Section VII-8: Tender Drawings and Documents

A- Tender Drawings
B- Documents

VII-8A : Tender Drawings

Section VII-8A
Tender Drawings

Tenderer shall download Tender drawings from HRIDC website. Tender Drawings are available for downloading under Active Tender Section on HRIDC website (https://hridc.co.in/active-tender.php). Tender drawings uploaded on HRIDC website for Package C-5 shall be deemed to form part of Tender Documents. List of Tender Drawings are enclosed hereunder.

List of Tender Drawings
I. Civil Drawings

S. No	TITLE	DRAWING NO.
1. ALIGNMENT PLAN & L-SECTION		
1.	Conceptual Plan & longitudinal section (-2.296KM to -0.6KM)	GC-HRIDC-ALL-DRW-ALN-P&P-(-2.296)-(-0.6)KM_A0
2.	Conceptual Plan & longitudinal section (-0.6 KM TO 0.0 KM)	GC-HRIDC-ALL-DRW-ALN-P&P-(-0.6)-(0.0)KM_A0
3.	Conceptual Plan & longitudinal section (0.0 KM TO 5.0 KM)	GC-HRIDC-ALL-DRW-ALN-P&P-0-5KM_A0
4.	Conceptual Plan & longitudinal section (5.0 KM TO 10.0 KM)	GC-HRIDC-ALL-DRW-ALN-P&P-5-10KM_A0
5.	Conceptual Plan and longitudinal section (10.0KM to 15.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-10-15KM_A2
6.	Conceptual Plan and longitudinal section (15.0KM to 20.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-15-20KM_A2
7.	Conceptual Plan & longitudinal section (20.0 KM TO 25.0 KM)	GC-HRIDC-ALL-DRW-ALN-P&P-20-25KM_A0
2. ESP/YARD PLAN		
1.	Detailed Design Yard Layout Plan for New Prithala Junction Station.	14YLPLT4103 Rev 2 dated 22.09.2023
2.	Conceptual Engineering Scale Plan Prithla Junction Yard Ch:00m F/Prithla	GC-HRIDC-C5-DRW-STN-ESP-PRI01_A0
3.	Conceptual Engineering Scale Plan Silani Station Yard CH:10341.882m F/Prithla	GC-HRIDC-C5-DRW-STN-ESP-SIL01_A0
4.	Conceptual Engineering Scale Plan IMT Sohna	GC-HRIDC-C5-DRW-STN-ESP-SOH01_A0
3. STATION BUILDING AND SUBWAY		
1.	Conceptual Plan of Prithla Station & Subway No. 8 & 8A	GC-HRIDC-C5-DRW-STN-SAD-PRI01_A0 (Sheet 1 of 3)
	Conceptual Architectural Drawing Prithla Station Building	GC-HRIDC-C5-DRW-STN-SAD-PRI01_A0 (Sheet 2 of 3)
	Conceptual Architectural Drawing Prithla Building	GC-HRIDC-C5-DRW-STN-SAD-PRI01_A0 (Sheet 3 of 3)
2.	Conceptual Plan of SILANI Station and Subway No. 39 & 39A	GC-HRIDC-C5-DRW-STN-SAD-SIL01_A0 (Sheet 1 of 1)

S. No	TITLE	DRAWING NO.
3.	Conceptual Plan of Sohna Station and Subway No. 66 & 66A	GC-HRIDC-C5-DRW-STN-SAD-SOH01_A0 (Sheet 1 of 3)
	Conceptual Architectural Drawing IMT Sohna Station Building	GC-HRIDC-C5-DRW-STN-SAD-SOH01_A0 (Sheet 2 of 3)
		GC-HRIDC-C5-DRW-STN-SAD-SOH01_A0 (Sheet 3 of 3)
4. BRIDGES		
4.1 MINOR BRIDGES		
4.1.1 MAIN LINE		
1.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No.6 1x 2x 2m RCC Box at Ch.-574.471	GC-HRIDC-C5-DRW-BRD-GAD_01006_A0
2.	Conceptual General Arrangement Drawing For Road Under Bridge No. 07, Span 1.0x4.6x5.65 RCC Box at Ch:-252.537	GC-HRIDC-C5-DRW-BRD-GAD_01007_A0
3.	Conceptual General Arrangement Drawing For Road Under Bridge No. 09 Span 1.0x4.6x4.15 RCC Box at Ch:139.953	GC-HRIDC-C5-DRW-BRD-GAD_01009_A0
4.	Conceptual General Arrangement Drawing For Balancing Culvert + RUB Bridge No. 10 Span 1x5.2x5.0 + 1x4.7x5 RCC Box at Ch: 371.033 (CANAL CROSSING DHATIR DISTRIBUTORY RD 25000)	GC-HRIDC-C5-DRW-BRD-GAD_010010_A0
5.	Conceptual General Arrangement Drawing For Road Under Bridge No 11 Span 1x4.6x4.15 RCC Box at Ch: 958.395	GC-HRIDC-C5-DRW-BRD-GAD_01011_A0
6.	Conceptual General Arrangement Drawing For Road Under Bridge No 13 Span 1x4.60x4.15, RCC box at Ch: 2034.968	GC-HRIDC-C5-DRW-BRD-GAD-01013_A0
7.	Conceptual General Arrangement Drawing For RUB + Balancing Culvert Bridge No. 14 Span 2x5.2x4.15 RCC Box at Ch: 2493.015 (CANAL CROSSING CHANDPUR MINOR RD 6500)	GC-HRIDC-C5-DRW-BRD-GAD_01014_A0
8.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 15 Span 1x2x2 RCC Box at Ch: 3153.203	GC-HRIDC-C5-DRW-BRD-GAD_01015_A0
9.	Conceptual General Arrangement Drawing For Road Under Bridge No. 18 1x9.75mx6.70m RCC Box at Ch.4373.615m	GC-HRIDC-C5-DRW-BRD-GAD_01018_A0
10.	Conceptual General Arrangement Drawing For Road Under Bridge No 19 Span 1.0x4.6x4.15 RCC Box at Ch: 4858.791	GC-HRIDC-C5-DRW-BRD-GAD-01019_A1

S. No	TITLE	DRAWING NO.
11.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No 20 Span 1x2.0x2.0 RCC Box at Ch.4891.994	GC-HRIDC-C5-DRW-BRD-GAD-01020_A1
12.	Conceptual General Arrangement Drawing For Road Under Bridge No. 21 1 x 4.6 x 4.15m RCC Box at Ch.5340.10m	GC-HRIDC-C5-DRW-BRD-GAD_01021_A0
13.	Conceptual General Arrangement Drawing For Road Under Bridge No. 22 1x 4.6 x 4.15m RCC Box at Ch.5807.675m	GC-HRIDC-C5-DRW-BRD-GAD_01022_A0
14.	Conceptual General Arrangement Drawing For Balancing Culvert No. 23 1x 3 x 3m RCC Box at Ch.6409.986m	GC-HRIDC-C5-DRW-BRD-GAD_0023_A0
15.	Conceptual General Arrangement Drawing For Road Under Bridge No. 24 1x 4.6 x 4.150 m RCC Box at Ch.6881.539m	GC-HRIDC-C5-DRW-BRD-GAD_01024_A0
16.	Conceptual General Arrangement Drawing For Road Under Bridge No 25 Span 1.0x4.60x4.50 RCC Box at Ch: 7548.737	GC-HRIDC-C5-DRW-BRD-GAD-01025_A0
17.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 27 Span 1x2x2 RCC Box at Ch: 7941.374	GC-HRIDC-C5-DRW-BRD-GAD_01027_A0
18.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 29 Span 1x2x2 RCC Box at Ch: 8141.419	GC-HRIDC-C5-DRW-BRD-GAD_01029_A0
19.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 31, 1 x 4 x 3.0m RCC Box at Ch.8593.734m	GC-HRIDC-C5-DRW-BRD-GAD_01031_A0
20.	Conceptual General Arrangement Drawing For Balancing Culvert No. 32 1x4.0x3.7m RCC Box at Ch: 8891.591m	GC-HRIDC-C5-DRW-BRD-GAD_01032_A0
21.	Conceptual General Arrangement Drawing For Road Under Bridge No. 33 1 x 7.00 x 4.15m RCC Box at Ch.9293.620m	GC-HRIDC-C5-DRW-BRD-GAD_01033_A0
22.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 35 Span 1x2x2 RCC Box at Ch: 9591.677	GC-HRIDC-C5-DRW-BRD-GAD_01035_A0
23.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 36 Span 1x2x2 RCC Box at Ch: 9882.453	GC-HRIDC-C5-DRW-BRD-GAD_01036_A0
24.	Conceptual General Arrangement Drawing For Road Under Bridge No. 37 1 x 5.70 x 4.15m RCC Box at Ch.9894.460m	GC-HRIDC-C5-DRW-BRD-GAD_01037_A0
25.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 38 Span 1x3x3 RCC Box at Ch: 10090.792	GC-HRIDC-C5-DRW-BRD-GAD_01038_A0
26.	Conceptual General Arrangement Drawing For Road Under Bridge No. 40	GC-HRIDC-C5-DRW-BRD-GAD_01040_A0

S. No	TITLE	DRAWING NO.
	Span 1x8.40x5.15 RCC Box at Ch: 10410.702	
27.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 42 Span 1x2x2 RCC Box at Ch: 10907.894	GC-HRIDC-C5-DRW-BRD-GAD_01042_A0
28.	Conceptual General Arrangement Drawing For Road Under Bridge No. 43 Span 1.0x4.70x5.65 RCC Box at Ch: 11203.249	GC-HRIDC-C5-DRW-BRD-GAD_01043_A0
29.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 44 Span 1x2.0x2.0 RCC Box at Ch: 11403.443	GC-HRIDC-C5-DRW-BRD-GAD_01044_A0
30.	Conceptual General Arrangement Drawing For Road Under Bridge No. 64 Span 2x6.0x4.0 RCC Box at Ch: 18558.00	GC-HRIDC-C5-DRW-BRD-GAD_01064_A0
31.	Conceptual General Arrangement Drawing For Balancing Culvert Bridge No. 65 Span 1x2x2 RCC Box at Ch: 18735.000	GC-HRIDC-C5-DRW-BRD-GAD_01065_A0
32.	Conceptual General Arrangement Drawing For Road + Balancing Culvert No. 67 Span 2.0x7.5x7.5 RCC Box at Ch: 19435.000 (CANAL CROSSING REWASAN DRAIN RD 10350)	GC-HRIDC-C5-DRW-BRD-GAD-01067_A0
4.1.2 CONNECTING LINE		
A. PRITHLA TO NEW PRITHLA		
1.	Conceptual General Arrangement Drawing For Pipe Culvert Bridge No. 1 1x1.2m Dia ,at Ch:-1950.000	GC-HRIDC-C5-DRW-BRD-GAD_01001_A0
2.	Conceptual General Arrangement Drawing For Balancing Culvert + RUB Bridge No. 02 Span 1x2.5x5.05+1x3.6x5.05, RCC Box, at Ch: -1832.759	GC-HRIDC-C5-DRW-BRD-GAD_01002_A0
3.	Conceptual General Arrangement Drawing For Road Under Bridge No. 03, Span 1.0x4.60x5.65 RCC Box at Ch: -1312.056	GC-HRIDC-C5-DRW-BRD-GAD_01003_A0
4.2 MAJOR BRIDGES		
4.2.1 MAIN LINE		
1.	Conceptual General Arrangement Drawing for Prop Canal Crossing Bridge No. 4, 1x8x7.5+1x24.4+1x8x7.5m (CG+ RCC Box) at Ch. -795.733	GC-HRIDC-C5-DRW-BRD-GAD_01004_A0
2.	Conceptual General Arrangement Drawing for Road No. 5, 1x 12 x 6.10m RCC Box at Ch. -592.612m	GC-HRIDC-C5-DRW-BRD-GAD_01005_A0

S. No	TITLE	DRAWING NO.
3.	Conceptual General Arrangement Drawing Proposed RUB Bridge No.12 1x12.2 PSC U Slab Ch:1696.624	GC-HRIDC-C5-DRW-BRD-GAD_01012_A0
4.	Conceptual General Arrangement Drawing Proposed Major Bridge No. 16 1x12x6.10 m, RCC box Ch: 3472.548m	GC-HRIDC-C5-DRW-BRD-GAD_01016_A0
5.	Conceptual General Arrangement Drawing for Proposed Major RUB No.17 4x30.5 Open web Girder at Ch:4256.298m (NH-148A DND-2)	GC-HRIDC-C5-DRG-BRD-GAD_01017_A0 (Sheet 1 of 2)
		GC-HRIDC-C5-DRG-BRD-GAD_01017_A0 (Sheet 2 of 2)
6.	Conceptual General Arrangement Drawing Proposed RUB Bridge No. 26 1x12x6.10 m, RCC Box Ch: 7753.296m	GC-HRIDC-C5-DRW-BRD-GAD_01026_A0
7.	Conceptual General Arrangement Drawing For Prop. Major Bridge No. 28 18.3X30.5+18.3(OWG+CG) AT CH: 8036.354m (CANAL CROSSING GURGAON CANAL RD 79150)	GC-HRIDC-C5-DRG-BRD-GAD_01028_A0
8.	Conceptual General Arrangement Drawing For Prop. Drain Crossing Bridge No.30, 1X30.5 (Composite Girder) AT CH: 8298.110m (CANAL CROSSING NUH DRAIN RD 87645)	GC-HRIDC-C5-DRG-BRD-GAD_01030_A0
9.	Conceptual General Arrangement Drawing Proposed IOCL Crossing Bridge No. 34 1 x24.4m (CG) AT CH.9536.901m	GC-HRIDC-C5-DRW-BRD-GAD_01034_A0
10.	Conceptual General Arrangement Drawing for Road Under Bridge no. 41 Span 1x12x5.650 RCC Box at Ch: 10709.675	GC-HRIDC-C5-DRW-BRD-GAD_01041_A0
11.	Conceptual General Arrangement Drawing for Prop. Major Bridge No.045, at Ch: 11543.518m 2X76.2 (Open Web Girder) (NH 919 PALWAL SOHNA ROAD)	GC-HRIDC-C5-DRW-BRD-GAD_01045_A0
12.	Conceptual General Arrangement Drawing For Stream Bridge No.53 2x24.4 m CG at Ch:14472.112	GC-HRIDC-C4-DRW-BRD-GAD_01053_A2
13.	Conceptual General Arrangement Drawing for Prop. Drain Crossing bridge no.63 1x5x4.9+1x12.2m+1x5x4.9 (PSC U Slab +RCC Box) at CH: 18310 (CANAL CROSSING INDRI DISTRIBUTARY RD 11260)	GC-HRIDC-C5-DRW-BRD-GAD_01063_A0

S. No	TITLE	DRAWING NO.
14.	Conceptual General Arrangement Drawing for Prop. Major RUB No.68 2x61(OWG) at Ch: 20184 (CANAL CROSSING REWASAN DRAIN RD 6670) NH-248A	GC-HRIDC-C5-DRG-BRD-GAD_01068_A0
15.	Conceptual General Arrangement Drawing for Prop. Major Bridge no.69 12.2+2X18.3+12.2 (CG+PSC U Slab) at Ch: 20400m	GC-HRIDC-C5-DRG-BRD-GAD_01069_A0
16.	Conceptual General Arrangement Drawing for Viaduct Br. No.70, Span: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10 (Composite Girder) from Ch: 20942.473m to 24843.543m	GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 1 of 15 to 15 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 2 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 3 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 4 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 5 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 6 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 7 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 8 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 9 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 10 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 11 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 12 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 13 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 14 of 15)
		GC-HRIDC-C5-DRG-BRD-GAD_01070_A0 (Sheet 15 of 15)

S. No	TITLE	DRAWING NO.
5. MISCELLANEOUS DRAWINGS (CONCEPTUAL PLANS)		
1.	Conceptual Plan Typical Embankment/Cutting Profile	GC-HRIDC-SK-GEN-001_A1
2.	Conceptual Plan R.C. Pre-Cast Fencing for End Platform	GC-HRIDC-SK-GEN-004
3.	Conceptual Plan Station Name Board	GC-HRIDC-SK-GEN-005
4.	Conceptual Plan Proposed Toilet Block on End Platforms	GC-HRIDC-SK-GEN-007_A1
5.	Conceptual Plan Drains for Embankment	GC-HRIDC-SK-GEN-008_A1
6.	Conceptual Plan Steel Barricade	GC-HRIDC-SK-GEN-009
7.	Conceptual Plan Water Booth with One Side Taps Arrangement (End Platform)	GC-HRIDC-SK-GEN-010_A1
8.	Conceptual Plan Water Booth with Both Side Taps Arrangement (Island Platform)	GC-HRIDC-SK-GEN-011_A1
9.	Conceptual Plan of Auto Location Hut (S&T)	GC-HRIDC-SK-GEN-012
10.	Conceptual Plan Ticket Counter	GC-HRIDC-SK-GEN-013
11.	Conceptual Plan CC Toe Wall	GC-HRIDC-SK-GEN-014_A1
12.	Conceptual Plan Typical Details of Protection Work of Bridge Approaches	GC-HRIDC-SK-GEN-015_A1
13.	Conceptual Plan Barbed Wire Fencing	GC-HRIDC-SK-GEN-016_A1
14.	Conceptual Plan RCC Duct of Signalling Cable	GC-HRIDC-SK-GEN-017
15.	Conceptual Plan for Transition System of Bridge Approaches	GC-HRIDC-SK-GEN-019
16.	Conceptual Plan for Self-Supporting Roof Covering Shed	GC-HRIDC-SK-GEN-020
17.	Conceptual Plan for Formation Details Below of Subway and Lift Well	GC-HRIDC-SK-GEN-021
18.	Conceptual Plan for Trolley Refuge in Embankment	GC-HRIDC-SK-GEN-022
19.	Conceptual Plan for Trolley Refuge in Cutting	GC-HRIDC-SK-GEN-023
20.	Conceptual Sketch for RCC Platform Wall	GC-HRIDC-SK-GEN-024
21.	Conceptual Plan for Single and Double Lane Road	GC-HRIDC-SK-GEN-025
22.	Conceptual Sketch for Reinforced Earth Wall with Geogrid Reinforcement	GC-HRIDC-SK-GEN-026
23.	Conceptual Plan OHE Portal for OWG Girder	GC-HRIDC-SK-GEN-035
24.	Conceptual Plan for Mild Steel Pipe 323.9mm Outer Dia for Future Utilities	GC-HRIDC-SK-GEN-030
25.	Jurisdictional Sketch Of C-5 Package	GC-HRIDC-C5-SK-CIVIL-001_A1

