF FOB SHALL BE AS PER RDSO DRAWING NO. RDSO/B-10433.
8. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
9. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
DPD/EST		DGM/S&T	
KRISHAN CHAND SAINSI CRE/CIVIL		DGM/Elect.	
AMARNATH SINGH CRE/S&T			

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.

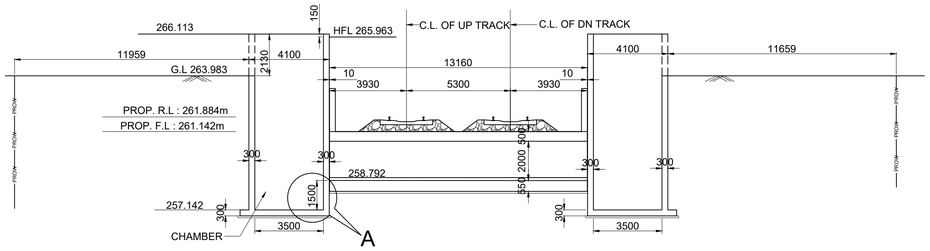
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL GENERAL ARRANGEMENT DRAWING PACHGAON STATION

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-PCG01_A0	1 OF 1

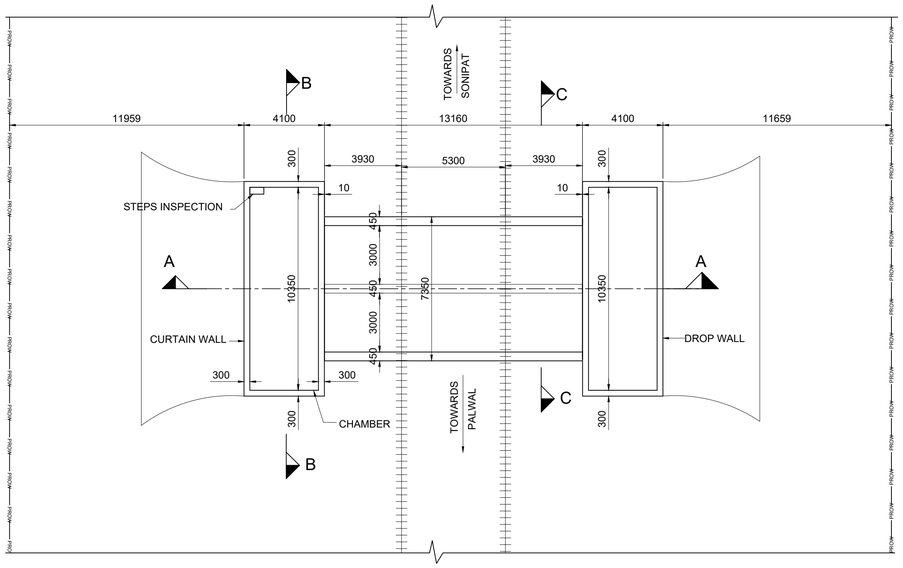
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	

4.BRIDGES



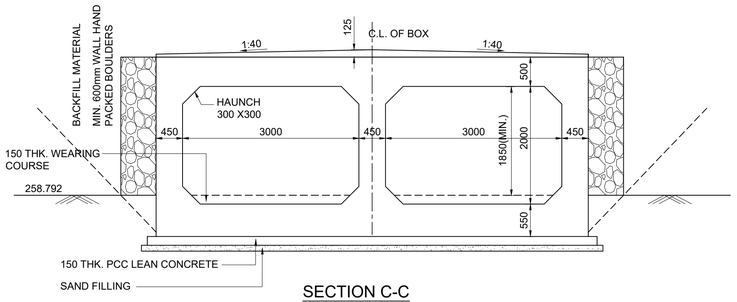
SECTIONAL ELEVATION AT A-A

SCALE 1:150



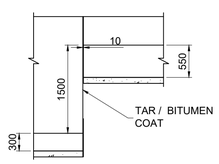
PLAN AT TOP

SCALE 1:150



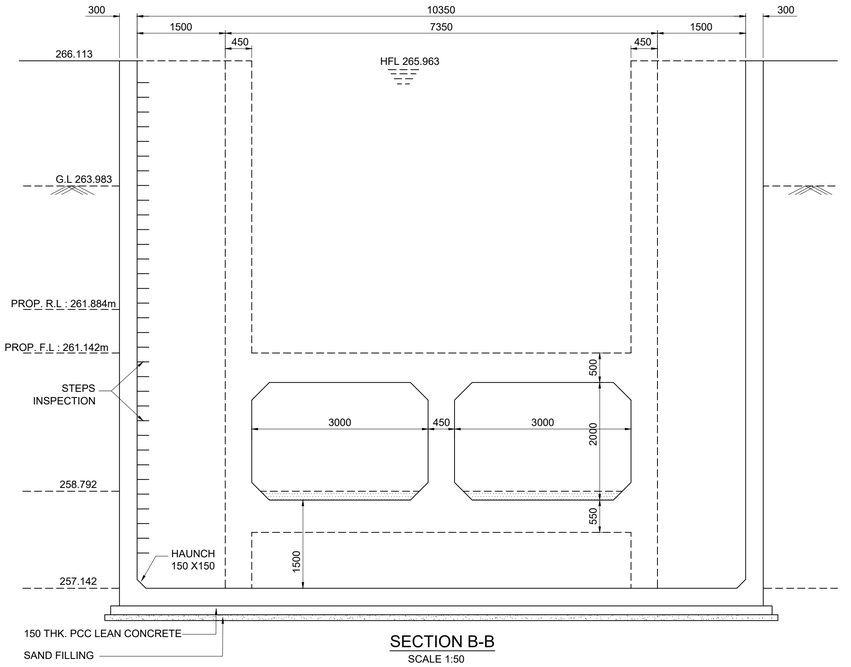
SECTION C-C

SCALE 1:50



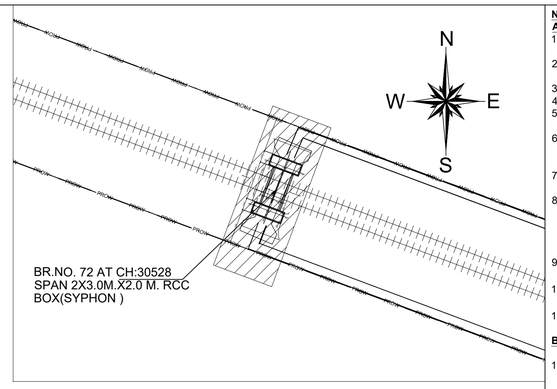
DETAIL -'A'

SCALE 1:50



SECTION B-B

SCALE 1:50



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.
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. ALL GAPS SHALL BE FILLED WITH POLY-SULPHIDE BASED SEALANT OR EQUIVALENT MATERIAL.

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

Member of the Surbana Jurong Group

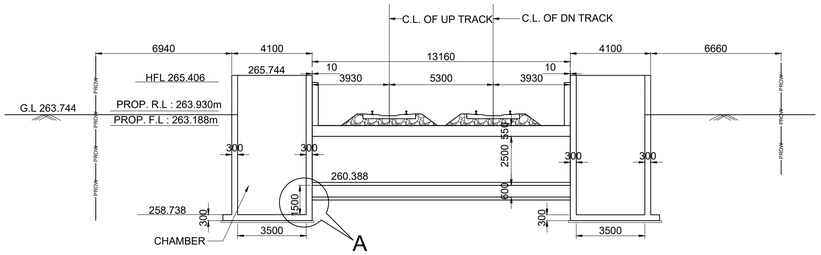
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED BR. NO. 072 SPAN 2×3.0×2.0 RCC BOX (SYPHON) AT CH: 30528

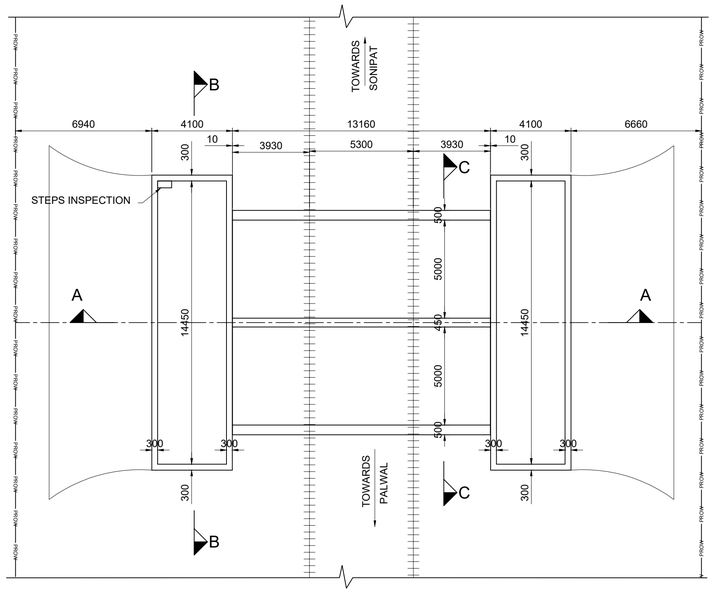
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01072_A0	1 OF 1

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



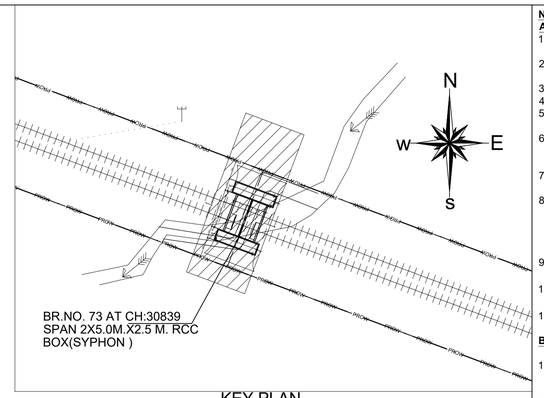
SECTIONAL ELEVATION AT A-A

SCALE 1:150



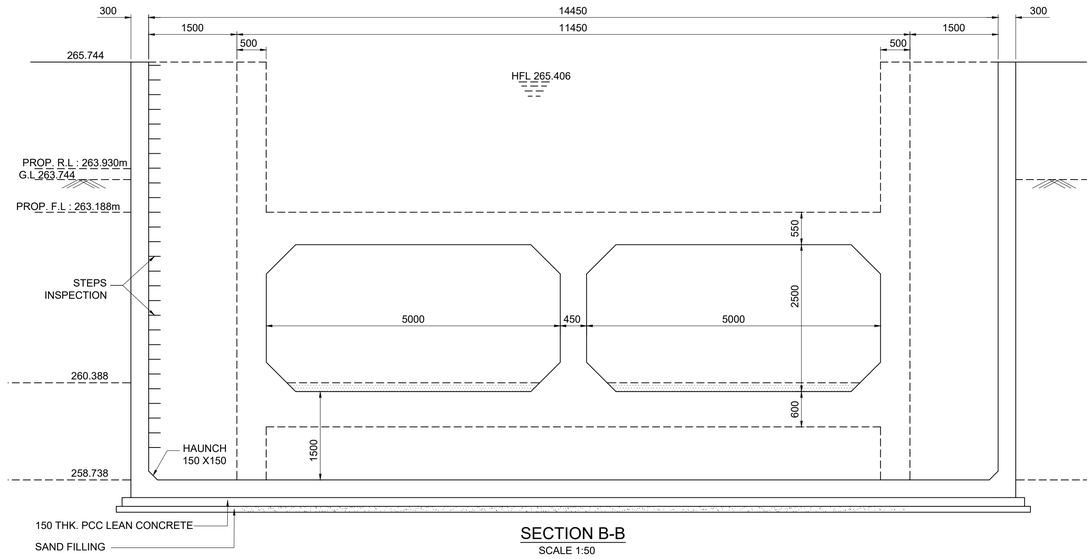
PLAN AT TOP

SCALE 1:150



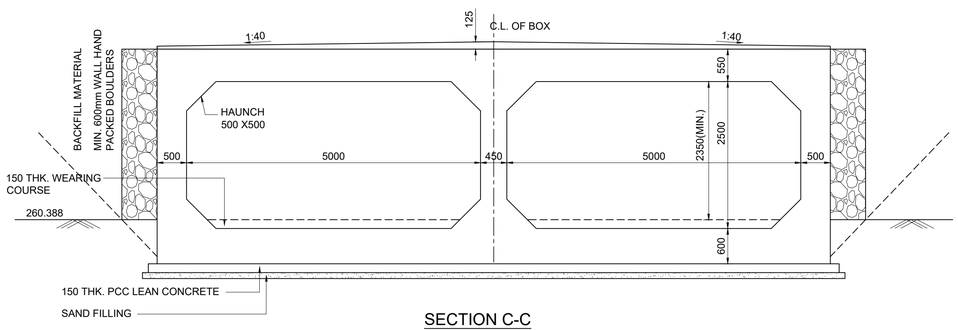
KEY PLAN

(NOT TO SCALE)



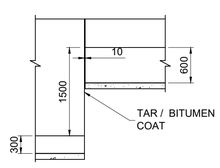
SECTION B-B

SCALE 1:50



SECTION C-C

SCALE 1:50



DETAIL -'A'

SCALE 1:50

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.
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. ALL GAPS SHALL BE FILLED WITH POLY-SULPHIDE BASED SEALANT OR EQUIVALENT MATERIAL.

LEGEND

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

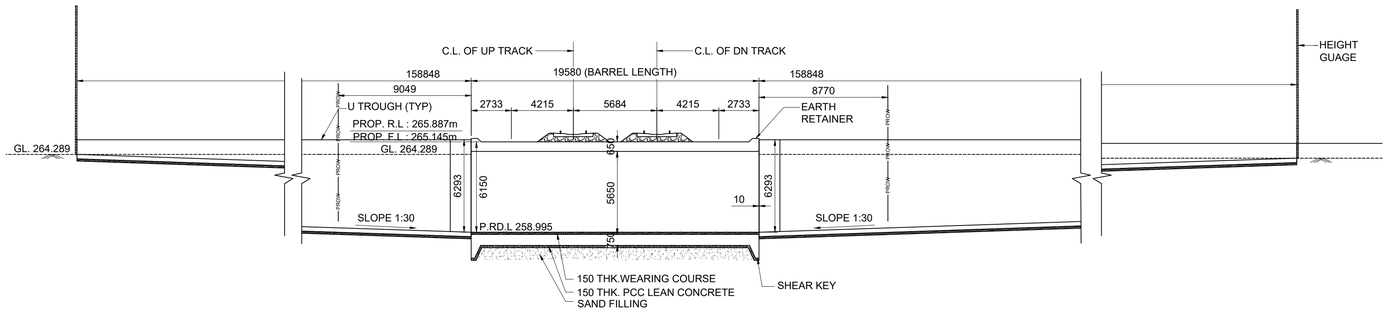
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED BR. NO. 073 SPAN 2×5.0×2.5 RCC BOX (SYPHON) AT CH: 30839

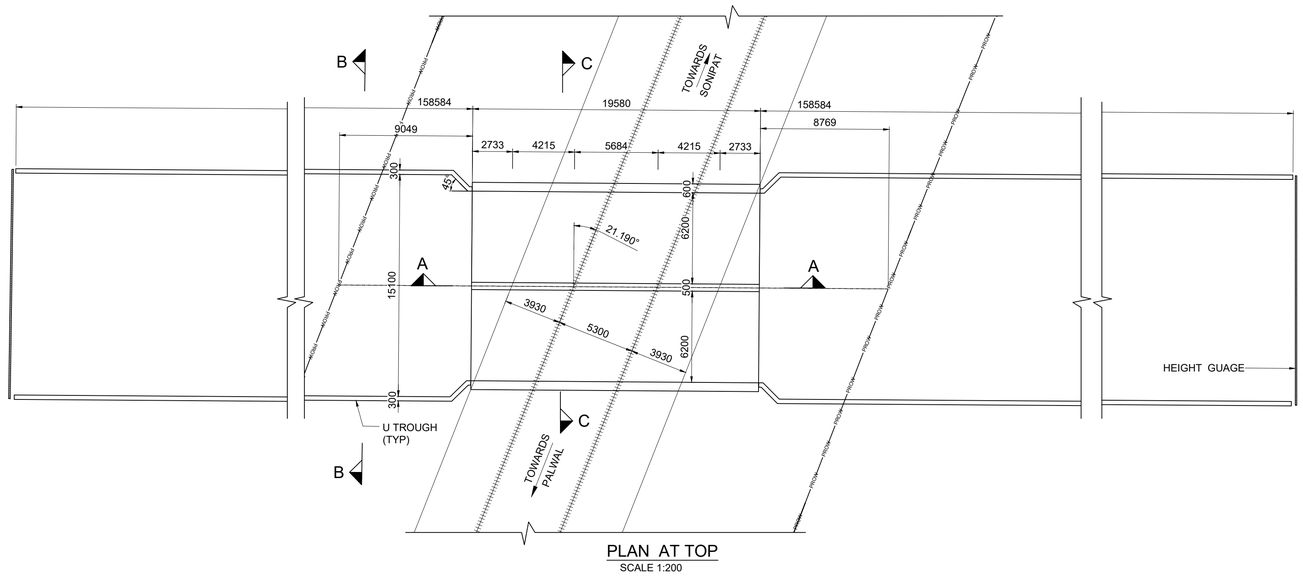
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01073_A0	1 OF 1

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



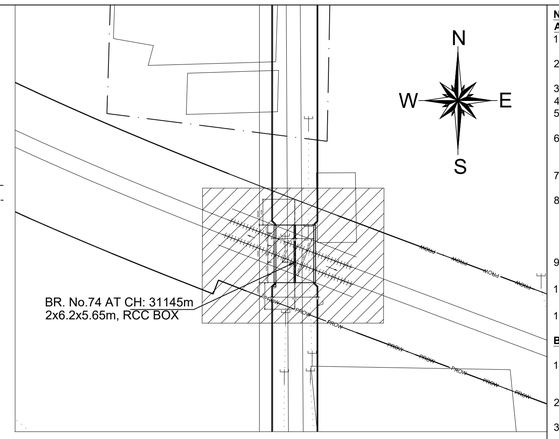
SECTIONAL ELEVATION AT A-A

SCALE 1:200



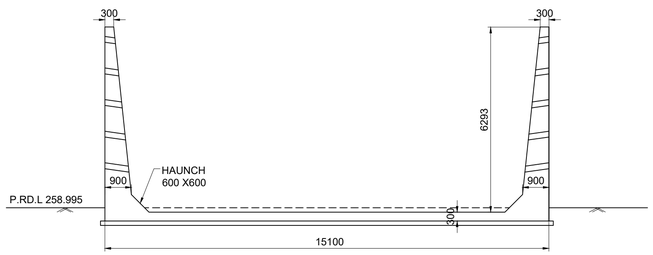
PLAN AT TOP

SCALE 1:200



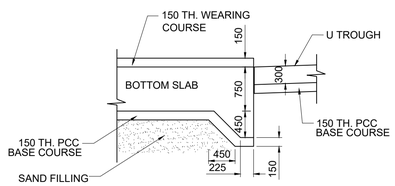
KEY PLAN

(NOT TO SCALE)



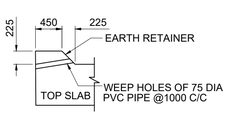
SECTION B-B

SCALE 1:100



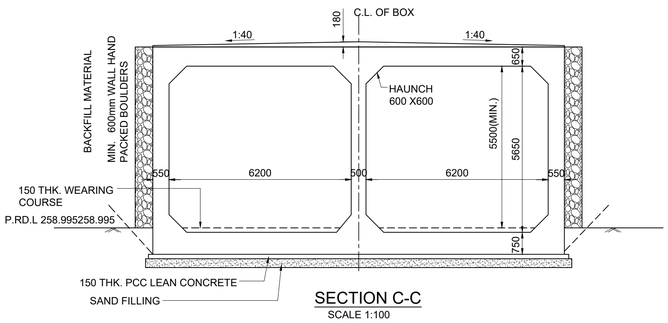
SHEAR KEY

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.
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.
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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.
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   (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.
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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED 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 CONSULTANTS 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		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 074 SPAN
2×6.2×5.650 RCC BOX AT CH: 31145

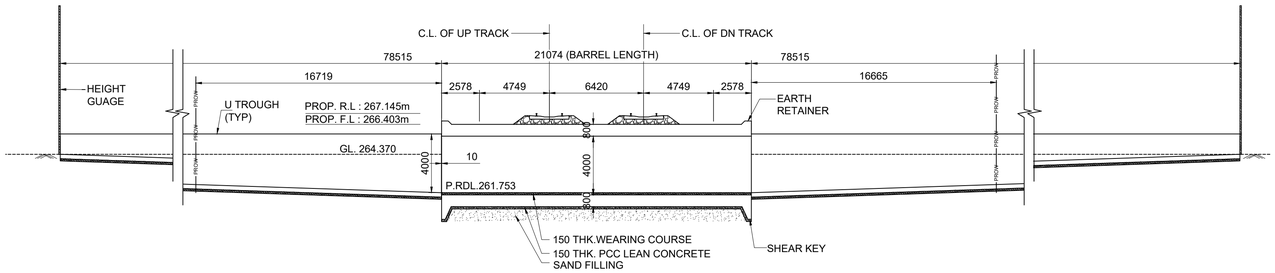
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01074_A0

SHEET NO. 1 OF 1

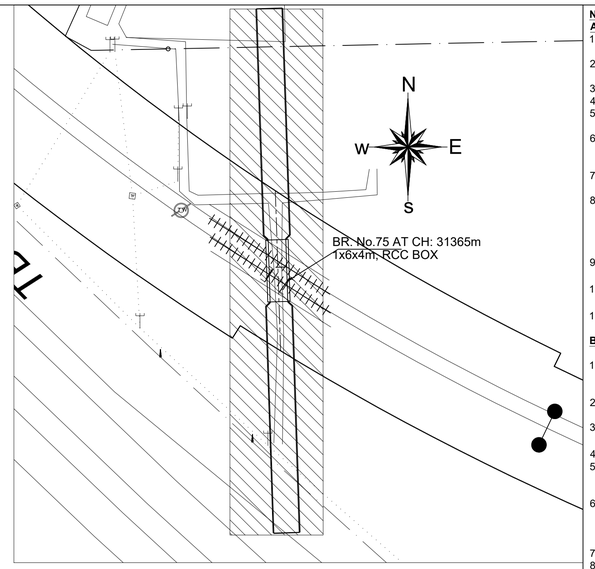
SCALE : AS SHOWN

ISSUE DATE 11-11-2022

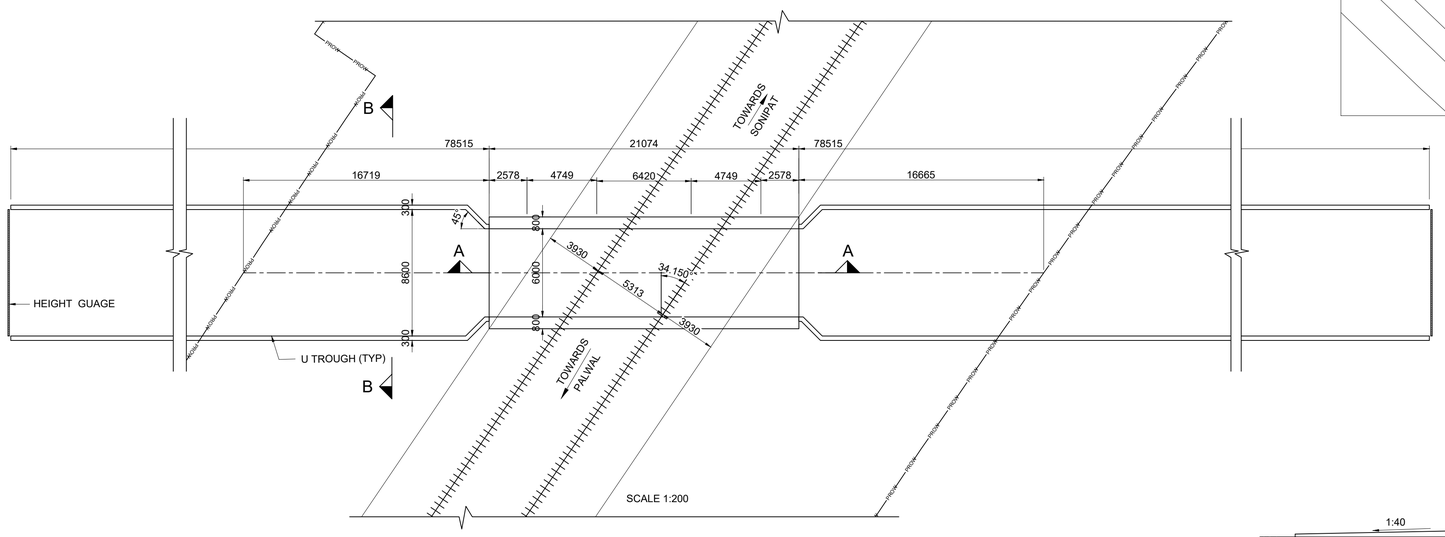
REVISED DATE



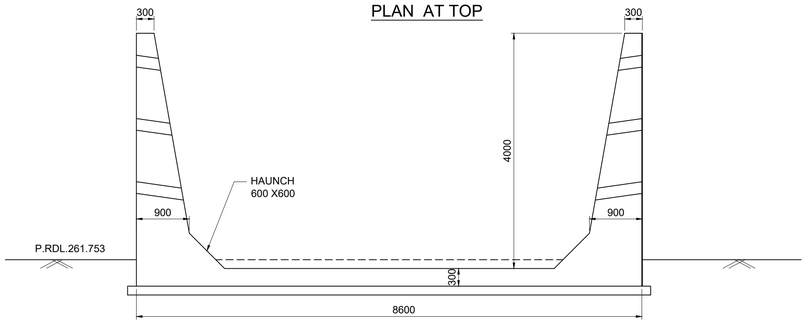
SECTIONAL ELEVATION AT A-A
SCALE 1:200



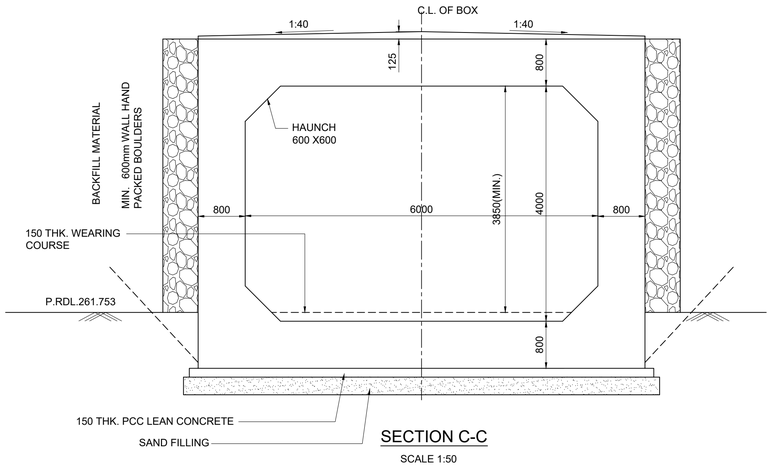
KEY PLAN
(NOT TO SCALE)



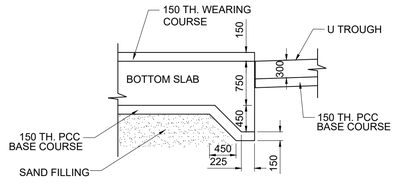
PLAN AT TOP



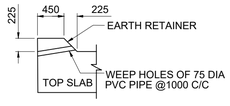
SECTION B-B
SCALE 1:50



SECTION C-C
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

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LEGEND

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PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

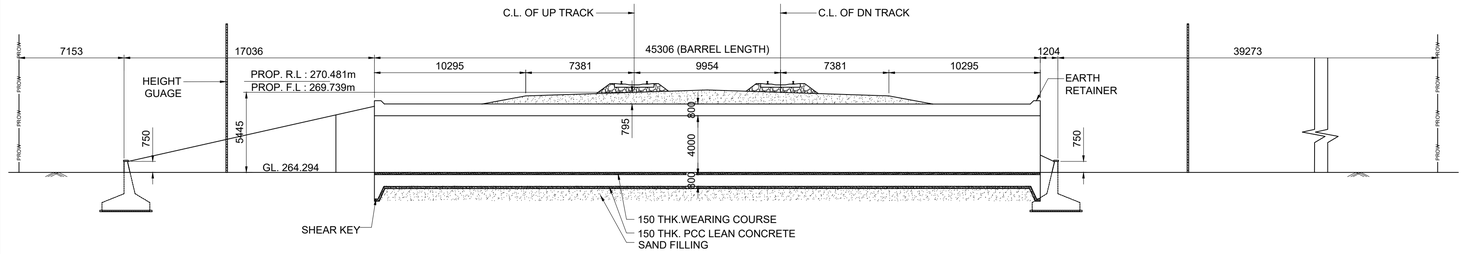
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

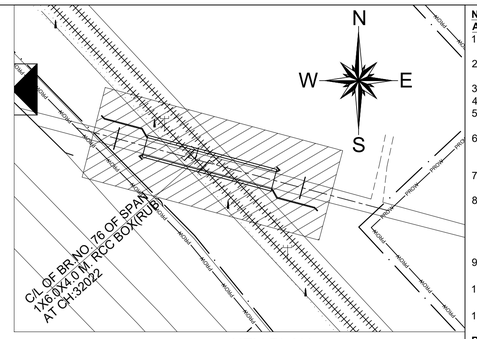
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 075 SPAN
1×6.0×4.0 RCC BOX AT CH: 31365

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01075_A0
SHEET NO. 1 OF 1

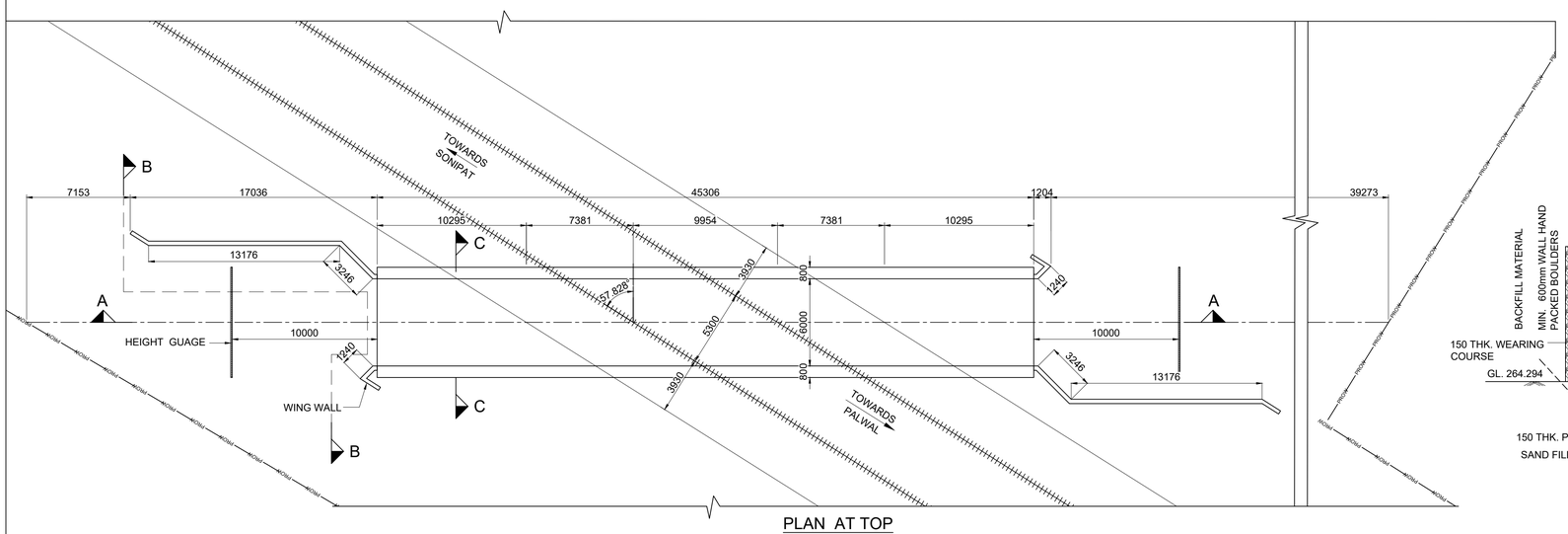
SCALE : AS SHOWN
ISSUE DATE 11-11-2022
REVISED DATE



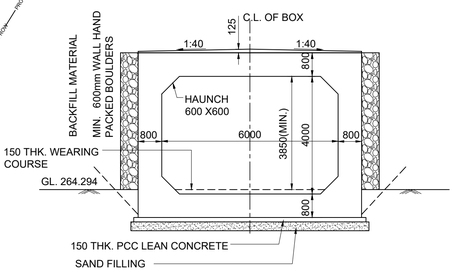
SECTIONAL ELEVATION AT A-A
SCALE 1:200



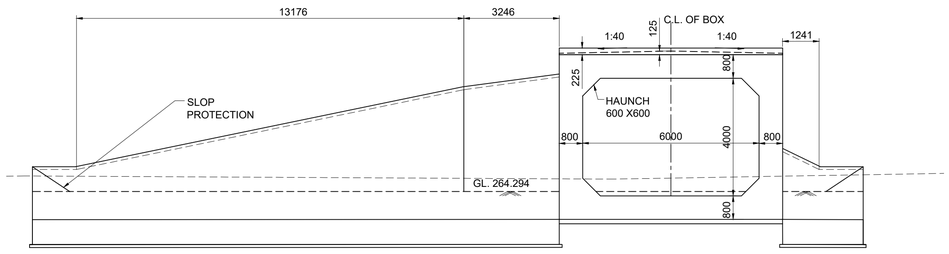
KEY PLAN
(NOT TO SCALE)



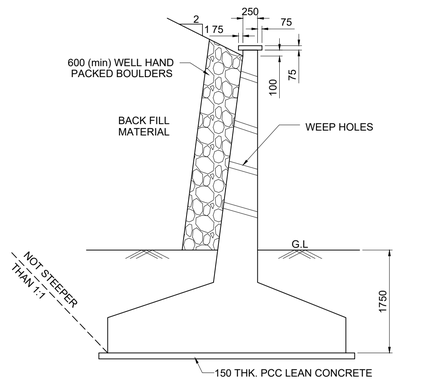
PLAN AT TOP
SCALE 1:200



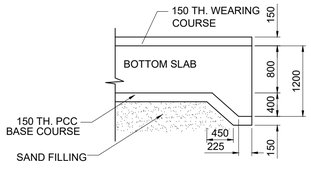
SECTION C-C
SCALE 1:100



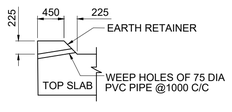
SECTION B-B
SCALE 1:100



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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
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HFL	HEIGHEST FLOOD LEVEL
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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 CONSULTANTS 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		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 076 SPAN
1×6.0×4.0 RCC BOX AT CH: 32022

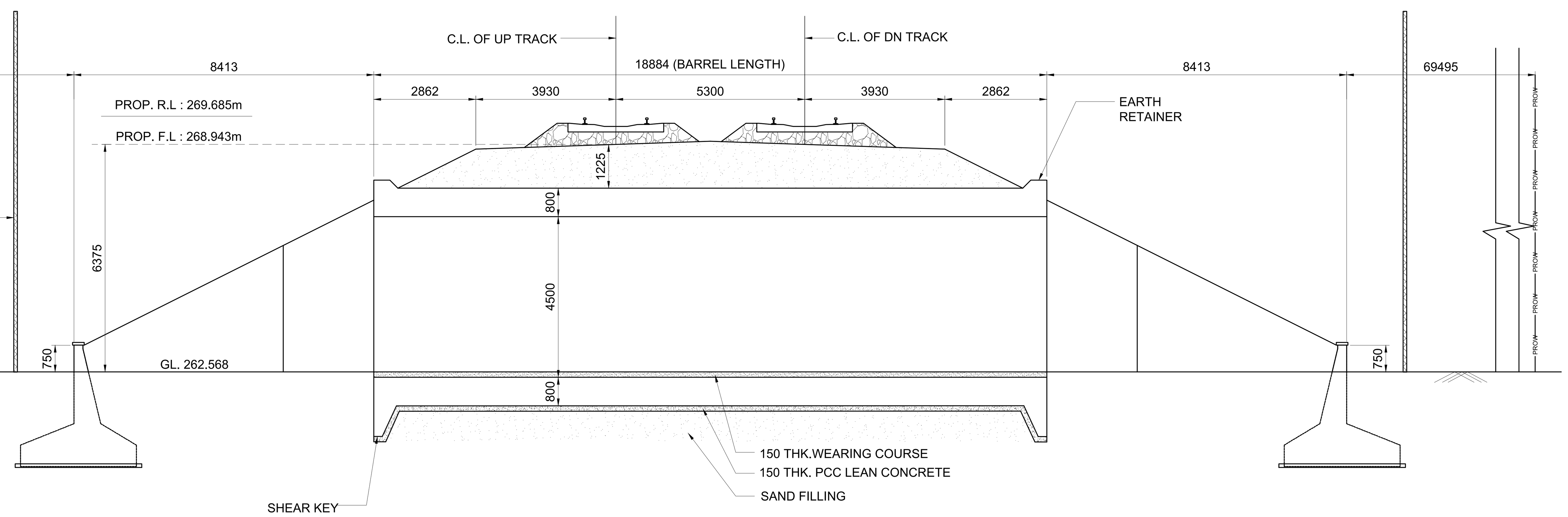
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01076_A0

SHEET NO. 1 OF 1

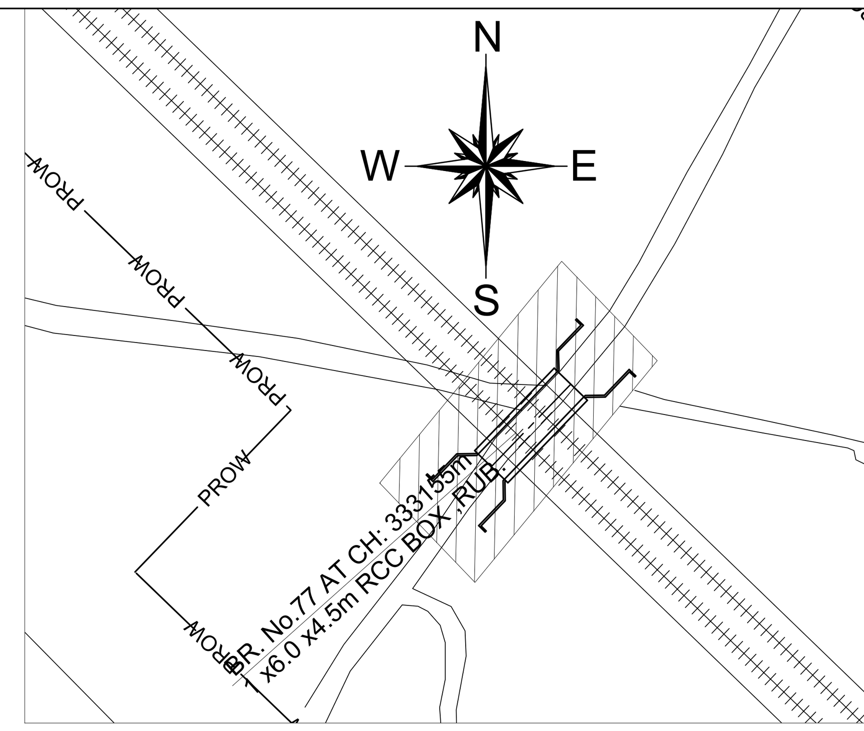
SCALE : AS SHOWN

ISSUE DATE 11-11-2022

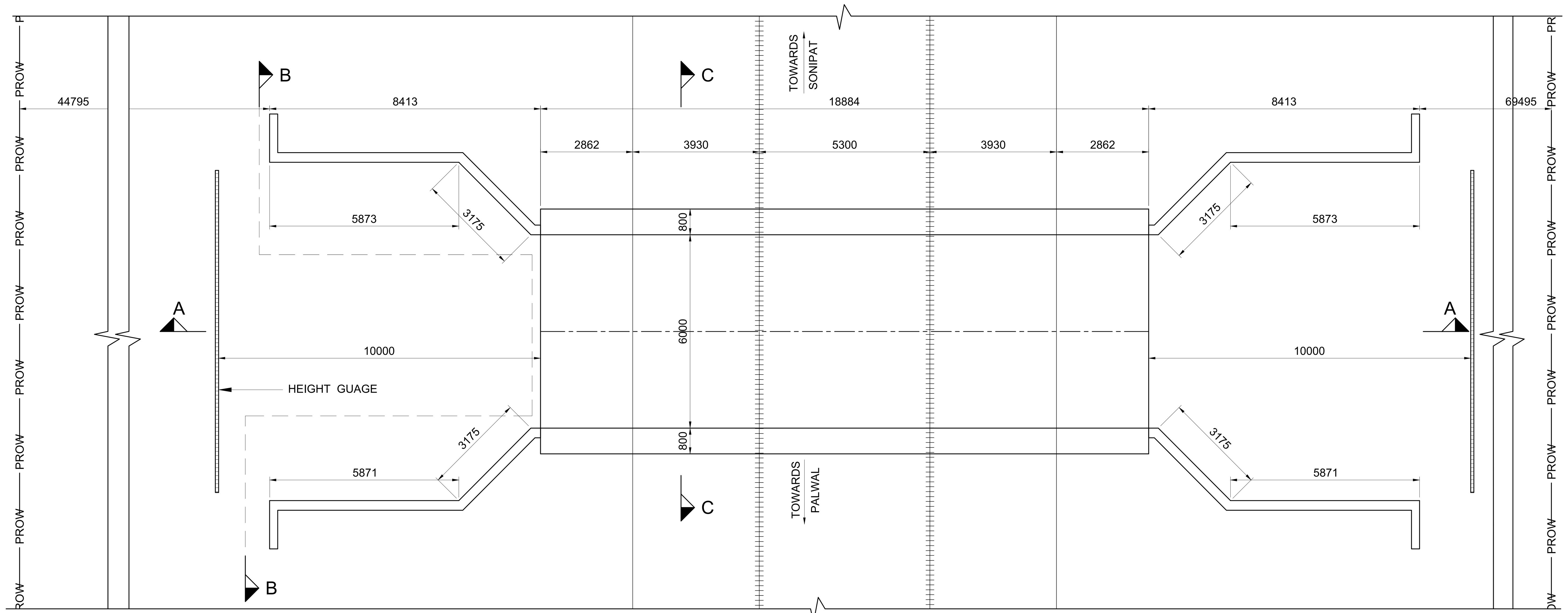
REVISED DATE



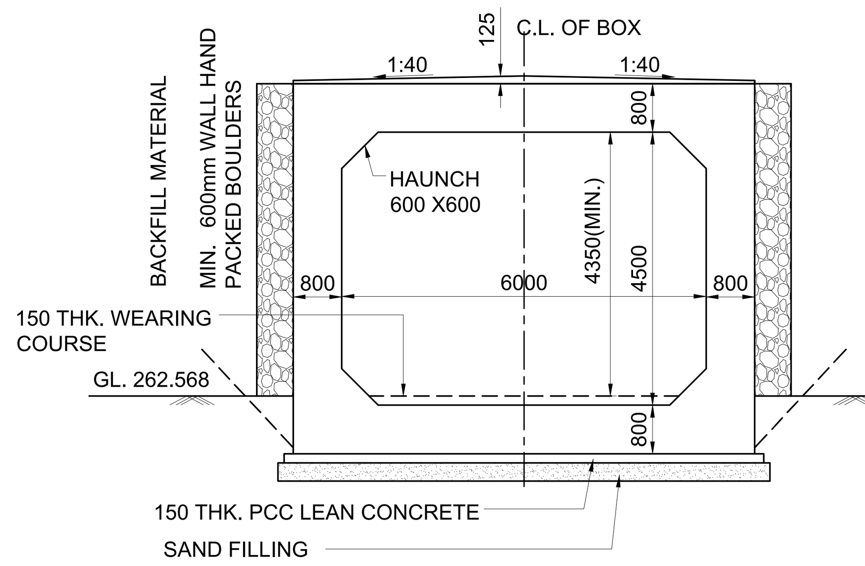
SECTIONAL ELEVATION AT A-A
SCALE 1:100



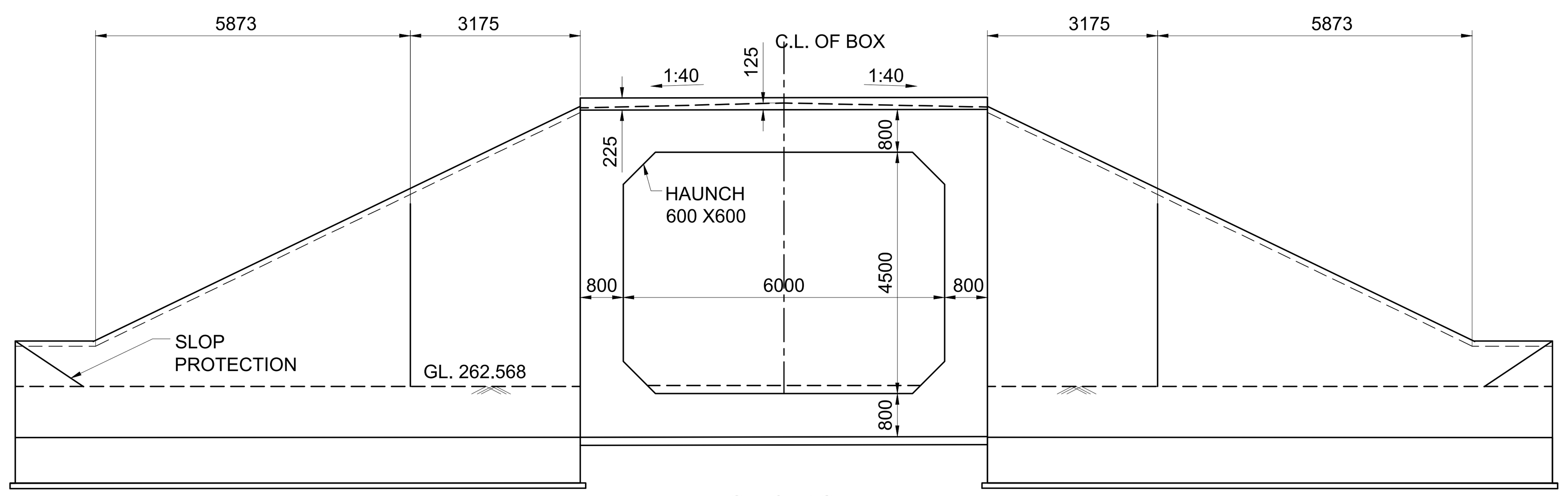
KEY PLAN
(NOT TO SCALE)



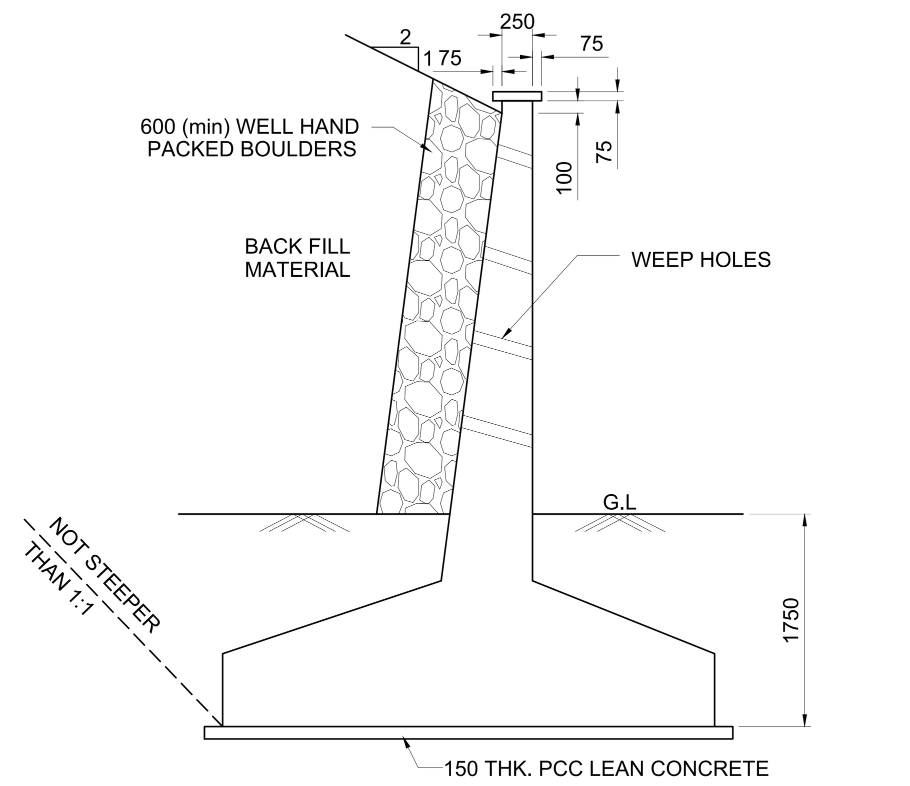
PLAN AT TOP
SCALE 1:100



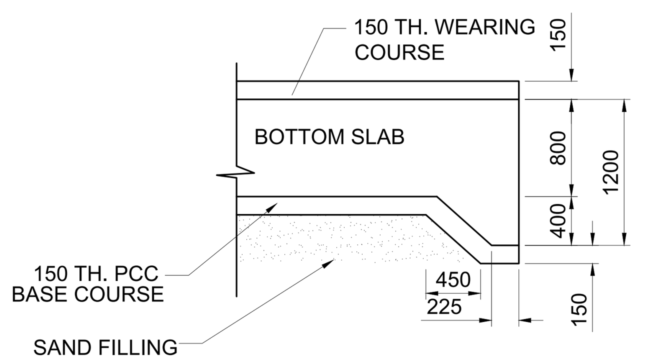
SECTION C-C
SCALE 1:100



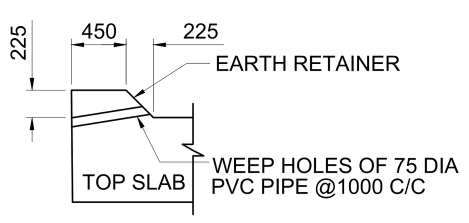
SECTION B-B
SCALE 1:100



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.
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 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

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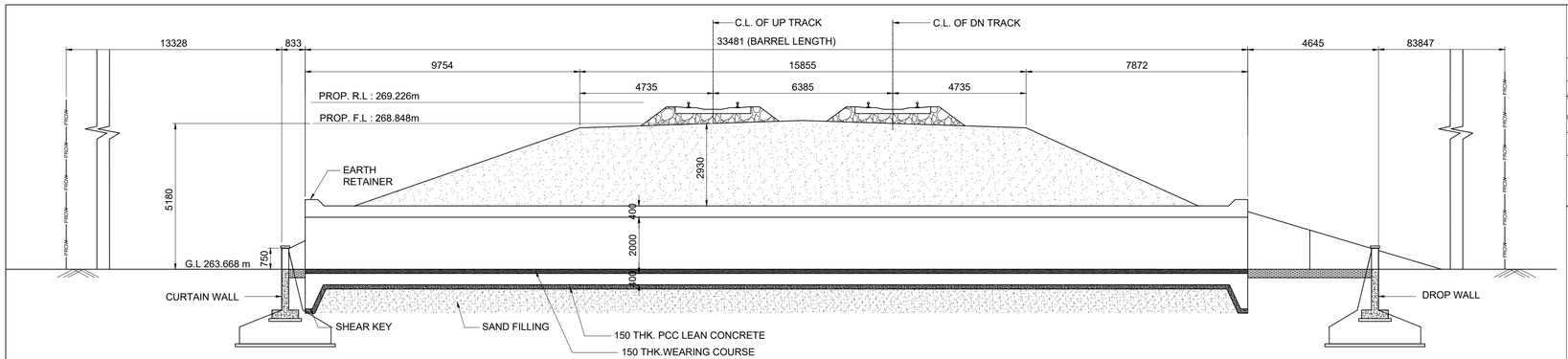
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	[signature]	SHIV OM DWIVEDI CPM/HRIDC	[signature]
SUDHIR AGRAWAL DPD/CIVIL	[signature]	RAJU SOLANKI DGM/C-SOUTH	[signature]
REETU PATIAL CDE/ CIVIL	[signature]		

TITLE: CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 077 SPAN
1×6.0×4.50 RCC BOX AT CH: 33155

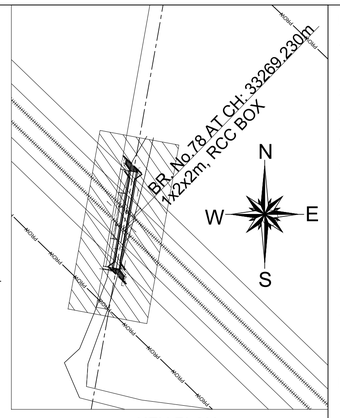
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01077_A0	1 OF 1

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



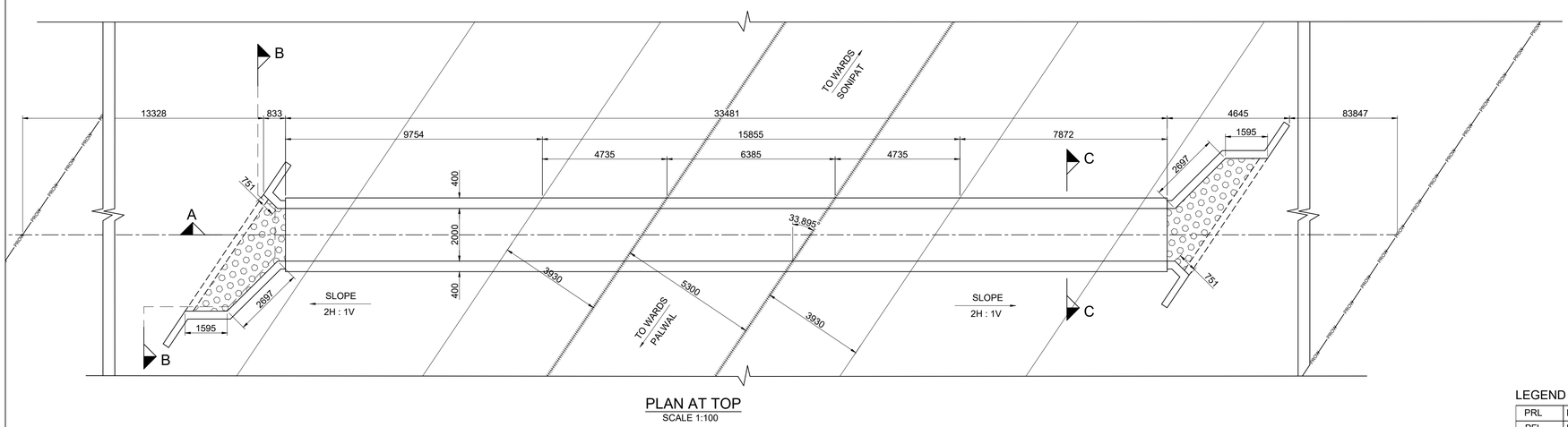
SECTIONAL ELEVATION AT A-A

SCALE 1:100



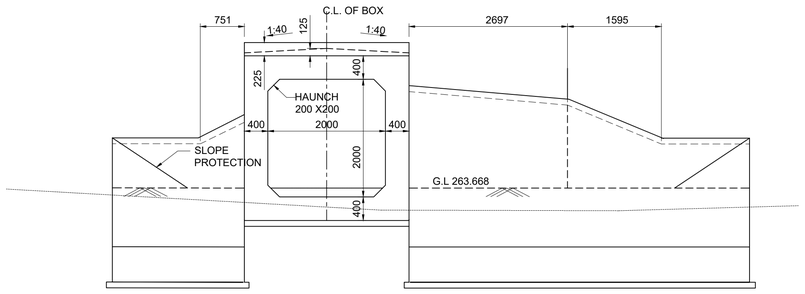
KEY PLAN

(NOT TO SCALE)



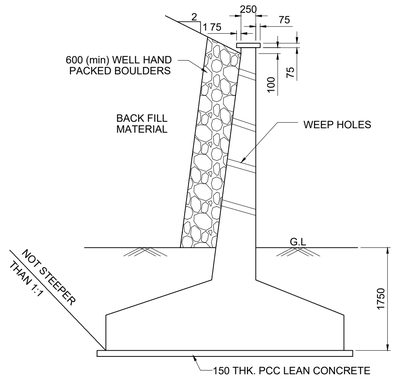
PLAN AT TOP

SCALE 1:100



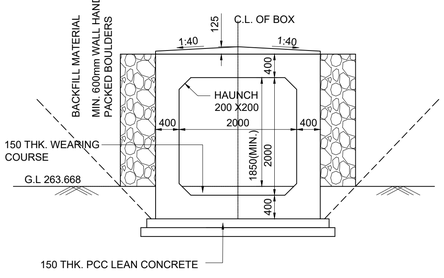
VIEW AT B-B

SCALE 1:50



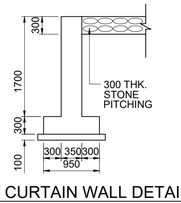
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



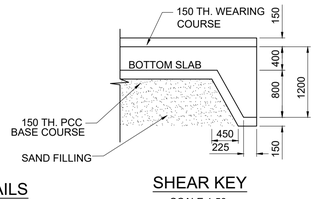
SECTION C-C

SCALE 1:50



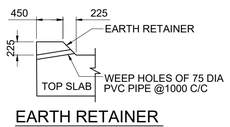
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

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HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

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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
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    (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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

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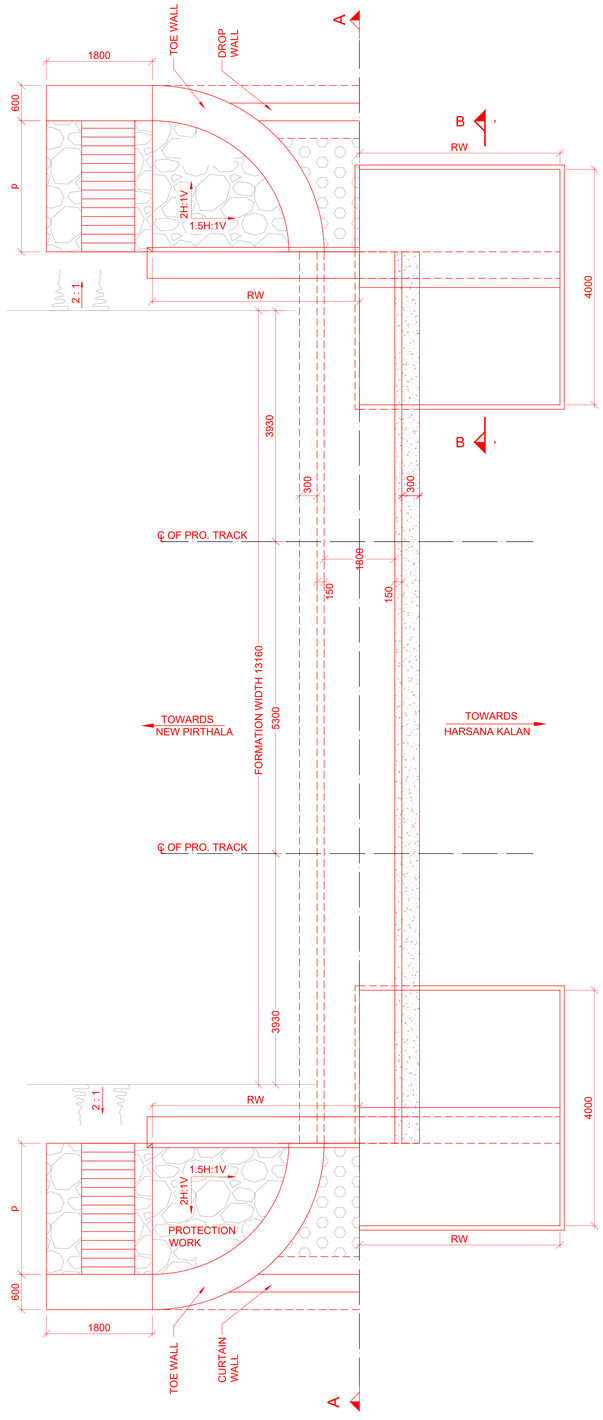
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

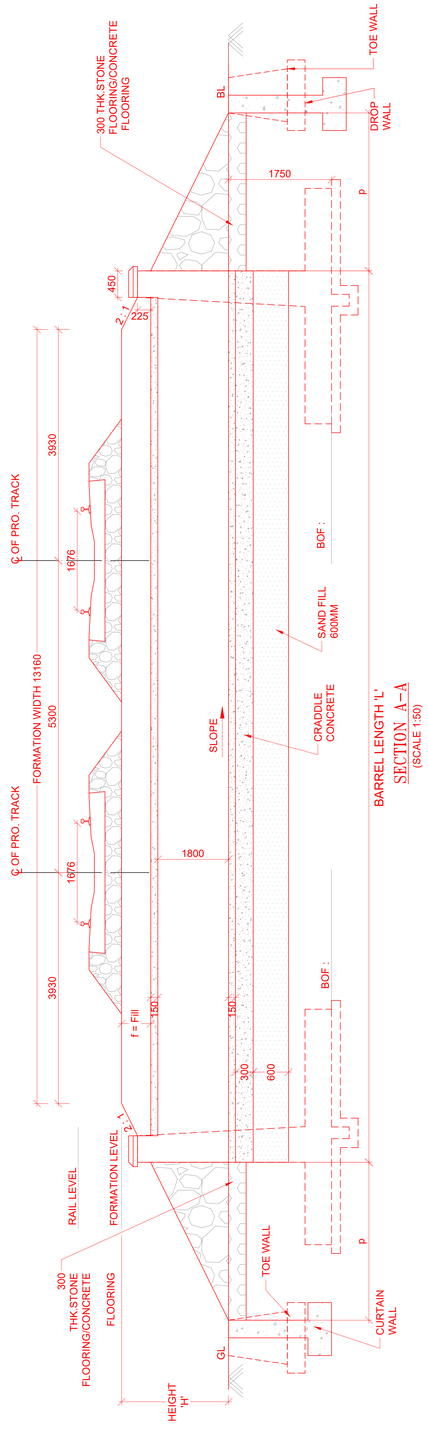
PROPOSED RUB NO. 078 SPAN
1×2.0×2.0 RCC BOX AT CH: 33269.230

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01078_A0	1 OF 1

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



HALF PLAN AT TOP

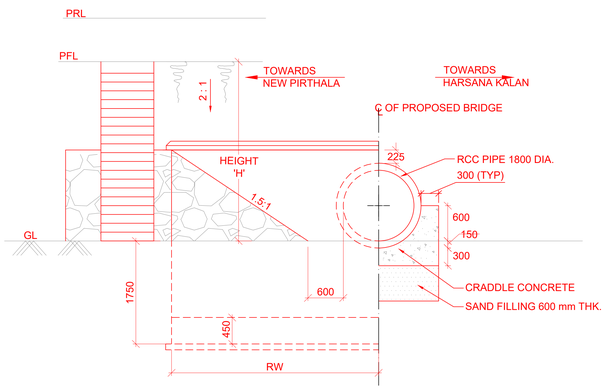


BARREL LENGTH 'L'

SECTION A – A (SCALE 1:50)

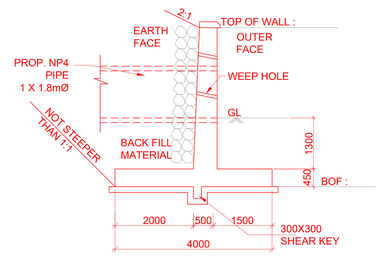
HALF PLAN AT BOTTOM

(SCALE 1:50)



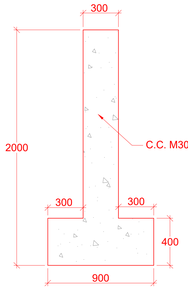
HALF ELEVATION HALF SECTION

(SCALE 1:50)



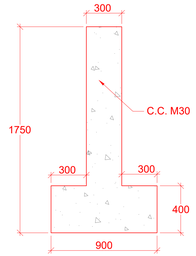
SECTION B-B

(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

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	79	1 x 1.8m	269.465	268.723	263.704	1.800	Straight	2	5.3	4.425	3.9	3.068	5.018	44.795	56.1°, SKEW
2	37317.678	86	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	91	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	41666.592	94	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	116	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	

NOTES :

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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 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. 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		SHIV OM DWIVEDI CPM/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. 79,86,91,94&116
PIPE CULVERT 1X1.8 SPAN

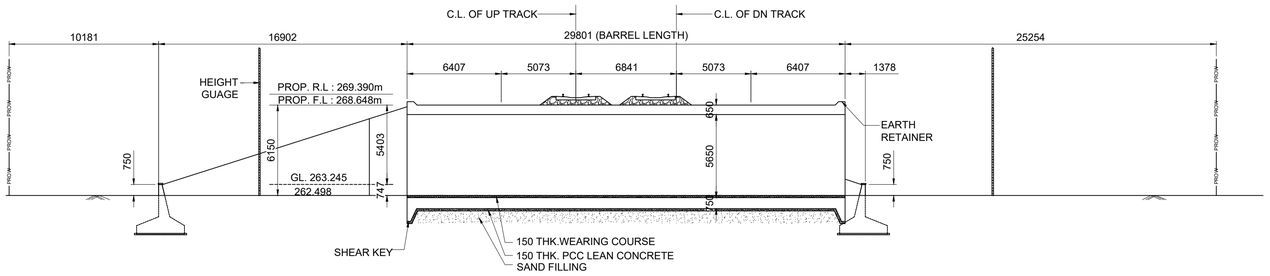
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-PIPE_A0

SHEET NO. 1 OF 1

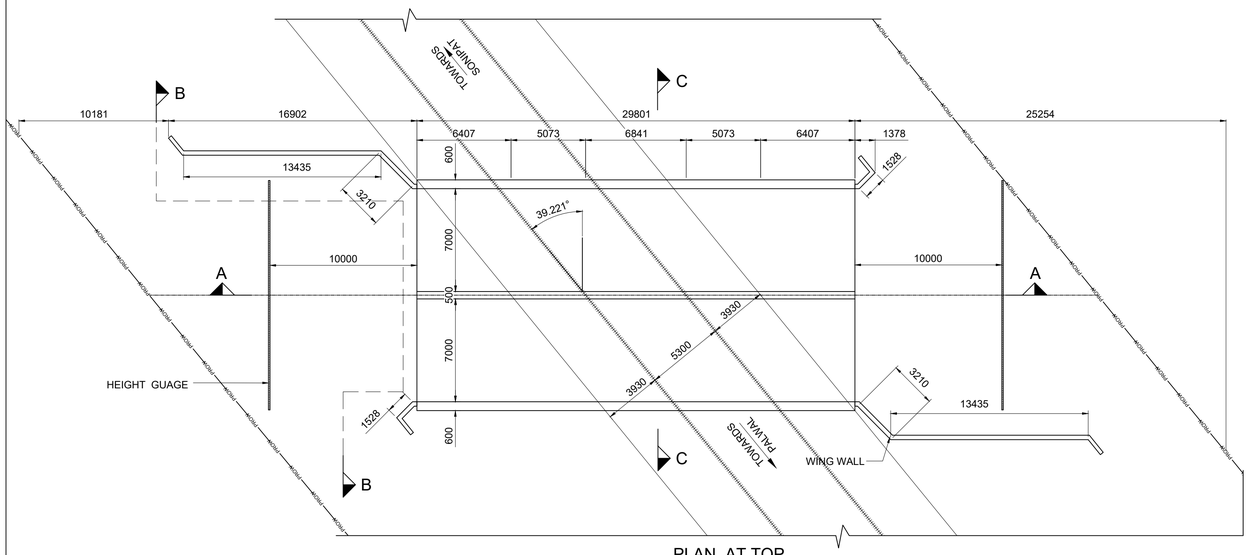
SCALE : AS SHOWN

ISSUE DATE 11-11-2022

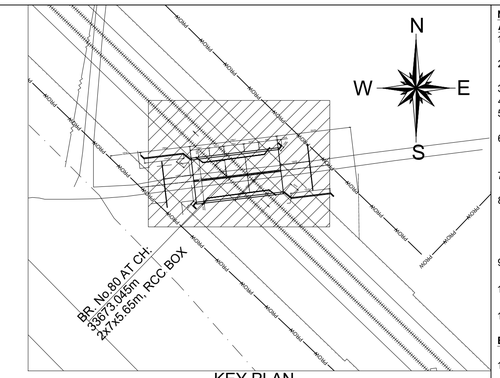
REVISED DATE



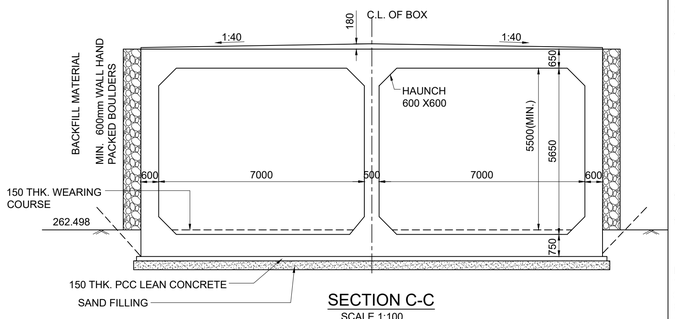
SECTIONAL ELEVATION AT A-A
SCALE 1:200



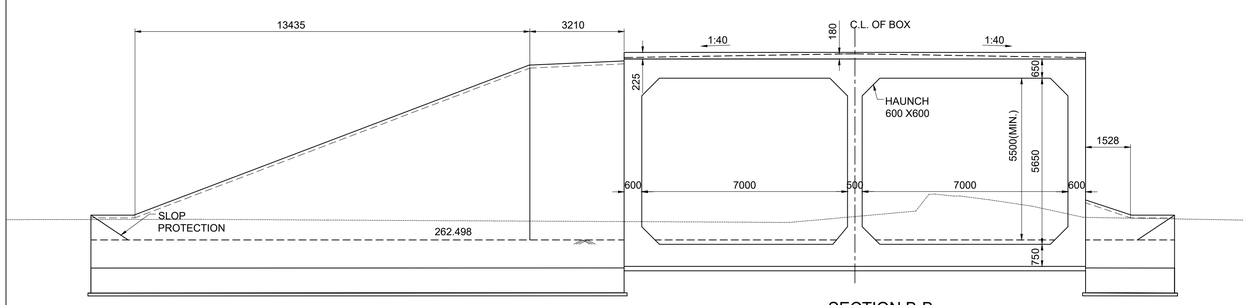
PLAN AT TOP
SCALE 1:200



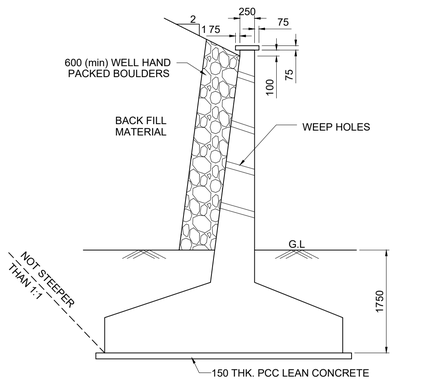
KEY PLAN
(NOT TO SCALE)



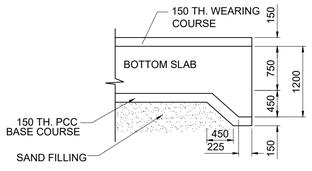
SECTION C-C
SCALE 1:100



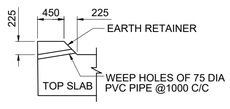
SECTION B-B
SCALE 1:100



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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

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.
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

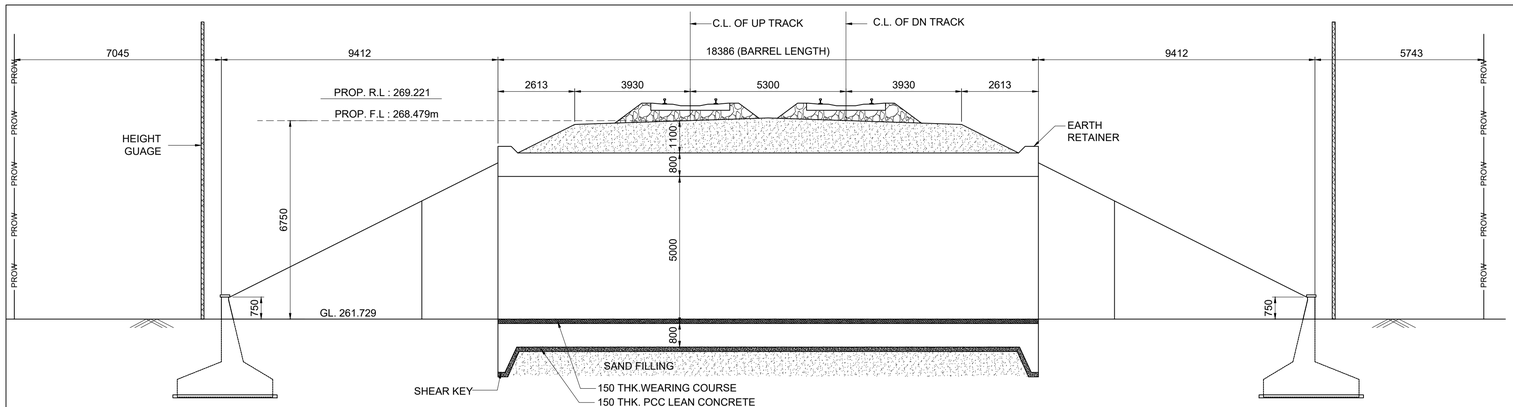
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

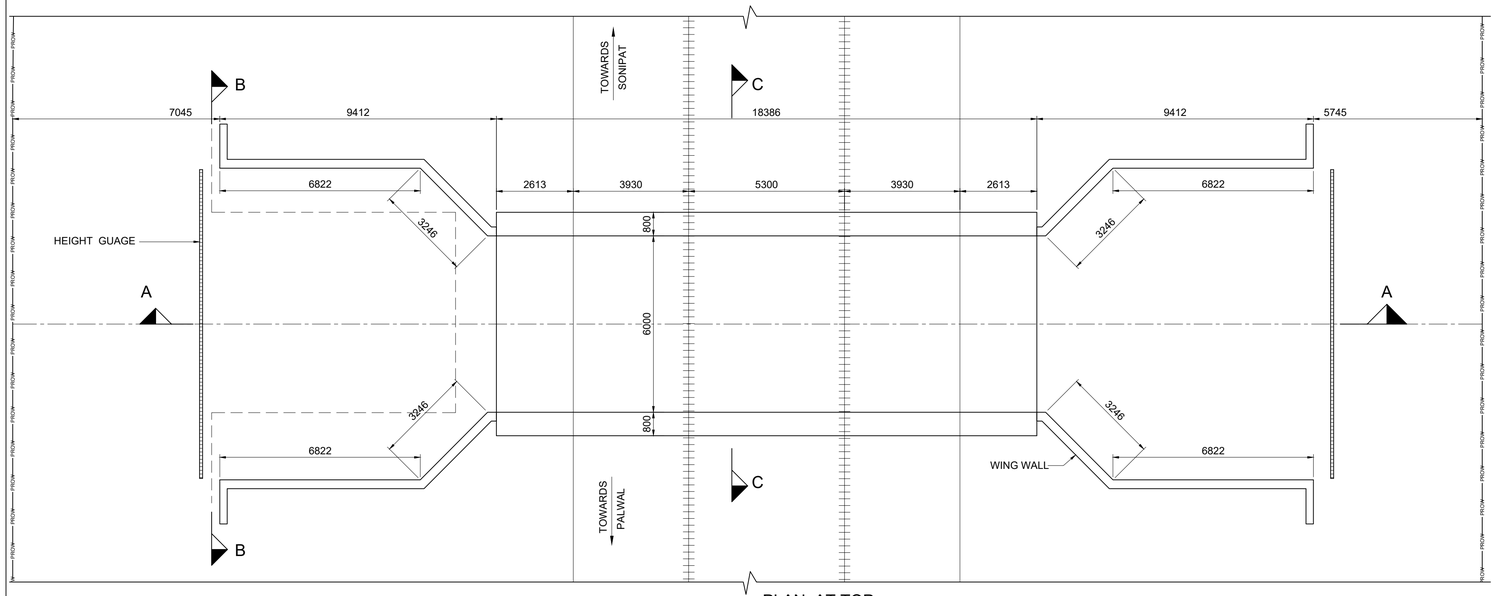
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 080 SPAN
2×7.0×5.650 RCC BOX AT CH: 33673.045

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01080_A0
SHEET NO. 1 OF 1
SCALE : AS SHOWN
ISSUE DATE 11-11-2022
REVISED DATE



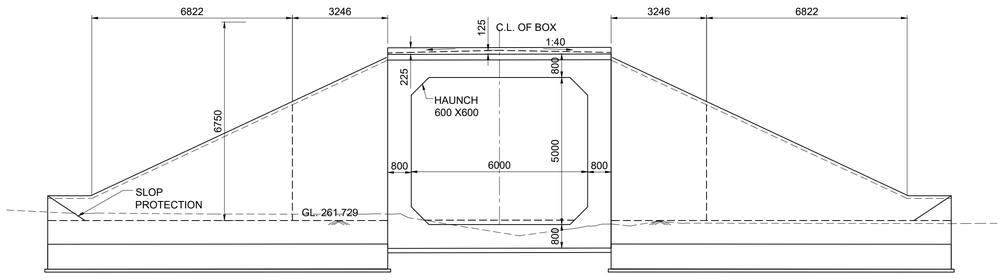
SECTIONAL ELEVATION AT A-A

SCALE 1:100



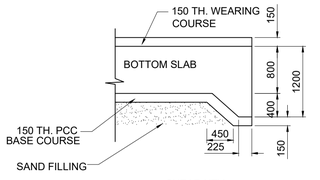
PLAN AT TOP

SCALE 1:100



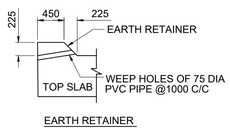
SECTION B-B

SCALE 1:100



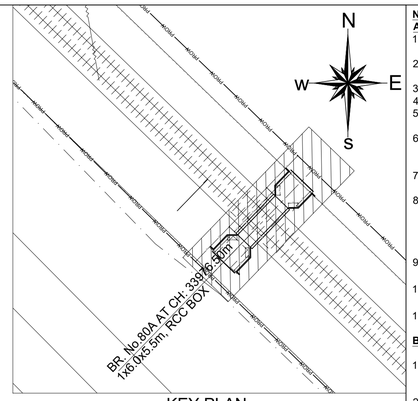
SHEAR KEY

SCALE 1:50



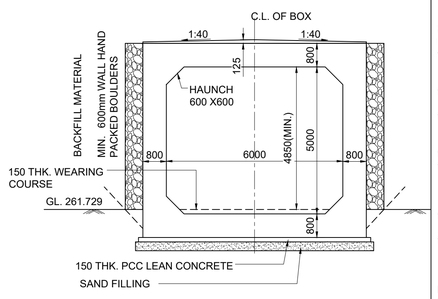
EARTH RETAINER

SCALE 1:50



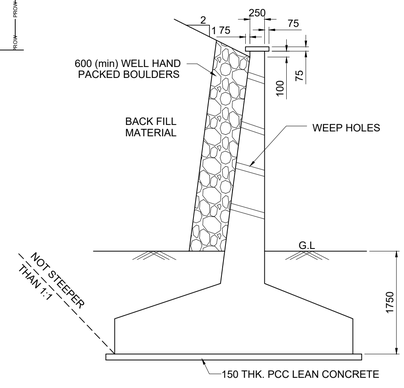
KEY PLAN

(NOT TO SCALE)



SECTION C-C

SCALE 1:100



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.
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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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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
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13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
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    (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:
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LEGEND

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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 Member of the Surbana Jurong Group

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 080A SPAN
1×6.0×5.0 RCC BOX AT CH: 33976.50

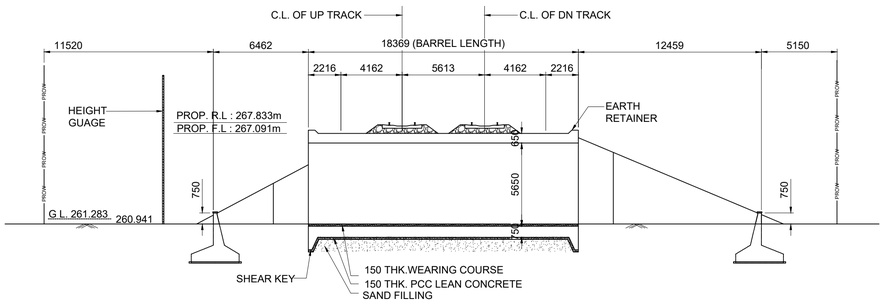
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01080A_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

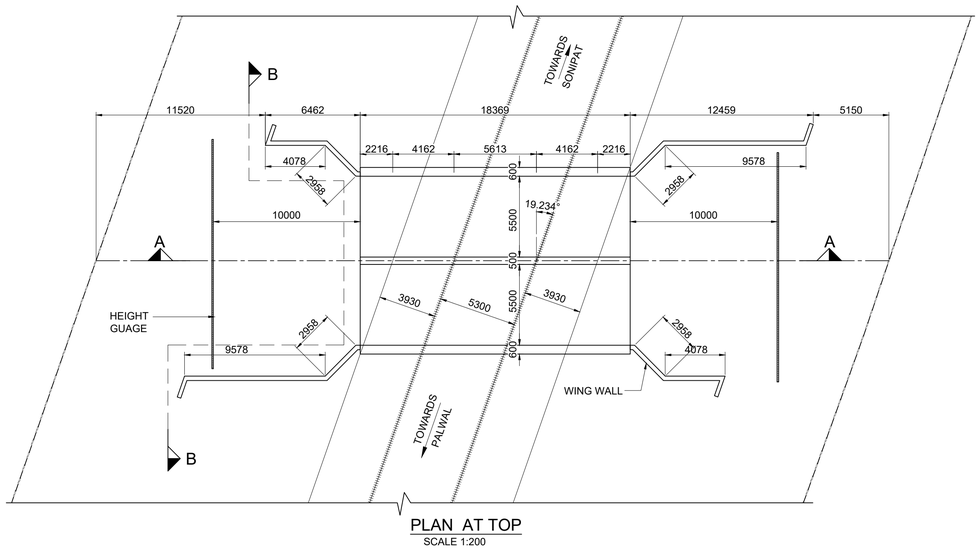
ISSUE DATE 11-11-2022

REVISED DATE



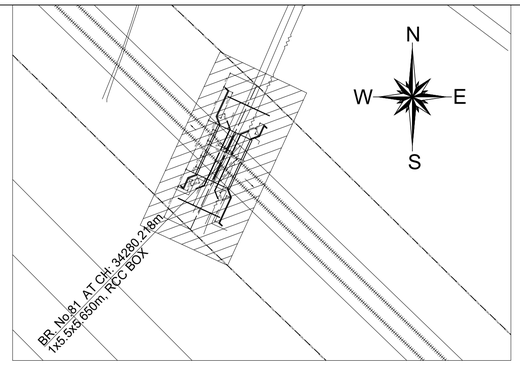
SECTIONAL ELEVATION AT A-A

SCALE 1:200



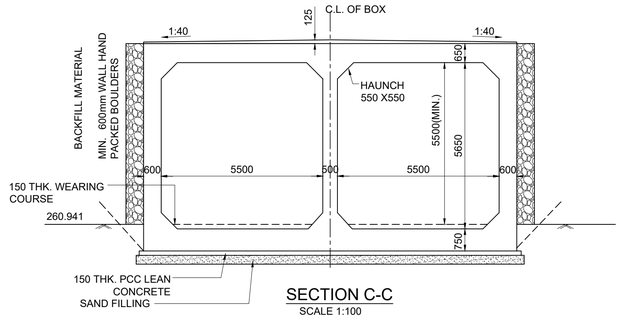
PLAN AT TOP

SCALE 1:200



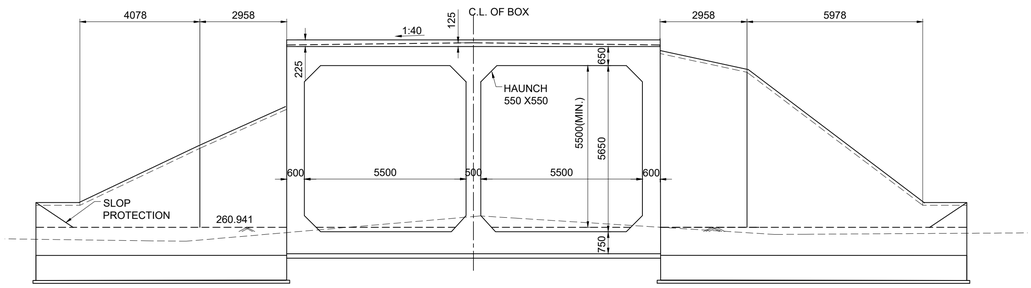
KEY PLAN

(NOT TO SCALE)



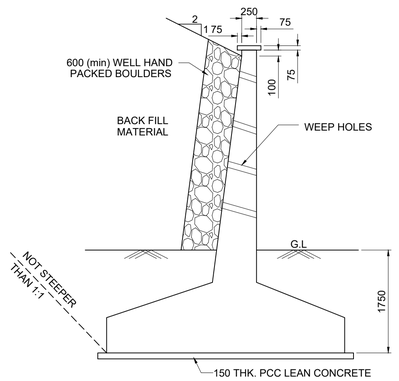
SECTION C-C

SCALE 1:100



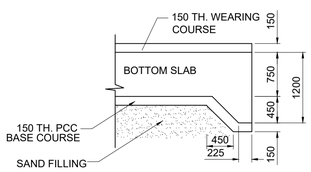
SECTION B-B

SCALE 1:100



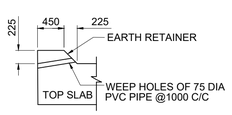
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

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.
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 Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 081 SPAN
2×5.0×5.650 RCC BOX AT CH: 34280.218

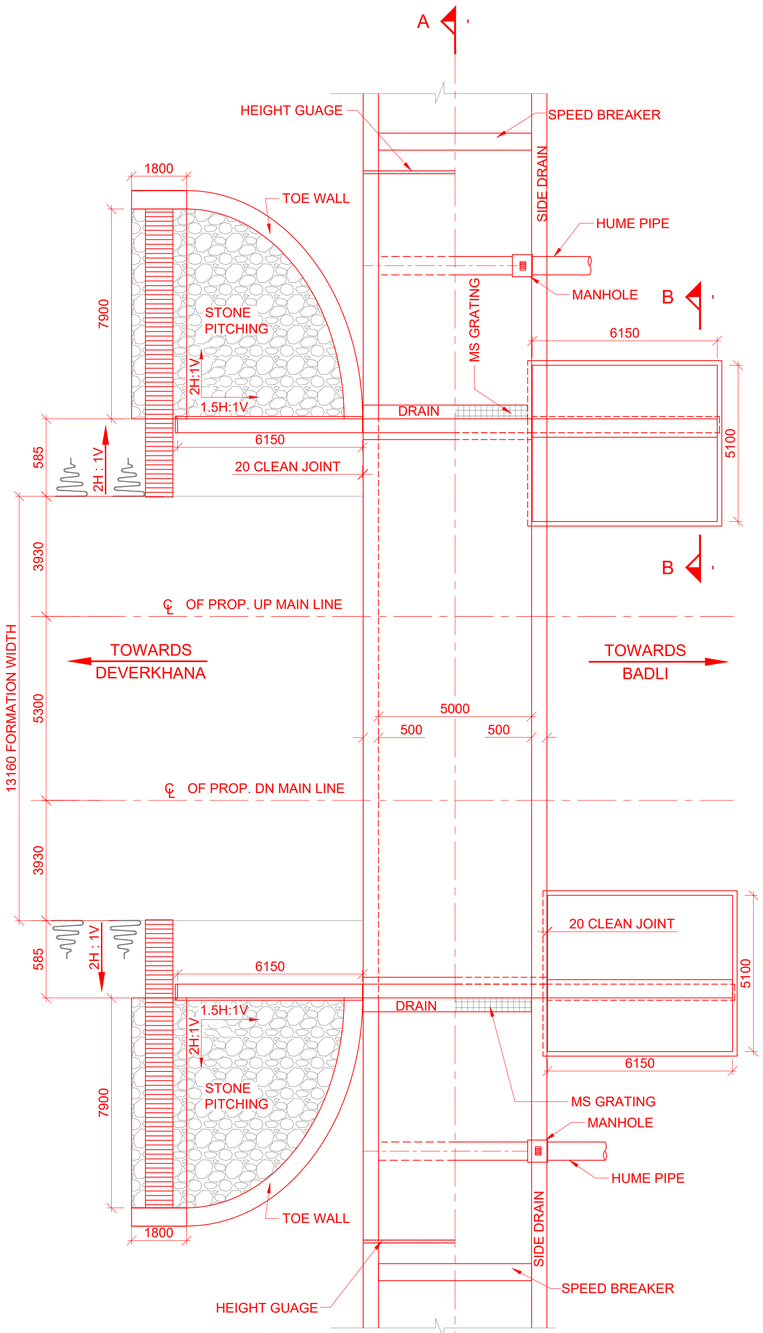
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01081_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