S. No	TITLE	DRAWING NO.
26.	Conceptual Plan Drainage Arrangement (Prithla)	GC-HRIDC-C5-SK-CIVIL-002_A1
27.	Conceptual Plan Drainage Arrangement (Silani)	GC-HRIDC-C5-SK-CIVIL-003_A1
28.	Conceptual Plan Drainage Arrangement (IMT Sohna)	GC-HRIDC-C5-SK-CIVIL-004_A1
29.	Conceptual Plan Bank/Cutting Benching at Interface Locations	GC-HRIDC-C5-SK-CIVIL-009_A1
30.	Type Plan Powder Toilet for Divyangs	N.R.H.Q.E PLAN NO. HQ/20/11-2021
31.	Conceptual Plan OWG With Concrete Deck for BLT	GC-HRIDC-SK-GEN-036
32.	Conceptual Plan Ground Improvement for Embankment at Pond/Water Logged Area.	GC-HRIDC-SK-GEN-037
33.	Conceptual Plan for OHE Earthing & OHE Bolt Fixing Arrangement on Bridges	GC-HRIDC- C5-SK-GEN-038
34.	Conceptual Plan Location of Signal Post for Composite Girder Bridges	GC-HRIDC-SK-GEN-034
35.	Conceptual Plan Location of OHE Mast In Viaduct	GC-HRIDC-SK-GEN-032
36.	Conceptual Plan Location of OHE Mast for Composite Girder Bridges	GC-HRIDC- SK-GEN-031
37.	Indicative OHE Guy Rod Arrangement on Viaduct	GC-HRIDC-SYS1-DRW-ELE-007_A0
38.	Conceptual Plan Typical Embankment/Cutting Profile	GC-HRIDC-SK-GEN-001_A1

II. General Electrical Services Drawings

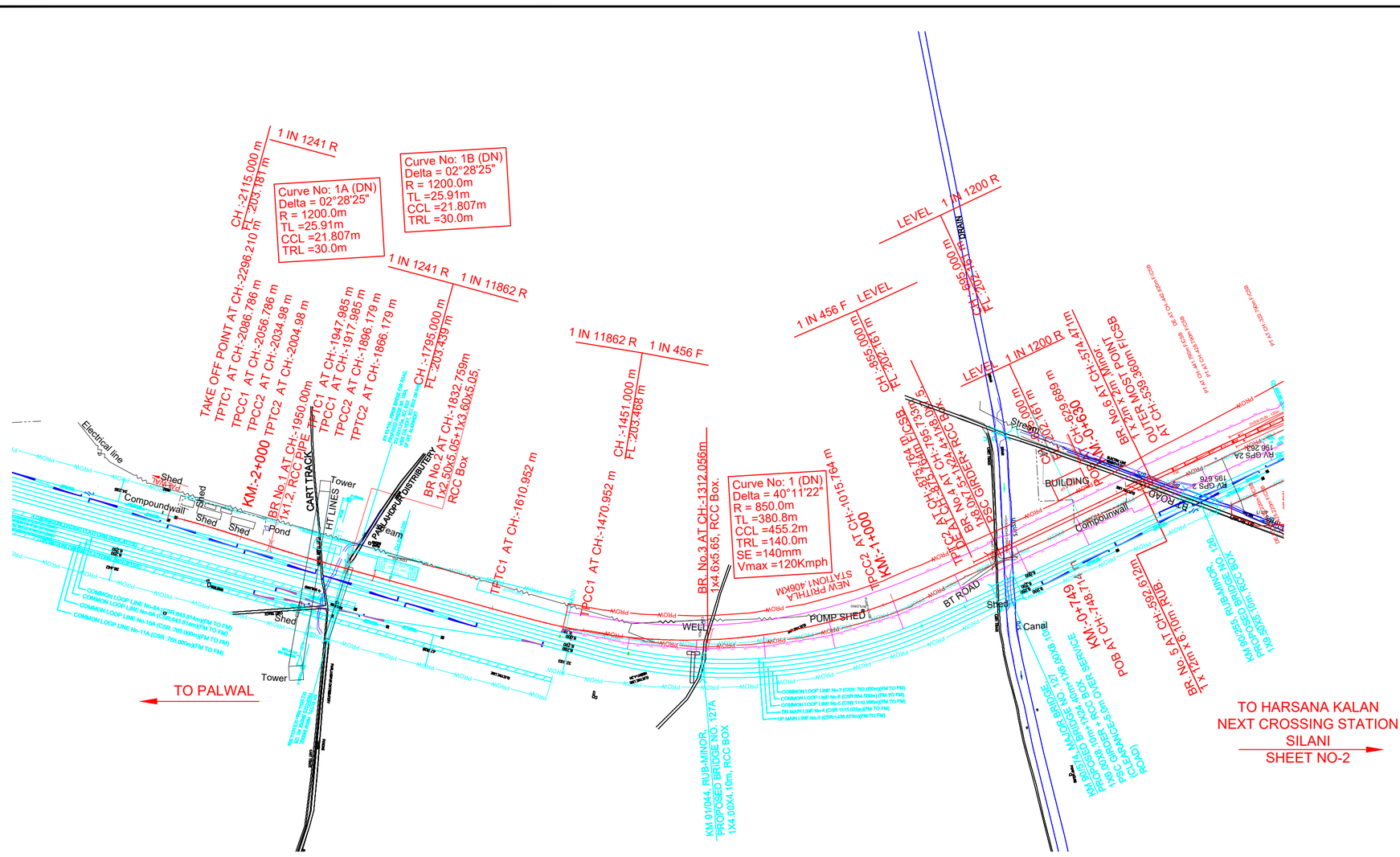
S. No	TITLE	DRAWING NO.
1.	Indicative LT Supply System with Local, DG and Auxiliary Transformer Supply	GC-HRIDC-C5-DRW-ELE-001-A0
2.	Indicative LT Supply Distribution Diagram	GC-HRIDC-C5-DRW-ELE-002-A0
3.	Indicative Arrangement Of Decorative Street Light Pole at Station and Platform	GC-HRIDC-C5-DRW-ELE-03-A0
4.	Indicative Cable Route Plan for Track Crossing of Power Cable and Route Marker	GC-HRIDC-C5-DRW-ELE-04-A0
5.	Indicative Earthing Arrangement of Electrical System by Copper Cladded Electrode	GC-HRIDC-C5-DRW-ELE-05-A0
6.	Indicative Schematic Drawing Of 11 KV Power Supply Arrangement	GC-HRIDC-C5-DRW-ELE-06-A0
7.	Indicative LT Supply System With Local & Auxilary Transformer Supply	GC-HRIDC-C5-DRW-ELE-007-A0
8.	Indicative Compact Substation (CSS) Single Line Diagram	GC-HRIDC-C5-DRW-ELE-08-A0
9.	Indicative Viaduct Lighting and Railing Earthing Arrangement	GC-HRIDC-C5-DRW-ELE-09-A0

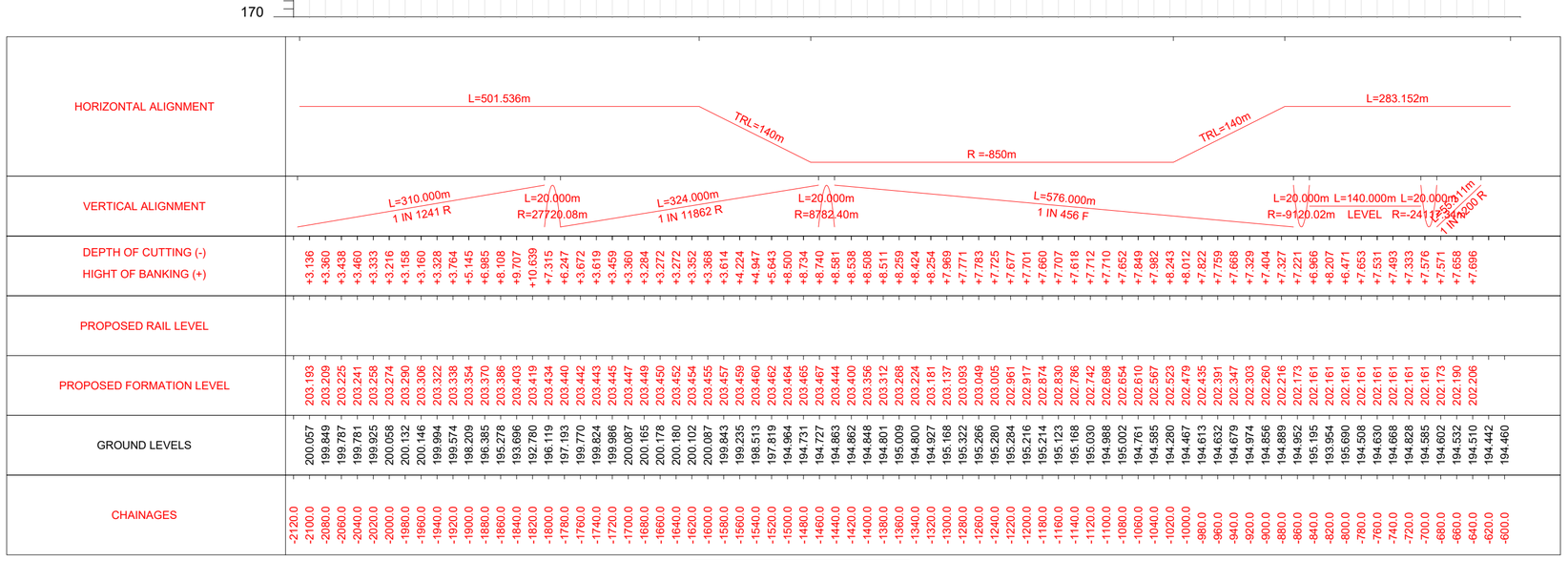
III. Signalling & Telecommunication Drawings

S. No	TITLE	DRAWING NO.
1.	Typical Main Cable Distribution Plan for Double Line (4 Lines) P.I. Station	SDO/CABLE LAYING/001
2.	Position of Trenches for Cable Laying	SDO/CABLE LAYING/002
3.	Cable Trench	SDO/CABLE LAYING/003
4.	Laying Of Signalling Cable & Telecom/ Power Cable in Same Trench	SDO/CABLE LAYING/004
5.	Laying Of Cables in Rocky Area	NR/SIG/CABLE/004
6.	Track Crossings	NR/SIG/CABLE/005
7.	Road Crossings	NR/SIG/CABLE/006
8.	Cable Laying on Culverts with Low Flood Level	SDO/CABLE LAYING/011
9.	Cable Laying on Culverts with High Flood Level	NR/SIG/CABLE/007
10.	Cable Laying on Metallic Bridges	SDO/CABLE LAYING/013
11.	Cable Trough for Metallic Bridges	SDO/CABLE LAYING/014
12.	Cable Laying on Arch Bridges	NR/SIG/CABLE/008
13.	Brick Masonry Channel for Arch Bridge	SDO/CABLE LAYING/016
14.	Arrangement of Jumper cable	SDO/CABLE LAYING/017
15.	CI Cable Marker & Concreting	SDO/CABLE LAYING/018
16.	CI Cable Marker	SDO/CABLE LAYING/019
17.	Concrete Cable Marker	SDO/CABLE LAYING/020
18.	Method of Unrolling Cable	SDO/CABLE LAYING/021
19.	Rule Made of Pipe for Measuring Trench Depth	SDO/CABLE LAYING/022

I. Civil Drawings

1. ALIGNMENT PLAN & L-SECTION





LONGITUDINAL PROFILE

LEGEND:

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

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	
NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*	
SUDHIR AGRAWAL *DPD/CIVIL*	
KRISHAN CHAND SAINSI *CRE/CIVIL*	

HRIDC	
NAME / DESIGNATION	SIGN
NEERAJ BHANDARI *CPM/SOUTH*	
RAJU SOLANKI *DGM/CIVIL*	

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (-2.296 KM TO -0.6 KM)

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-(-2.296)-(-0.6)KM_A0

ISSUE Dt: 22.06.2023 REVISED Dt:

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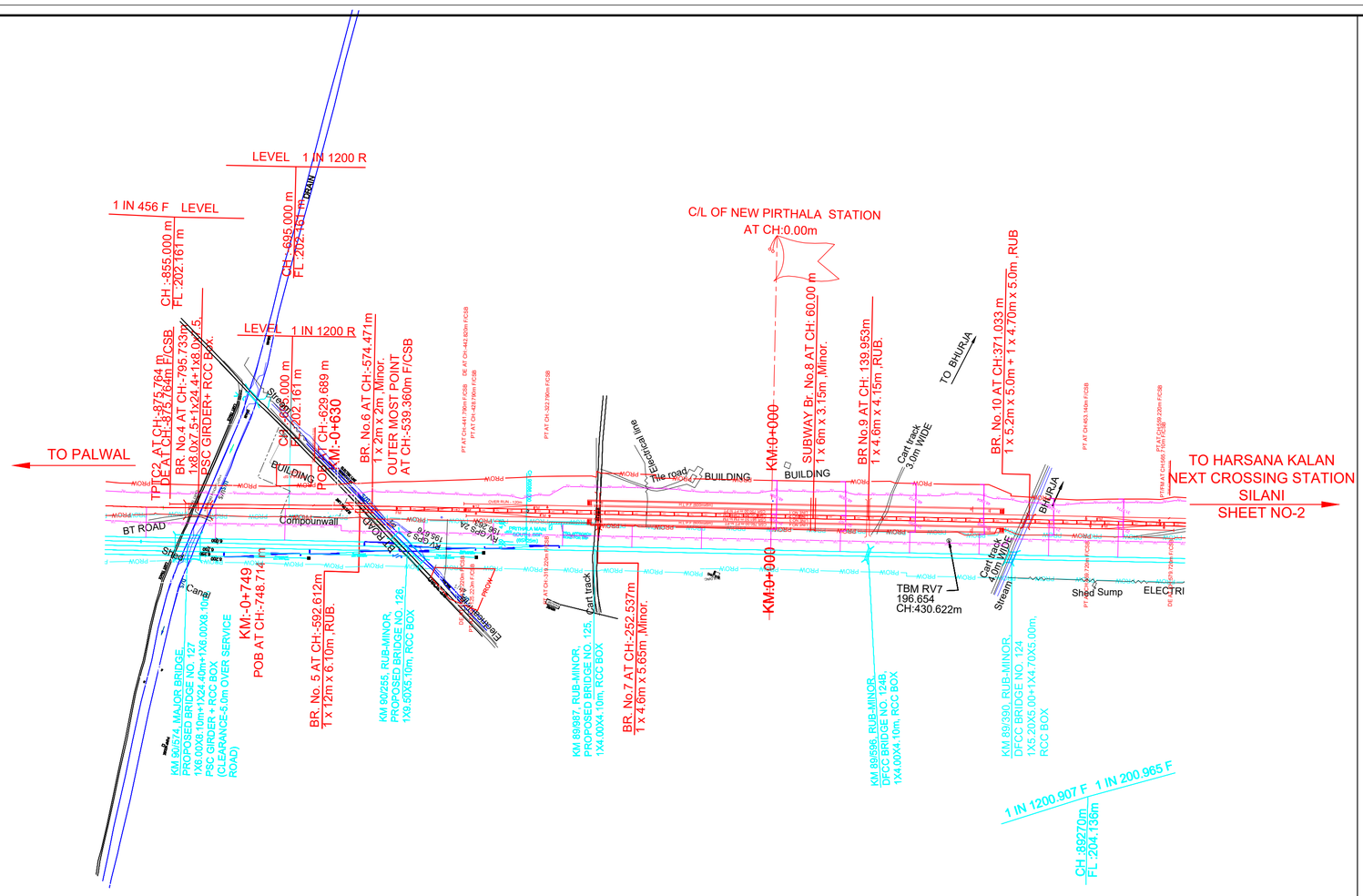
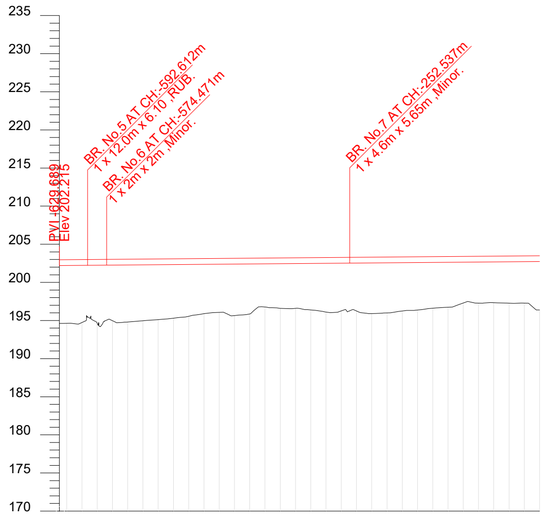
AARVEE ASSOCIATES