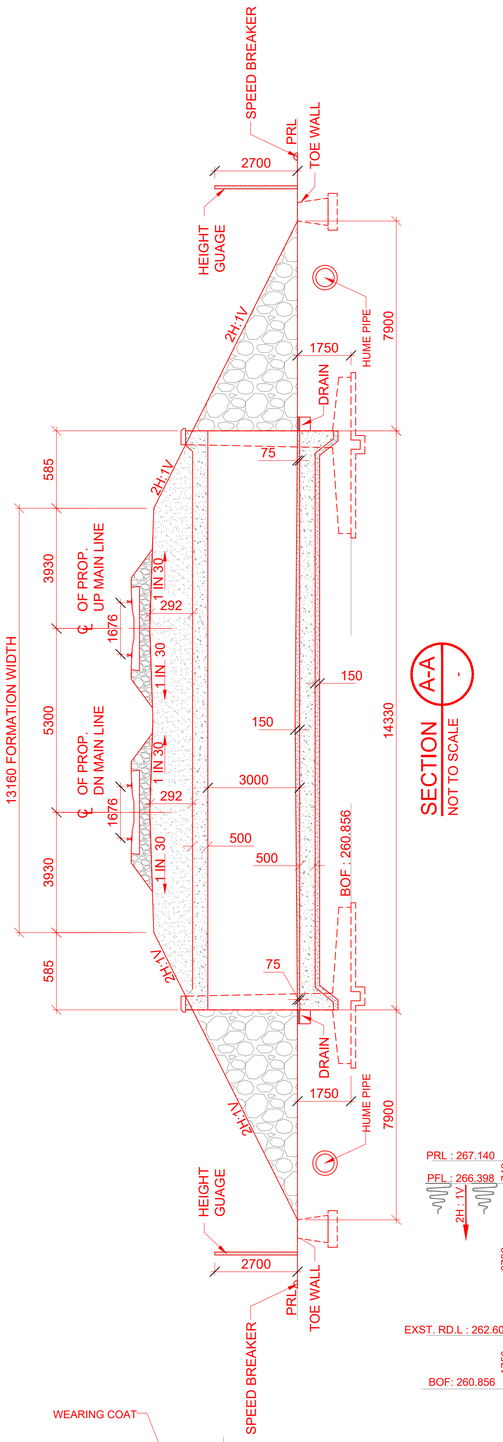
ISSUE DATE 11-11-2022

REVISED DATE



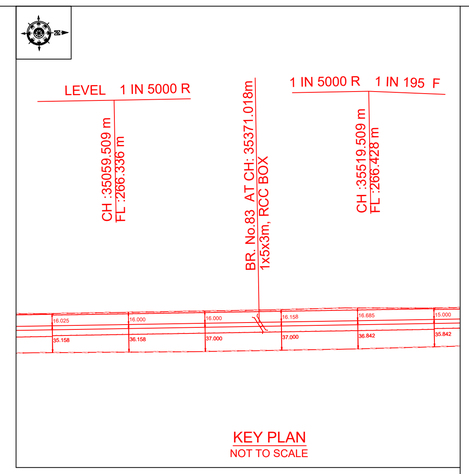
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



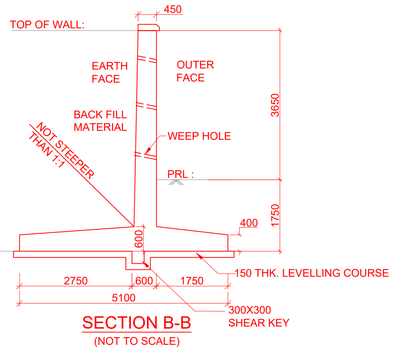
SECTION A-A

NOT TO SCALE



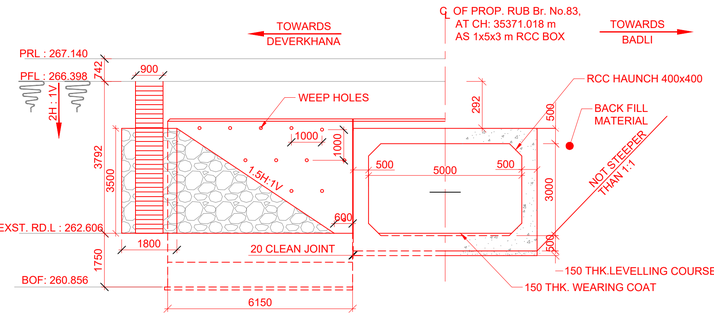
KEY PLAN

NOT TO SCALE



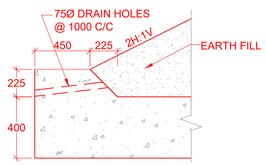
SECTION B-B

(NOT TO SCALE)



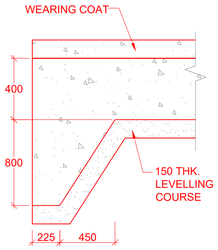
HALF ELEVATION HALF SECTION

NOT TO SCALE



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

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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:

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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

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NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 83 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 35371.018m

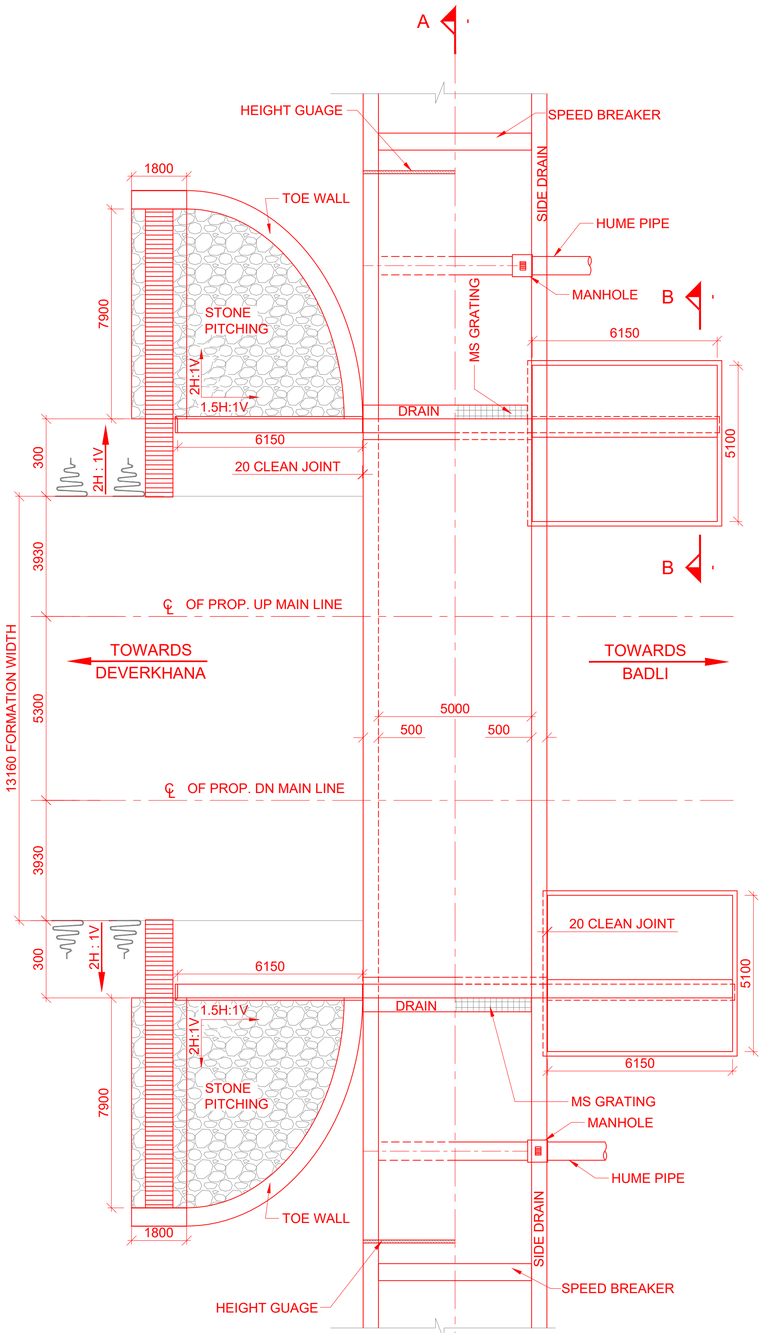
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-0083_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

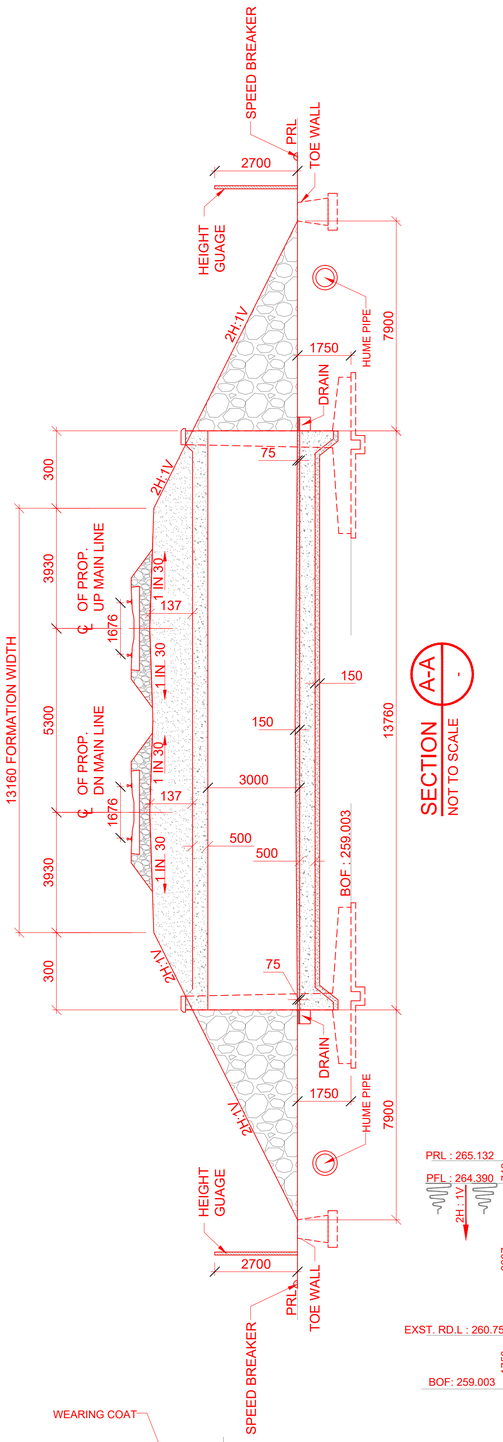
ISSUE DATE 11-11-2022

REVISED DATE



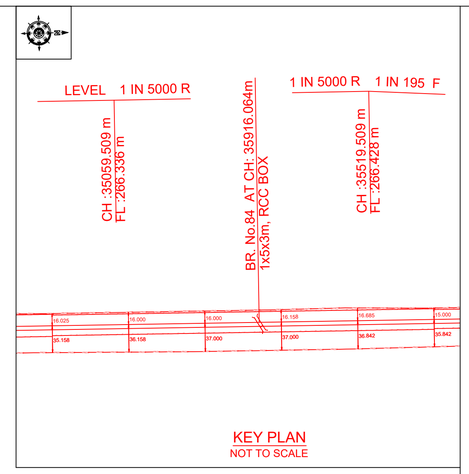
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



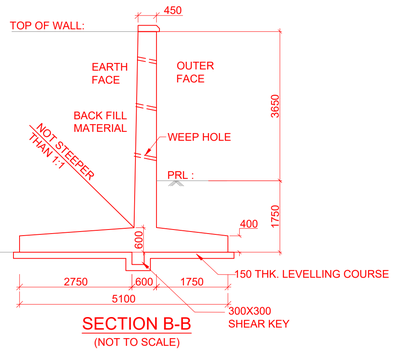
SECTION A-A

NOT TO SCALE



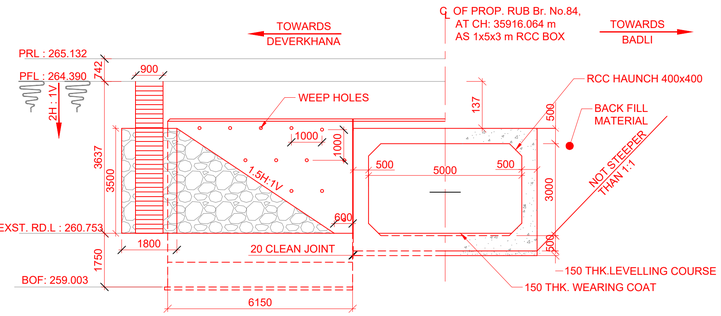
KEY PLAN

NOT TO SCALE



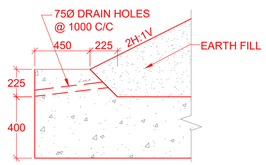
SECTION B-B

(NOT TO SCALE)



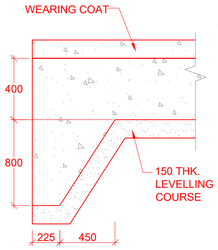
HALF ELEVATION HALF SECTION

NOT TO SCALE



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

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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

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NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 84 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 35916.064m

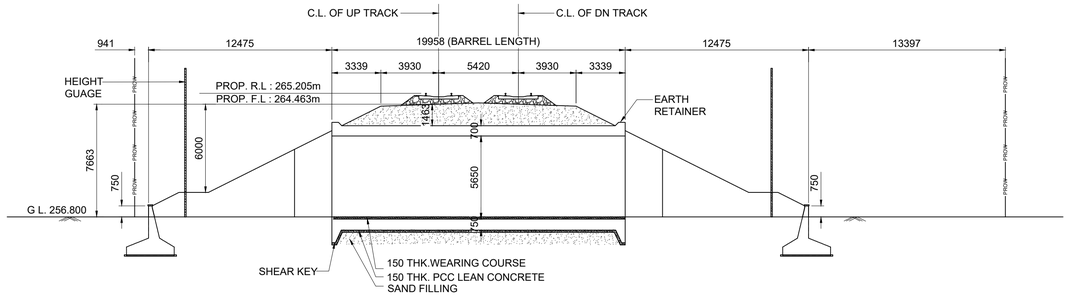
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-0084_A0

SHEET NO. 1 OF 1

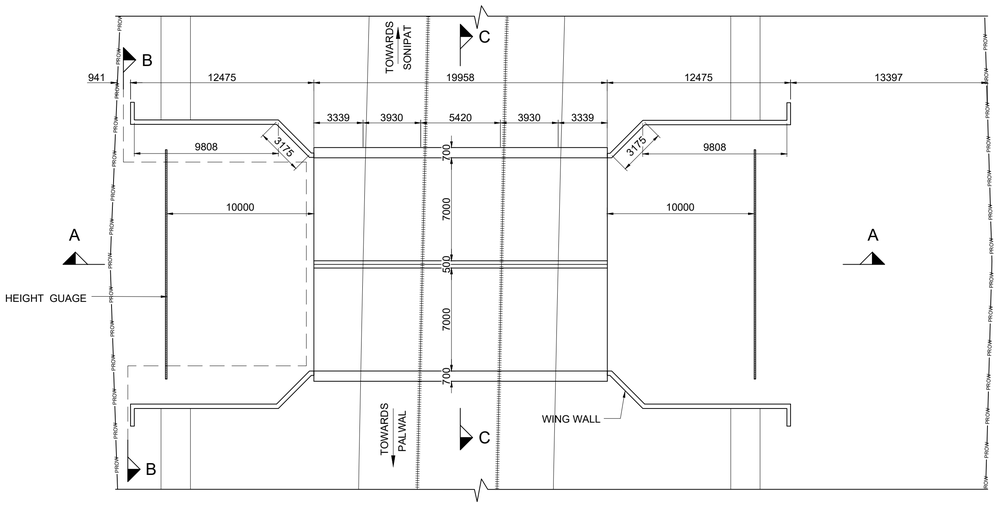
SCALE : AS SHOWN

ISSUE DATE 11-11-2022

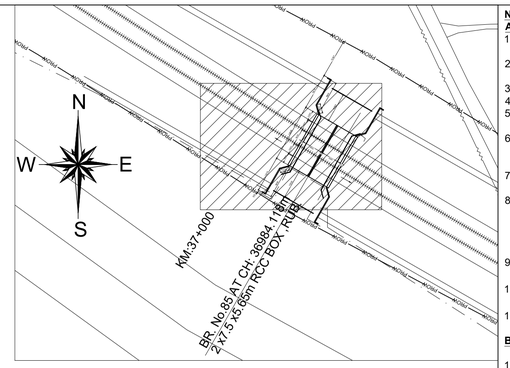
REVISED DATE



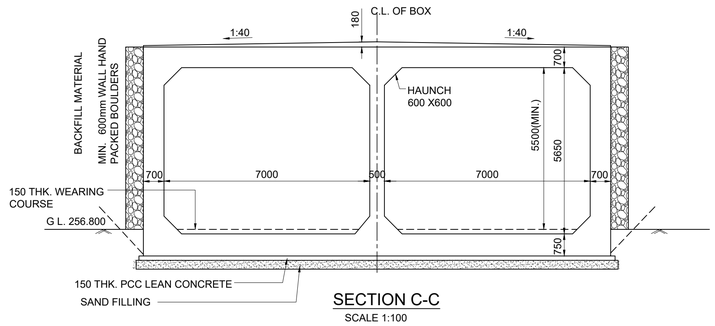
SECTIONAL ELEVATION AT A-A
SCALE 1:200



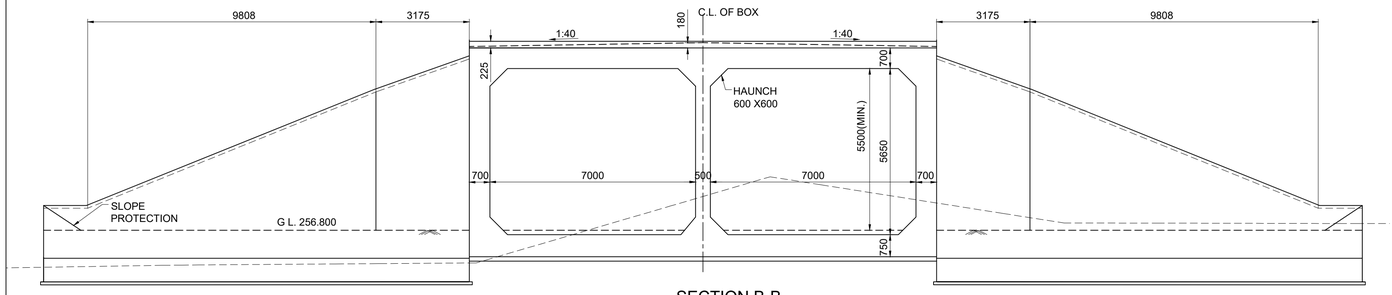
PLAN AT TOP
SCALE 1:200



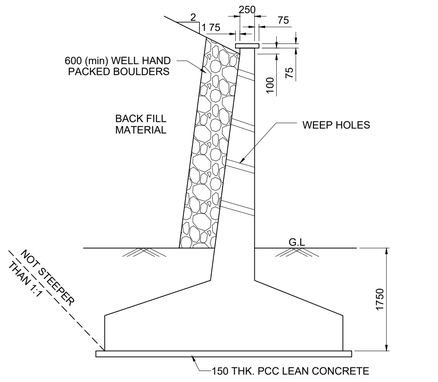
KEY PLAN
(NOT TO SCALE)



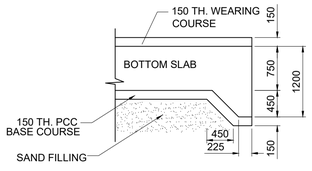
SECTION C-C
SCALE 1:100



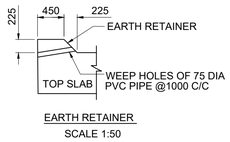
SECTION B-B
SCALE 1:100



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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

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.
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
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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.
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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 Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 085 SPAN
2×7.0×5.650 RCC BOX AT CH: 36984.118

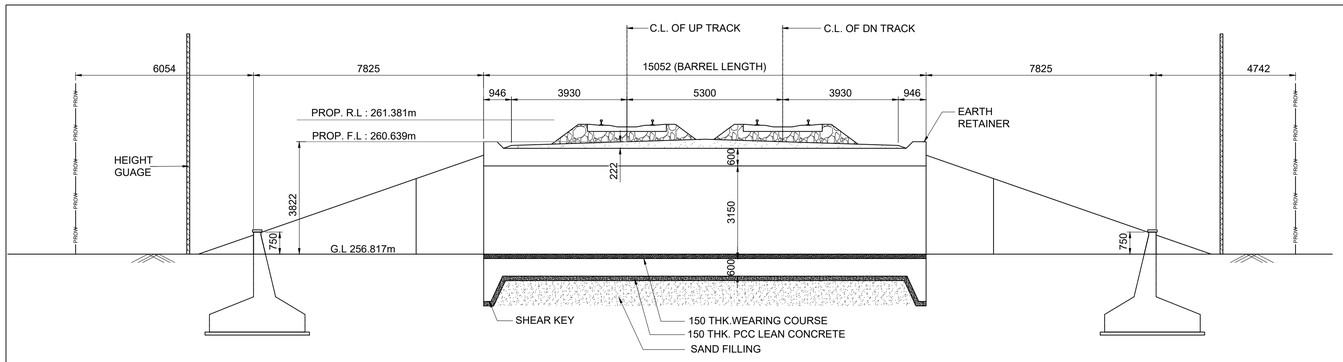
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01085_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

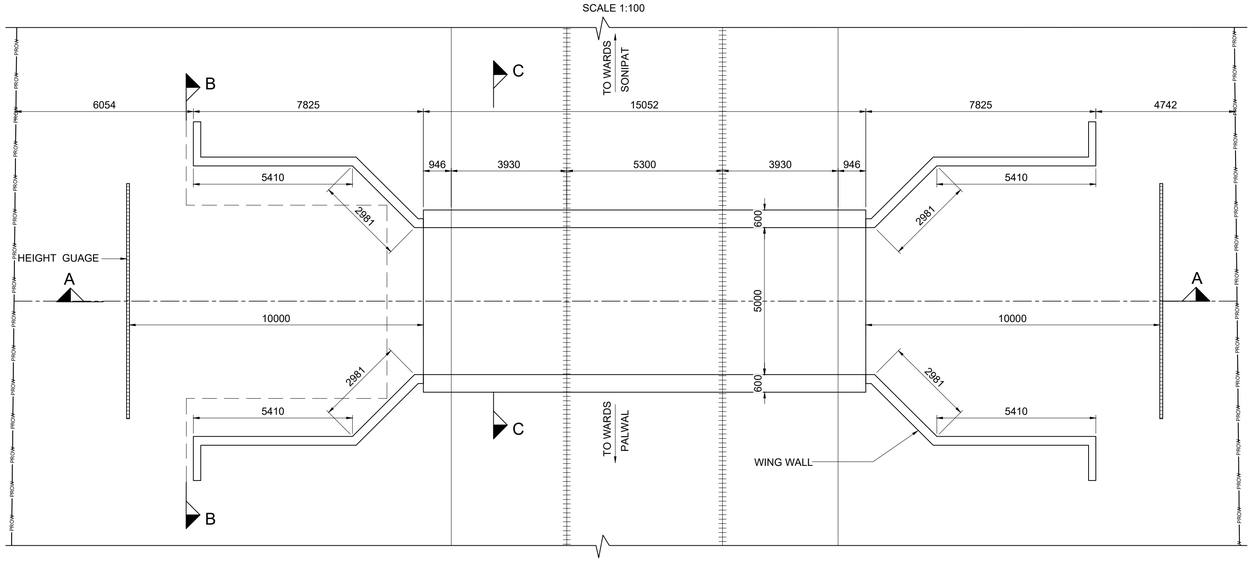
ISSUE DATE 11-11-2022

REVISED DATE



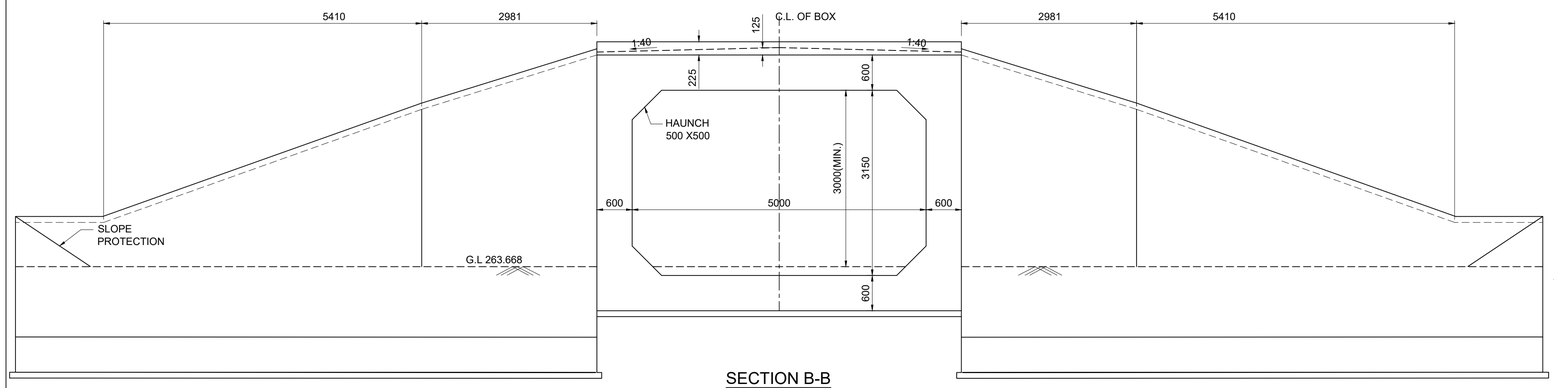
SECTIONAL ELEVATION AT A-A

SCALE 1:100



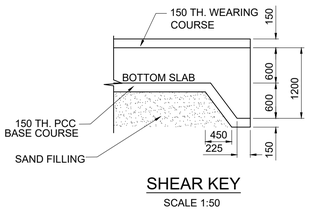
PLAN AT TOP

SCALE 1:100



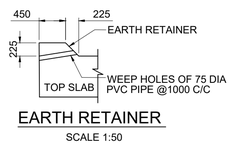
SECTION B-B

SCALE 1:50



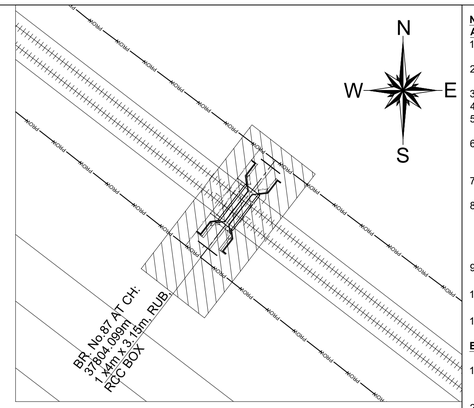
SHEAR KEY

SCALE 1:50



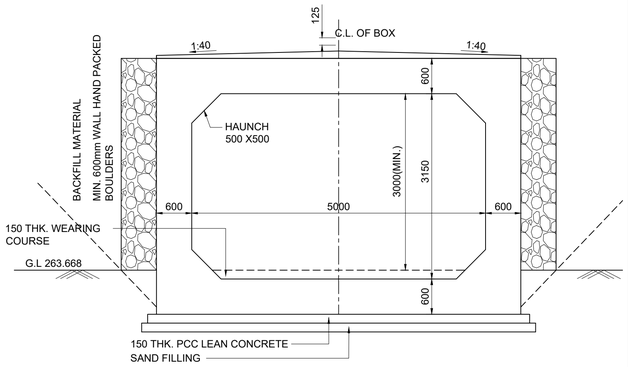
EARTH RETAINER

SCALE 1:50



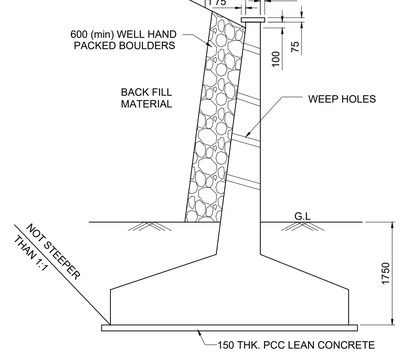
KEY PLAN

(NOT TO SCALE)



SECTION C-C

SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL

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

CLIENT:

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CONSULTANT:

GENERAL CONSULTANTS 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

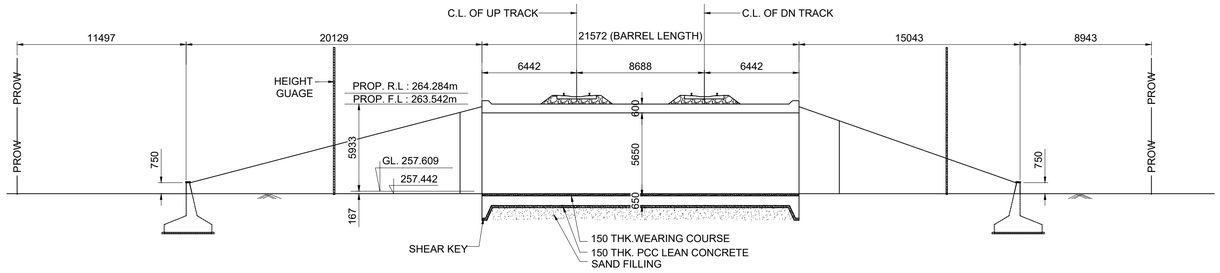
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

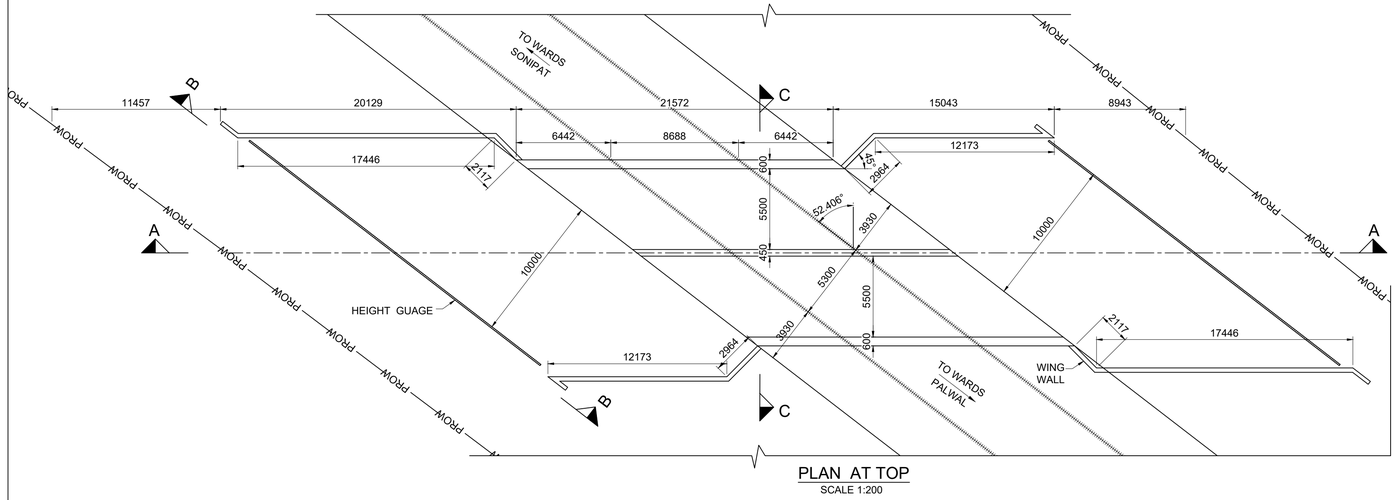
PROPOSED RUB NO. 087 SPAN 1×5.0×3.15 RCC BOX AT CH: 37804.099

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01087_A0	1 OF 1

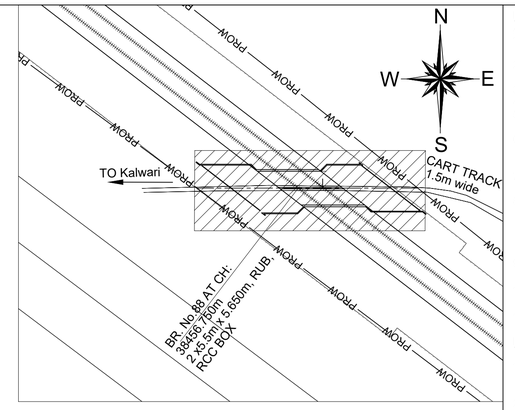
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



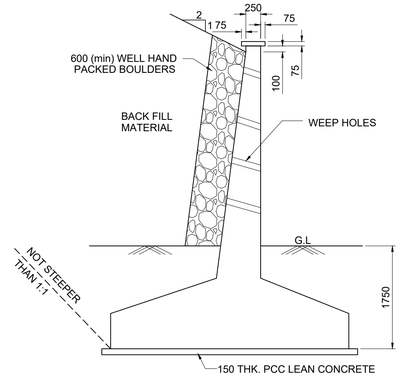
SECTIONAL ELEVATION AT A-A
SCALE 1:200



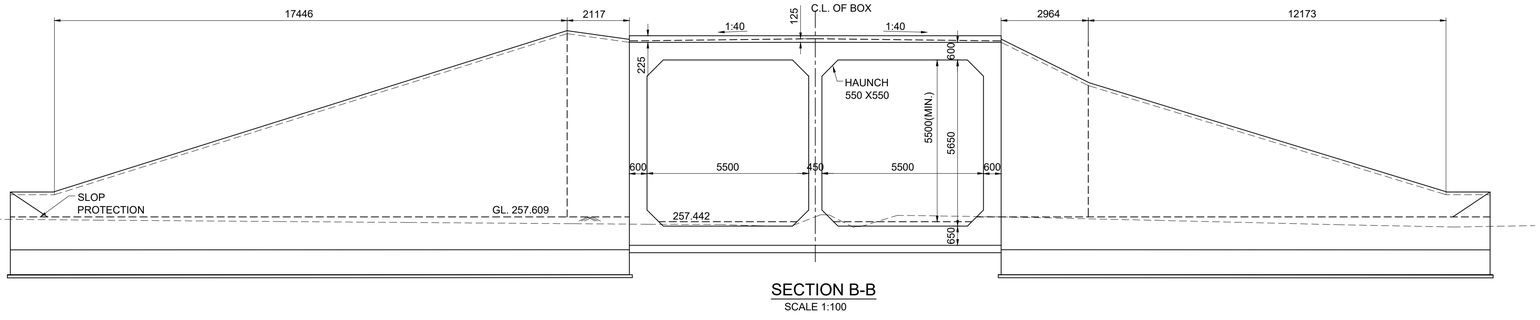
PLAN AT TOP
SCALE 1:200



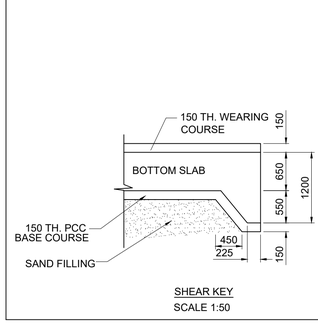
KEY PLAN
(NOT TO SCALE)



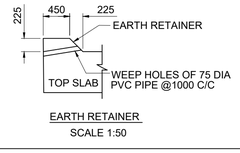
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



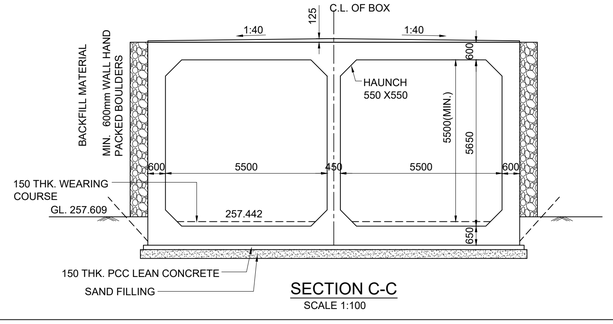
SECTION B-B
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



SECTION C-C
SCALE 1:100

NOTES :

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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.

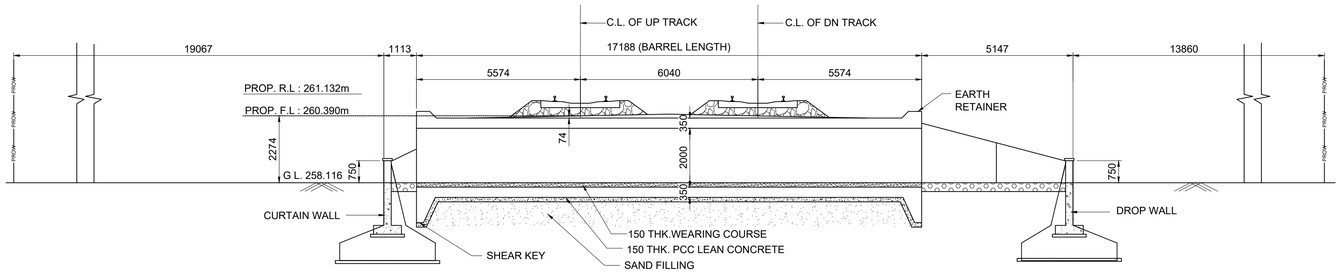
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

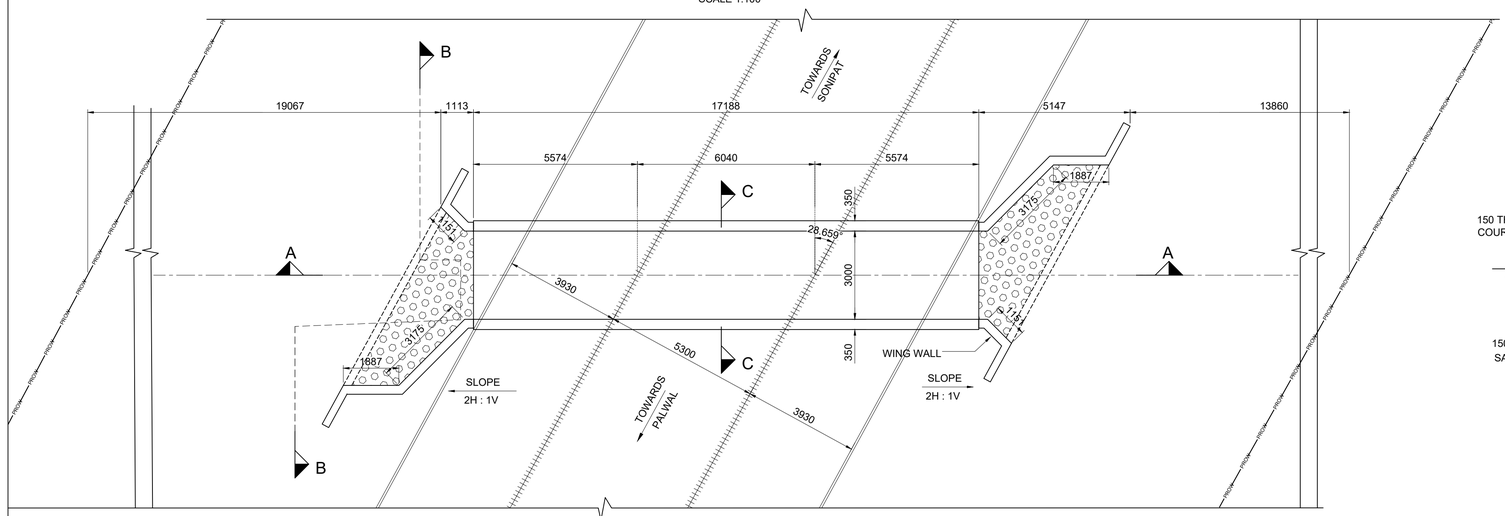
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 088 SPAN
2×5.5×5.650 RCC BOX AT CH: 38456.750

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01088_A0
SHEET NO. 1 OF 1

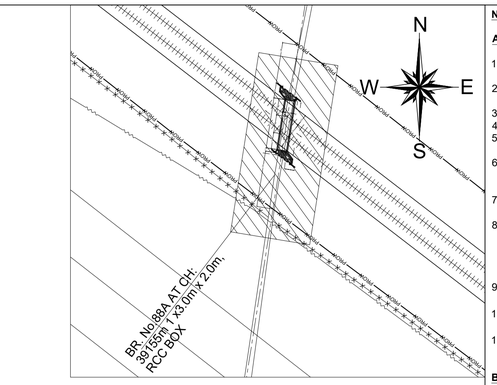
SCALE : AS SHOWN
ISSUE DATE 11-11-2022
REVISED DATE



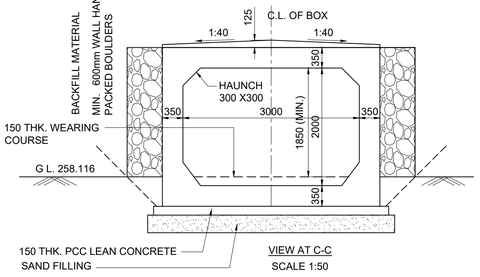
SECTIONAL ELEVATION AT A-A
SCALE 1:100



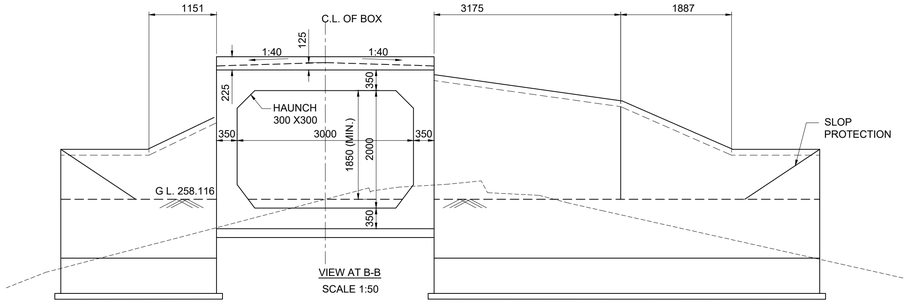
PLAN AT TOP
SCALE 1:100



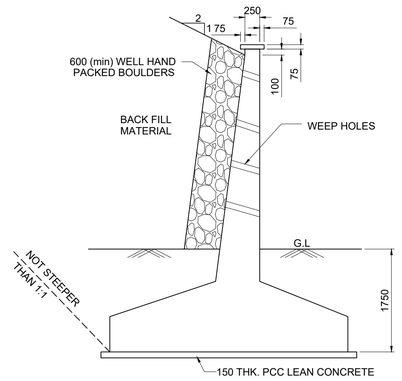
KEY PLAN
(NOT TO SCALE)



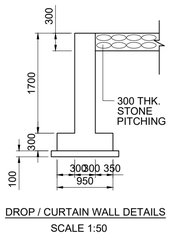
VIEW AT C-C
SCALE 1:50



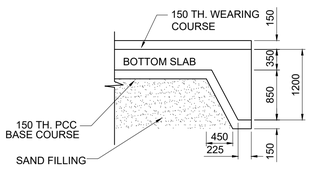
VIEW AT B-B
SCALE 1:50



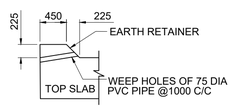
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

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.
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(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.

LEGEND

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

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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CLIENT:

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CONSULTANT:

GENERAL CONSULTANTS 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		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 088A SPAN 1×3.0×2.0 RCC BOX AT CH: 39155

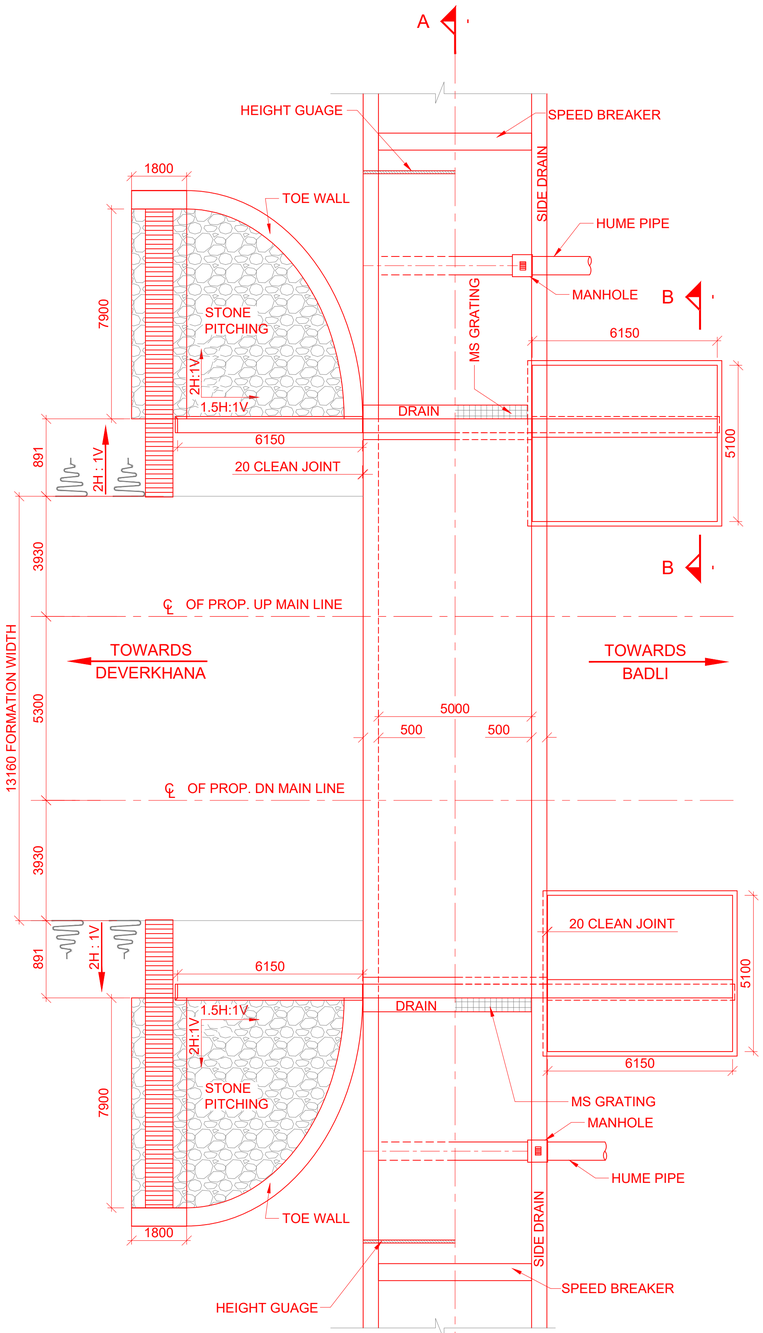
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01088A_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

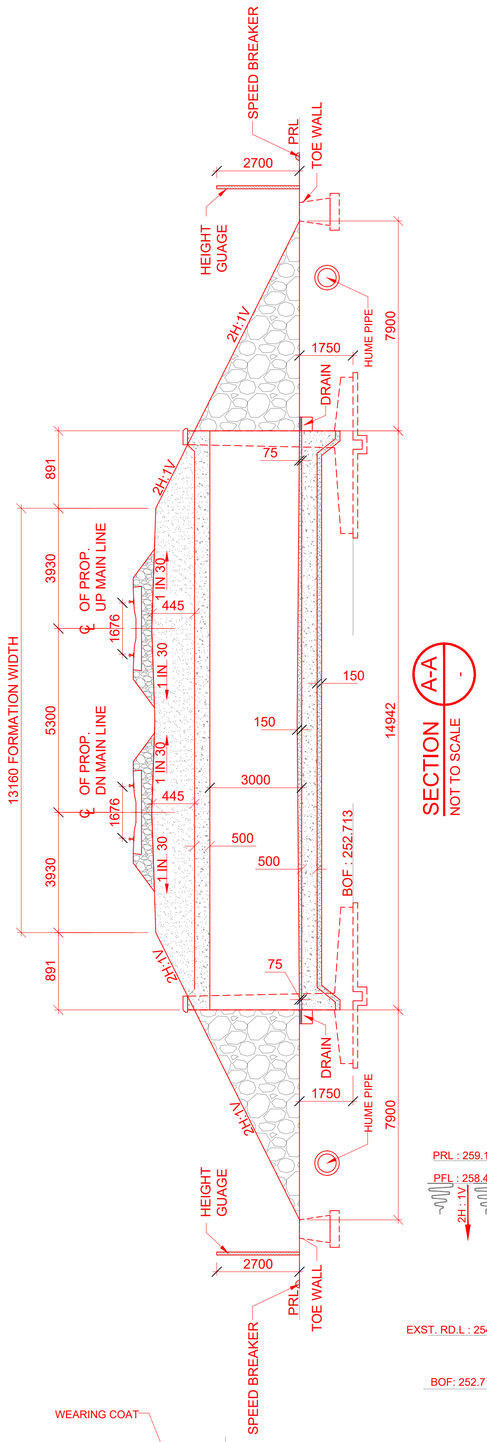
ISSUE DATE 11-11-2022

REVISED DATE



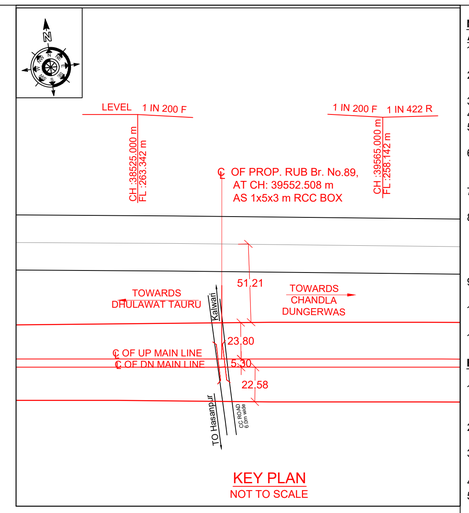
HALF PLAN AT TOP HALF PLAN AT BOTTOM

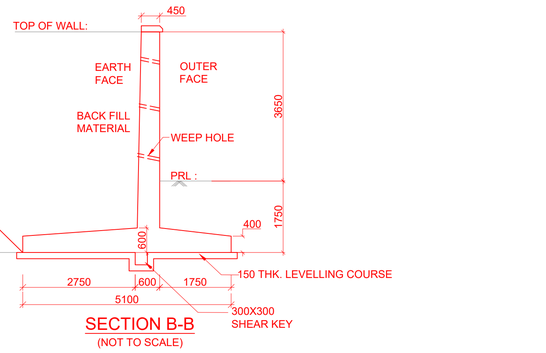
NOT TO SCALE



SECTION A-A

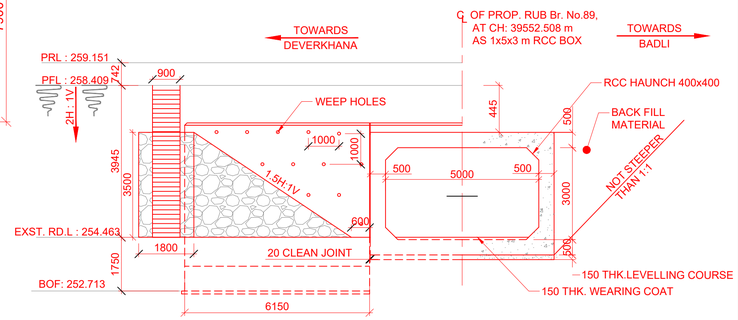
NOT TO SCALE





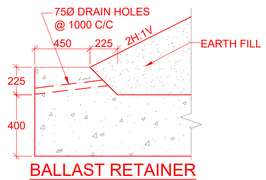
SECTION B-B

(NOT TO SCALE)



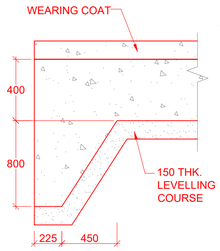
HALF ELEVATION HALF SECTION

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.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
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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.
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.
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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:

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GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

Member of the Surbana Jurong Group

GC/HORC		HRIDC	
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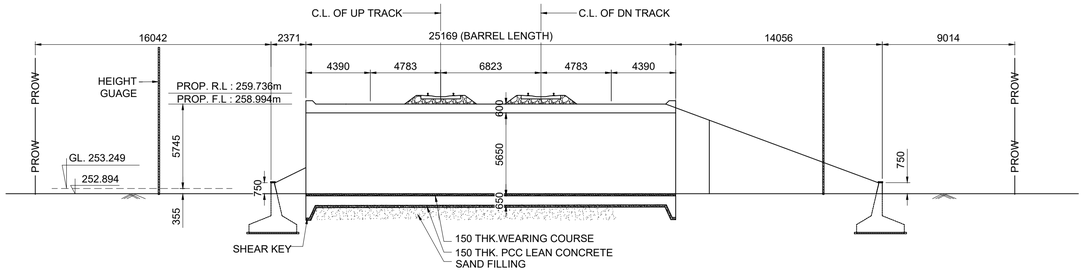
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

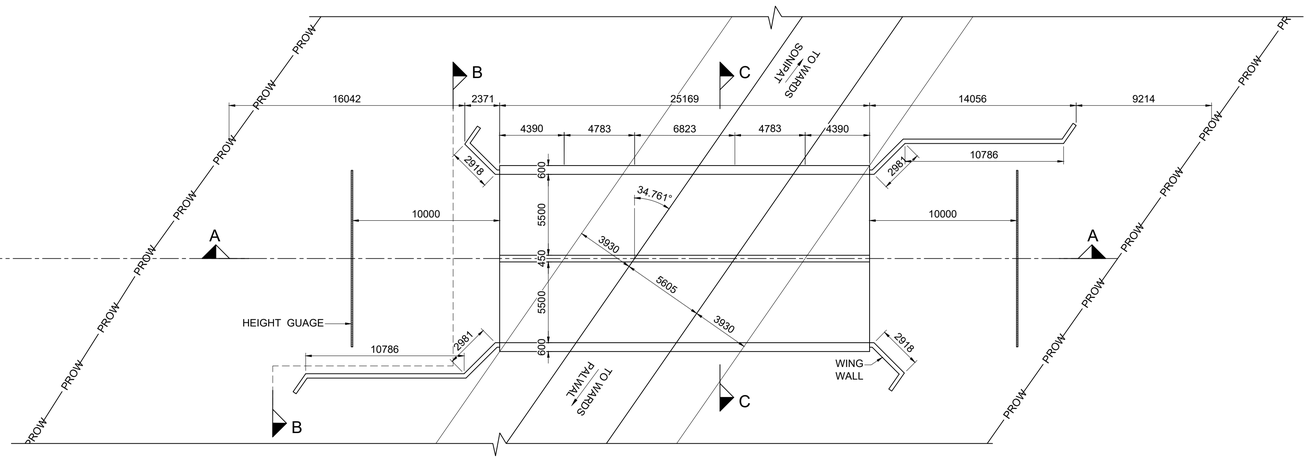
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 89 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 39552.508m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01089_A0	1 OF 1

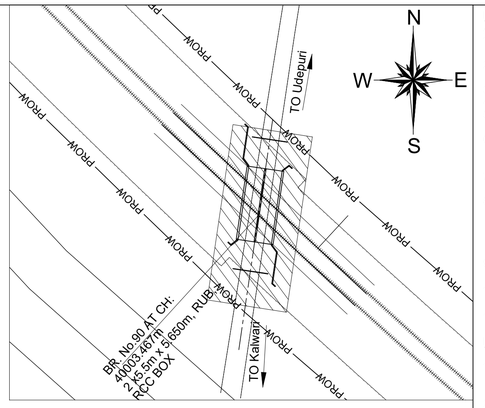
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



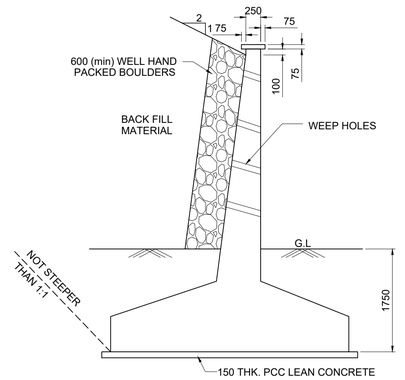
SECTIONAL ELEVATION AT A-A
SCALE 1:200



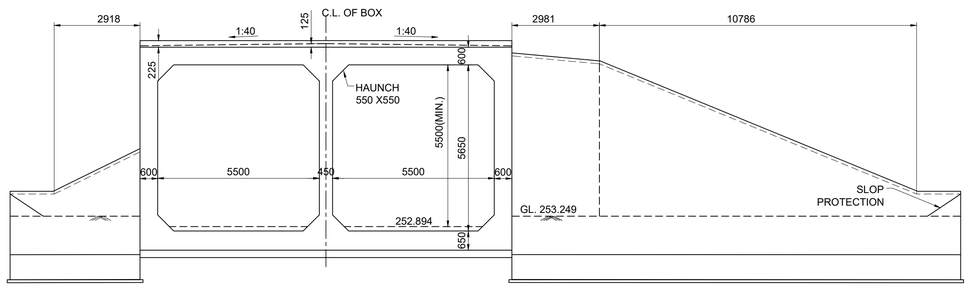
PLAN AT TOP
SCALE 1:200



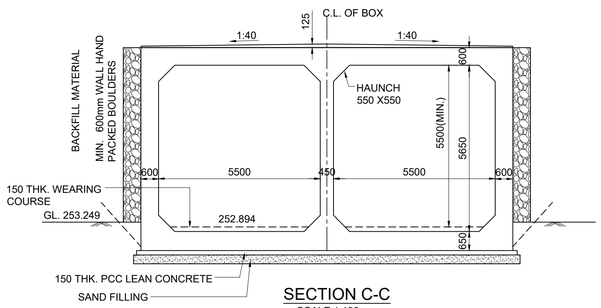
KEY PLAN
(NOT TO SCALE)



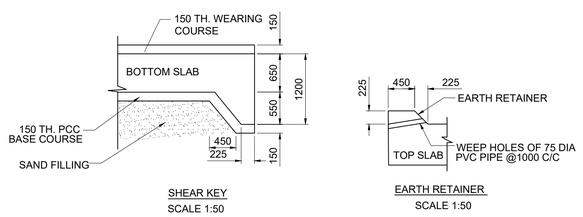
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



SHEAR KEY
SCALE 1:50

EARTH RETAINER
SCALE 1:50

NOTES :

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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.

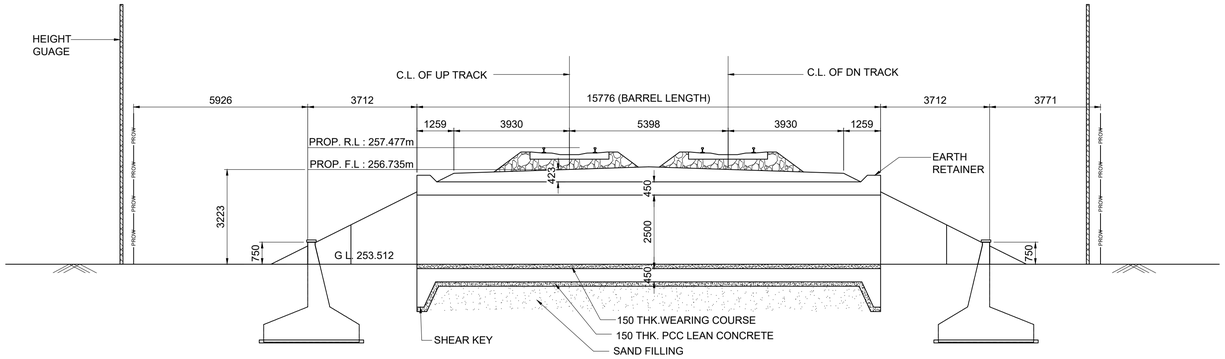
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 090 SPAN
2×5.5×5.650 RCC BOX AT CH: 40003.467

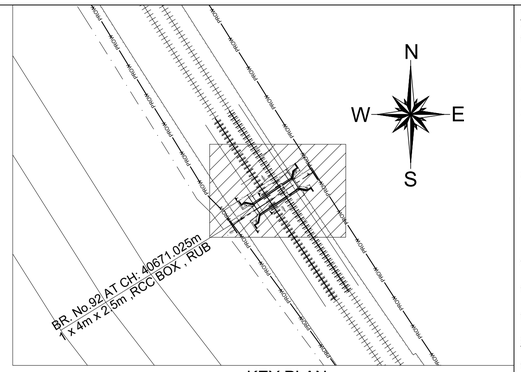
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01090_A0
SHEET NO. 1 OF 1

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



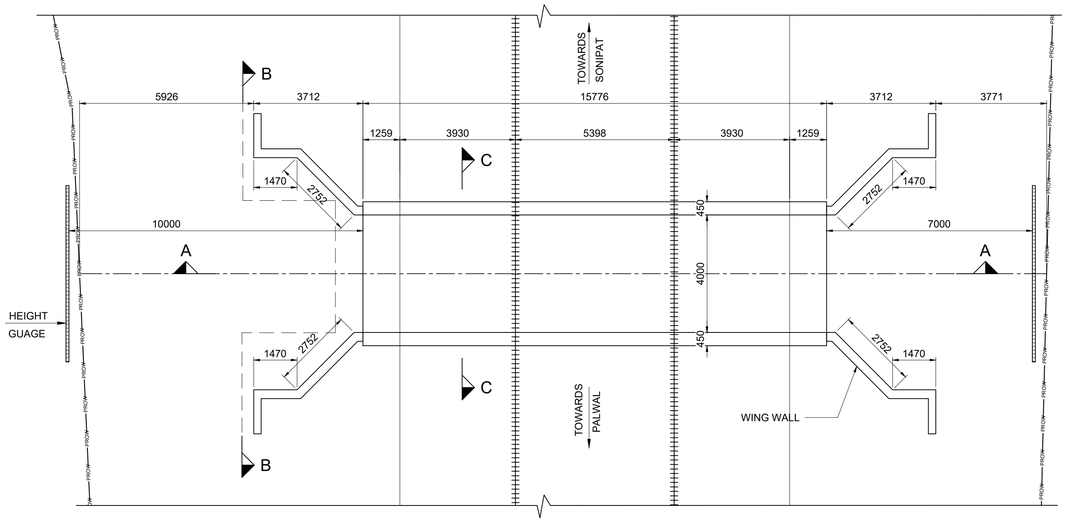
SECTIONAL ELEVATION AT A-A

SCALE 1:100



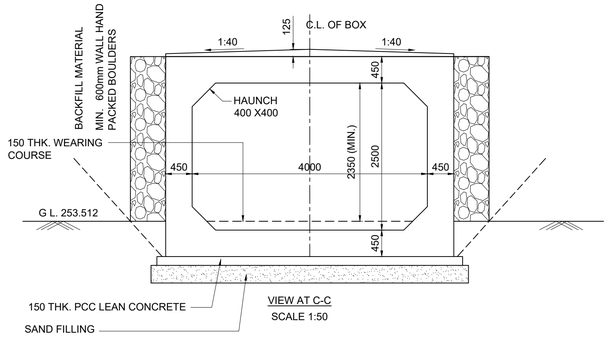
KEY PLAN

(NOT TO SCALE)



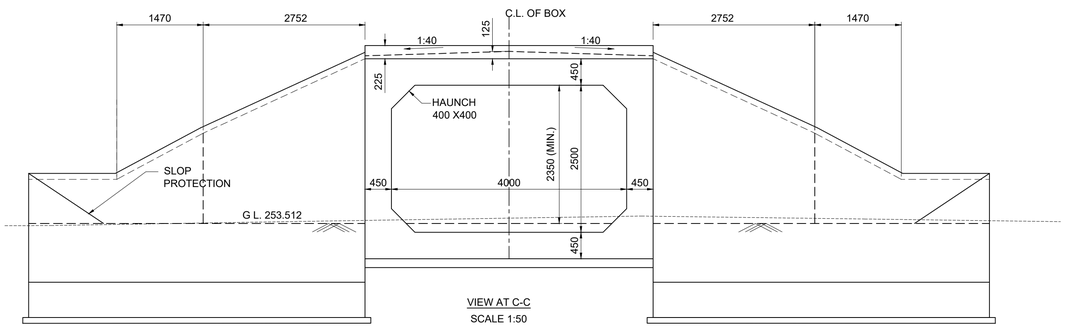
PLAN AT TOP

SCALE 1:100



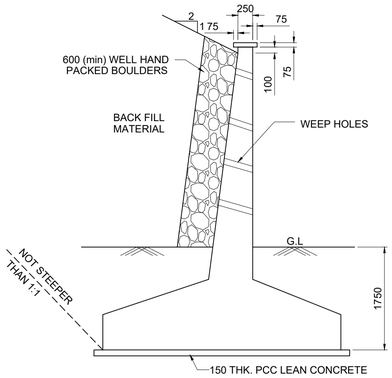
VIEW AT C-C

SCALE 1:50



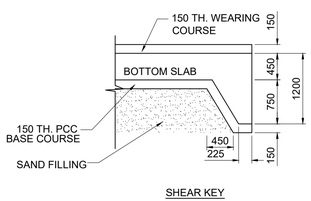
VIEW AT C-C

SCALE 1:50



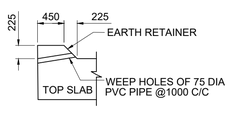
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
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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 :

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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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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
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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 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

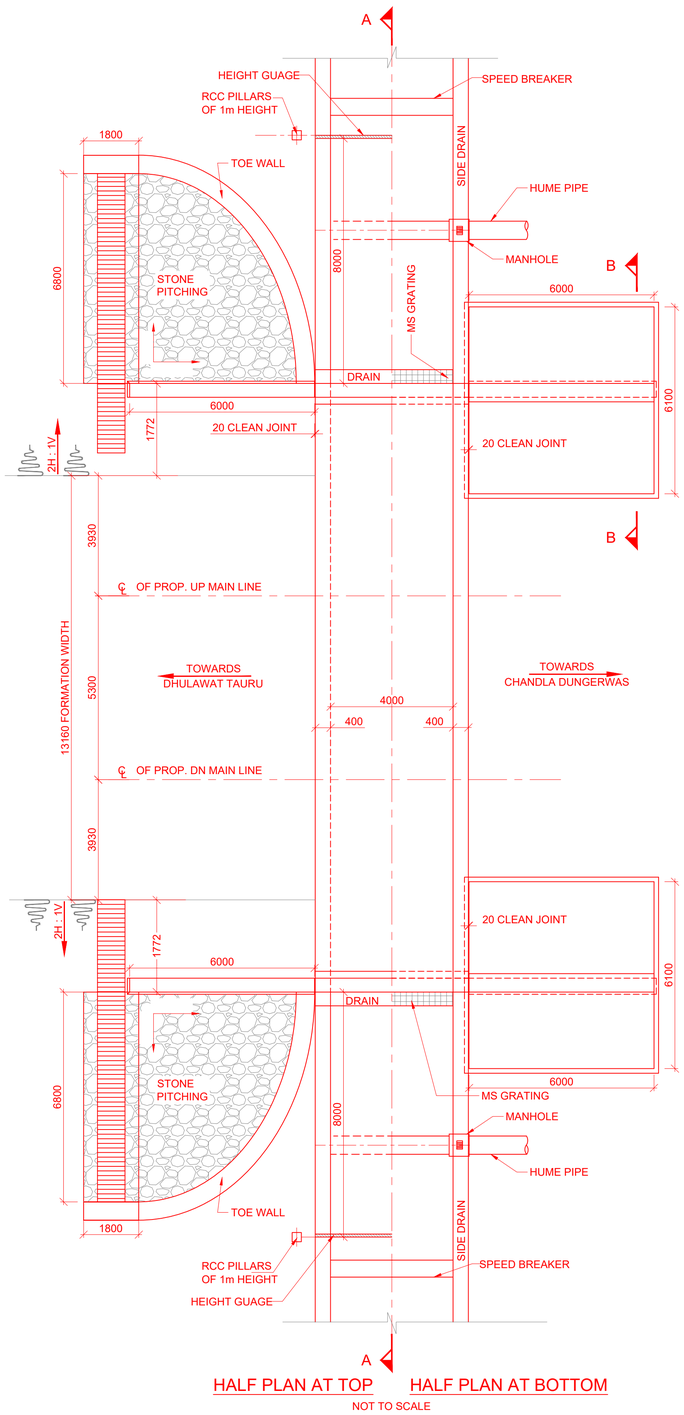
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

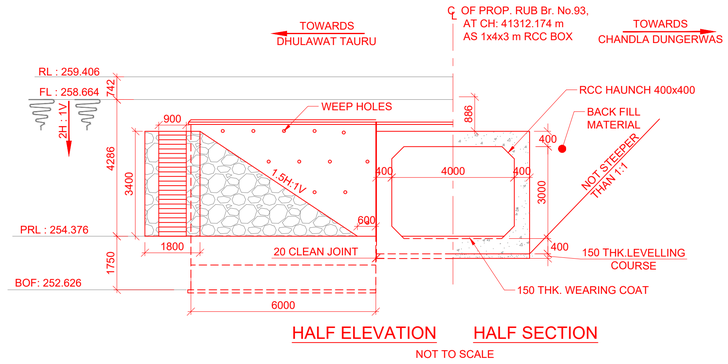
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

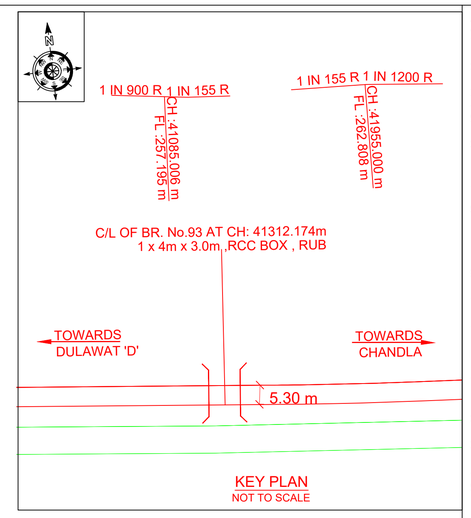
PROPOSED RUB NO. 092 SPAN
1×4.0×2.5 RCC BOX AT CH: 40671.025

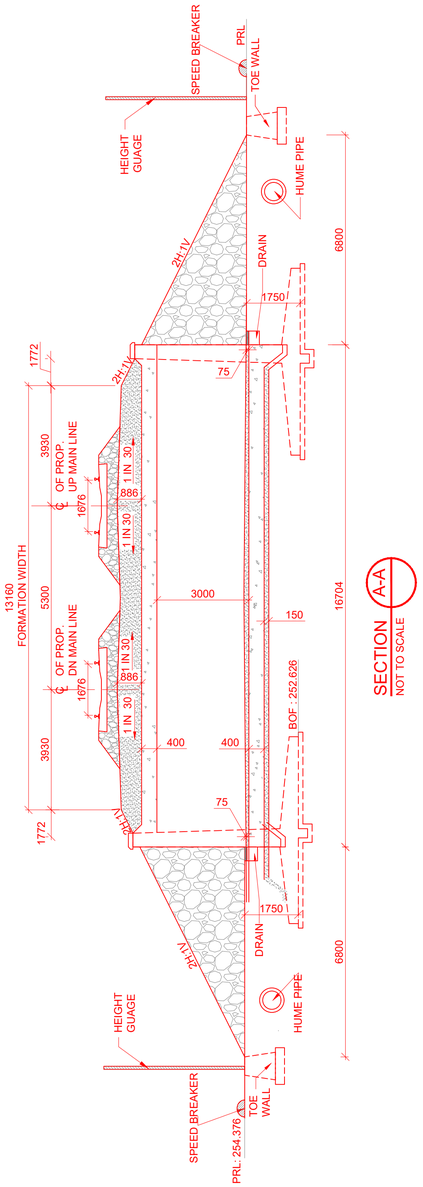
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01092_A0	1 OF 1

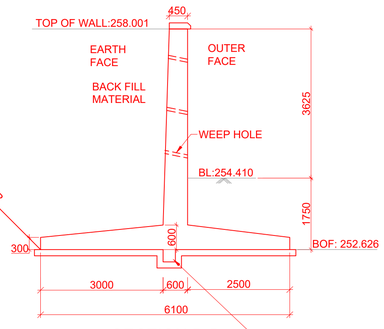
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	

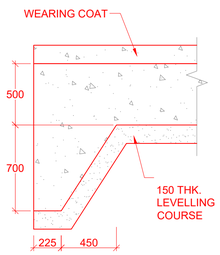


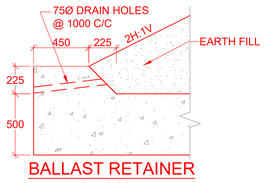












NOTES :

A) GENERAL 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.
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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.
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B) TECHNICAL NOTES :

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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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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:
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:
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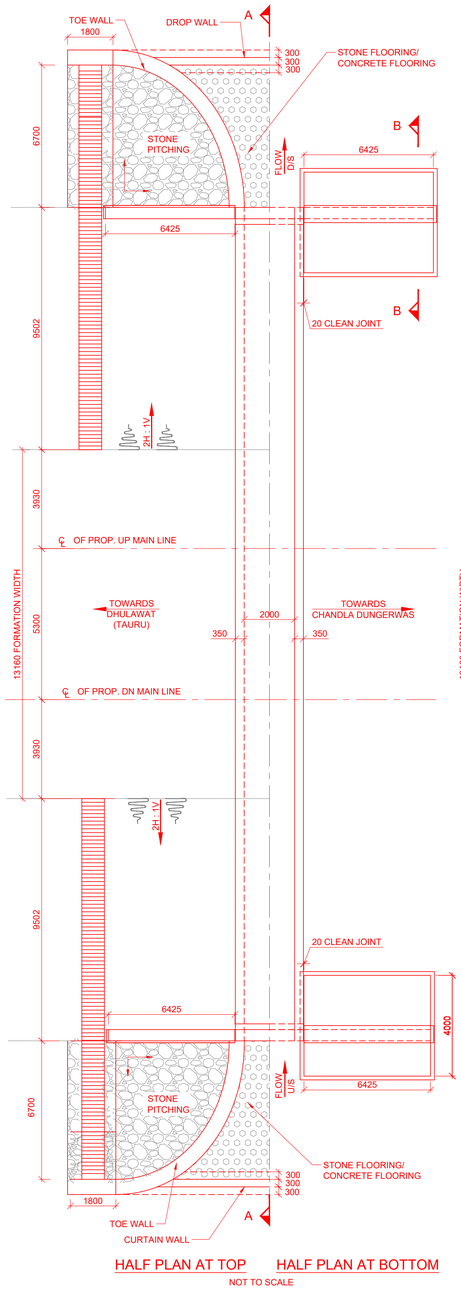
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 93
SPAN 1.0X4.0X3.0 RCC BOX AT CH: 41312.174m

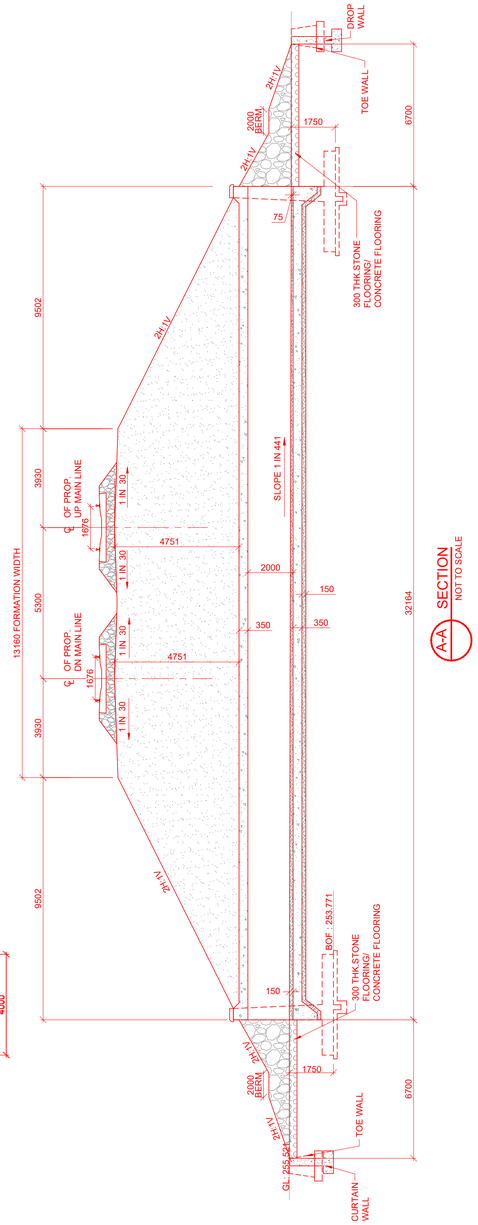
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01093_A0	1 OF 1

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



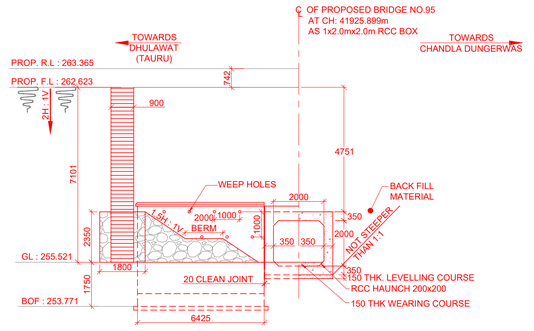
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



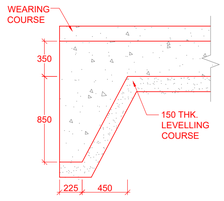
A-A SECTION

NOT TO SCALE



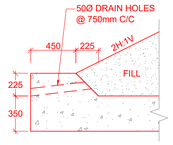
HALF ELEVATION HALF SECTION

NOT TO SCALE



SHEAR KEY

(NOT TO SCALE)



BALLAST RETAINER

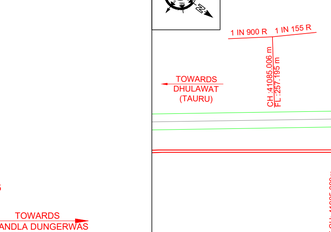
(NOT TO SCALE)

DROP WALL

(NOT TO SCALE)

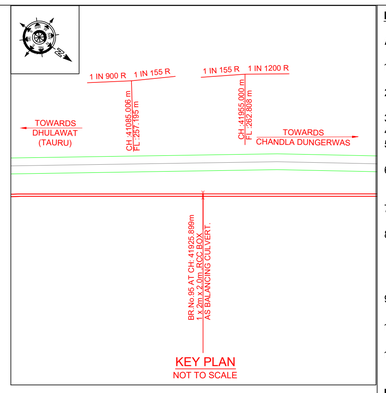
CURTAIN WALL

(NOT TO SCALE)



SECTION B-B

(NOT TO SCALE)



NOT TO SCALE

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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.
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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

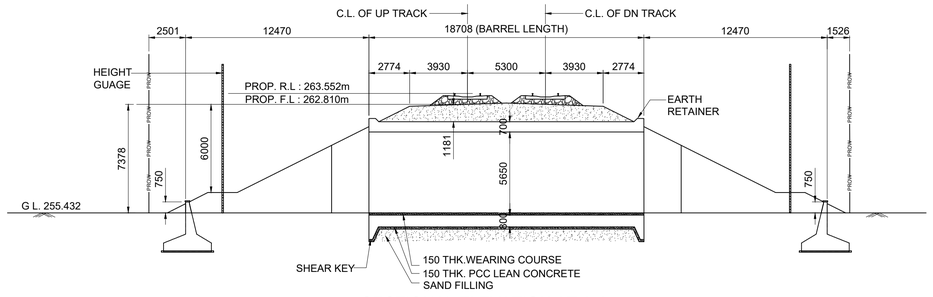
RITES Limited in consortium with SMEC International Pty. Ltd.

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

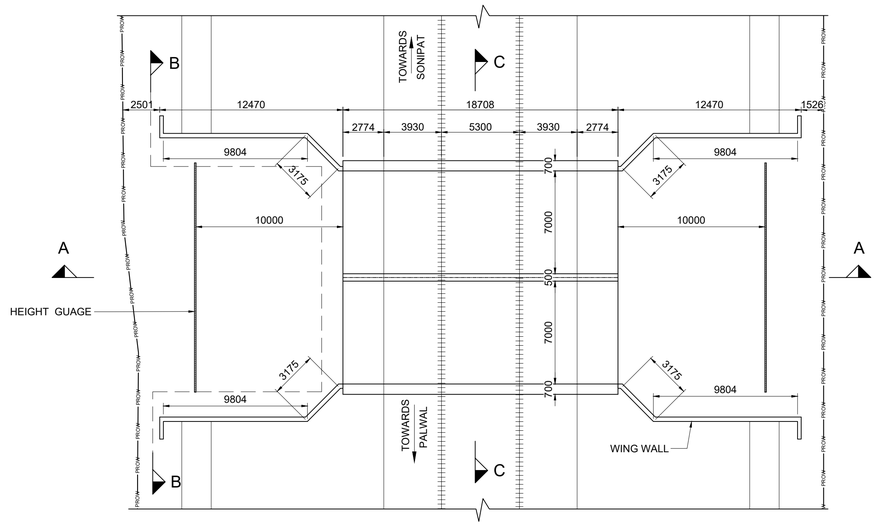
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 95 SPAN 1.0X2.0X2.0 RCC BOX AT CH: 41925.899m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01095_A0	1 OF 1

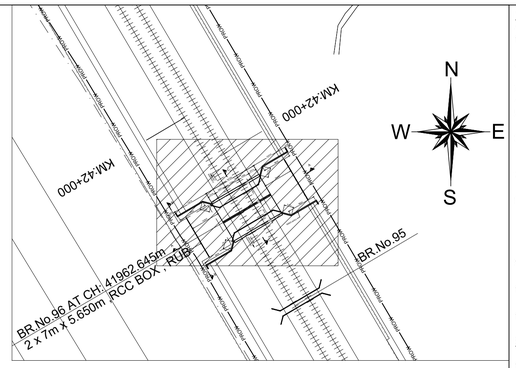
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



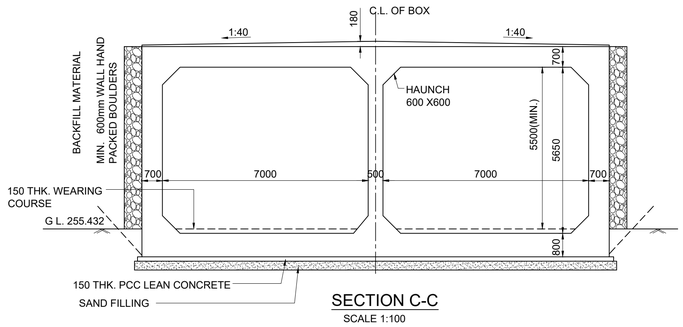
SECTIONAL ELEVATION AT A-A
SCALE 1:200



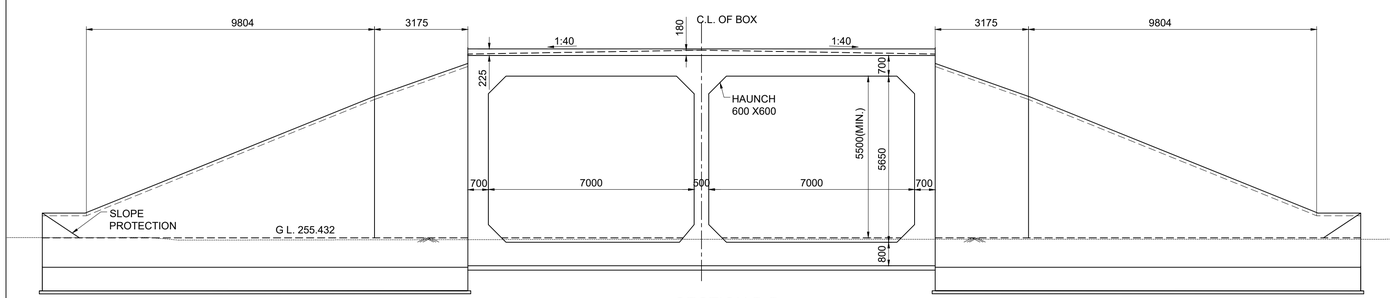
PLAN AT TOP
SCALE 1:200



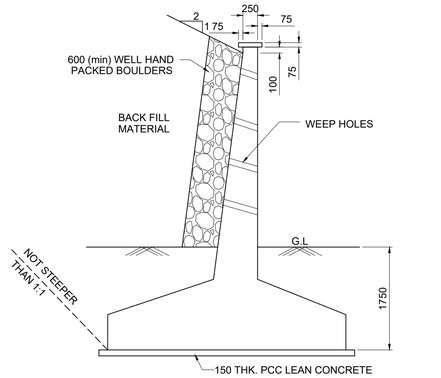
KEY PLAN
(NOT TO SCALE)



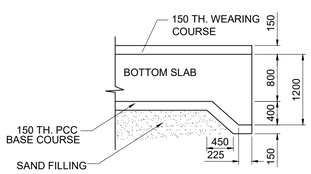
SECTION C-C
SCALE 1:100



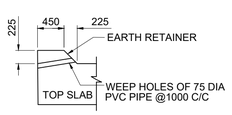
SECTION B-B
SCALE 1:100



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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

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.
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
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
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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:
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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 CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

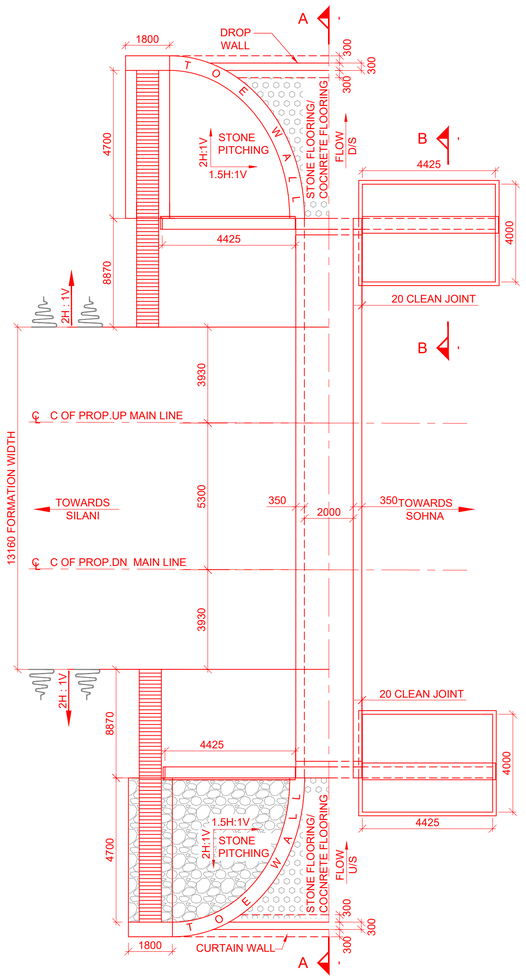
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 096 SPAN
2×7.0×5.650 RCC BOX AT CH: 41962.645

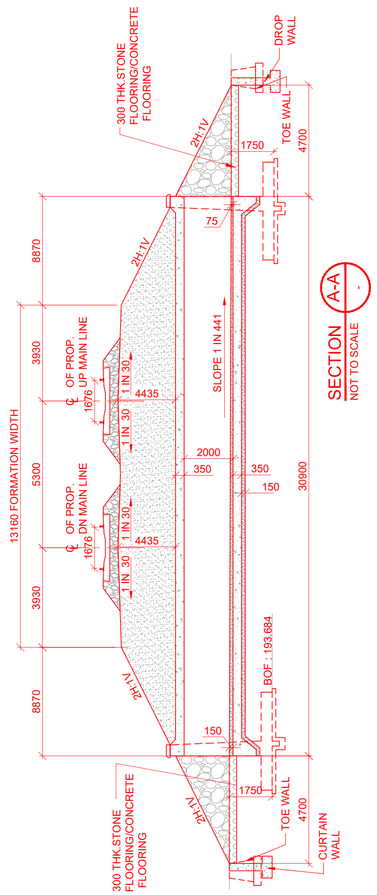
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01096_A0	1 OF 1

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



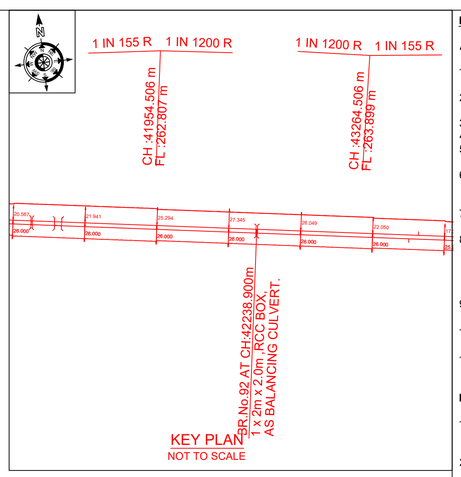
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



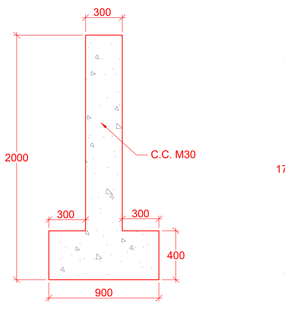
SECTION A-A

NOT TO SCALE



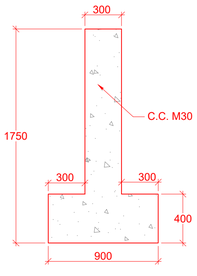
KEY PLAN

NOT TO SCALE



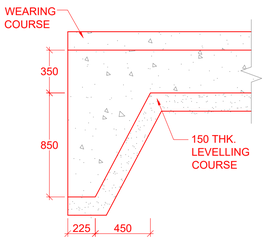
DROP WALL

(NOT TO SCALE)



CURTAIN WALL

(NOT TO SCALE)



SHEAR KEY

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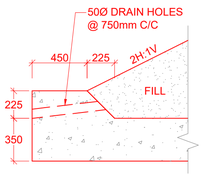
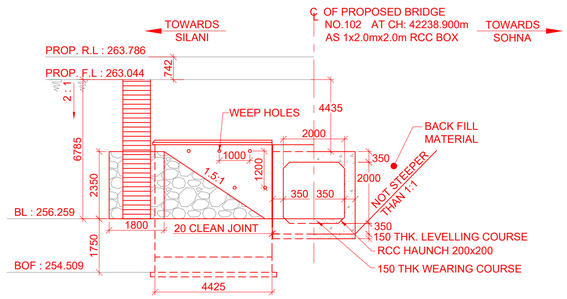


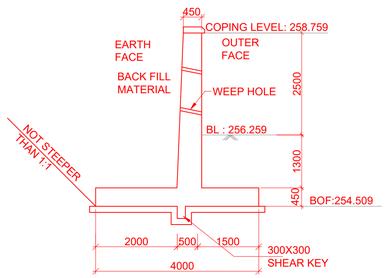
BALLAST RETAINER

(NOT TO SCALE)



HALF ELEVATION HALF SECTION

NOT TO SCALE



SECTION B-B

(NOT TO SCALE)

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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.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 97 SPAN 1.0X2.0X2.0 RCC BOX AT CH: 42238.900m

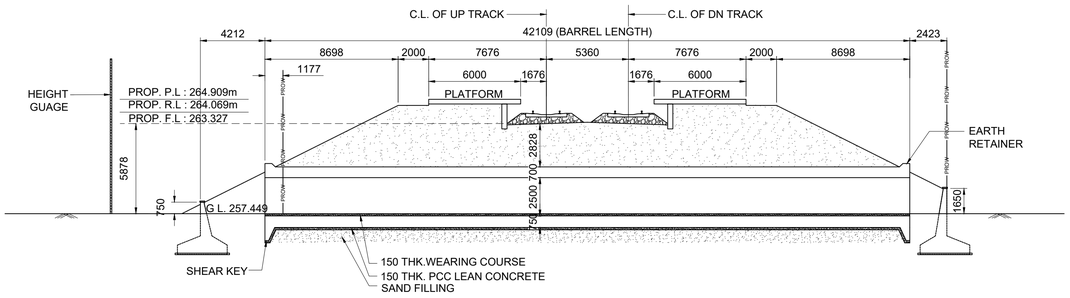
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01097_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

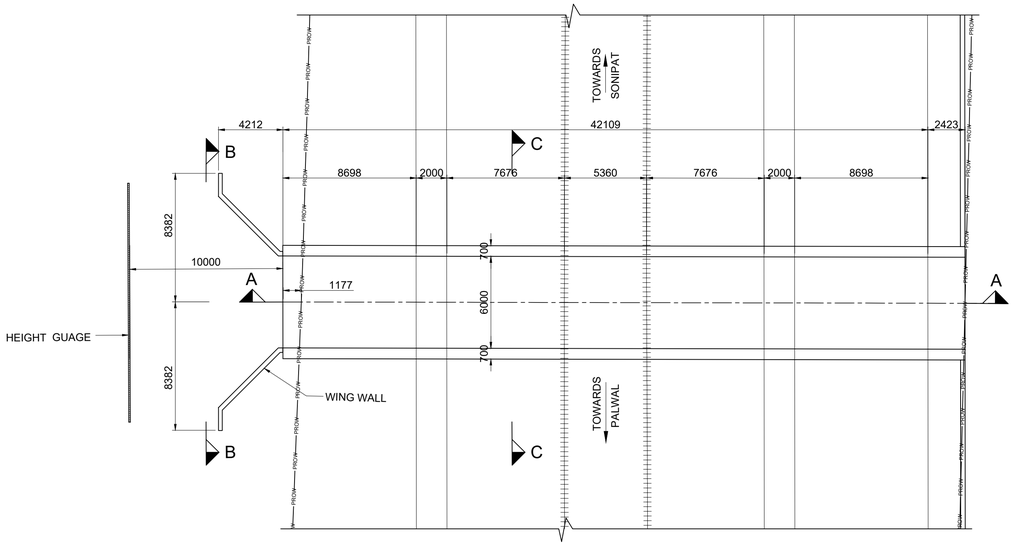
ISSUE DATE 11-11-2022

REVISED DATE



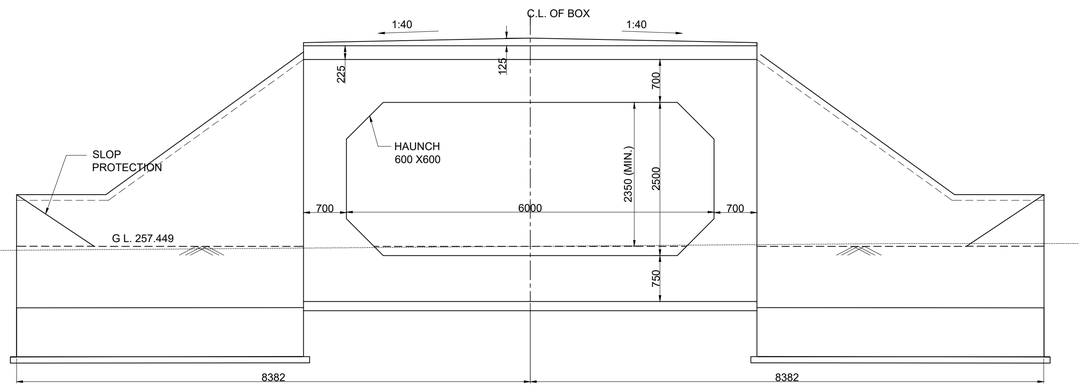
SECTIONAL ELEVATION AT A-A

SCALE 1:200



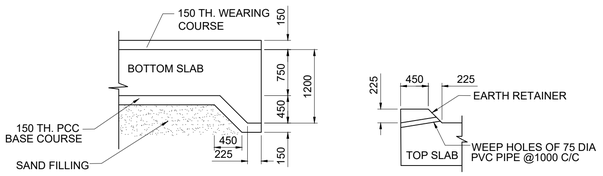
PLAN AT TOP

SCALE 1:200



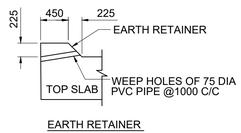
SECTION B-B

SCALE 1:50



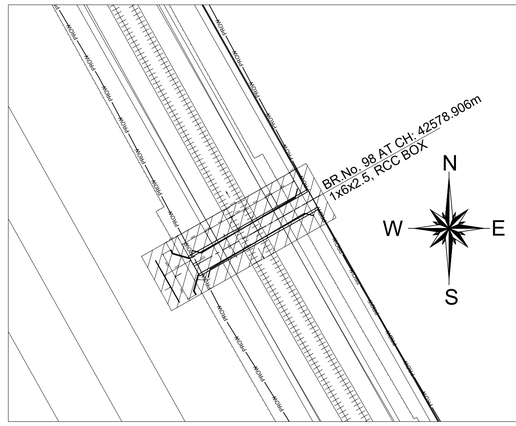
SHEAR KEY

SCALE 1:50



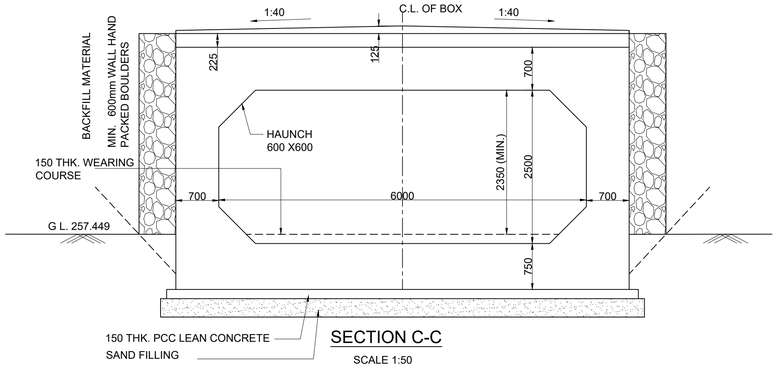
EARTH RETAINER

SCALE 1:50



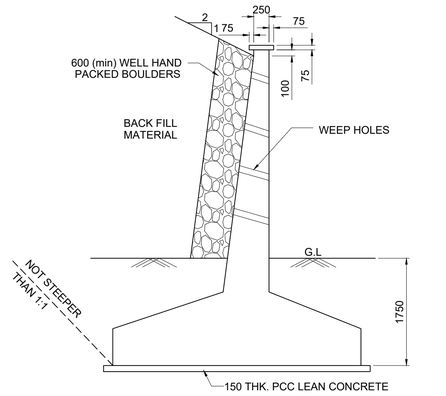
KEY PLAN

(NOT TO SCALE)



SECTION C-C

SCALE 1:50



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.
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 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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

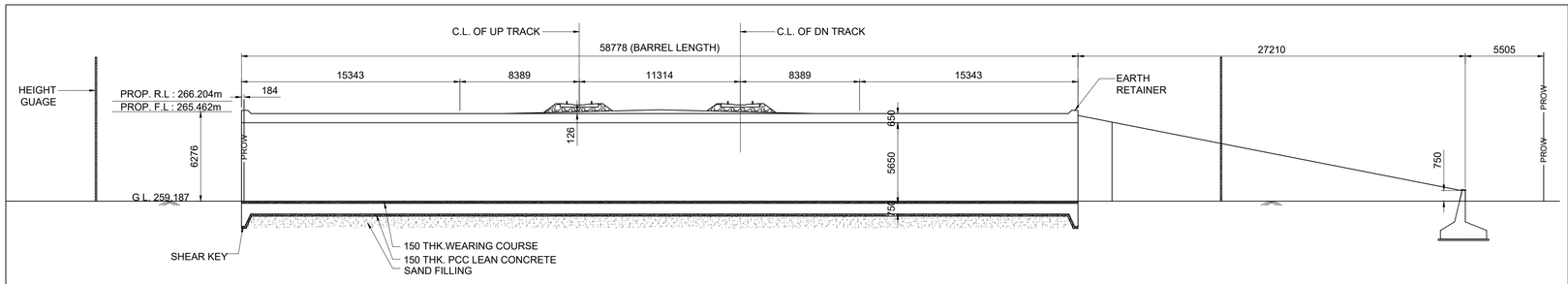
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

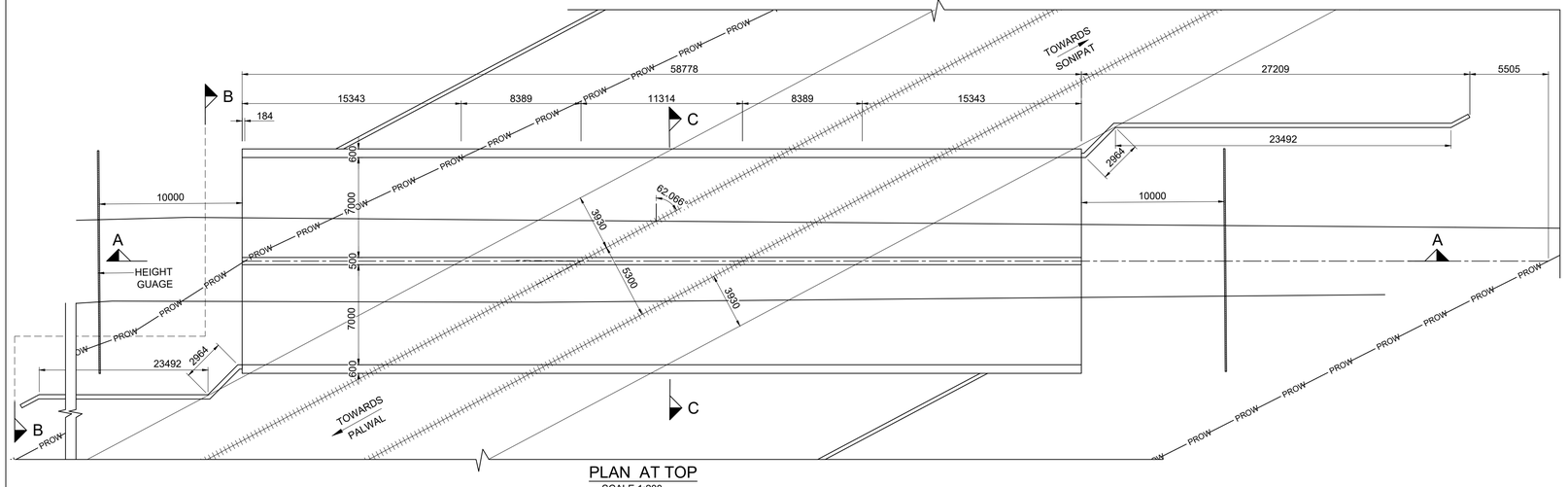
PROPOSED RUB NO. 098 SPAN
1×6.0×2.5 RCC BOX AT CH: 42578.906

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01098_A0	1 OF 1

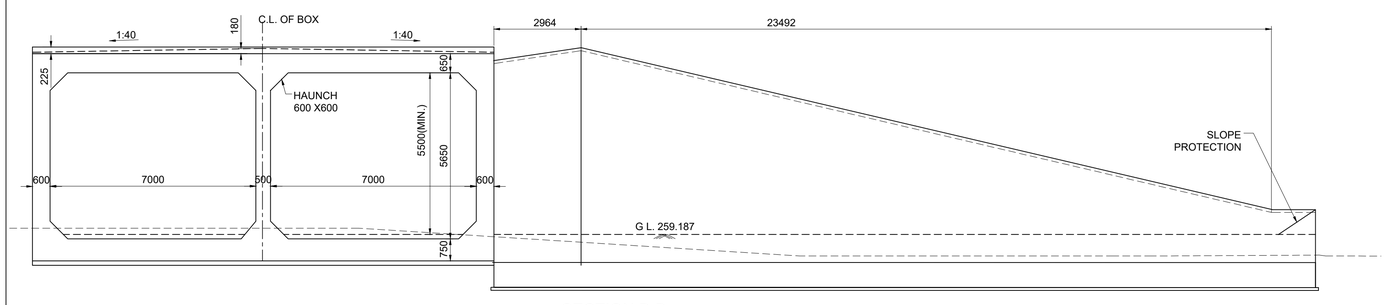
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



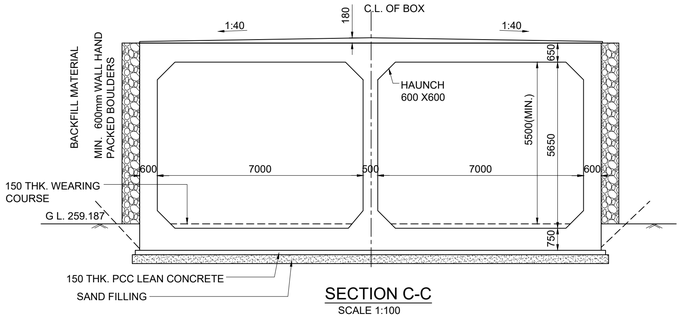
SECTIONAL ELEVATION AT A-A
SCALE 1:200



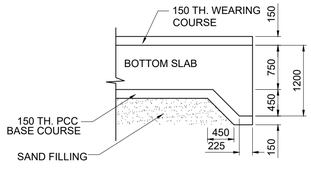
PLAN AT TOP
SCALE 1:200



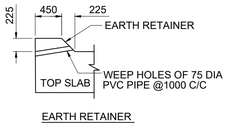
SECTION B-B
SCALE 1:100



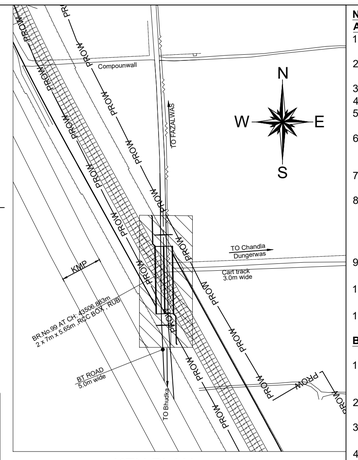
SECTION C-C
SCALE 1:100



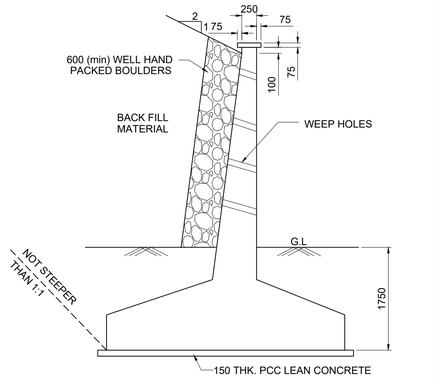
SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



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.
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.
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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.
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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 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		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 099 SPAN
2×7.0×5.650 RCC BOX AT CH: 43506.883

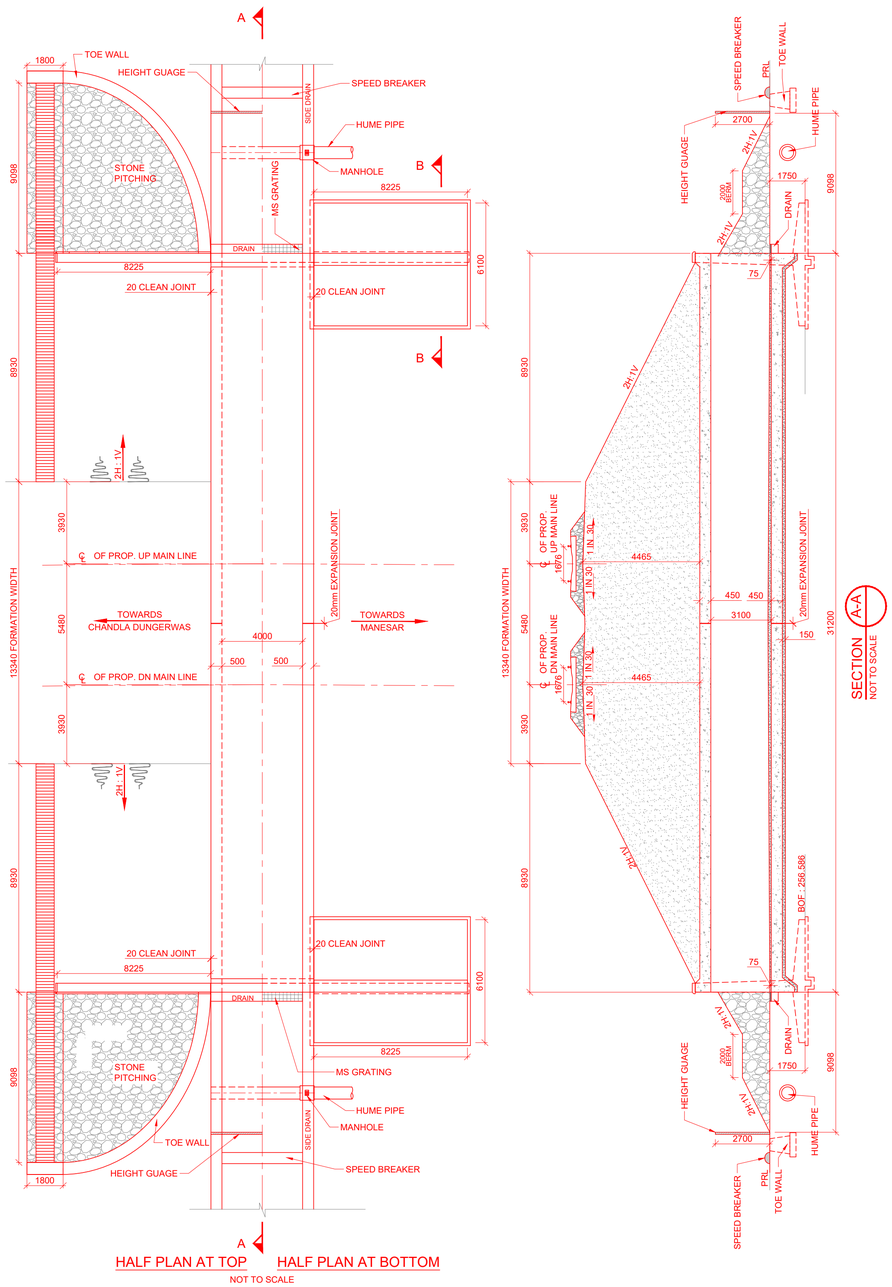
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01099_A0

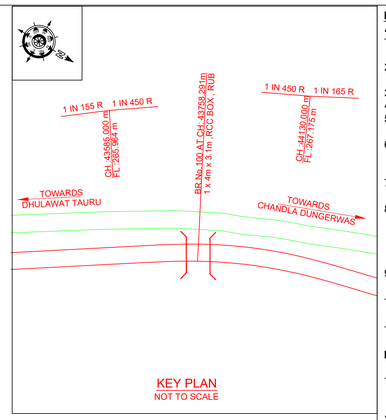
SHEET NO. 1 OF 1

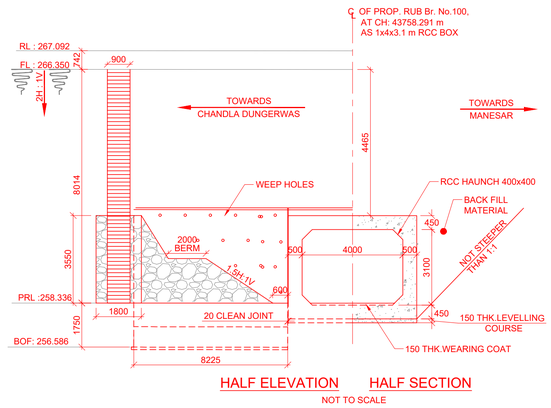
SCALE : AS SHOWN

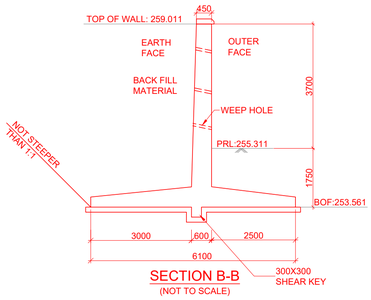
ISSUE DATE 11-11-2022

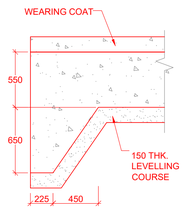
REVISED DATE

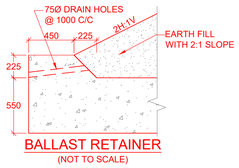












NOTES :

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B) TECHNICAL NOTES :

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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/M00001.

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.

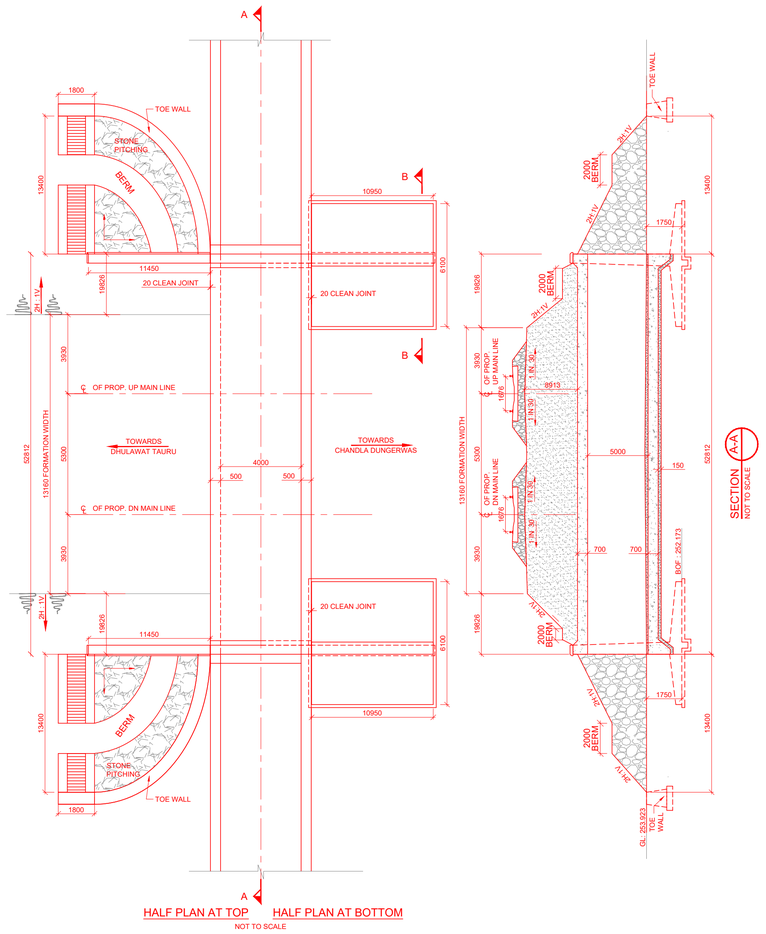
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

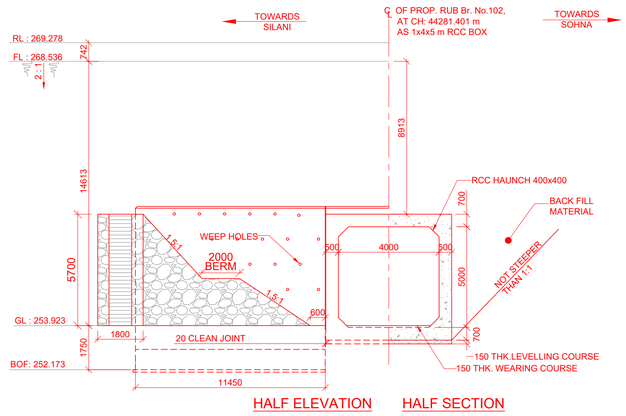
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

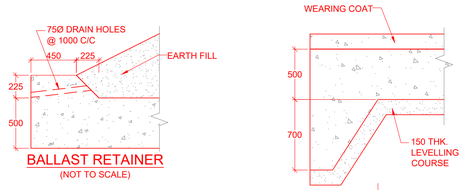
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 100 SPAN 1.0X4.0X3.1 RCC BOX AT CH: 43758.291m

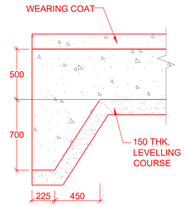
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01100_A0	1 OF 1

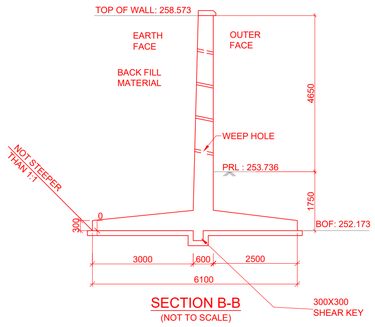
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	

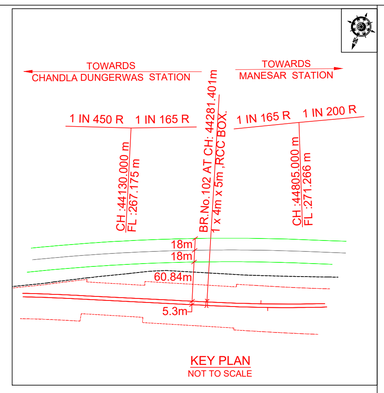












NOTES :

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.
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.

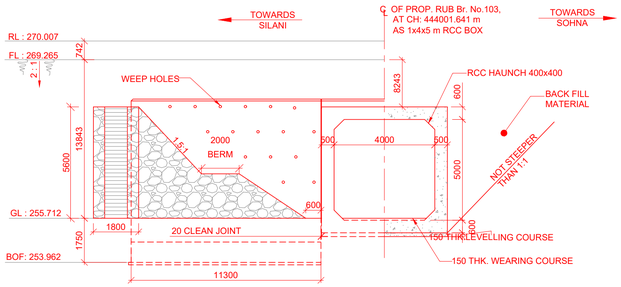
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 102 SPAN 1.0X4.0X5.0 RCC BOX AT CH: 44281.401m

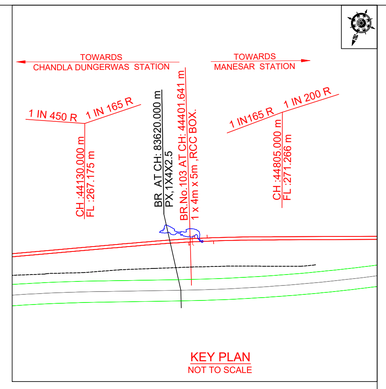
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01102_A0	1 OF 1

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



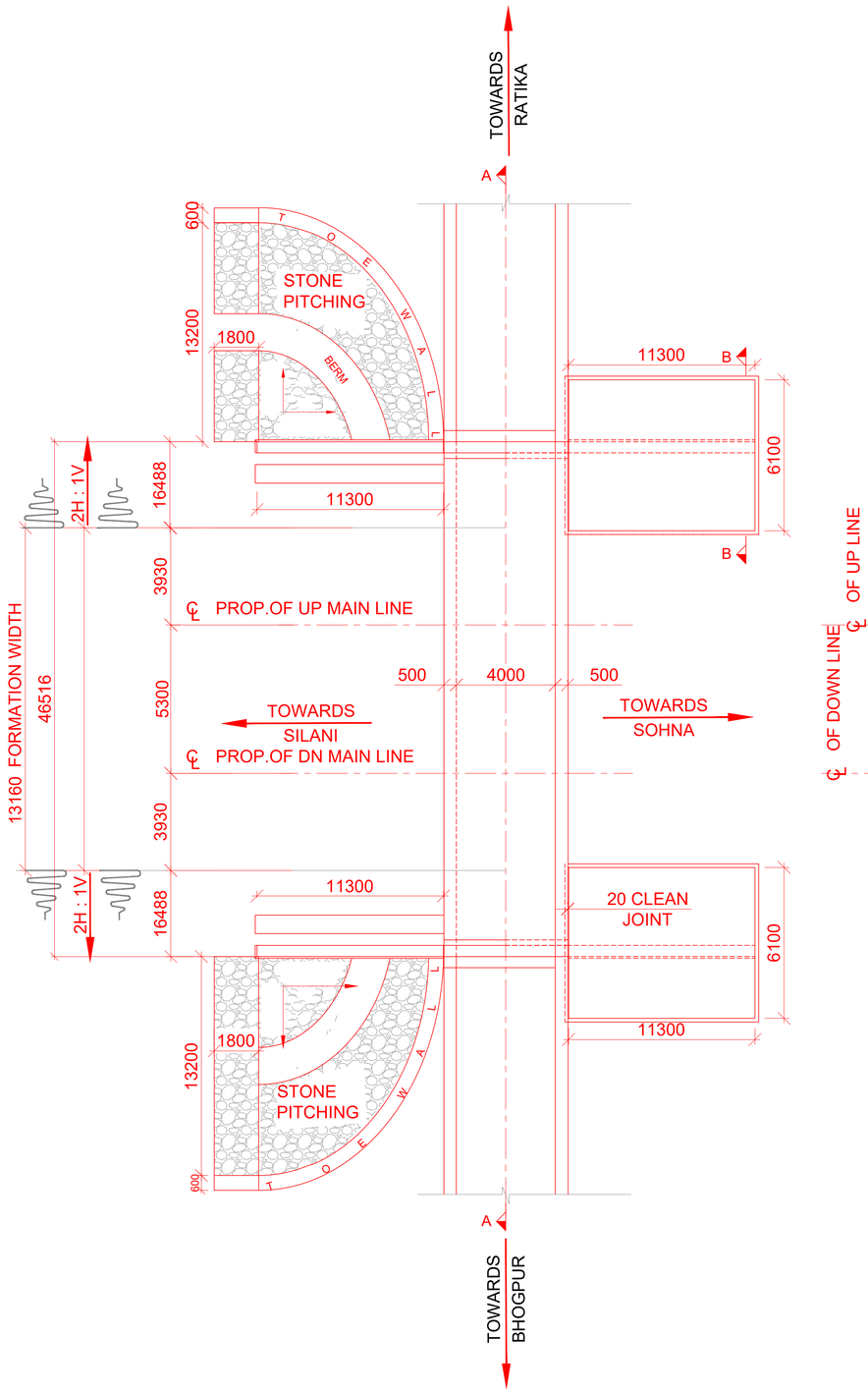
HALF ELEVATION HALF SECTION

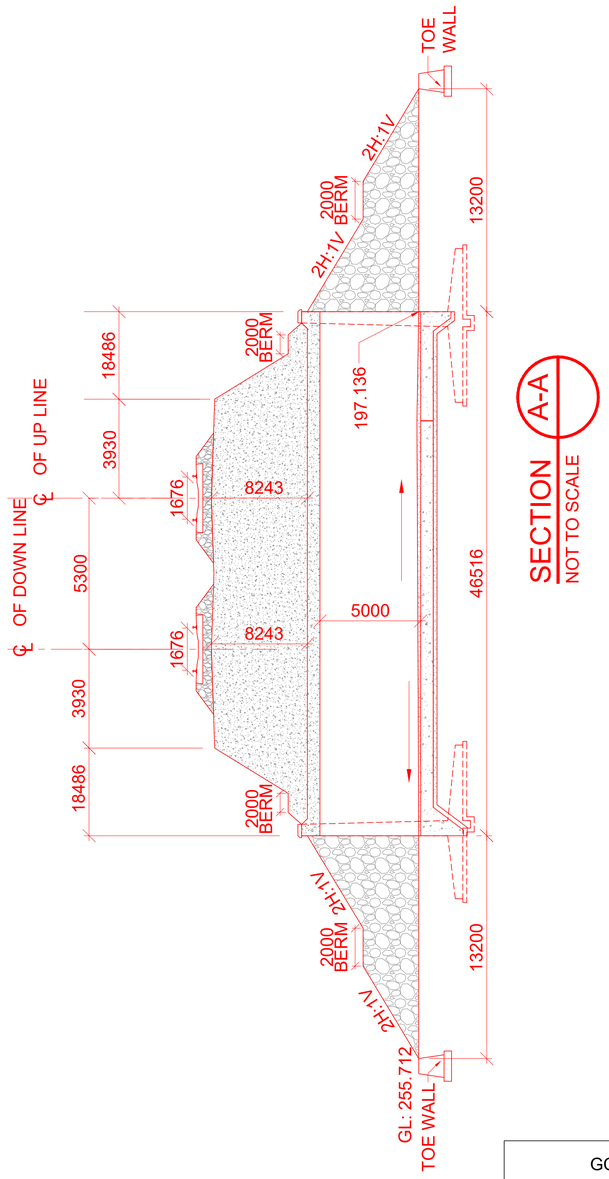
NOT TO SCALE



KEY PLAN

NOT TO SCALE



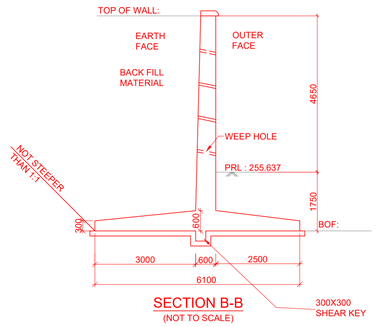


SECTION A-A

NOT TO SCALE

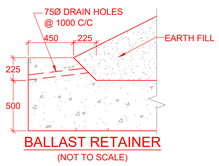
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



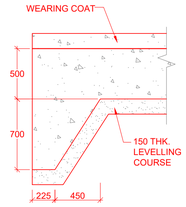
SECTION B-B

(NOT TO SCALE)



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

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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.

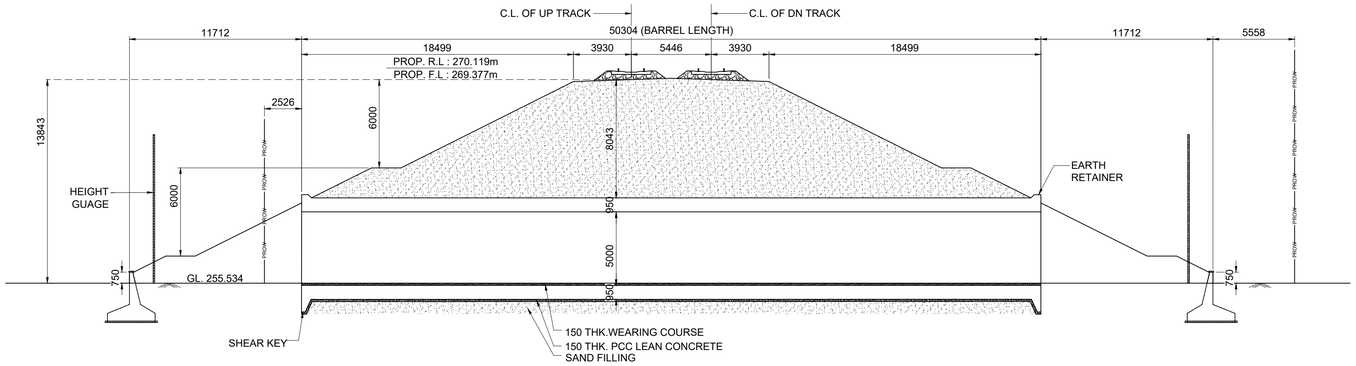
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

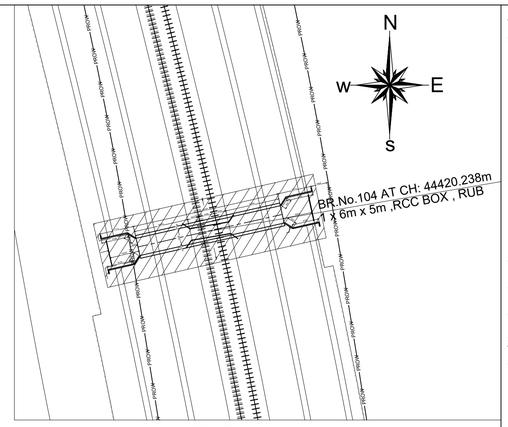
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 103 SPAN 1.0X4.0X5.0 RCC BOX AT CH: 44401.641m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01103_A0	1 OF 1

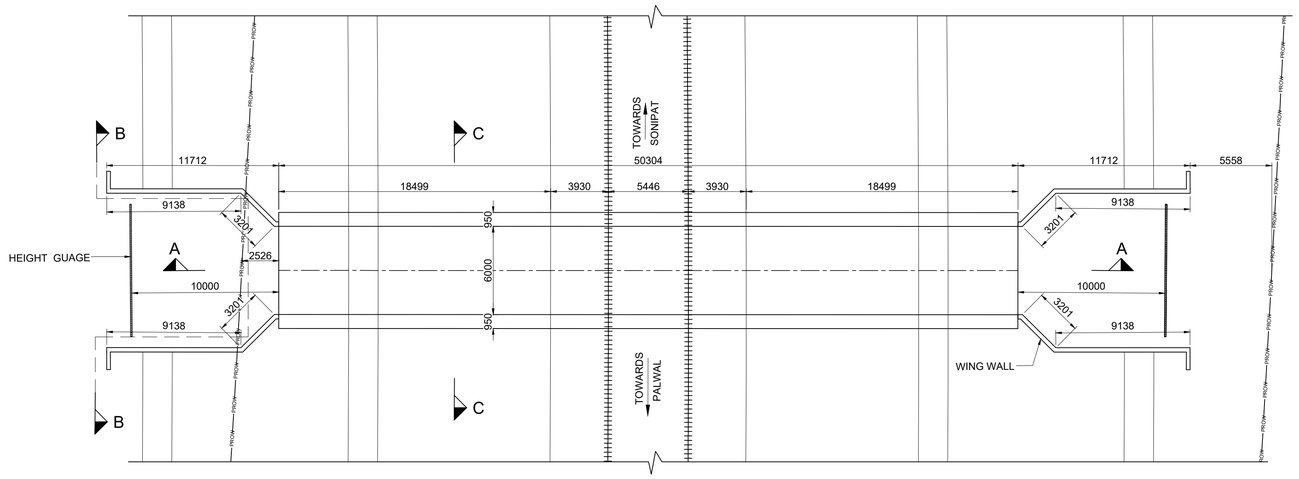
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



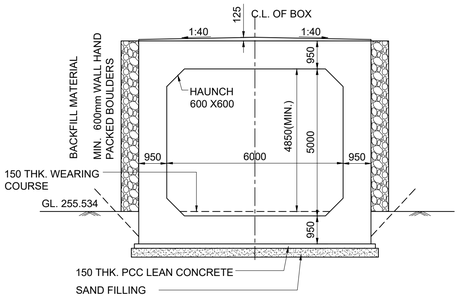
SECTIONAL ELEVATION AT A-A
SCALE 1:200



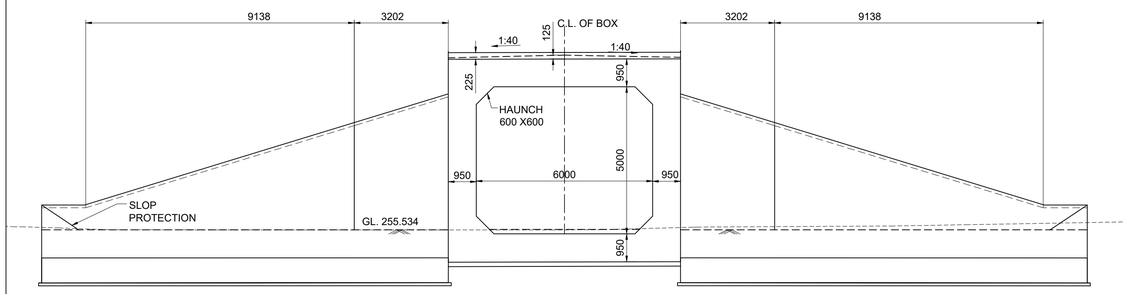
KEY PLAN
(NOT TO SCALE)



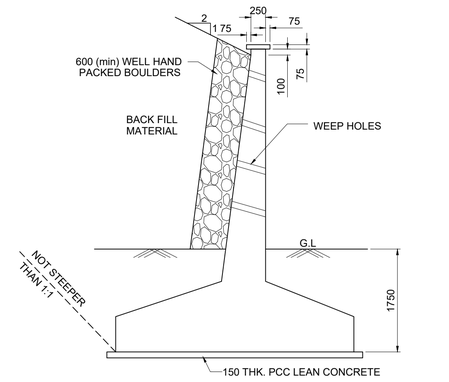
PLAN AT TOP
SCALE 1:200



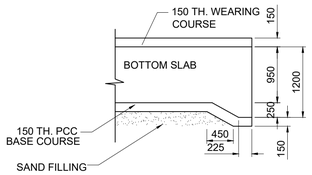
SECTION C-C
SCALE 1:100



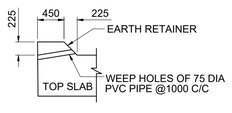
SECTION B-B
SCALE 1:100



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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

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    (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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

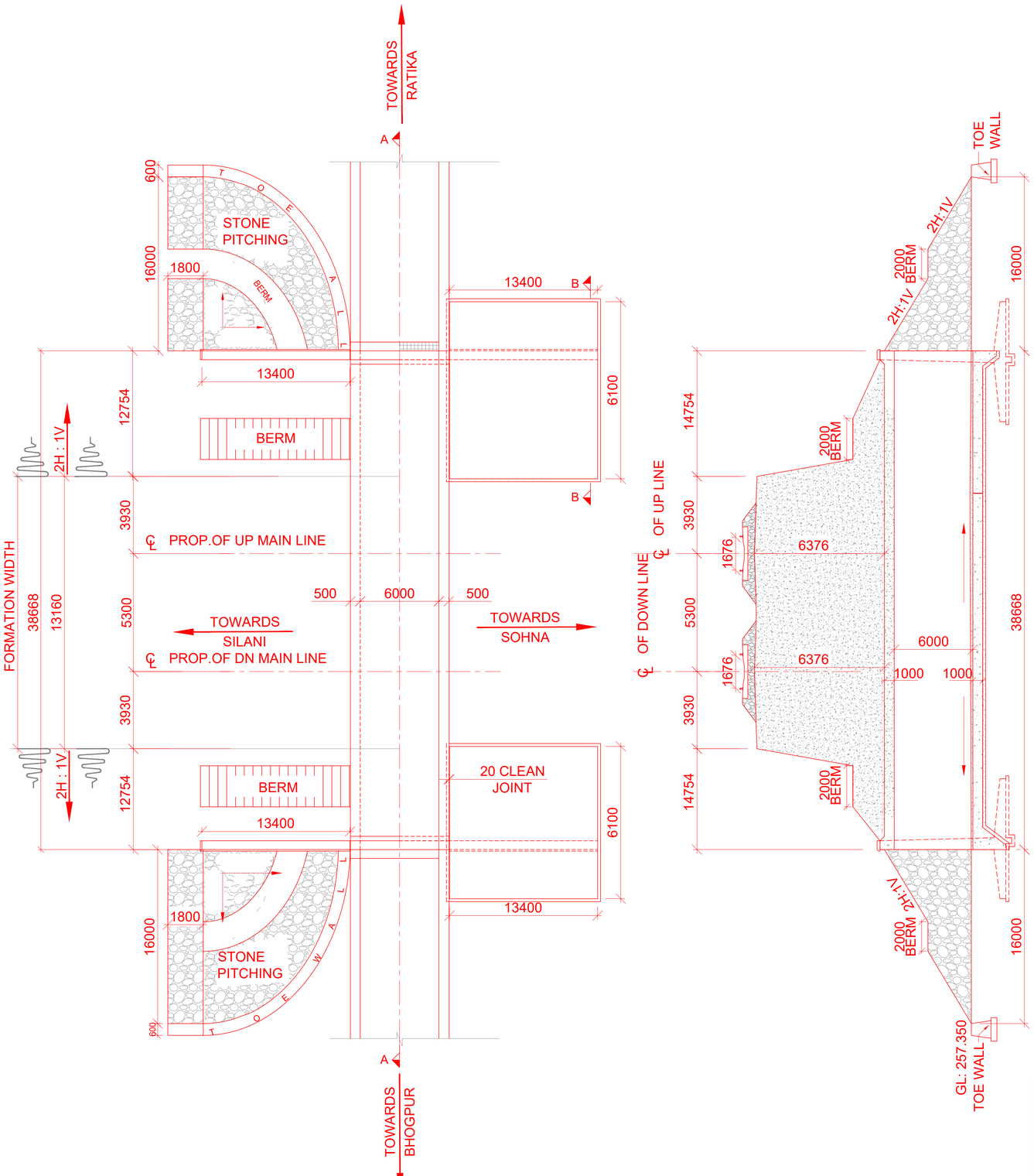
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

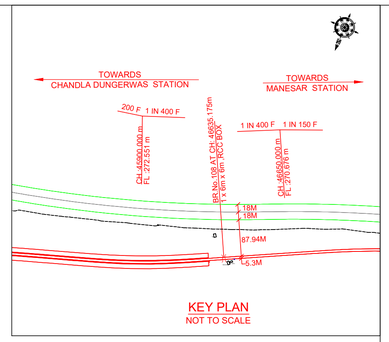
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

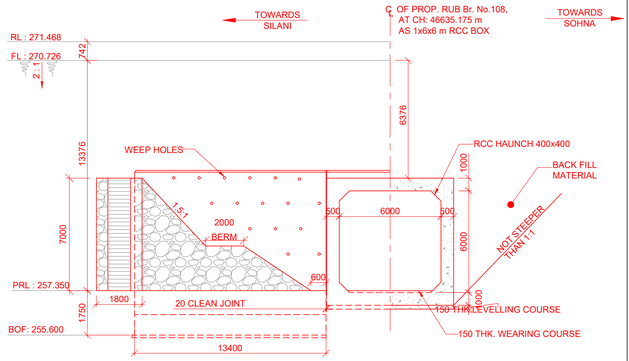
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 104 SPAN
1×6.0×5.0RCC BOX AT CH: 44420.238

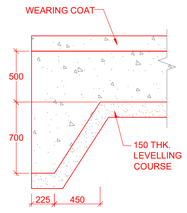
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01104_A0	1 OF 1

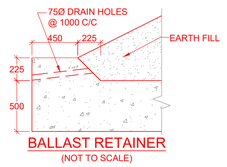
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	

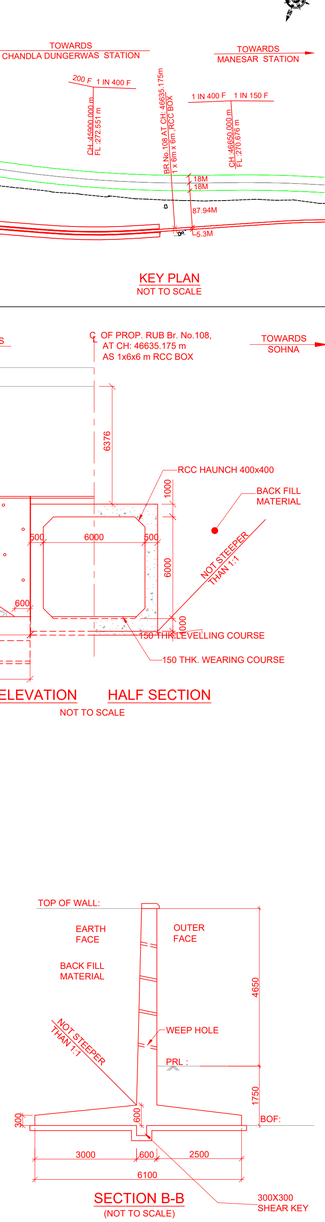












NOTES :

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.
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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

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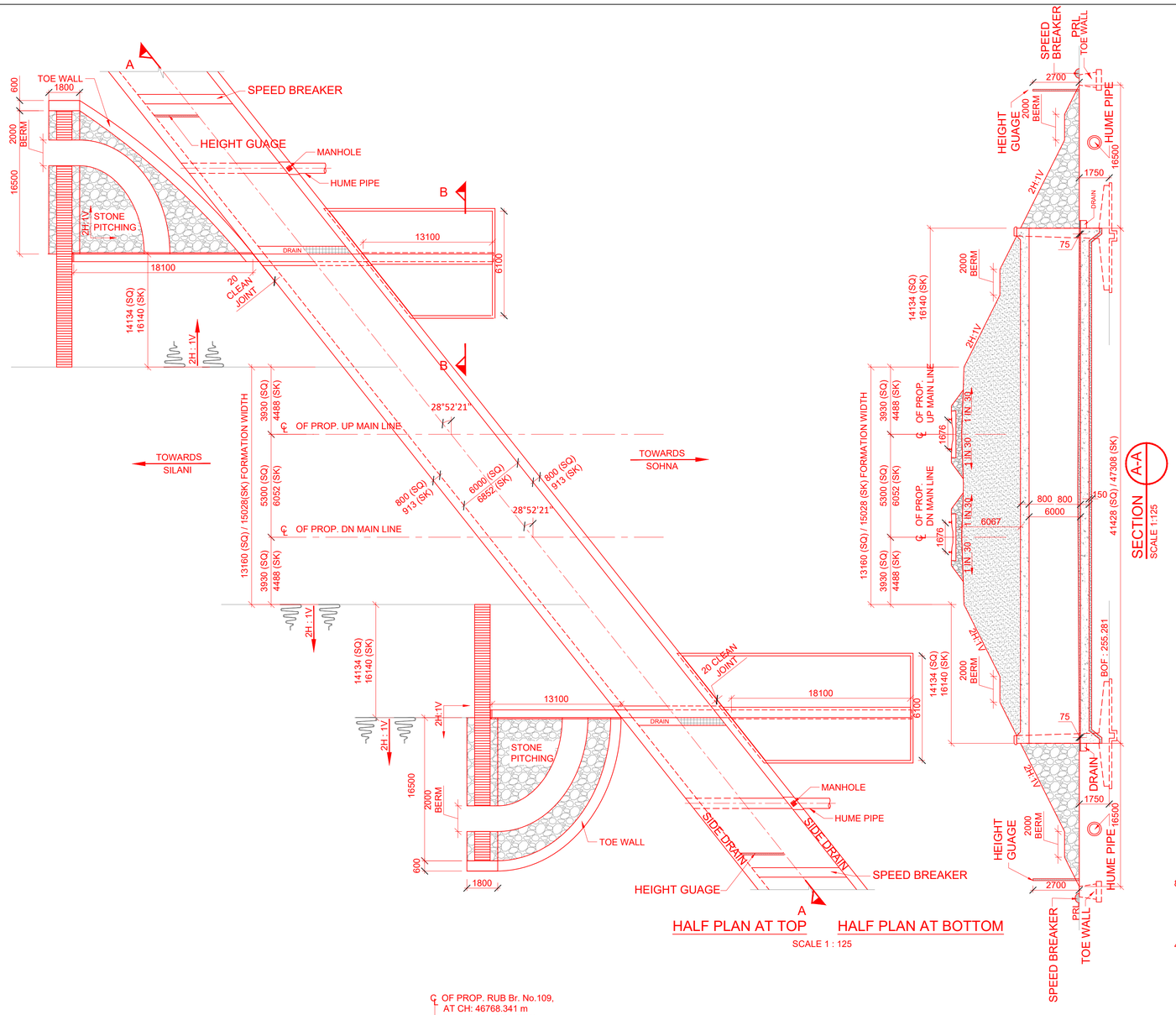
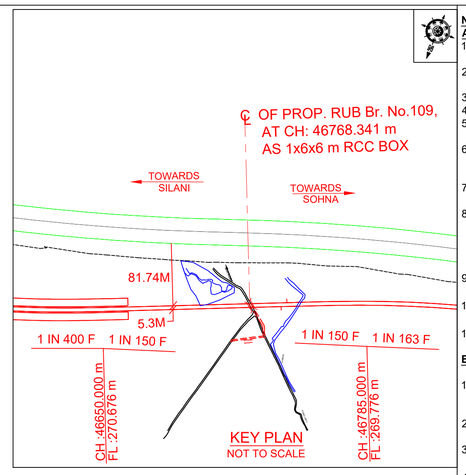
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

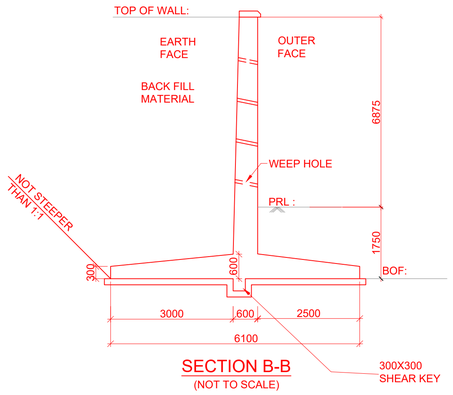
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 108 SPAN 1.0X6.0X6.0 RCC BOX AT CH: 46635.175m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01108_A0	1 OF 1

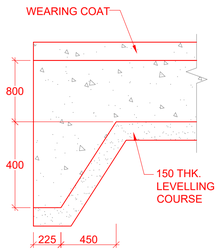
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



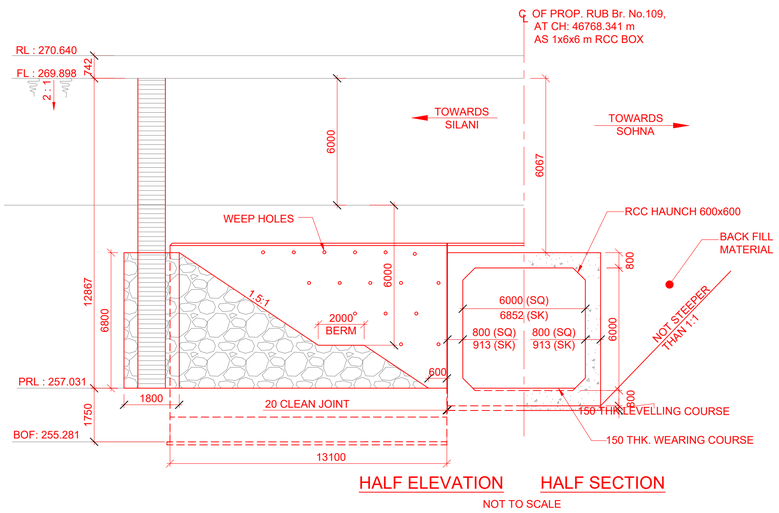




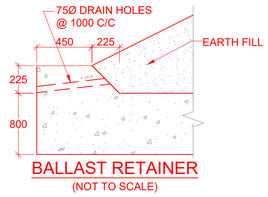
SECTION B-B
(NOT TO SCALE)



SHEAR KEY
(NOT TO SCALE)



HALF ELEVATION HALF SECTION
NOT TO SCALE



BALLAST RETAINER
(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
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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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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.
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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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

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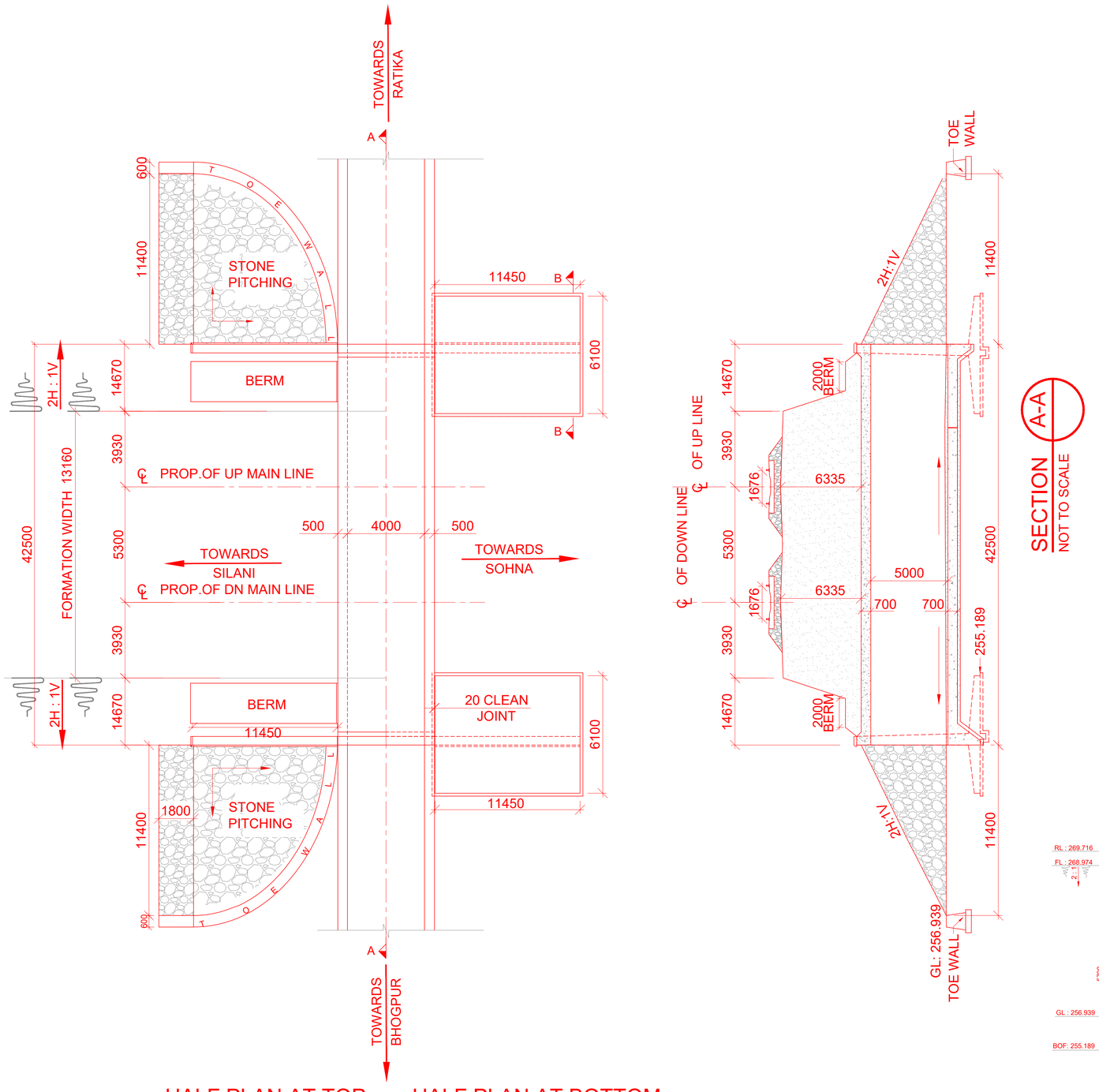
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 109
SPAN 1.0X6.0X6.0 RCC BOX AT CH: 46768.341m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01109_A0	1 OF 1

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

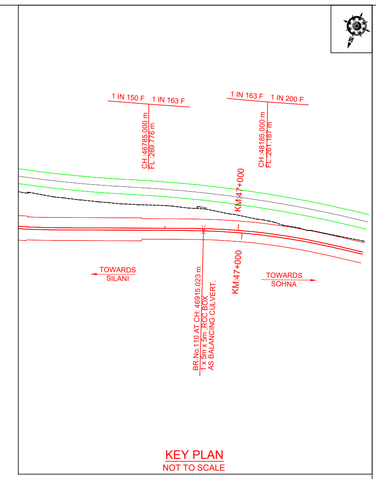


HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE

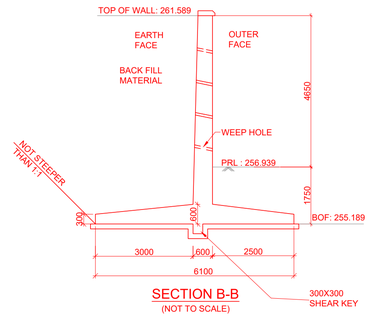
SECTION A-A

NOT TO SCALE



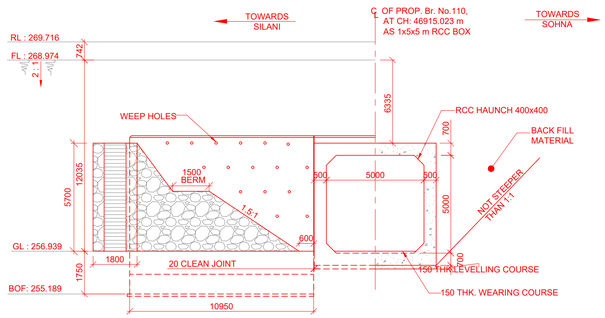
KEY PLAN

NOT TO SCALE



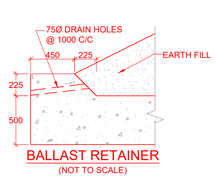
SECTION B-B

(NOT TO SCALE)



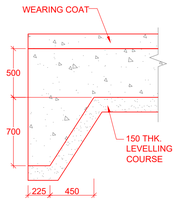
HALF ELEVATION HALF SECTION

NOT TO SCALE



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

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NOTES :

A) GENERAL NOTES

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NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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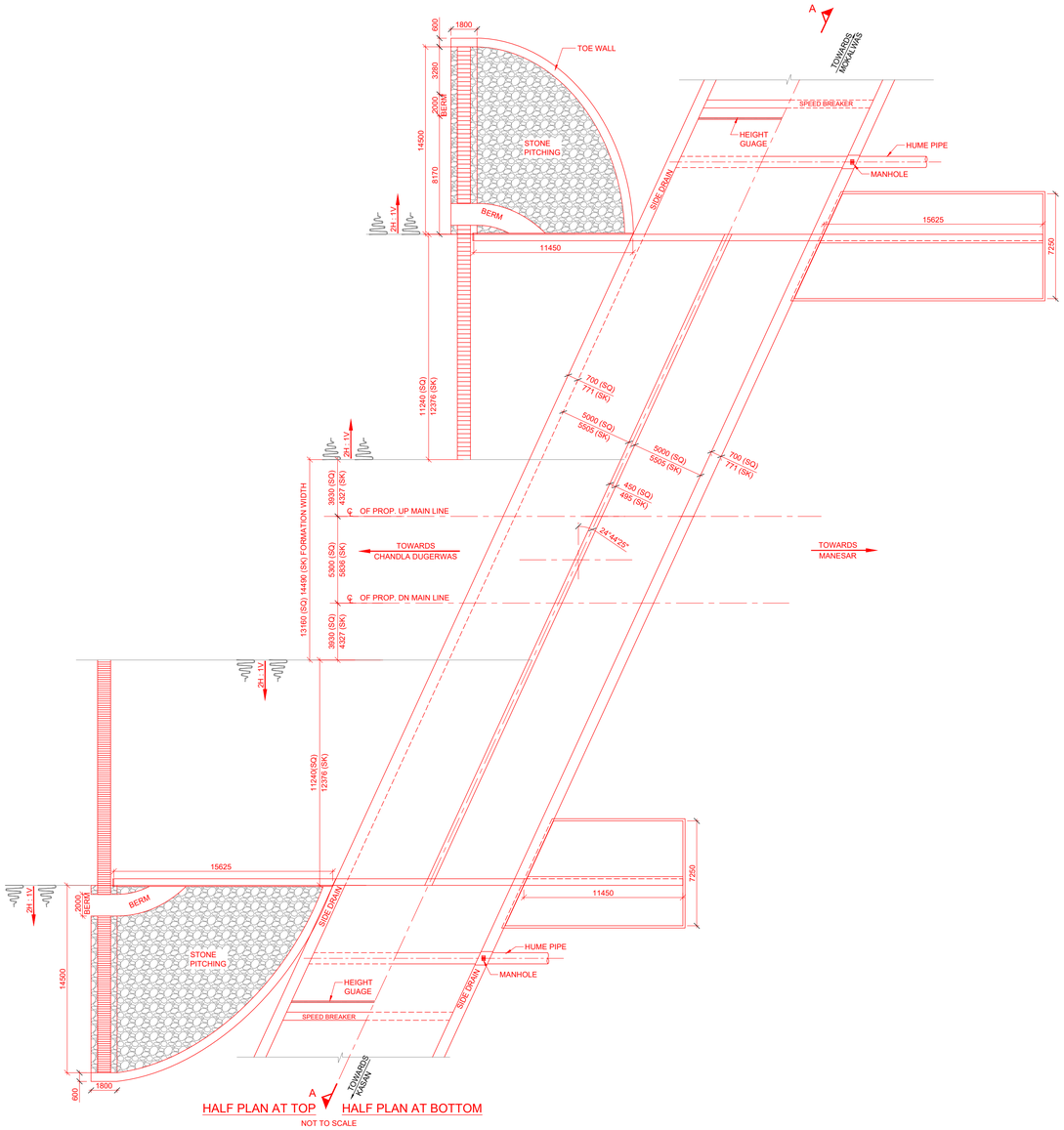
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 110 SPAN 1.0X5.0X5.0 RCC BOX AT CH: 46915.023m

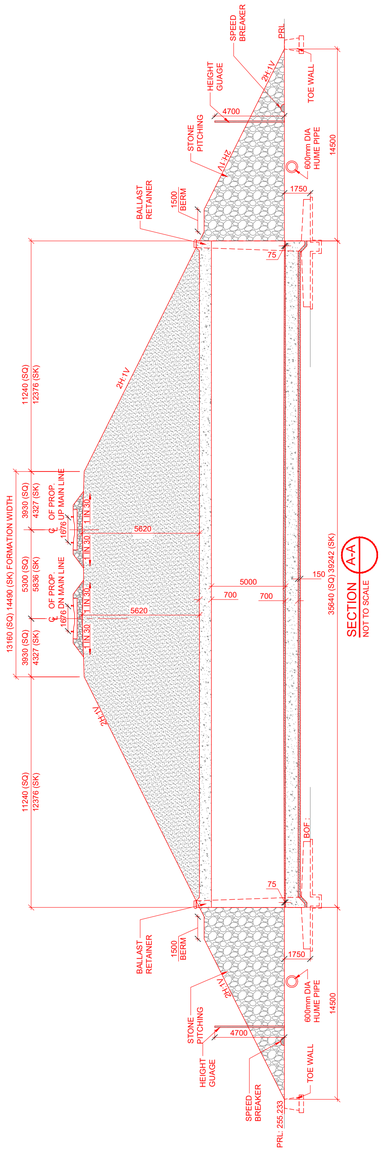
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01110_A0	1 OF 1

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



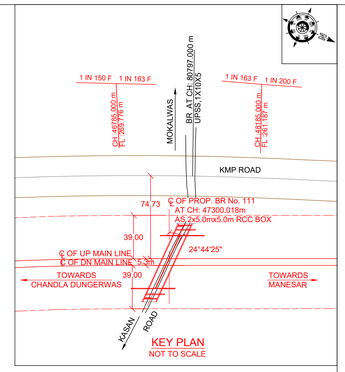
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



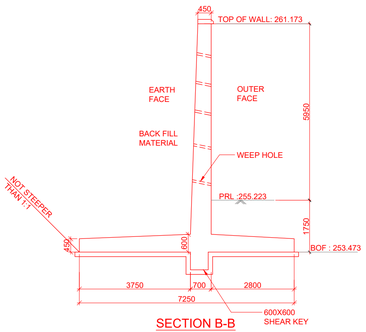
SECTION A-A

NOT TO SCALE



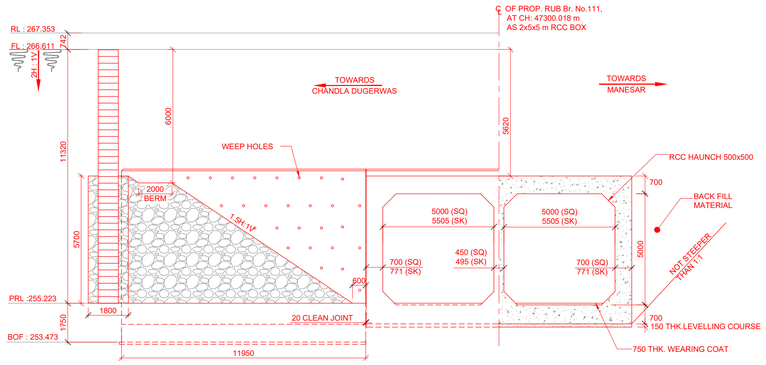
KEY PLAN

NOT TO SCALE



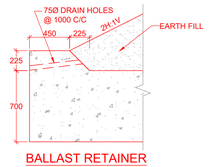
SECTION B-B

(NOT TO SCALE)



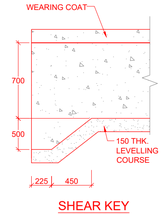
HALF ELEVATION HALF SECTION

NOT TO SCALE



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.
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
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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.
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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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

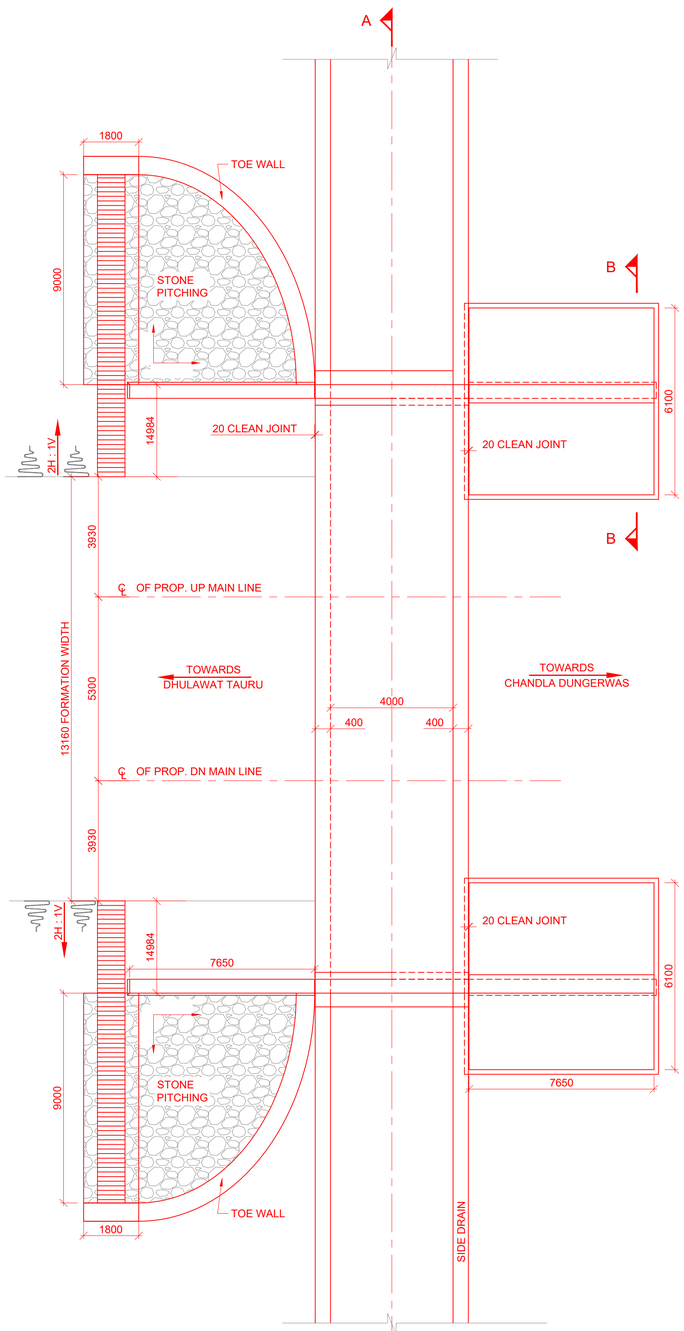
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 111 SPAN 2.0X5.0X5.0 RCC BOX AT CH: 47300.018m

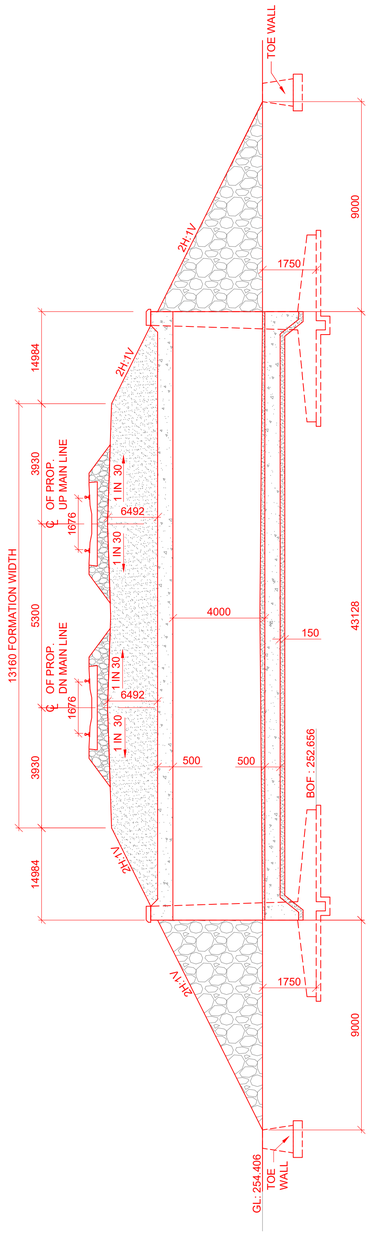
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01111_A0	1 OF 1

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



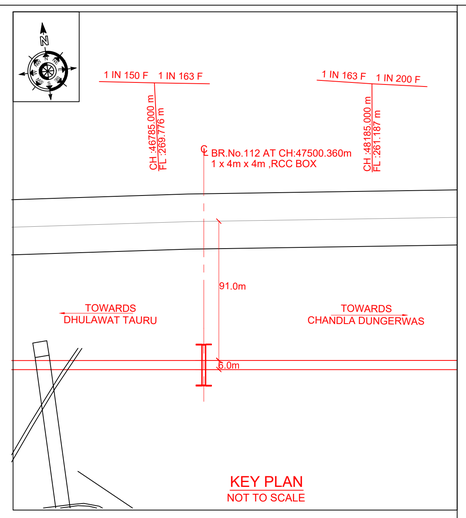
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



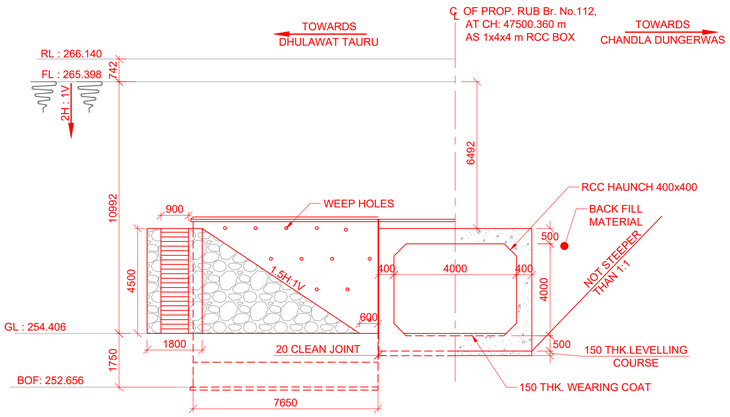
SECTION A-A

NOT TO SCALE



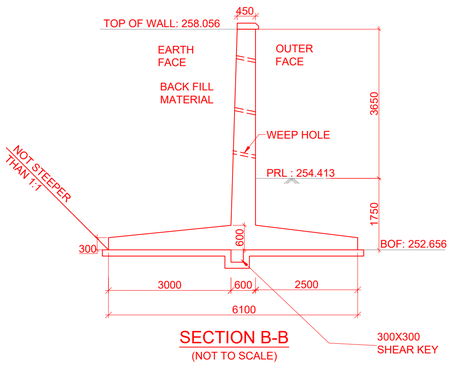
KEY PLAN

NOT TO SCALE



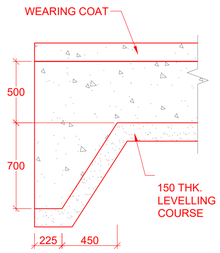
HALF ELEVATION HALF SECTION

NOT TO SCALE



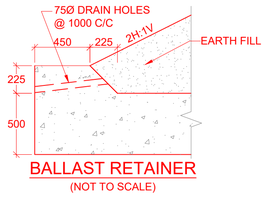
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



BALLAST RETAINER

(NOT TO SCALE)

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8. SEISMIC ZONE- IV
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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:

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CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

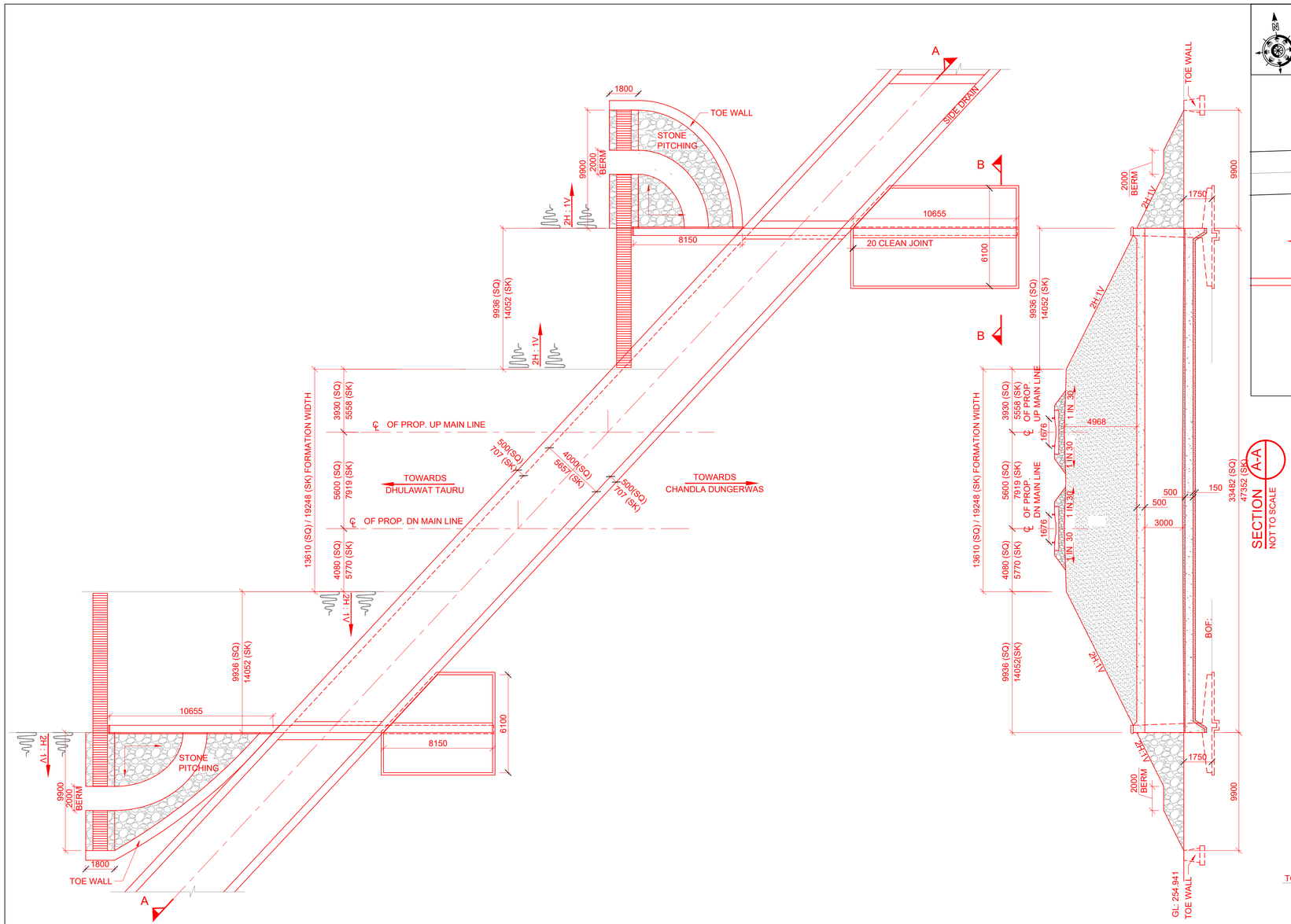
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

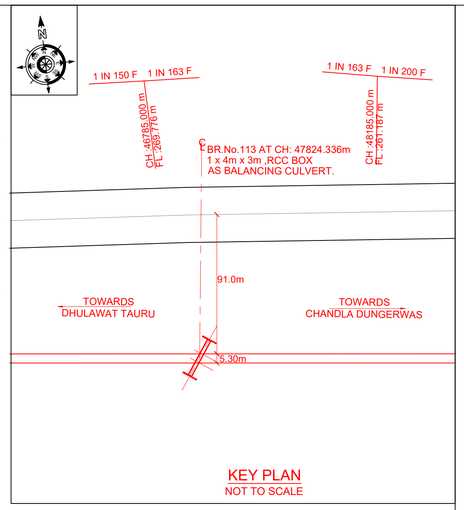
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

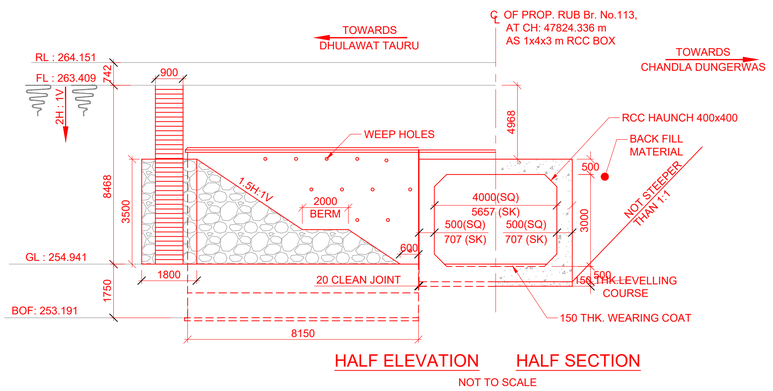
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT NO 112 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 47500.360m

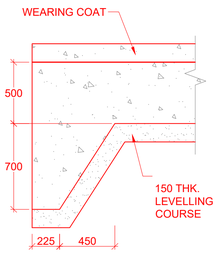
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01112_A0	1 OF 1

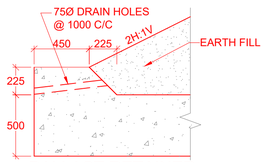
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	

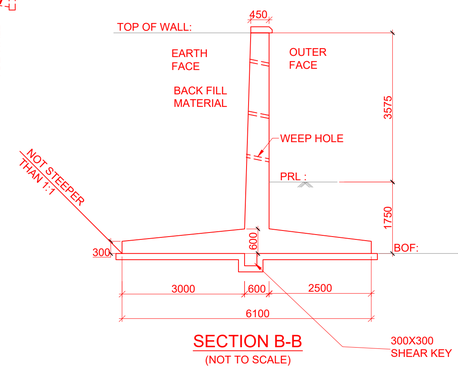












NOTES :

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NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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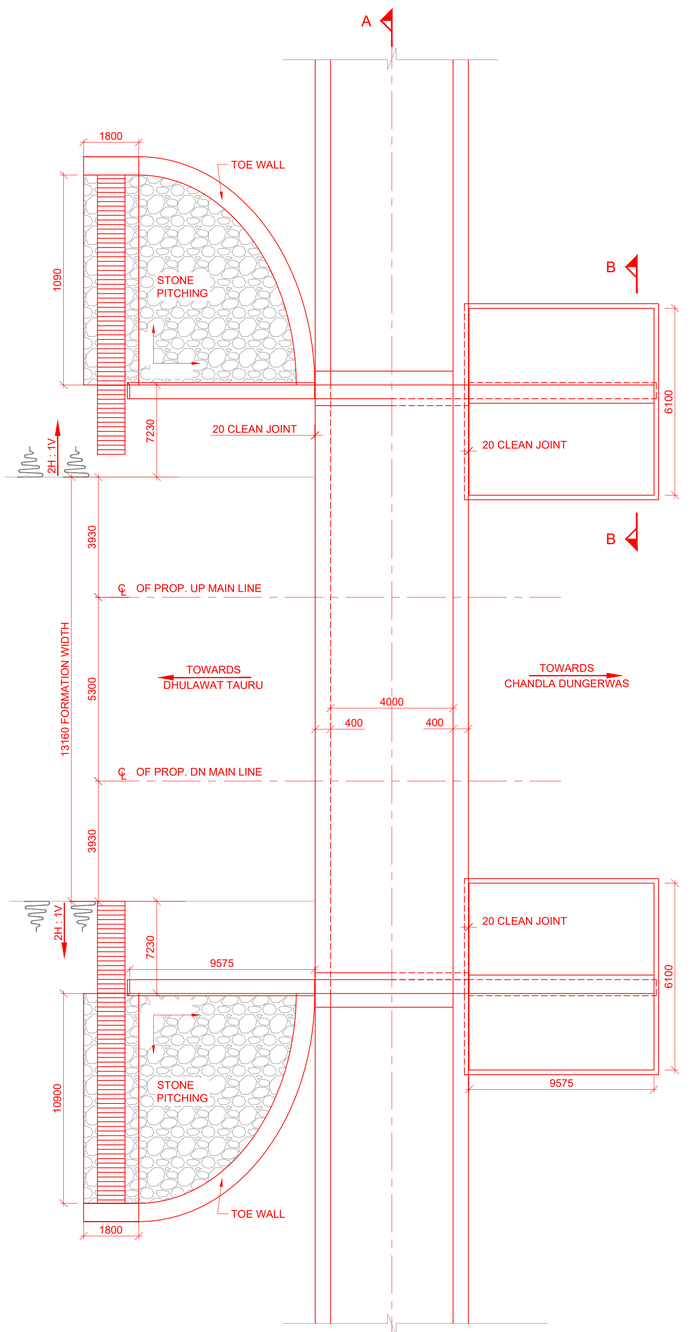
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 113 SPAN 1.0X4.0X3.0 RCC BOX AT CH: 47824.336m

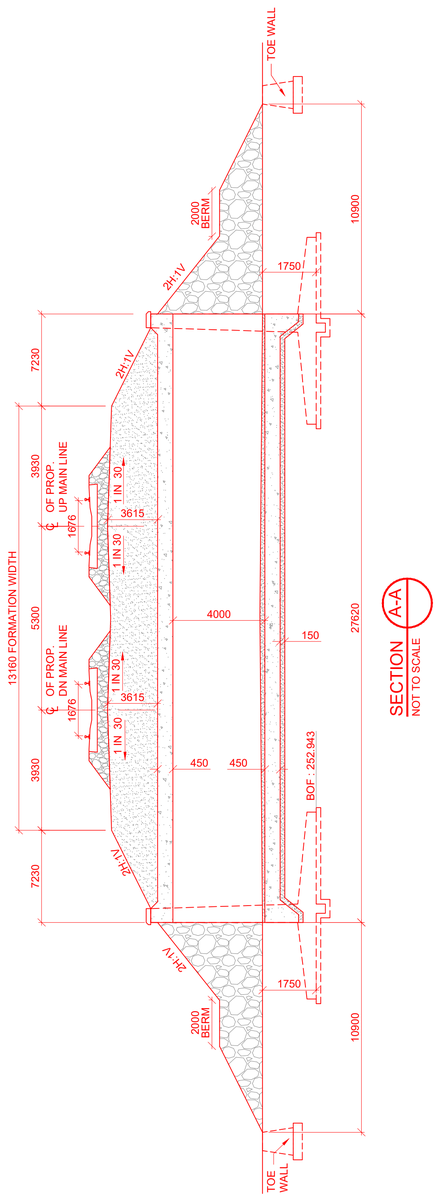
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01113_A0	1 OF 1

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



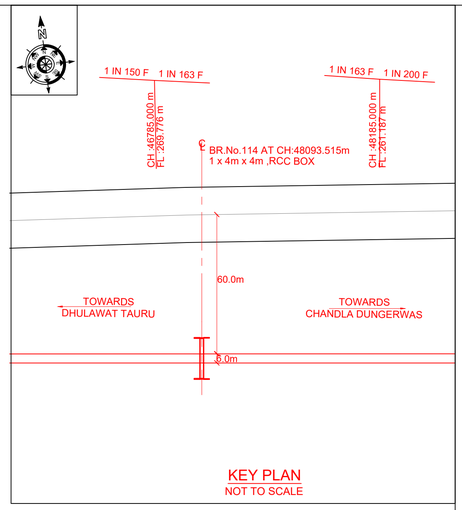
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



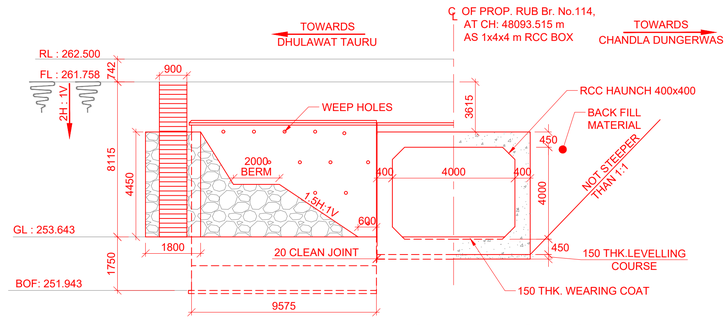
SECTION A-A

NOT TO SCALE



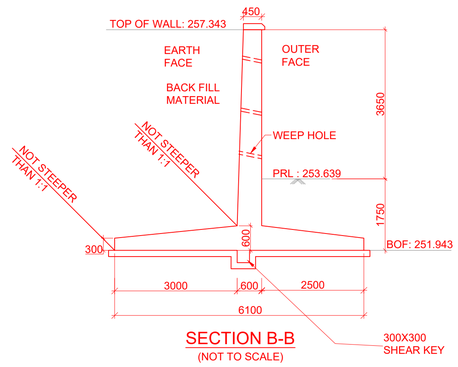
KEY PLAN

NOT TO SCALE



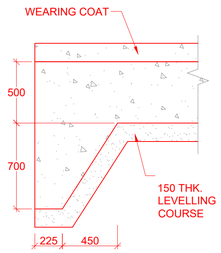
HALF ELEVATION HALF SECTION

NOT TO SCALE



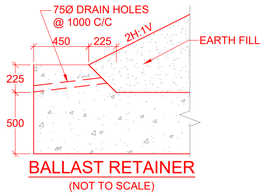
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



BALLAST RETAINER

(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.
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.