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

DRG.NO.AA/2245/AL/DR/P&P/R3 SHEET No. 1 OF 24

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





HORIZONTAL ALIGNMENT	L=1544.246m
VERTICAL ALIGNMENT	L=1478.535m 1 IN 1200 R

CHAINAGES	DEPTH OF CUTTING (-) HIGHT OF BANKING (+)	PROPOSED RAIL LEVEL	PROPOSED FORMATION LEVEL	GROUND LEVELS
-628.7	+7.588	202.965	202.223	194.630
-620.0	+7.499	202.982	202.240	194.741
-600.0	+7.603	202.999	202.257	194.654
-580.0	+7.300	203.015	202.273	194.973
-560.0	+7.485	203.032	202.290	194.805
-540.0	+7.338	203.049	202.307	194.969
-520.0	+7.205	203.065	202.323	195.118
-500.0	+7.036	203.082	202.340	195.304
-480.0	+6.811	203.099	202.357	195.546
-460.0	+6.466	203.115	202.373	195.907
-440.0	+6.317	203.132	202.390	196.073
-420.0	+6.753	203.149	202.407	195.654
-400.0	+6.587	203.165	202.423	195.856
-380.0	+5.672	203.182	202.440	196.768
-360.0	+5.857	203.199	202.457	196.600
-340.0	+5.875	203.215	202.473	196.598
-320.0	+6.100	203.232	202.490	196.390
-300.0	+6.402	203.249	202.507	196.105
-280.0	+6.256	203.265	202.523	196.267
-260.0	+6.286	203.282	202.540	196.254
-240.0	+6.645	203.299	202.557	195.912
-220.0	+6.575	203.315	202.573	195.998
-200.0	+6.350	203.332	202.590	196.240
-180.0	+6.231	203.349	202.607	196.376
-160.0	+6.008	203.365	202.623	196.615
-140.0	+5.901	203.382	202.640	196.739
-120.0	+5.358	203.399	202.657	197.299
-100.0	+5.390	203.415	202.673	197.283
-80.0	+5.358	203.432	202.690	197.332
-60.0	+5.433	203.449	202.707	197.274
-40.0	+5.441	203.465	202.723	197.282
-20.0	+6.347	203.482	202.740	196.393
0.0				

LONGITUDINAL PROFILE

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DFCC WORKS
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY — PROW
- DFCC BOUNDARY — PROW
- 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	
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CLIENT:
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HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (-0.6 KM TO 0.0 KM)

GC DRG.NO. GC-HRIDC-ALL-DRW-ALN-P&P-(-0.6)-(0.0)KM_A0

ISSUE Dt: 22.06.2023 REVISED Dt:

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AARVEE ASSOCIATES
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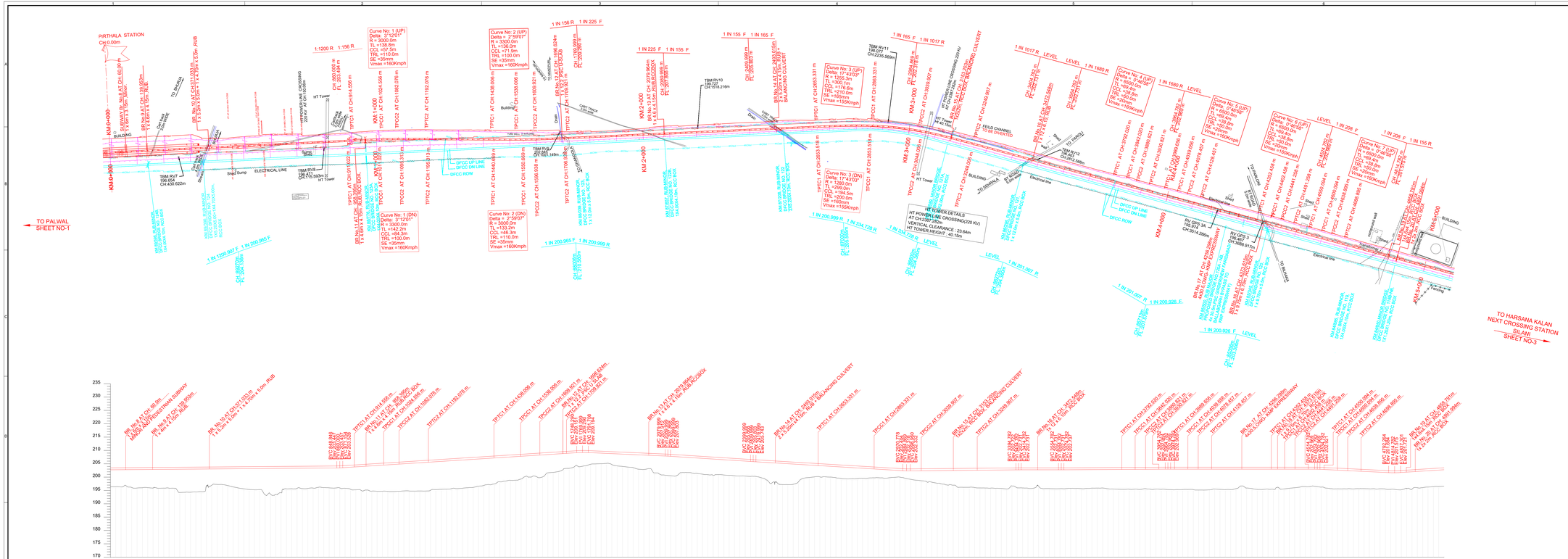
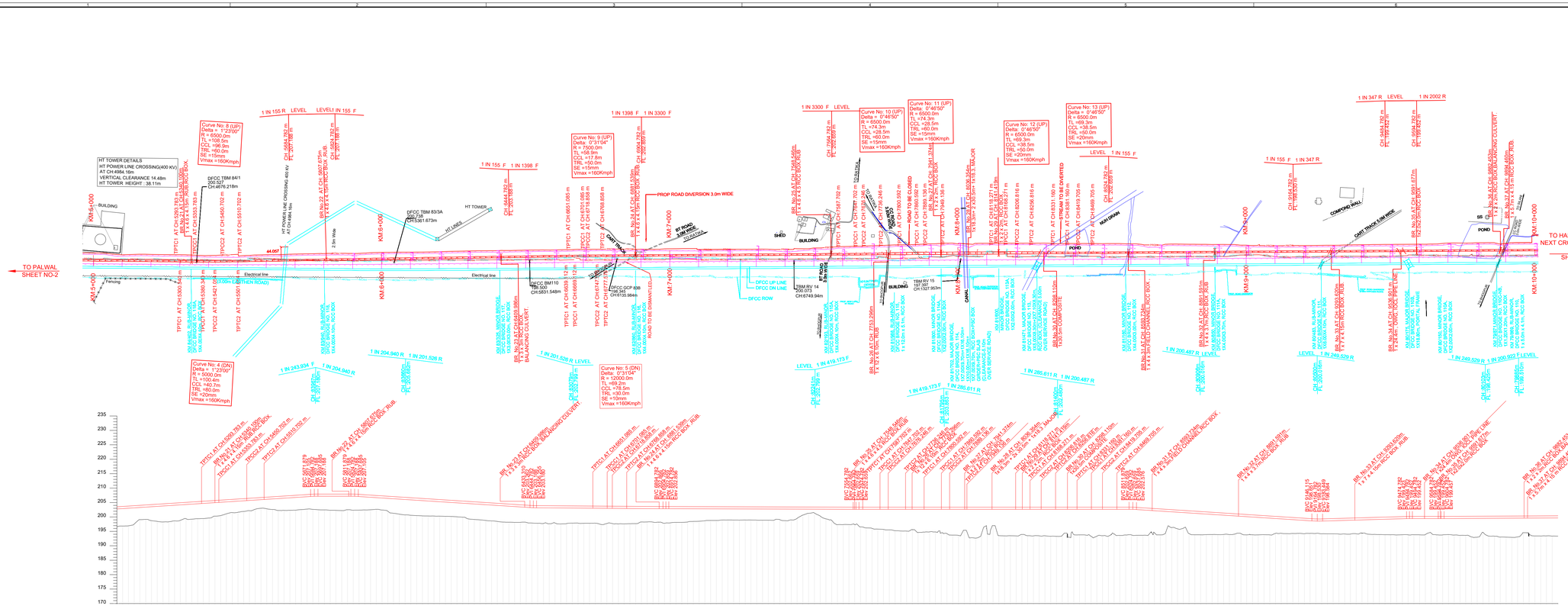
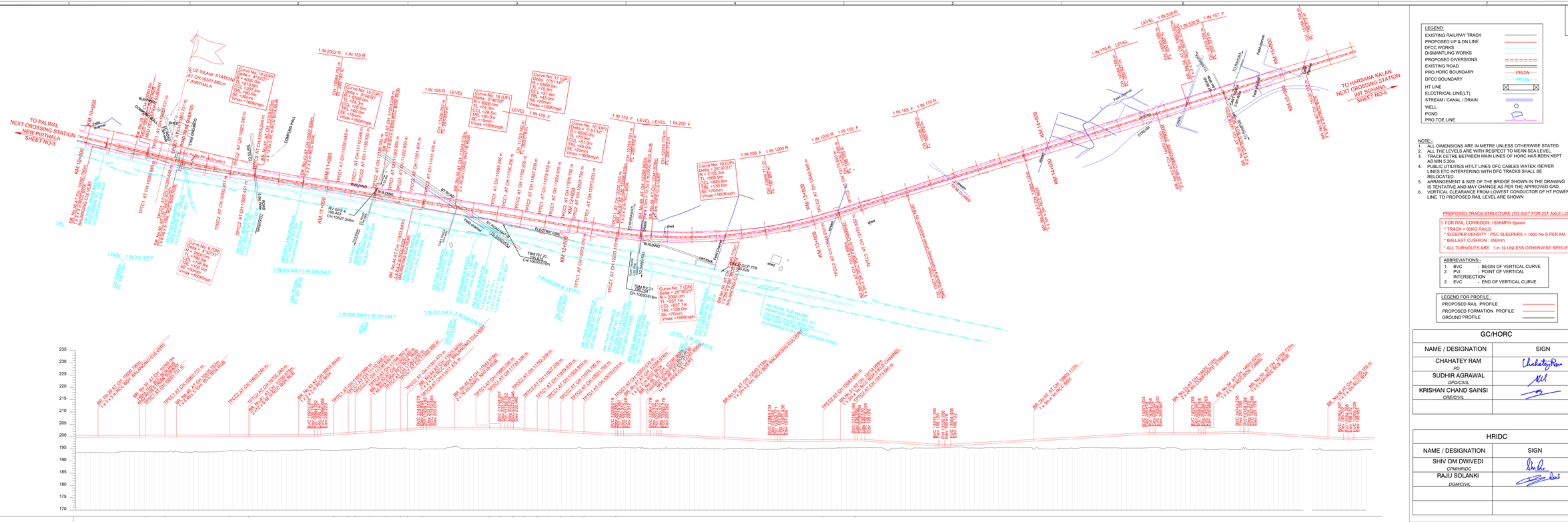
DRG.NO.AA/2245/AL/DR/P&P/R3 SHEET No. 2 OF 24

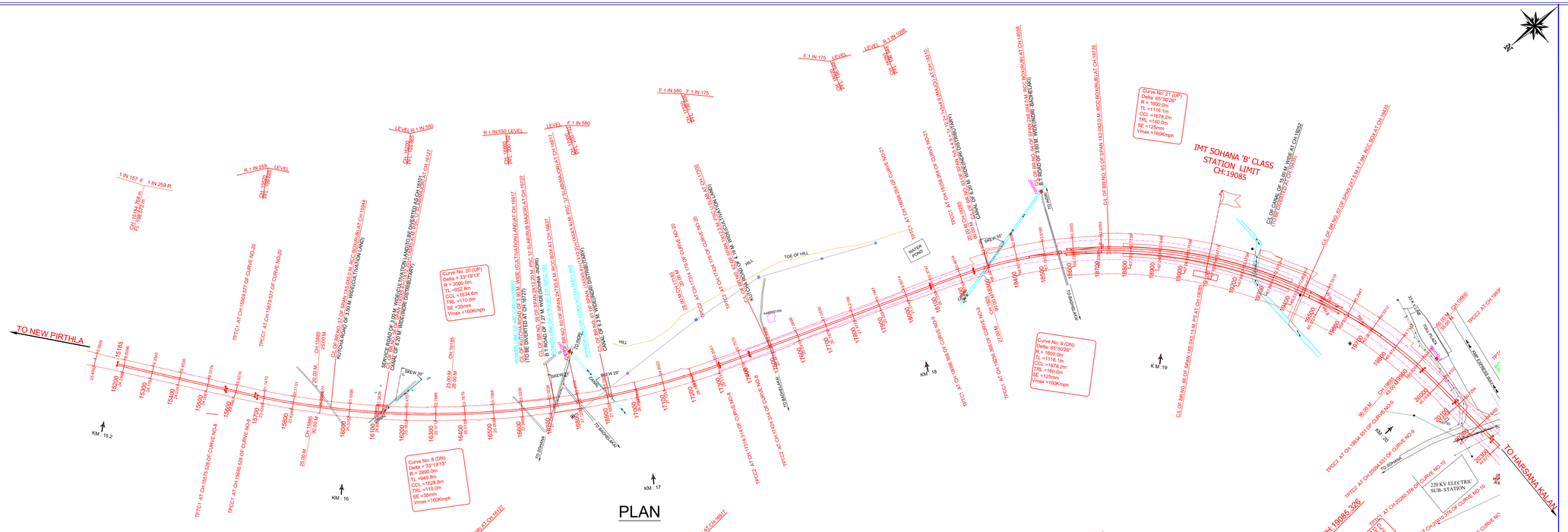
SCALE : H = 1:5000 V = 1:500 ISSUED Dt: 26.11.2019 REV Dt: 06-08-2022