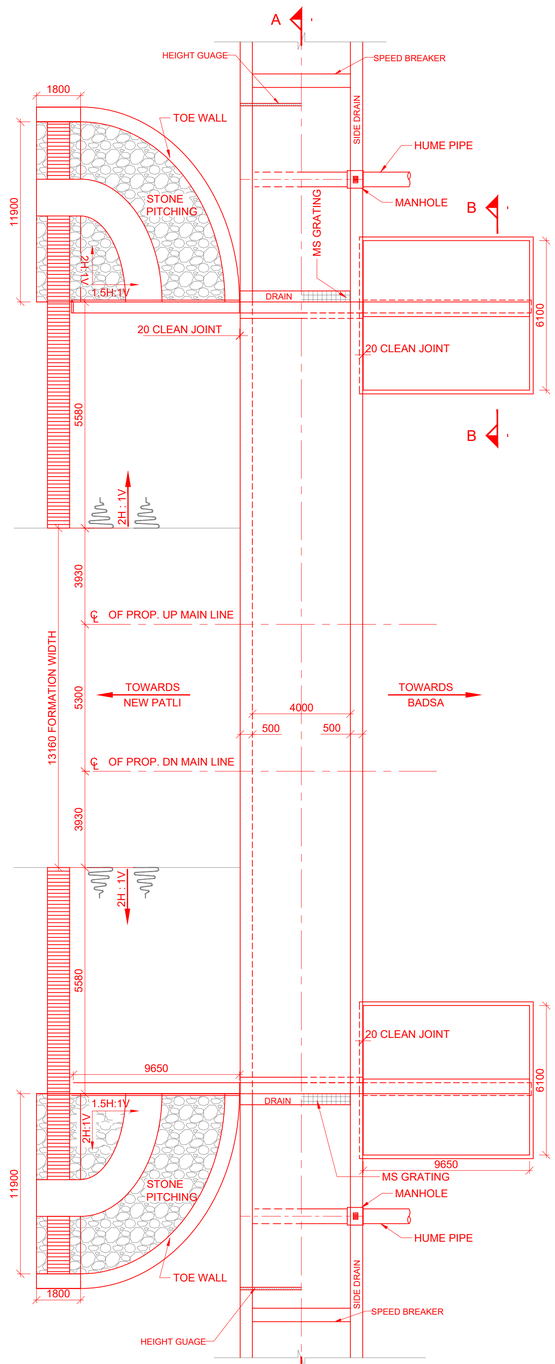
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 114 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48093.515m

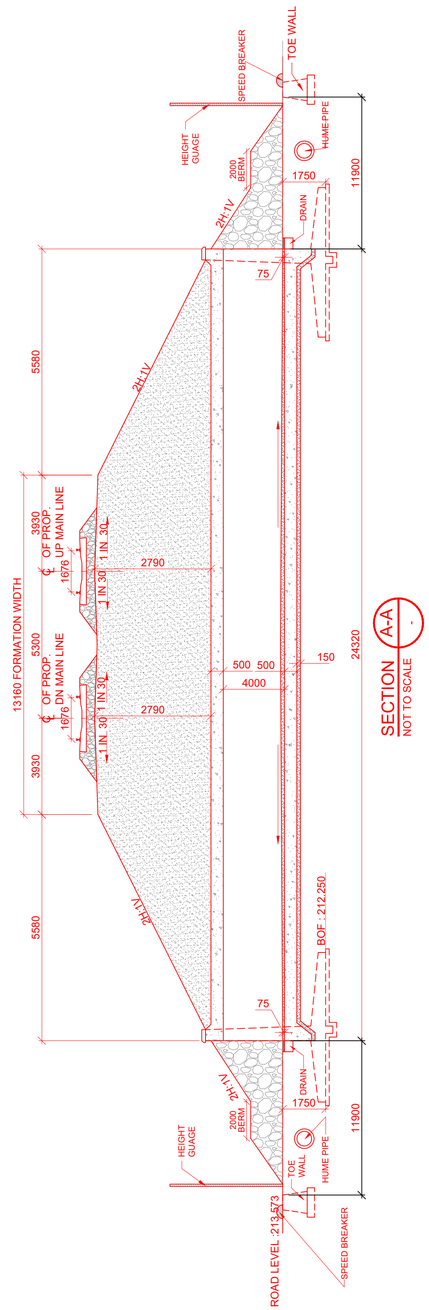
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01114_A0	1 OF 1

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



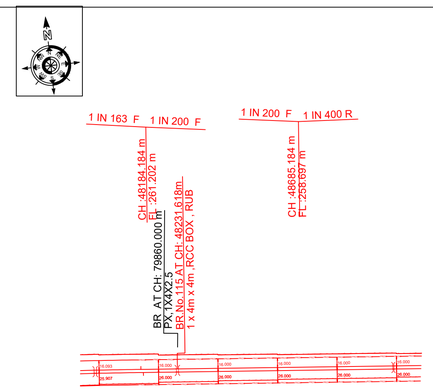
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



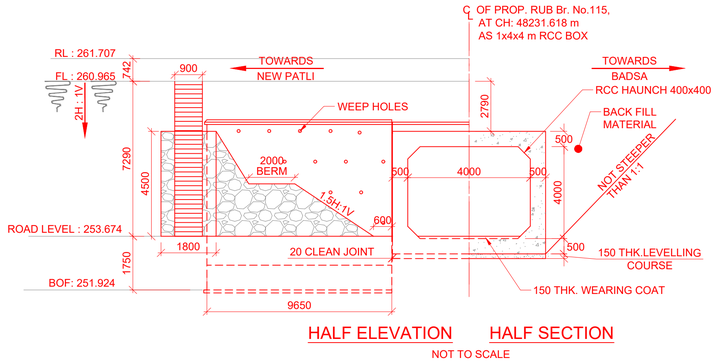
SECTION A-A

NOT TO SCALE



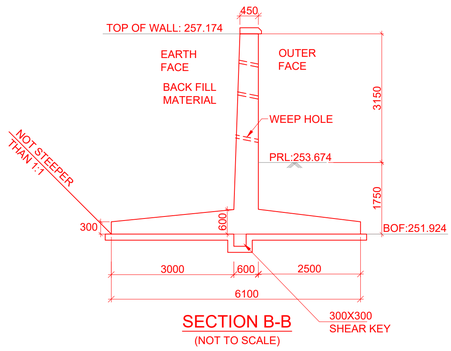
KEY PLAN

NOT TO SCALE



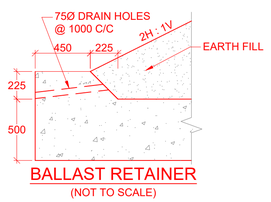
HALF ELEVATION HALF SECTION

NOT TO SCALE



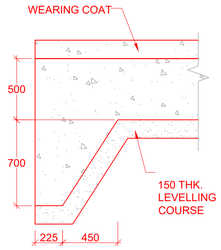
SECTION B-B

(NOT TO SCALE)



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.
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.

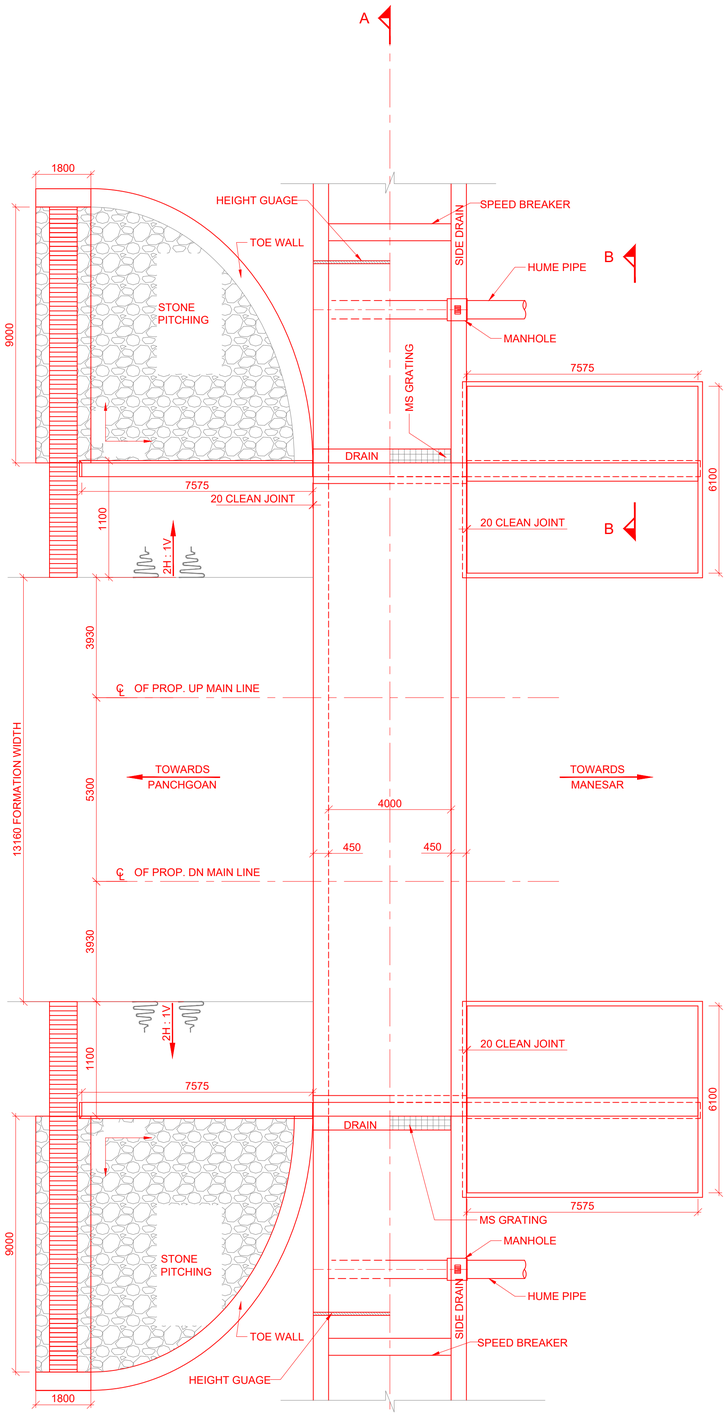
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 115 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48231.618m

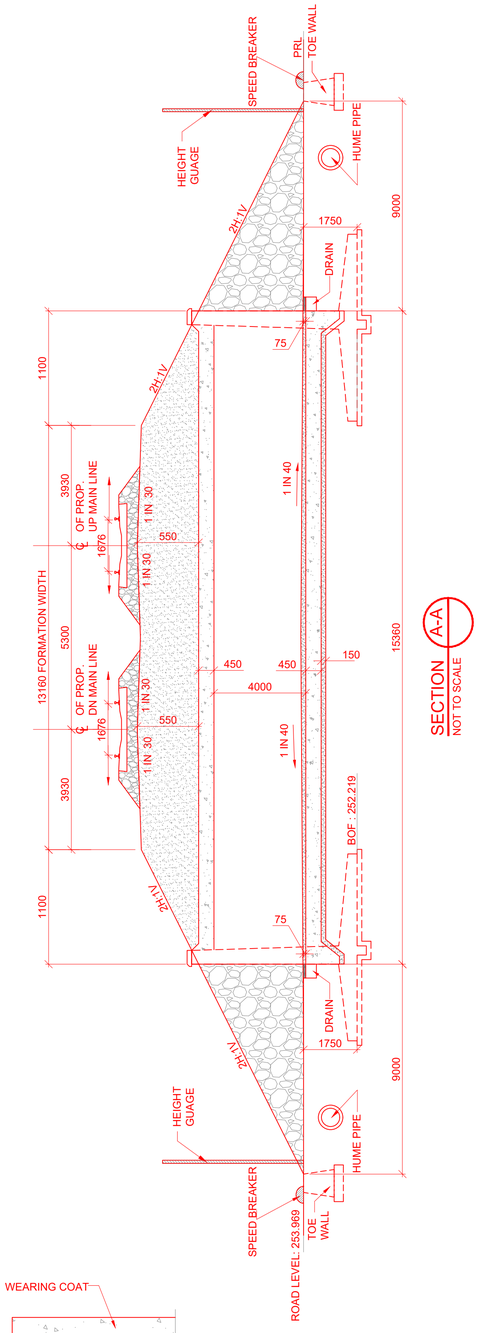
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01115_A0	1 OF 1

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



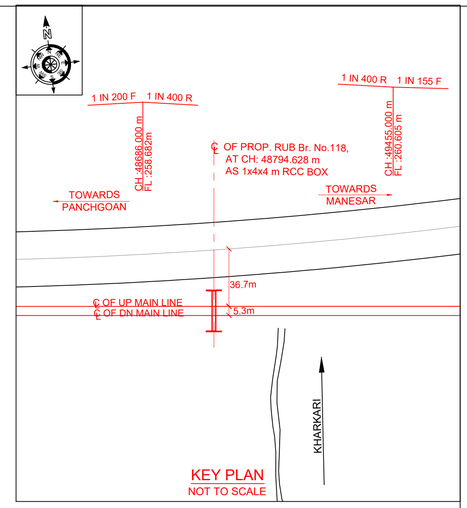
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



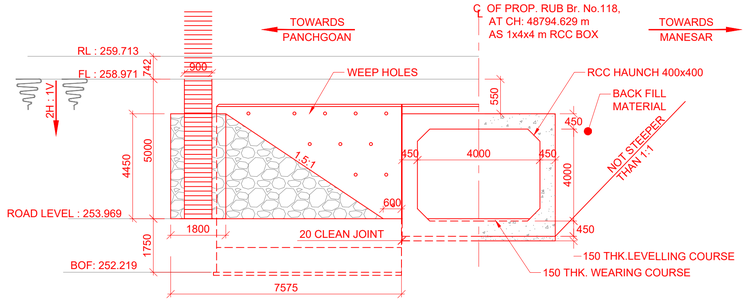
SECTION A-A

NOT TO SCALE



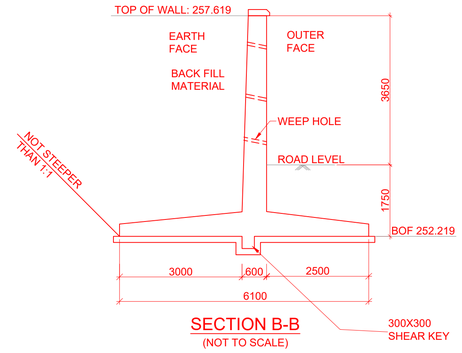
KEY PLAN

NOT TO SCALE



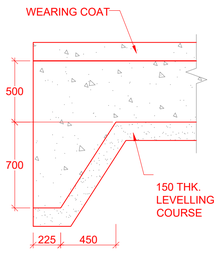
HALF ELEVATION HALF SECTION

NOT TO SCALE



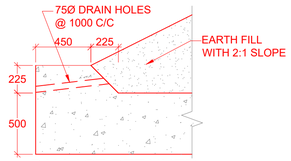
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



BALLAST RETAINER

(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.
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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
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    GRADE OF CONCRETE :
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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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

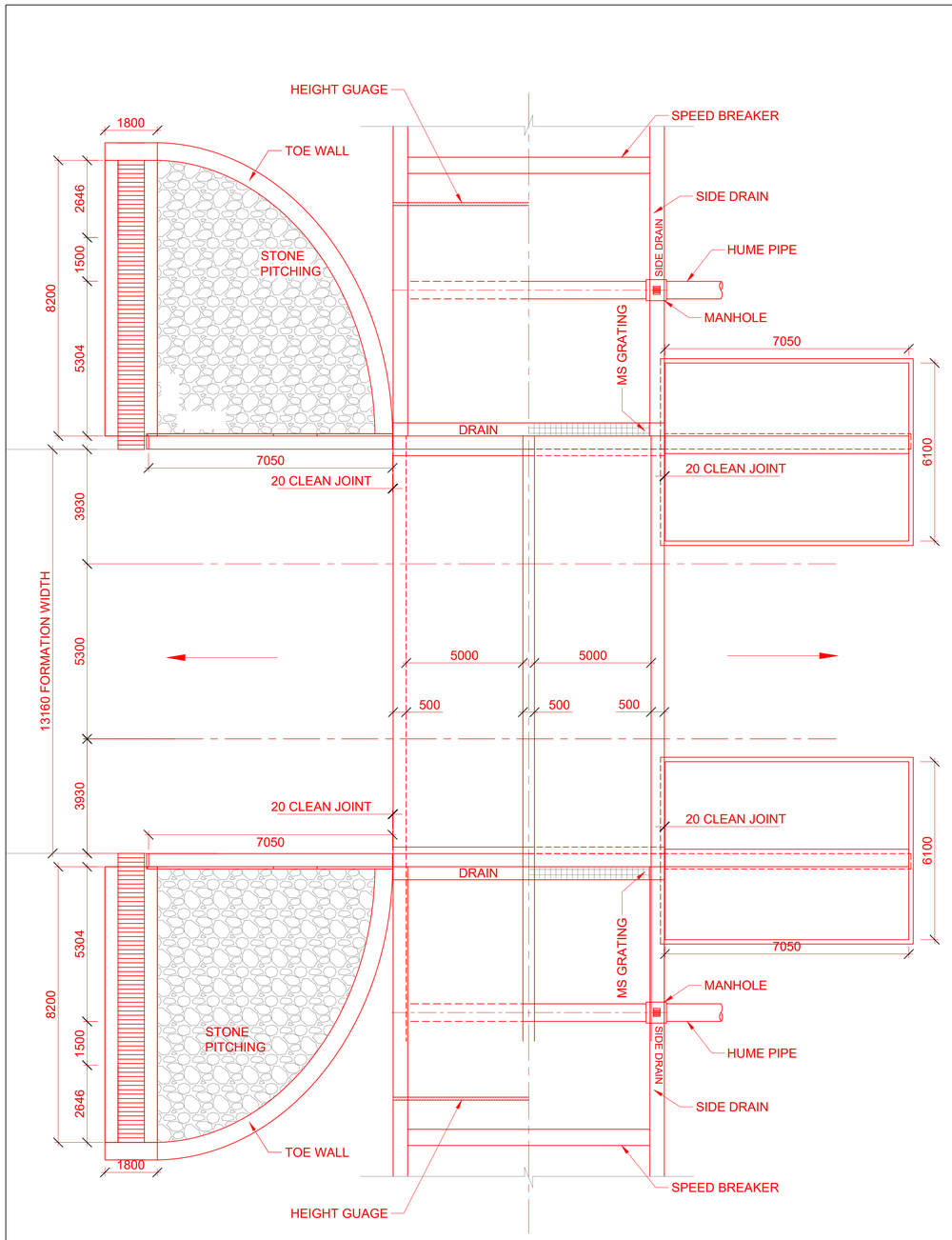
RITES Limited in consortium with SMEC International Pty. Ltd.

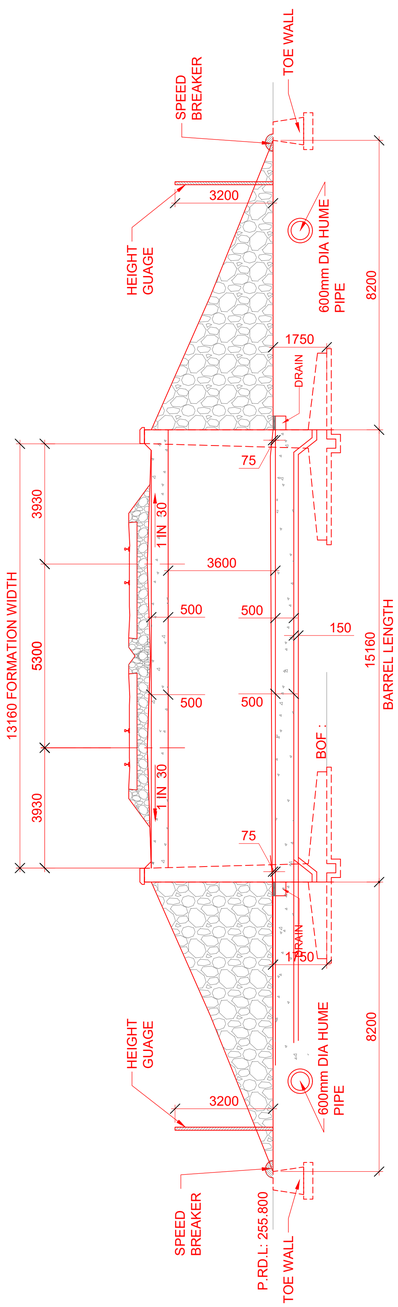
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

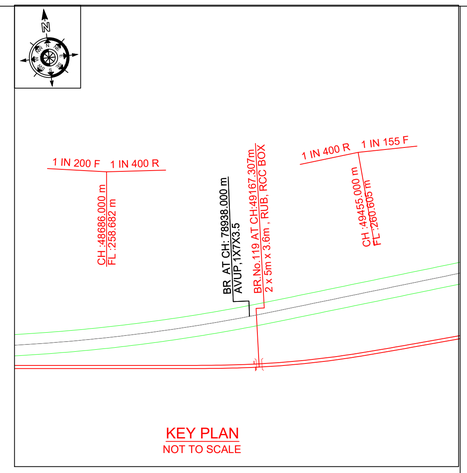
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 118 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48794.629m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01118_A0	1 OF 1

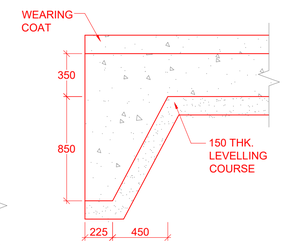
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	





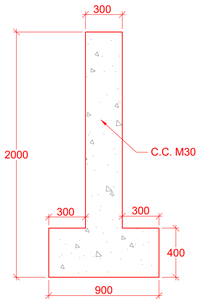


KEY PLAN
NOT TO SCALE

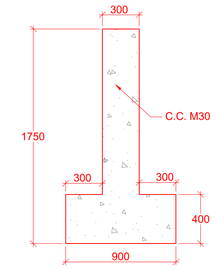


BALLAST RETAINER
(SCALE 1:25)

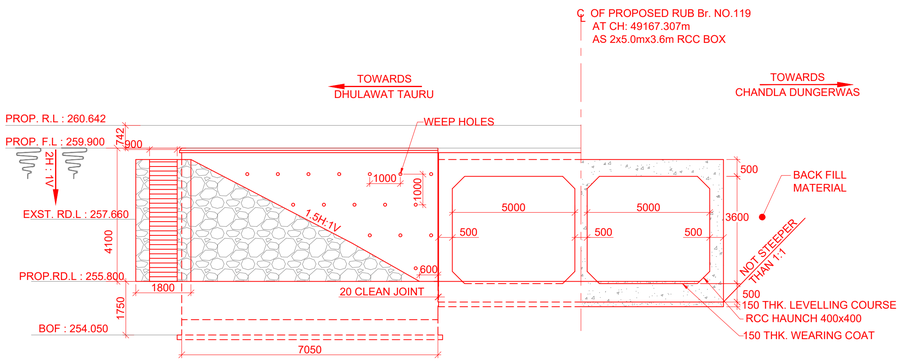
SHEAR KEY
(SCALE 1:25)



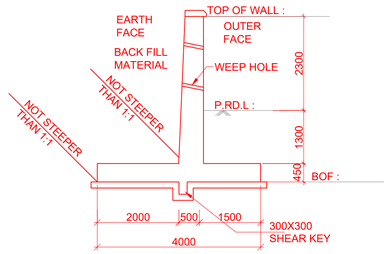
DROP WALL
(SCALE 1:25)



CURTAIN WALL
(SCALE 1:25)



HALF ELEVATION HALF SECTION
NOT TO SCALE



SECTION B-B
(SCALE 1:75)

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.
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.

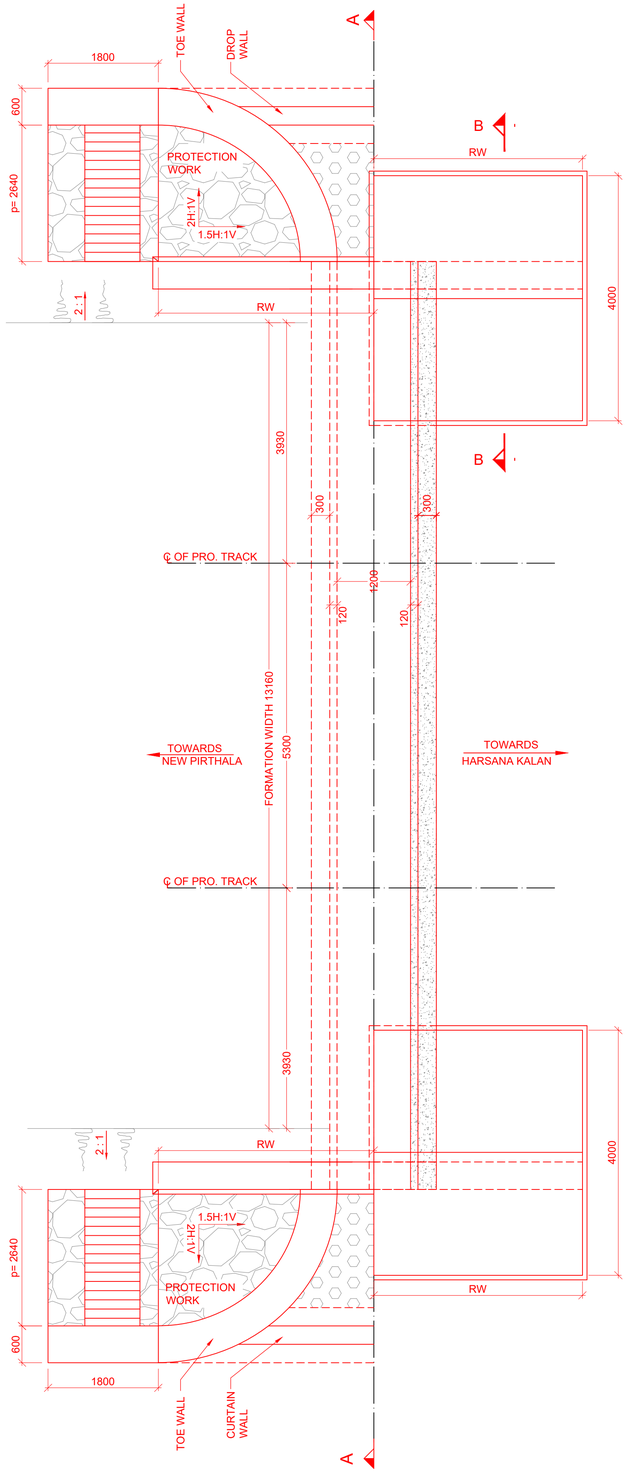
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 119
SPAN 2.0X5.0X3.6 RCC BOX AT CH: 49167.307m

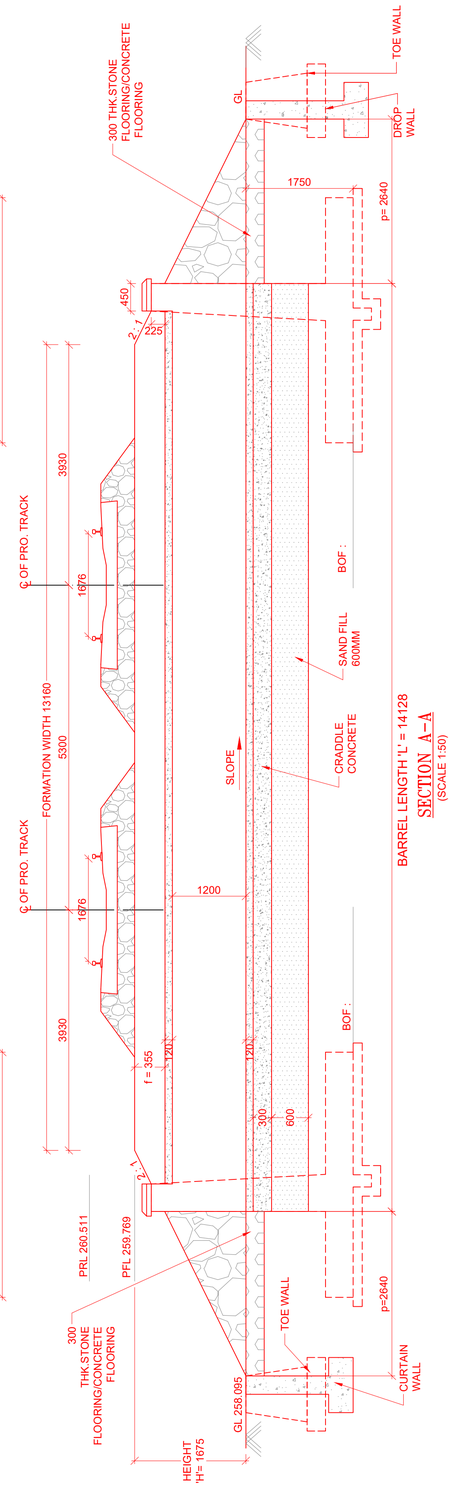
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01119_A0	1 OF 1

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



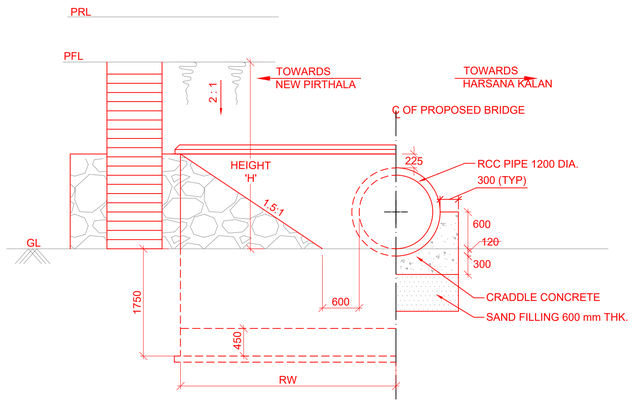
HALF PLAN AT TOP HALF PLAN AT BOTTOM

(SCALE 1:50)



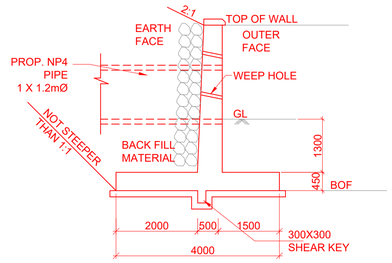
SECTION A – A

(SCALE 1:50)



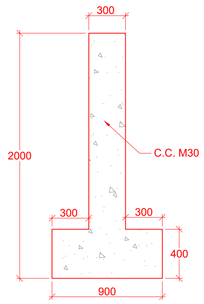
HALF ELEVATION HALF SECTION

(SCALE 1:50)



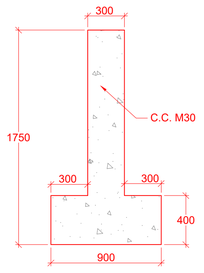
SECTION B-B

(SCALE 1:75)



DROP WALL

(SCALE 1:25)



CURTAIN WALL

(SCALE 1:25)

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. 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 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. 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		SHIV OM DWIVEDI CPM/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

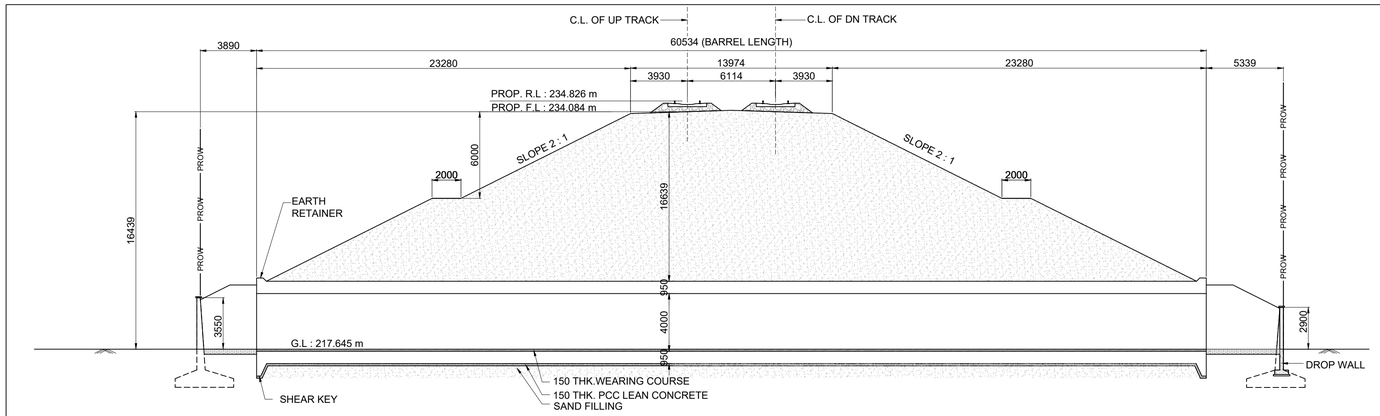
RITES Limited in consortium with SMEC International Pty. Ltd.

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

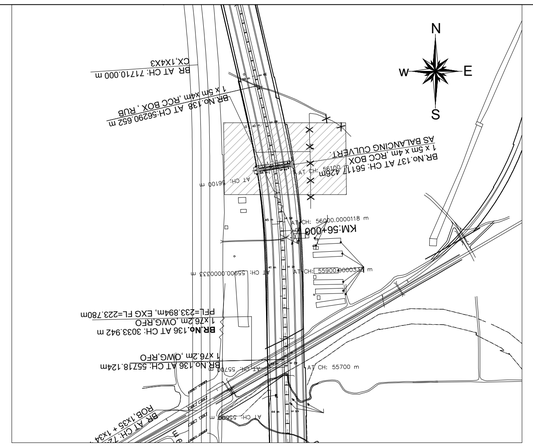
TITLE:- GENERAL ARRANGEMENT FOR BRIDGE NO. 120
PIPE CULVERT 1X1.2 SPAN, AT CH: 49583.34866m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01120_A0	1 OF 1

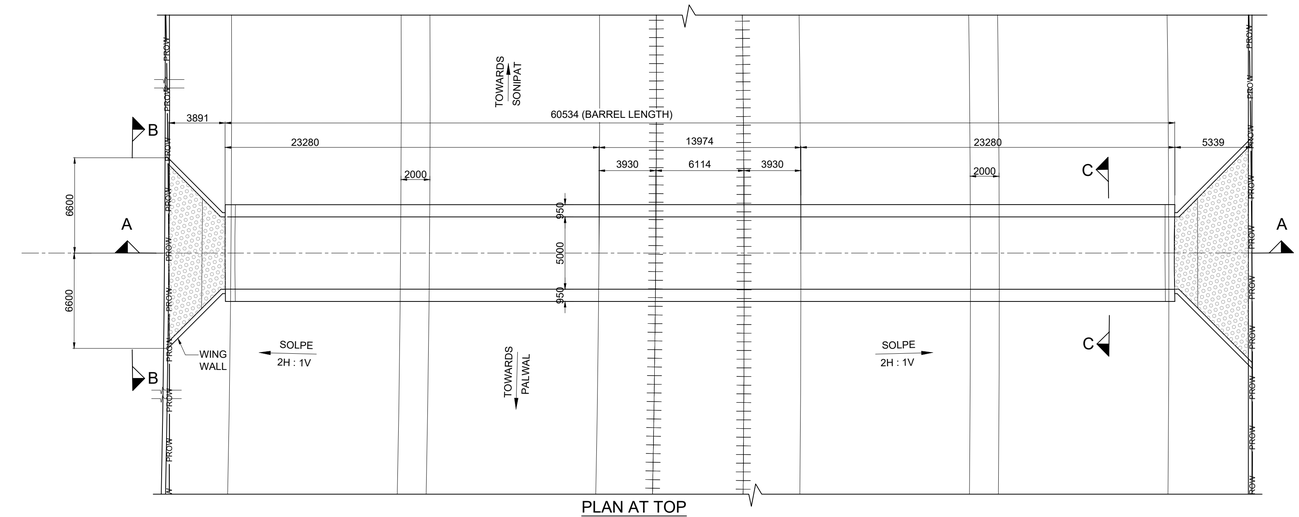
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



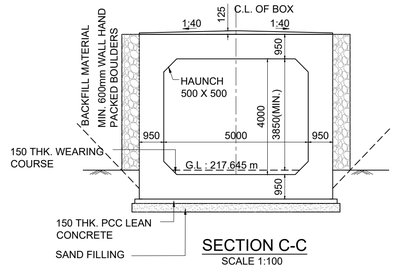
SECTIONAL ELEVATION AT A-A
SCALE 1:200



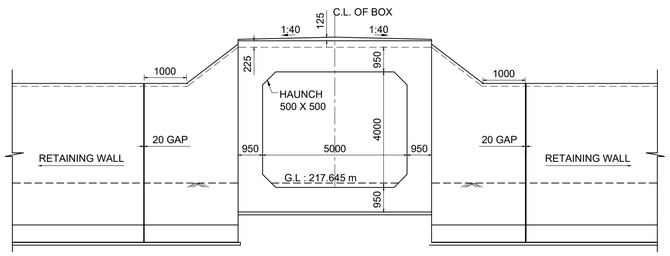
KEY PLAN
SCALE 1:NTS



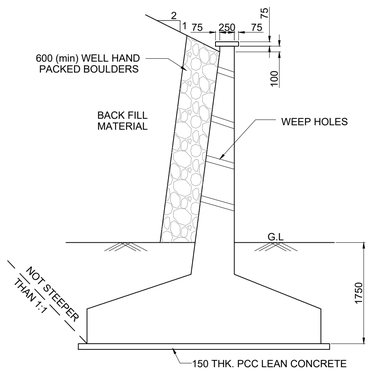
PLAN AT TOP
SCALE 1:200



SECTION C-C
SCALE 1:100



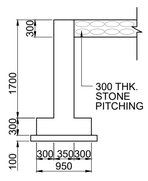
VIEW AT B-B
SCALE 1:100



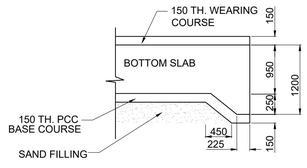
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

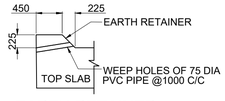
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

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.
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

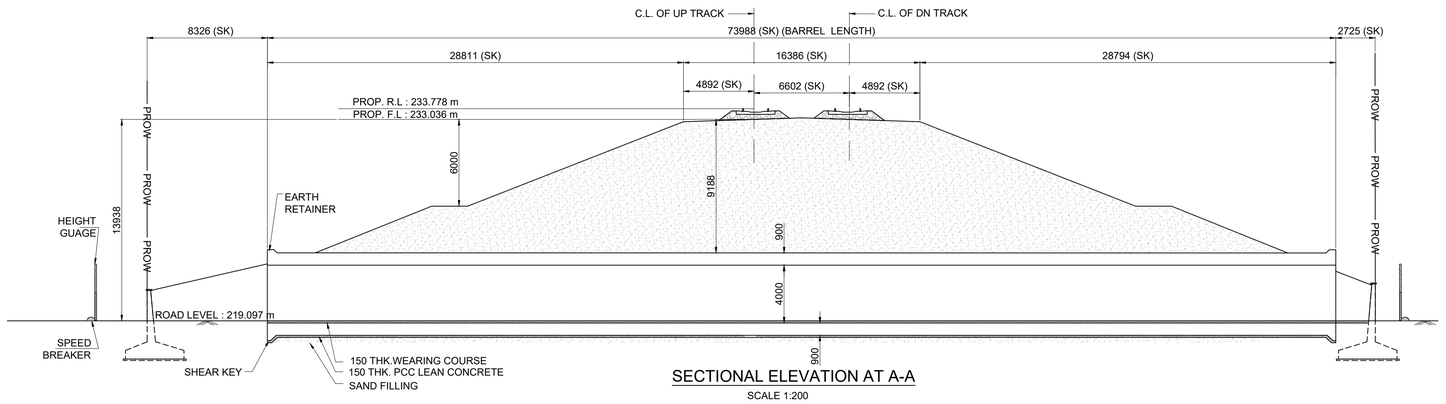
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

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

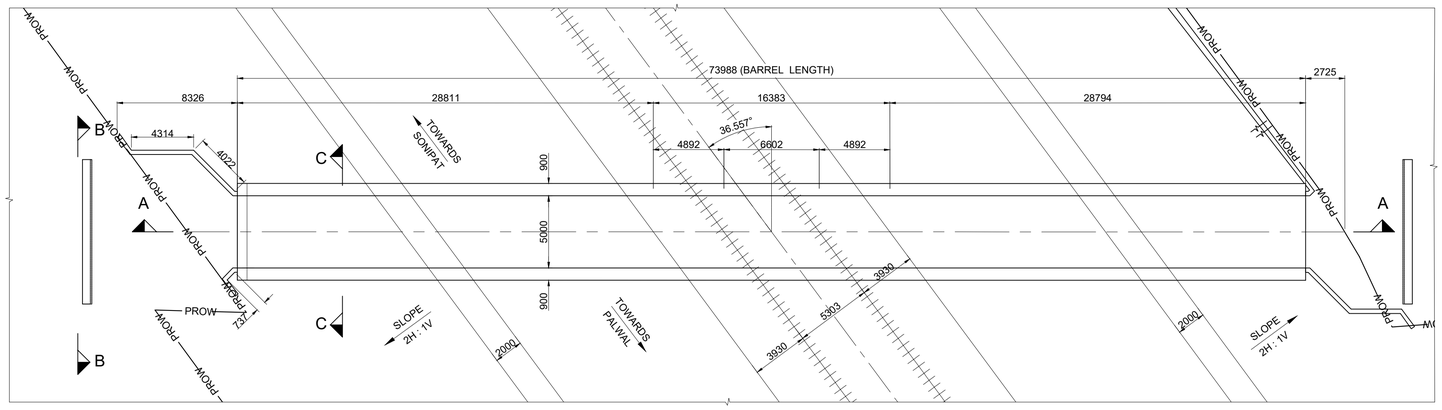
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01137_A0	1 OF 1

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



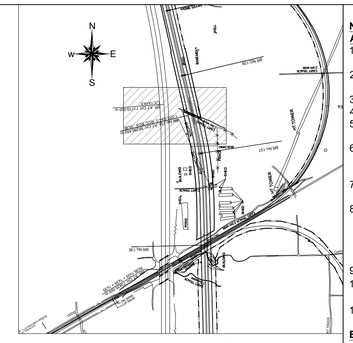
SECTIONAL ELEVATION AT A-A

SCALE 1:200



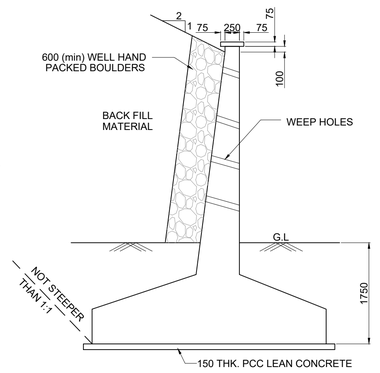
PLAN AT TOP

SCALE 1:200



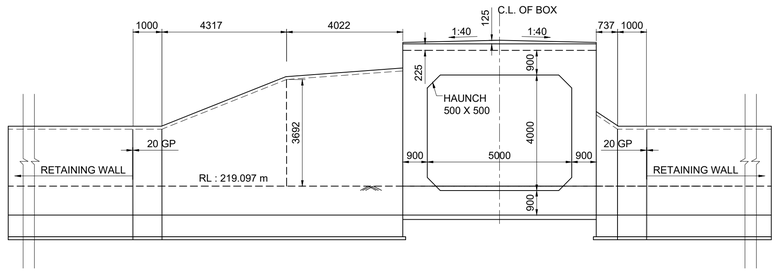
KEY PLAN

SCALE 1:NTS



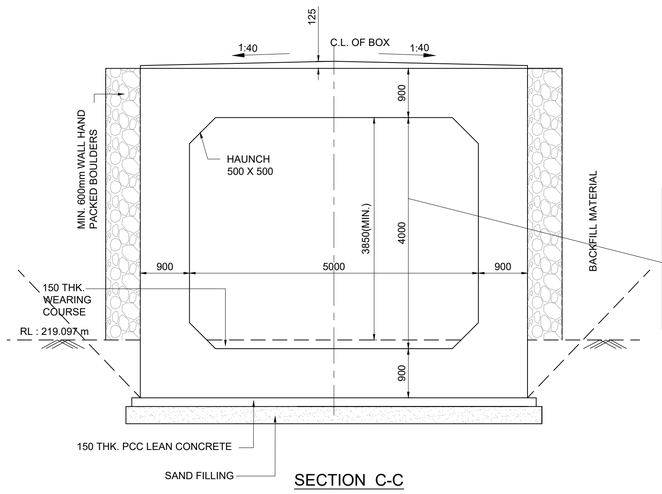
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



VIEW AT B-B

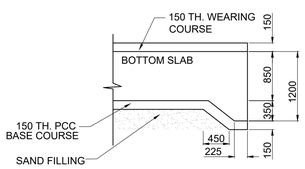
SCALE 1:50



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.

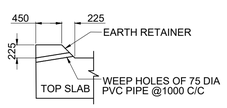
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD 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.
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.

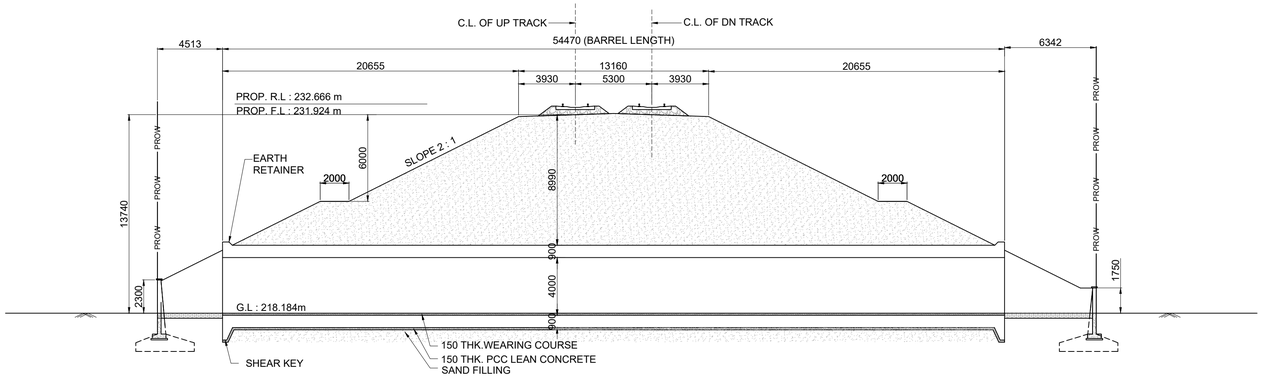
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

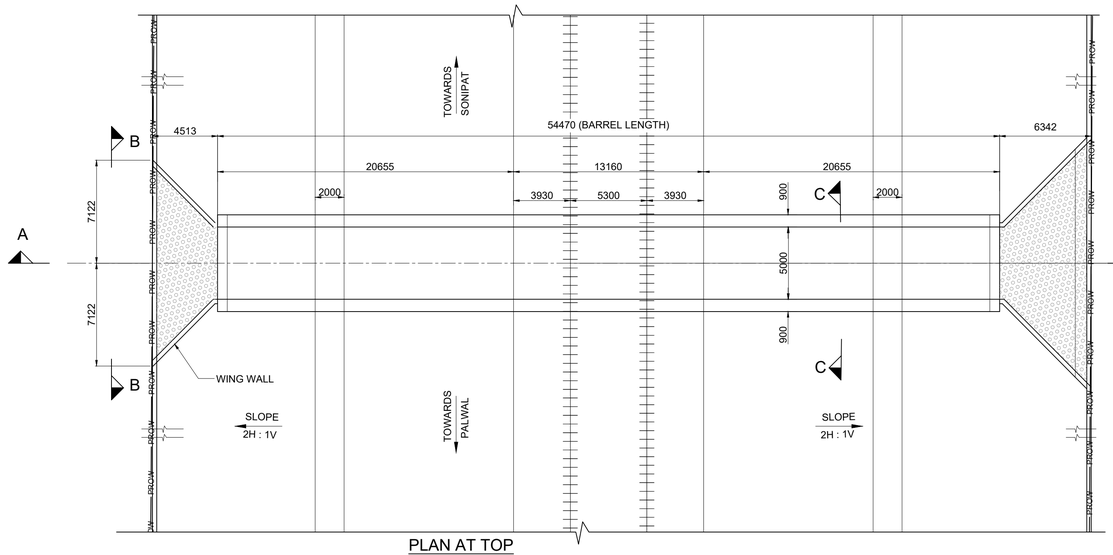
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 138 SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56290.652

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01138_A0	1 OF 1

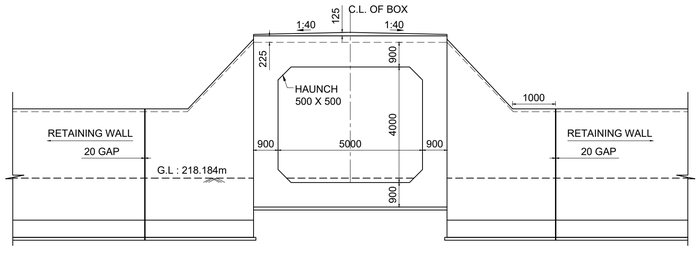
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



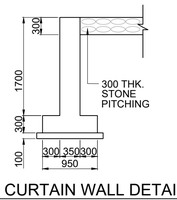
SECTIONAL ELEVATION AT A-A
SCALE 1:200



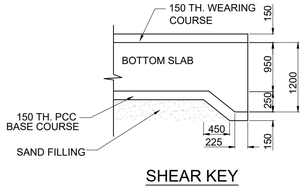
PLAN AT TOP
SCALE 1:200



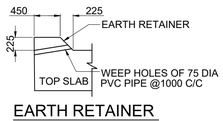
VIEW AT B-B
SCALE 1:100



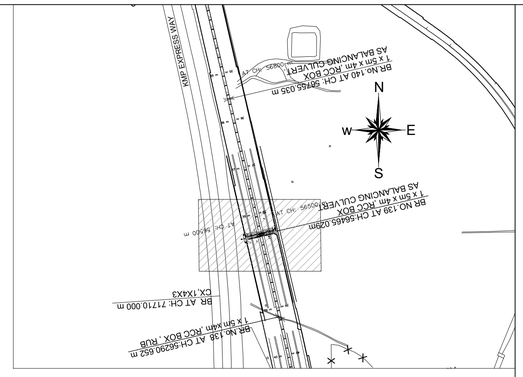
DROP / CURTAIN WALL DETAILS
SCALE 1:50



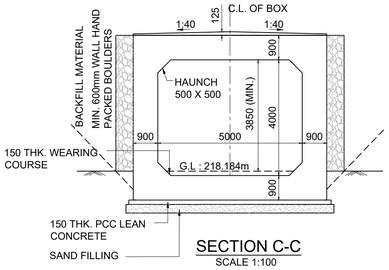
SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



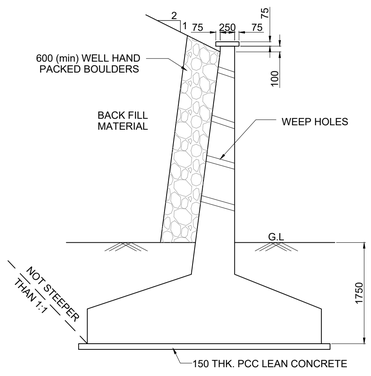
KEY PLAN
SCALE 1:NTS



SECTION C-C
SCALE 1:100

LEGEND

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



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.
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.
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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
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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.
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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		SHIV OM DWIVEDI CPM/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

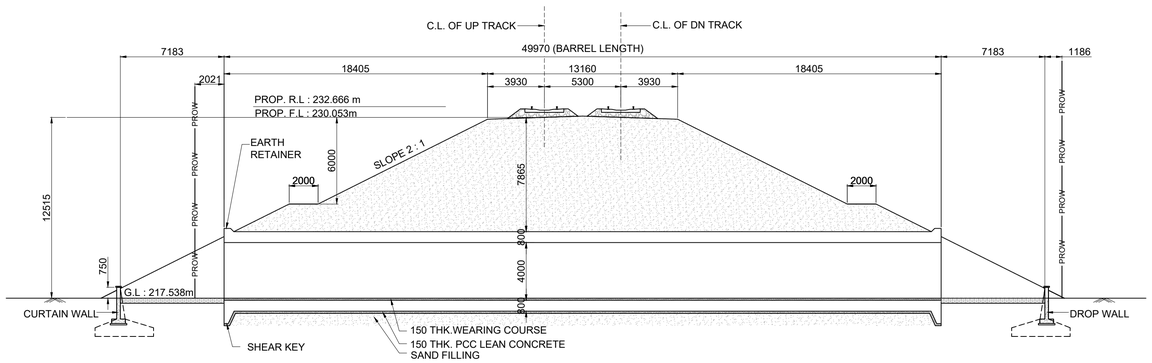
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

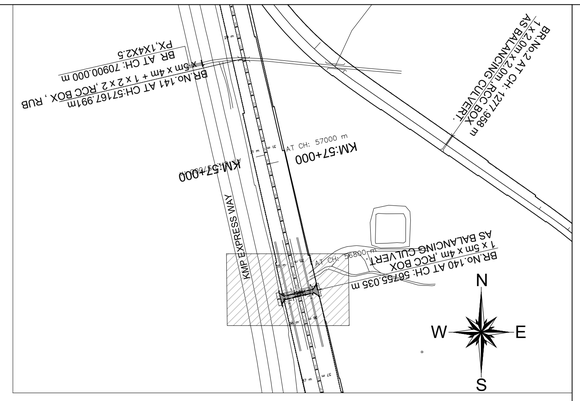
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 139
SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56465.029

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01139_A0	1 OF 1

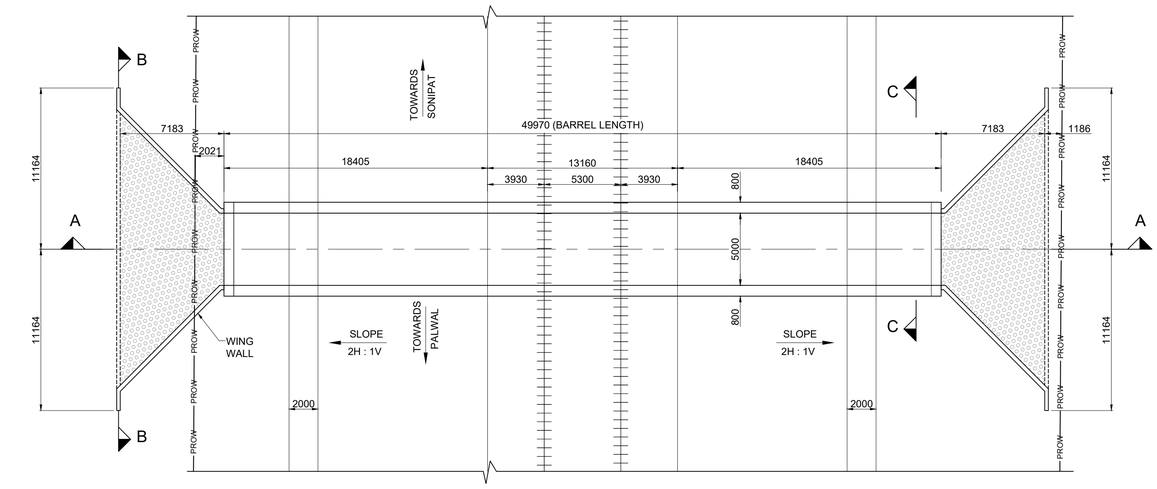
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



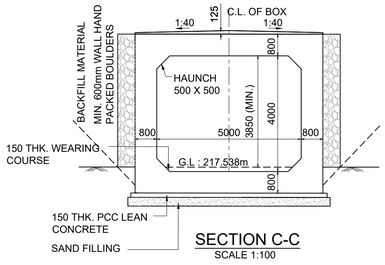
SECTIONAL ELEVATION AT A-A
SCALE 1:200



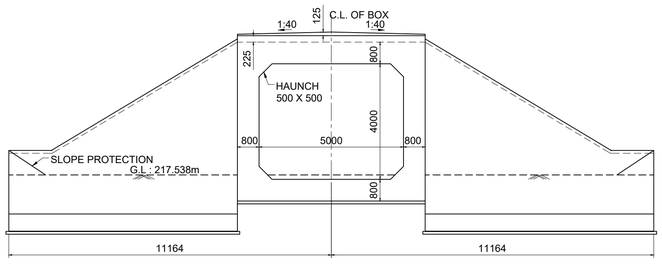
KEY PLAN
SCALE 1:NTS



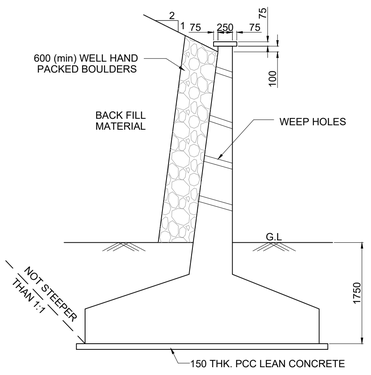
PLAN AT TOP
SCALE 1:200



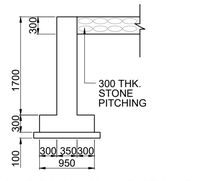
SECTION C-C
SCALE 1:100



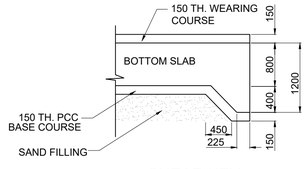
VIEW AT B-B
SCALE 1:100



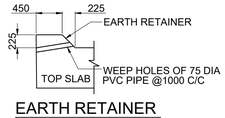
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

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.
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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

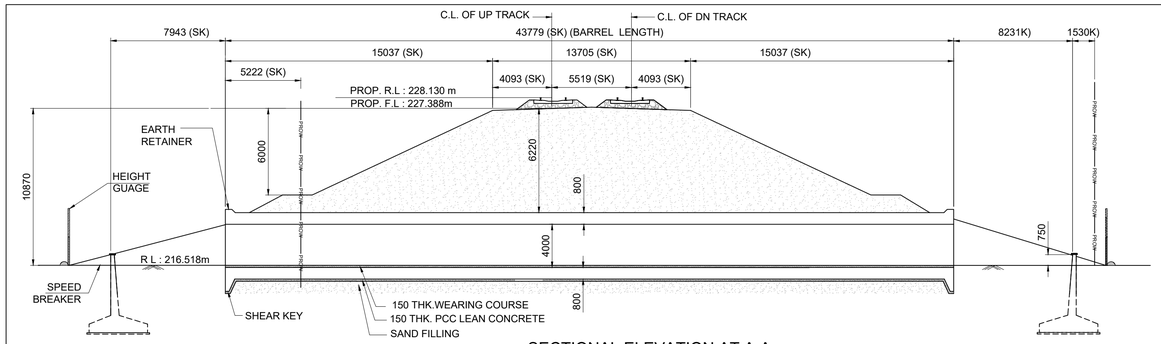
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

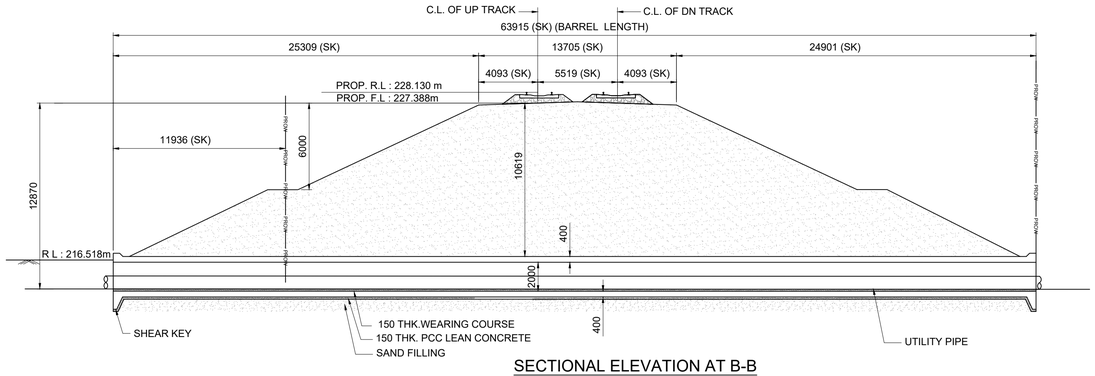
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01140_A0	1 OF 1

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



SECTIONAL ELEVATION AT A-A

SCALE 1:200

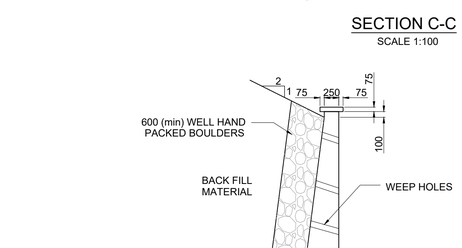


SECTIONAL ELEVATION AT B-B

SCALE 1:200

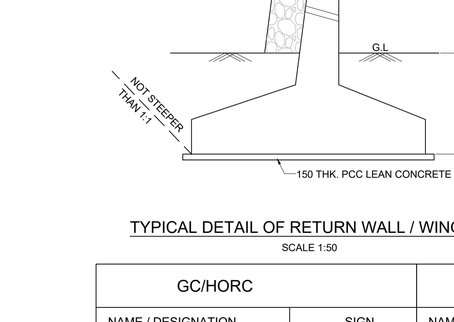
PLAN AT TOP

SCALE 1:200



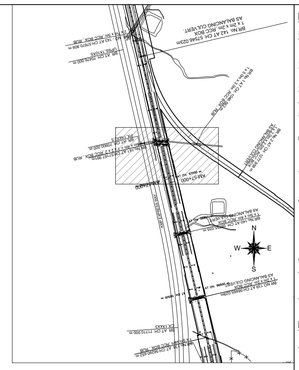
ELEVATION

SCALE 1:100



ELEVATION

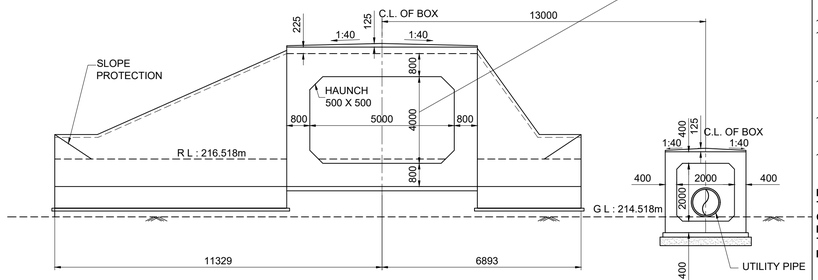
SCALE 1:50



KEY PLAN

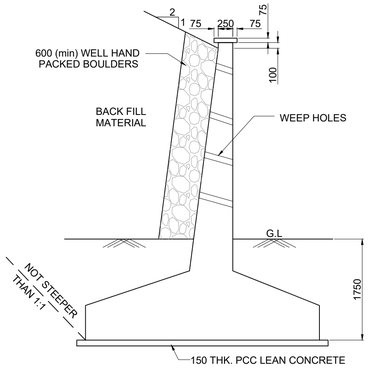
SCALE 1:NTS

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.



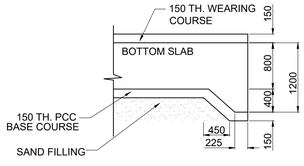
SECTION C-C

SCALE 1:100



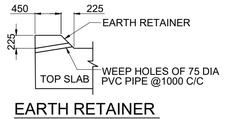
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD 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.
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3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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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.
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   (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
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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.
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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 Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 141 SPAN 1x5x4 +1x2x2RCC BOX AT CH: 57167.991

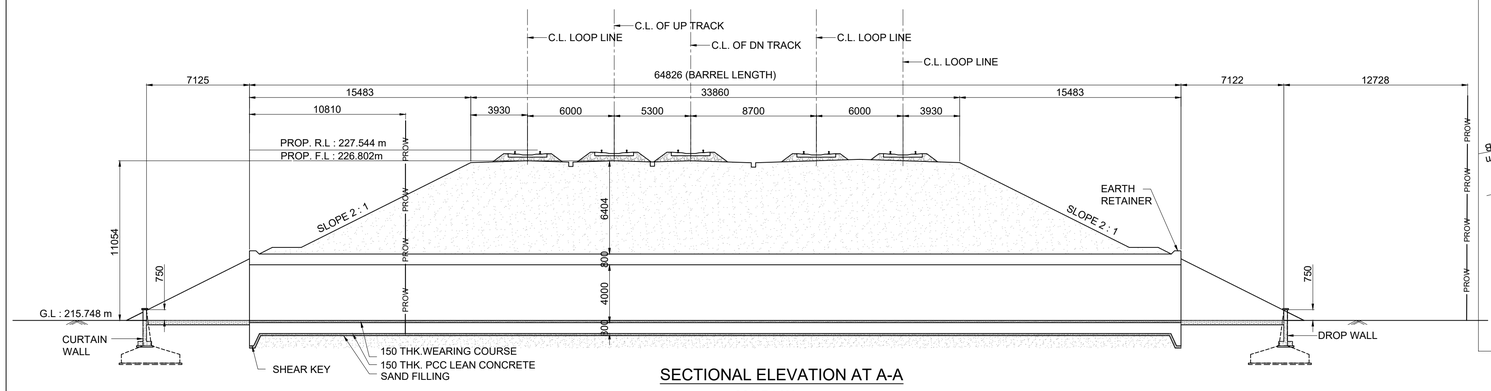
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01141_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

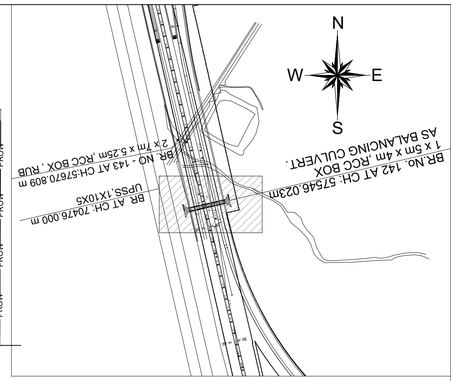
ISSUE DATE 11-11-2022

REVISED DATE



SECTIONAL ELEVATION AT A-A

SCALE 1:200



NOTES :

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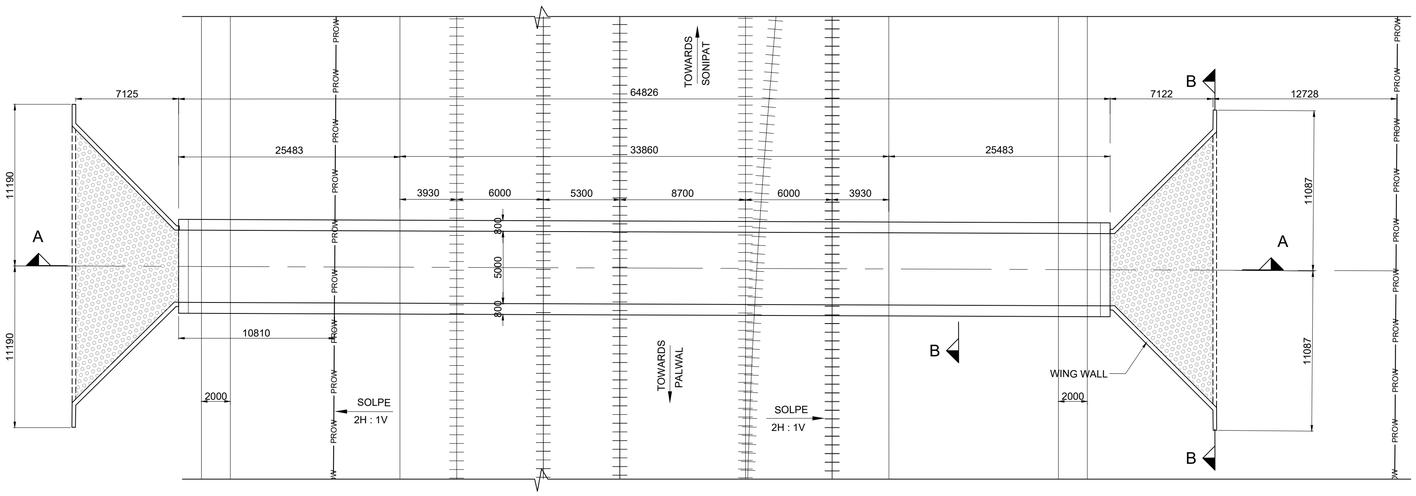
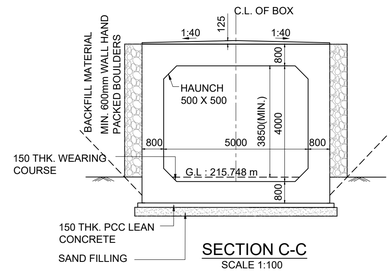
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.



PLAN AT TOP

SCALE 1:200

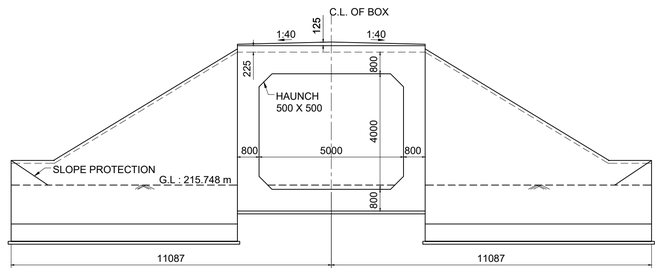


SECTION C-C

SCALE 1:100

LEGEND

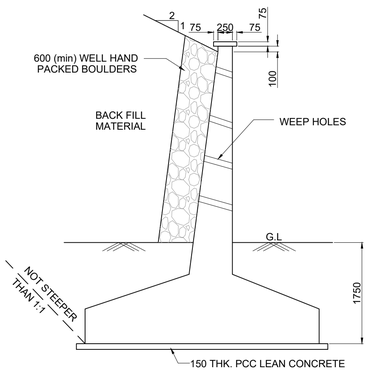
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



VIEW AT B-B

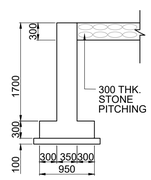
SCALE 1:100

PLAN AT TOP



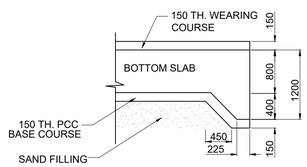
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



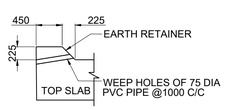
DROP / CURTAIN WALL DETAILS

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		SHIV OM DWIVEDI CPM/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

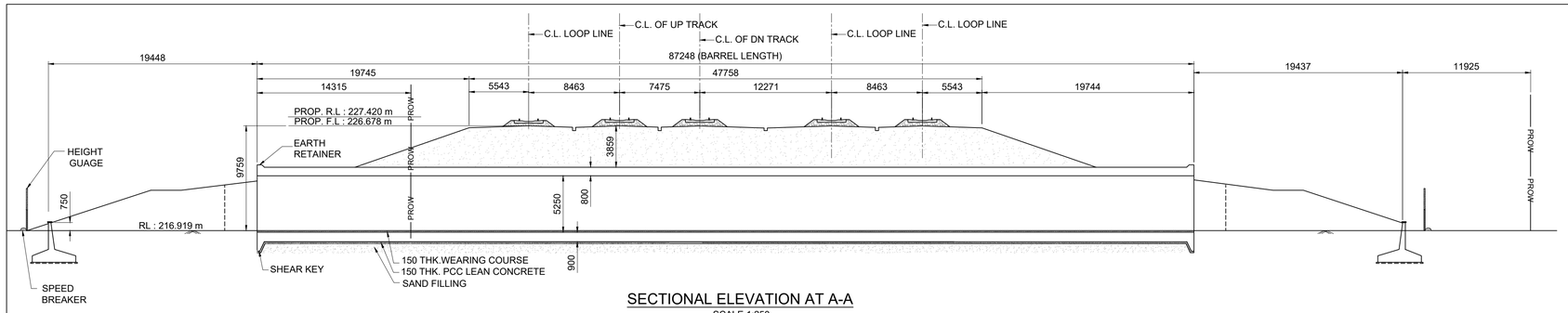
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 142 SPAN 1.0X2.0X2.0 RCC BOX AT CH: 57546.023

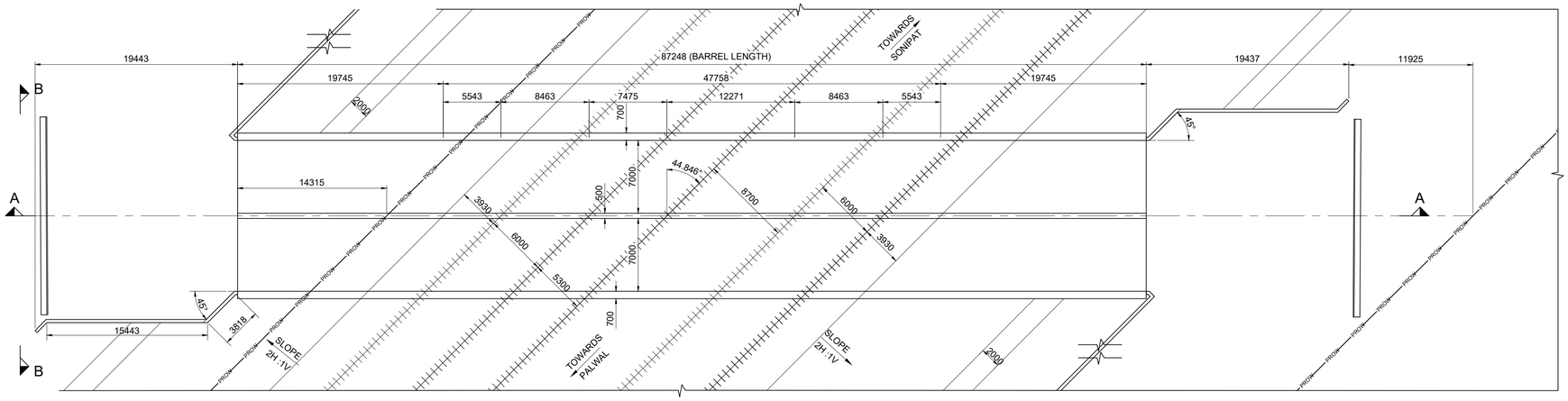
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01142_A0	1 OF 1

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



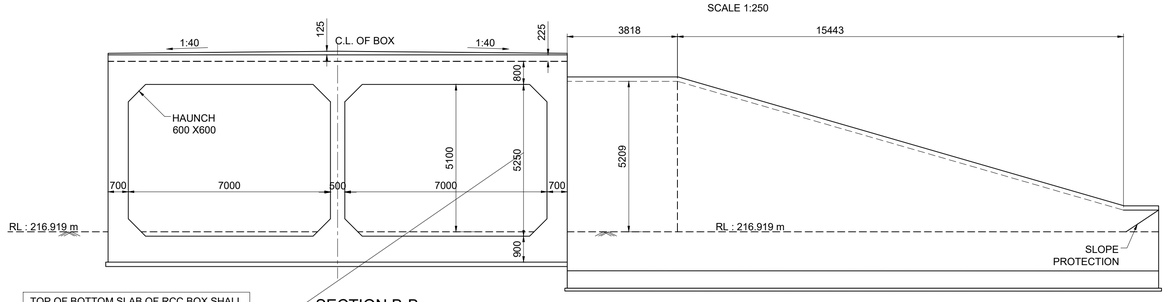
SECTIONAL ELEVATION AT A-A

SCALE 1:250



PLAN AT TOP

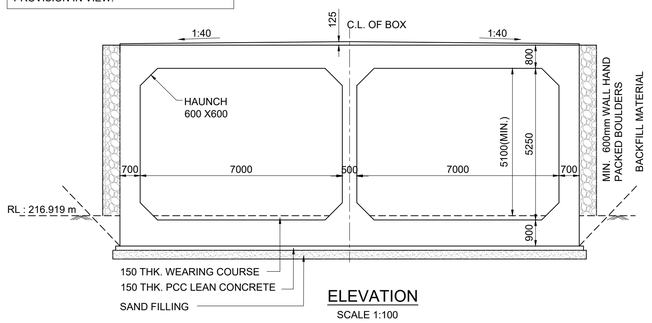
SCALE 1:250



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.

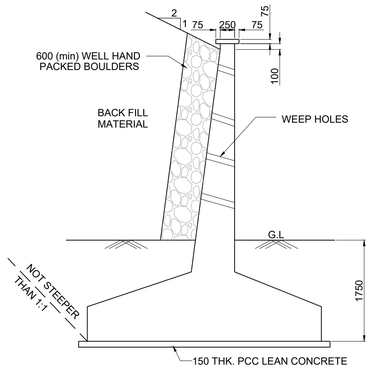
SECTION B-B

SCALE 1:100



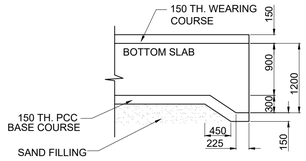
ELEVATION

SCALE 1:100



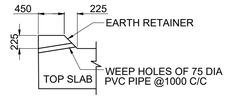
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



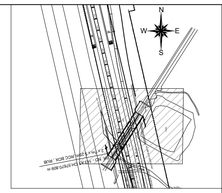
EARTH RETAINER

SCALE 1:50

LEGEND

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			



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.
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.

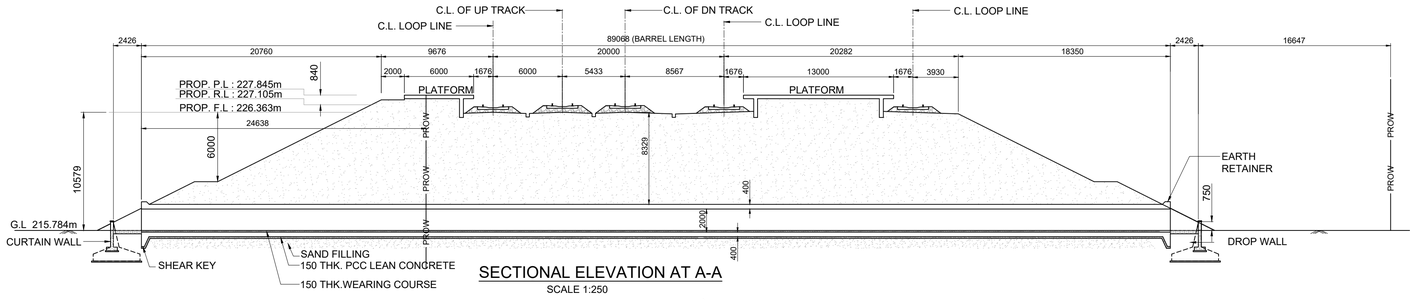
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR ROAD UNDER BRIDGE NO 143 SPAN 2.0X7.0X5.25 RCC BOX AT CH: 57670.809

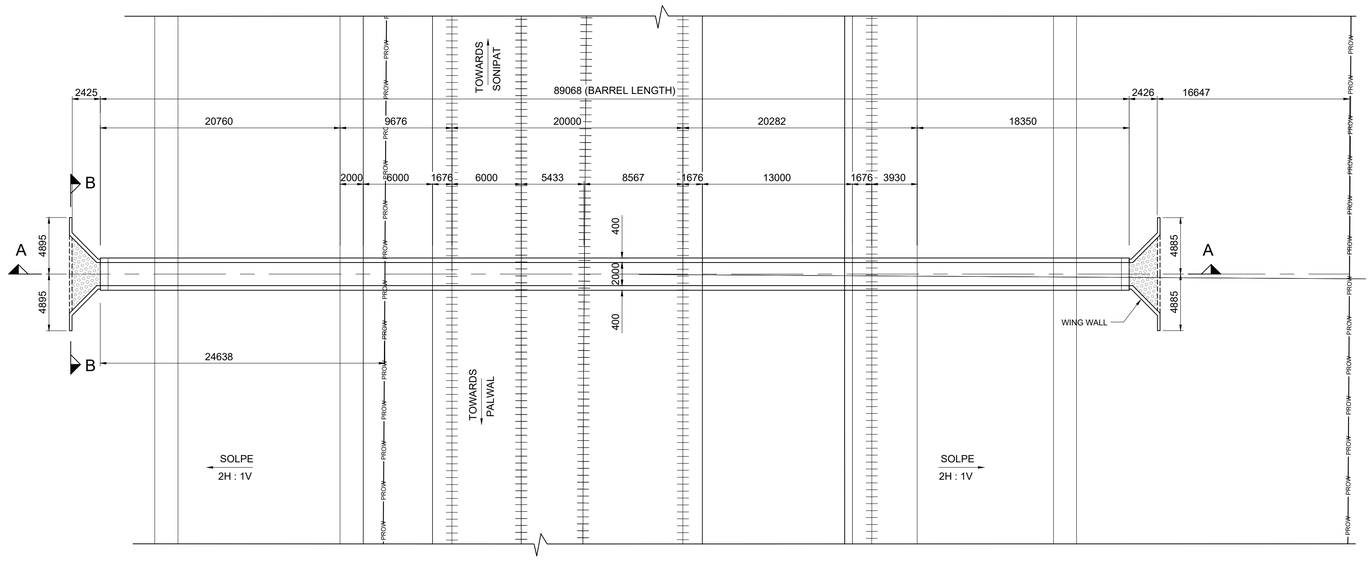
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01143_A0	1 OF 1

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



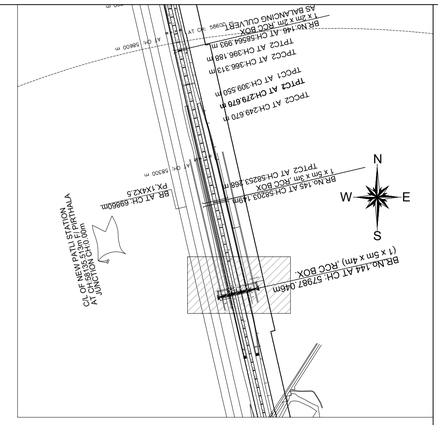
SECTIONAL ELEVATION AT A-A

SCALE 1:250



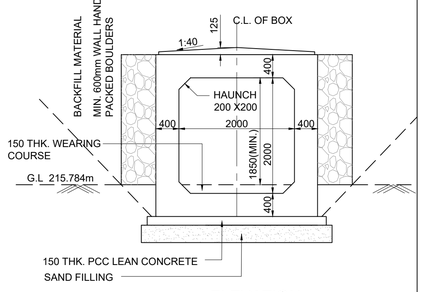
PLAN AT TOP

SCALE 1:250



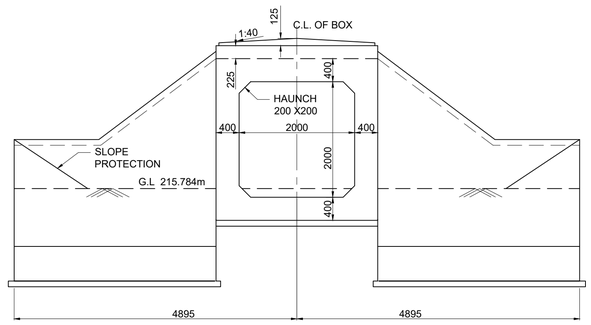
KEY PLAN

SCALE 1:NTS



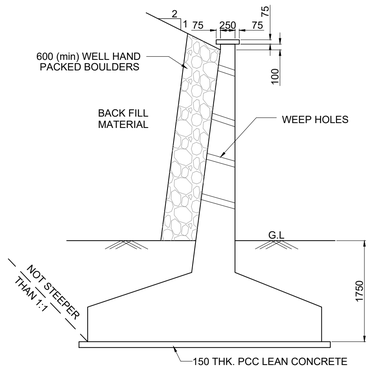
ELEVATION

SCALE 1:50



VIEW AT B-B

SCALE 1:50



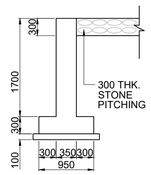
WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

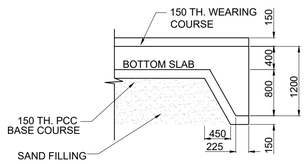
LEGEND

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



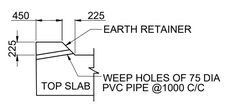
DROP / CURTAIN WALL DETAILS

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.
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.