PIRTHALA STATION
CH 0.00m
KM 0+000
KM 0+100
KM 1+000
KM 2+000
KM 3+000
KM 4+000
KM 5+000
KM 6+000
TO PALWAL
SHEET NO-1
TO HARSANA KALAN
NEXT CROSSING STATION
SILANI
SHEET NO-3
Curve No: 1 (UP)
Delta = 3°12'01"
R = 3600.0m
TL =136.8m
CCL =57.5m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 2 (UP)
Delta = 2°59'07"
R = 3300.0m
TL =136.0m
CCL =57.5m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 3 (UP)
Delta = 17°43'03"
R = 1255.3m
TL =196.0m
CCL =219.0m
TRL =210.0m
SE =160mm
Vmax =155Kmph
Curve No: 4 (UP)
Delta = 4°50'00"
R = 3600.0m
TL =151.9m
CCL =58.3m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 5 (UP)
Delta = 6°40'36"
R = 1400.0m
TL =82.0m
CCL =58.3m
TRL =100.0m
SE =50mm
Vmax =150Kmph
Curve No: 6 (UP)
Delta = 4°50'00"
R = 3600.0m
TL =151.9m
CCL =58.3m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 7 (UP)
Delta = 6°40'36"
R = 1400.0m
TL =82.0m
CCL =58.3m
TRL =100.0m
SE =50mm
Vmax =150Kmph
Curve No: 1 (DN)
Delta = 3°12'01"
R = 3300.0m
TL =142.2m
CCL =57.5m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 2 (DN)
Delta = 2°59'07"
R = 3300.0m
TL =133.2m
CCL =46.3m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 3 (DN)
Delta = 17°43'03"
R = 1280.0m
TL =199.9m
CCL =219.0m
TRL =290.0m
SE =160mm
Vmax =155Kmph
HT POWER LINE CROSSING(220 KV)
AT CH:2357.250m
VERTICAL CLEARANCE : 23.64m
HT TOWER HEIGHT : 40.15m
HT POWER LINE CROSSING(220 KV)
AT CH:2853.518m
VERTICAL CLEARANCE : 23.64m
HT TOWER HEIGHT : 40.15m
HT POWER LINE CROSSING(220 KV)
AT CH:3246.098m
VERTICAL CLEARANCE : 23.64m
HT TOWER HEIGHT : 40.15m
1 IN 155 F
1 IN 165 F
1 IN 225 F
1 IN 155 F
1 IN 156 R
1 IN 225 F
1 IN 165 F
1 IN 1017 R
1 IN 1017 R
LEVEL
1 IN 1680 R
LEVEL
1 IN 208 F
1 IN 155 R
1 IN 200.999 R
1 IN 334.728 R
LEVEL
1 IN 334.728 R
1 IN 200.965 F
1 IN 200.999 R
1 IN 1200 R
1:156 R
1:1200 R
1 IN 201.007 R
1 IN 200.926 F
LEVEL
1 IN 200.926 F
1 IN 201.007 R
TBM RV7
196.054
CH:430.622m
TBM RV8
196.472
CH:1172.583m
TBM RV9
196.472
CH:1172.583m
TBM RV10
196.727
CH:1316.216m
TBM RV11
196.031
CH:2225.565m
TBM RV12
196.402
CH:2812.588m
TBM RV13
196.727
CH:3246.098m
TBM RV14
196.727
CH:3246.098m
BR No.1 AT CH:0.000m
MAIN LINE PEDESTRIAN SUBWAY
1 x 4.5m W x 3.5m H RCC BOX
BR No.2 AT CH:371.670 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.3 AT CH:914.556 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.4 AT CH:1438.006 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.5 AT CH:1838.006 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.6 AT CH:1938.388 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.7 AT CH:1999.971 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.8 AT CH:2053.331 m
1 x 4.5m W x 3.5m H RCC BOX
BR No.9 AT CH:2357.250 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.10 AT CH:2853.518 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.11 AT CH:3246.098 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.12 AT CH:3609.907 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.13 AT CH:3762.693 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.14 AT CH:4002.658 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.15 AT CH:4447.258 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.16 AT CH:4650.098 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.17 AT CH:4698.898 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.18 AT CH:5472.648m
4 x 4.5m W x 3.5m H RCC BOX
BR No.19 AT CH:5702.693 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.20 AT CH:5984.500 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.21 AT CH:6039.656 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.22 AT CH:6126.457 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.23 AT CH:6398.656 m
4 x 4.5m W x 3.5m H RCC BOX
MAJ.BRIDGE No.1 AT CH:6550.000m
4 x 4.5m W x 3.5m H RCC BOX
BR No.24 AT CH:6626.656 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.25 AT CH:6826.656 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.26 AT CH:6898.656 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.27 AT CH:6976.274 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.28 AT CH:7091.291 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.29 AT CH:7208.770 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.30 AT CH:7299.656 m
2 x 3.5m W x 3.5m H RCC BOX
MAJ.BRIDGE No.2 AT CH:7550.000m
4 x 4.5m W x 3.5m H RCC BOX
BR No.31 AT CH:7799.656 m
2 x 3.5m W x 3.5m H RCC BOX
BR No.32 AT CH:7999.656 m
2 x 3.5m W x 3.5m H RCC BOX
RV GRS 1
196.487
CH:3988.917m
RV GRS 2
196.487
CH:4004.288m
RV GRS 3
196.487
CH:4019.288m
RV GRS 4
196.487
CH:4034.288m
RV GRS 5
196.487
CH:4049.288m
RV GRS 6
196.487
CH:4064.288m
RV GRS 7
196.487
CH:4079.288m
RV GRS 8
196.487
CH:4094.288m
RV GRS 9
196.487
CH:4109.288m
RV GRS


TO PALWAL
SHEET NO-2
TO HARSANA KALAN
NEXT CROSSING STATION
SILANI
SHEET NO-4
HT TOWER DETAILS
HT POWER LINE CROSSING(400 KV)
AT CH 4984.16m
VERTICAL CLEARANCE 14.48m
HT TOWER HEIGHT : 38.11m
Curve No: 8 (UP)
Delta = 1°23'40"
R = 6500.0m
TL =106.5m
CCL =96.9m
TRL =60.0m
SE =15mm
Vmax =160Kmph
Curve No: 9 (UP)
Delta : 0°31'04"
R = 7500.0m
TL =58.9m
CCL =17.8m
TRL =50.0m
SE =15mm
Vmax =160Kmph
Curve No: 10 (UP)
Delta : 0°46'50"
R = 6500.0m
TL =74.3m
CCL =28.5m
TRL =60.0m
SE =15mm
Vmax =160Kmph
Curve No: 11 (UP)
Delta : 0°46'50"
R = 6500.0m
TL =69.3m
CCL =38.5m
TRL =50.0m
SE =20mm
Vmax =160Kmph
Curve No: 12 (UP)
Delta : 0°46'50"
R = 6500.0m
TL =69.3m
CCL =38.5m
TRL =50.0m
SE =20mm
Vmax =160Kmph
Curve No: 13 (UP)
Delta = 0°46'50"
R = 6500.0m
TL =69.3m
CCL =38.5m
TRL =50.0m
SE =20mm
Vmax =160Kmph
Curve No: 4 (DN)
Delta = 1°23'00"
R = 5000.0m
TL =100.4m
CCL =40.7m
TRL =60.0m
SE =20mm
Vmax =160Kmph
Curve No: 5 (DN)
Delta : 0°31'04"
R = 12000.0m
TL =69.2m
CCL =78.5m
TRL =30.0m
SE =10mm
Vmax =160Kmph
PROP ROAD DIVERSION 3.0m WIDE
RT ROAD 9.0m WIDE
CART TRACK 3.5M WIDE
HUT DRAIN
STREAM TO BE DIVERTED
COMPOND WALL
SHED
BUILDING
POND
CANAL
DFCC ROW
DFCC UP LINE
DFCC DN LINE
Electrical line
Fencing
HT LINES
HT TOWER
2.5m Wide
44.00m
KM-5+000
KM-6+000
KM-7+000
KM-8+000
KM-9+000
KM-10+000
1 IN 155 R LEVEL
1 IN 155 F LEVEL
1 IN 1398 F
1 IN 3300 F
1 IN 347 R LEVEL
1 IN 2002 R
1 IN 243.934 F
1 IN 204.940 R
1 IN 201.526 R
1 IN 201.529 R LEVEL
1 IN 419.173 F
1 IN 286.611 R
1 IN 200.487 R
1 IN 269.529 R
1 IN 243.529 R
1 IN 299.922 F LEVEL
LEVEL 1 IN 419.175 F
TPTC1 AT CH:5393.783 m
TPTC2 AT CH:5403.783 m
TPTC1 AT CH:5380.343 m
TPTC2 AT CH:5400.343 m
TPTC1 AT CH:5501.702 m
TPTC2 AT CH:5510.702 m
TPTC1 AT CH:6651.085 m
TPTC2 AT CH:6678.858 m
TPTC1 AT CH:6608.112 m
TPTC2 AT CH:6677.112 m
TPTC1 AT CH:7327.702 m
TPTC2 AT CH:7346.246 m
TPTC1 AT CH:7800.992 m
TPTC2 AT CH:7849.136 m
TPTC1 AT CH:8206.816 m
TPTC2 AT CH:8256.816 m
TPTC1 AT CH:8331.100 m
TPTC2 AT CH:8381.160 m
TPTC1 AT CH:8618.271 m
TPTC2 AT CH:8668.271 m
TPTC1 AT CH:8419.705 m
TPTC2 AT CH:8469.705 m
TPTC1 AT CH:9159.677 m
TPTC2 AT CH:9209.677 m
TBM BV 14
200.073
CH:6749.94m
TBM BV 15
197.397
CH:1327.953m
DFCC BM110
TBM 500
CH:5831.548m
DFCC BM108
TBM 545
CH:6135.984m
DFCC GCP 828
CH:6677.112m
BR No.23 AT CH:6455.998m
1 x 12 X 6.10m RUB
BR No.24 AT CH:6608.112m
1 x 4 X 4.5 RCC BOX RUB
BR No.25 AT CH:6677.112m
1 x 12 X 6.10m RUB
BR No.26 AT CH:7733.298m
1 x 12 X 6.10m RUB
BR No.27 AT CH:7941.244m
1 x 4 X 4.5 RCC BOX RUB
BR No.28 AT CH:8036.354m
1 x 16.30m + 2 x 30.50m + 1 x 16.3 MSB
BR No.29 AT CH:8206.816m
1 x 4 X 4.5 RCC BOX RUB
BR No.30 AT CH:8256.816m
1 x 4 X 4.5 RCC BOX RUB
BR No.31 AT CH:8618.271m
1 x 4 X 4.5 RCC BOX RUB
BR No.32 AT CH:8668.271m
1 x 4 X 4.5 RCC BOX RUB
BR No.33 AT CH:8881.160m
1 x 4 X 4.5 RCC BOX RUB
BR No.34 AT CH:8931.091m
1 x 4 X 4.5m RCC BOX RUB
BR No.35 AT CH:9059.677m
12x30x22m MSCC BOX
BR No.36 AT CH:9082.453m
1 x 2 x 2m RCC BOX BALANCING CULVERT
BR No.37 AT CH:9084.600m
1 x 4 X 4.5m RCC BOX RUB
CH: 6584.792 m
FL: 207.188 m
CH: 6584.792 m
FL: 207.188 m
CH: 6584.792 m
FL: 207.188 m


TO PALWAL
NEXT CROSSING STATION
NEW PIRTHALA
SHEET NO-3
TO HARSANA KALAN
NEXT CROSSING STATION
IMT SOHANA
SHEET NO-5
KM 10+000
KM 11+000
KM 12+000
KM 13+000
KM 14+000
KM 15+000
KM 15+600
PC OF SILANI STATION
AT CH:10341.882 m
P/RITHALA
Curve No. 14 (UP)
Delta = 1°33'11"
R = 4000.0m
TL =+81.0m
CCL =+161.9m
TRL =+80.9m
SE =+30mm
Vmax =160Kmph
Curve No. 15 (UP)
Delta = 1°46'59"
R = 4000.0m
TL =+74.5m
CCL =+149.0m
TRL =+74.5m
SE =+15mm
Vmax =160Kmph
Curve No. 16 (UP)
Delta = 0°48'50"
R = 4000.0m
TL =+56.9m
CCL =+113.8m
TRL =+56.9m
SE =+10mm
Vmax =160Kmph
Curve No. 17 (UP)
Delta = 0°51'43"
R = 4000.0m
TL =+60.3m
CCL =+120.6m
TRL =+60.3m
SE =+10mm
Vmax =160Kmph
Curve No. 18 (UP)
Delta = 1°51'14"
R = 6000.0m
TL =+97.0m
CCL =+194.0m
TRL =+96.9m
SE =+20mm
Vmax =160Kmph
Curve No. 19 (UP)
Delta = 2°30'21"
R = 3000.0m
TL =+65.9m
CCL =+131.8m
TRL =+65.9m
SE =+70mm
Vmax =160Kmph
Curve No. 6 (DN)
Delta = 1°46'59"
R = 4000.0m
TL =+74.5m
CCL =+149.0m
TRL =+74.5m
SE =+15mm
Vmax =160Kmph
Curve No. 7 (DN)
Delta = 2°30'21"
R = 2000.0m
TL =+57.7m
CCL =+57.7m
TRL =+130.0m
SE =+70mm
Vmax =160Kmph
RF No.48 AT CH: 11405.438m
4 x 4.2m RCC BOX BALANCING CULVERT
RF No.49 AT CH: 11561.438m
4 x 4.2m RCC BOX BALANCING CULVERT
RF No.50 AT CH: 11645.438m
4 x 4.2m RCC BOX BALANCING CULVERT
RF No.51 AT CH: 11729.438m
4 x 4.2m RCC BOX BALANCING CULVERT
RF

PLAN


TO NEW PIRTHLA
TO HARSANA KALAN
IMT SOHANA 'B' CLASS STATION LIMIT CH:19085
CL OF IMT SOHANA 'B' CLASS STATION AT CH:19085
Curve No: 20 (UP)
Delta = 33°19'13"
R = 3000.0m
TL =952.6m
CCL =1634.6m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 8 (DN)
Delta = 33°19'13"
R = 2990.0m
TL =949.8m
CCL =1628.6m
TRL =110.0m
SE =35mm
Vmax =160Kmph
Curve No: 9 (DN)
Delta: 65°50'26"
R = 1600.0m
TL =1116.1m
CCL =1676.2m
TRL =160.0m
SE =125mm
Vmax =160Kmph
Curve No: 21 (UP)
Delta: 65°50'26"
R = 1600.0m
TL =1116.1m
CCL =1676.2m
TRL =160.0m
SE =125mm
Vmax =160Kmph
KM : 15.2
KM : 16
KM : 17
KM : 18
KM : 19
KM : 20
SERVICE ROAD OF 7.00 M WIDE(CULTIVATION LAND) TO BE DIVERTED AS CH:16972
SERVICE ROAD OF 7.00 M WIDE(CULTIVATION LAND) TO BE DIVERTED AS CH:18972
KUCHA ROAD OF 3.66 M WIDE(CULTIVATION LAND)
KUCHA ROAD OF 3.66 M WIDE(NON CULTIVATION LAND)
TOE OF HILL
WATER POND
KABRISTAN
BRICK KILN
TPCC1 AT CH:15599.577 OF CURVE NO-20
TPCC1 AT CH:15975.577 OF CURVE NO-20
TPCC1 AT CH:15985.528 OF CURVE NO-9
TPCC1 AT CH:19858.528 OF CURVE NO-9
TPCC2 AT CH:19934.601 OF CURVE NO-9
TPCC2 AT CH:20084.533 OF CURVE NO-9
TPCC1 AT CH:20084.533 OF CURVE NO-10
TPCC2 AT CH:20084.565 OF CURVE NO-10
TPCC1 AT CH:20084.376 OF CURVE NO-10
TPCC2 AT CH:20084.565 OF CURVE NO-10
220 KV ELECTRIC SUB- STATION
CL OF BR.NO.65 OF SPAN 13X20.73 M, RCC BOX/BR.(R) AT CH:15975
CL OF BR.NO.66 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16010
CL OF BR.NO.67 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16044
CL OF BR.NO.68 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16077
CL OF BR.NO.69 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16111
CL OF BR.NO.70 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16144
CL OF BR.NO.71 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16177
CL OF BR.NO.72 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16211
CL OF BR.NO.73 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16244
CL OF BR.NO.74 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16277
CL OF BR.NO.75 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16310
CL OF BR.NO.76 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16344
CL OF BR.NO.77 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16377
CL OF BR.NO.78 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16411
CL OF BR.NO.79 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16444
CL OF BR.NO.80 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16477
CL OF BR.NO.81 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16511
CL OF BR.NO.82 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16544
CL OF BR.NO.83 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16577
CL OF BR.NO.84 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16611
CL OF BR.NO.85 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16644
CL OF BR.NO.86 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16677
CL OF BR.NO.87 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16711
CL OF BR.NO.88 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16744
CL OF BR.NO.89 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16777
CL OF BR.NO.90 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16811
CL OF BR.NO.91 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16844
CL OF BR.NO.92 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16877
CL OF BR.NO.93 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16911
CL OF BR.NO.94 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16944
CL OF BR.NO.95 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:16977
CL OF BR.NO.96 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17011
CL OF BR.NO.97 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17044
CL OF BR.NO.98 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17077
CL OF BR.NO.99 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17111
CL OF BR.NO.100 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17144
CL OF BR.NO.101 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17177
CL OF BR.NO.102 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17211
CL OF BR.NO.103 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17244
CL OF BR.NO.104 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17277
CL OF BR.NO.105 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17311
CL OF BR.NO.106 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17344
CL OF BR.NO.107 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17377
CL OF BR.NO.108 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17411
CL OF BR.NO.109 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17444
CL OF BR.NO.110 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17477
CL OF BR.NO.111 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17511
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CL OF BR.NO.113 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17577
CL OF BR.NO.114 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17611
CL OF BR.NO.115 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17644
CL OF BR.NO.116 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17677
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CL OF BR.NO.120 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:17811
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CL OF BR.NO.126 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:18011
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CL OF BR.NO.148 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:18744
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CL OF BR.NO.160 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:19144
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CL OF BR.NO.256 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:22344
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CL OF BR.NO.264 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:22611
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CL OF BR.NO.283 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23244
CL OF BR.NO.284 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23277
CL OF BR.NO.285 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23311
CL OF BR.NO.286 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23344
CL OF BR.NO.287 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23377
CL OF BR.NO.288 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23411
CL OF BR.NO.289 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23444
CL OF BR.NO.290 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23477
CL OF BR.NO.291 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23511
CL OF BR.NO.292 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23544
CL OF BR.NO.293 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23577
CL OF BR.NO.294 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23611
CL OF BR.NO.295 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23644
CL OF BR.NO.296 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23677
CL OF BR.NO.297 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23711
CL OF BR.NO.298 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23744
CL OF BR.NO.299 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23777
CL OF BR.NO.300 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23811
CL OF BR.NO.301 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23844
CL OF BR.NO.302 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23877
CL OF BR.NO.303 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23911
CL OF BR.NO.304 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23944
CL OF BR.NO.305 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:23977
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CL OF BR.NO.319 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24444
CL OF BR.NO.320 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24477
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CL OF BR.NO.326 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24677
CL OF BR.NO.327 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24711
CL OF BR.NO.328 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24744
CL OF BR.NO.329 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24777
CL OF BR.NO.330 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24811
CL OF BR.NO.331 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24844
CL OF BR.NO.332 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:24877
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CL OF BR.NO.341 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25177
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CL OF BR.NO.343 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25244
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CL OF BR.NO.345 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25311
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CL OF BR.NO.349 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25444
CL OF BR.NO.350 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25477
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CL OF BR.NO.362 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25877
CL OF BR.NO.363 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25911
CL OF BR.NO.364 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:25944
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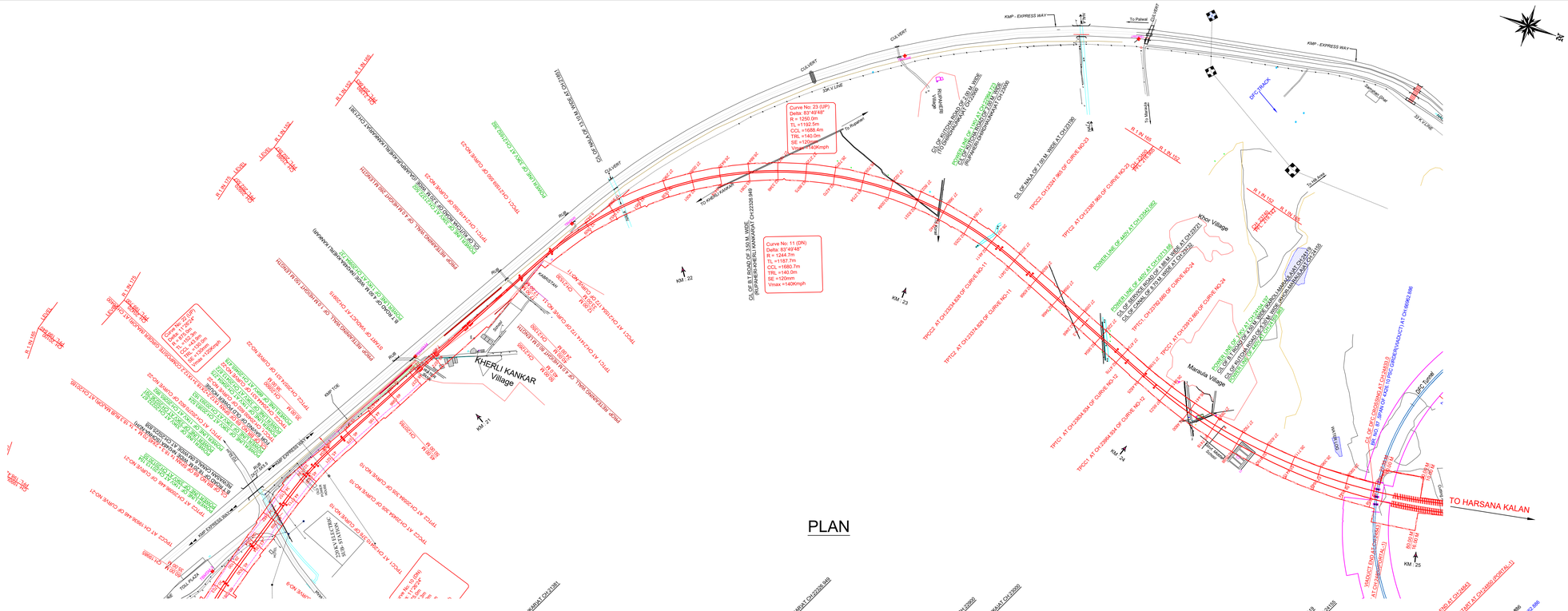
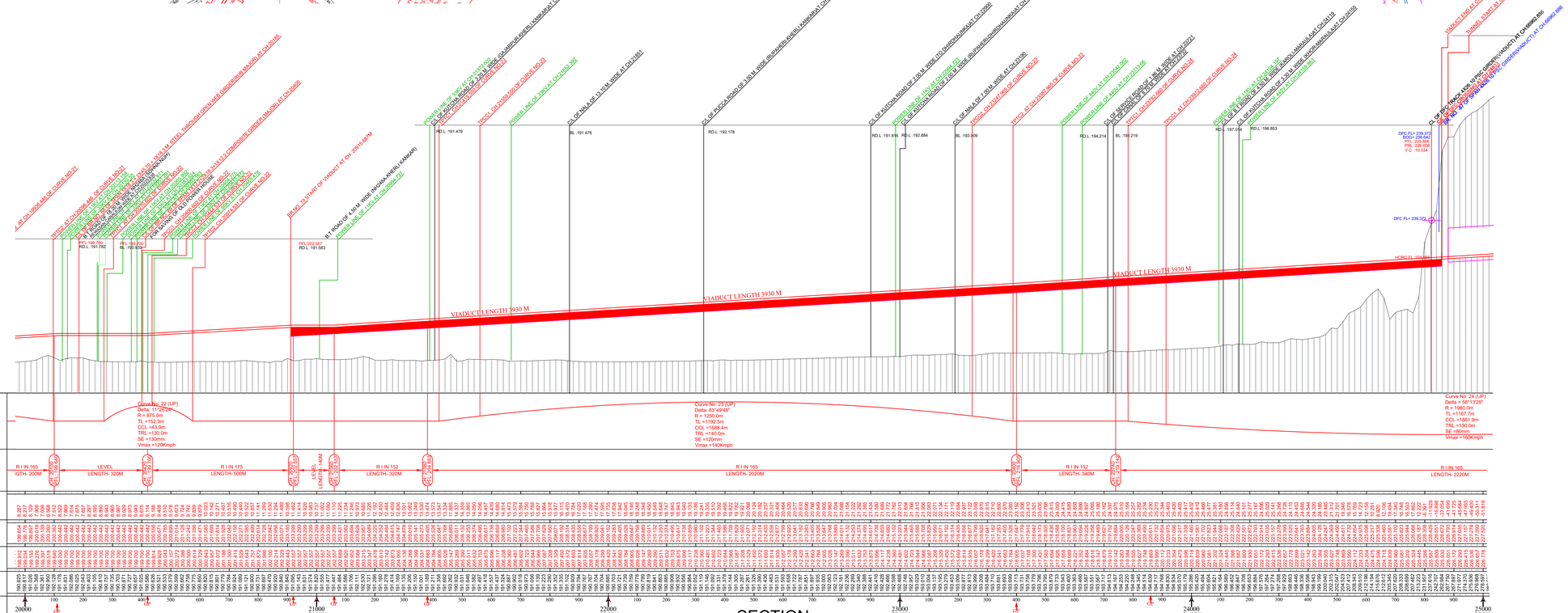
CL OF BR.NO.373 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:26244
CL OF BR.NO.374 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:26277
CL OF BR.NO.375 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:26311
CL OF BR.NO.376 OF SPAN 1X3.66 M, RCC BOX/BR.(R) AT CH:26344
CL OF BR.NO.377 OF SPAN 1X

PLAN





LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DFCC WORKS
- 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

LIST OF TBM

TBM No.	Easting	Northing	Elevation
SM-1	705588.878	3121113.675	194.387
SM-2	704954.348	3119500.444	193.724
SM-3	703625.564	3118924.368	193.601

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

HRIDC	
NAME / DESIGNATION	SIGN
SHIV OM DWIVEDI *CPM/HRIDC*	
RAJU SOLANKI *DGM/C/VIL*	

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION 20 KM TO 25 KM

GC DRG.NO.	GC-HRIDC-ALL-DRW-ALN-P&P-20-25KM_A0
ISSUE Dt:	22.06.2023
REVISED Dt:	

SCALE: HORIZONTAL = 1000 VERTICAL = 100

SMC DRG. NO:- SMC-HRIDC-TUNNELS-S- (R-4)

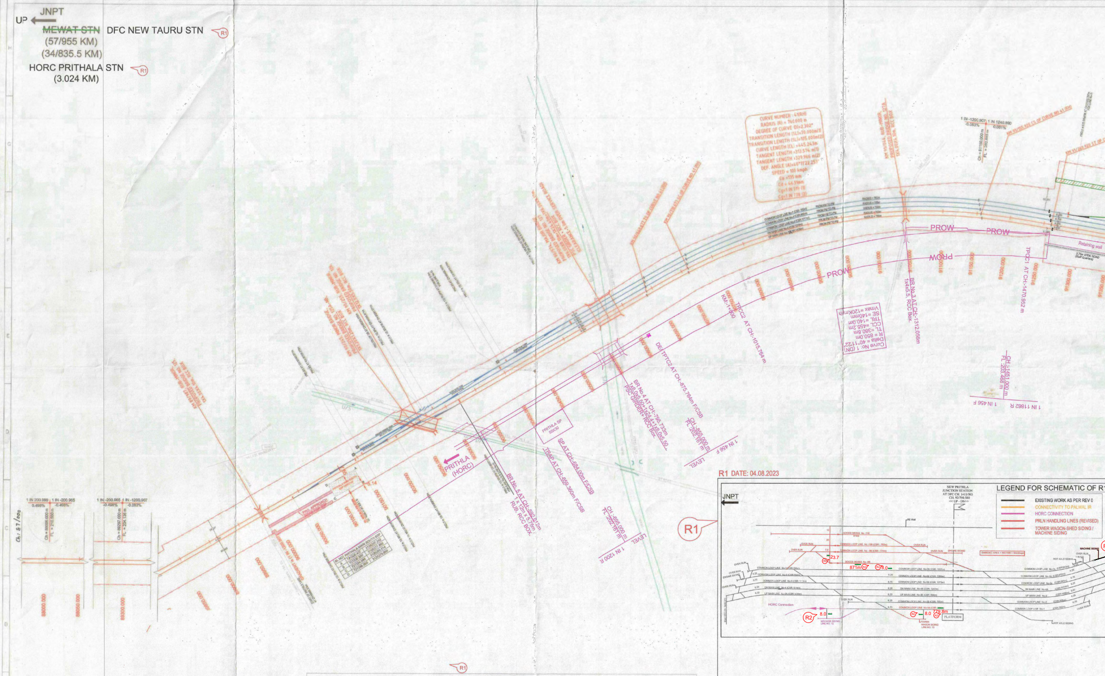
CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company Transmission | Telecom | Telecommunication | South Asia | New Delhi Web : www.smcindia.com, E-Mail : support@smcindia.com

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

RELEASED FOR: PRELIMINARY, FOR APPROVAL; TENDER; CONSTRUCTION

S.V.RAM
PROJECT INCHARGE

2. ESP/YARD PLAN

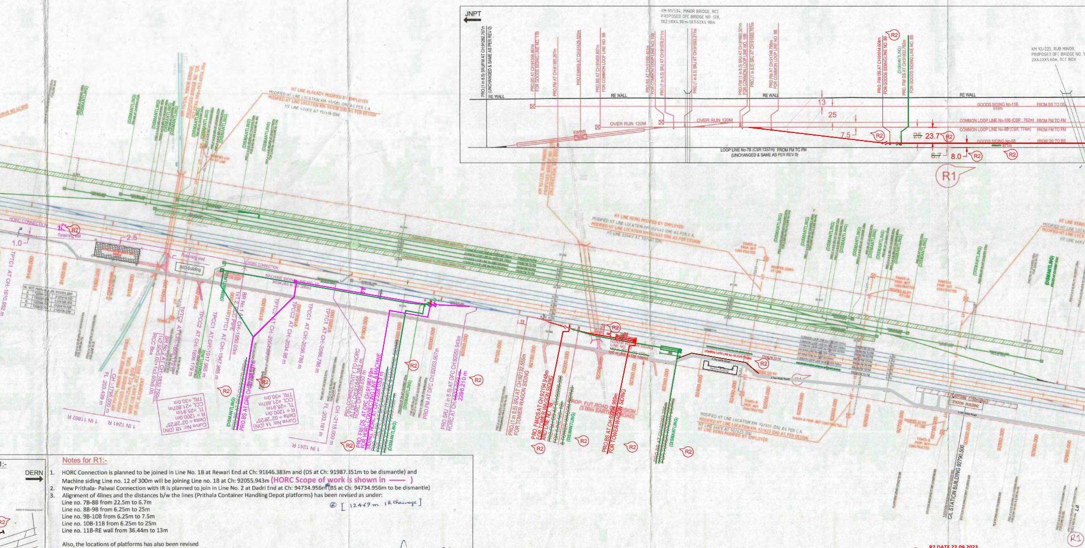

UP ← JNPT
~~MEWAT STN~~ DFC NEW TAURU STN
(57/955 KM)
(34/835.5 KM)
HORC PRITHALA STN
(3.024 KM)
R1
PROW
PRITHLA (HORC)
PRITHLA SP
BR No.3 AT CH.-1312.056m 1x4x5.5, RCC Box.
BR No.4 AT CH.-795.735m
BR No.5 AT CH.-563.512m
TPC1 AT CH.-1470.952 m
TPC2 AT CH.-1015.764 m
DE TPTC2 AT CH.-975.764m F/CSB
SP AT CH.-684.000m F/CSB
TRAP AT CH.-659.360m F/CSB
CH.-855.000 m
FL.-202.161 m
1 IN 456 F
LEVEL
1 IN 1200 R
1 IN 11862 R
CH.-1451.000 m
FL.-202.468 m
Retaining wall
Ch: 87/000
R1 DATE: 04.08.2023
JNPT
NEW PRITHLA JUNCTION STATION AT DFC CH. 1411/303 CH. 92/790.500 << UP - DN>>
LEGEND FOR SCHEMATIC OF R1
EXISTING WORK AS PER REV 0
CONNECTIVITY TO PALWAL IR
HORC CONNECTION
PRLN HANDLING LINES (REVISED)
TOWER WAGON-SHED SIDING / MACHINE SIDING
RE Wall
GOODS SIDING No.-11B
COMMON LOOP LINE
OVER RUN
ENGINE SIDING
GOODS SIDING No.-8B
23.7
871m
8.0
R2
HORC Connection
PLATFORM
MACHINE SIDING
HOT AXLE SIDING

NEW PRITHALA YARD						
LINE NO	LINE NOTATION	START		END		TOTAL LENGTH OF CSR
LINE No-3A	UP MAIN LINE	FM	90321.538	FM	91760.411	1439
LINE No-4	DN MAIN LINE	FM	90321.538	FM	91637.163	1316
LINE No-5	COMMON LOOP	FM	90397.519	FM	91508.515	1111
LINE No-6	COMMON LOOP	FM	90520.767	FM	91385.267	864
LINE No-7	COMMON LOOP	FM	90520.767	FM	91282.767	762

R1

NEW PRITHALA YARD						
LINE NO	LINE NOTATION	START		END		TOTAL LENGTH OF CSR
LINE No-1B	COMMON LOOP	FM	92209.396	FM	92974.730	765
~~LINE No-8B~~	~~GOODS SIDING~~	~~DS~~	~~91932.792~~	~~BS~~	~~92793.076~~	~~860~~
LINE No-9B	COMMON LOOP	FM	91746.798	FM	92520.798	774
LINE No-10B	COMMON LOOP	FM	91680.321	FM	92442.321	762
LINE No-11B	GOODS SIDING	BS	91358.467	DS	92273.469	915
LINE No-8B	GOODS SIDING	DS	91914.604	BS	92785.553	871

R2


JNPT
KM 91/594, MINOR BRIDGE, RCC PROPOSED DFC BRIDGE NO. 129, 1X2.50X4.90m+1X3.60X4.90m
KM 92/225, RUB MINOR, PROPOSED DFC BRIDGE NO. 1 2X6.00X5.60m, RCC BOX
RE WALL
OVER RUN 120M
GOODS SIDING No-11B
COMMON LOOP LINE No-10B (CSR : 762m) FROM FM TO FM
COMMON LOOP LINE No-9B (CSR: 774m) FROM FM TO FM
GOODS SIDING No-8B
LOOP LINE No-7B (CSR:1357m) FROM FM TO FM (UNCHANGED & SAME AS PER REV 0)
FROM BS TO DS
FROM DS TO BS
13
25
7.5
~~25~~ 23.7
~~6.7~~ 8.0
R1
R2
HORC CONNECTION
Retaining wall
IMD Building
MACHINE SIDING LINE No. 12 300M (BS to DS 300m)
TOWER WAGON SIDING LINE No. 13 100 m (BS to DS 106m)
HT LINE ALREADY MODIFIED BY EMPLOYER
HT LINE BEING MODIFIED BY EMPLOYER
(DISMANTLING)
Curve No: 1B (DN) Delta = 02°28'25" R = 1200.0m
Curve No: 1A (DN) Delta = 02°28'25" R = 1200.0m
1 IN 1241 R
1 IN 11862 R
PLATFORM (150m×6m)
STATION BUILDING
C/L STATION BUILDING 92790.500
DERN

Notes for R1:-

1. HORC Connection is planned to be joined in Line No. 1B at Rewari End at Ch: 91846.383m and (DS at Ch: 91987.351m to be dismantle) and Machine siding Line no. 12 of 300m will be joining Line no. 1B at Ch: 92055.943m **(HORC Scope of work is shown in ——)**
2. New Prithala- Palwal Connection with IR is planned to join in Line No. 2 at Dadri End at Ch: 94734.956m(BS at Ch: 94734.956m to be dismantle) [12469m IR chainage]
3. Alignment of 4lines and the distances b/w the lines (Prithala Container Handling Depot platforms) has been revised as under:
   Line no. 7B-8B from 22.5m to 6.7m
   Line no. 8B-9B from 6.25m to 25m
   Line no. 9B-10B from 6.25m to 7.5m
   Line no. 10B-11B from 6.25m to 25m
   Line no. 11B-RE wall from 36.44m to 13m

   Also, the locations of platforms has also been revised
   from Line 7B-8B to Line 8B-9B
   from Line 11B-RE wall to Line 10B-11B
4. It has been decided that Prithala Junction North SSP (Ch: 93070m) will not be constructed.
5. Tower-wagon Siding Line no. 13 of 150m will be joining Line No. 1B at Ch: 92132.555m
   Accordingly, CSR of Line no. 1B has been revised from 855m to 765m
6. Length of Machine Siding at Dadri End has been revised from 120m to 280m (BS at Ch: 94211.853m to be dismantle)
7. The name of station of DFC be read as "New Prithala Junction Station" and Station of HORC be read as "Prithala Station"
8. The ROW (Land Boundary) shall not be used for land related issues from this ESP Plan. Land Plans shall be used for such purposes.
9. Distance between C/L of Station buildings are as follows:
   HORC Prithala Station - DFC New Prithala Junction Station is approx. 3024m
   DFC New Prithala Junction Station - IR Palwal Station is approx. 14844m)
10. Common Loop Line No. 8B and 11B has been revised to Goods Siding.
11. Reference E-file No. Noida/1/2022 o/o CGM Noida (computer No. 1640)
12. TC of HORC & Palwal connectivity with DFCCIL Track to be kept such that there is no infringement to existing mast/portals.