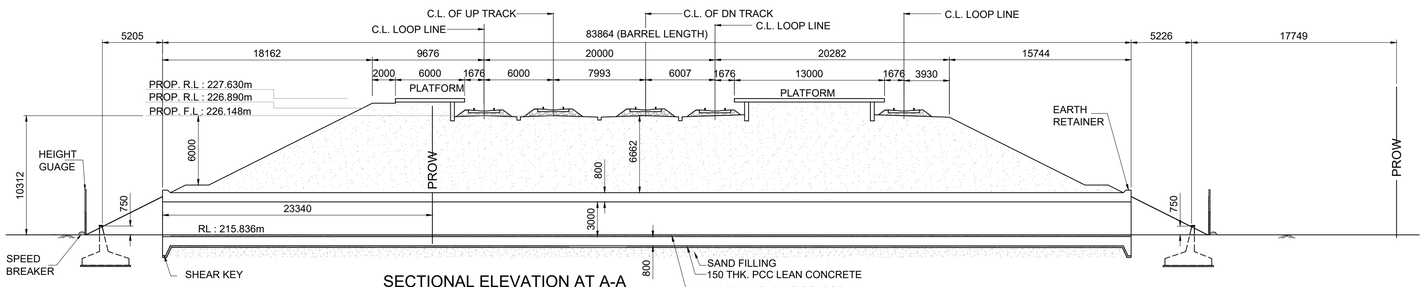
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 144 SPAN 1.0X5.0X4.0 RCC BOX AT CH: 57987.046

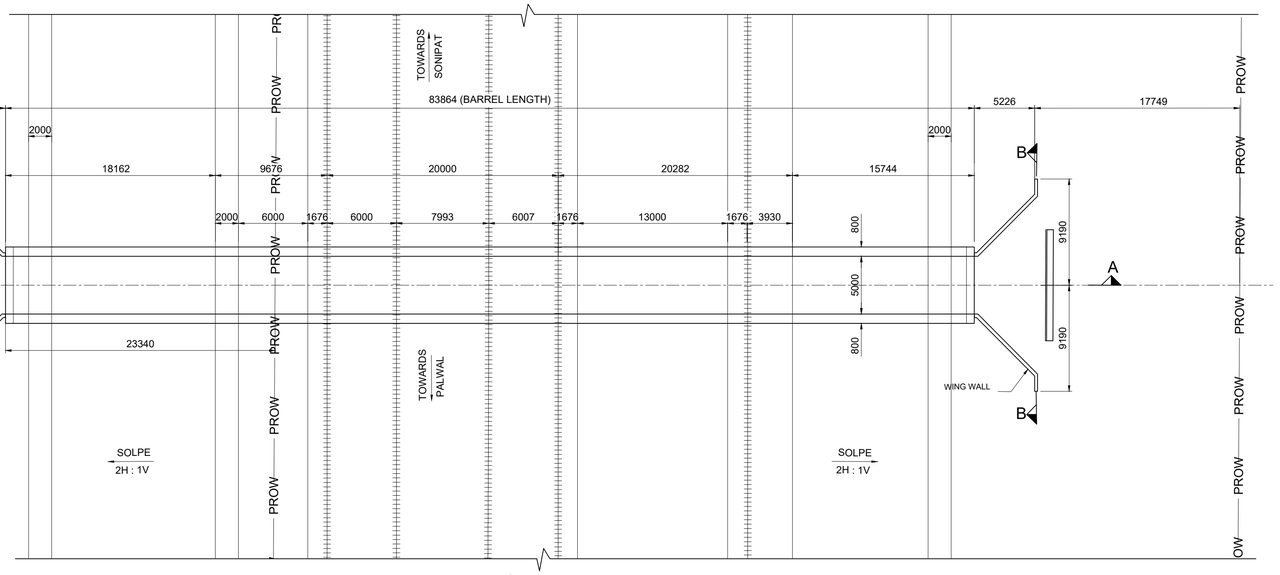
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_01144_A0	1 OF 1

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



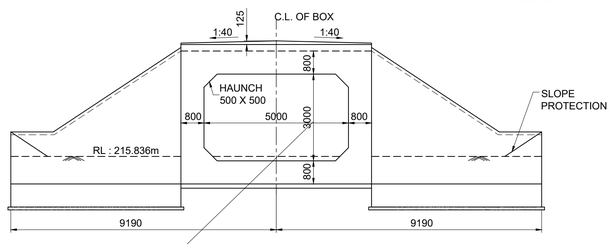
SECTIONAL ELEVATION AT A-A

SCALE 1:250



PLAN AT TOP

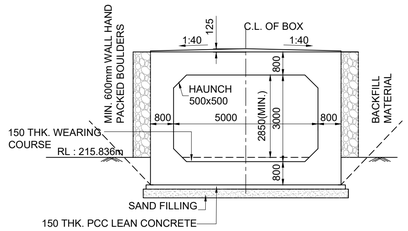
SCALE 1:250



SECTION B-B

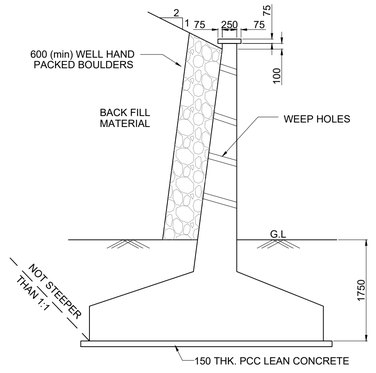
SCALE 1:100

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.



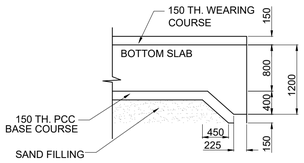
ELEVATION

SCALE 1:100



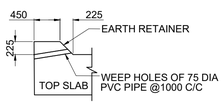
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

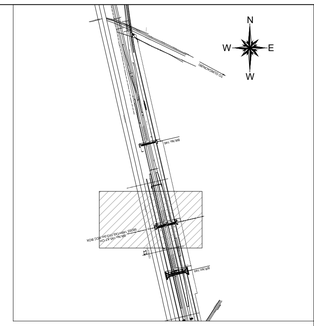
SCALE 1:50



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

SCALE 1:NTS

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.
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 Member of the Surbana Jurong Group

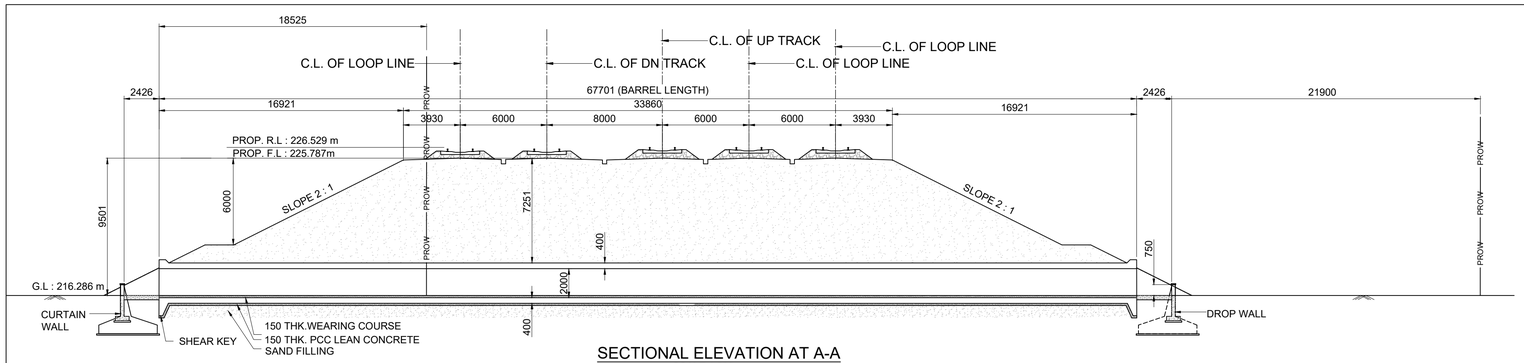
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

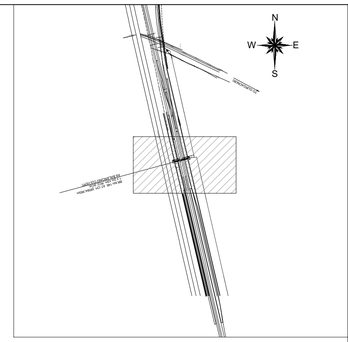
FOR ROAD UNDER BRIDGE NO 145
1X5.0X3.0m RCC BOX AT CH. 58203.149m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01145_A0	1 OF 1

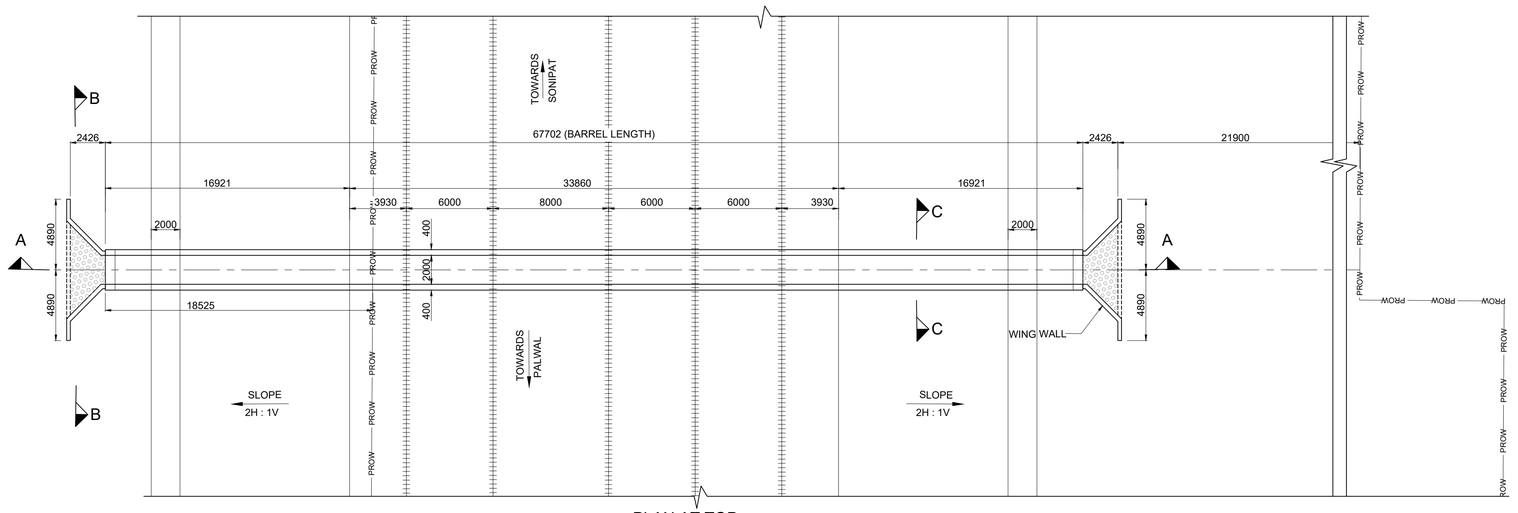
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



SECTIONAL ELEVATION AT A-A
SCALE 1:200



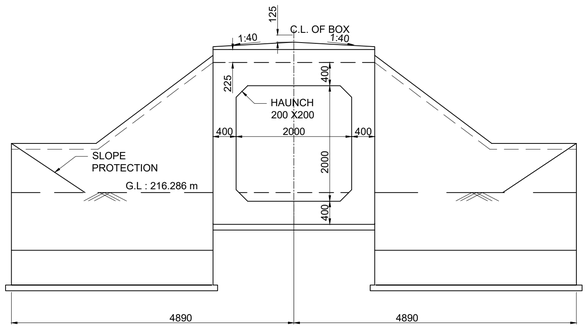
KEY PLAN
SCALE 1:NTS



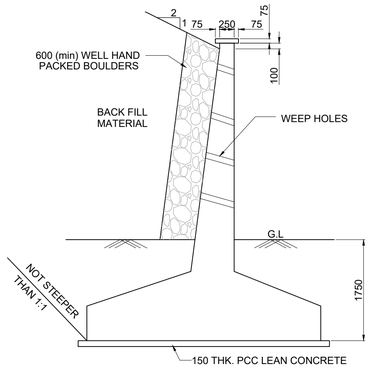
PLAN AT TOP
SCALE 1:200

LEGEND

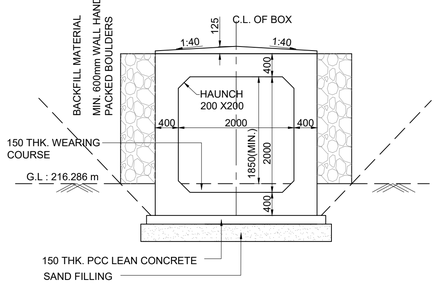
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



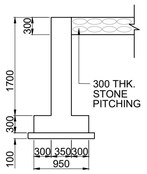
VIEW AT B-B
SCALE 1:50



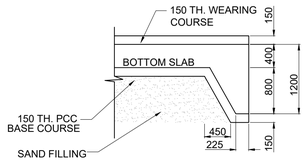
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



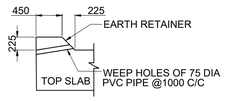
SECTION
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

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.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
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B) TECHNICAL NOTES :

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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
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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 :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
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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

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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 Member of the Surbana Jurong Group

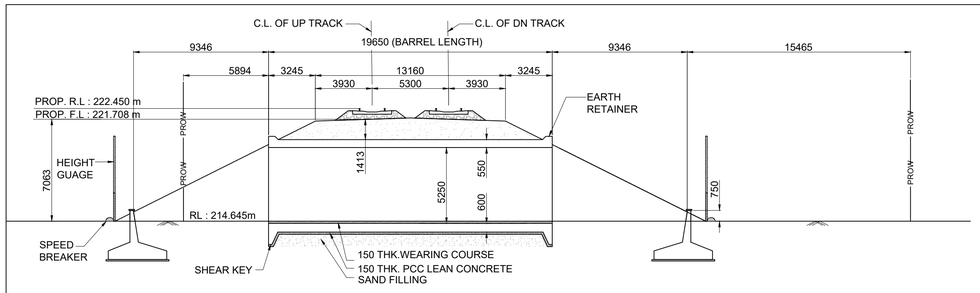
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 146 1X2.0X2.0m RCC BOX AT CH. 58564.993m

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

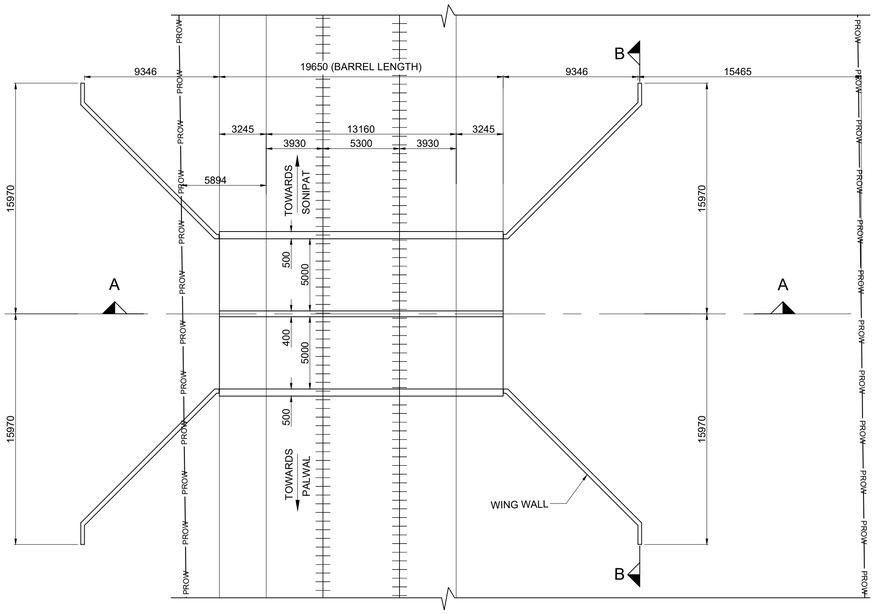
SHEET NO. 1 OF 1

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



SECTIONAL ELEVATION AT A-A

SCALE 1:200



PLAN AT TOP

SCALE 1:200

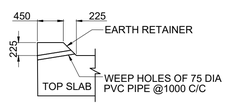
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL. HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY. THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION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

VIEW AT B-B

SCALE 1:100

SHEAR KEY

SCALE 1:50

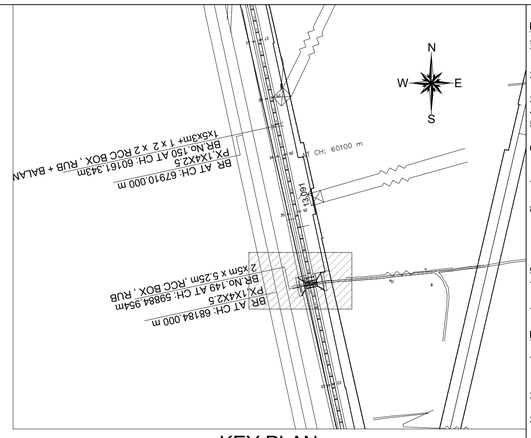


EARTH RETAINER

SCALE 1:50

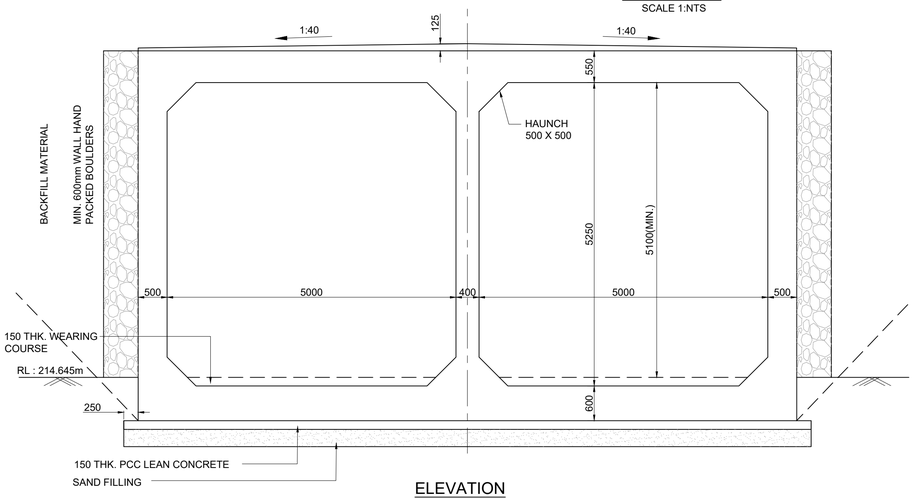
LEGEND

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



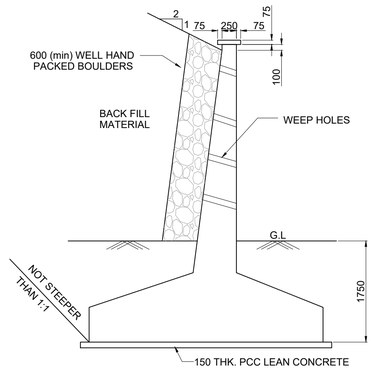
KEY PLAN

SCALE 1:NTS



ELEVATION

SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

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

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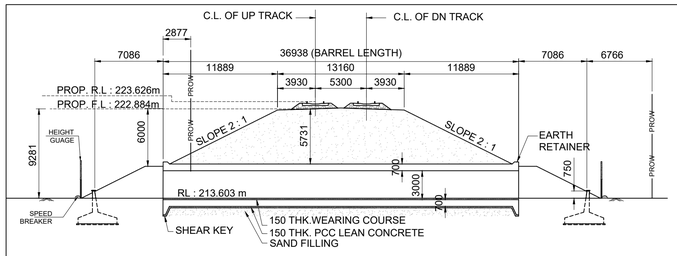
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

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

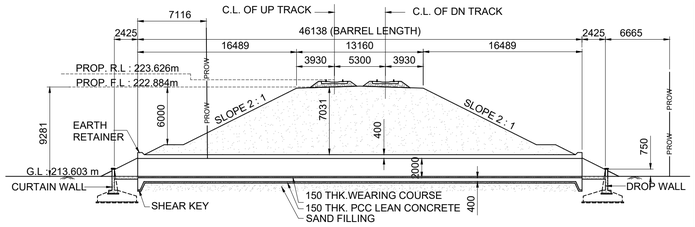
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01148_A0	1 OF 1

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



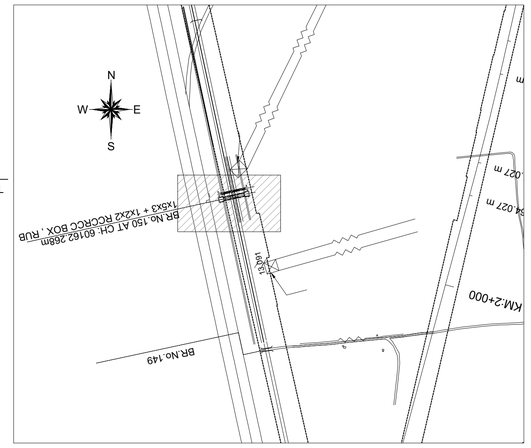
SECTIONAL ELEVATION AT A-A

SCALE 1:300



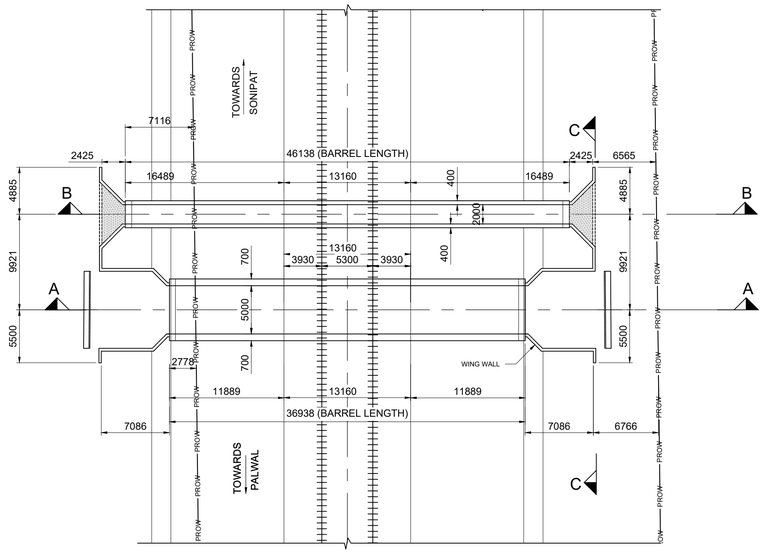
SECTIONAL ELEVATION AT B-B

SCALE 1:300



KEY PLAN

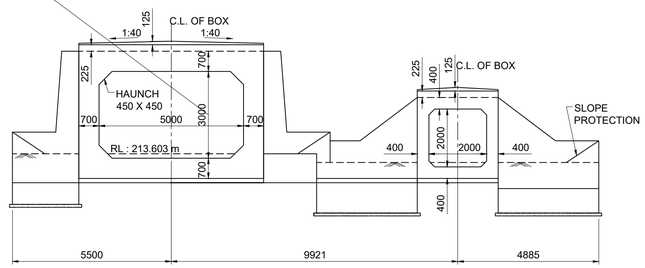
SCALE 1:NTS



PLAN AT TOP

SCALE 1:200

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.



VIEW AT C-C

SCALE 1:100

NOTES :

A) GENERAL NOTES

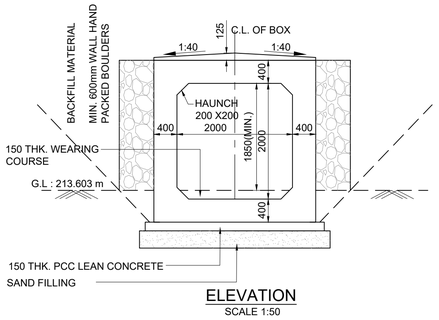
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS 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.
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.

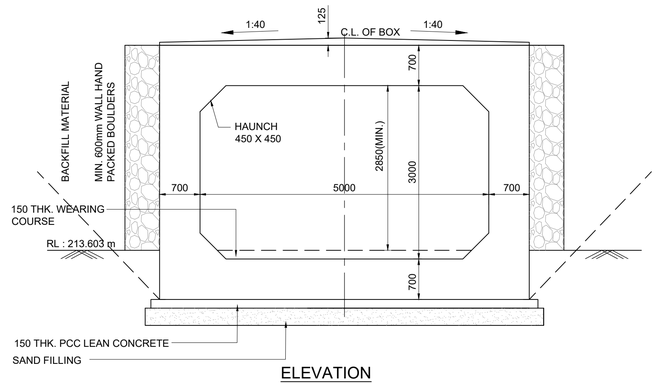
IMPORTANT NOTE:

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.



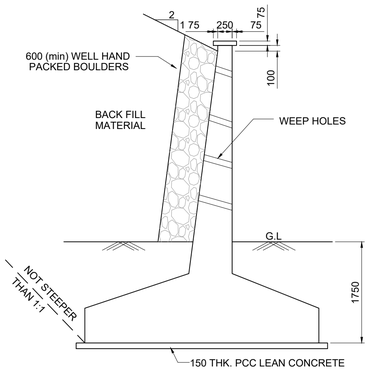
ELEVATION

SCALE 1:50



ELEVATION

SCALE 1:50

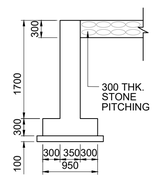


TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

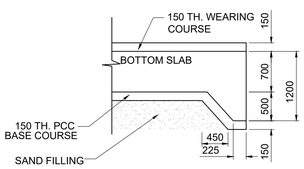
LEGEND

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



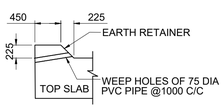
DROP / CURTAIN WALL DETAILS

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		SHIV OM DWIVEDI CPM/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

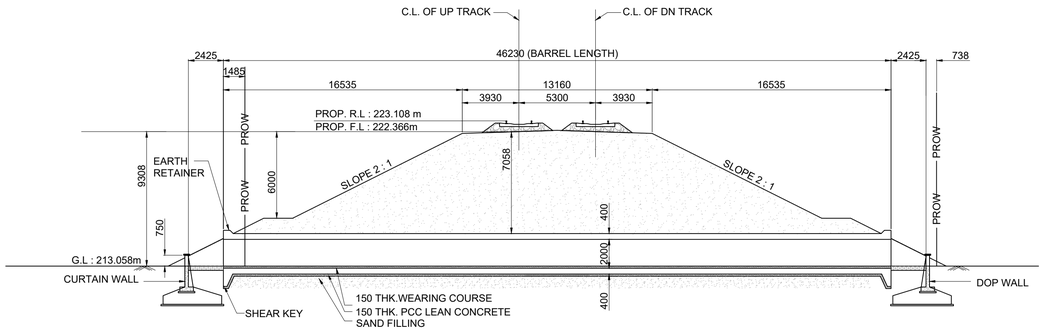
RITES Limited in consortium with SMEC International Pty. Ltd.

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

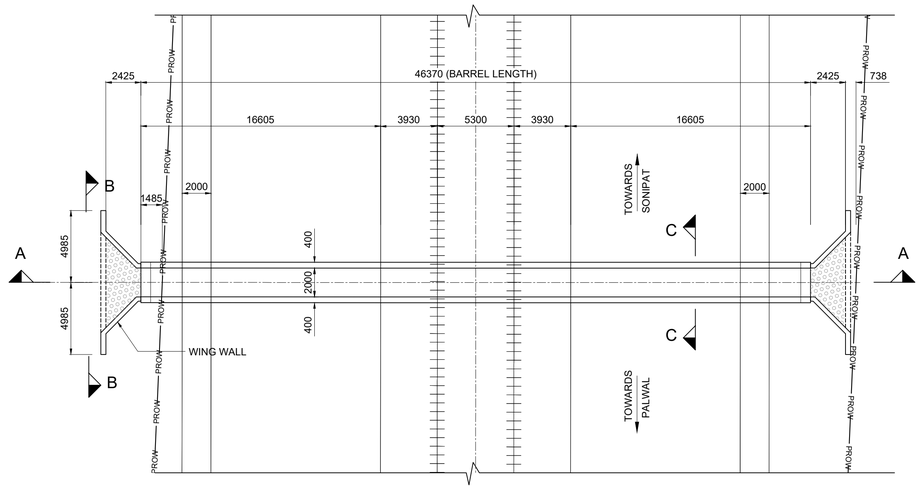
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD+BALANCING CULVERT BRIDGE NO 149 1x5x3 + 1x2x2 RCC BOX AT CH. 60161.343m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01149_A0	1 OF 1

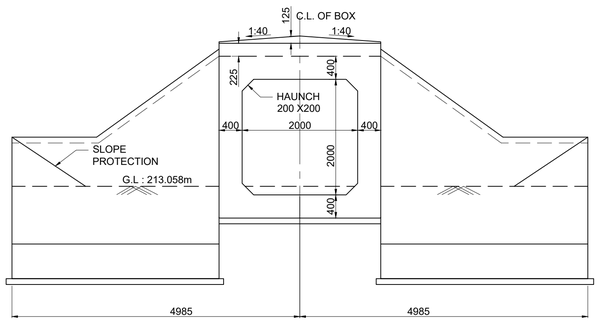
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



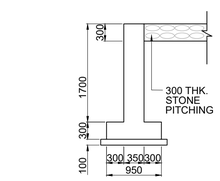
SECTIONAL ELEVATION AT A-A
SCALE 1:200



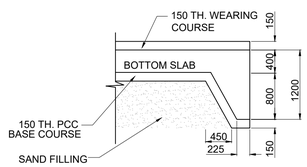
PLAN AT TOP
SCALE 1:200



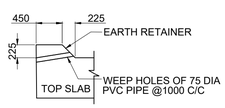
VIEW AT B-B
SCALE 1:50



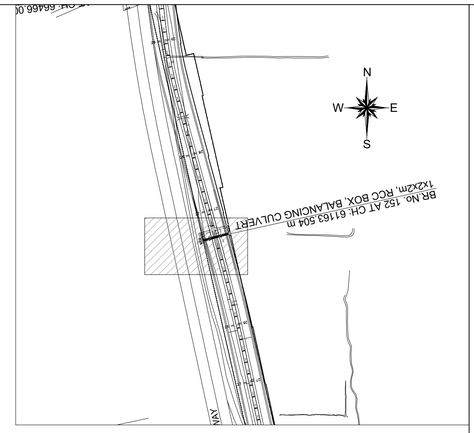
DROP / CURTAIN WALL DETAILS
SCALE 1:50



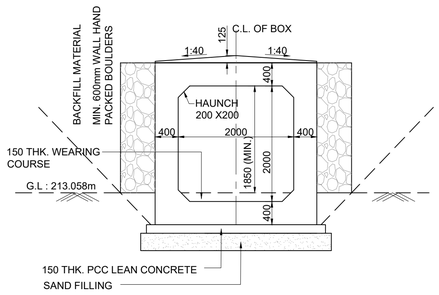
SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



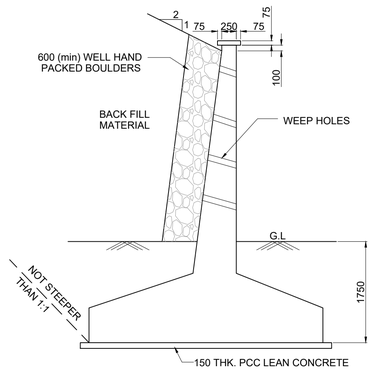
KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50

LEGEND

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



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.
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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

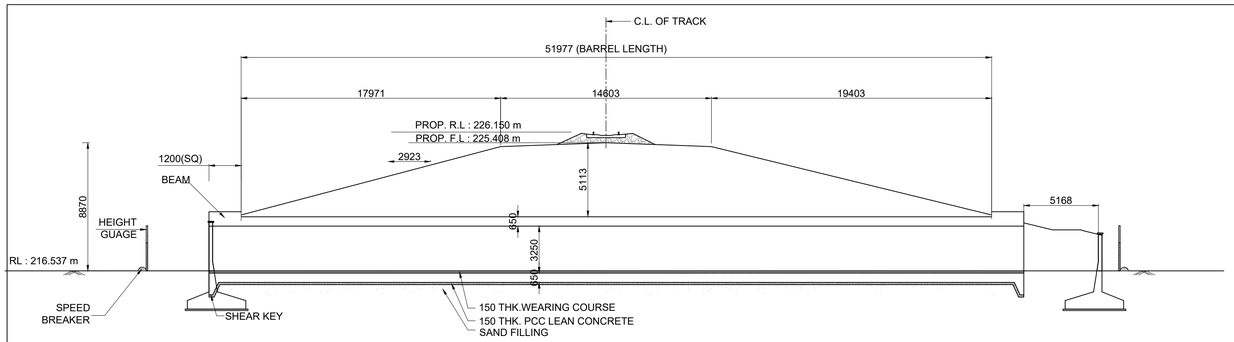
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

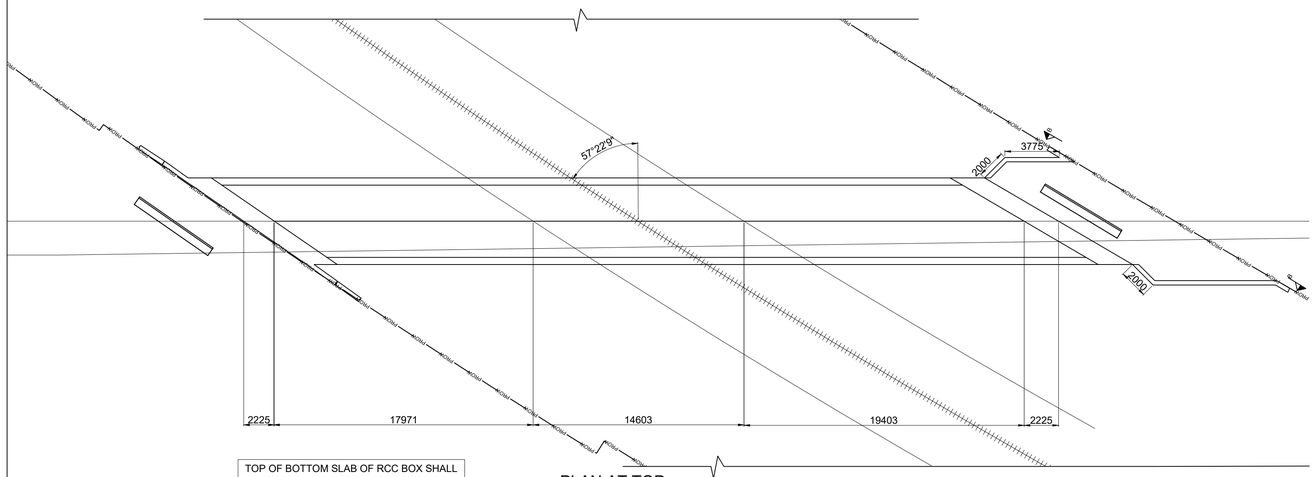
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 154
SPAN 1.0X2.0X2.0 RCC BOX AT CH.61163.504

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01154_A0	1 OF 1

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

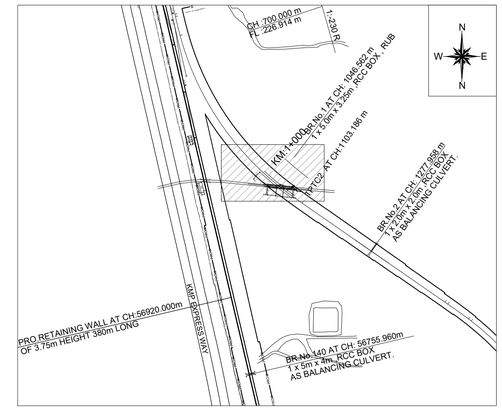


SECTIONAL ELEVATION AT A-A
SCALE 1:200

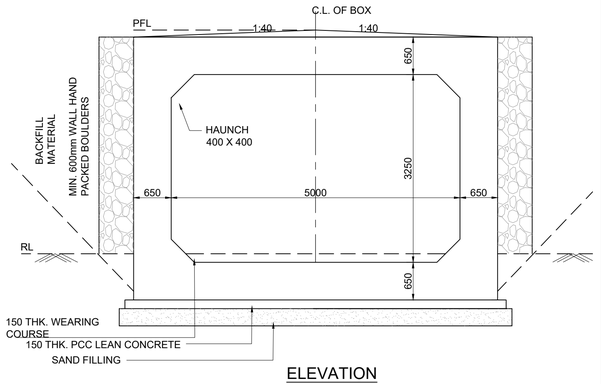


PLAN AT TOP
SCALE 1:200

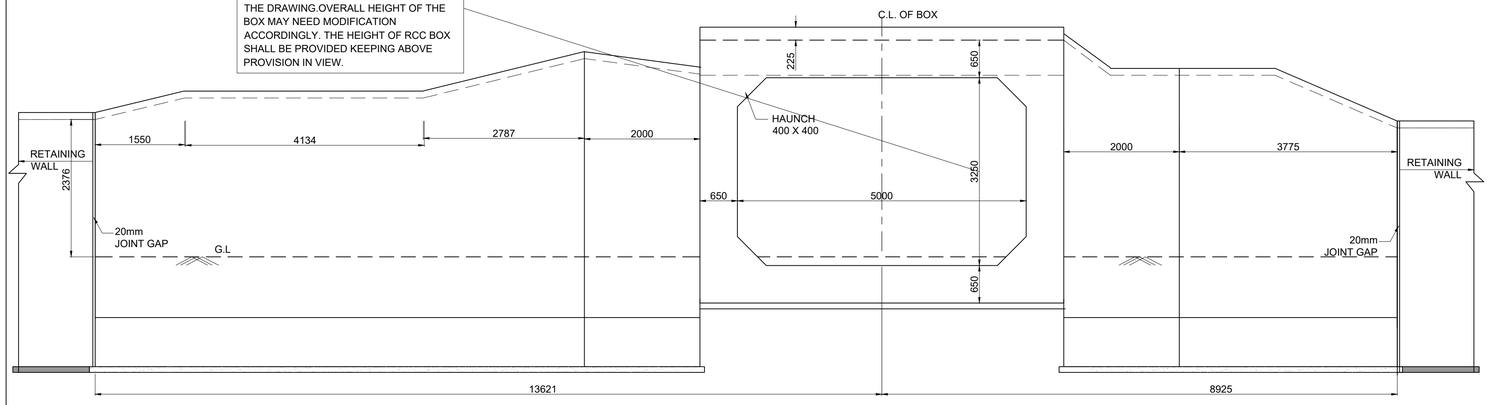
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL. HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY. THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION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



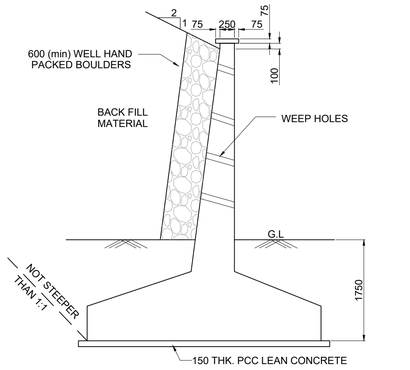
KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50

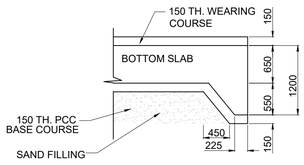


VIEW AT B-B
SCALE 1:50

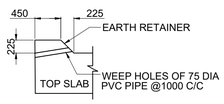


WING WALL (TO BE DESIGN AS PER SITE CONDITION)

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



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

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.
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.

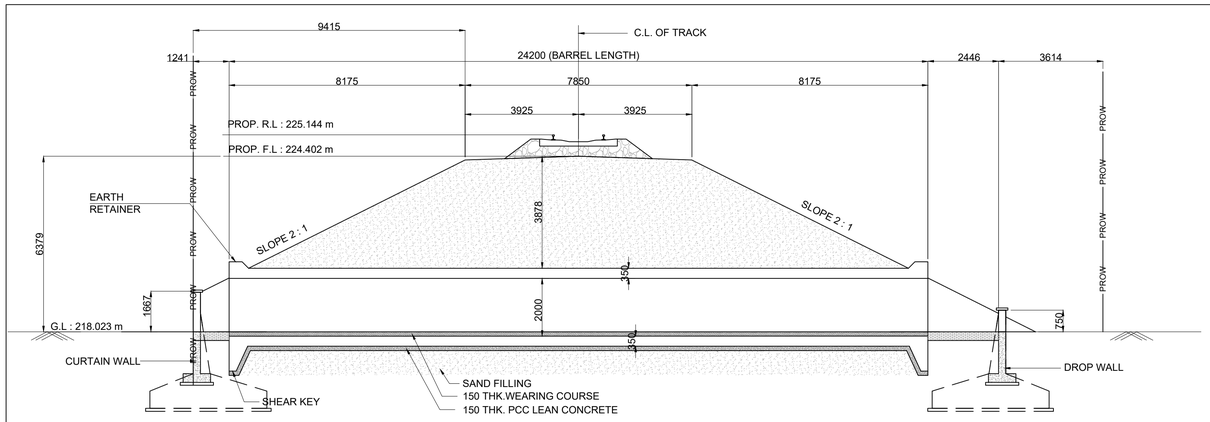
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

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)

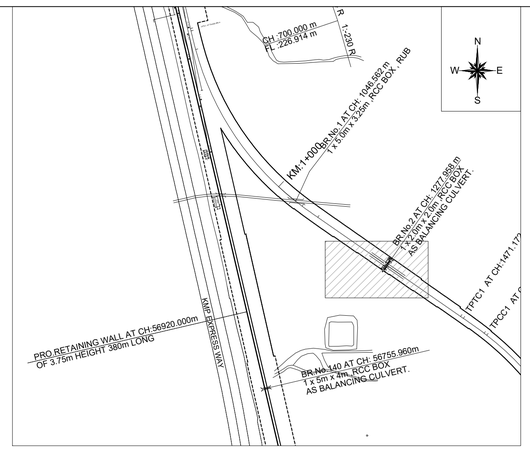
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03001_A0	1 OF 1

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



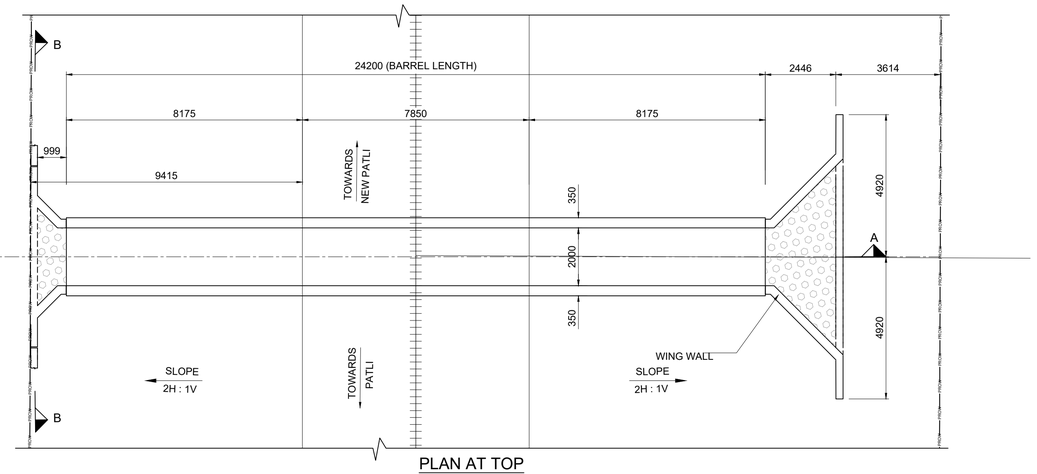
SECTIONAL ELEVATION AT A-A

SCALE 1:100



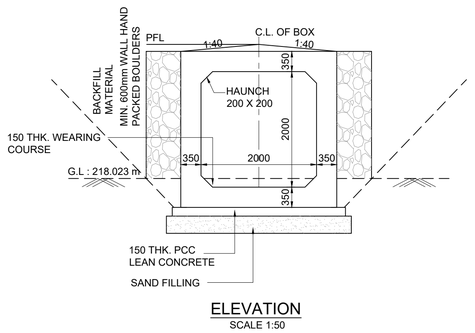
KEY PLAN

SCALE 1:NTS



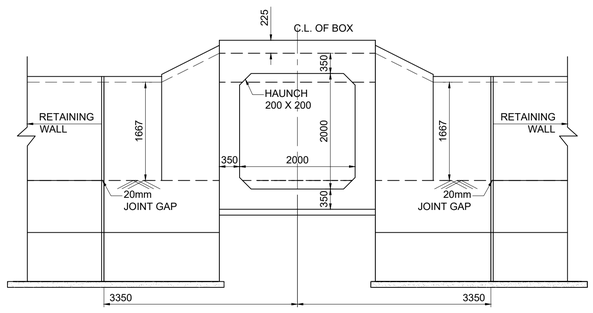
PLAN AT TOP

SCALE 1:100



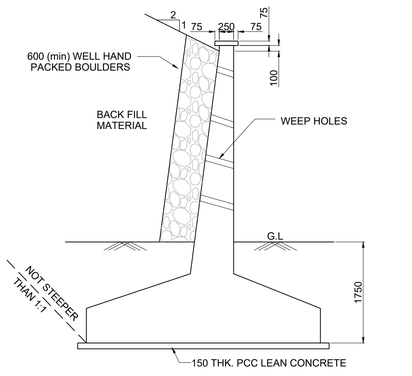
ELEVATION

SCALE 1:50



VIEW B-B

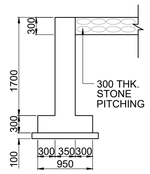
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

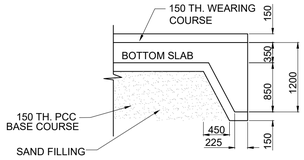
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



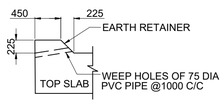
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT 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.
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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

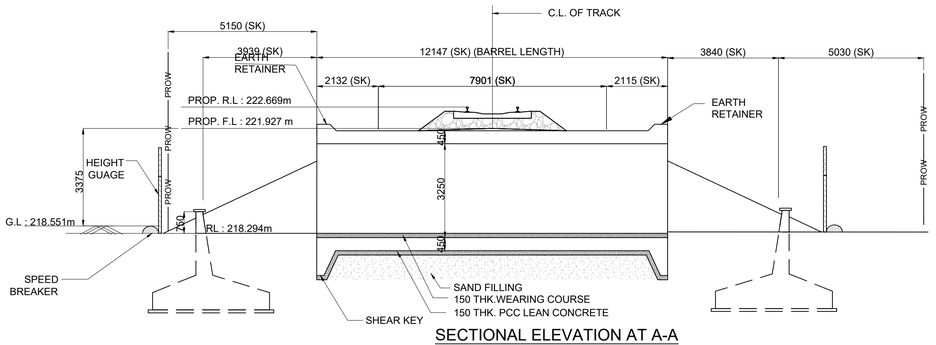
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT NO.2 -1X2.0X2.0m RCC BOX AT CH. 1277.958m (CONNECTING LINE NEW PATLI TO PATLI)

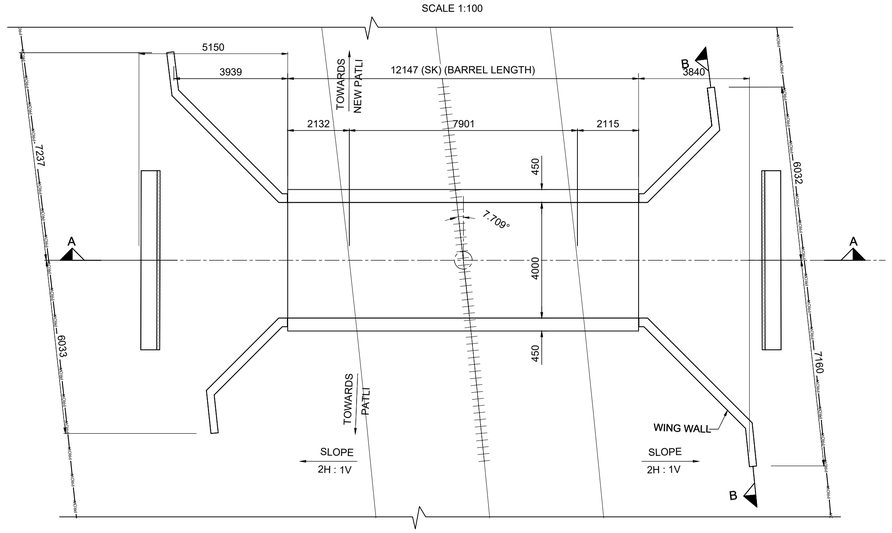
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03002_A0	1 OF 1

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



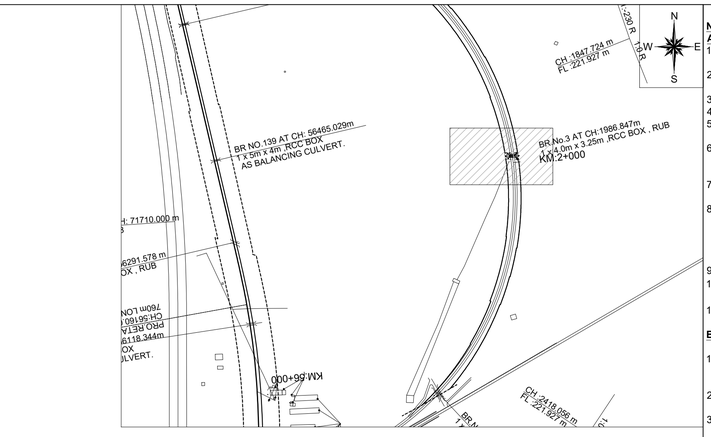
SECTIONAL ELEVATION AT A-A

SCALE 1:100



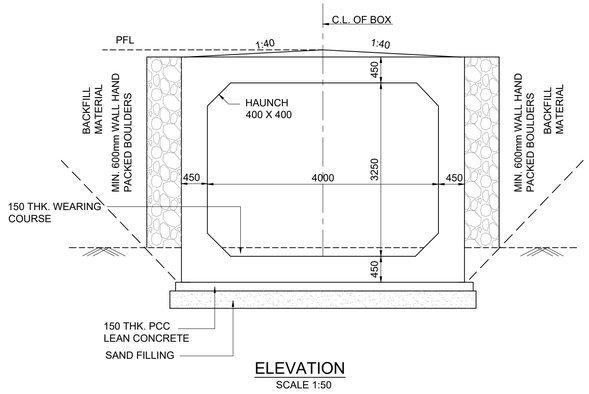
PLAN AT TOP

SCALE 1:100



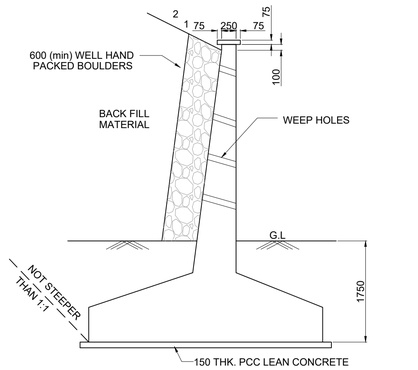
KEY PLAN

SCALE 1:NTS



ELEVATION

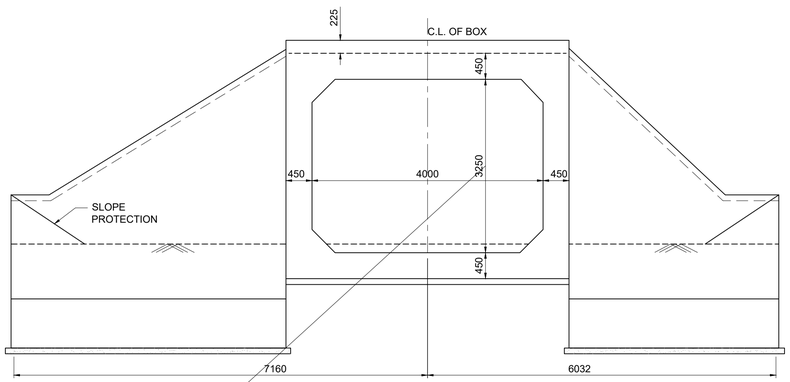
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL

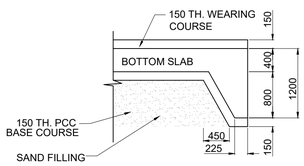
SCALE 1:50



VIEW B-B

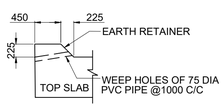
SCALE 1:50

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.



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

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.
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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   (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.
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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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

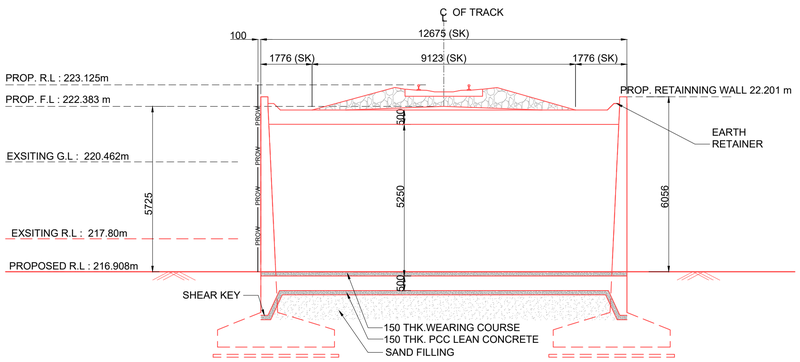
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- 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)

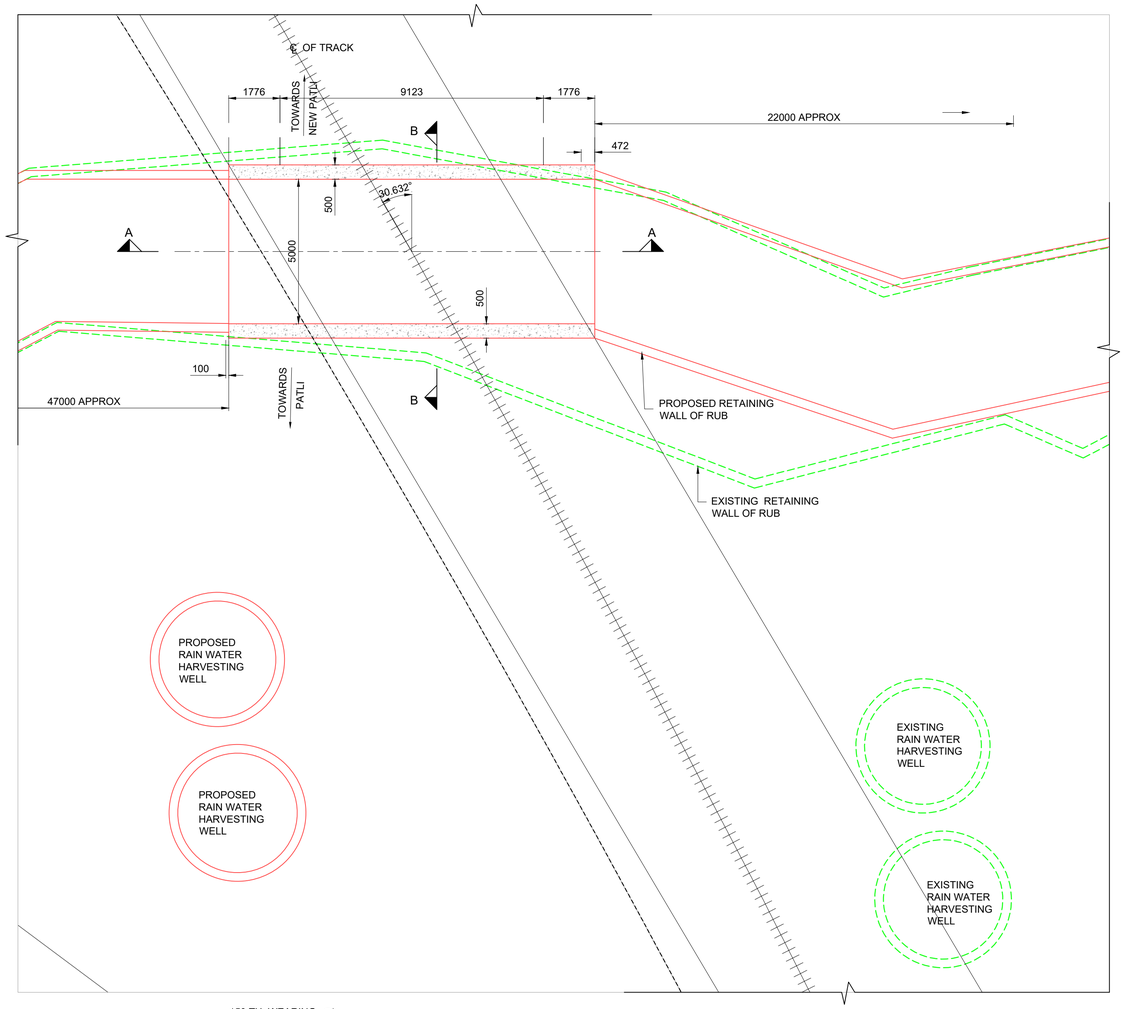
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03003_A0	1 OF 1

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



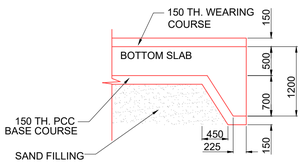
SECTIONAL ELEVATION AT A-A

SCALE 1:100



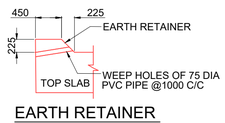
PLAN AT TOP

SCALE 1:100



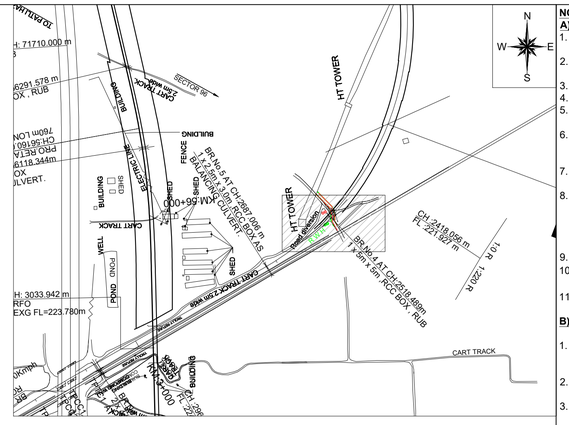
SHEAR KEY

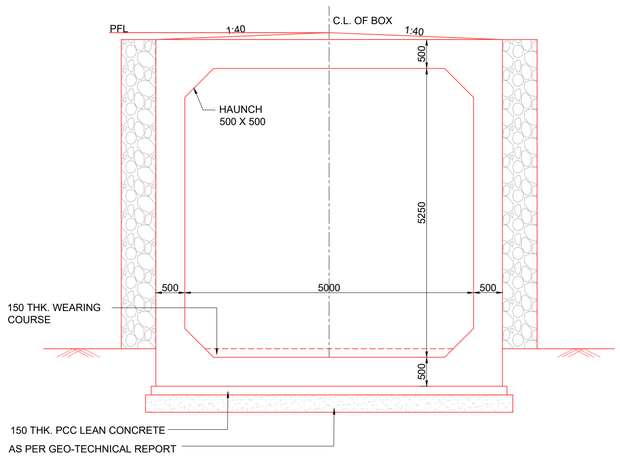
SCALE 1:50



EARTH RETAINER

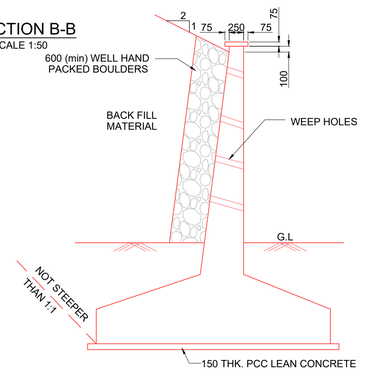
SCALE 1:50





SECTION B-B

SCALE 1:50



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.
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.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
———	PROPOSED
- - - -	DISMANTEL

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

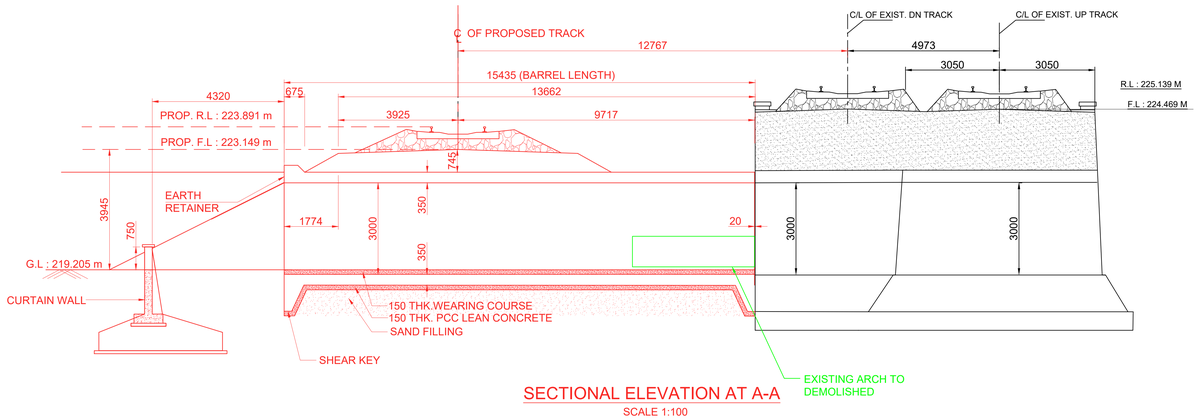
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

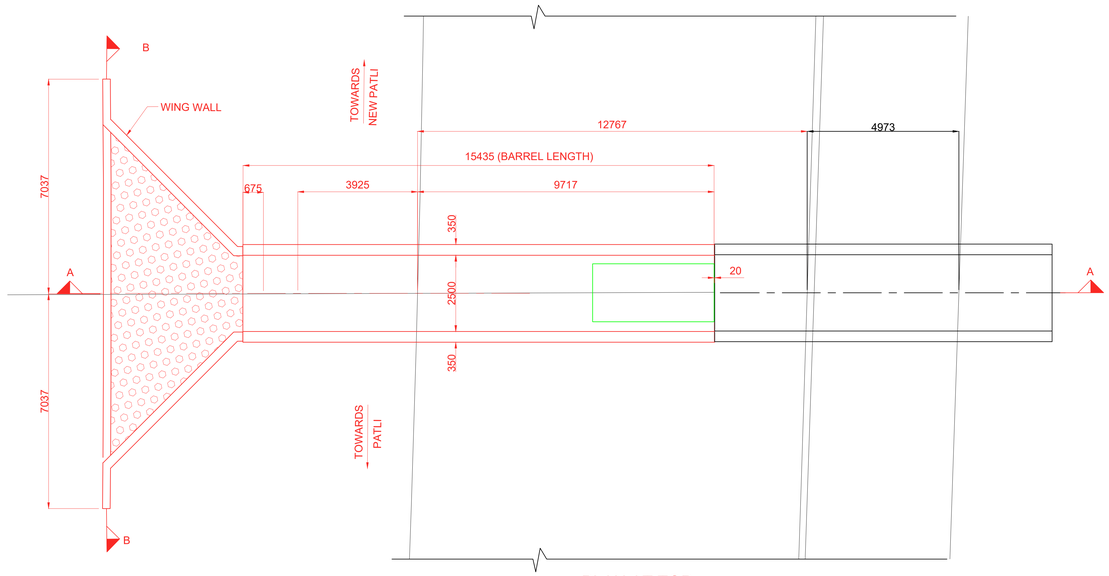
FOR ROAD UNDER BRIDGE NO.4 - 1X5.0X5.25m RCC BOX AT CH. 2518.489m (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03004_A0	1 OF 1

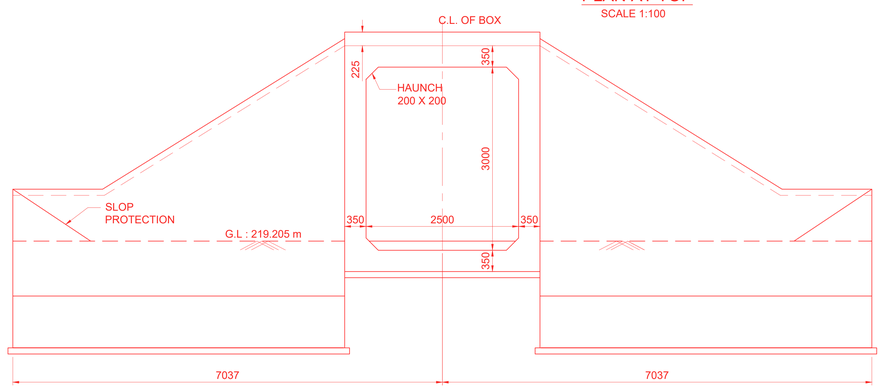
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



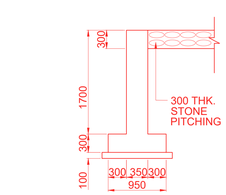
SECTIONAL ELEVATION AT A-A
SCALE 1:100



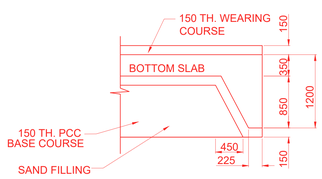
PLAN AT TOP
SCALE 1:100



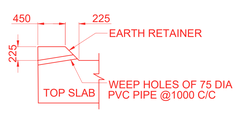
VIEW B-B
SCALE 1:50



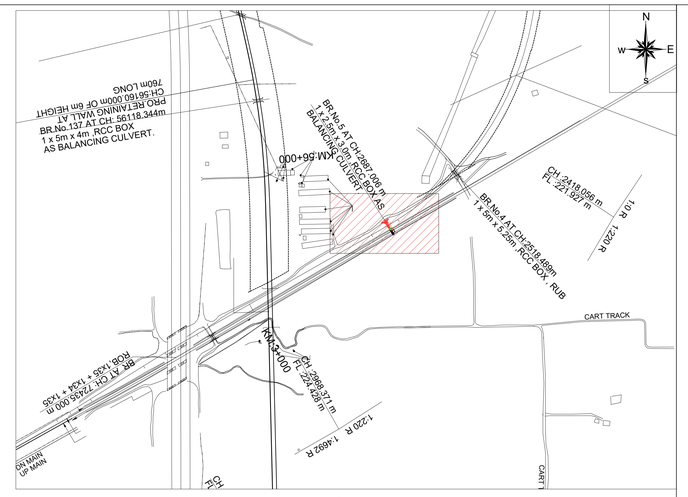
DROP / CURTAIN WALL DETAILS
SCALE 1:50



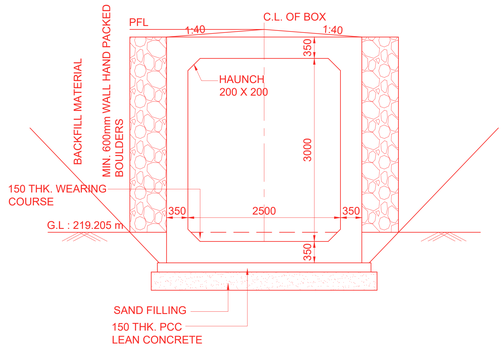
SHEAR KEY
SCALE 1:50



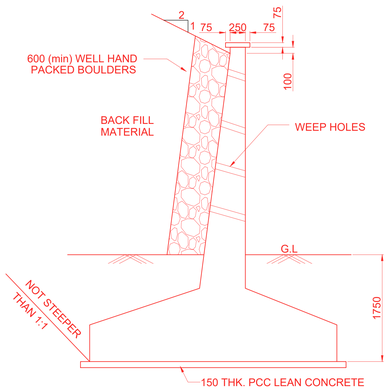
EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50



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
———	PROPOSED
———	DISMANTEL

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.
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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

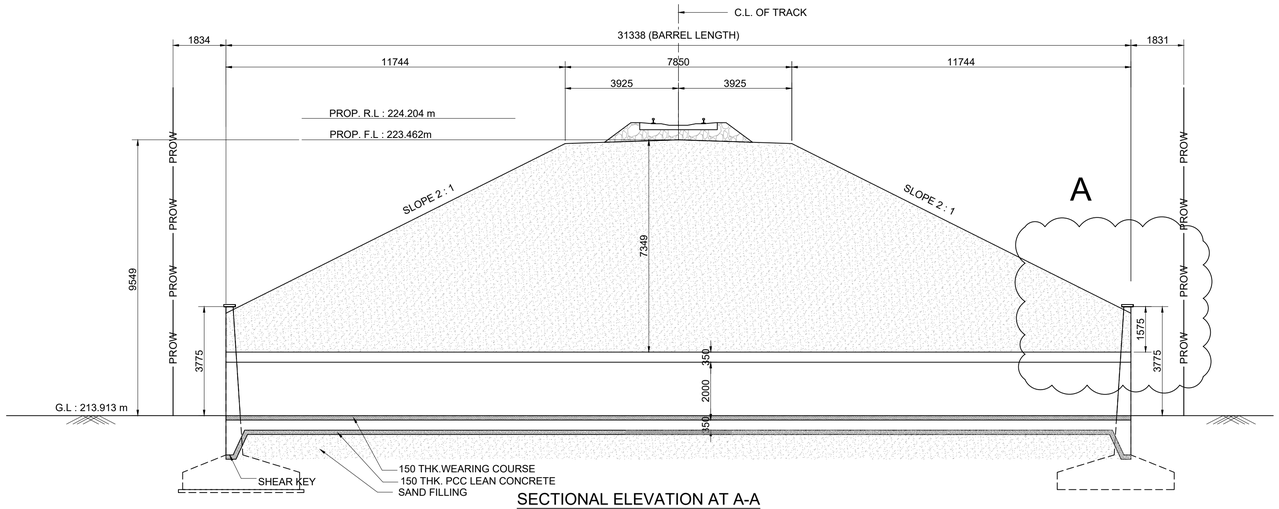
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

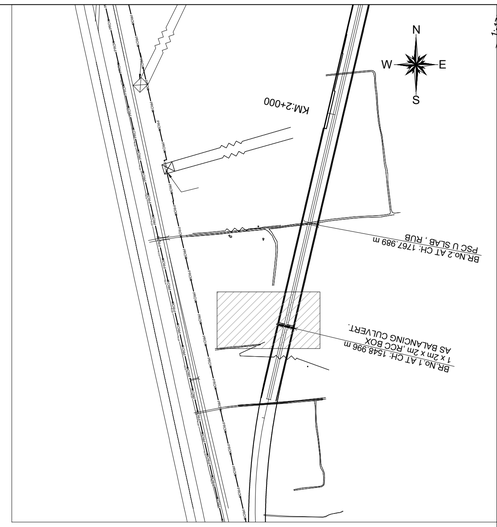
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERTNO.5 - 1X2.5X3.0mRCC BOX AT CH. 2687.006 AND EXIST BOX. SIZE- 1X2.5X3.0 (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03005_A0	1 OF 1

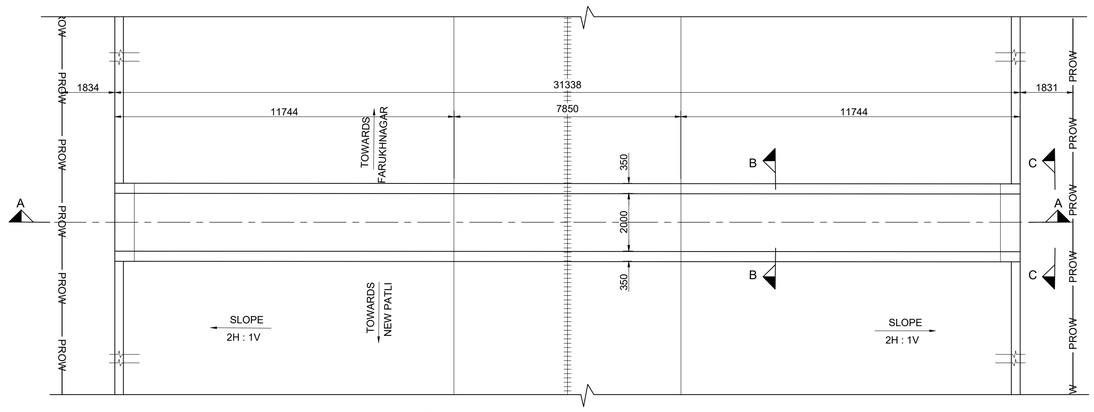
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



SECTIONAL ELEVATION AT A-A
SCALE 1:100



KEY PLAN
SCALE 1:NTS



PLAN AT TOP
SCALE 1:100

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.
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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.
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13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
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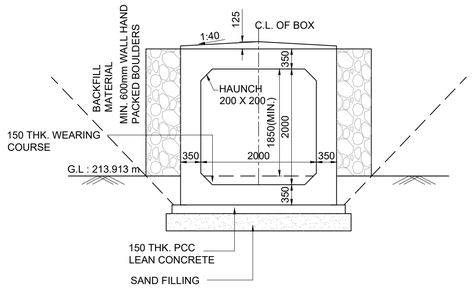
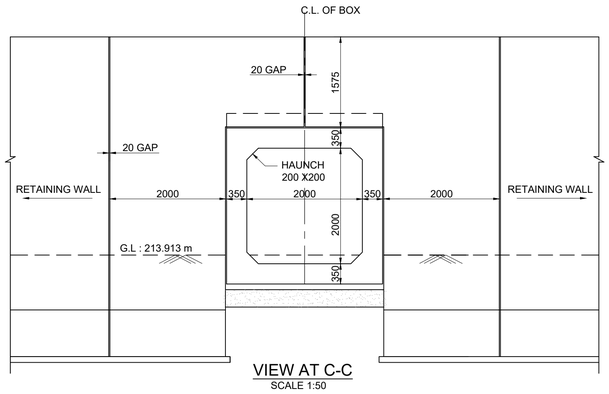
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION 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

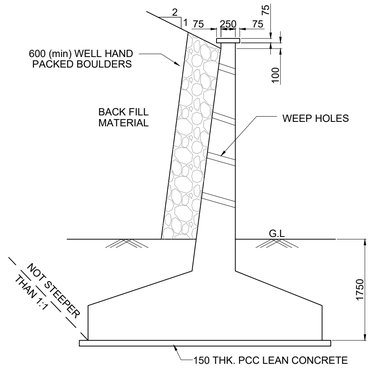
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



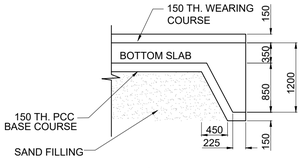
SECTION B-B
SCALE 1:50



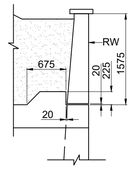
VIEW AT C-C
SCALE 1:50



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



SHEAR KEY
SCALE 1:50



DETAIL -A
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

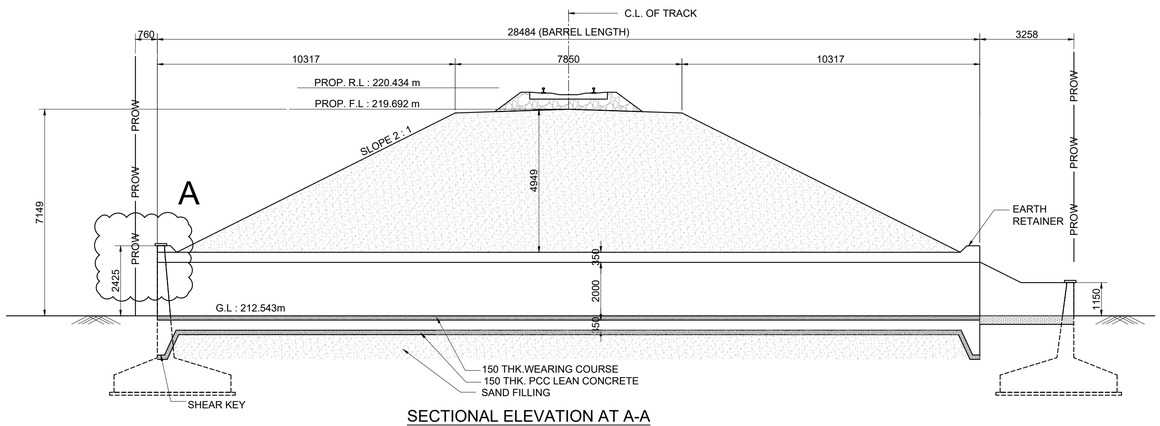
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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:- 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)

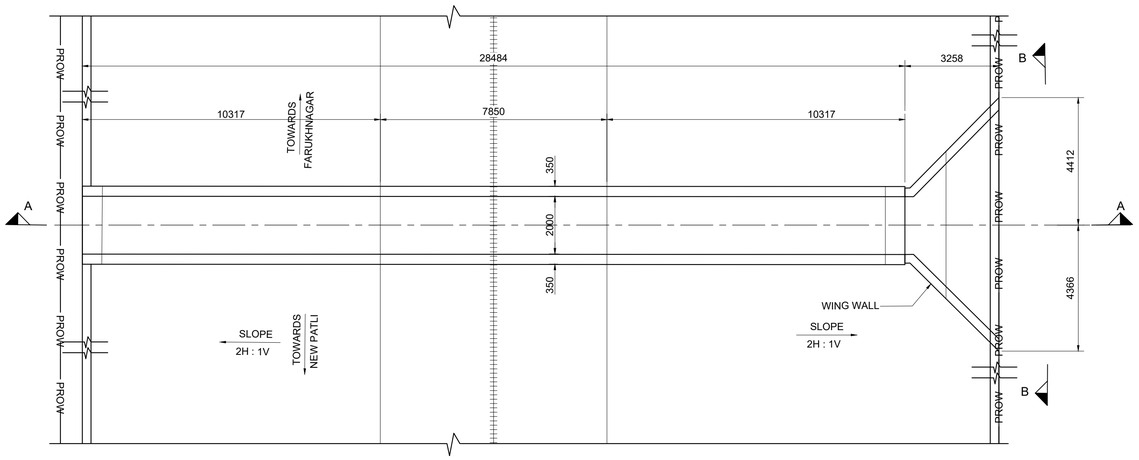
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04002_A0	1 OF 1

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



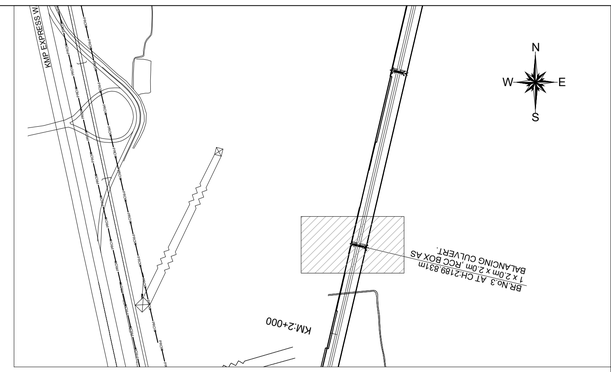
SECTIONAL ELEVATION AT A-A

SCALE 1:100



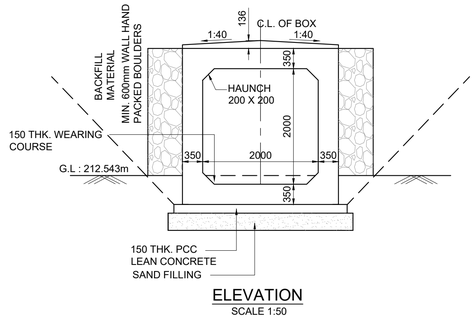
PLAN AT TOP

SCALE 1:100



KEY PLAN

SCALE 1:NTS

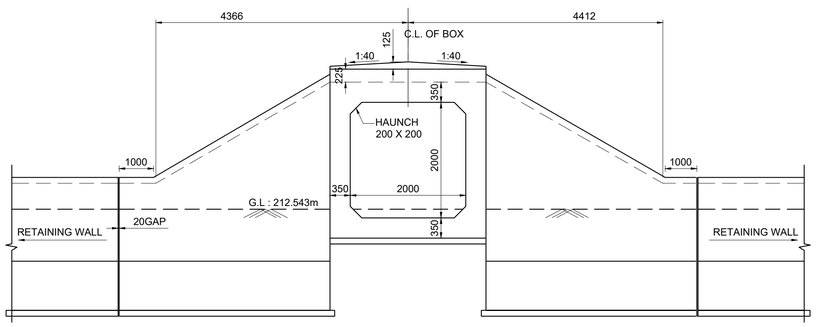


ELEVATION

SCALE 1:50

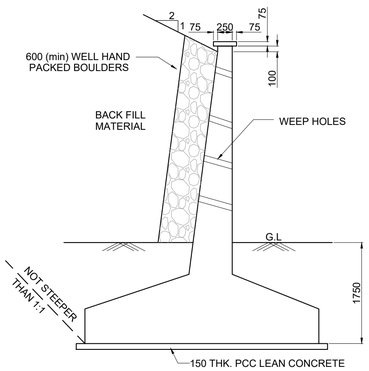
LEGEND

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



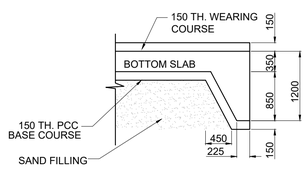
VIEW B-B

SCALE 1:50



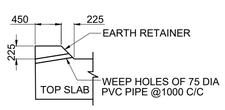
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



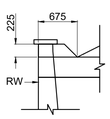
SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50



DETAIL -A

SCALE 1:50

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.
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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

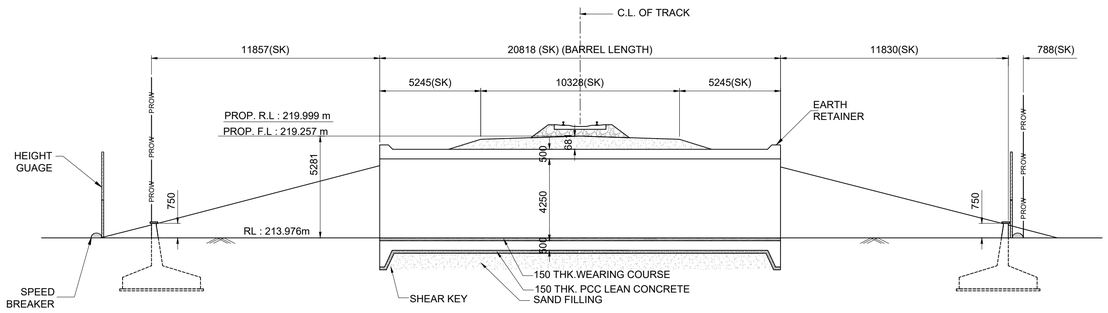
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- 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)

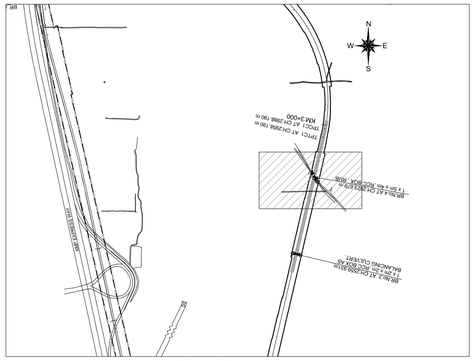
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04004_A0	1 OF 1

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



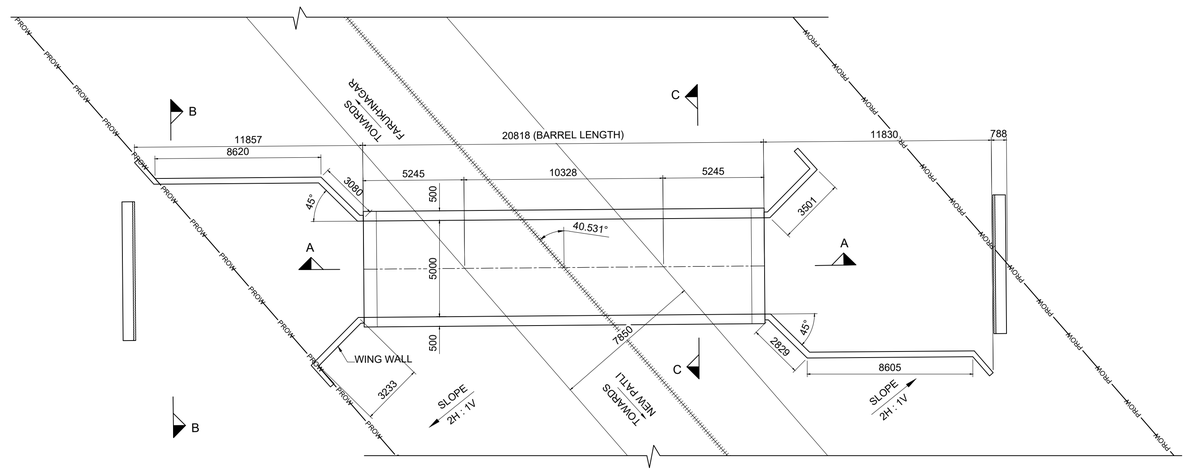
SECTIONAL ELEVATION AT A-A

SCALE 1:150



KEY PLAN

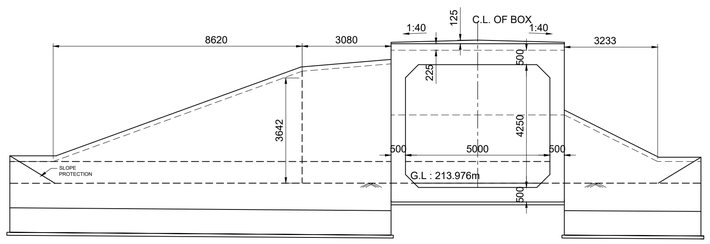
SCALE 1:NTS



PLAN AT TOP

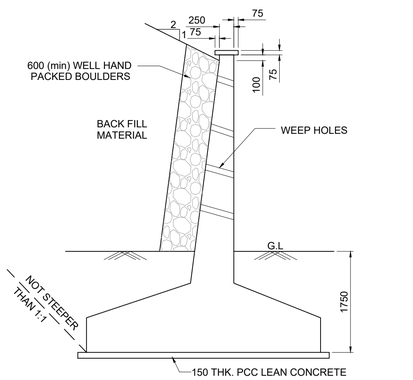
SCALE 1:150

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.



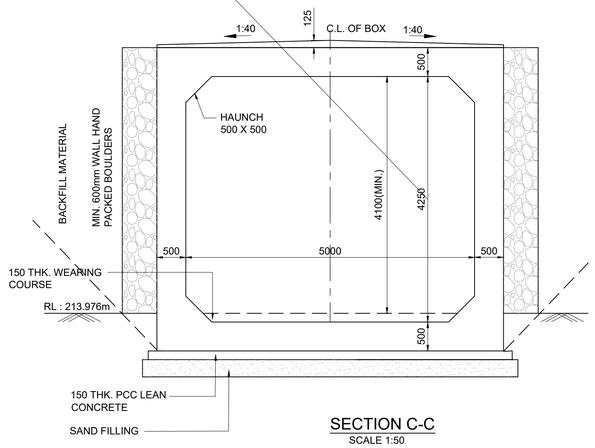
VIEW AT B-B

SCALE 1:100



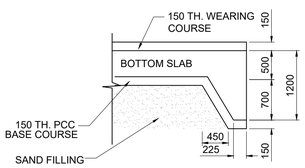
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



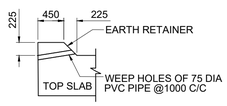
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD 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.
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.