For Palwal Prithala connectivity
Refer Drg No. NRHR ECP-P-275-LS/2022 SH 3,2,1

Dir/OP&BD 7/8/23

Dir/Infra

GC HORC	HORC / HRIDC	NR	DFCCIL		
			FIELD UNIT		C.O
Chahatey Ram 7/8/23 PD	07.8.23 CPM	07.8.23 C.E./Survey/NR	Dy PM/E 04/8/23 04/08/23 PM/Elect.	04/08/2023 GM/Elect.	Mahaji 08.8.2023 GGM/Elect.
Anand DPD CIVIL		For Palwal-Prithala connectivity 7.8.23 Dy. C.E./Survey/NR	04/08/23 APM/DPM/S&T	04.08.23 Dy. CPM/S&T	V.B.Malh 08.08.23 GGM/S&T
for DPD EST			04/08/23 APM/DPM/Engg.	04/08/23 Dy. CPM/Engg.	Praveen Kumar 10/8/23 ED/AM/WDFC
07-08-2023 CRE ELECT.			Upendra 04/8/2023 APM/DPM/OP&Safety	04/8/23 CGM	8.8.23 GGM/OP&Safety

R1

NEW PRITHALA YARD						
LINE NO	LINE NOTATION	START		END		TOTAL LENGTH OF CSR
~~LINE No-1B~~	~~COMMON LOOP~~	~~FM~~	~~92119.555~~	~~FM~~	~~92974.730~~	~~855~~
LINE No-2B	COMMON LOOP	FM	92119.555	FM	92884.555	765
LINE No-3B	UP MAIN LINE	FM	91990.907	FM	92884.555	894
LINE No-4B	DN MAIN LINE	FM	91867.659	FM	93114.505	1247
LINE No-5B	COMMON LOOP	FM	91747.411	FM	93020.505	1273
LINE No-6B	COMMON LOOP	FM	91624.163	FM	92930.330	1306
LINE No-7B	COMMON LOOP	FM	91495.515	FM	92852.180	1357
~~LINE No-8B~~	~~COMMON LOOP~~	~~FM~~	~~91678.140~~	~~FM~~	~~92521.954~~	~~844~~
~~LINE No-9B~~	~~COMMON LOOP~~	~~FM~~	~~91678.140~~	~~FM~~	~~92521.954~~	~~844~~
~~LINE No-10B~~	~~COMMON LOOP~~	~~FM~~	~~91717.547~~	~~FM~~	~~92482.547~~	~~765~~
~~LINE No-11B~~	~~COMMON LOOP~~	~~FM~~	~~91717.547~~	~~FM~~	~~92482.547~~	~~765~~

R1 R1 R1 R1 R1

R2 DATE 22.09.2023

NOTES FOR R2:-

1. Distance between HORC Connecting Line and DFC UP Main Li
2. Distance between Machine Siding Line no. 12 and Common L
   accordingly, DS and BS has been revised.
3. Distance between Tower Wagon Siding Line no. 13 and Comr
   with 3.5m wide platform and 30° ramp, accordingly, DS and
4A. Distances between Line no. 7B of Prithala Yard and lines of P
(i) Line no. 7B-8B from 6.7m to 8.0m
(ii) Line no. 8B-9B from 25m to 23.7m
4B. Accordingly, DS and BS of Goods Siding Line No. 8B has been
5. Length of Machine Siding at Dadri End has been revised from
6. Prithala-Palwal Connection is planned to be joined in Line no
   Now, distance between Prithala-Palwal Connection and DFC

GC HORC	HORC / HRIDC
PD	CPM
DPD/ Civil	
DPD/ EST	
CRE/ Elect	

R2

DERN
RE WALL
PRO. FM / DS AT CH:92273.469m FOR GOODS SIDING LINE NO. 11B
PRO.FM AT CH:92442.321m FOR COMMON LOOP LINE NO. 10B
PRO. FM/ (1 in 8.5) SRJ AT CH:92507.798m FOR COMMON LOOP LINE NO. 9B
PRO. (1 in 8.5) SRJ AT CH:92520.798m
PRO.(1 in 8.5) SRJ AT CH:92606.598m
PRO.(1 in 8.5) SRJ AT CH:92621.598m
PRO.BS AT CH:92640.798m FOR COMMON LOOP LINE NO. 10B
PRO.FM/ SRJ OF DS AT CH:92742.746m
PRO.BS AT CH:92785.553m
(DISMANTLING) PRO.BS AT CH:92793.076m FOR GOODS SIDING LINE NO. 8B
PRO.BS AT CH:92842.746m FOR COMMON LOOP LINE NO. 9B
PRO.FM AT CH:92842.746m FOR COMMON LOOP LINE NO. 7B
PRO.(1 in 8.5) SRJ AT CH:92917.330m (UNCHANGED & SAME AS PER REV 0)
OVER RUN 120M
ENGINE SIDING 100M (BS to DS 106m)
LOOP LINE No-7B (CSR:1357m) FROM FM TO FM (UNCHANGED & SAME AS PER REV 0)
R1
R2
SCHEMATIC LINE DIAG
CURVE NUMBER : 42(LH)
RADIUS (R) = 700.000 m
DEGREE OF CURVE (D)=2.500°
TRANSITION LENGTH (SL)=115.000m(1)
TRANSITION LENGTH (SL)=80.000m(2)
CURVE LENGTH (CL) =180.692m
TANGENT LENGTH =197.434m(1)
TANGENT LENGTH =182.218m(2)
DEF. ANGLE (A)= 22°48'58.835"
SPEED = 100 kmph
Ca =140 mm
Cd=56.86mm
Cg= 1 IN 821 (1)
Cg= 1 IN 571 (2)
KM 93/339.972 SC OF CURVE NO 42 (LH)
PROP. FUT.ROAD DIVERSION (3.00m EARTHEN ROAD)
KM 93/510, MINOR BRIDGE FOR ROAD
MACHINE SIDING 120M (BS to DS 126m)
SIGNALLING EAST CABIN @94350
(DISMANTLING)
93000.000
93050.000
93100.000
93150.000
93200.000
93250.000
93300.000
93350.000
93400.000
93450.000
93500.000
93550.000
93600.000
93650.000
93700.000
93750.000
93800.000
93850.000
93900.000
93950.000
94000.000
94050.000
94100.000
94150.000
94200.000
94250.000
94300.000
94350.000
94400.000
94450.000

ine no. 3A has been revised from 7m to 7.2m.
oop Line no. 1B has been revised from 10.5m to 8.0m and length of Machine Siding has been revised from 300m to 200m,

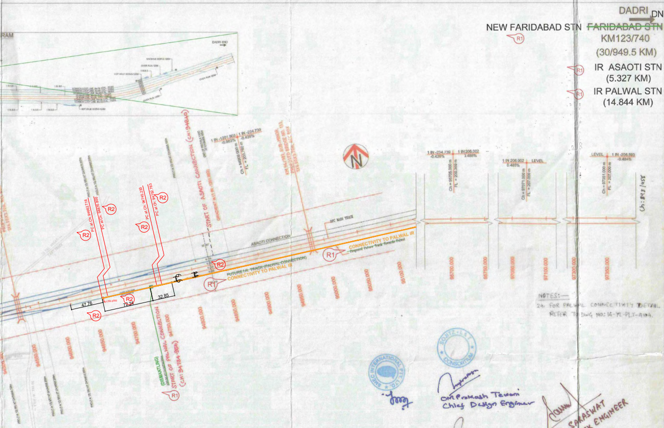
non Loop Line no. 1B has been revised from 10.5m to 8.0m and length of Tower Wagon Siding has been revised from 150m to 100m
3S has been revised. Therefore now CSR of Common Loop Line No. 1B has been revised from 765m to 779.8m.
rithala Container Handling Depot have been revised and are as below:

revised. Therefore now CSR of Goods Siding No. 8B has been revised from 860m to 871m.
280m to 120m and will be same as per REV 0, due to infringement of Signaling East Cabin at Ch: 94350.
. 2 at Dadri End at Ch: 94734.956 and (BS at Ch: 94734.956m to be dismantled).
UP Main Line will be 6.6m instead of 6.25m in REV 0.

	NR	DFCCIL		
		FIELD UNIT		C.O
	C.E./Survey/NR	PM/Elect.	GM/Elect.	GGM/Elect.
	Dy. C.E./Survey/NR	DPM/S&T	Dy. CPM/S&T	GGM/S&T
		APM/DPM/Engg.	Dy. CPM/Engg.	ED/AM/WDFC
		APM/DPM/OP&Safety	CGM	GGM/OP&Safety

R1

NEW PRITHALA YARD						
LINE NO	LINE NOTATION	START		END		TOTAL LENGTH OF CSR
LINE No-1	COMMON LOOP	FM	93158.874	FM	93920.874	762
LINE No-2	COMMON LOOP	FM	93055.730	FM	93920.874	865
LINE No-3	UP MAIN LINE	FM	92961.730	FM	94049.522	1088
LINE No-4A	DN MAIN LINE	FM	93191.680	FM	94205.545	1014
LINE No-5A	COMMON LOOP	FM	93191.680	FM	94076.897	885
LINE No-6A	COMMON LOOP	FM	93101.505	FM	93953.649	852
LINE No-7A	COMMON LOOP	FM	93007.505	FM	93850.505	843


DADRI
DN
NEW FARIDABAD STN
~~FARIDABAD STN~~
R1
KM123/740
(30/949.5 KM)
IR ASAOTI STN
(5.327 KM)
IR PALWAL STN
(14.844 KM)
DADRI END
START OF ASAOTI CONNECTION (CH: 94840)
GRADIENT in (1 IN -1201.903)
1 IN -1201.903 -0.083%
1 IN -234.739 -0.426%
Ch = 94909.000 m
FL = 203.760 m
KM 94/981, RUB-HEMDR, BRIDGE NO. 133, PROPOSED BRIDGE NO. 133, 1X6.00X3.75m, RCC BOX
1 IN -234.739 -0.426%
1 IN 206.002 2.485%
1 IN 206.002 0.485%
LEVEL
1 IN -206.593 -0.484%
Ch = 95705.000 m
FL = 200.359 m
Ch = 97071.000 m
FL = 207.000 m
Ch = 97351.000 m
FL = 207.000 m
Ch: 89.3 / 458
DFC MAIN TRACK
ASAOTI CONNECTION
CONNECTIVITY TO PALWAL IR
Proposed Future Track Towards Palwal
FUTURE I.R. TRACK (PALWAL CONNECTION)
CONNECTIVITY TO PALWAL IR
PC at Ch: 94662.716
PC at Ch: 94670.600
PC at Ch: 94745.233
PC at Ch: 94752.763
R2
R1
47.76
72.24
32.85
R1750.0000
(DISMANTLING)
START OF PALWAL CONNECTION (CH: 94734.956)
94600.000
94650.000
94700.000
94750.000
94800.000
94850.000
94900.000
94950.000
95000.000
95050.000
95100.000
95700.000
95750.000
97050.000
97100.000
97300.000
97350.000
N

NOTES:—

24. FOR PALWAL CONNECTIVITY DETAIL REFER TO DWG NO: 14-YL-PLT-4104.

SOJITZ-L&T CONSORTIUM

SMEC INTERNATIONAL PTY. LTD.

Om Prakash Tewari
Chief Design Engineer

PUJA RANI
(ENGINEERING MANAGER)

S.B. SARASWAT
CHIEF TRACK ENGINEER

Deepak Gupta
DEEPAK GUPTA
EDRC/ELECTRICAL

PMC - 2 R
OCGC CONSORTIUM

Vinod Kumar Agarwal
CM/Elect.
V.K. AGARWAL

4.X.19
(AK Mishra)
CM(S&T)

4/10/19 (ANIL MITTAL)
Track Design Engineer

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LEGEND:-

🟥	PROPOSED DFCC MAIN LINES
🟦	PROPOSED DFCC LOOP LINES
🟦	(1 IN 12) TURNOUT
🟦	(1 IN 8.5) TURNOUT
⊠	BUFFER STOP
	DERAILING SWITCH (12.2m)
	FOULING MARK
	STOCK RAIL JOINT
ROW	DFCC ROW LINE
	ASAOTI CONNECTION (YET TO BE FINALISED)
- - -	FUTURE I.R. TRACK (PALWAL CONNECTION)
- - -	FUTURE PROPOSED DFCC TRACK
▨	PLATFORM
▨	SSP

ABBREVIATION:-

BS	BUFFER STOP
DS	DERAILING SWITCH
FM	FOULING MARK
SC	SPIRAL TO CURVE
CS	CURVE TO SPIRAL
ST	SPIRAL TO TANGENT
TS	TANGENT TO SPIRAL
GP	GRADIENT POST
SRJ	STOCK RAIL JOINT
EL	ELECTRIC LOCO
DL	DIESEL LOCO
BV	BRAKE VAN

NOTES:-

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.
2. THIS DRAWING IS BASED ON MAIN LINE ALIGNMENT DESIGN DRAWING REF_P&P Km. 90+000 To Km. 104+000 OF SEC 16 AND Km. 00+000 to 2+640 OF ASAWATI CONNECTION REV-0 (14-AL-PLT-2102 TO 2109, 14-AL-PLT-2122 TO 2130 & 14-AL-PLT-2152 TO 2161) SUBMITTAL NO:- SUBM/SLT14/OCGC/CTP14/CIVIL/DGN/1218 dated 02.07.2018.
3. ALL TURNOUTS TO BE LOCATED AT A MINIMUM DISTANCE OF 30m FROM A CHANGE OF GRADIENT.
4. NO TURNOUTS ARE LOCATED WITHIN 18m OF A HORIZONTAL TRANSITION CURVE, AS PER NOTE OF CL.9.3 OF WDFC SSOD.
5. TURNOUT GEOMETRY, INCLUDING DISTANCES FROM STOCK RAIL JOINT TO ACTUAL TOE OF SWITCH, IS BASED ON INPUT PROVIDED BY L&T WITH OVERALL LENGTHS OF TURNOUTS BEING
   1- (FOR 1 IN 8.5 TURNOUT LENGTH = 30.768m)
   2- (FOR 1 IN 12 TURNOUT LENGTH = 42.667m)
6. DISTANCES FROM STOCK RAIL JOINT TO ACTUAL TOE OF SWITCH - 1144mm FOR 1 IN 12 AND 1500mm FOR 1 IN 8.5.
7. THE TURNOUT DESIGN SPEEDS ARE (50km/hr FOR 1 IN 12) AND (25km/hr FOR 1 IN 8.5).
8. CANT IS NOT PROVIDED IN LOOP LINE IN STATION YARD TRACKS.
9. THE MINIMUM DEPTH OF BALLAST BELOW THE SLEEPER, AT THE RAIL SEAT, IN LOOP LINE OF STATION YARD TRACKS IS 250mm.
10. THE OVERRUN LENGTH OF 120m FROM SRJ OF TURNOUT TILL THE DEAD END/ DS IS NOT FIT FOR STABLING.
11. FM AND SRJ ARE AT SAME POSITION.
12. TRAP SWITCH TO BE INSTALLED IN THE RAIL AND AWAY FROM THE TRACK BEING PROTECTED.
13. YARD LIMITS HAVE BEEN SET AS PER WDFC SSOD CHAPTER IX STATION YARD-CLAUSE 9.1.2 NOTE b) iii) REGARDING MARKING OF STATION YARD LIMIT.
14. CLEAR STANDING ROOM HAS BEEN SET AS MINIMUM 762m FM TO FM.
15. THE CHAINAGES ARE MARKED WITH RESPECT TO THE CHAINAGING PROVIDED FOR THE DOWN MAINLINE.
16. DERAILING SWITCH OVERALL LENGTH =12.204m FOR 1 IN 8.5 AS INPUT PROVIDED BY L&T.
17. DESIGN OF YARD COMPLIES WITH SOD FOR WESTERN DEDICATED FREIGHT CORRIDOR OF INDIAN RAILWAY.
18. THE STATION BUILDING AND PLATFORM SHOWN IN THE YARD LAYOUT IS INDICATIVE. FOR DETAILS OF THE SAME, PLEASE REFER STATION SITE LAYOUT.
19. ROADS AS PER SITE CONDITIONS AND DIVERSION WILL BE SHOWN IN AS -BUILT PLAN & PROFILE DRAWINGS.
20. LOCATION OF SERVICE ROAD AND TOE LINE OF THE BANK WILL BE SHOWN IN THE ALIGNMENT DRAWING.
21. APPROACH ROAD AND SSP LOCATIONS AND SIZE SHOWN ARE INDICATIVE ONLY.
22. AS MENTIONED IN THE DRAWING THE LOCATION OF SSP'S ARE INDICATIVE, THE ROAD CONSTRUCTION SHALL BE DONE UP TO THE BOUNDARY OF SSP'S.
23. CONNECTING ARRANGEMENT FROM PRITHALA TO ASAOTI & PALWAL WILL BE SUBMITTED SEPARATELY.