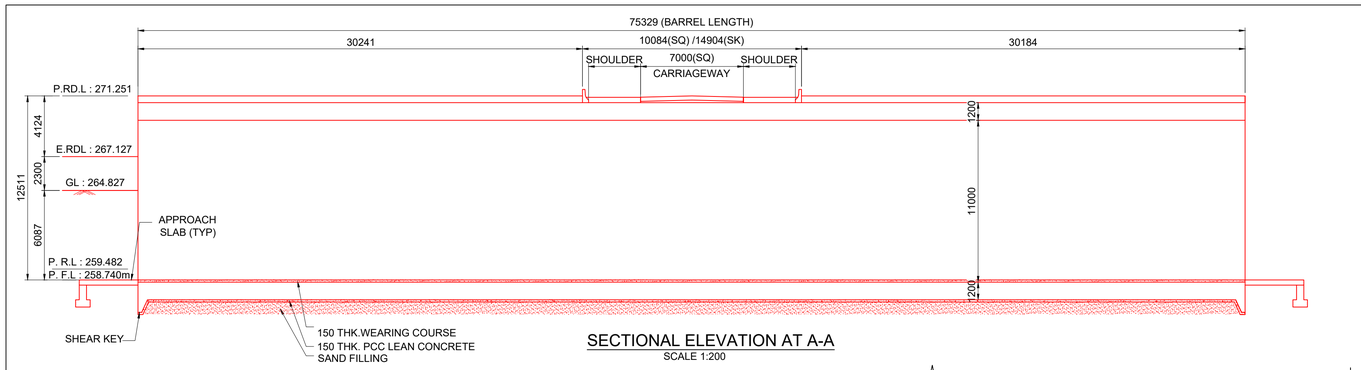
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

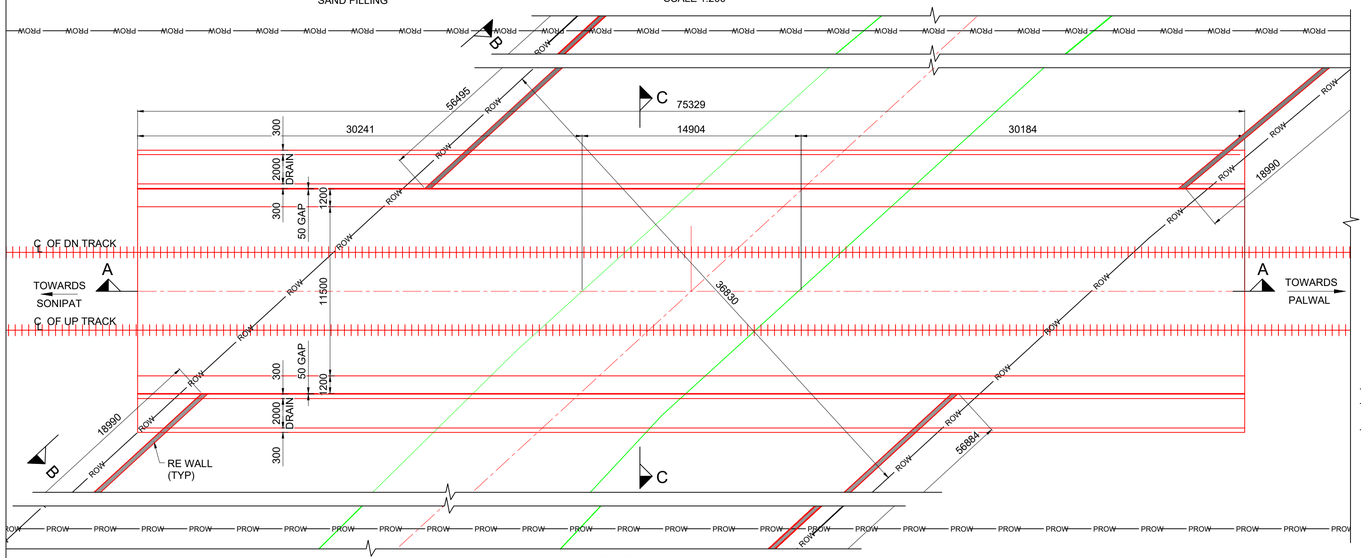
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO.5 - 1X5.0X425m RCC BOX AT CH. 2823.679 m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04005_A0	1 OF 1

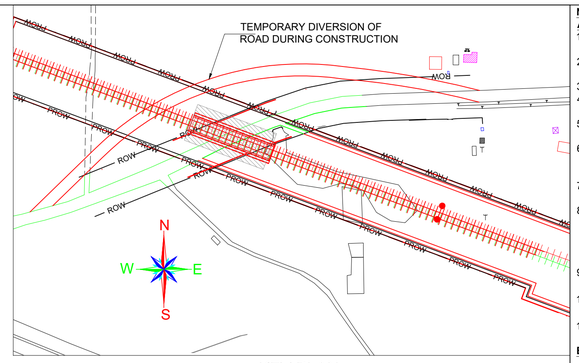
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



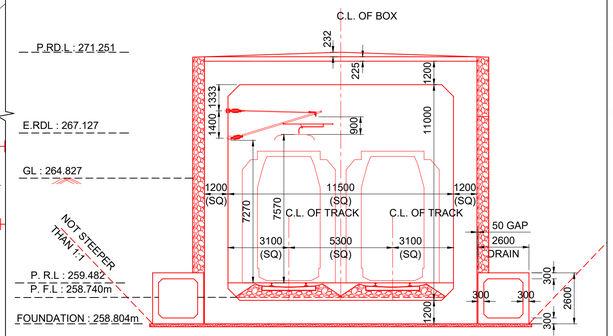
SECTIONAL ELEVATION AT A-A
SCALE 1:200



PLAN AT TOP
SCALE 1:200



KEY PLAN
(NOT TO SCALE)



SECTION C-C
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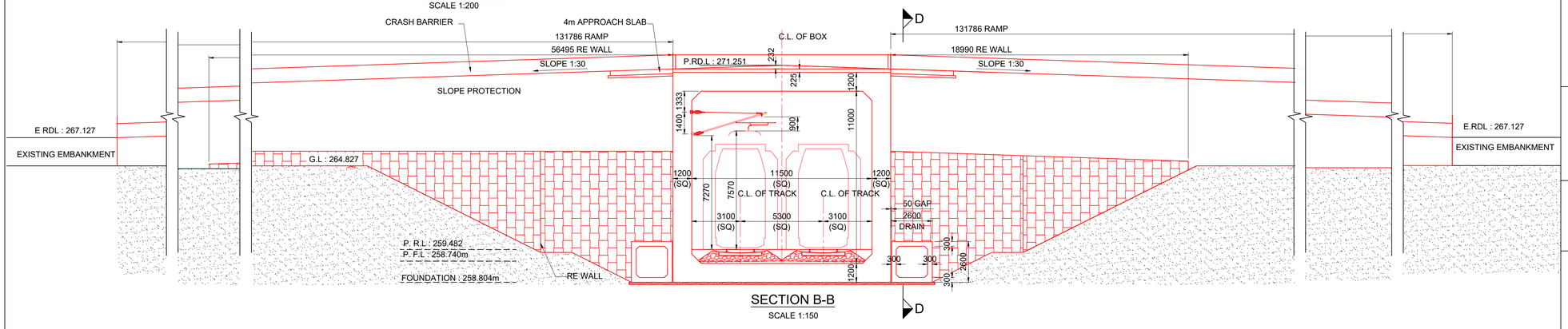
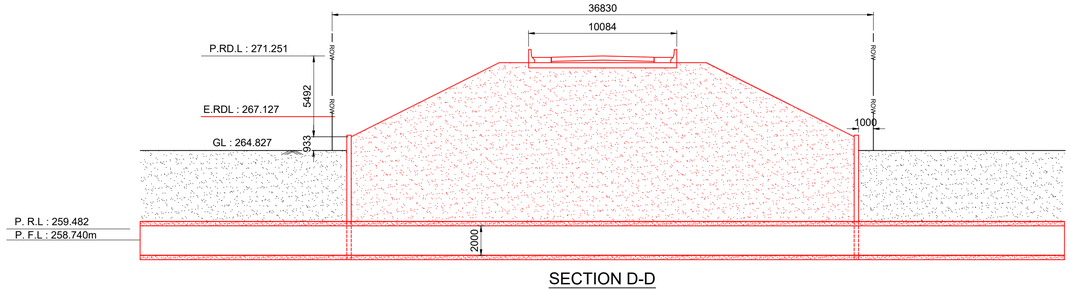


SECTION B-B
SCALE 1:150



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.
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 IRC6 AND 32.5 T AXLE 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 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, 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. ROAD TO BE TEMPORARY DIVERTED FOR CONSTRUCTION WITH SAME STANDARD AS OF EXISTING ROAD.COST WILL BE BEARED BY HRIDC.
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 ON BRIDGE 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.

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

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 Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			
STIPHEN SAHOO SRE/ ELECT.			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED ROB BR. NO. 071SPAN
1×12×10.5 RCC BOX (AT CH: 30155

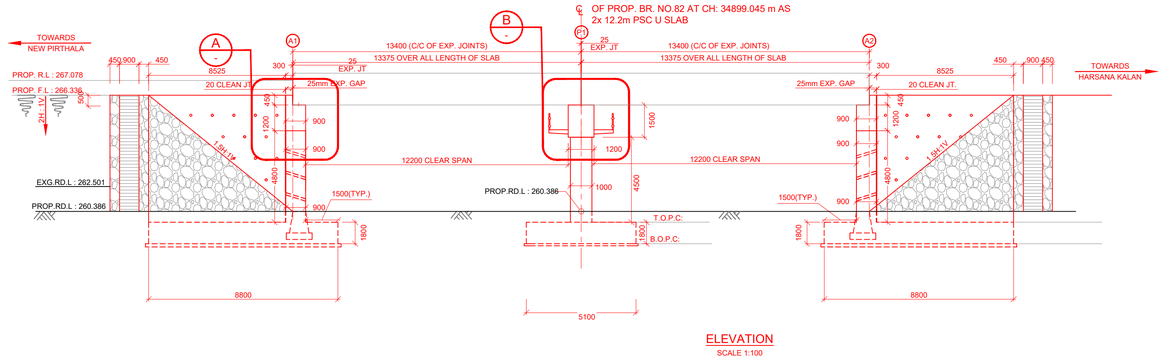
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01071_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 11-11-2022

REVISED DATE



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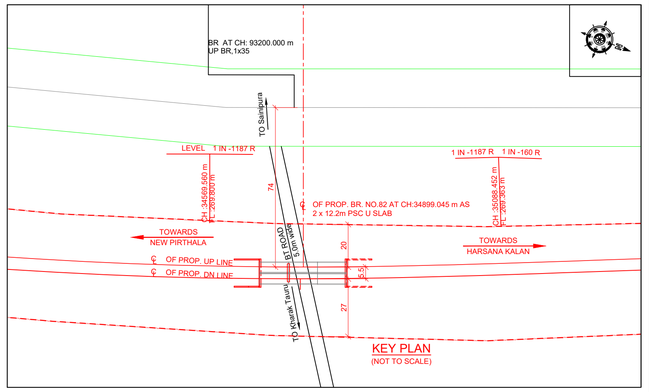
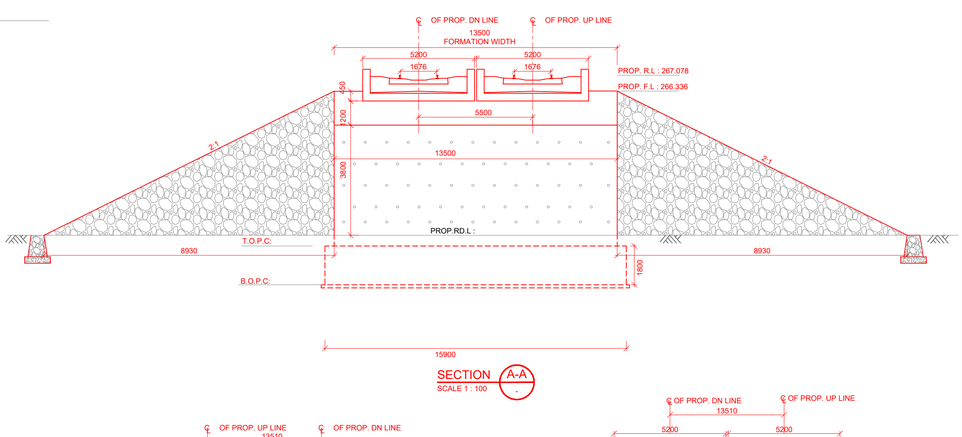
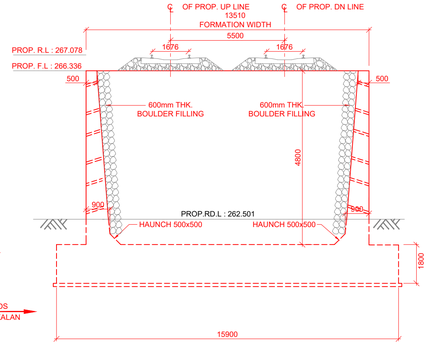
SCALE 1:100



KEY PLAN
(NOT TO SCALE)



SECTION A-A
SCALE 1 : 100



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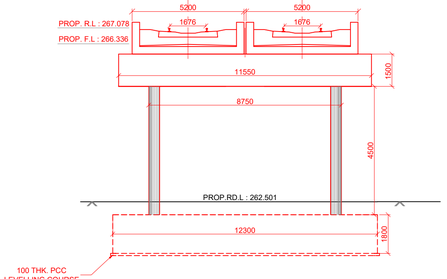

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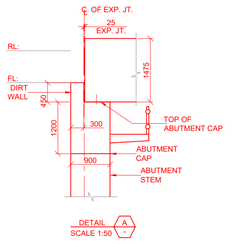
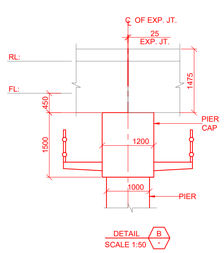


DETAIL A
SCALE 1:50



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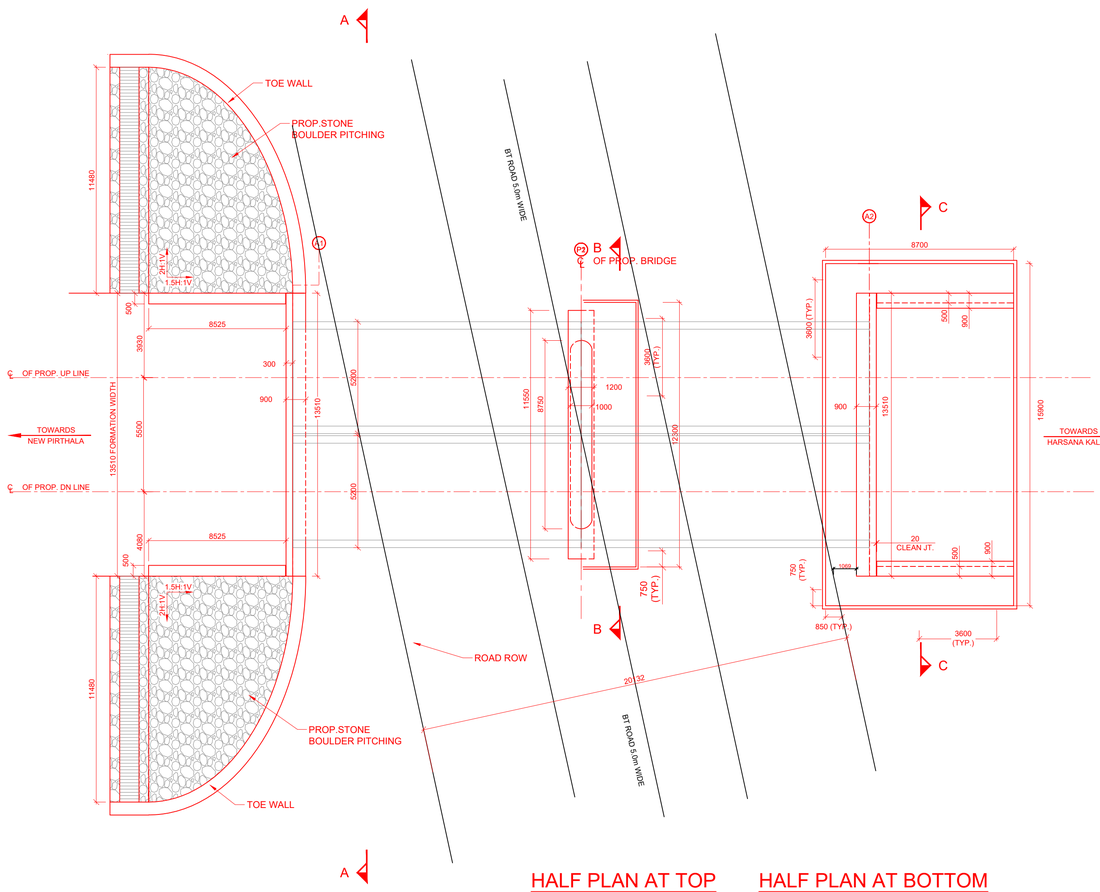


HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 100

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 - 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----------M15
   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 ABUTMENT TO 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 TOI WALL DETAILS REFER SEPARATE SKETCH NO. GC-HRIDC-SK-GEN-014.

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 Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR MAJOR BRIDGE NO 82 AT CH: 34899.045m AS 2X12.2m PSC U SLAB

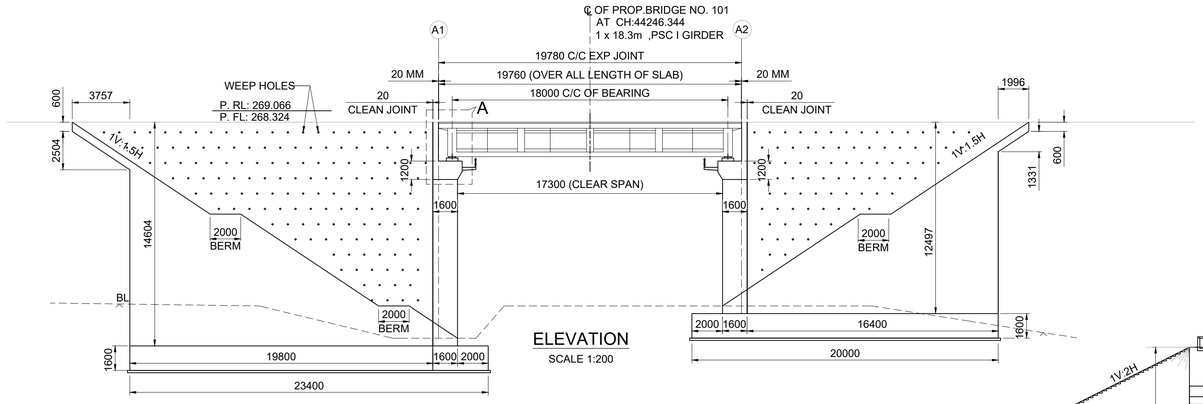
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-0082_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 11-11-2022

REVISED DATE



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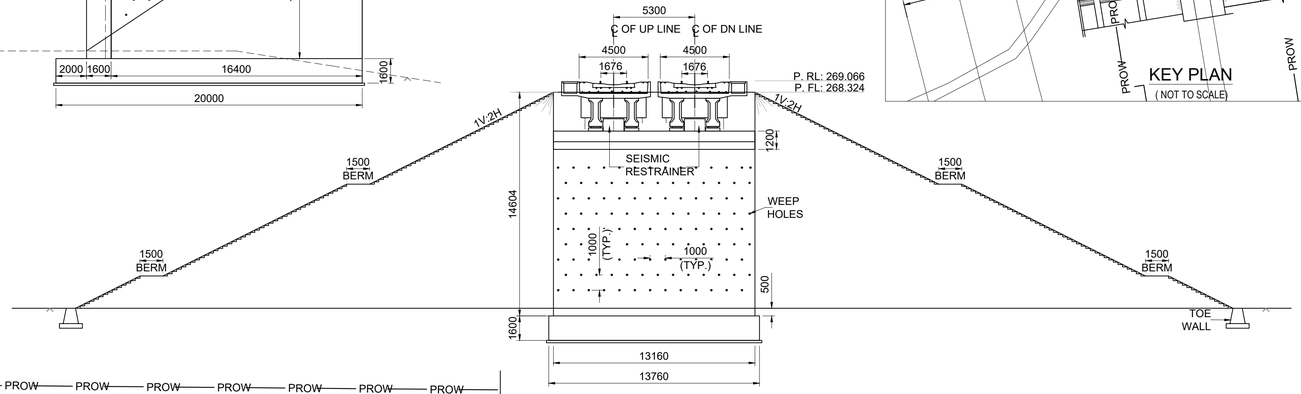

SECTION A-A
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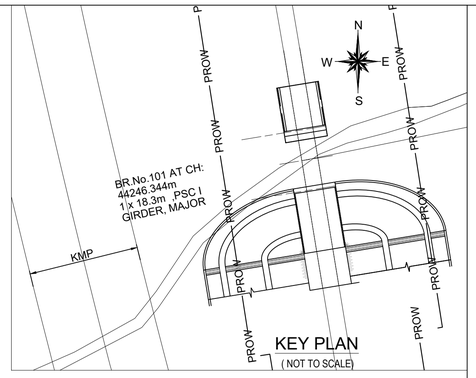
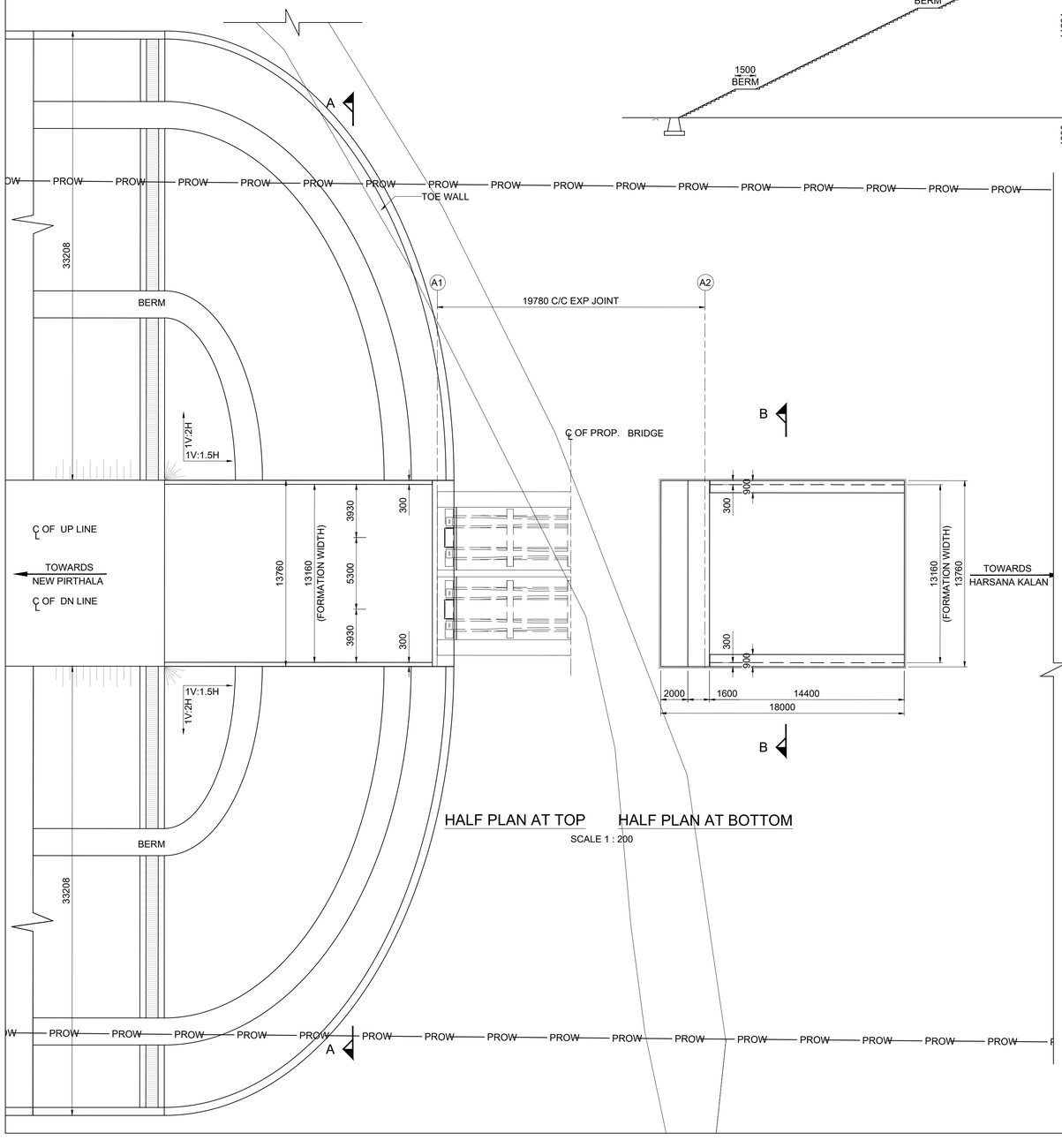
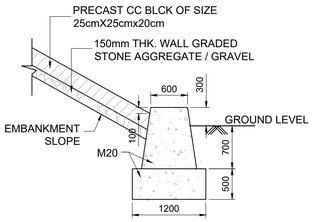


KEY PLAN
(NOT TO SCALE)

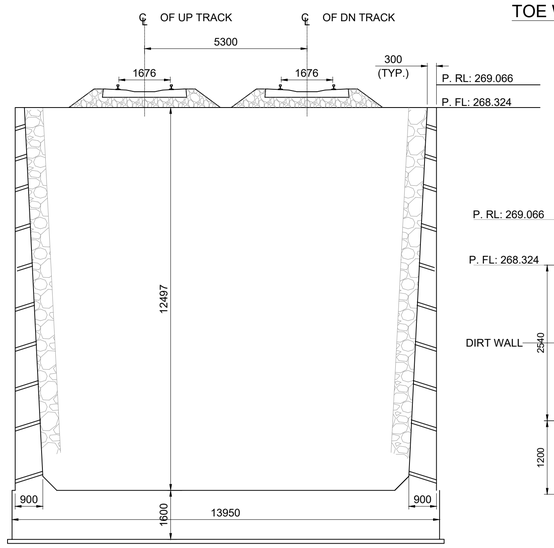
NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 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 PILE & PILE CAP----------M35
   iii) FOR LEVELING COURSE----------M15
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 ABUTMENT TO 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. FOR PILE FOUNDATION THE RELEVANT CODE FOR PILE FOUNDATION AND TESTING WILL BE FOLLOWED.
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.



HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



TOE WALL AND PITCHING
SCALE 1:50



SECTION B-B
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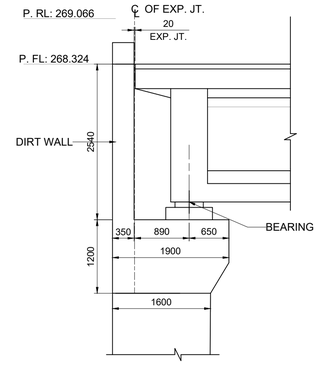

DETAIL -A
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

PROJECT:
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CLIENT:
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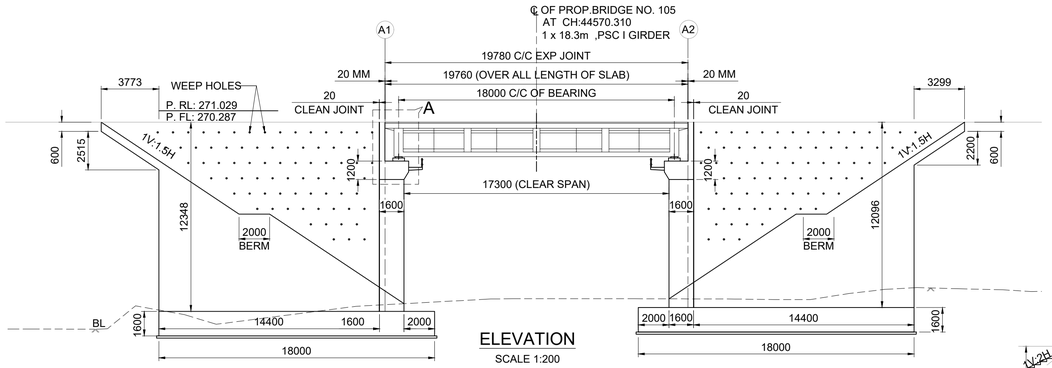
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.101 AT
CH: 44246.344 m AS 1 x 18.3 m PSC I GIRDER

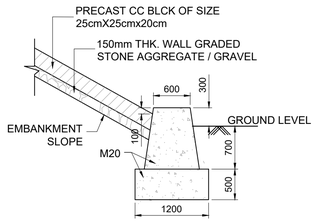
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01101_A0	1 OF 1

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



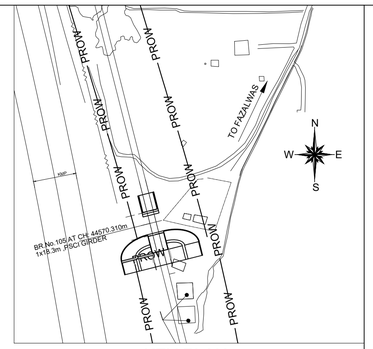
ELEVATION

SCALE 1:200



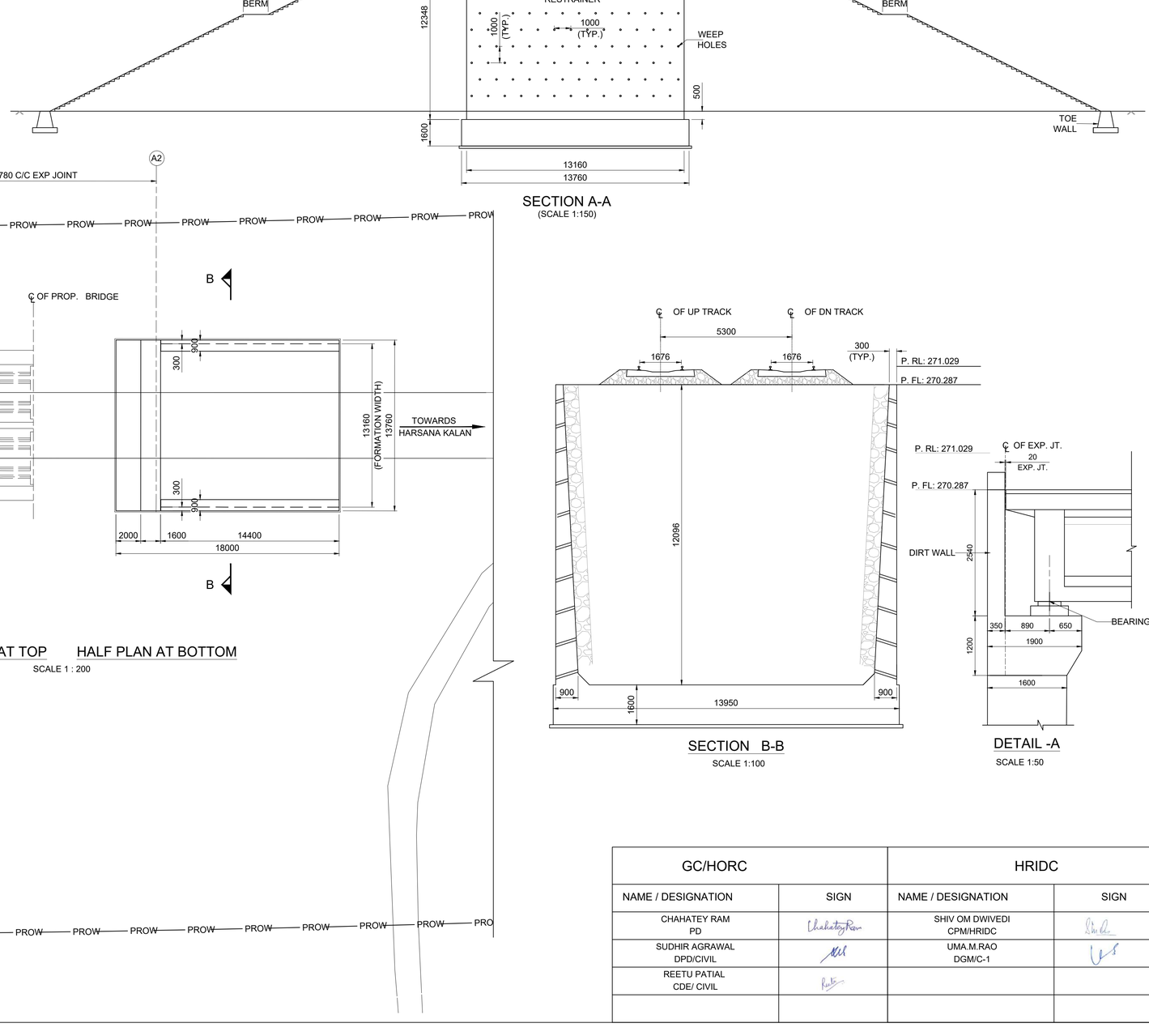
TOE WALL AND PITCHING

SCALE 1:50



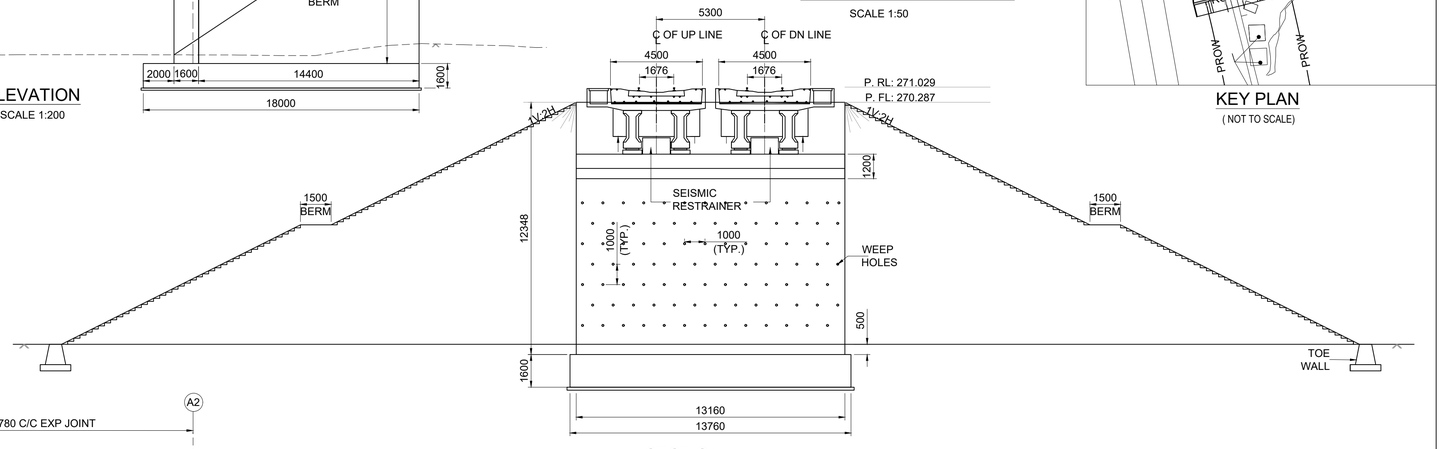
KEY PLAN

(NOT TO SCALE)



HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



SECTION A-A

(SCALE 1:150)

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.
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   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
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   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
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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.
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15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
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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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:

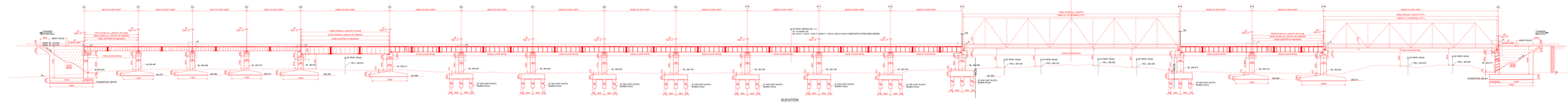
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

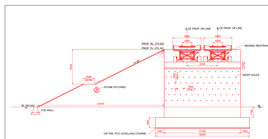
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

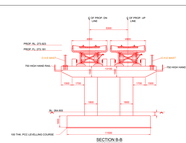
TITLE:- GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.105 AT CH:
44570.310 m AS 1 x 18.3 m PSC I GIRDER

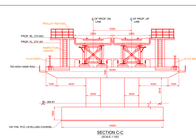
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-105_A0	1 OF 1

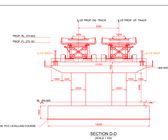
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	

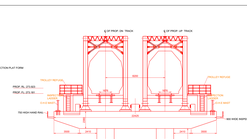

ELEVATION
Scale 1:100
FOUNDATION ZB+R1
FOUNDATION ZB+R1
@ 1000 CAST IN SITU BURIED PILES
@ 1200 CAST IN SITU BURIED PILES
@ 1500 CAST IN SITU BURIED PILES
@ PROF BRIDGE NO. 110
CH. 21.454KM (NH)
4@ 31.5+3 x 34.5+3 x 34.5+3 x 1375.21 (SIZE-R1)M COMPOSITE STEEL GIRDER
@ PROF BRIDGE NO. 111
CH. 23.000KM (NH)
4@ 31.5+3 x 34.5+3 x 34.5+3 x 1375.21 (SIZE-R1)M COMPOSITE STEEL GIRDER
@ PROF BRIDGE NO. 109
CH. 21.454KM (NH)
3@31.5+3 x 34.5+3 x 34.5+3 x 1375.21 (SIZE-R1)M COMPOSITE STEEL GIRDER
@ PROF ROAD
@ PROF ROAD
@ PROF ROAD

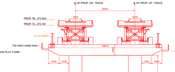


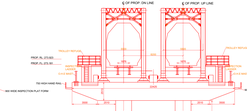


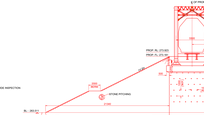


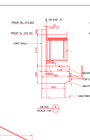


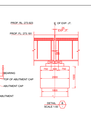


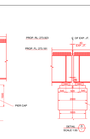


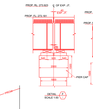


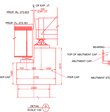


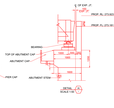


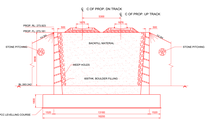


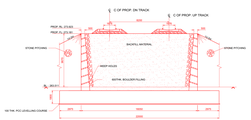


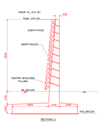


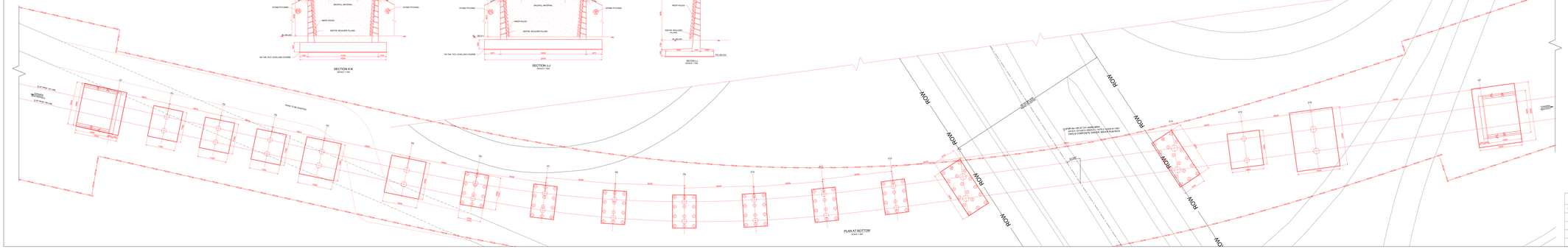












NOTES :
1. FOR GENERAL NOTES REFER SHEET 1 OF 2

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING KIM/OTHAT/LOJ/LTKANPUR-ASAUDHA BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

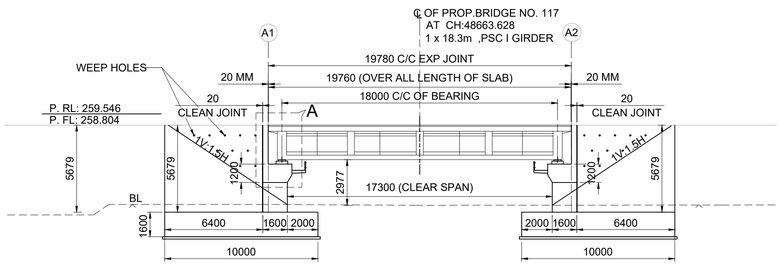
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PO		SHIV OM DHINGI CPM/HRIDC	
SUDHIR AGRAWAL CDO/ CIVIL		UMA M.RAO SDM(C)	
REETU PATAL CDO/ CIVIL			

TITLE GENERAL ARRANGEMENT DRAWING
FOR PROP. MAJOR RUB NO.106, AT CH. 45495.969m 4X15.3 +X1x30.5 +4X24.4 + 1X15.2 +2X24.4+1X61 CWG COMPOSITE GIRDER

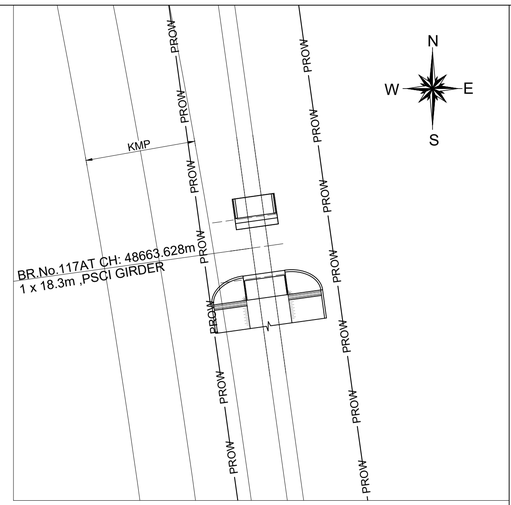
DRG. NO. GC-HRC-02-DRG-BRD-GAD-106_R0 | SHEET NO. 2 OF 2

SCALE : AS SHOWN | ISSUE DATE: 11-11-2022 | REVISED DATE



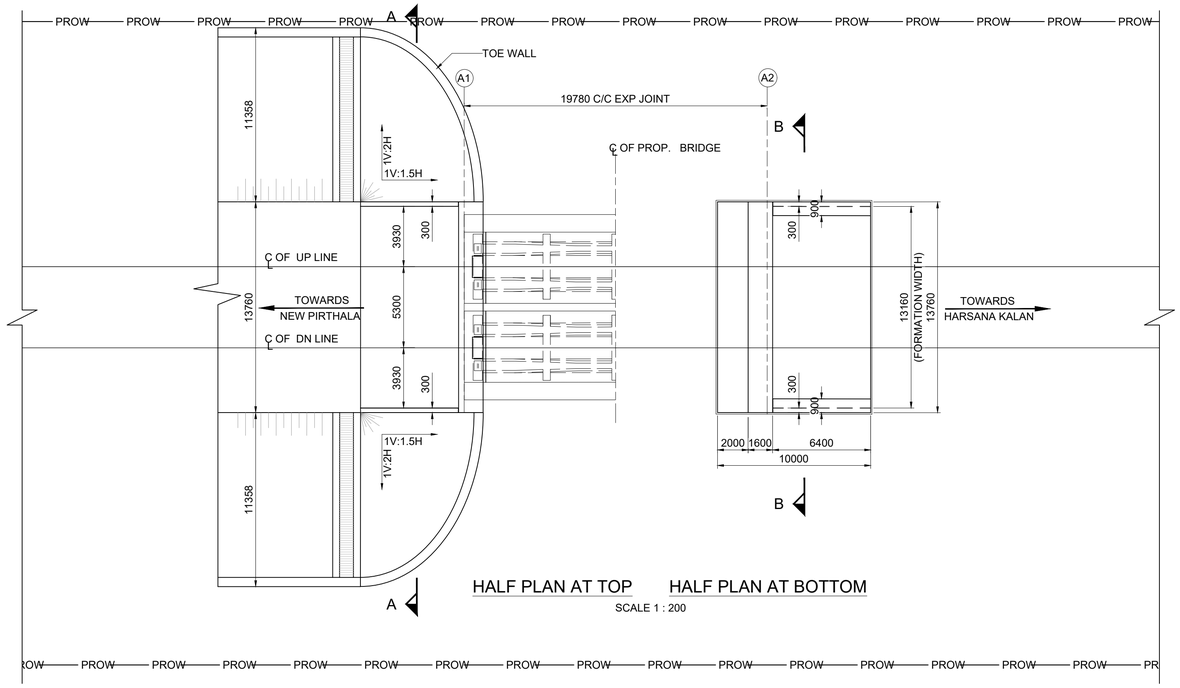
ELEVATION

SCALE 1:200



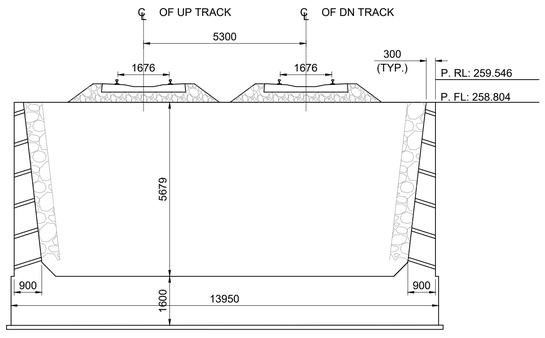
KEY PLAN

(NOT TO SCALE)



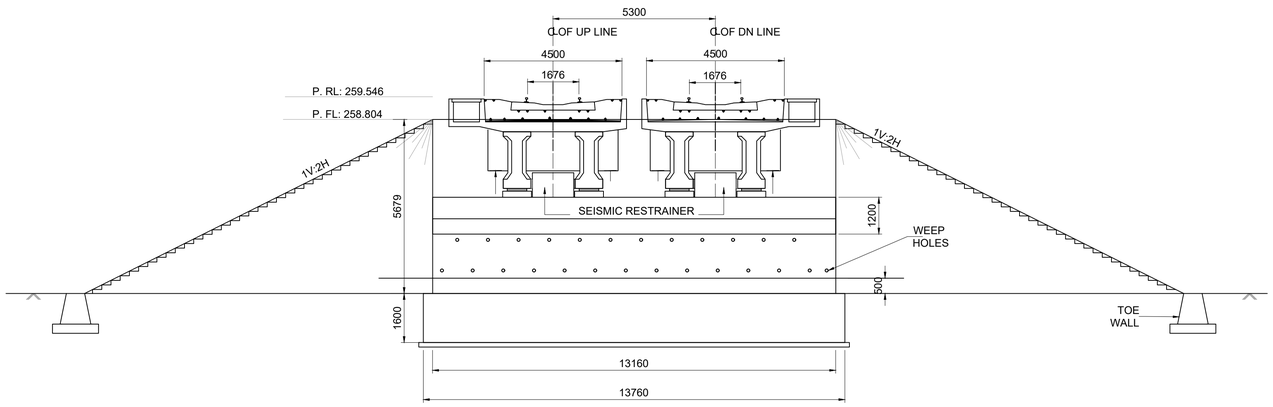
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



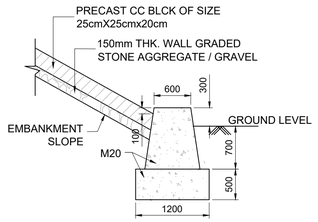
SECTION B-B

SCALE 1:100



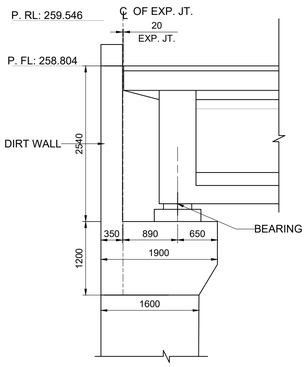
SECTION A-A

(SCALE 1:100)



TOE WALL AND PITCHING

SCALE 1:50



DETAIL -A

SCALE 1:50

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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:

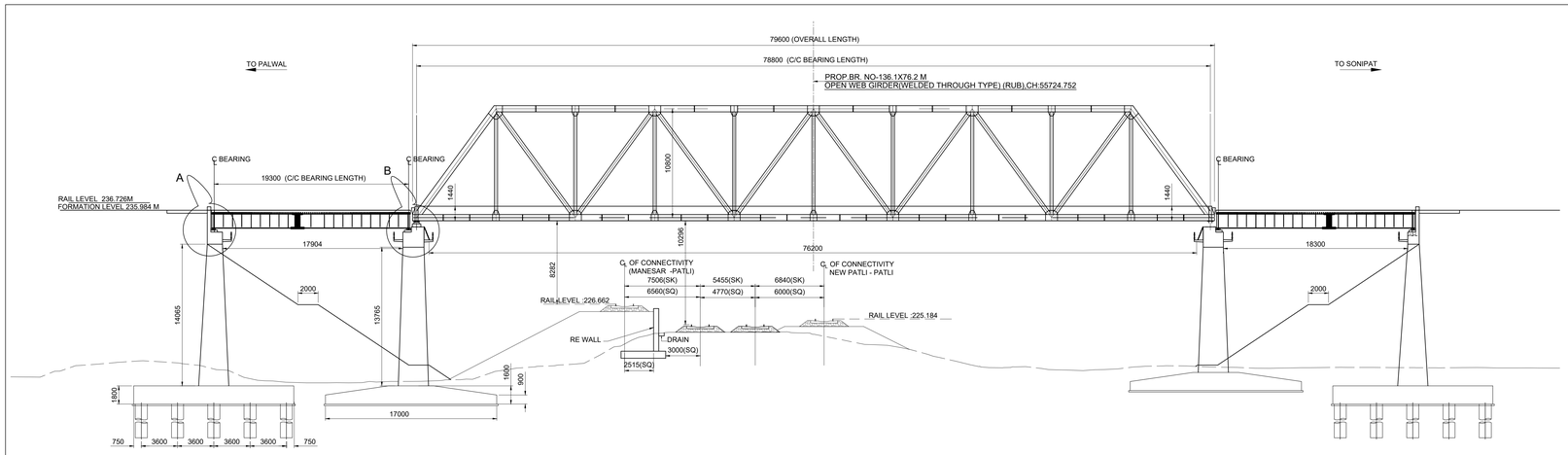
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

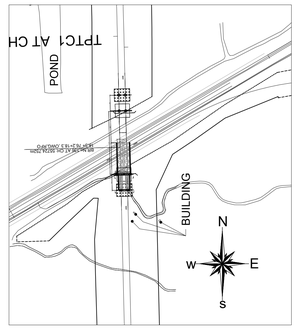
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.117 AT
CH: 48663.628 m AS 1 x 18.3 m PSC I GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-117_A0	1 OF 1

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





KEYPLAN
(NOT TO SCALE)

X-683092.392
Y-3143783.105

BH- A2

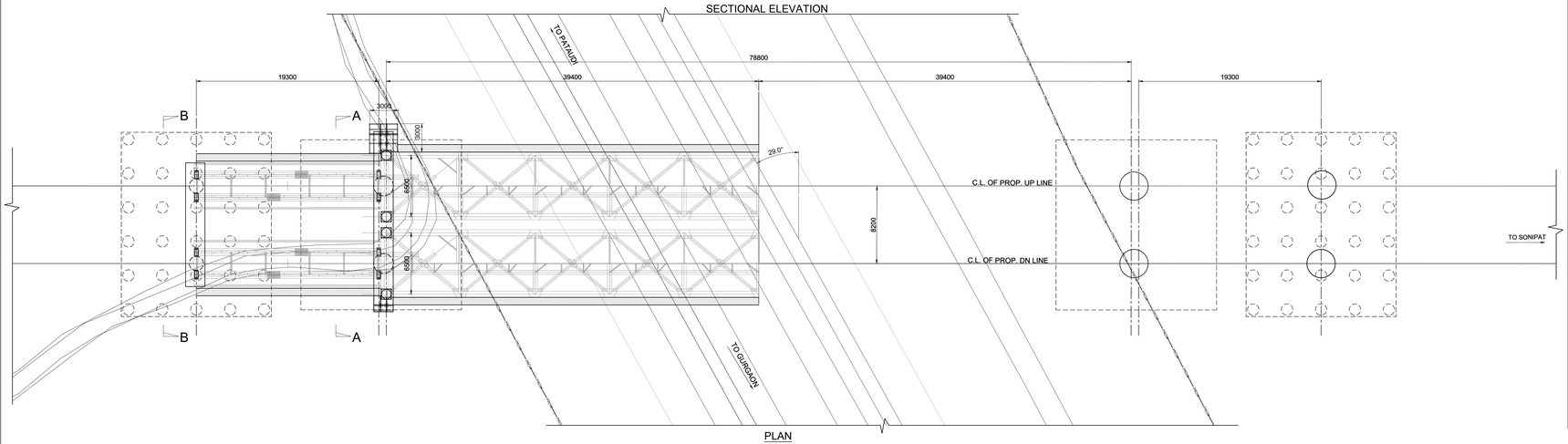
0.00	G.L.			BH-1
1.00				
2.50		13	ML-CL	SANDY SILT
4.00				
5.50		22		
7.00			CL	SILTY CLAY
8.50		22		
10.00				
11.50		29		
13.00				
14.50		39		
16.00				
17.50		56		
19.00				
20.50		54		
22.00				
23.50		66		
25.00				
26.50		43	ML-CL	SANDY SILT
28.00				
29.50		52		
31.00				
32.50		34		
34.00				
35.50		69		
37.00		81		
38.50		78		
40.00		93		

BORE LOG DETAILS

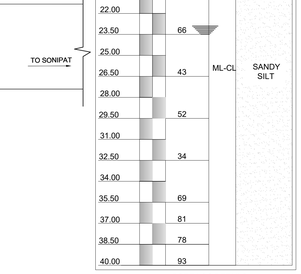
DATUM - 205.00

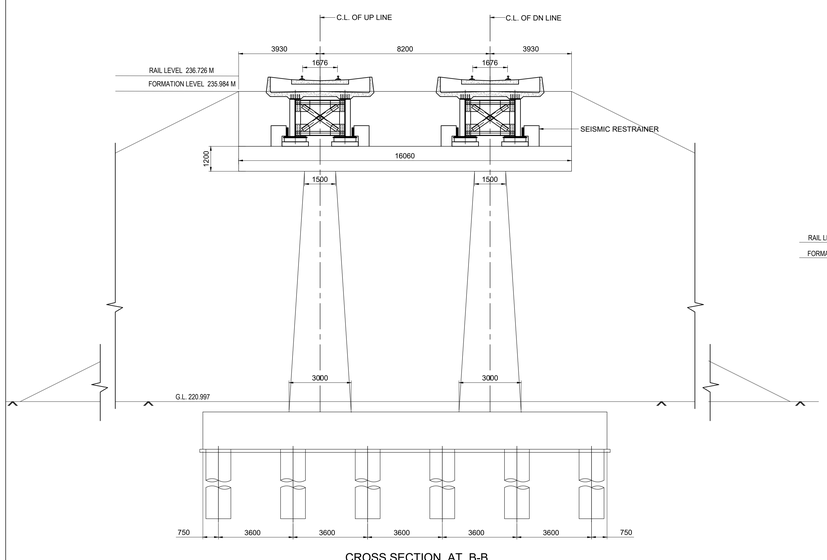
FORMATION LEVEL	235.984	235.984	235.984	235.984	235.984
GROUND LEVEL	220.218	218.994	223.665	220.413	220.362
CHAINAGE	55666.052	55685.352	55724.752	55764.152	55783.452

SECTIONAL ELEVATION

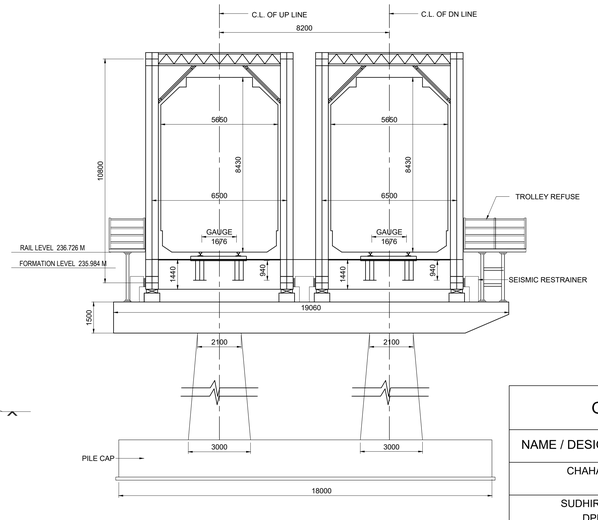


PLAN
SCALE 1:200

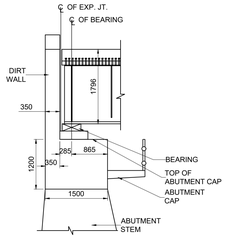




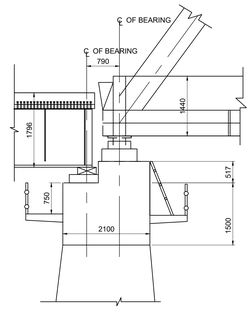
CROSS SECTION AT B-B
(SCALE 1:100)



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. 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. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
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. FOR PILE FOUNDATION THE RELEVANT CODE FOR PILE FOUNDATION AND TESTING WILL BE FOLLOWED.
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. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045(FOR OWG) & CBS-0046 (FOR CG).
25. TROLLEY REFUGE SHALL BE PROVIDED ON OPPOSITE SIDES OF EACH CENTRAL PIER.
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.

DESCRIPTION OF BRIDGE

1.	CHAINAGE	55724.752
2.	RAIL LEVEL	236.726 M
3.	FORMATION LEVEL	235.984 M
4.	VERTICAL ALLIGNMENT	LEVEL
4.	HORIZONTAL ALLIGNMENT	STRAIGHT
5.	SOFFIT LEVEL	234.944 M
6.	ROAD LEVEL	223.893 M
7.	OVERALL SPAN	79600 MM
8.	EFFECTIVE SPAN	78800 MM
9.	CLEAR SPAN	76200 MM
10	TYPE OF CROSSING	ROAD
11	VERTICAL CLEARANCE	11051 MM

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.

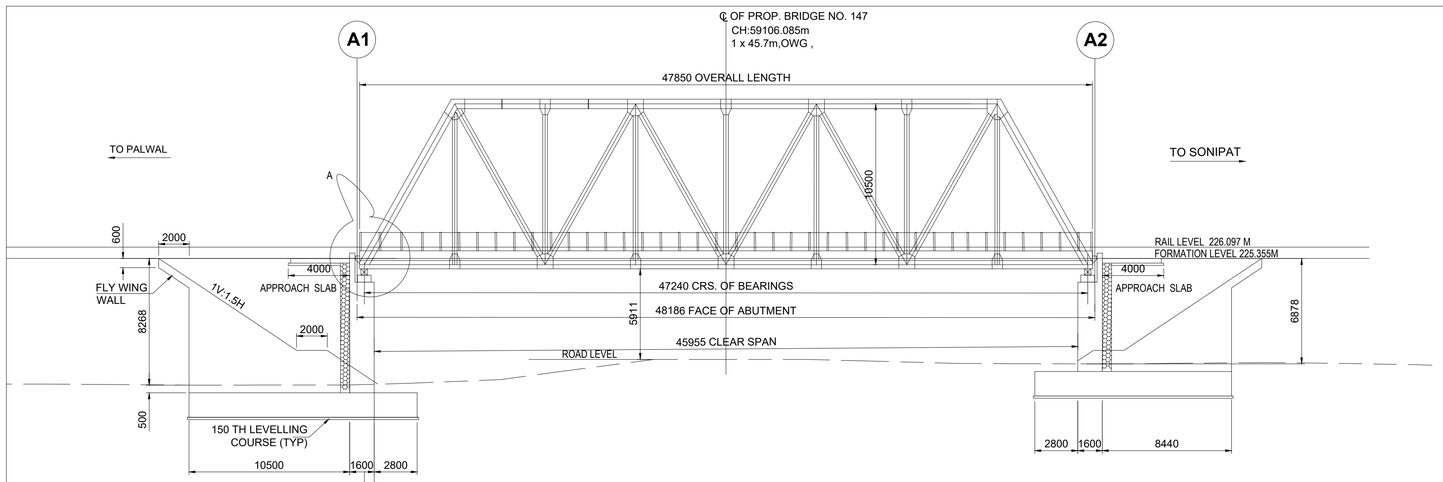
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR ROR BRIDGE NO.136, 18.3+76.2+18.3 CG + OWG AT CH: 55724.752m

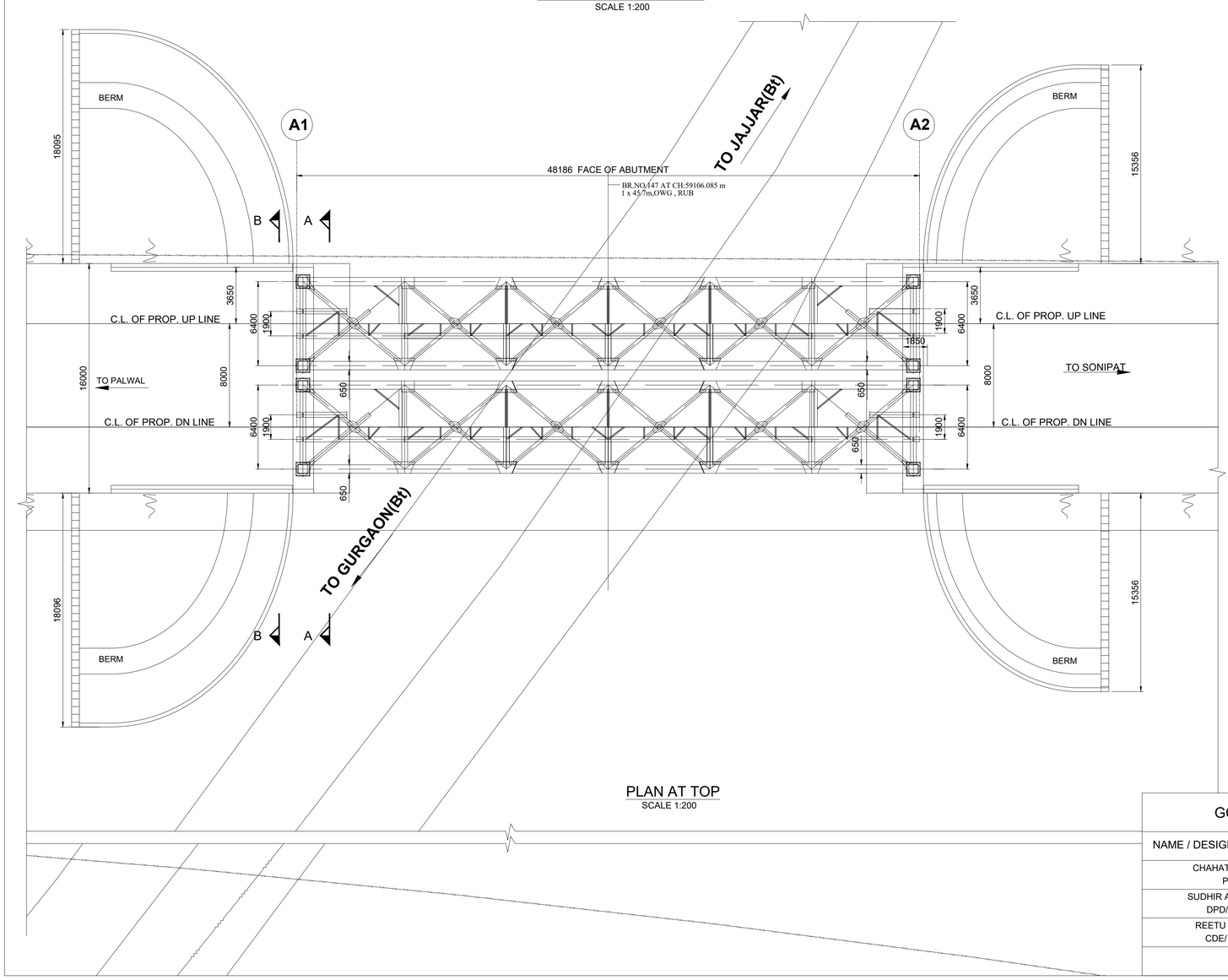
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01136_A0
SHEET NO. 1 OF 1

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

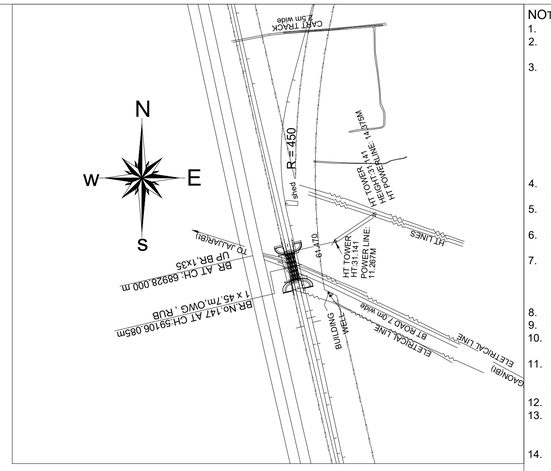


FORMATION LEVEL	225.355	225.355	225.355
GROUND LEVEL	217.127	218.766	218.476
CHAINAGE	59082.465	59106.085	59129.705

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 ABUTMENT TO 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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	SHIV OM DWIVEDI CPM/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.

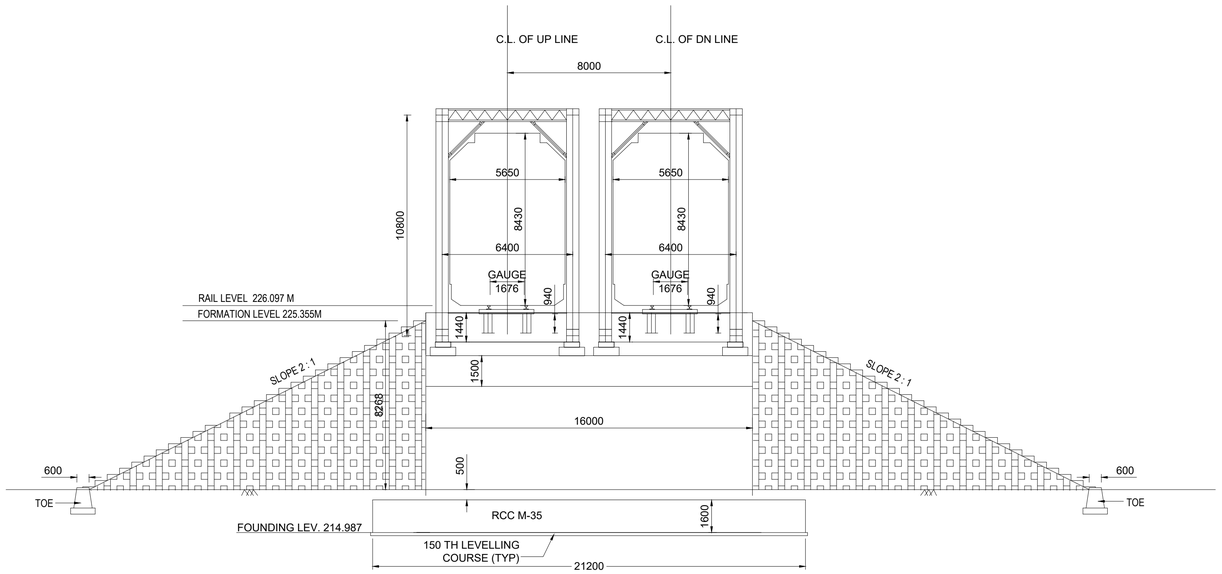
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.147 AT CH:59106.085m 1 x 45.7m,OPEN WEB GIRDER

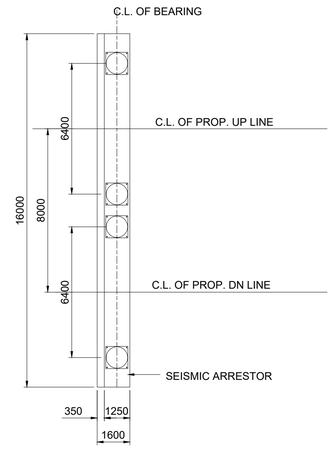
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01147_A0	1 OF 2

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



CROSS SECTION AT A-A (ABUTMENT)

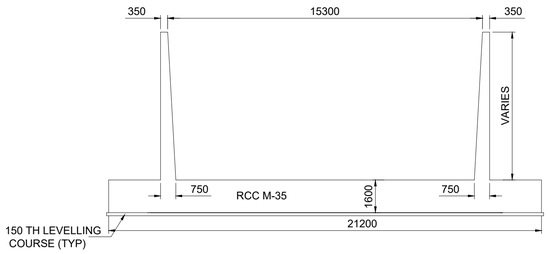
SCALE 1:150



TYPICAL DETAILS OF ABUTMENT CAP

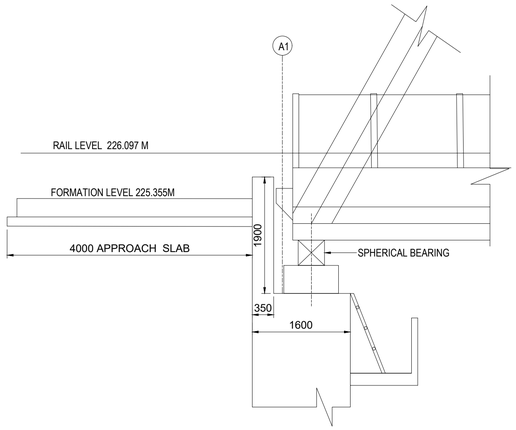
SCALE 1:150

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.



CROSS SECTION AT B-B

SCALE 1:150



DETAILS AT "A"

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

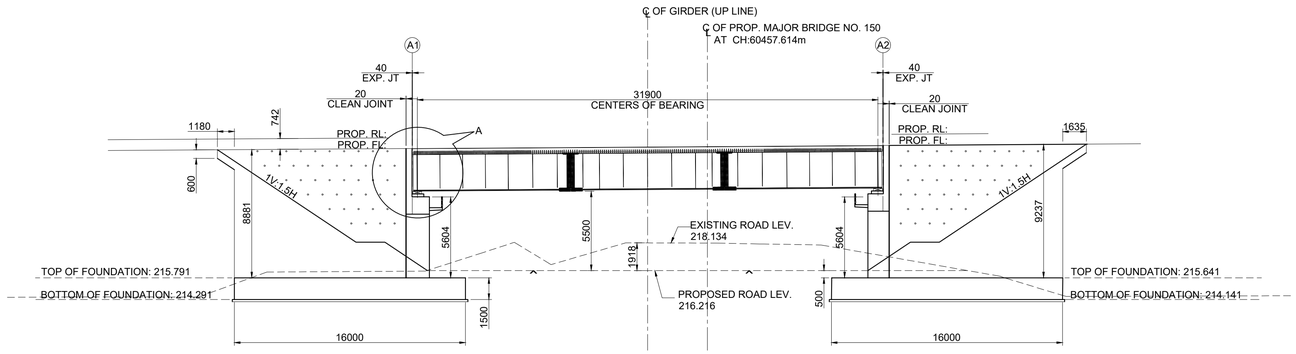
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

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

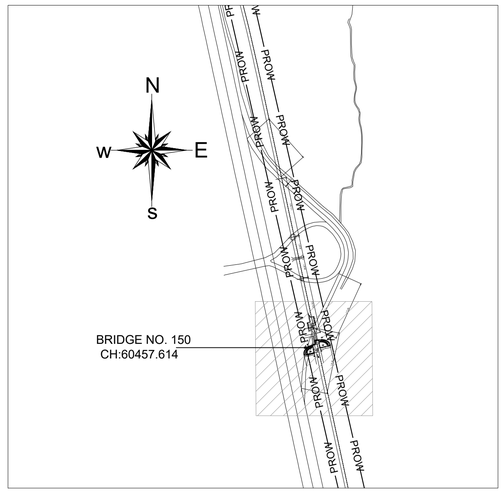
SHEET NO. 2 OF 2

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

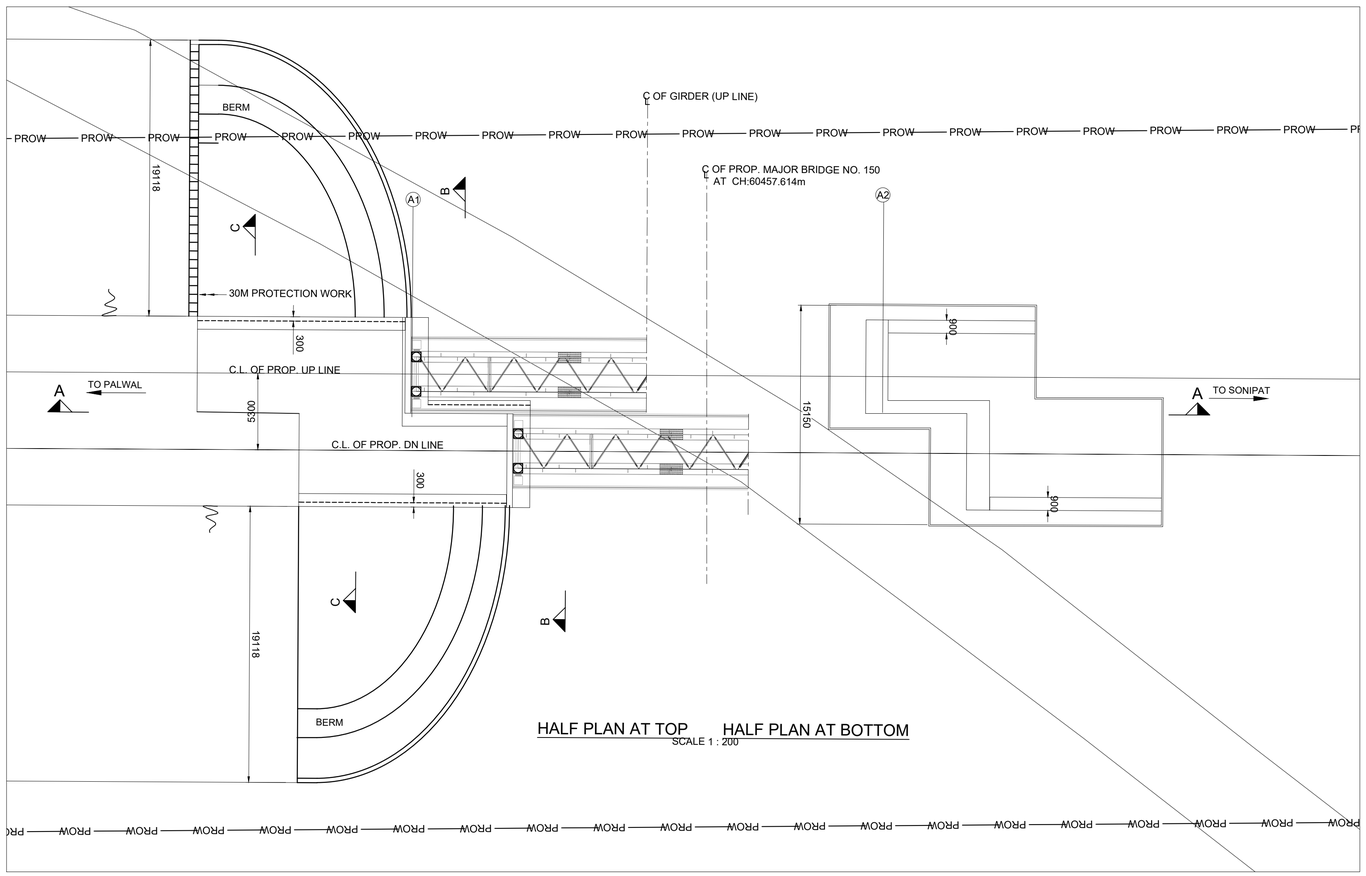


FORMATION LEVEL	224.666	224.775	224.872
GROUND LEVEL	216.224	218.134	216.862
CHAINAGE	60437.522	60457.614	60469.422

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 ABUTMENT TO 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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

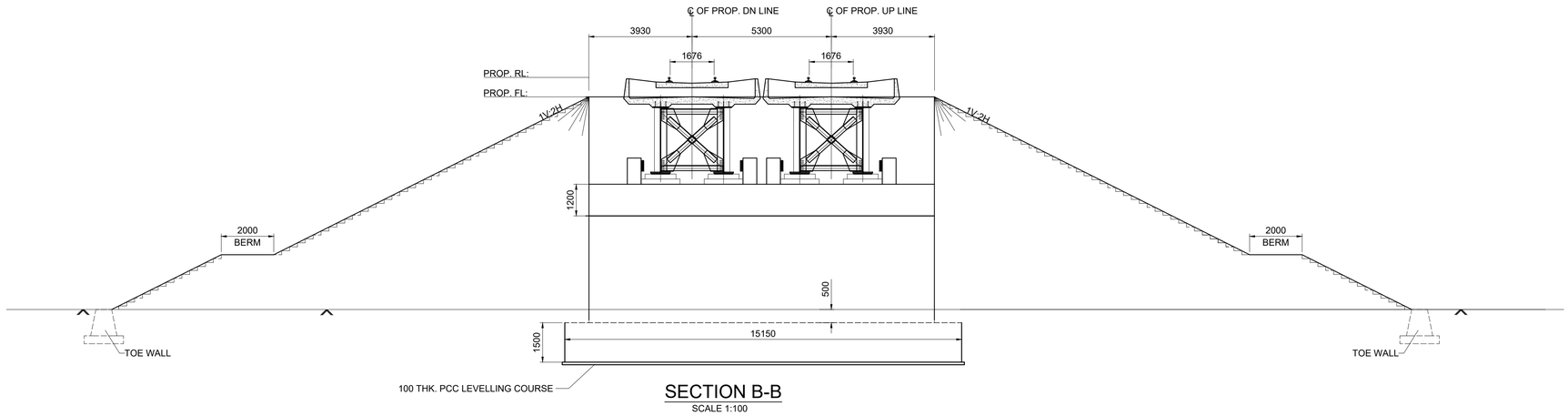
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

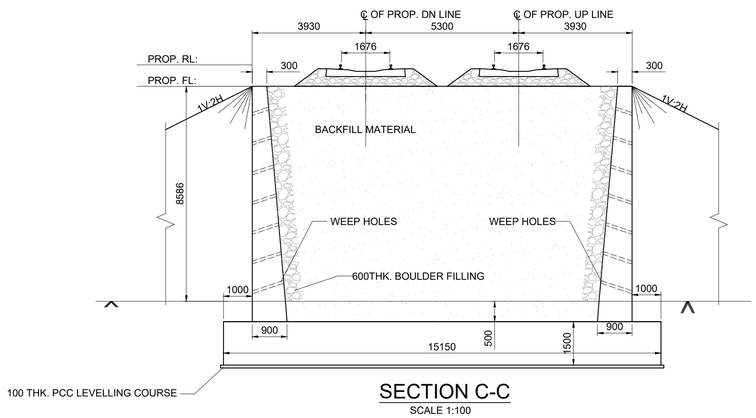
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.150,
1 x 30.5m COMPOSITE GIRDER AT CH: 60457.614m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01150_A0	1 OF 2

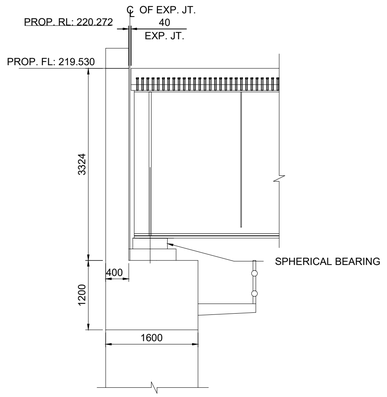
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



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.