REV NO.	DATE	DESCRIPTION
		REVISED
0	26/07/2019	ISSUED FOR CONSTRUCTION.
F	05/07/2019	MACHINE SIDING LENGTH INCREASED AND ISSUED FOR APPROVAL.
E	07/09/2018	REVISED AFTER NONO TO INCORPORATE BUILDING LAYOUTS
D	27/02/2018	REVISED AS PER COMMENTS (LETTER No-UOCGC/DFCC/CMT/CTP-14/1801/9607)
C	22/01/2018	REVISED AS PER COMMENTS (LETTER No-DFCC/Noida Unit/Contract/CTP-14/1084)
B	12/12/2017	REVISED AS PER COMMENTS (LETTER No-8083 DATE:28.11.2017)
A	20/11/2017	FOR REVIEW

REVISIONS

PROJECT :
WESTERN DEDICATED FREIGHT CORRIDOR
PACKAGE CTP-14 - REWARI TO DADRI

ORGANIZATION

CLIENT :
DEDICATED FREIGHT CORRIDOR
CORPORATION OF INDIA LTD.

ENGINEER :
PMC-2R
OCG CONSORTIUM

CIVIL	S&T	ELECTRICAL

CONTRACTOR :
SOJITZ-L&T
CONSORTIUM

DESIGNER:
SMEC International Pty Ltd
Member of the Surbana Jurong Group

TITLE:
DETAILED DESIGN YARD LAYOUT PLAN
~~FOR PRITHALA JUNCTION STATION~~ R1
FOR NEW PRITHALA JUNCTION STATION

JOB No :

	NAME	SIGN
DSGN	B. UJWAL	
DRWN	RUDRA PRASAD	
CHKD	MAHENDRA K.	
APPD	MAHENDRA K.	

SIZE : A1

PROJECTION: FIRST ANGLE

SCALE : 1:2000

RELEASED FOR
☐ PRELIMINARY
☐ FOR APPROVAL
☑ GOOD FOR CONSTRUCTION
☐ AS BUILT

DRG. NO: 1 4 Y L P L T 4 1 0 3

REV: 0

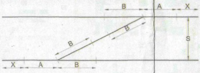
R1 DATE: 04.08.2023
R2 DATE: 22.09.2023

DATE: 26.07.2019
SHEET NO: 1 OF 1

THIS YARD LAYOUT PLAN SUPERCEDES Rev – D

DFCC CROSS OVER LENGTHS

Distance between parallel tracks →	6.000	6.250	6.700
Type of Turnout ↓	Overal length of cross overs		
1 in 8.5	75.050	77.175	81.000
1 in 12	107.248	110.248	115.648
DERAILING SWITCH	12.204m		



1) 1 IN 12 CROSSOVER

A = 16.48m (A+X=17.624)
B = 25.043m
X = 1.144m
Length of cross over L=2x(A+X)+12xS
for

S= 6m	L= 107.248m
S= 6.25m	L= 110.248m
S= 6.7m	L= 115.648m

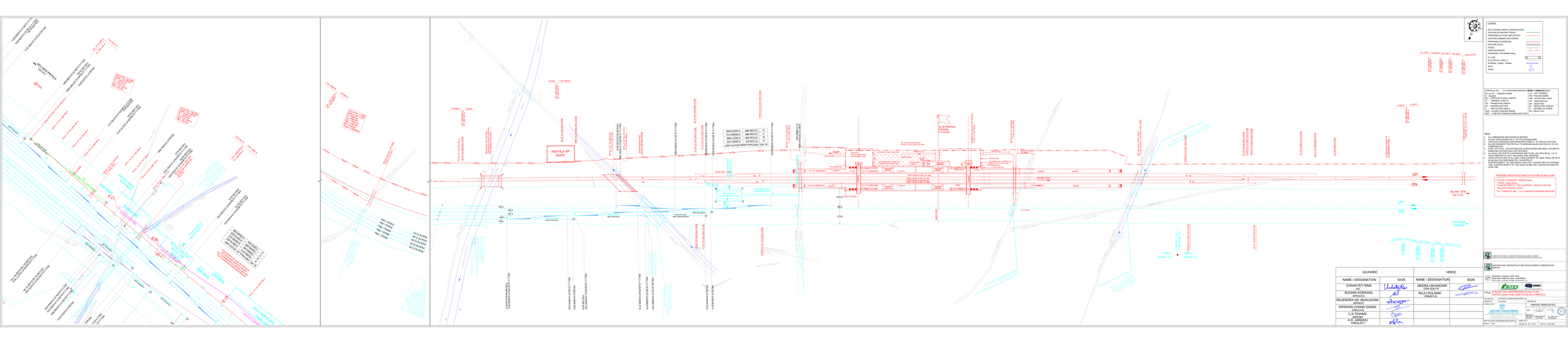
2) 1 IN 8.5 CROSSOVER

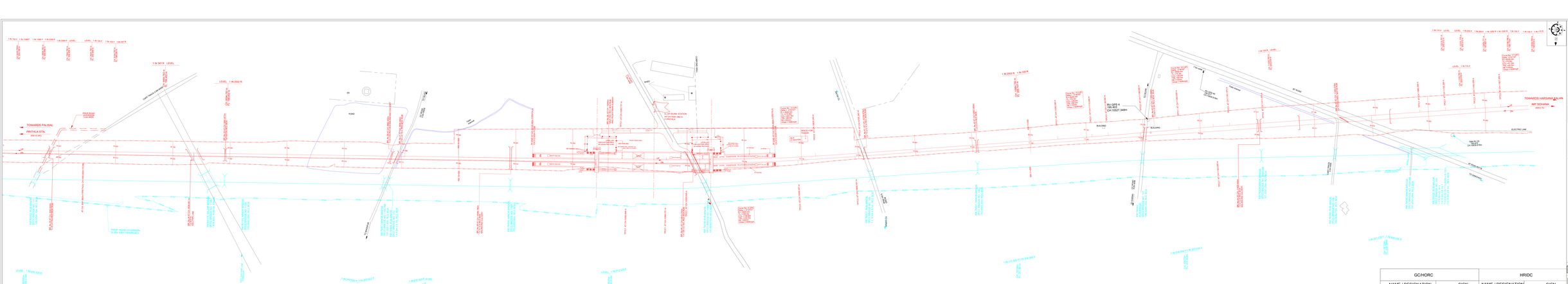
A = 10.525 (A+X=12.025)
B = 18.743m
X = 1.5m
Length of cross over L=2x(A+X)+8.5xS
for

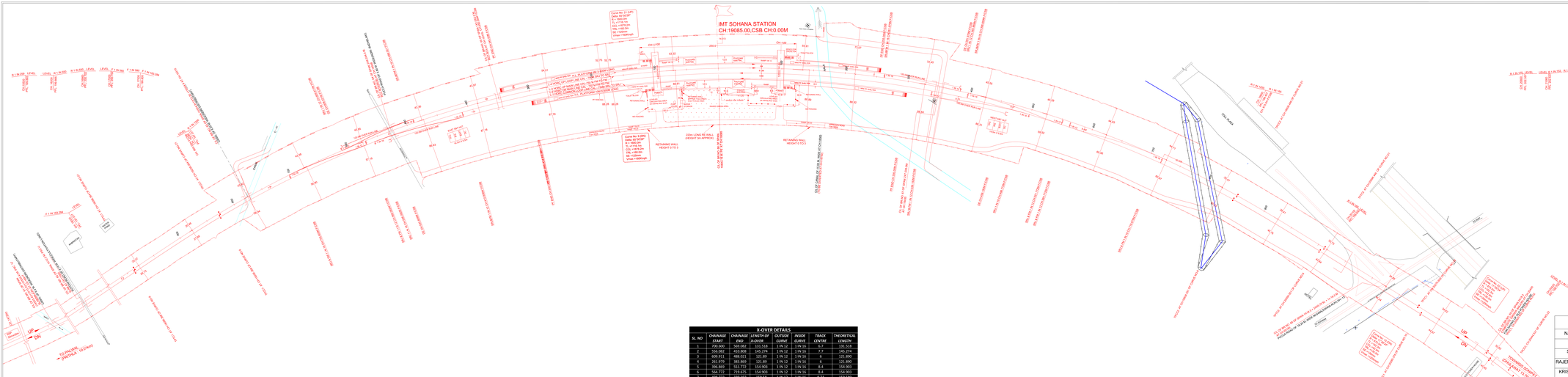
S= 6m	L= 75.050m
S= 6.25m	L= 77.175m
S= 6.7m	L= 81.000m

DFCCIL

FIELD UNIT			C.O
10/10/19 APM/DPM/Elect.	10/10/19 CPM/Elect.		23/10/19. GGM/Elect.
12.10.19 APM/DPM/S&T	JGM-S&T WC-II Dy. CPM/S&T		24/10/19 GGM/S&T/WC-II
APM/DPM/Engg.	7/10/19 PM/Engg.	21/10/19 Dy. CPM/Engg.	Praveen Kumar 22/10/19 GGM/Engg.
15/10/19 APM/DPM/OP&Safety	16/10/19 GM	Praveen Kumar 22/10/19 CGM	Ved Prakash GGM/OP&Safety


PRITHLA SP 50X30
PRITHLA YARD
PRITHLA STATION
UP DN
SILANI STN
TOWARDS PEENGAN
LEGEND
SPOC WORKS UNDER CONSTRUCTION
EXISTING M RAILWAY TRACK
PROPOSED UP & DN LINE DETAILS
PROPOSED BRIDGE WORKS
PROPOSED SILVERSAND
EXISTING ROAD
RIVER
HSR/L BOUNDARY
PROPOSED RETAINING WALL
HT LINE
ELECTRICAL LINE(LT)
NALLAH / CANAL / DRAIN
HILL
POND
GC-HQ/HRC
HRIDC
NAME / DESIGNATION
SIGN
CHHAITEY RAM
ED
SUDHIR AGRAWAL
DPO(CVO)
RAJENDRA KR. BHAUGUNA
DPO(ET)
KRISHAN CHAND SAINSI
DPO(S)
C.S.TEWARI
PRO&T
A.R. JANGRU
CHE/ELECT.
NEERAJ BHANDARI
CPM (SOUTH)
RAJU SOLANKI
CPM(CIVIL)
GENERAL CONSULTANT FOR
HARYANA RAIL NCR CORRIDOR
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION
TITLE CONCEPTUAL ENGINEERING SCALE PLAN
PRITHLA JUNCTION YARD CH:0M-5KM PRITHLA
DRG.NO.: GC-HRDC-13-2206-PH-GA-DWG-01
REVISED
AARVEE ASSOCIATES
aarvee associates
SCALE : 1:1000
SHEET NO. 1 OF 1
REV.NO. 08-JAN-25


TOWARDS PALWAL
PRATHLA STN.
(KM 10.340)
PROP.ROAD OVERBRIDGE
7.5m WIDE
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 9.900)
EXIST.RAILWAY STATION BUILDING
UP MAIN LINE
DN MAIN LINE
UP RELAY ROOM
DN RELAY ROOM
UP SIDE STATION
(KM 9.660)
PRATHLA
POND
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 9.240)
EXIST. ROAD
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 8.820)
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 8.400)
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 7.980)
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 7.560)
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM 7.140)
PROP. ROAD OVERBRIDGE
10.500m WIDE
(KM



X-OVER DETAILS

SL. NO	CHAINAGE START	CHAINAGE END	LENGTH OF X-OVER	OUTSIDE CURVE	INSIDE CURVE	TRACK CENTRE	THEORITICAL LENGTH
1	755.809	769.082	131.518	1 IN 12	1 IN 16	5.3	131.518
2	556.082	410.808	145.274	1 IN 12	1 IN 16	7.7	145.274
3	609.911	468.021	121.89	1 IN 12	1 IN 16	8	121.890
4	263.979	383.869	121.89	1 IN 12	1 IN 16	6	121.890
5	396.869	551.772	154.903	1 IN 12	1 IN 16	8.4	154.903
6	564.772	719.675	154.903	1 IN 12	1 IN 16	8.4	154.903
7	496.772	339.332	159.58	1 IN 12	1 IN 16	8.76	159.580

NOTES :-

1. ALL CHAINAGES ARE GIVEN FROM C.L. OF IMT SOHNA STATION BUILDING AT CH 0.00
2. ALL RAILS ARE 60 KG UTS
3. ALL RAILS ARE 90 A UTS(NEW) AND 72R (UTS) (AS APPLY) IN 12 TYPE 1660 SWITCH WITH 1653 LONG C.M.S. CROSSING.
4. TRACK CIRCUITING OF ALL NEW / REPLACEMENT OF UNITS SHALL BE OF M-ROD MAKE & ON AC-FRT. ELEMENTS AND AXLE COUNTER (EBI/KTJ TYPE MAKE) ARE TO BE INSTALLED AT EVERY 1000 MTRS. & FOR LESS THAN 1000 MTRS ANY CURVATURE ON NEW
5. ALL TURNOUTS ARE LAID WITH RECEIVED MADE FOR 1660/52 WITH PTS - 1/8 DISTRIBUTED INTERLOCKING AND MECH. AUTOMATIC SIGNALLING SYSTEM.
6. WHERE PHYSICIENT IMPEDITES ARE TO BE PROVIDED WHEREVER REQUIRED AS PER RDSO/SPN/TC/0001/2019 REV.0 AND AS PER RDSO/SPN/TC/0002/2019 REV.0
7. RCC DUCT / DEPOSIT CRIBWALL SHALL BE PROVIDED ON THE SIDE OF STATION BUILDING FROM CENTRE LINE OF STATION TO 30M ON EITHER SIDE.

LEGEND

EXISTING LINE	
PROPOSED LINE	
EXISTING LINE (TO BE REMOVED)	
ELECTRIC LINE ALT. SECONDARY	
ELECTRIC LINE ALT. MAIN/ALT.	
ELECTRIC LINE WITH POLE	
TEMPORARY STRUCTURE	
PERMANENT STRUCTURE	
ROAD	

LEGEND

NAME BOARD	
TP	
PFs	
HAND PUMPS PL	
WIRE FENCE	
OS, DE	
LIGHT POLE	
LAND TO BE ACQUIRED	
FUTURE WORK	
MISHAC	

NORTHERN RAILWAY

DELHI DIVISION

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

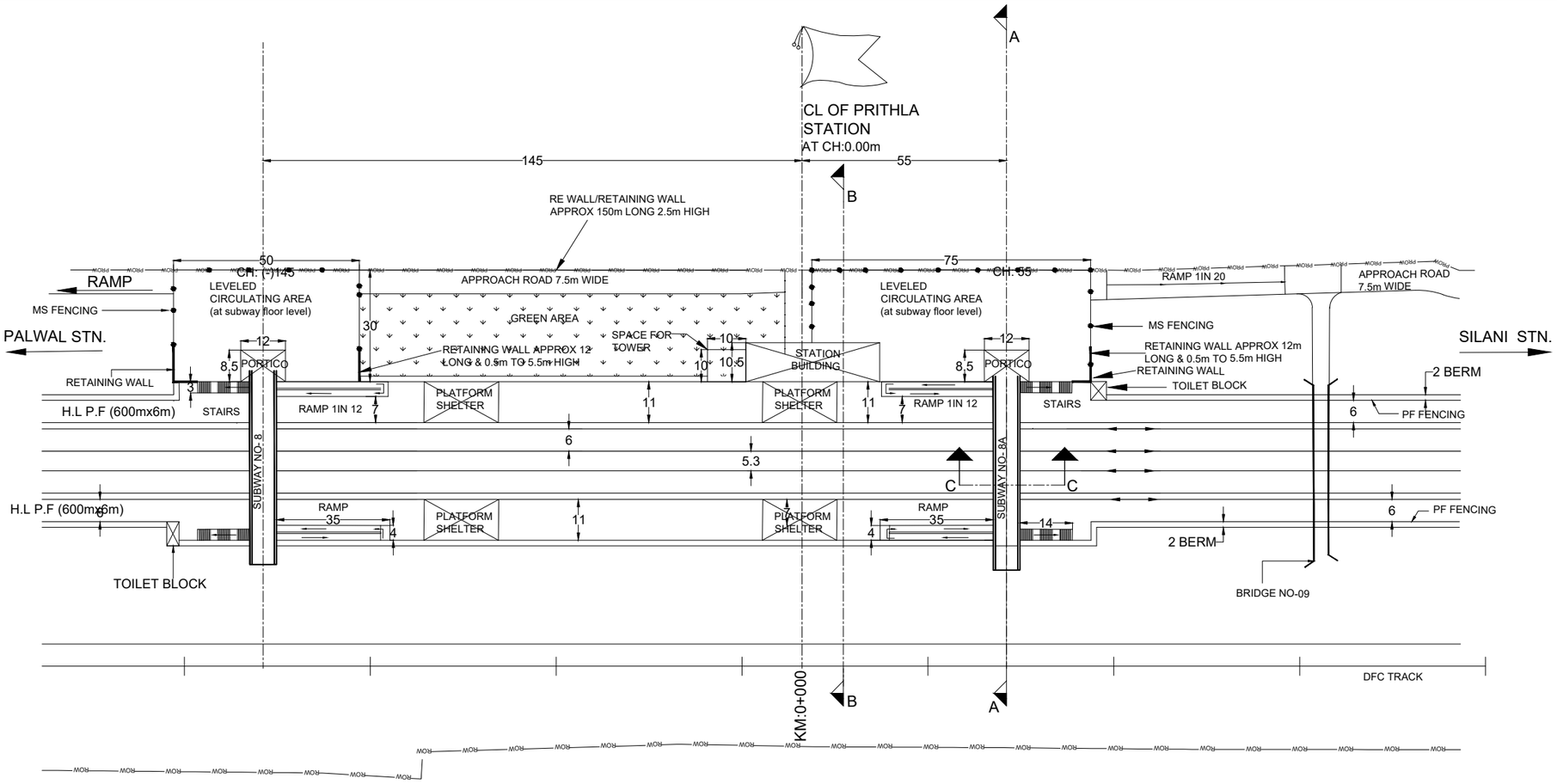
RITES Limited in consortium with SMEC International SRLs, Ltd.