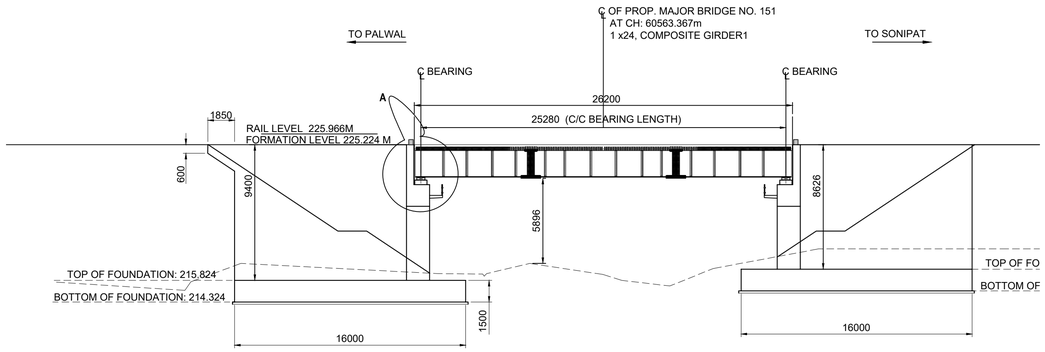
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
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

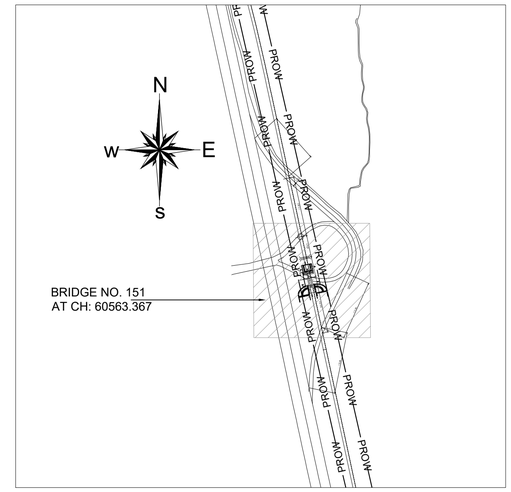
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01150_A0
SHEET NO. 2 OF 2

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

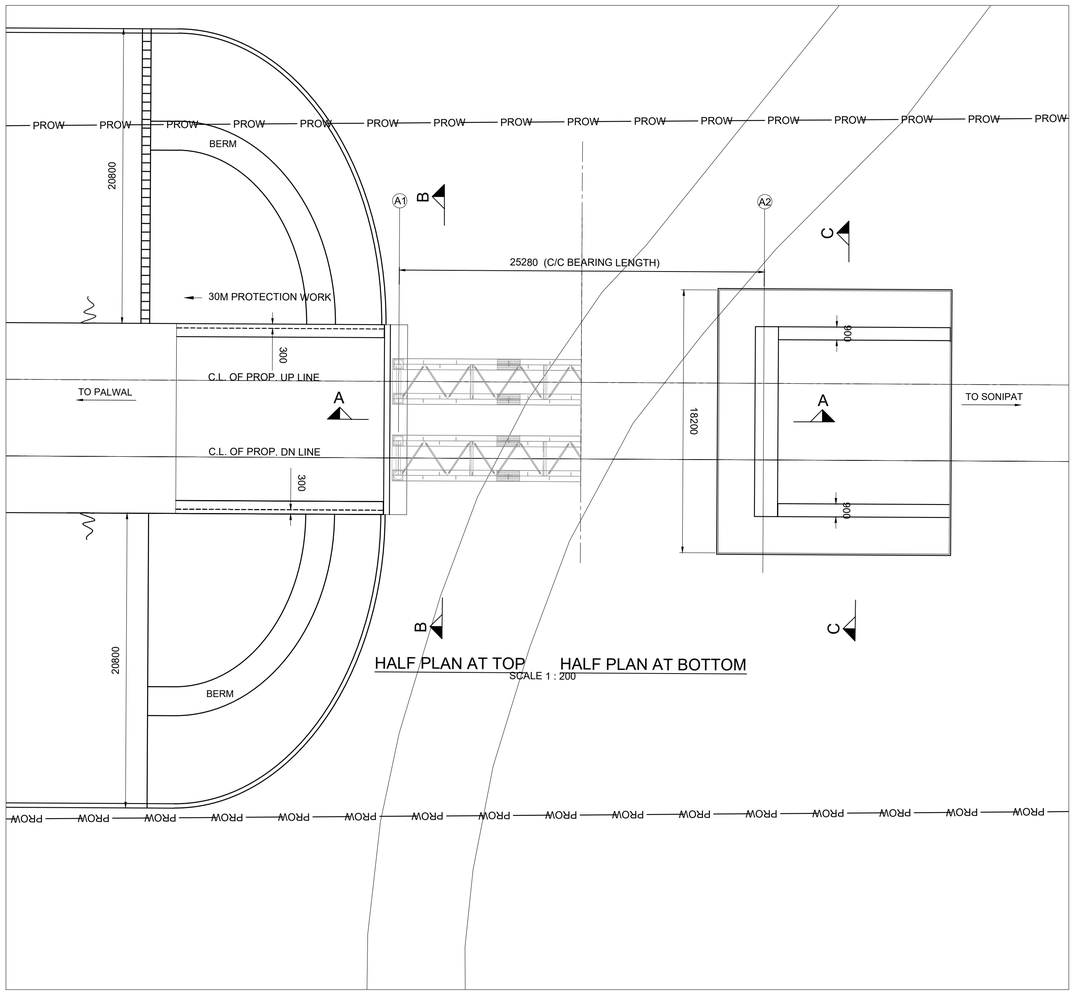


FORMATION LEVEL	225.224	225.224	225.224
GROUND LEVEL	216.358	216.223	217.583
CHAINAGE	60550.727	60563.367	60767.004

SECTIONAL ELEVATION
SCALE 1:200



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 ABUTMENT TO 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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

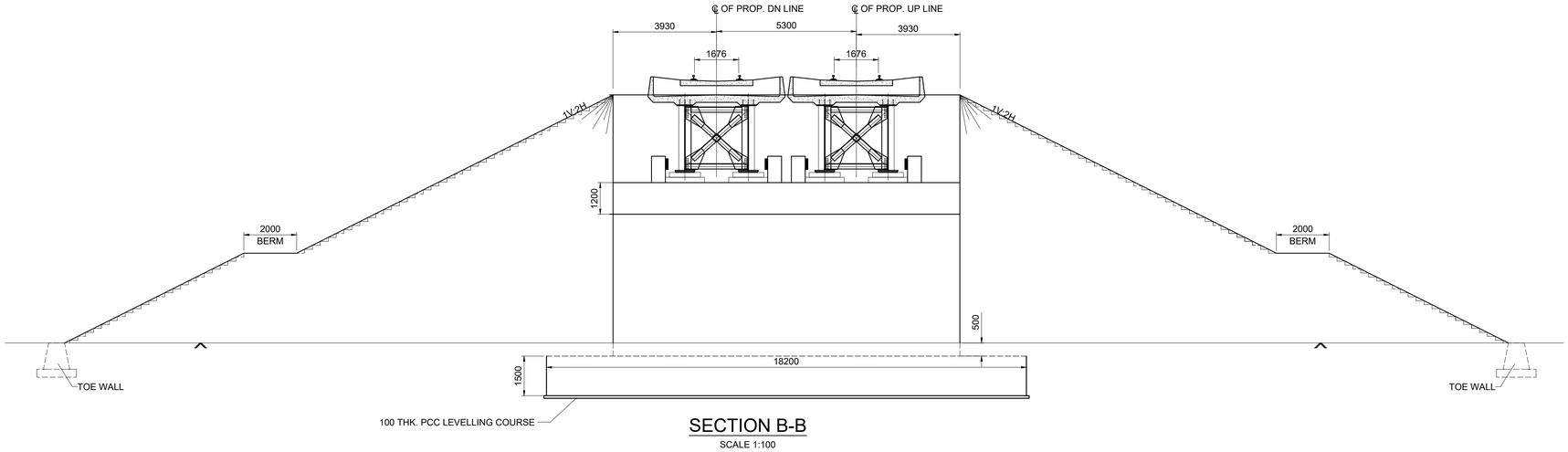
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.151,
1 x 24.4m COMPOSITE GIRDER AT CH: 60563.367m

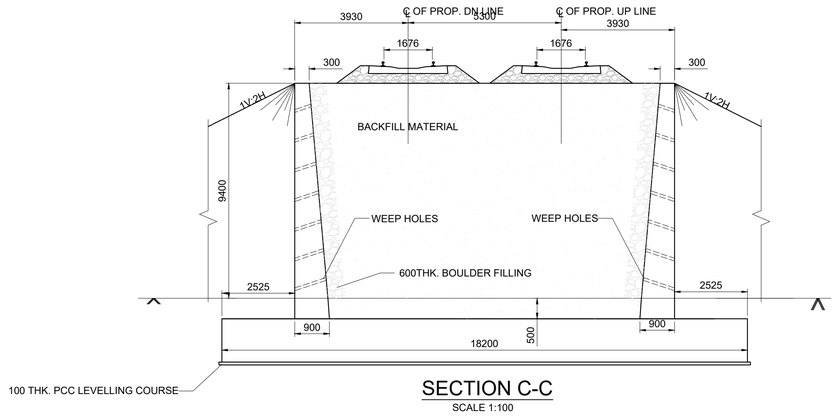
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01151_A0	1 OF 2

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



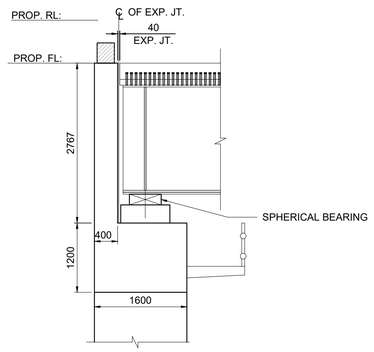
SECTION B-B

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:

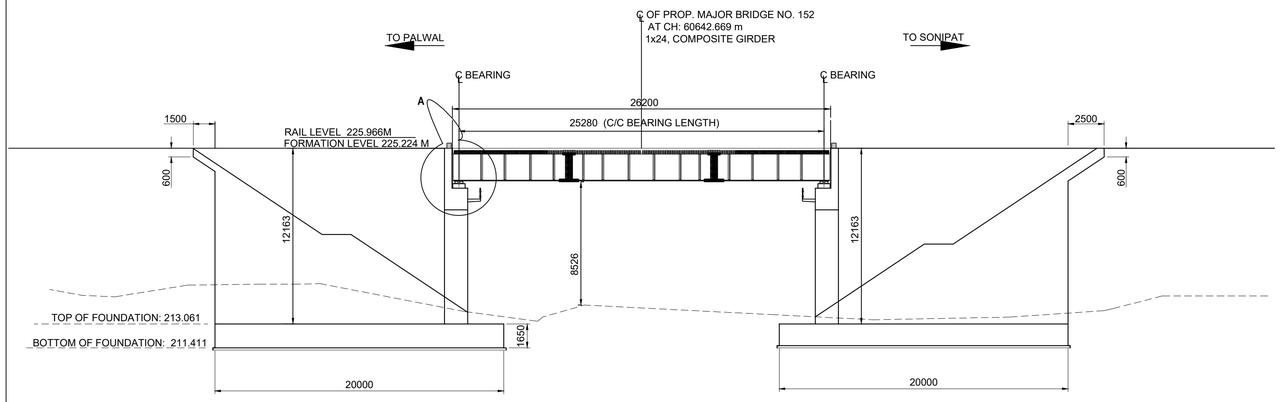
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.151,
1 x 24.4m COMPOSITE GIRDER AT CH: 60563.367m

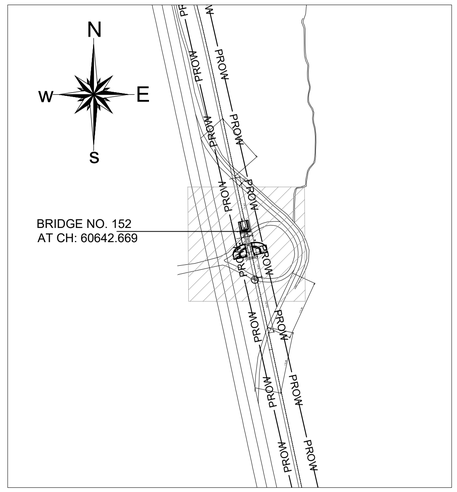
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01151_A0	2 OF 2

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

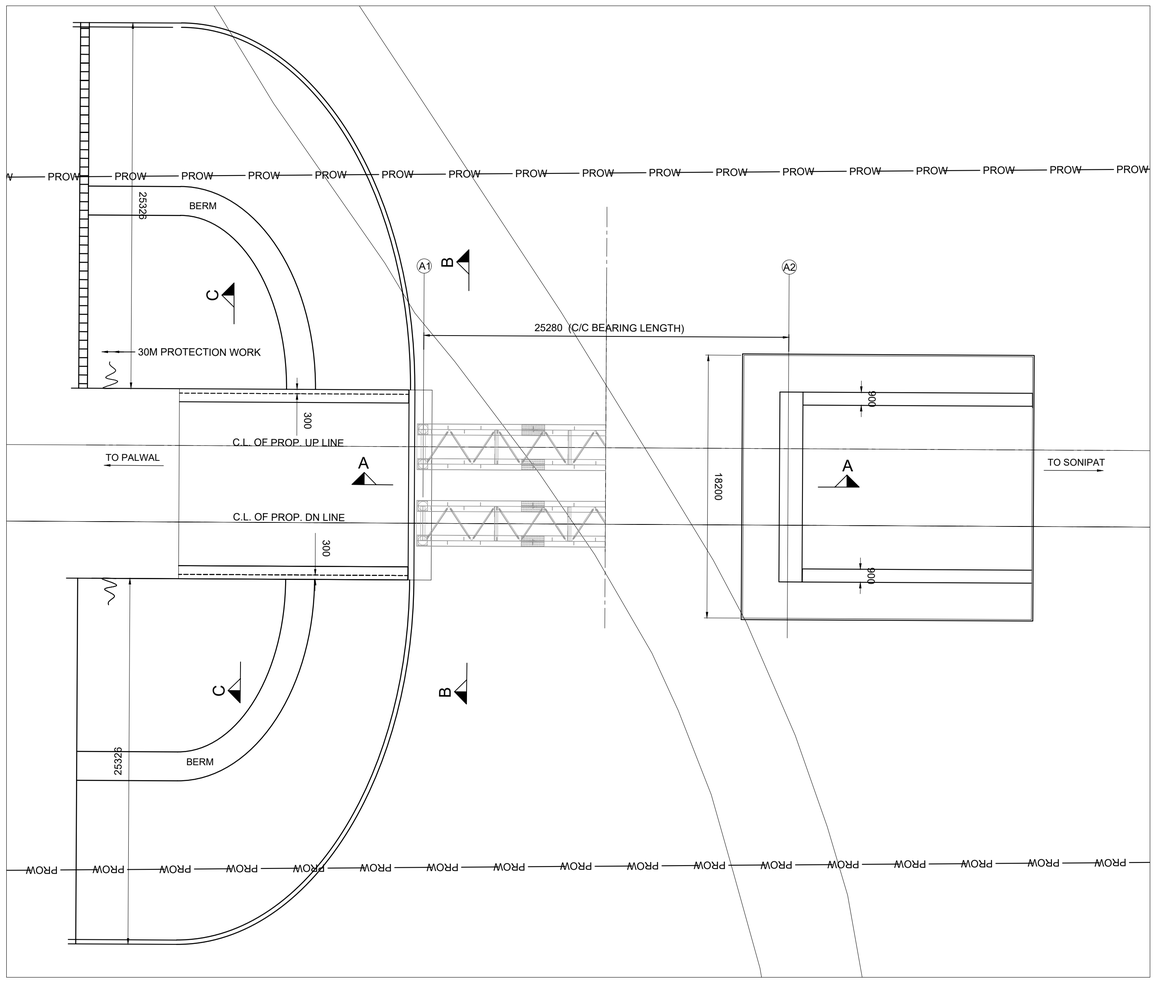


FORMATION LEVEL	225.224	225.224	225.224
GROUND LEVEL	213.996	214.178	213.528
CHAINAGE	60630.029	60642.669	60655.309

SECTIONAL ELEVATION
SCALE 1:200



KEY PLAN
SCALE - N.T.S



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   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.
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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.
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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.
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15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
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21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
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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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

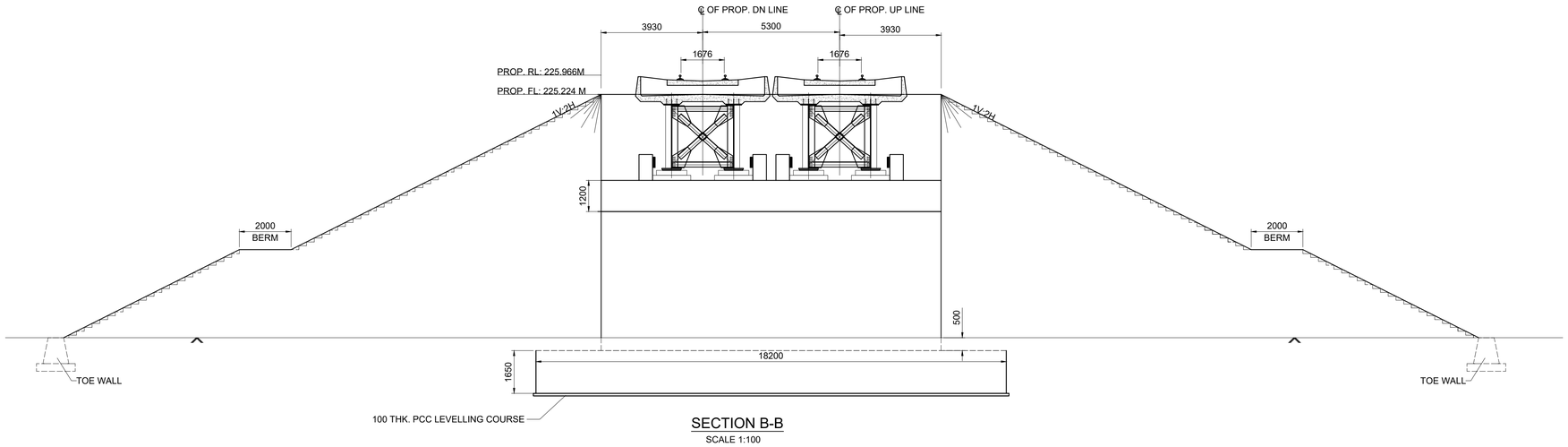
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

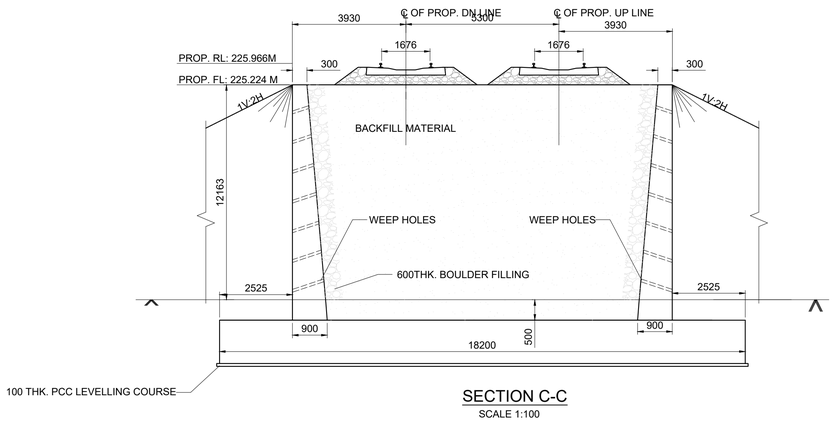
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.152,
1 x 24.4m COMPOSITE GIRDER AT CH: 60642.669 m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01152_A0	1 OF 2

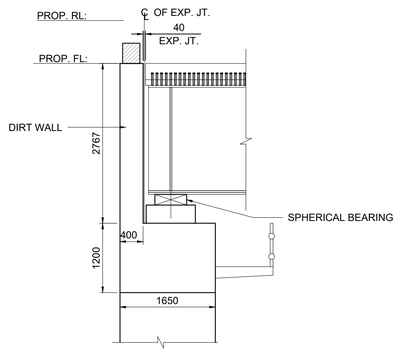
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



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
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

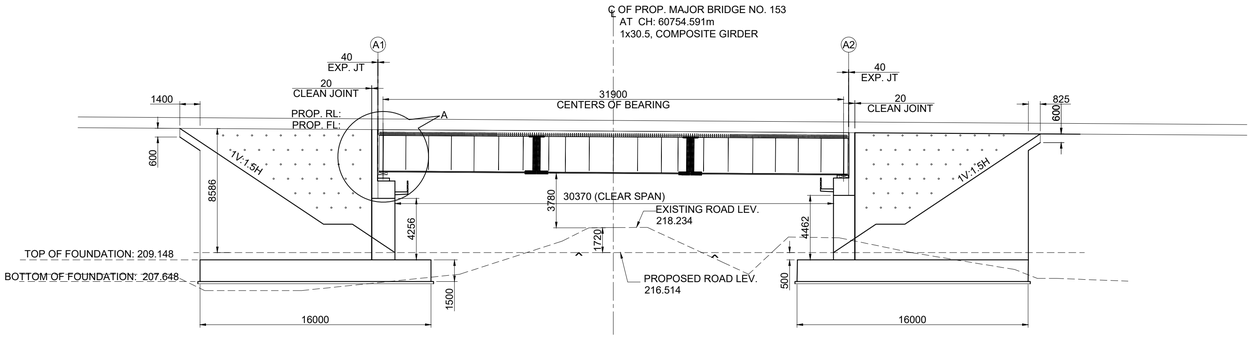
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.152,
1 x 24.4m COMPOSITE GIRDER AT CH: 60642.669 m

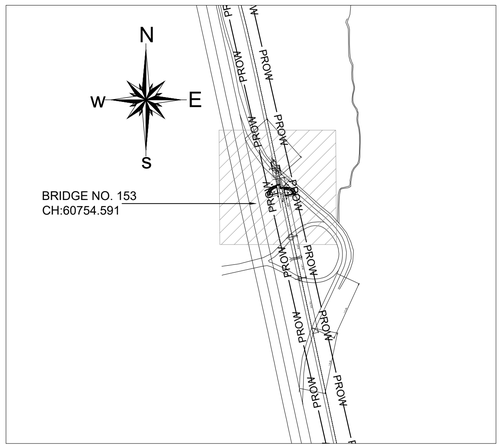
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01152_A0	2 OF 2

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

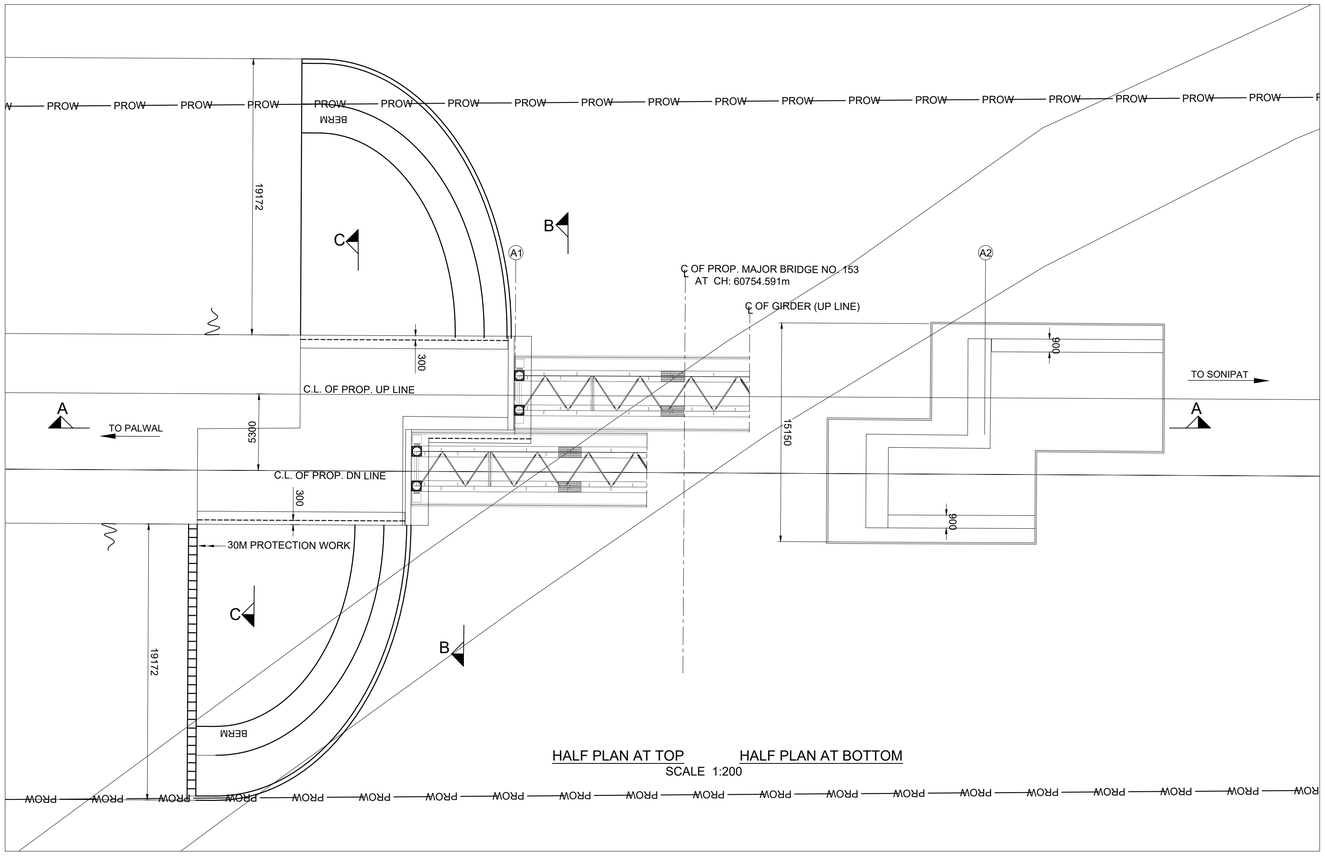


FORMATION LEVEL	224.977	224.234	224.766
GROUND LEVEL	214.948	218.234	215.865
CHAINAGE	60743.12	60754.591	60775.02

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.
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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 ABUTMENT TO 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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

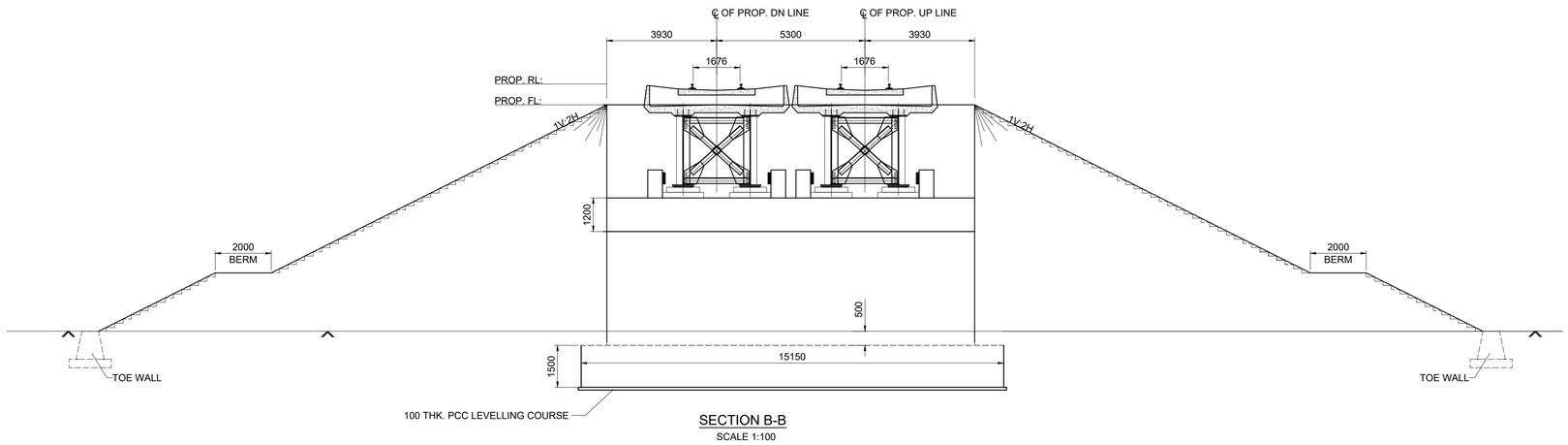
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

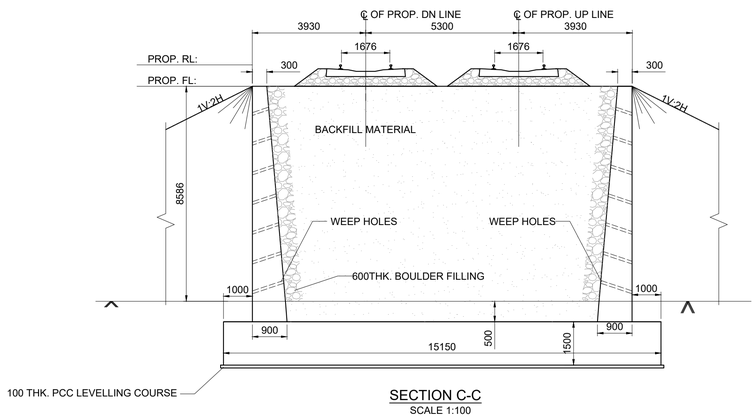
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.153,
1 x 30.5 m COMPOSITE GIRDER AT 60754.591m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01153_A0	1 OF 2

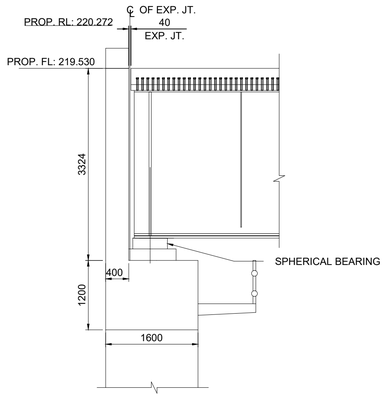
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	



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.

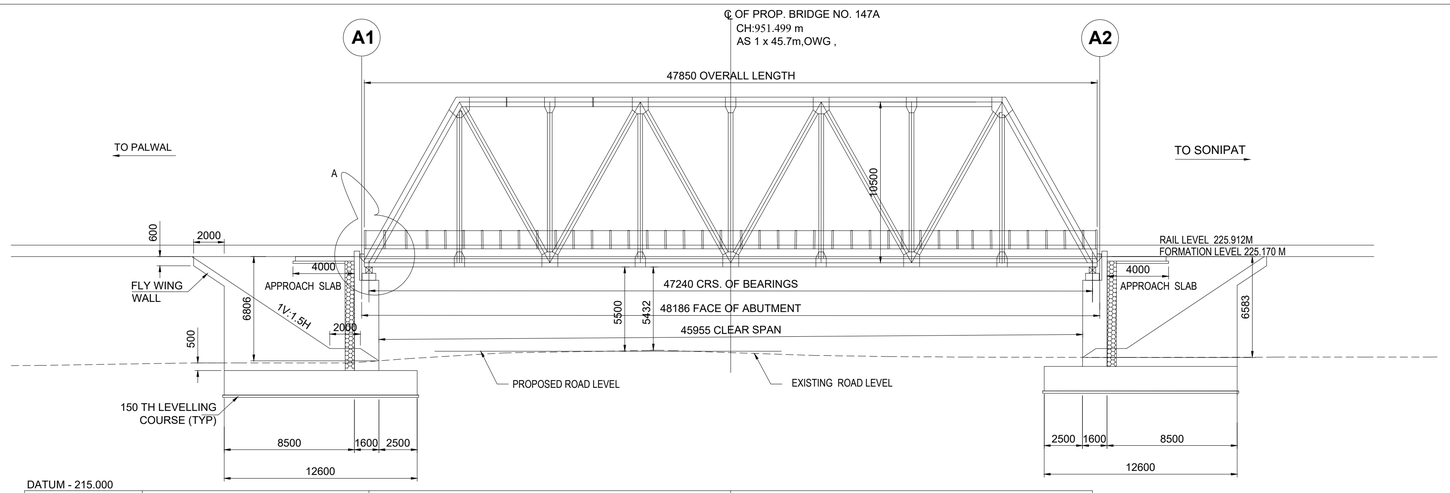
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
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. GC-HRIDC-C23-DRW-BRD-GAD-01153_A0
SHEET NO. 2 OF 2

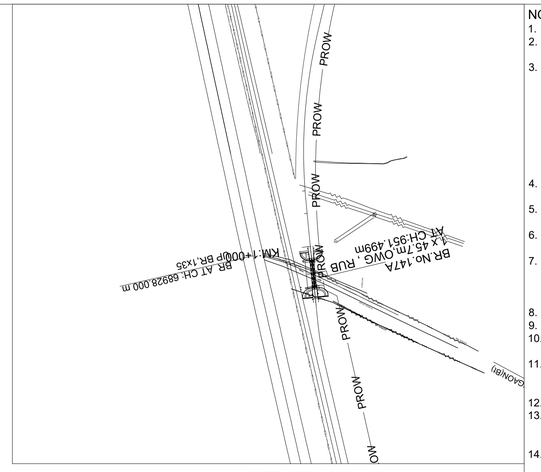
SCALE : AS SHOWN
ISSUE DATE 11-11-2022
REVISED DATE



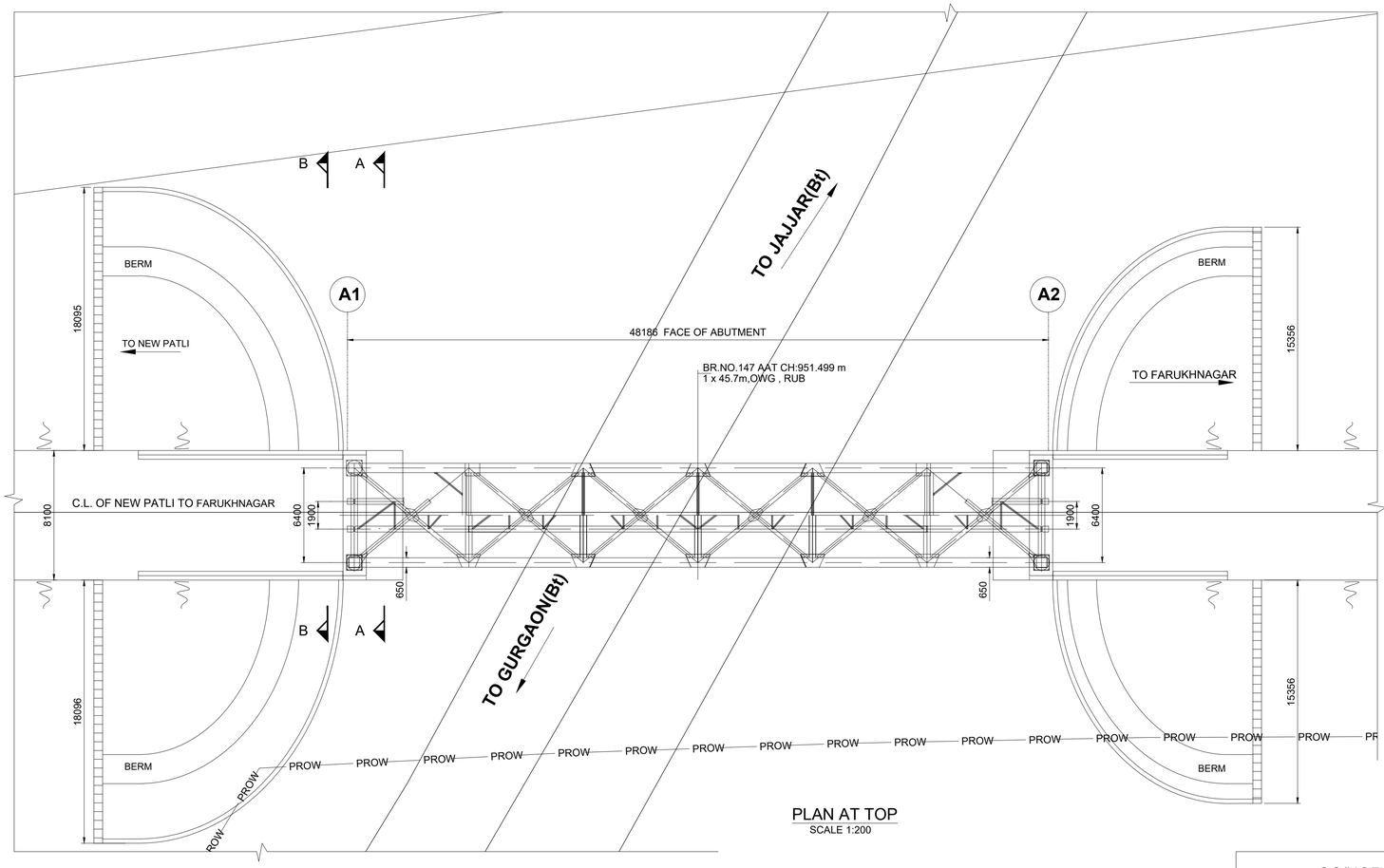
DATUM - 215.000

FORMATION LEVEL	225.152	225.152	225.152
GROUND LEVEL	218.416	218.996	218.684
CHAINAGE	928.370	951.499	975.119

SECTIONAL ELEVATION
SCALE 1:200



KEY PLAN
SCALE 1:NTS



PLAN AT TOP
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 ABUTMENT TO 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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

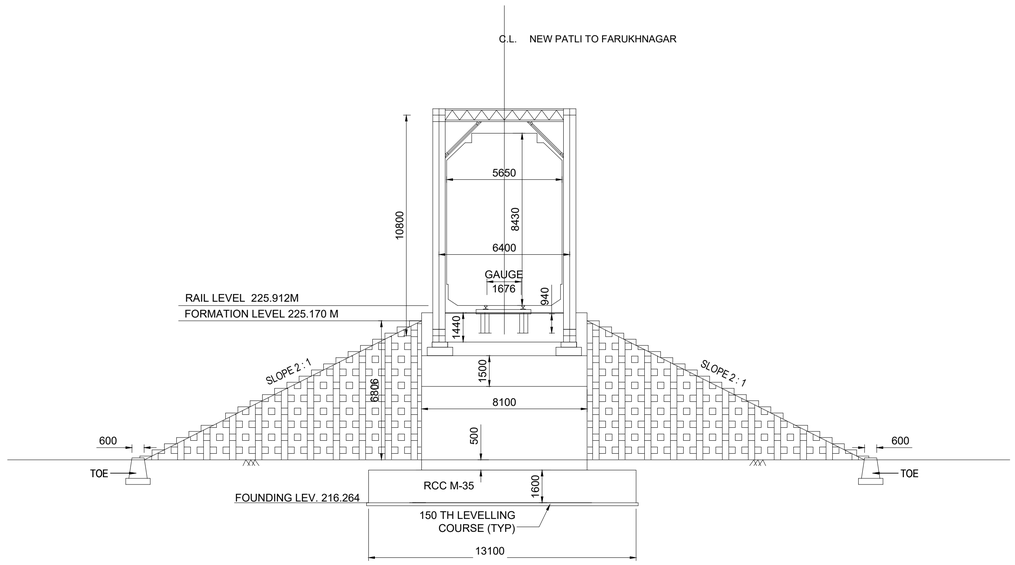
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE
Member of the Surbana Jurong Group

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)

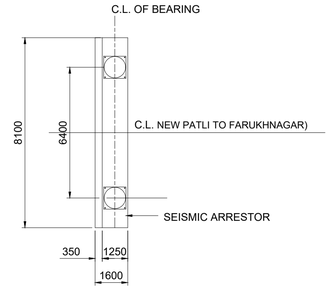
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04001_A0	1 OF 2

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



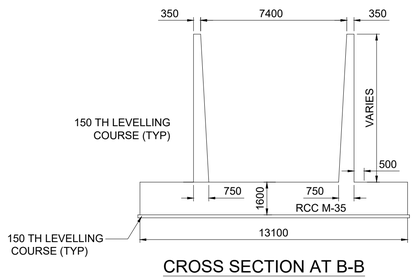
CROSS SECTION AT A-A (ABUTMENT)

SCALE 1:150



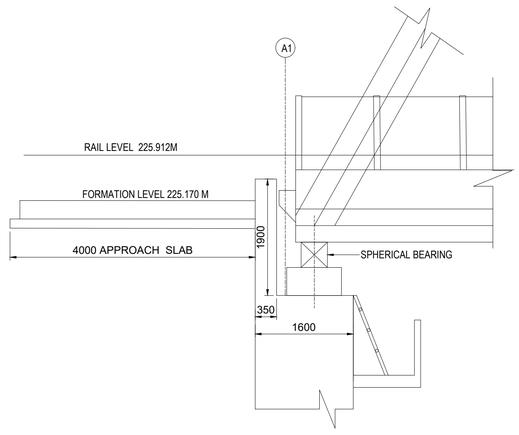
TYPICAL DETAILS OF ABUTMENT

SCALE 1:150



CROSS SECTION AT B-B

SCALE 1:150



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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:

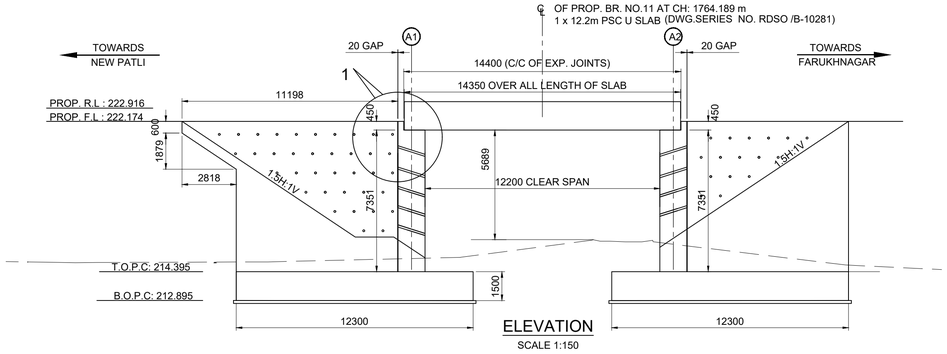
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

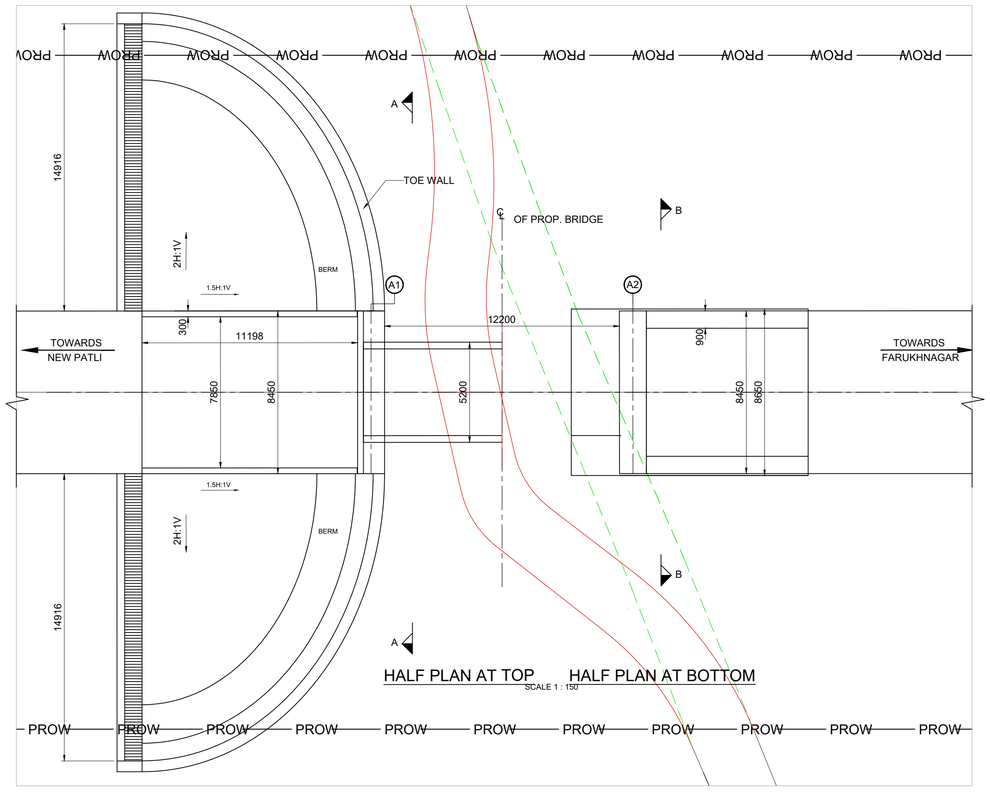
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO. 1 AT CH:951.499 m 1 x 45.7m,OPEN WEB GIRDER(CONNECTING LINE NEW PATLI TO SULTANPUR)

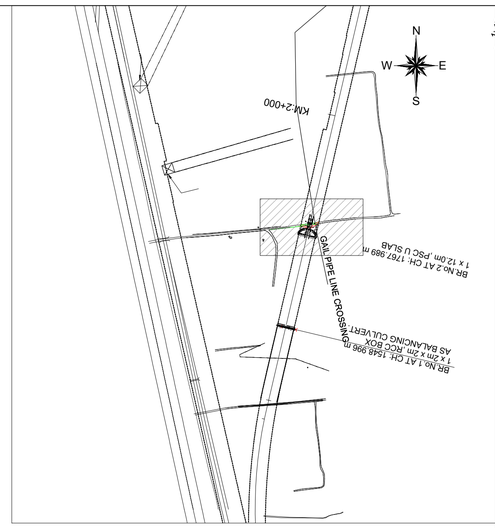
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04001_A0	2 OF 2

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

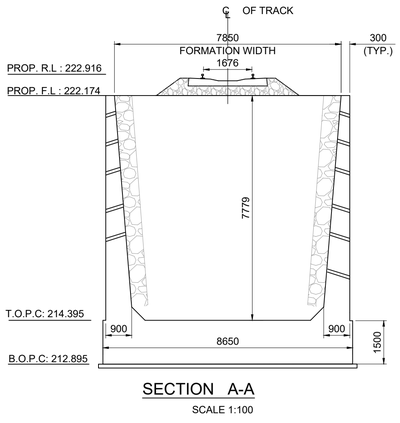


ELEVATION
SCALE 1:150

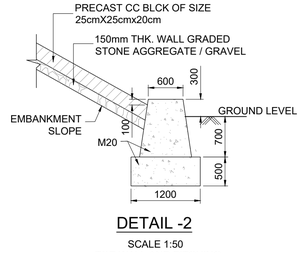




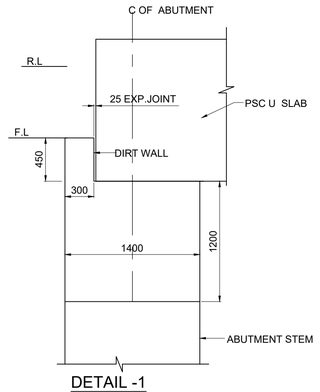
KEY PLAN
SCALE 1:NTS



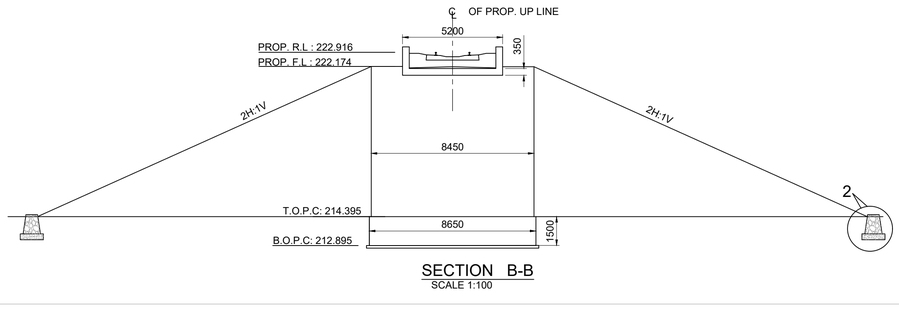
SECTION A-A
SCALE 1:100



DETAIL -2
SCALE 1:50
TOE WALL AND PITCHING



DETAIL -1
SCALE 1:30



SECTION B-B
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 ABUTMENT TO 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.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
———	PROPOSED
- - - -	DISMANTEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

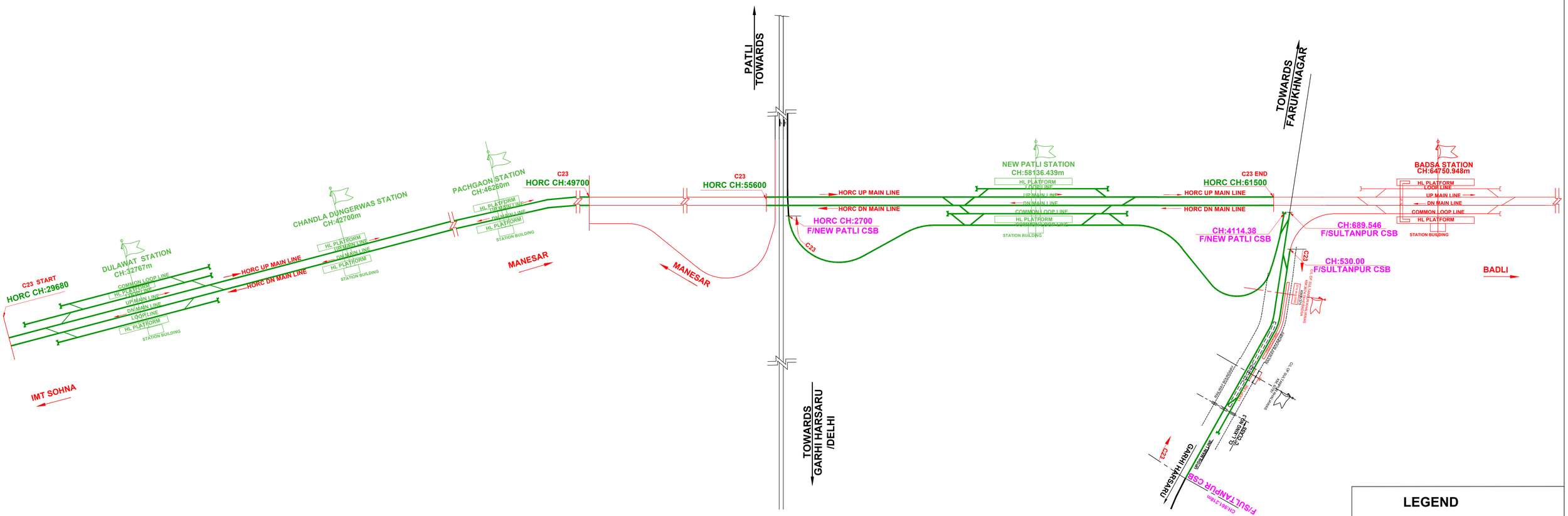
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- 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_A0	1 OF 1

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

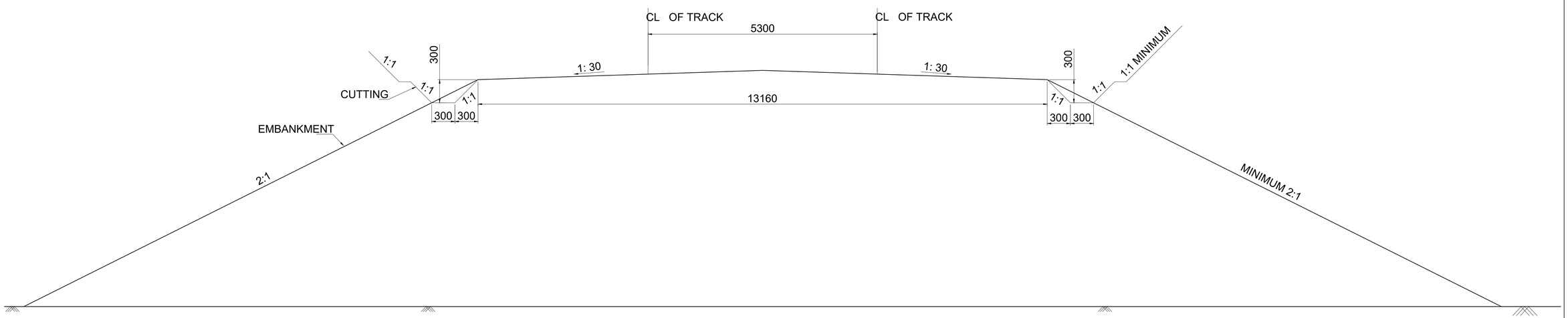
5.MISCELLANEOUS DRAWINGS (CONCEPTUAL PLAN)



LEGEND

WORKS TO BE DONE BY C23 PACKAGE CONTRACTOR	
WORKS TO BE DONE BY OTHER PACKAGE CONTRACTOR	

GC/HORC	HRIDC	TITLE: JURISDICTIONAL SKETCH FOR CIVIL WORKS C-23 PACKAGE	
DPD/ CIVIL	CPM		
CDE/ CIVIL	DGM/ CIVIL	Drawing No.	GC-HRIDC-C23-SK-CIVIL-001_AO



TYPICAL EMBANKMENT/CUTTING PROFILE

NOTE
1. ALL DIMENSION ARE IN MM.
2. CROSS SLOPE OF 1IN 30 SHALL BE PROVIDED.
3. MINIMUM FORMATION WIDTH OF 13160 MM SHALL BE ENSURED IN BOTH EMBANKMENT AND IN CUTTING (EXCLUDING SIDE DRAIN)
4. ON CURVES CENTER TO CENTER DISTANCE BETWEEN TWO TRACK SHALL BE INCREASED AS PER IRSOD.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

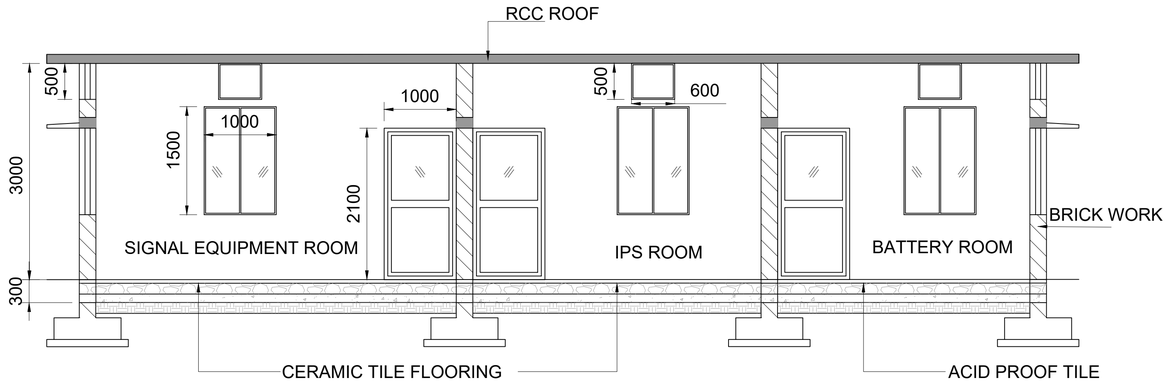
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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:- CONCEPTUAL PLAN
TYPICAL EMBANKMENT/CUTTING PROFILE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-001	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

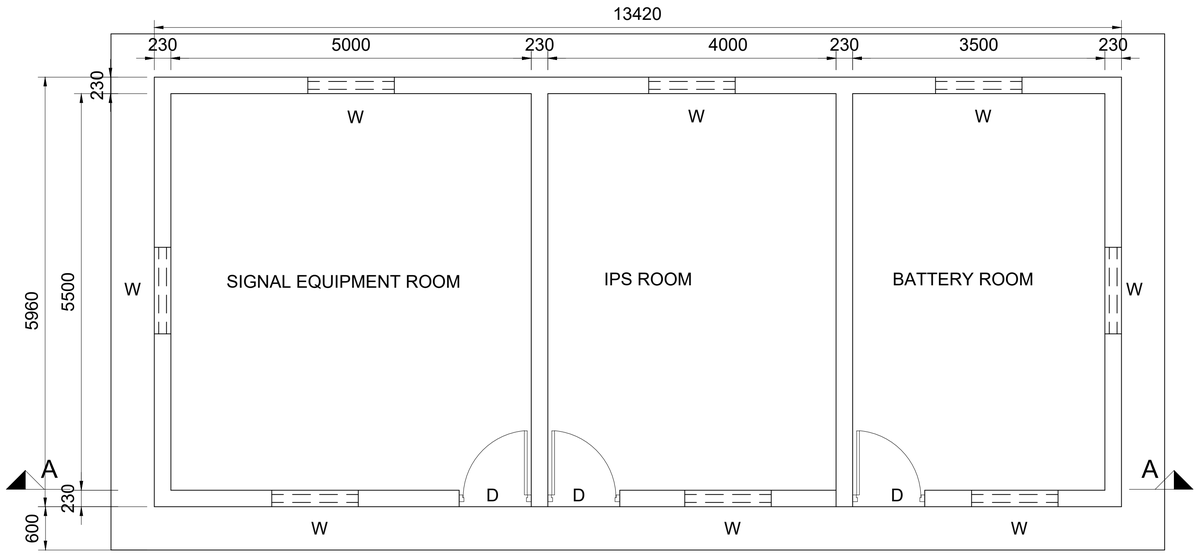


SECTIONAL ELEVATION A-A

SCHEDULE	
DOOR	2100x1000
WINDOW	1000x1500
VENTILATOR	600x500

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.



PLAN

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

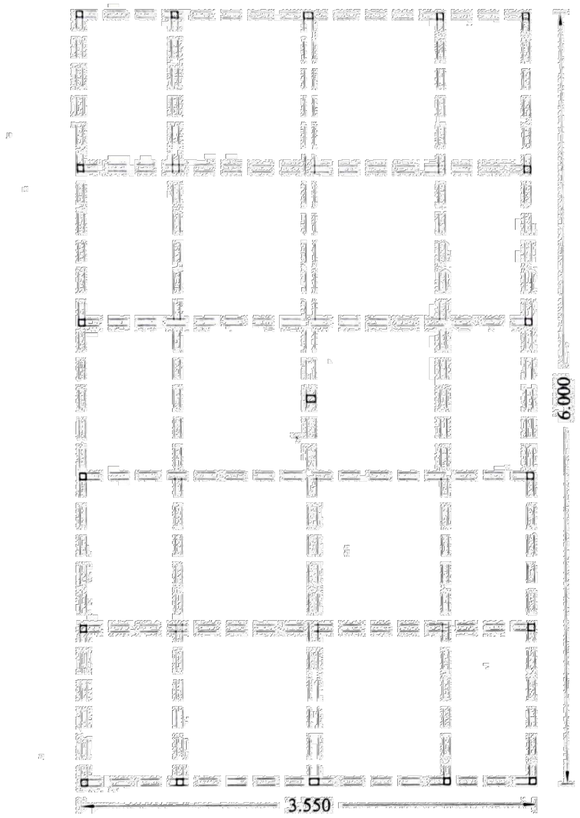
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

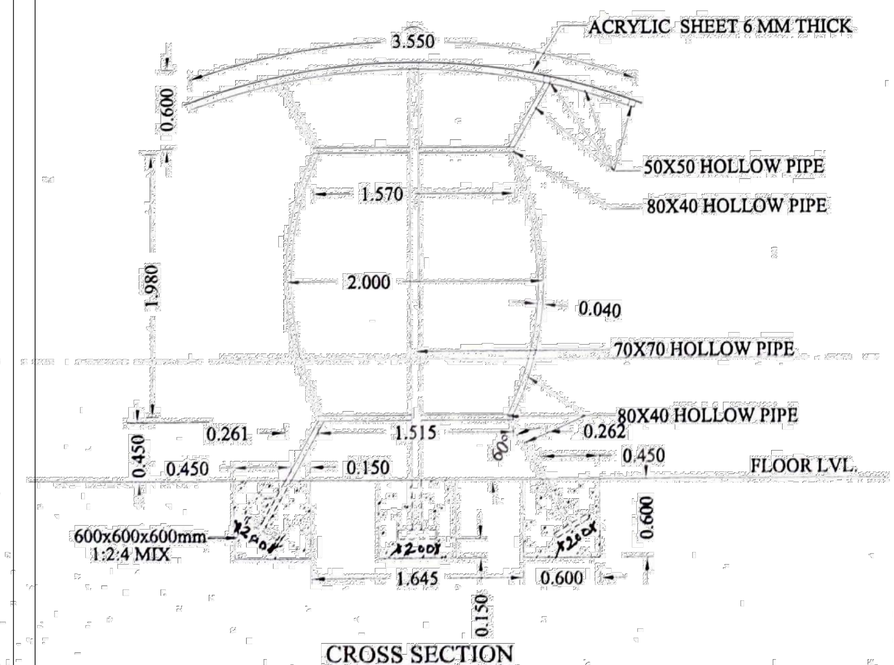
TITLE:- CONCEPTUAL PLAN
S & T HUT

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-002	

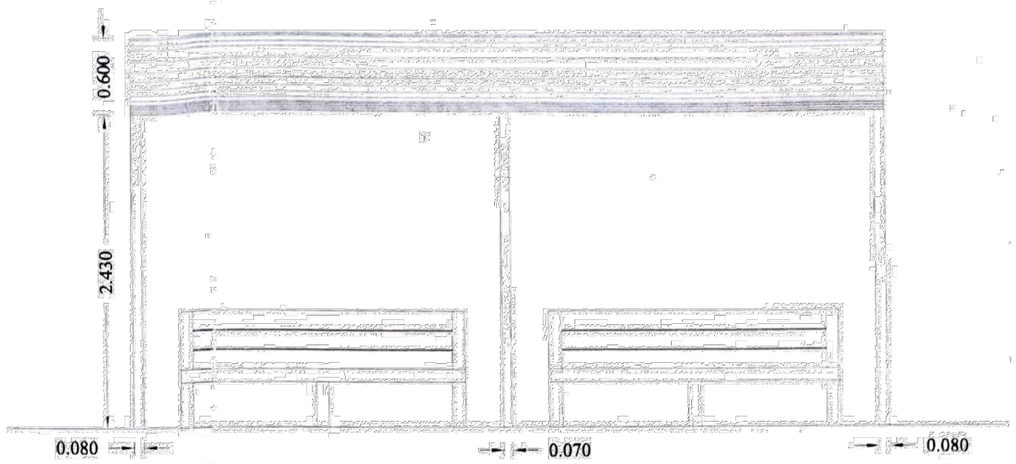
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



PLAN



CROSS SECTION



FRONT VIEW

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 M.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 M.S. shall be used. Size mentioned in the drawing are tentative and shall be as per detailed design.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

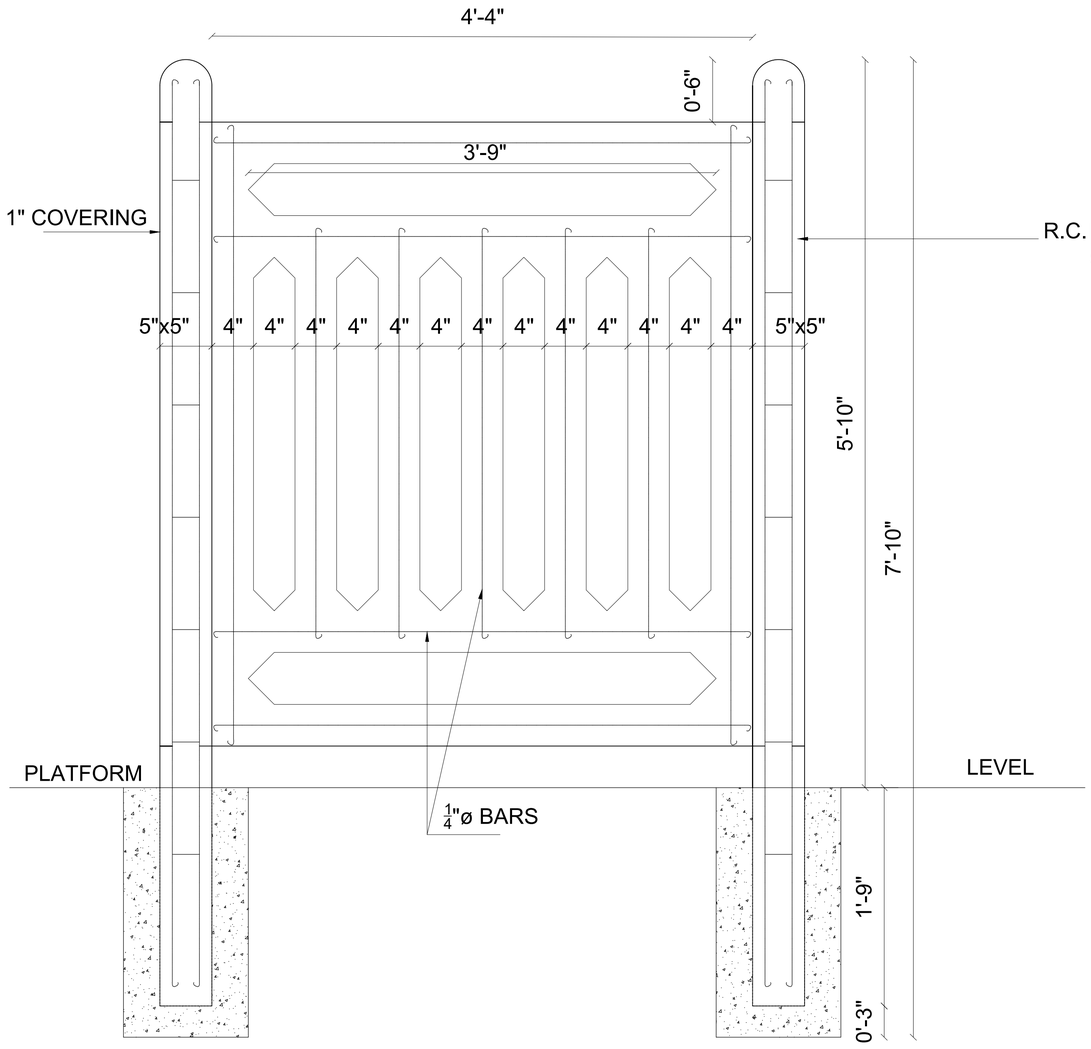
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

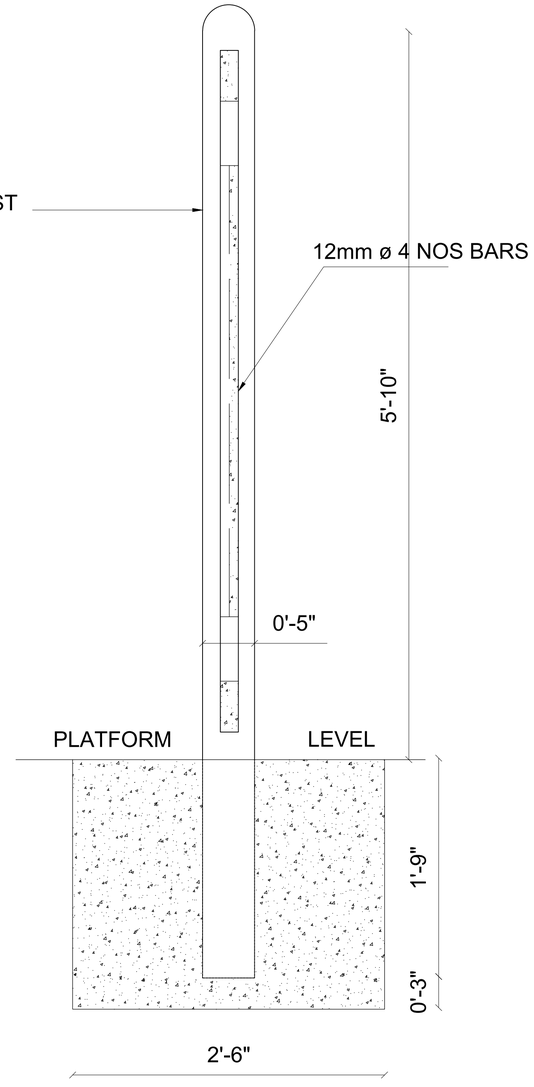
TITLE:- CONCEPTUAL PLAN
MINI PLATFORM SHELTER

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-003	

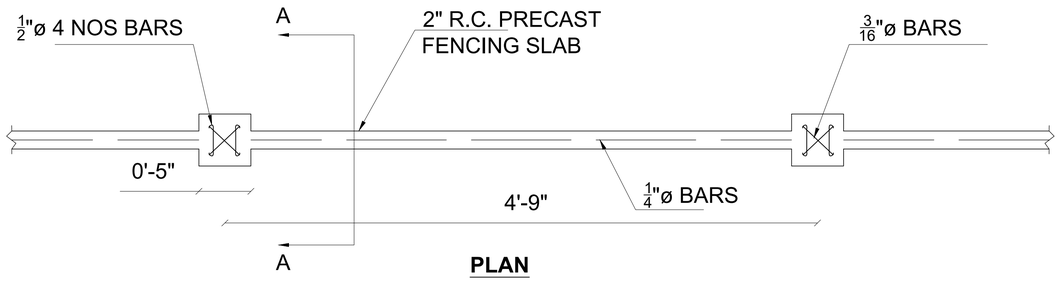
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



ELEVATION



SECTION AT A-A



PLAN

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

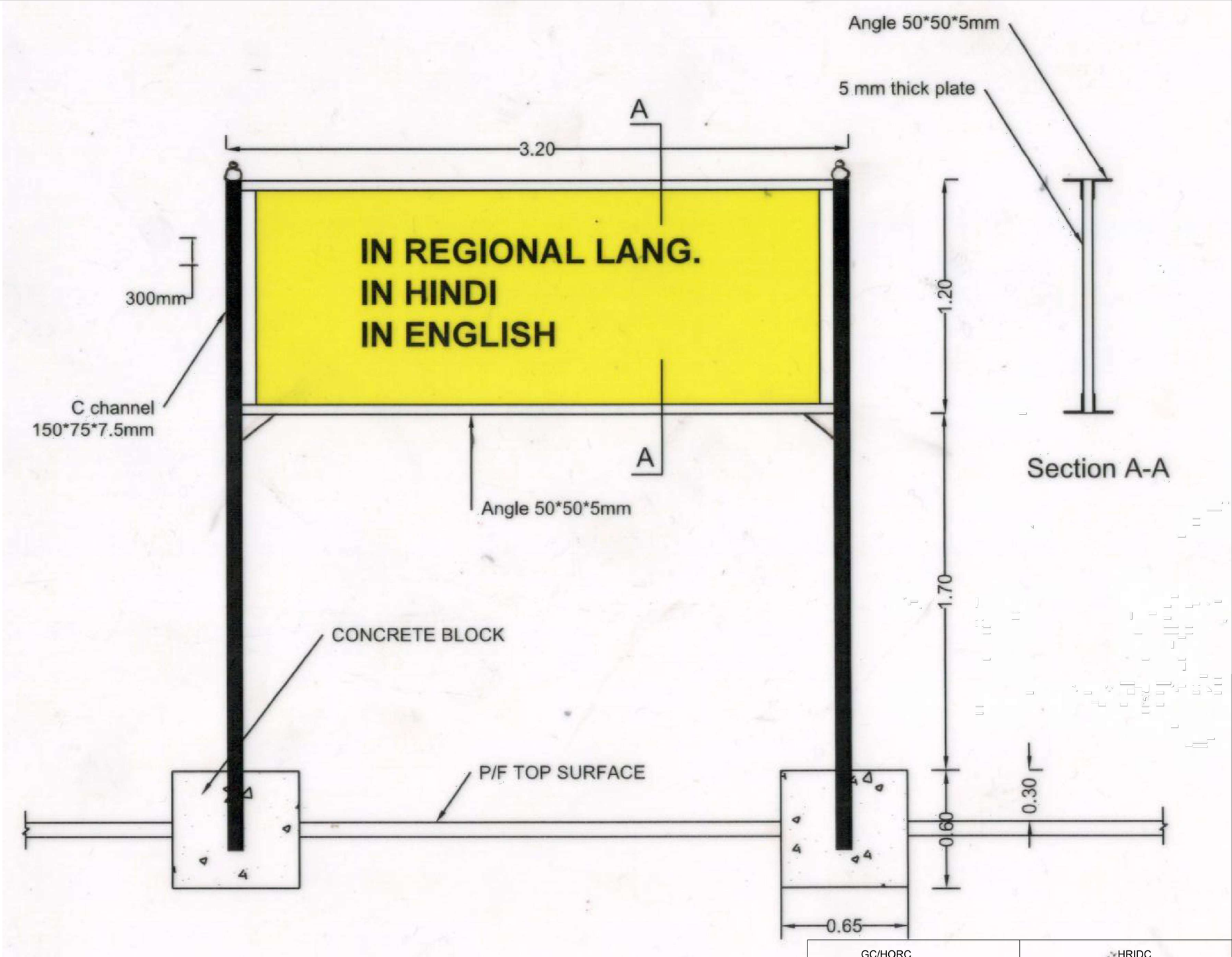
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL PLAN
R.C.PRE-CAST FENCING FOR END PLATFORM

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-004	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



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.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

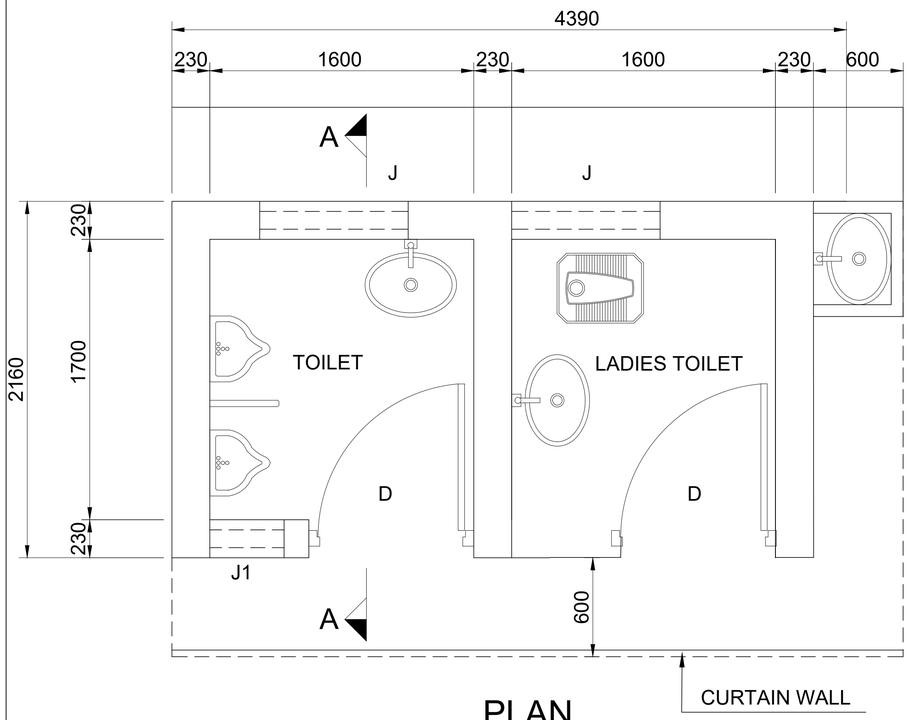
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

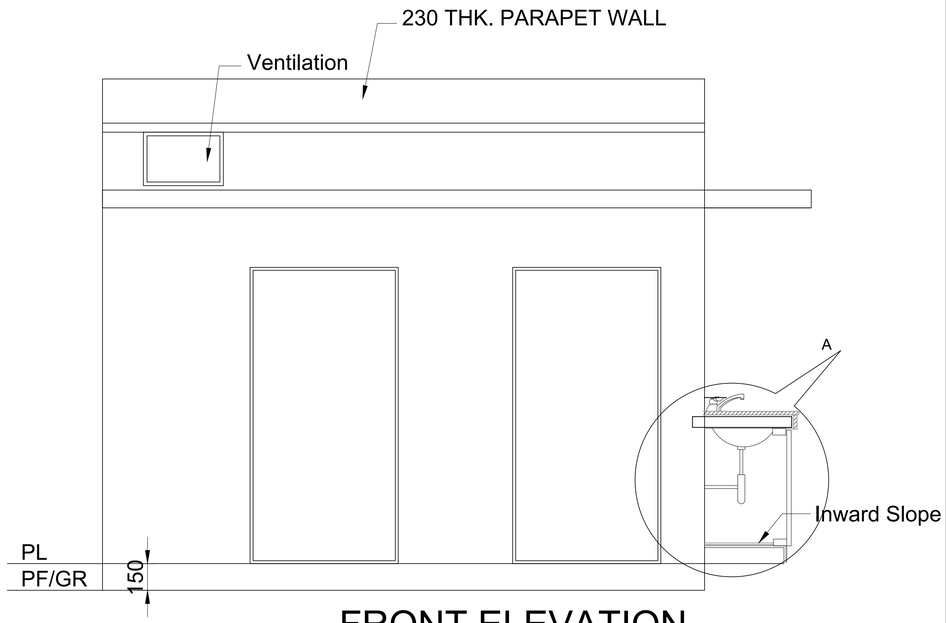
TITLE:- CONCEPTUAL PLAN
STATION NAME BOARD (M.S. STEEL BOARD)

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-005	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



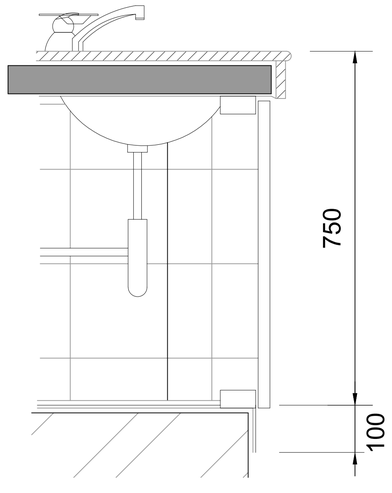
PLAN
(SCALE 1:50)



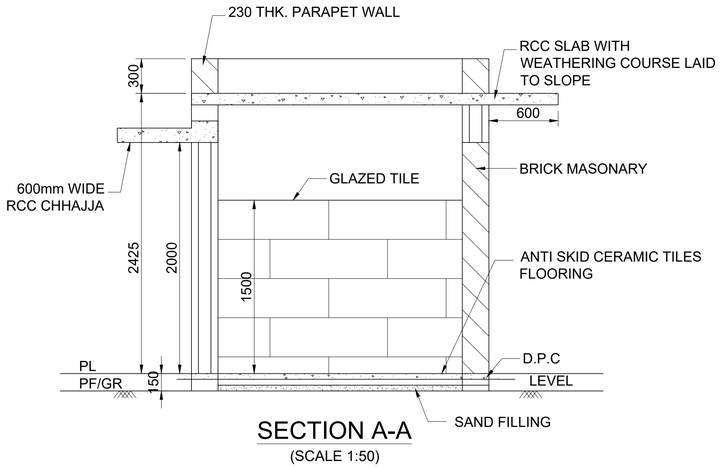
FRONT ELEVATION
(SCALE 1:50)

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FLOORING WITH CERAMIC TILES TO BE PROVIDED.
3. DADO WITH GLAZED TILES OF APPROVED QUALITY FOR A HEIGHT OF 1500MM TO BE PROVIDED INSIDE WC & URINAL.
4. THE FLOOR FOR URINAL SHOULD BE AT THE SAME LEVEL.
5. WHITE GLAZED FLAT BLACK LIPPED URINAL 43X260X350MM SIZE.
6. WHITE GLAZED SQUATTING TYPE URINAL OF SIZE 450X350XMM TO CONFORM IS 771-1963 TO BE PROVIDED.
7. FLUSHING TANK TO BE PROVIDED AS UNDER
   (A) 1. NO. 10 LITER CAPACITY FOR 2/3 URINAL -AUTOMATIC PVC/PORCELAIN TYPE.
8. PLUMBING TO BE CONCEALED.
9. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY.
10. DRAINAGE IS TO BE CONNECTED TO SOAK PIT OF SUITABLE CAPACITY.
11. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).
12. THIS PLAN TO BE ADOPTED FOR OTHER THAN A-1 CLASS STATION.



DETAIL 'A'



SECTION A-A
(SCALE 1:50)

SHEDULE 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 / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

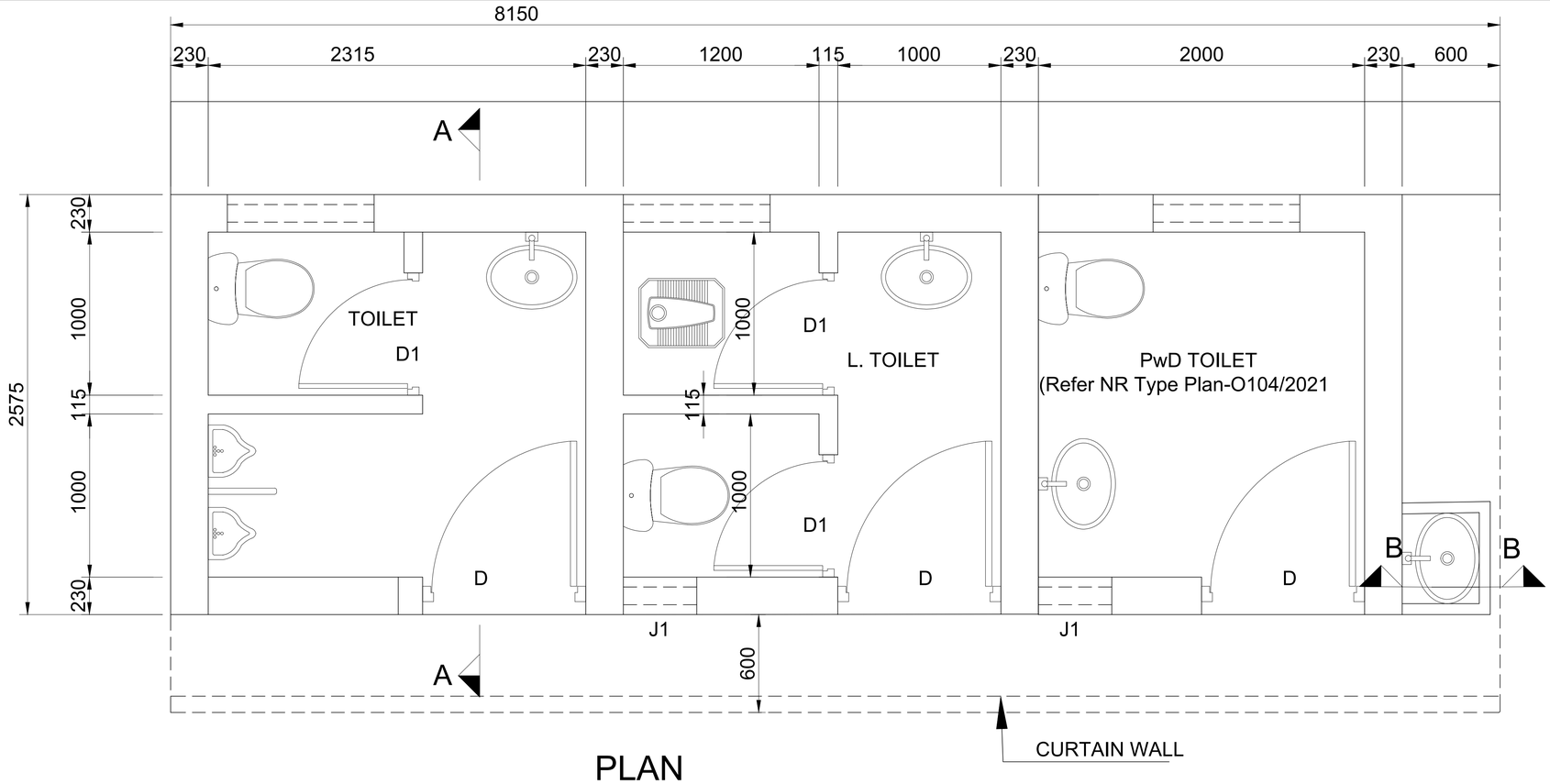
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

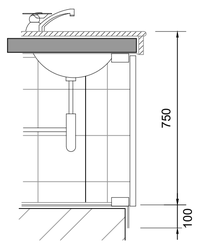
TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON ISLAND PLATFORMS

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-006	

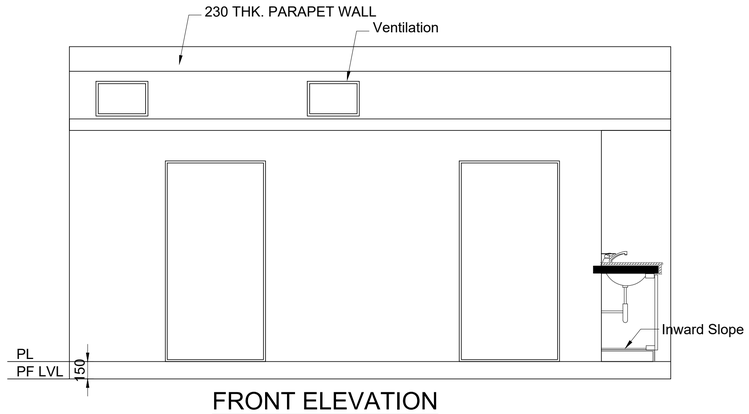
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



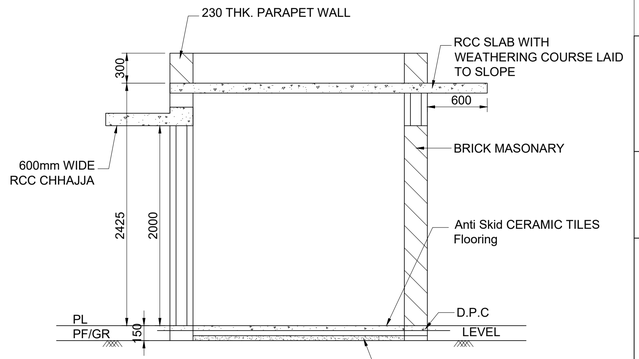
PLAN
(SCALE 1:50)



SECTION B-B



FRONT ELEVATION
(SCALE 1:50)



SECTION A-A
(SCALE 1:50)

SHEDULE 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 MILLIMETERS.
2. FLOORING WITH CERAMIC TILES TO BE PROVIDED.
3. DADO WITH GLAZED TILES OF APPROVED QUALITY FOR A HEIGHT OF 1500MM TO BE PROVIDED IN SIDE WC & URINAL.
4. THE FLOOR FOR WC & URINAL SHOULD AT THE SAME LEVEL.
5. WHITE GLAZED INDIAN TYPE WATER CLOSET (ORISSA PATTERN) OF SIZE 580MM AND 'P' TRAP TO BE PROVIDED.
6. WHITE GLAZED FLAT BLACK LIPPED URINAL 43X260X350MM SIZE TO BE PROVIDED.
7. WHITE GLAZED SQUATTING TYPE URINAL OF SIZE 450X350XMM TO CONFORM IS 771-1963 TO BE PROVIDED.
8. FLUSHING TANK TO BE PROVIDED AS UNDER
   (A) -1 NO. 1250 LITER CAPACITY FOR EACH WATER CLOSET - SUM PVC/PORCELAIN TYPE.
   (B) 1. NO. 10 LITER CAPACITY FOR 2/3 URINAL -AUTOMATIC PVC/PORCELAIN TYPE.
9. PLUMBING TO BE CONCEALED.
10. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY
11. DRAINAGE IS TO BE CONNECTED TO SEPTIC TANK / SOAK PIT SUITABLE CAPACITY.
12. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).
13. THIS PLAN TO BE ADOPTED FOR OTHER THAN A-1 CLASS STATION.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

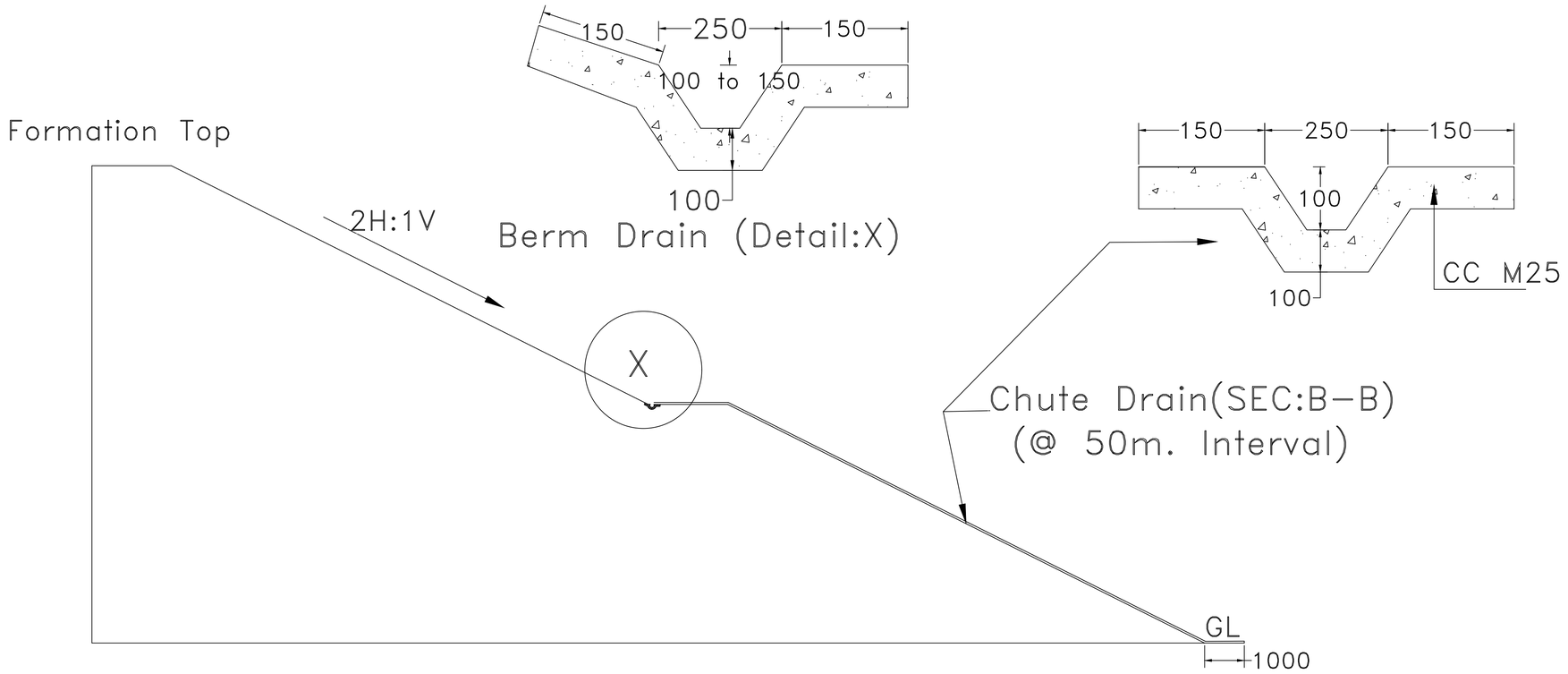
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

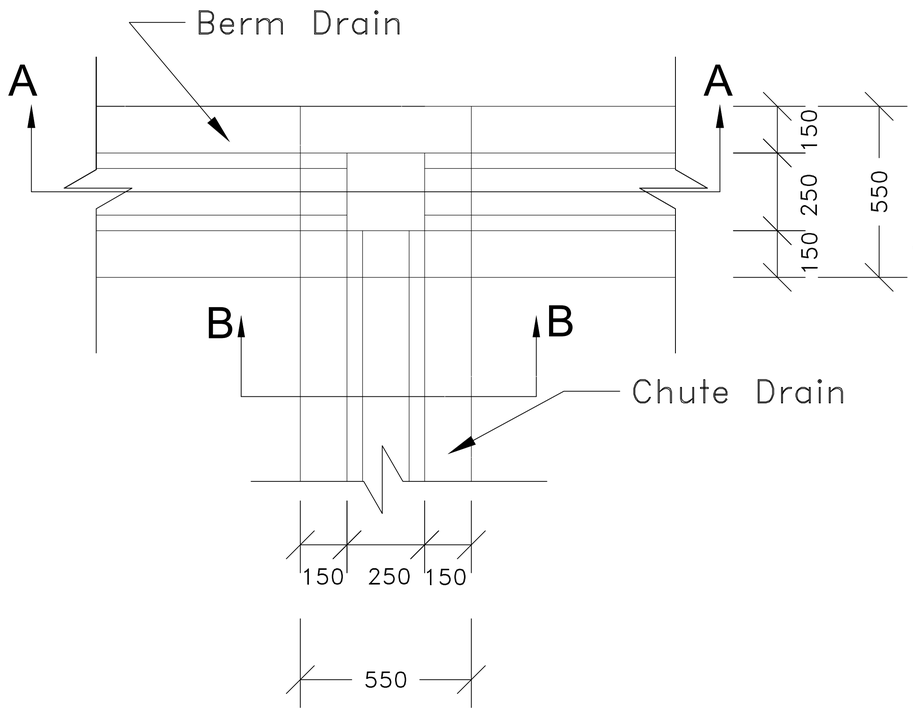
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

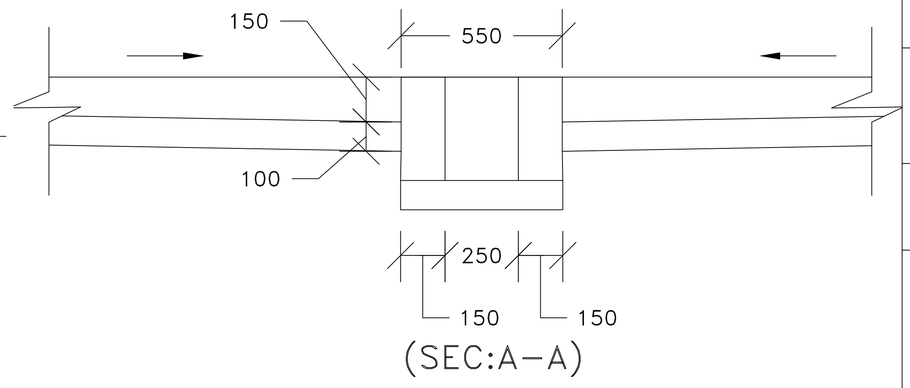
TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON
END PLATFORMS

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-007	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		







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

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

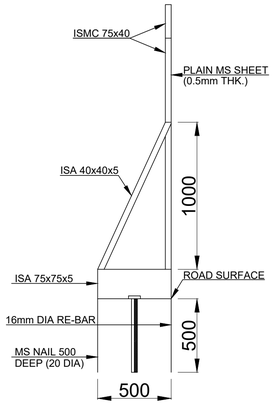
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

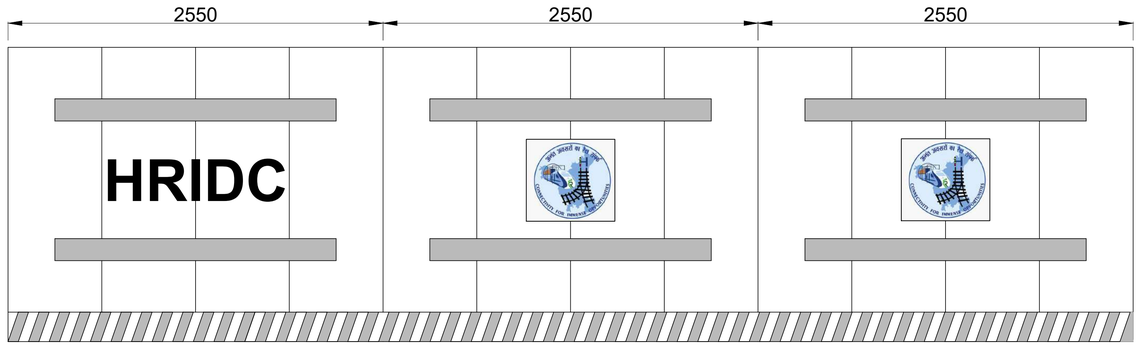
TITLE:- CONCEPTUAL PLAN DRAINS FOR EMBANKMENT

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-008	

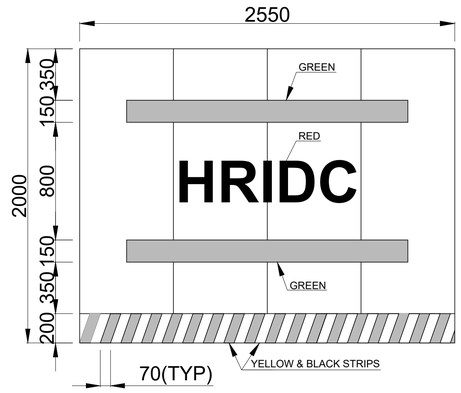
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



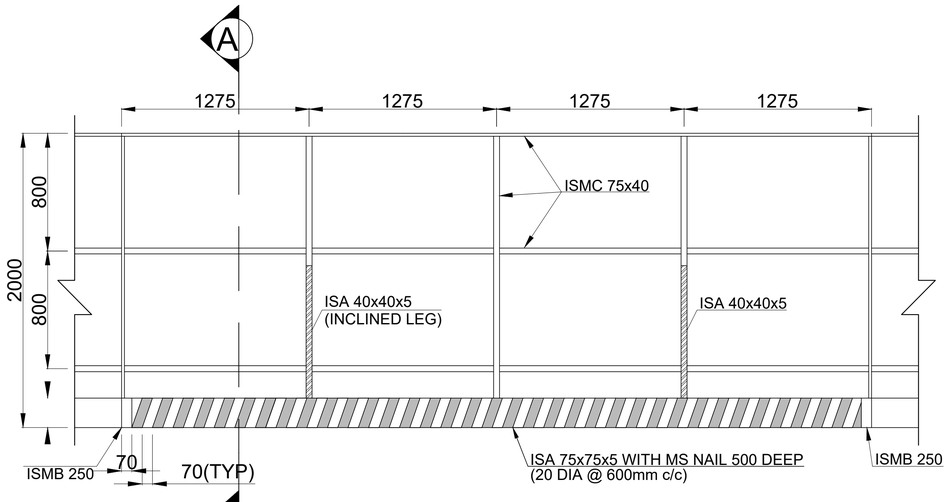
SECTION A-A



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 / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

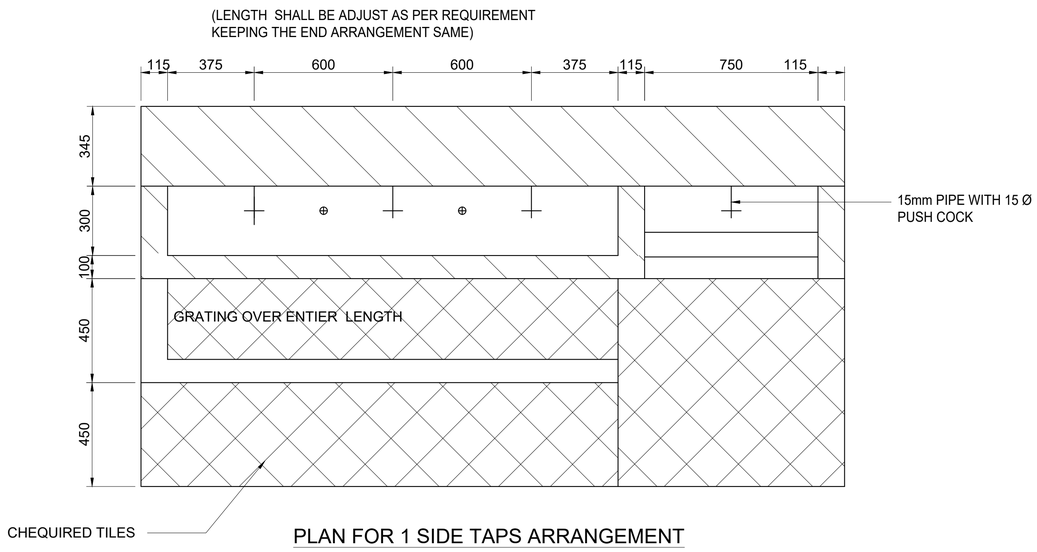
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

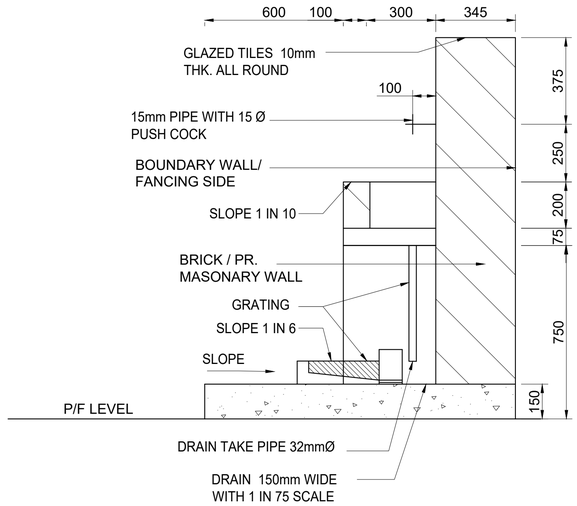
TITLE:- CONCEPTUAL PLAN
STEEL BARRICADE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-009	

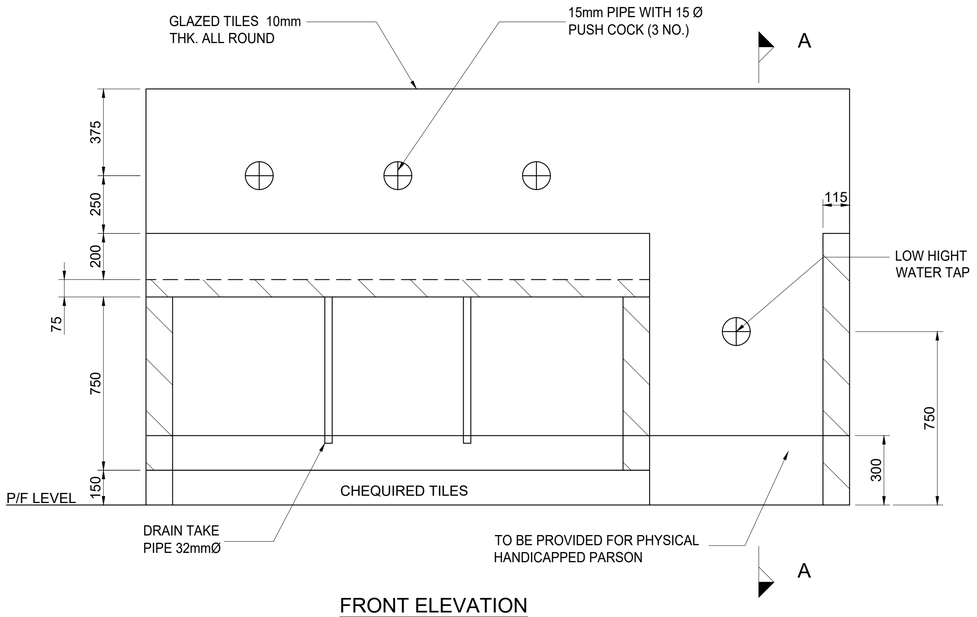
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



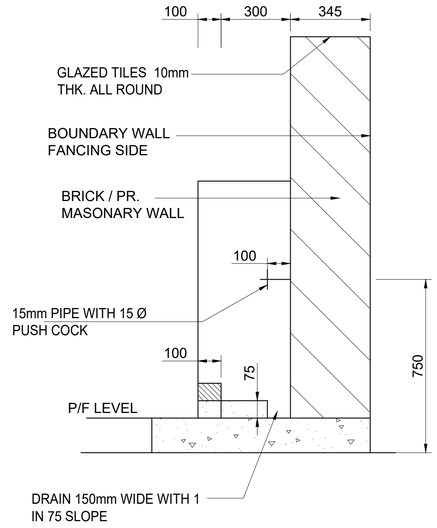
PLAN FOR 1 SIDE TAPS ARRANGEMENT



SECTION FOR ONE SIDE TAPS



FRONT ELEVATION



SECTION AT A-A

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. PUSH COCK SHALL BE CP BRASS 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.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

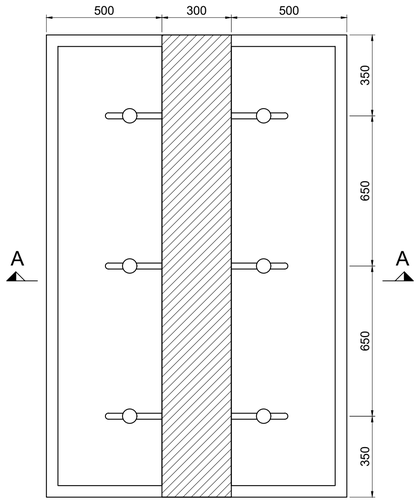
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE | Member of the Surbana Jurong Group

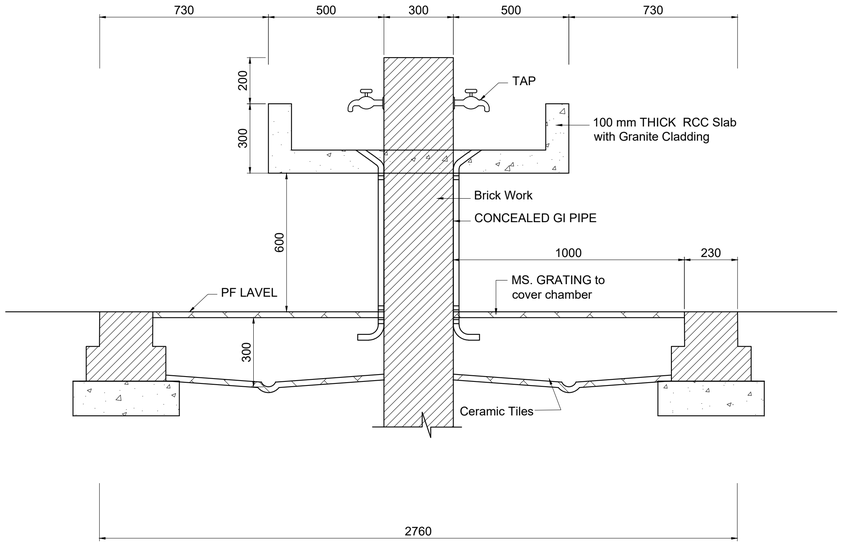
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH ONE SIDE TAPS ARRANGEMENT (END PLATFORM)

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-010	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



PLAN



SECTION A-A

NOTES :

1. ALL DIMENSIONS ARE IN MM .
2. ALL EXPOSED SURFACE SHALL BE OF GRANITE CLADDING
3. PUSH COCK SHALL BE CP BRASS 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 / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

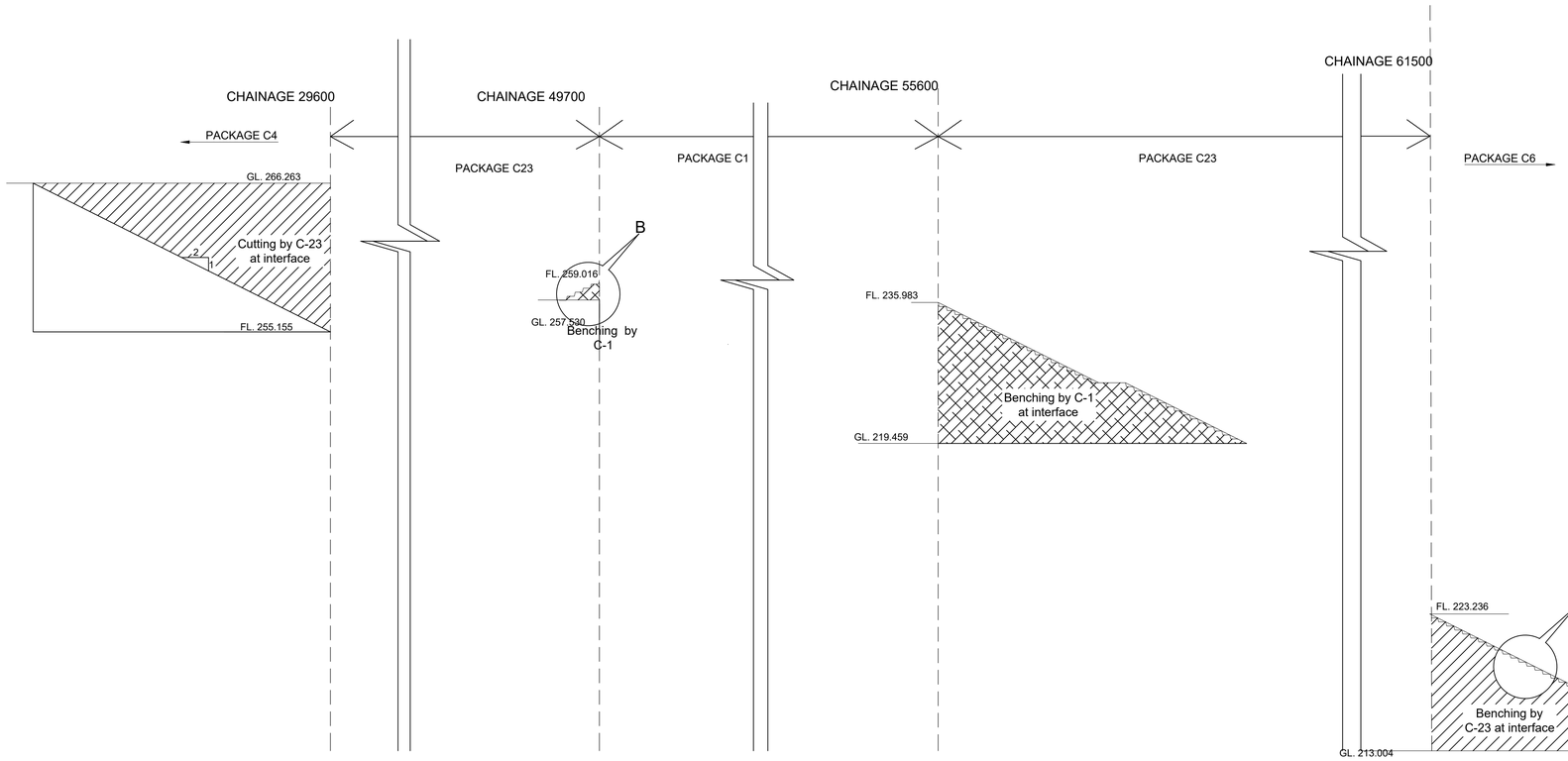
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH BOTH SIDE TAPS ARRANGEMENT (ISLAND PLATFORM)

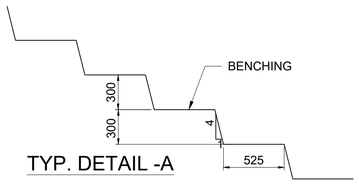
DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-011	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

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





TYP. DETAIL -A

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

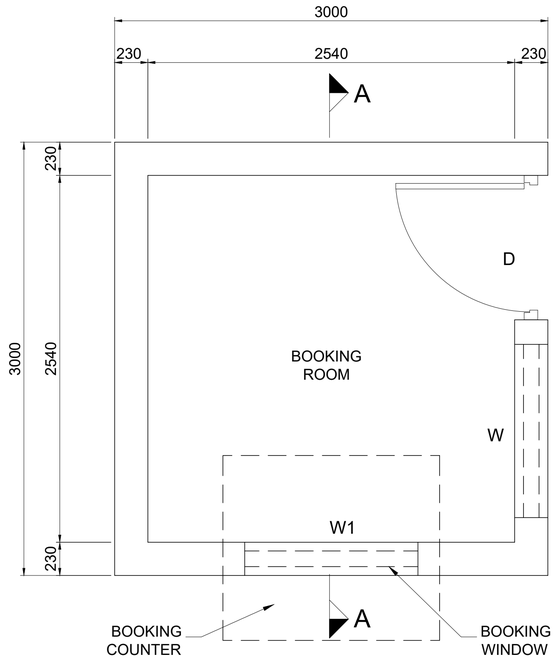
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

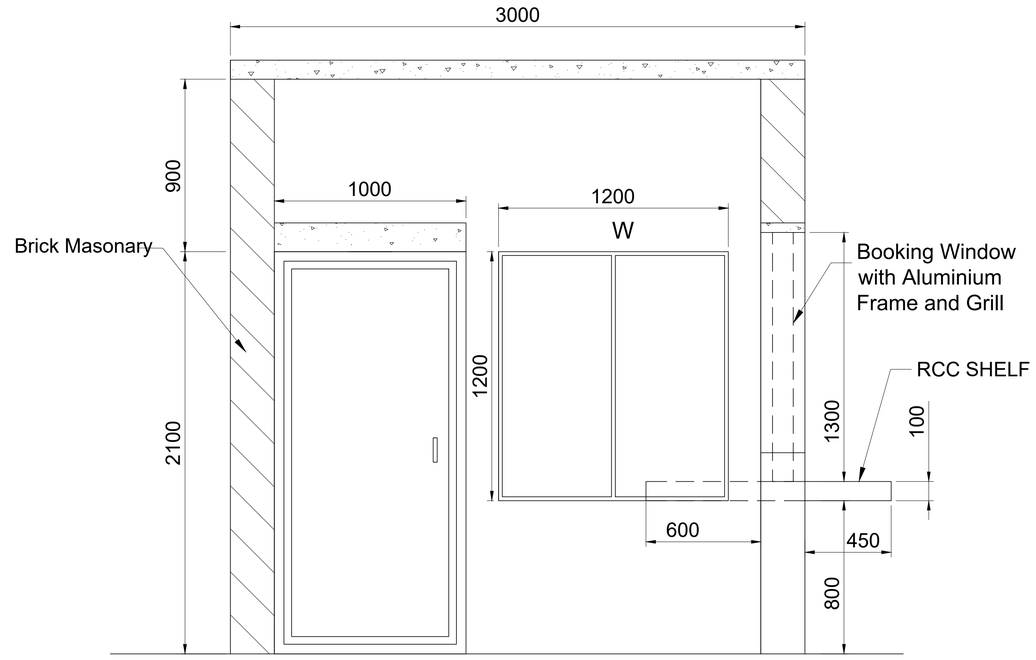
TITLE:- CONCEPTUAL PLAN BANK/CUTTING BENCHING AT INTERFACE LOCATION

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-012	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



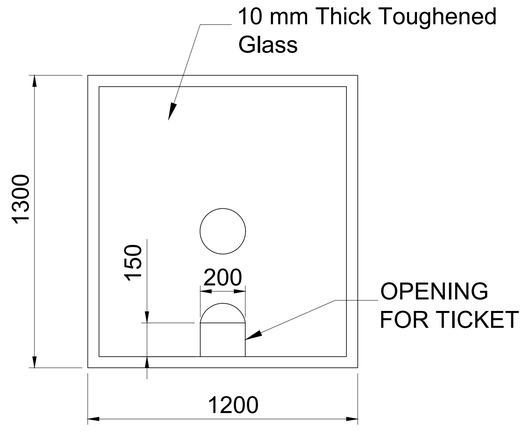
PLAN
(SCALE 1:50)



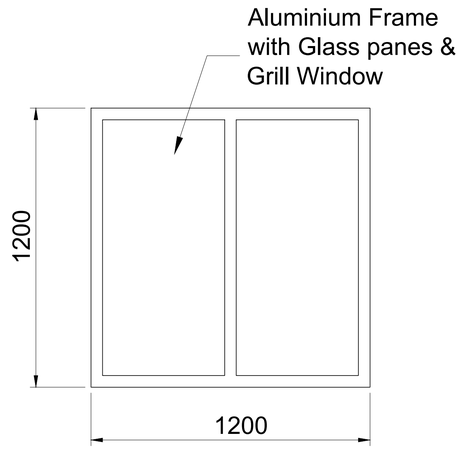
SECTION A-A
(SCALE 1:50)

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.



DETAIL OF WINDOW (W1)
(SCALE 1:50)



DETAIL OF WINDOW (W)
(SCALE 1:50)

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

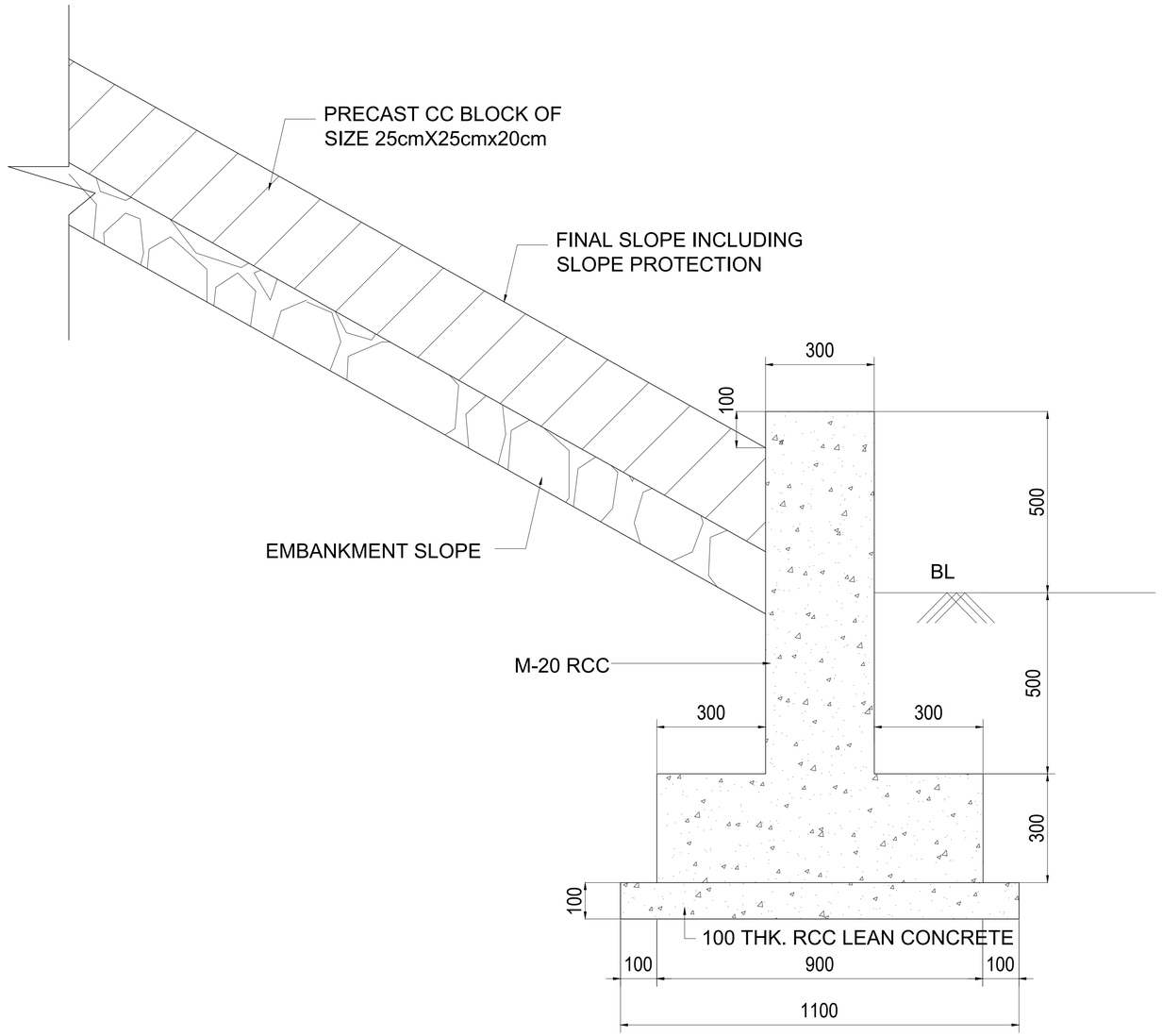
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL PLAN
TICKET COUNTER FOR
NEW PATLI STATION

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-013	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



TOE WALL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE 25cmX25cmx20cm
2. REINFORCEMENT SHALL BE Fe 500 D (TMT) CONFORMING TO IS 1786 - 2008 .
3. DESIGN CRITERIA IS BASED ON THE FOLLOWING IRS CODES :
   i) IRS BRIDGE RULES.
   ii) IRS CONCRETE BRIDGE CODE.
   iii) IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE.
4. LAP SPLICE SHALL BE AS PER CL 15.9.6.6 OF IRS CONCRETE BRIDGE CODE. NOT MORE THAN 50% OF BARS SHALL BE SPLICED AT ONE SECTION.
5. MINIMUM DEVELOPMENT LENGTH / ANCHORAGE LENGTH SHALL BE 52D, WHERE 'D' IS DIA OF BAR.
6. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464kg/sqm. CONFIRMING TO IS-3117.
7. CLEAR COVER FOR REINFORCING BARS SHOULD BE 50mm.
8. TOLERANCE SHALL BE FOLLOWED AS PER IRS CONCRETE BRIDGE CODE.
9. M-20 GRADE CONCRETE SHALL BE USED FOR TOE WALL RCC WORKS.
10. 25MM EXPIATION GAP SHALL BE PROVIDED AT THE 30m OF LENGTH OF RETAINING WALL.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

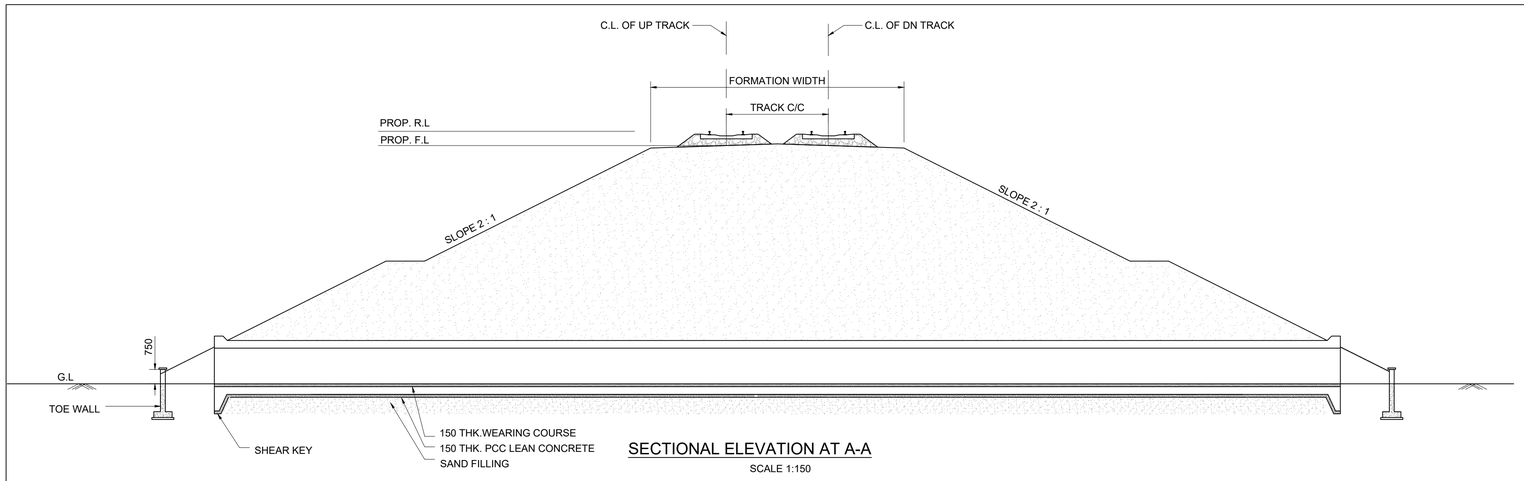
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL PLAN
TOE WALL

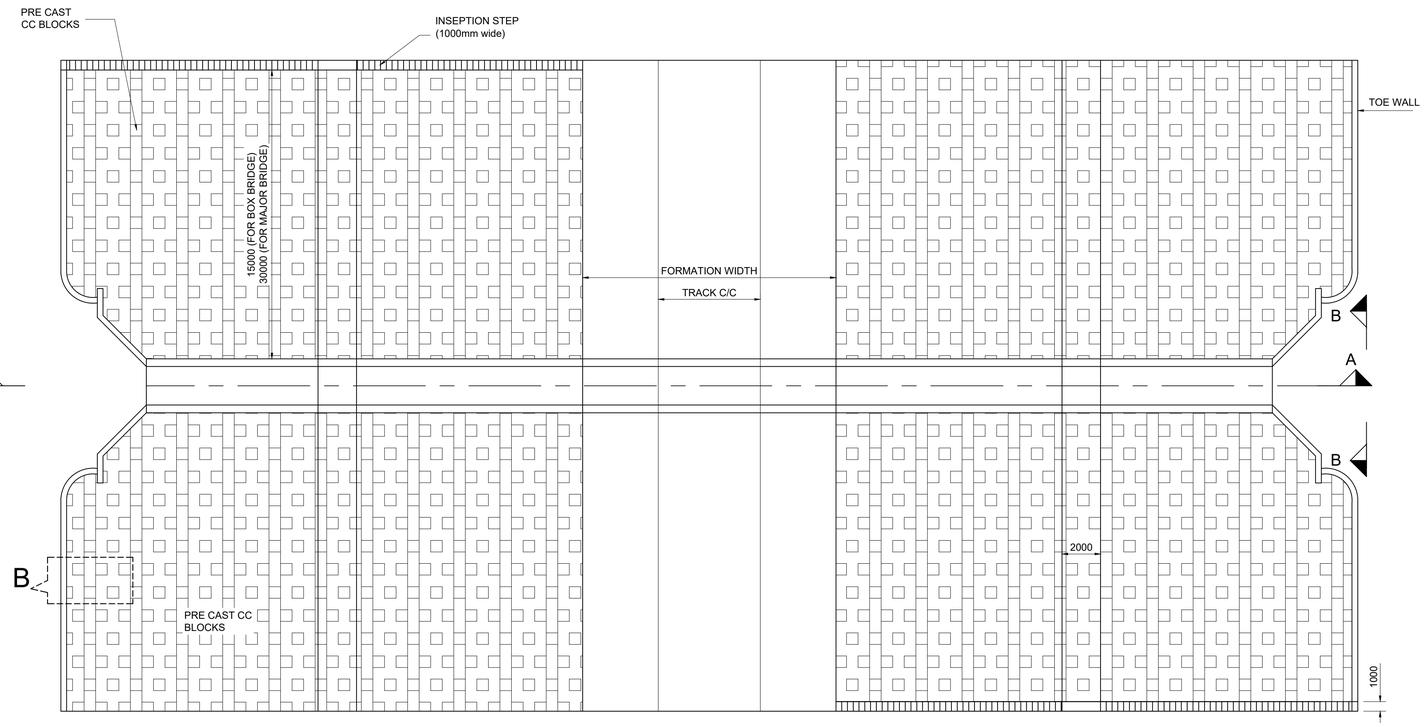
DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-014	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



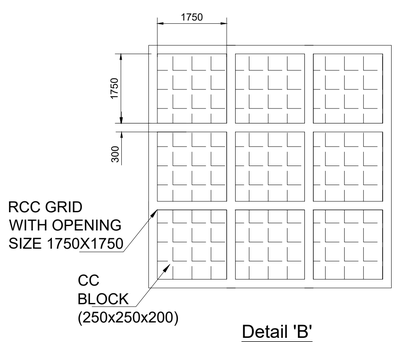
SECTIONAL ELEVATION AT A-A

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

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

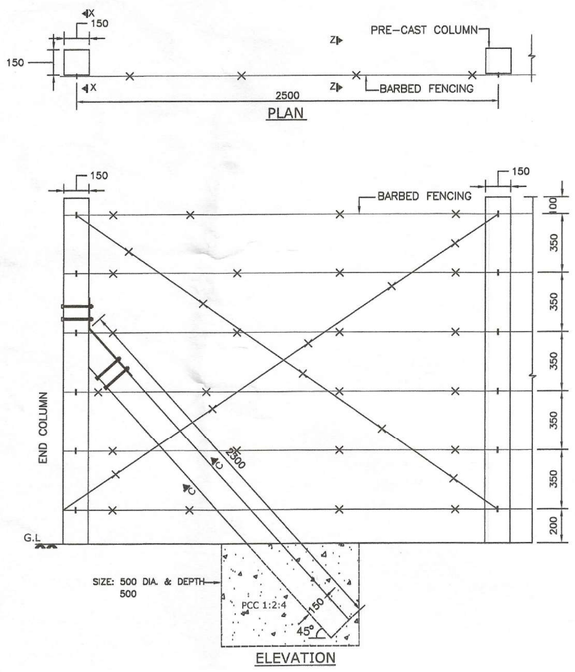
RITES Limited in consortium with SMEC International Pty. Ltd.

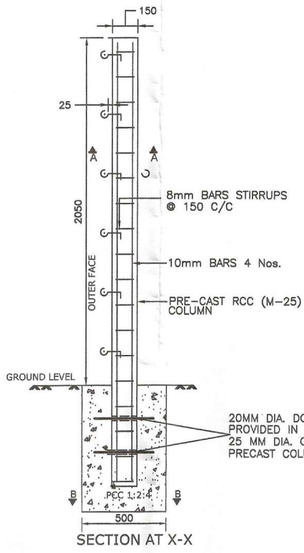
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

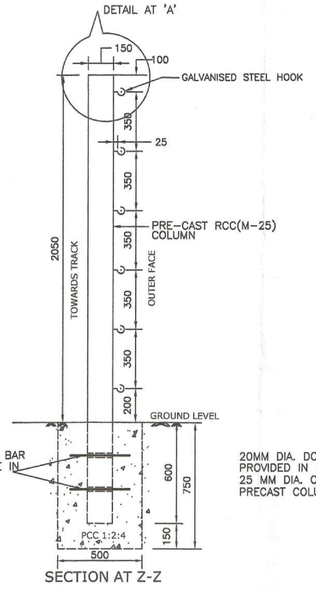
TITLE:- CONCEPTUAL PLAN
TYPICAL DETAILS OF PROTECTION WORK

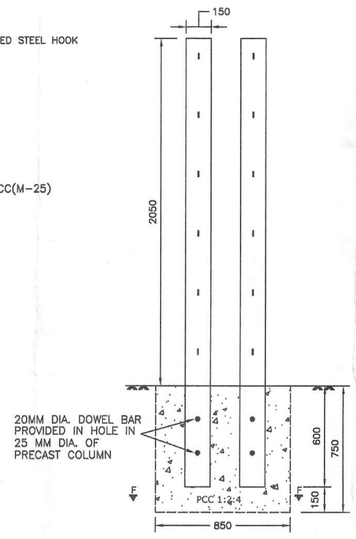
DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-015	

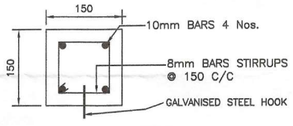
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

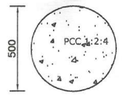


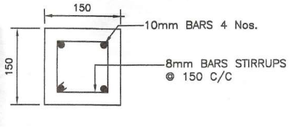


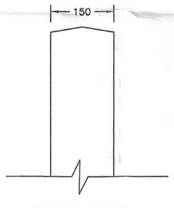


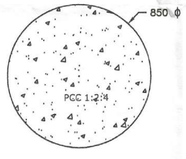


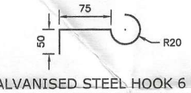








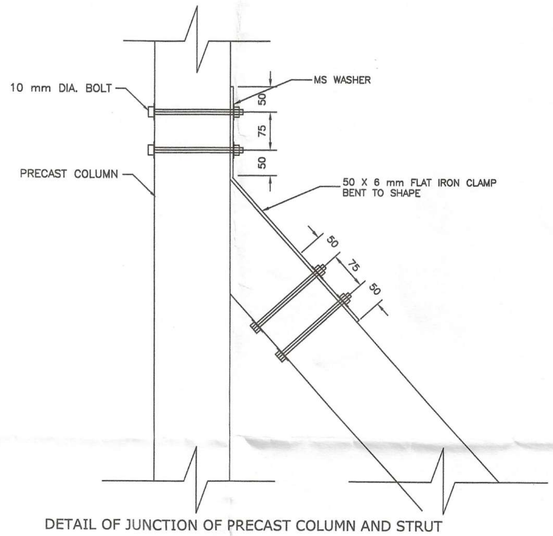




GALVANISED STEEL HOOK 6 mm DIA.
FOR HOLDING BARBED WIRE

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.



DETAIL OF JUNCTION OF PRECAST COLUMN AND STRUT

Notes:

1. THIS DRAWING IS BASED ON RDSO DRAWING NO. RDSO/WKS/2019/2.
2. GRADE OF CONCRETE M25.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

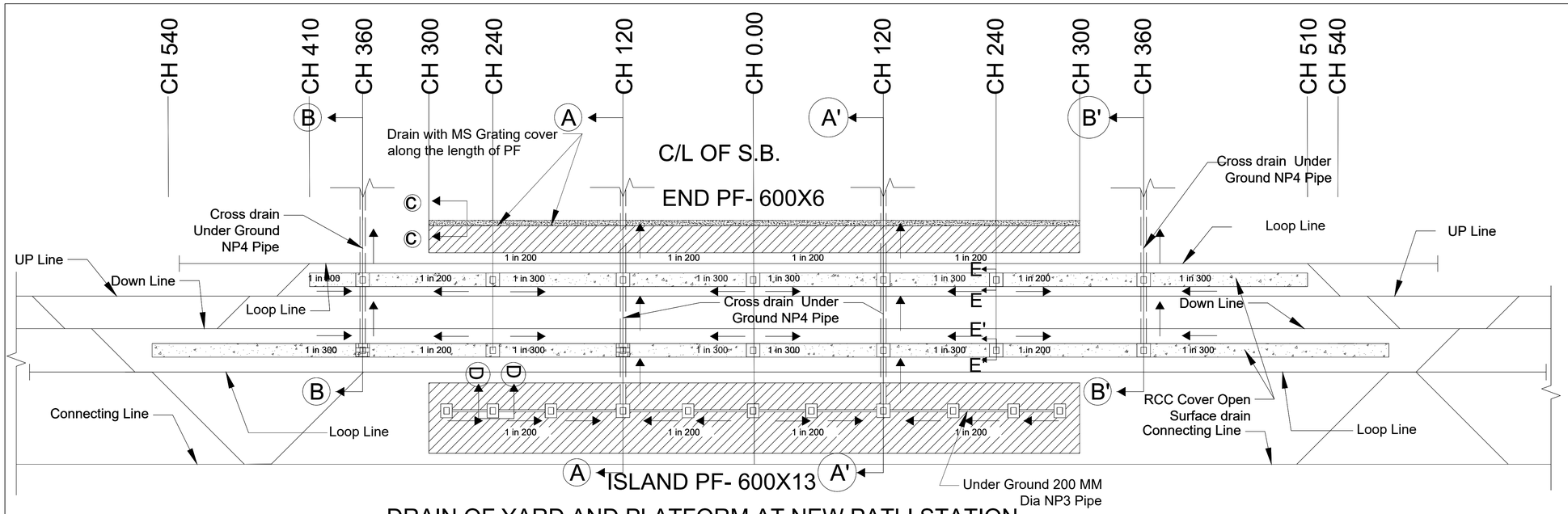
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
BARBED WIRE FENCING

SKETCH NO.	SHEET NO.
GC-HRIDC-SK-GEN-016	1 OF 1

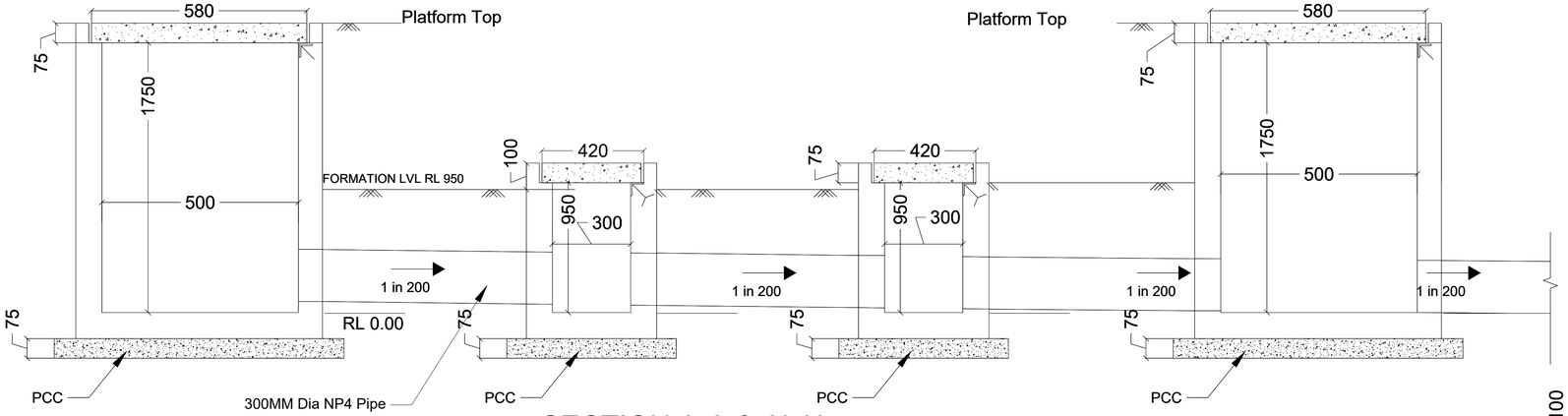
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

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 in slope as specified in the drawing.
4. Drain to be made of RCC.
5. Grade of concrete M25.

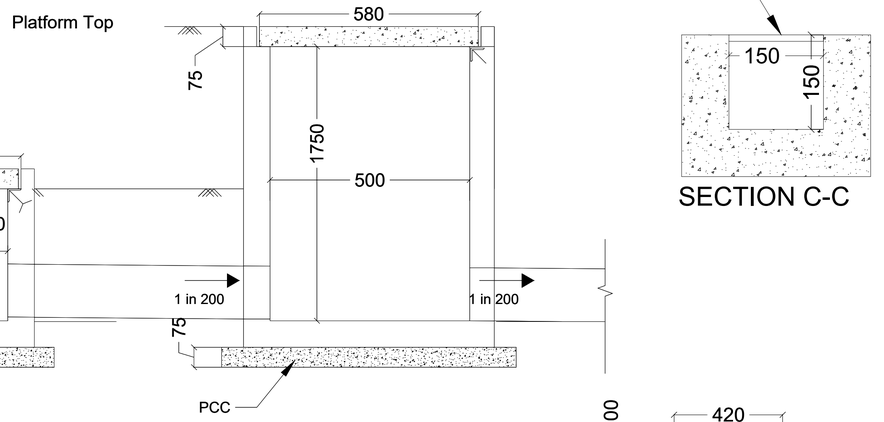


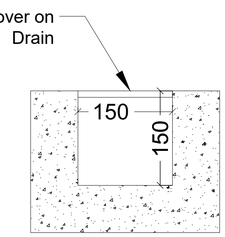
DRAIN OF YARD AND PLATFORM AT NEW PATLI STATION

Legend
RCC COVER OPEN SURFACE DRAIN
PLATFORM AREA
SAUCER DRAIN WITH GRATING
YARD INTERMEDIATE DRAIN

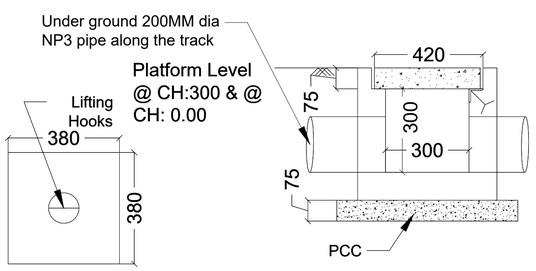


SECTION A-A & A'-A'



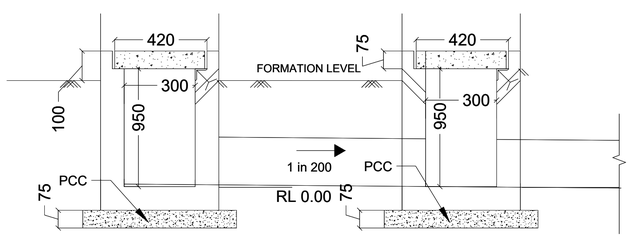


SECTION C-C

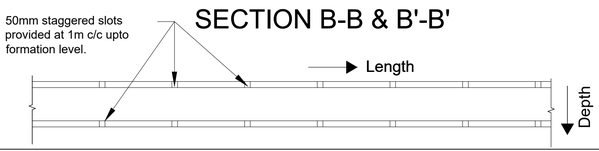


TYP. RCC Cover of Platform Drain

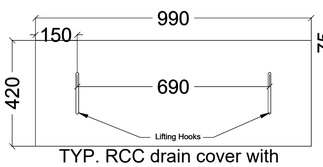
Platform Intermediate Drain Chamber SECTION D-D



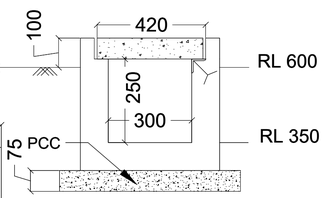
SECTION B-B & B'-B'



Formation Level @ CH:240 & @ CH: 0.00



TYP. RCC drain cover with lifting arrangement



SECTION- E-E &E'-E'

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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

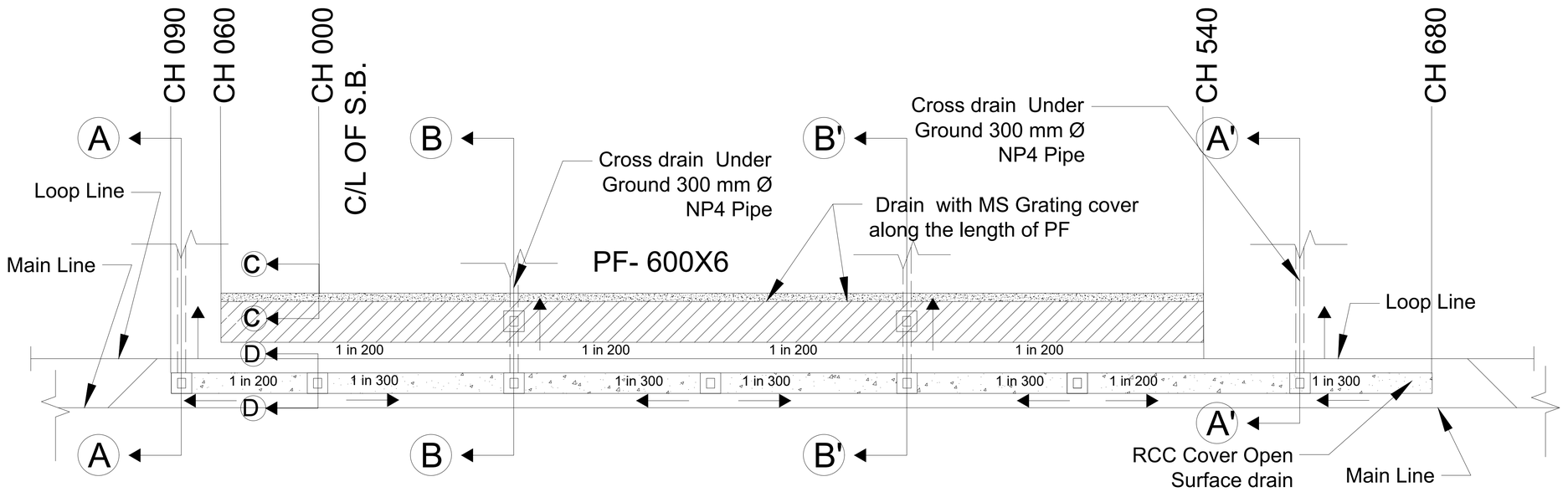
TITLE:- CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (NEW PATLI)

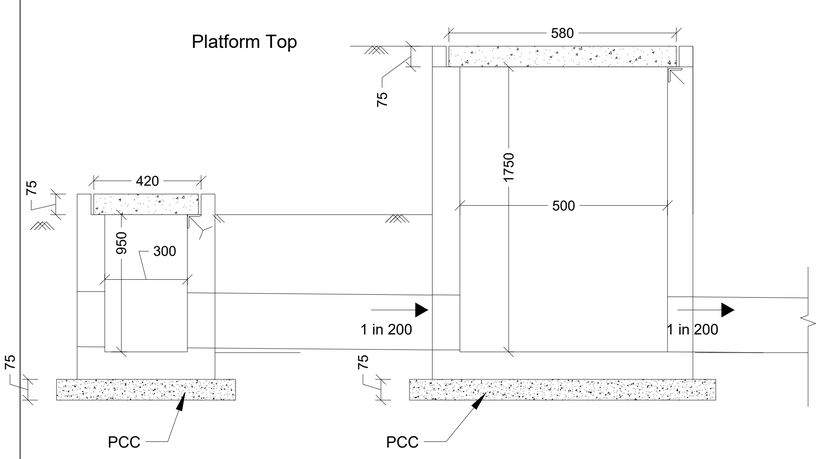
DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-002	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

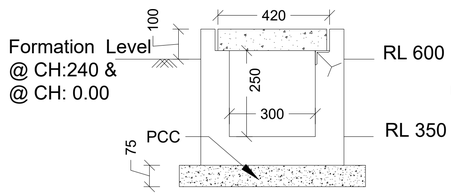
DRAIN OF YARD AND PLATFORM AT SULTANPUR STATION

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 in slope as specified in the drawing.
4. Drain to be made of RCC.
5. Grade of concrete M25.

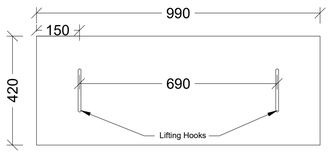




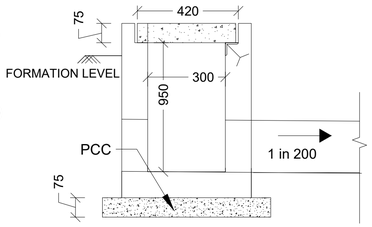
SECTION B-B & B'-B'



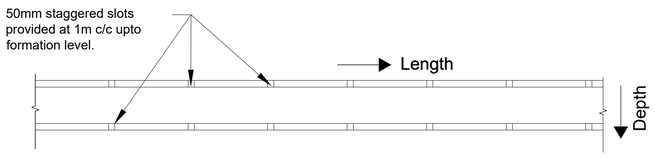
Yard Intermediate Drain
SECTION- D-D

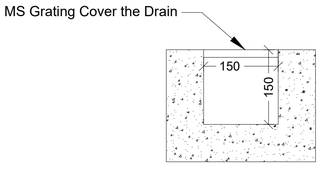


TYP. RCC drain cover lifting arrangement



SECTION A-A & A'-A'





SECTION C-C

Legend

	RCC COVER OPEN SURFACE DRAIN
	PLATFORM AREA
	SAUCER DRAIN WITH GRATING
	YARD INTERMEDIATE DRAIN

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

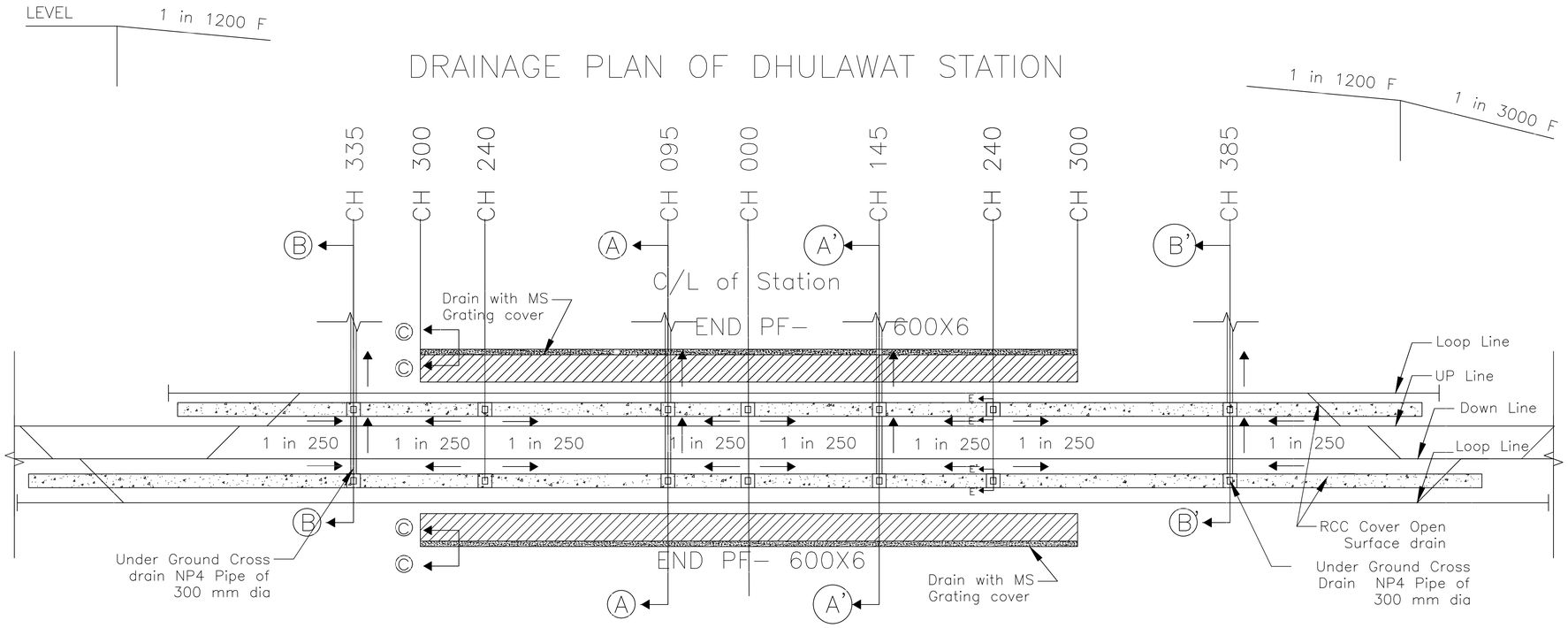
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-003	

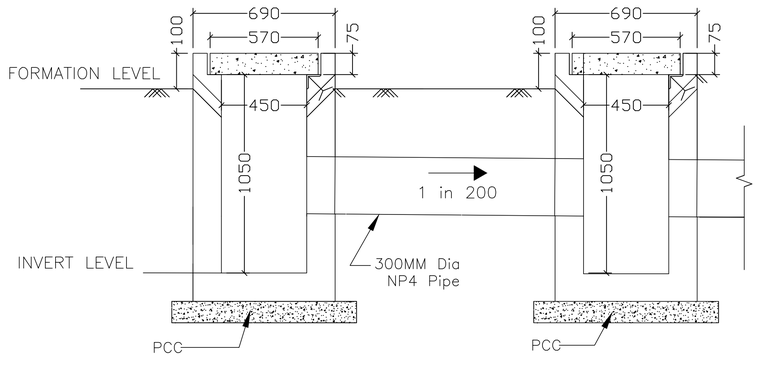
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

DRAINAGE PLAN OF DHULAWAT STATION

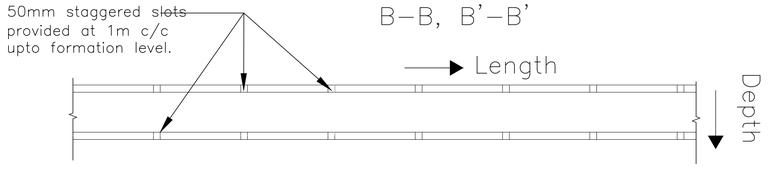


YARD AND PLATFORM DRAINAGE PLAN

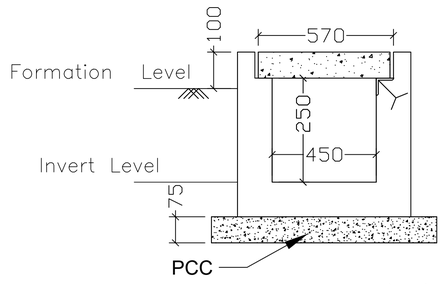
Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.
5. Suitable size RCC Chute drain to be provided about 50 m C/C to discharge water from under ground cross drains and pf drains.



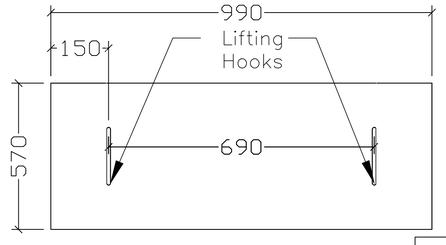
SECTION– A–A, A'–A', B–B, B'–B'



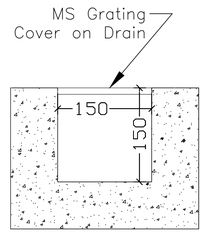
CHAINAGE	0	-95	145
FRL	0	79	-121
DRAIN SLOPE	LEVEL	RISE 1 IN 250	FALL 1 IN 250
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-380	-580
TOTAL DEPTH	-250.000	-709.167	-709.167



SECTION– E–E, E'–E'



TYP. RCC drain cover with lifting arrangement



SECTION C–C

Legend	
	RCC COVER OPEN SURFACE DRAIN
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	YARD INTERMEDIATE DRAIN

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

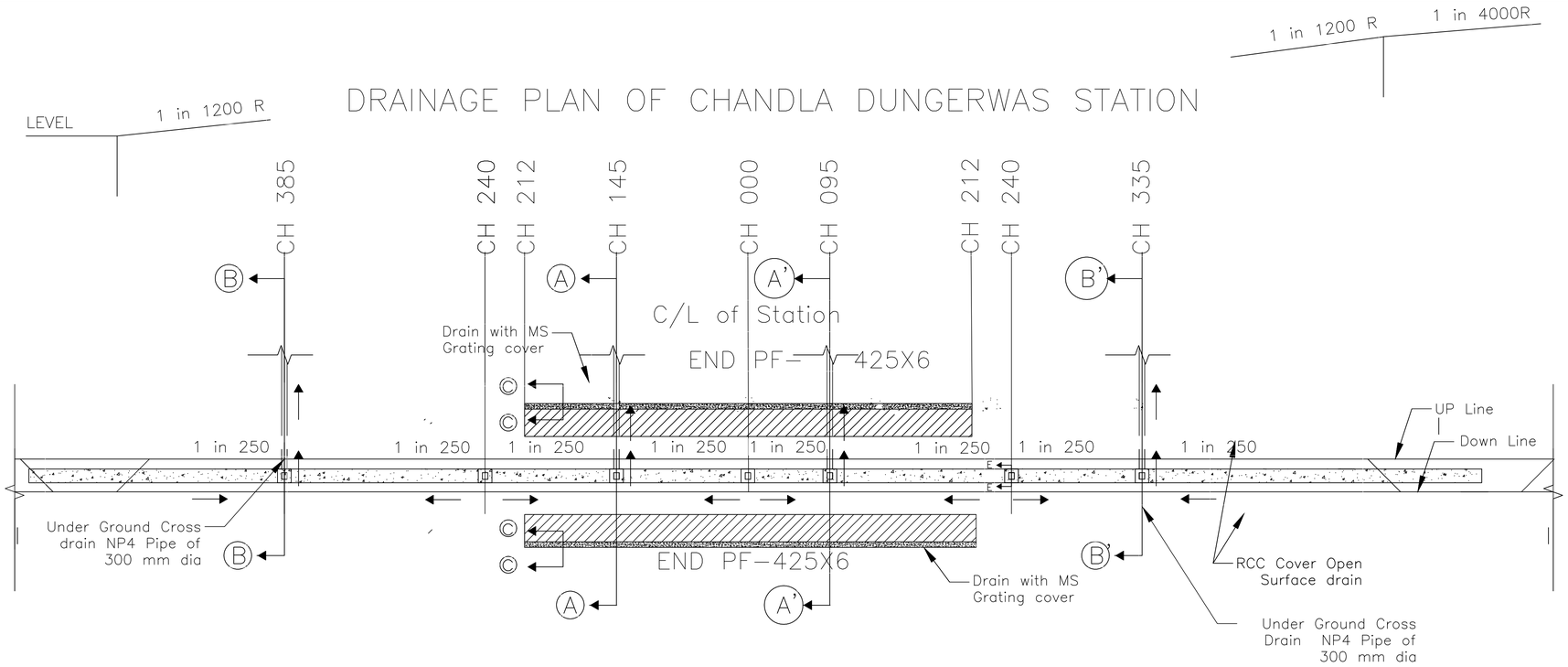
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (DHULAWAT)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-004	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

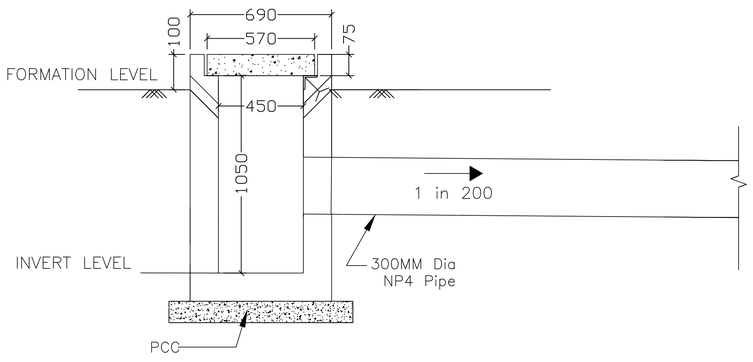
DRAINAGE PLAN OF CHANDLA DUNGERWAS STATION



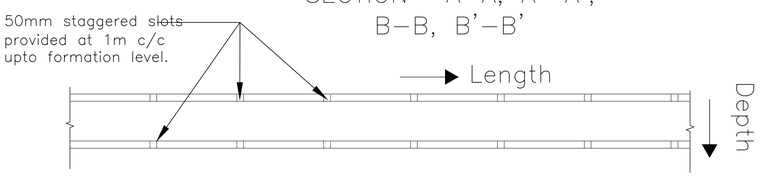
YARD AND PLATFORM DRAINAGE PLAN

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.
5. Suitable size RCC Chute drain to be provided about 50 m C/C to discharge water from under ground cross drains and pf drains.

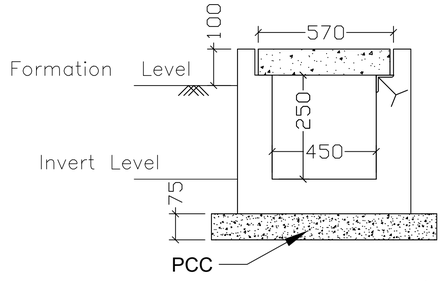
Legend	
	RCC COVER OPEN SURFACE DRAIN
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	YARD INTERMEDIATE DRAIN



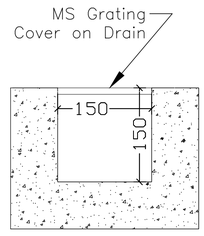
SECTION– A–A, A'–A', B–B, B'–B'



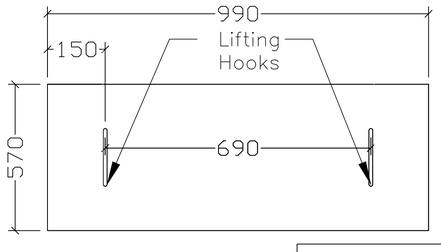
CHAINAGE	0	-145	95
FRL	0	-121	79
DRAIN SLOPE	LEVEL	RISE @ 1 IN 250	FALL @ 1 IN 250
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-580	-380
TOTAL DEPTH	-250.000	-709.167	-709.167



SECTION– E–E, E'–E'



SECTION C–C



TYP. RCC drain cover with lifting arrangement

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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.

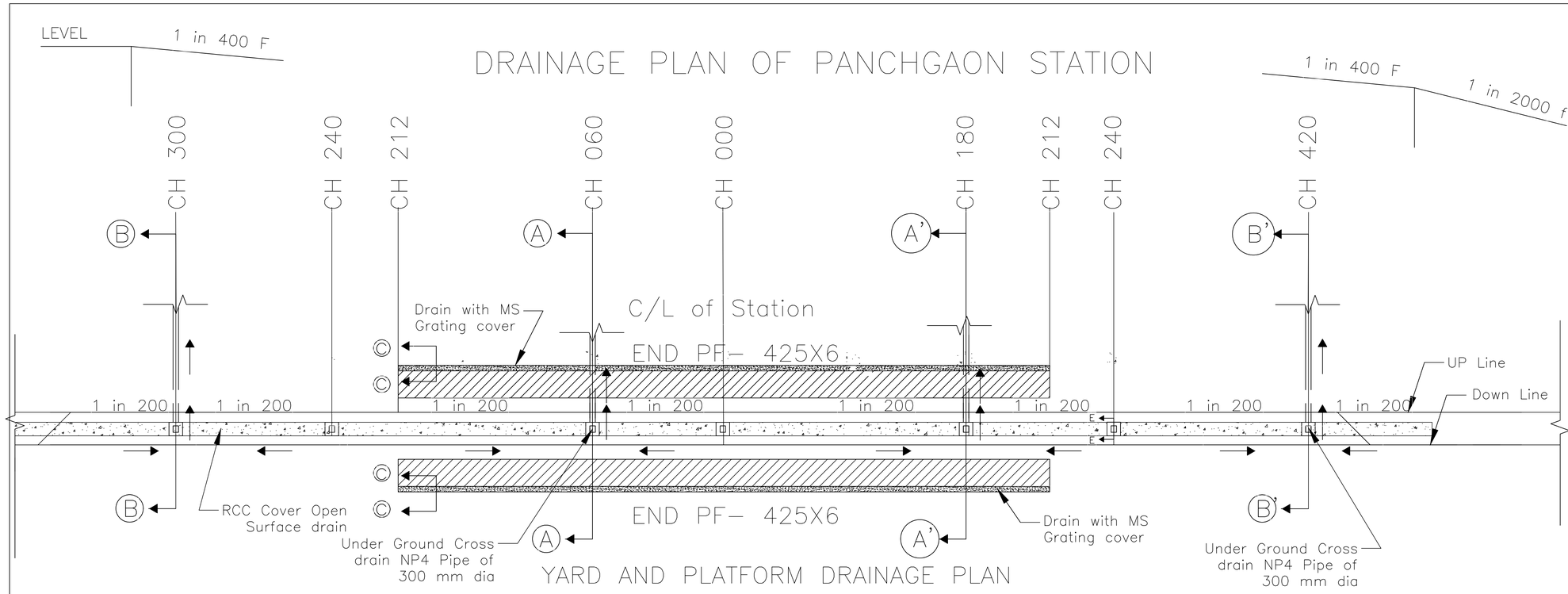
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (CHANDLA DUNGERWAS)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-005	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		

DRAINAGE PLAN OF PANCHGAON STATION

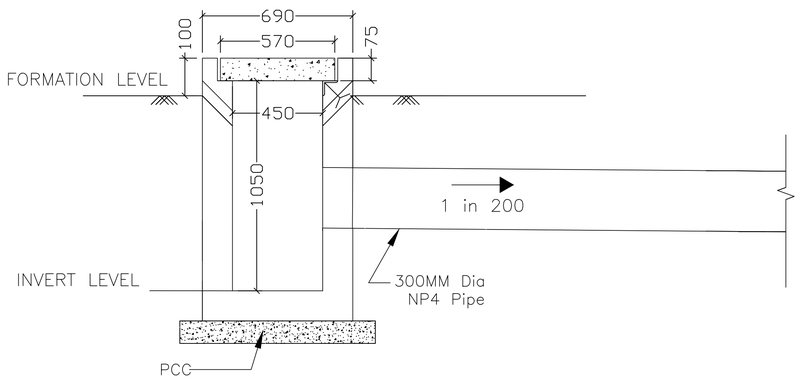


YARD AND PLATFORM DRAINAGE PLAN

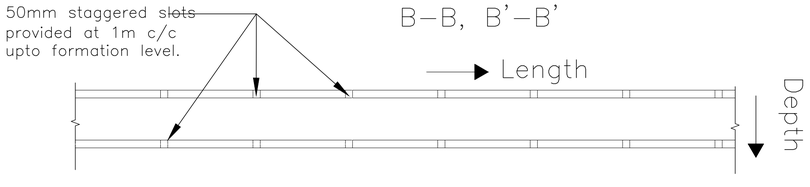
Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.
5. Suitable size RCC Chute drain to be provided about 50 m C/C to discharge water from under ground cross drains and pf drains.

Legend

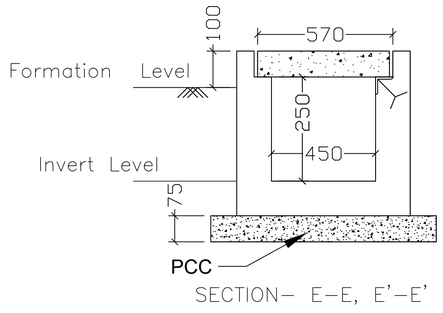
	RCC COVER OPEN SURFACE DRAIN
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	YARD INTERMEDIATE DRAIN



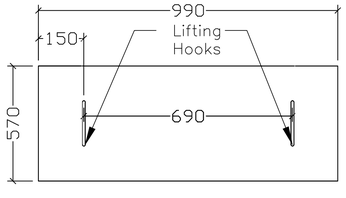
SECTION– A–A, A'–A', B–B, B'–B'



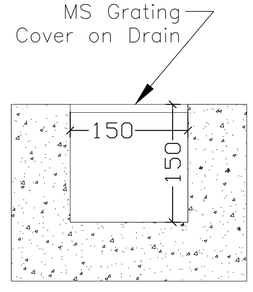
CHAINAGE	0	-60	180
FRL	0	150	-450
DRAIN SLOPE	LEVEL	RISE 1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-300	-900
TOTAL DEPTH	-250.000	-700.000	-700.000



SECTION– E–E, E'–E'



TYP. RCC drain cover with lifting arrangement



SECTION C–C

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:-
CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (PACHGAON)

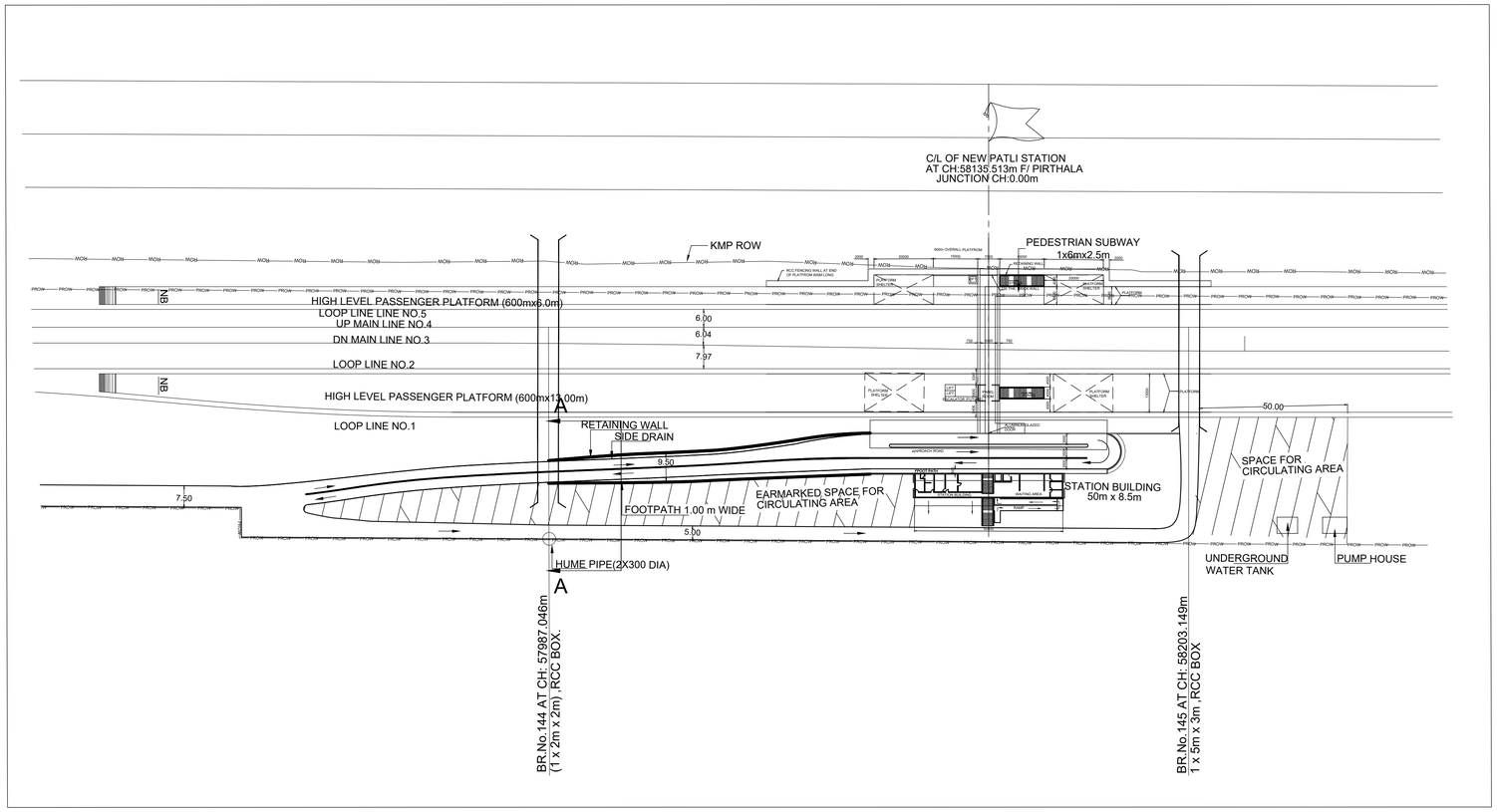
DRG. NO. GC-HRIDC-C23-SK-CIVIL-006

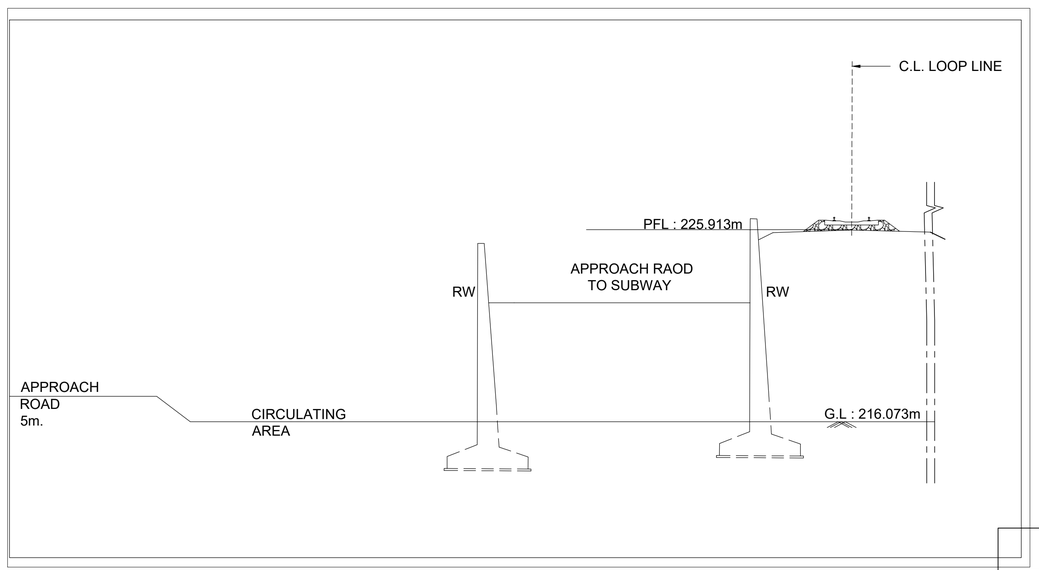
SHEET NO.

SCALE : AS SHOWN

ISSUE DATE

REVISED DATE





SECTION A-A

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL PD 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:- CIRCULATING AREA
NEW PATLI

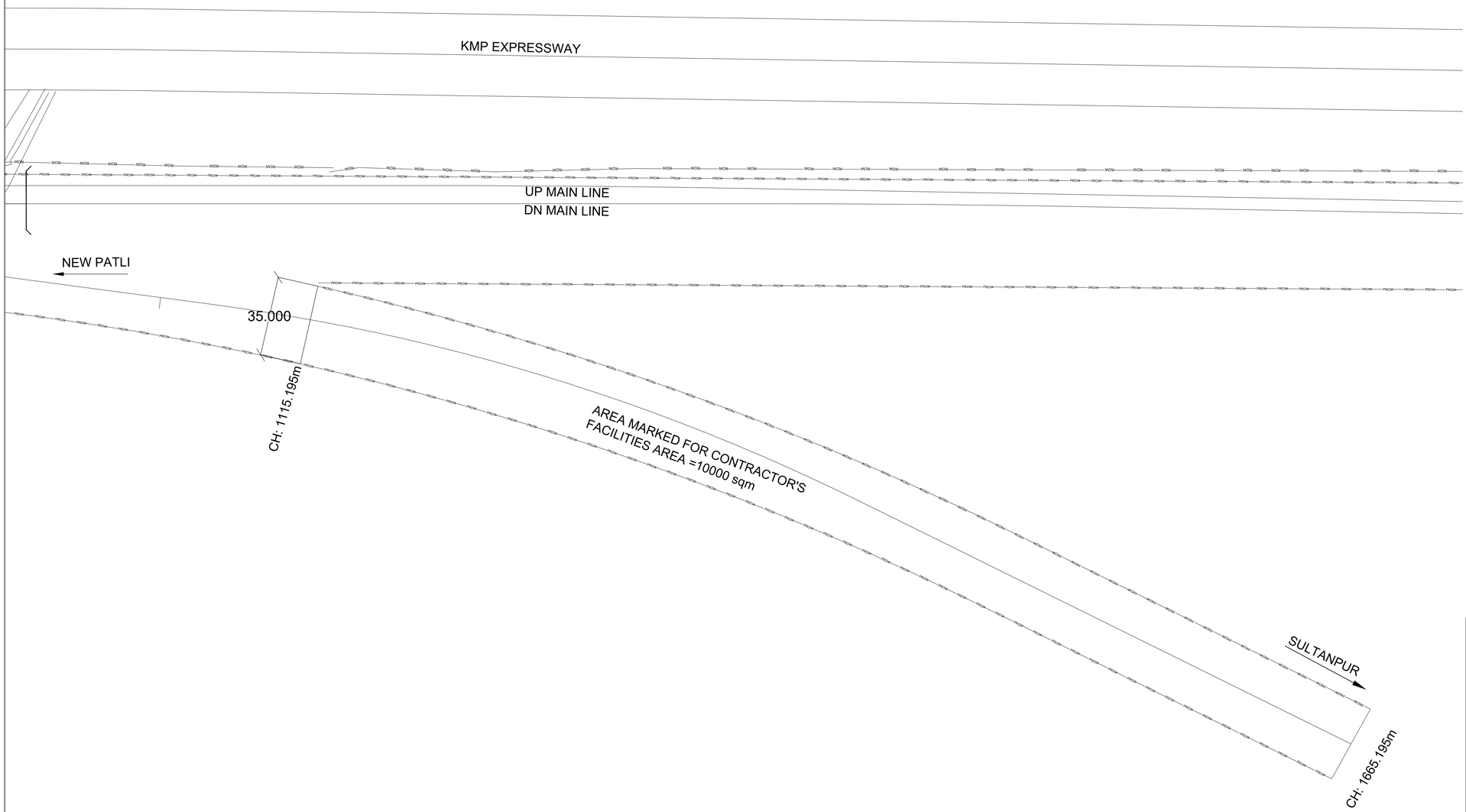
DRG. NO. GC-HRIDC-C23-SK-CIVIL-007

SHEET NO.

SCALE : AS SHOWN

ISSUE DATE

REVISED DATE



GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/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:

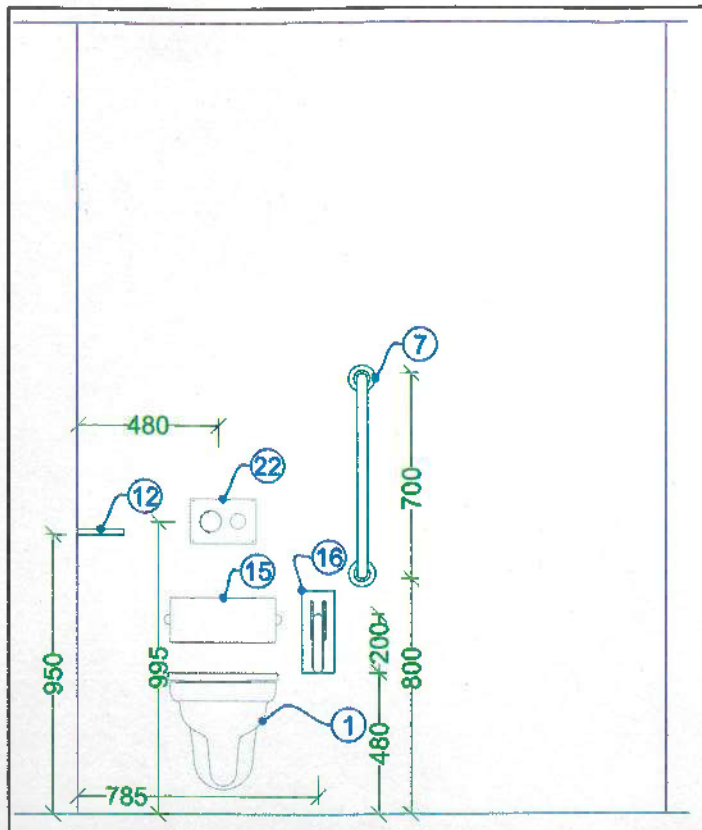
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

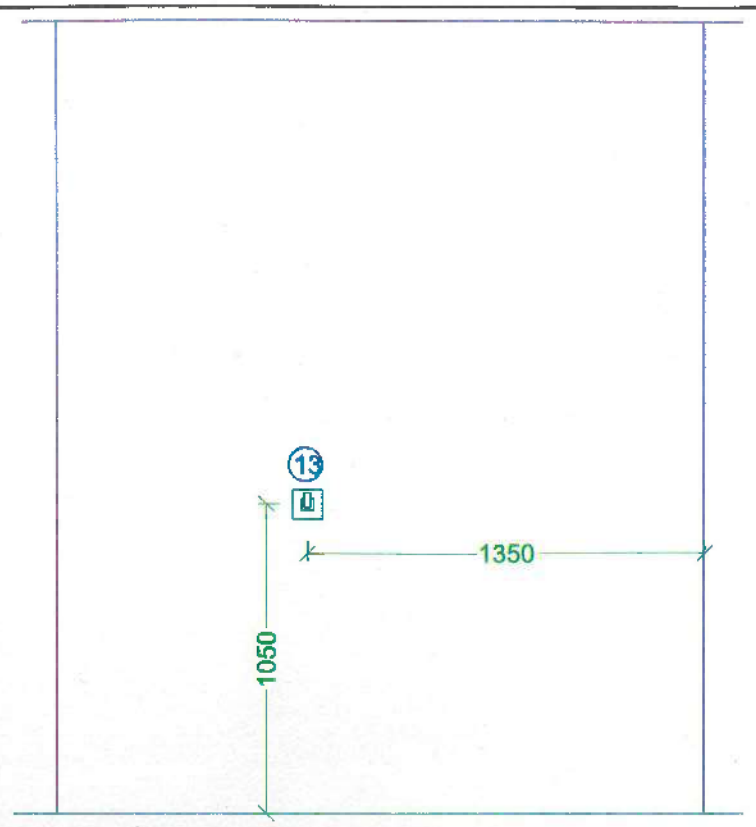
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

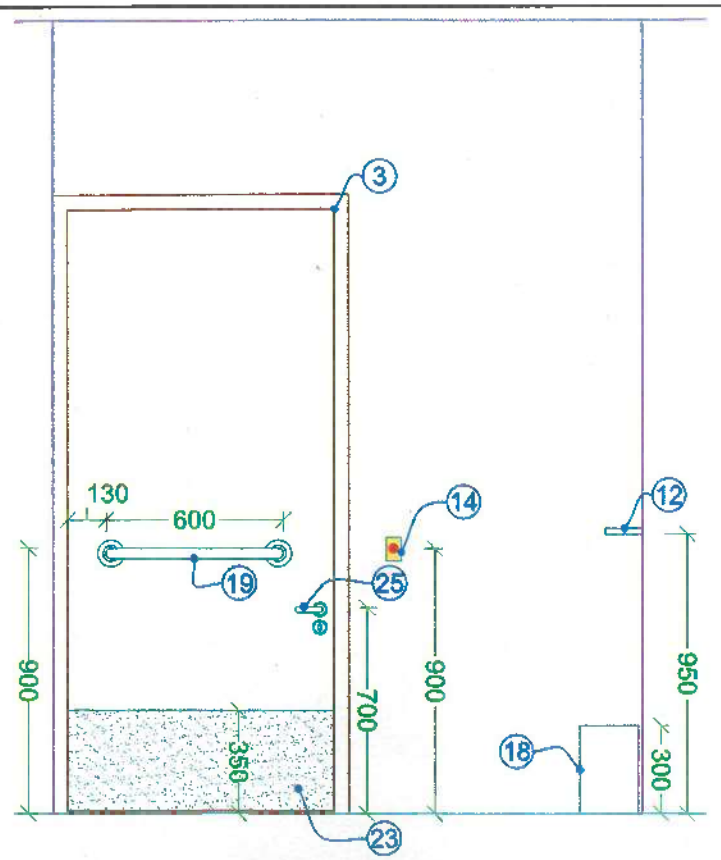
TITLE:- PLAN SHOWING EARMARKED AREA FOR CONTRACTOR'S FACILITIES & SITE OFFICE

DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-008	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		



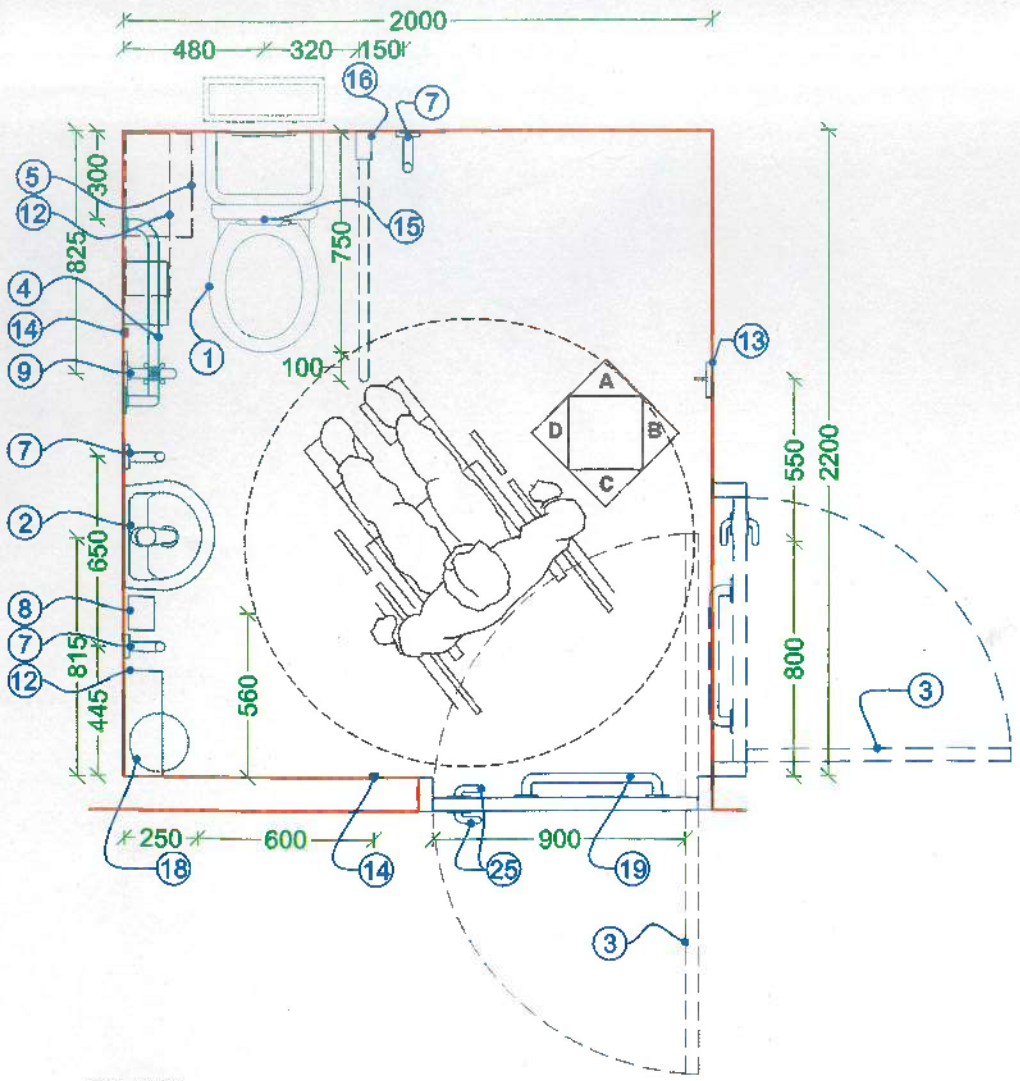




ELEVATION 'A'

ELEVATION 'B'

ELEVATION 'C'

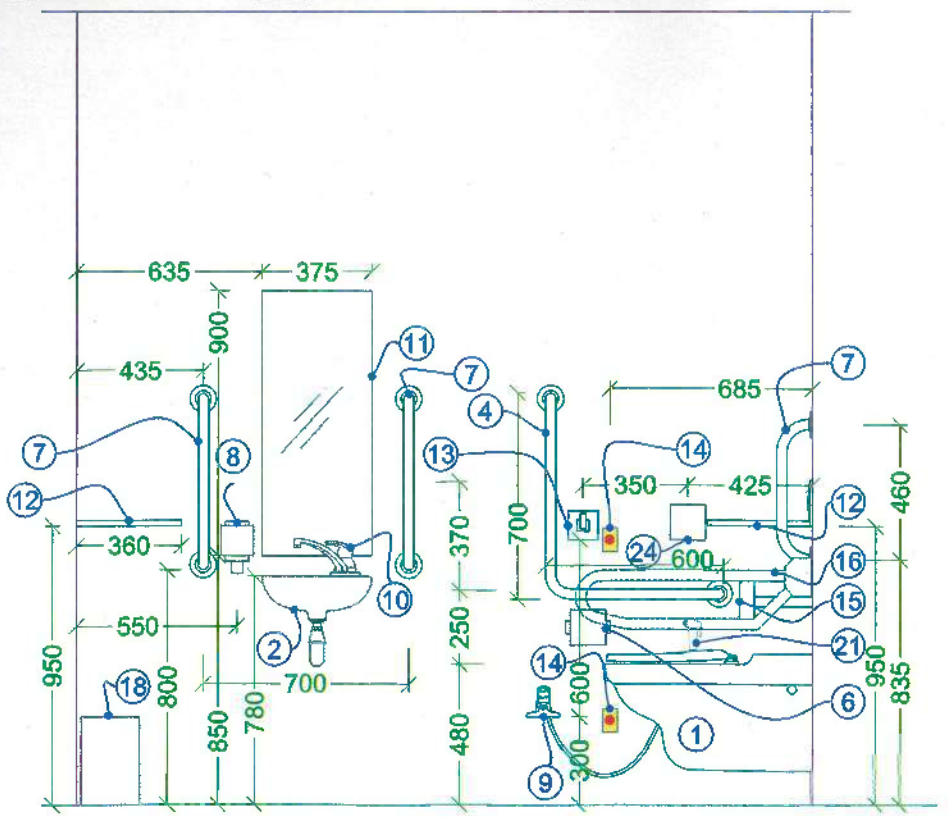


PLAN

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 2022

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