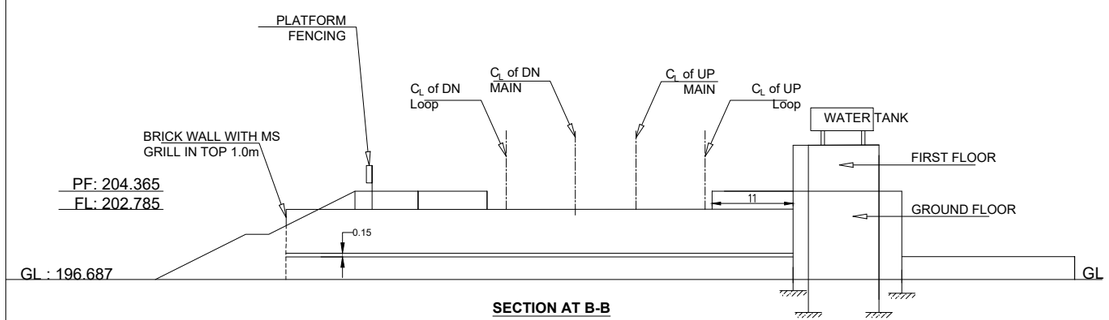
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHHATEEV RAM PD		NEERAJ BHANDARI CPM SOUTH	
SUDHIR AGRAWAL PROJ(N)		VIKRAM YADAV GM IE / HRIDC	
RAJENDRA KR. BHALIGUNA PROJECT		RAJU SOLANKI DGM(CIVIL)	
KRISHAN CHAND SAINSI PROJ(CIVIL)		JYOTI SANGWAN DGM(ELEC)	
A.S. JANGHU CHE/ELECT		AMSAT	

DRAWING NAME	CONCEPTUAL ENGINEERING SCALE PLAN IMT SOHNA
GC/HORC DRG. NO. / ISSUE DATE	GC-HRDC-ES-CPP-0-27th-EXP-SOHO-WE 05.08.2022
	REVISED DATE
SCALE	1:500 1M METRE 1:1000 1CM=10M
SMC ENC. NO.	
CONSULTANT	RITES LTD. EW CONSULTANTS An ISO 9001:2015 Company Rail Systems for Fast Connectivity
DRAWN BY:-	A.SAMANT
CHECKED BY:-	P. K.SWAIN
RELEASED FOR	PRELIMINARY FOR APPROVAL / TENDER / CONSTRUCTION

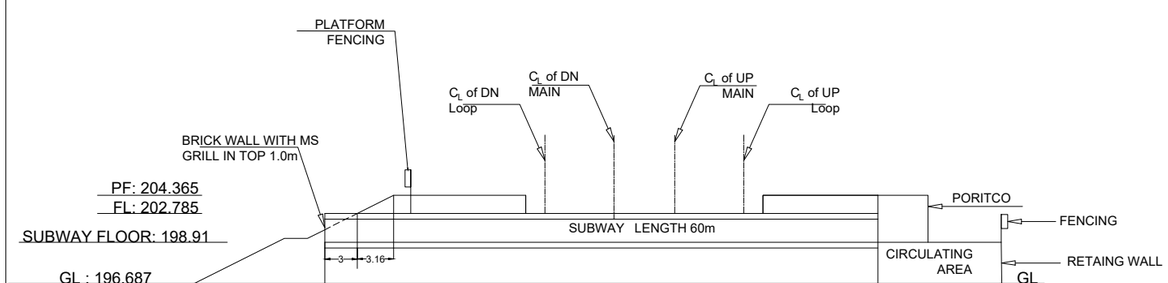
K.K.GUPTA PROJECT DIRECTOR(P)

3. STATION BUILDING AND SUBWAY

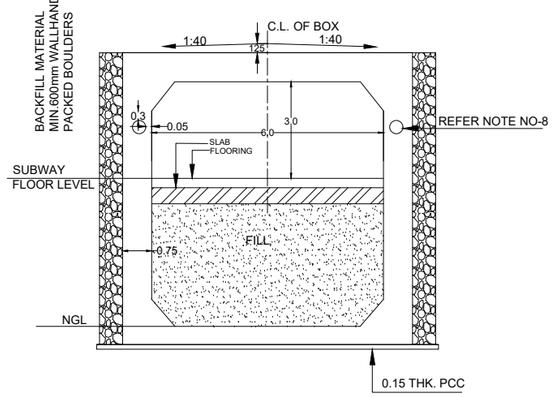




SECTION AT B-B



SECTION AT A-A



SECTION AT C-C

BRIDGE NO.	CHAINAGE	GL	SUBWAY FLOOR LEVEL	FORMATION LEVEL
8	-0145	196.615	198.748	202.623
8A	+55	196.687	198.910	202.785

NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE MENTIONED.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 15M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. STAINLESS STEEL (SS 304) HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE & RAMP.
5. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AND RAMP AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
6. FOUNDING LEVEL OF SUBWAY SHALL BE BELOW NATURAL GROUND LEVEL CONSIDERING DESIGN, BEARING CAPACITY AND SAFETY REQUIREMENTS.HOWEVER CLEAR OPENING OF THE SUBWAY SHALL NOT BE LESS THAN THAT SHOWN IN THE DRAWING.
7. CIRCULATING AREA AND STATION APPROACH ROAD INCLUDING ITS RETAINING STRUCTURE SHALL BE PAID UNDER SCHEDULE 'B'.
8. CONTRACTOR SHALL LAY 32mm DIA GI CONDUIT IN BOTH SIDE WALL OF SUBWAY AND PROVIDE JUNCTION BOX AT EVERY 5m DISTANCE WITH OPENING IN SUBWAY.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*		NEERAJ BHANDARI *CPM SOUTH*	
SUDHIR AGRAWAL *DPD/CIVIL*		VIKRAM YADAV *GM/ IE / HRIDC*	
RAJENDRA KR. BHAUGUNA *DPD/EST*		RAJU SOLANKI *DGM/CIVIL*	
A.S. JANGHU *CRE/ELECT.*		JYOTI SANGWAN *DGM/ELEC.*	
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

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

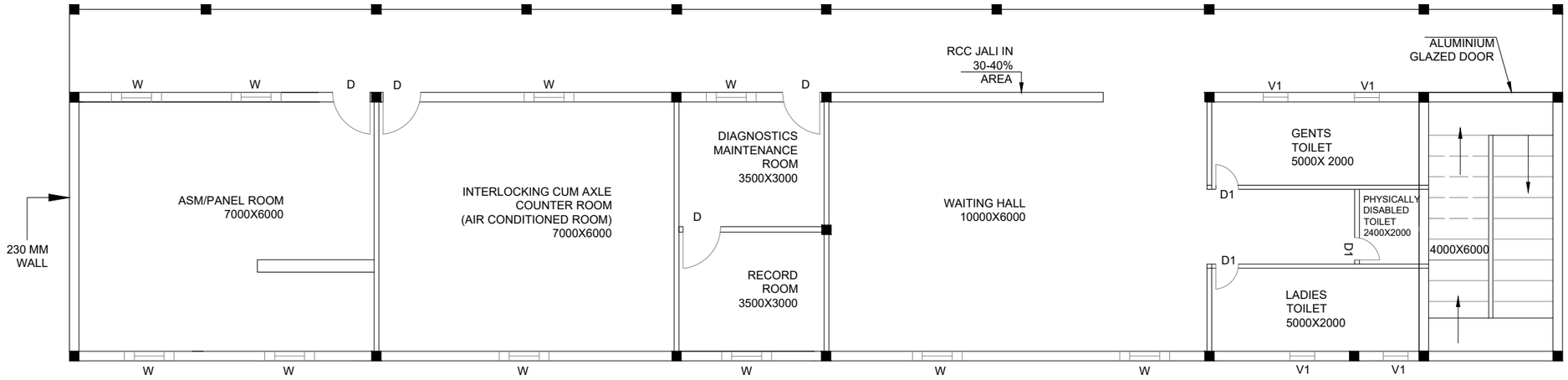
RITES Limited in consortium with SMEC International Pty. Ltd.

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

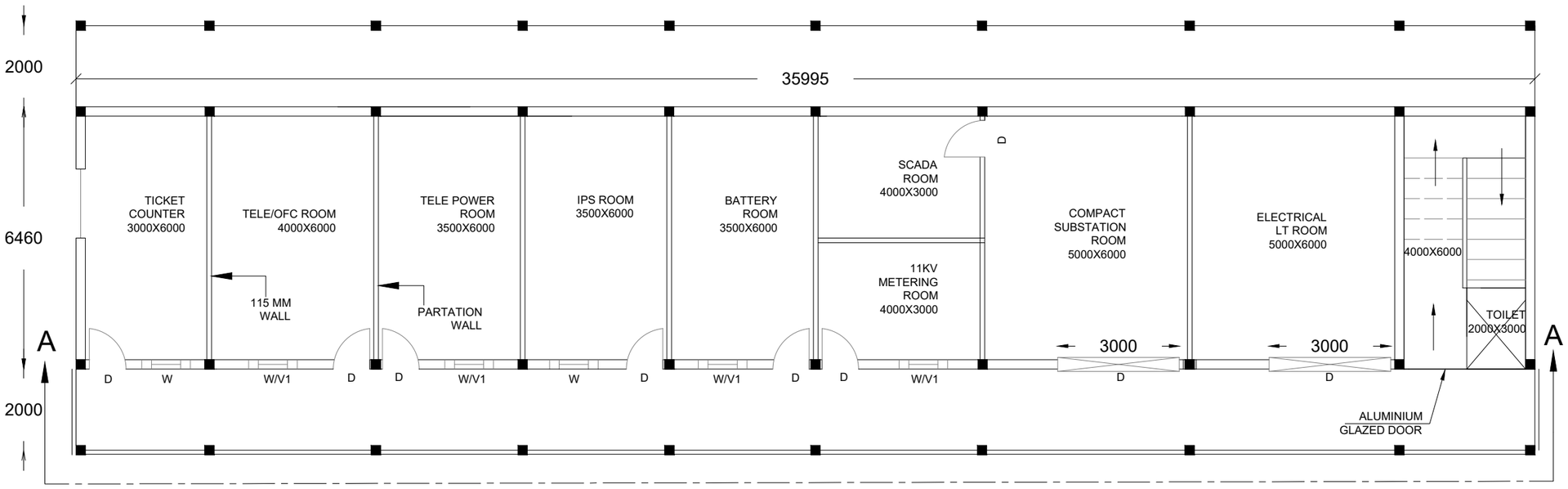
TITLE:- CONCEPTUAL PLAN OF PRITHLA STATION AND SUBWAY NO.8 & 8A

DRG. NO. GC-HRIDC-C5-DRW-STN-SAD-PRI01_A0

SCALE :	ISSUE DATE	REVISED DATE
NTS	27.09.2023	



STATION BUILDING
FIRST FLOOR PLAN



STATION BUILDING
GROUND FLOOR PLAN

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL OUTERS WALLS ARE OF 230MM THICK & PARTITION WALLS ARE OF 115MM.
3. THE FLOOR LEVEL OF PANEL ROOM SHALL BE ABOUT 300 MM ABOVE PLATFORM LEVEL.
4. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.
5. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
6. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED.
7. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN0-013.
8. STAINLESS STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE PORTION.
9. FOR DETAILING OF LADIES AND GENTS TOILETS REFER DRAWING NO. GC-HRIDC-SK-GEN-007.
10. HEAVY DUTY TWO RCC SHELF IN BATTERY ROOM ON TWO SIDES 1000MM WIDE FOR BATTERIES, 100MM PLINTH SHALL BE MADE BELOW SHELF. FIRST SHELF AT 1000MM & SECOND SHELF AT 1600MM FROM GROUND LEVEL.
11. POWER CABLE ENTRY 300mm(L)x300mm(H)x600mm DEEP IN POWER ROOM.
12. TELECOM/OFC CABLE ENTRY IN POWER ROOM 300mm(L)X300mm(H)X600mm DEEP.
13. HEAVY DUTY EXHAUST FAN IN IPS & BATTERY ROOM FRONT WALL WITH SELF CLOSING FLAP.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
RAJENDRA KR. BHAUGUNA DPD/EST		DGM/S&T	
A.S JANGHU CRE/ELECT		DGM/Elect.	
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

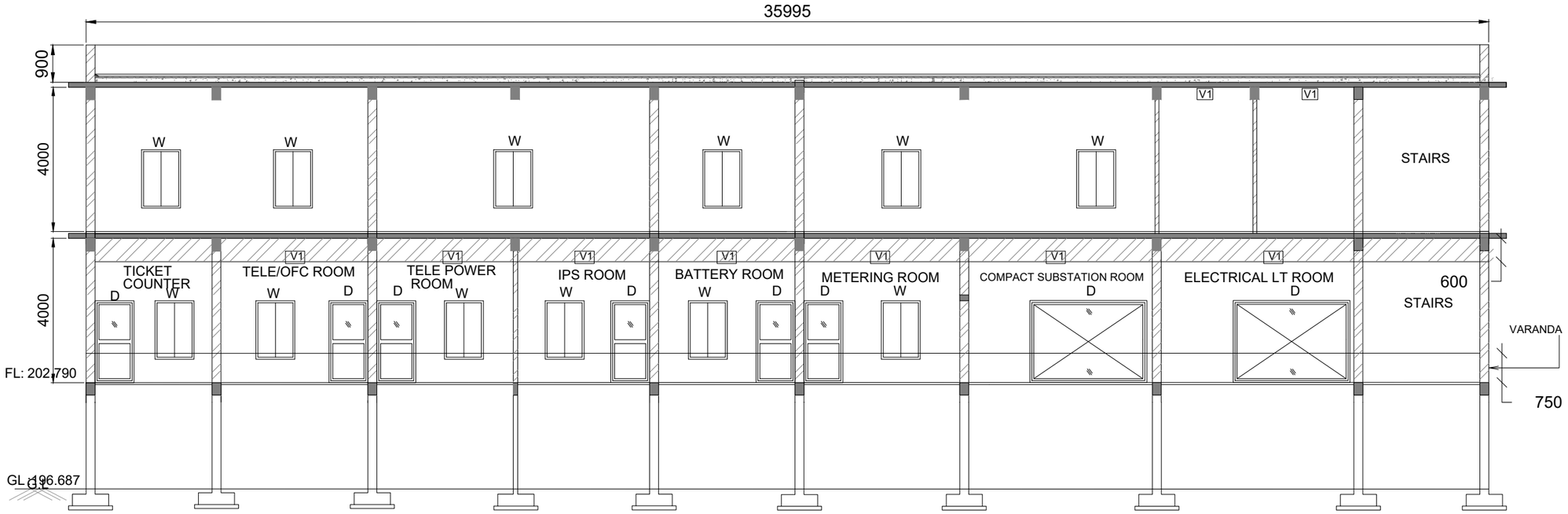
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 ARCHITECTURAL DRAWING
PRITHLA STATION BUILDING

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-STN-SAD-PRI01_A0	2 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07.08.2023	11.10.2023



GROUND FLOOR & FIRST FLOOR ELEVATION PLAN

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL OUTERS WALLS ARE OF 230MM THICK & PARTITION WALLS ARE OF 115MM.
3. THE FLOOR LEVEL OF PANEL ROOM SHALL BE ABOUT 300 MM ABOVE PLATFORM LEVEL.
4. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.
5. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
6. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED.
7. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN0-013.
8. STAINLESS STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE PORTION.
9. FOR DETAILING OF LADIES AND GENTS TOILETS REFER DRAWING NO. GC-HRIDC-SK-GEN-007.
10. SELF IN BATTERY ROOM ON 3 SIDES 1M WIDE @800MM.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
RAJENDRA KR. BHAUGUNA DPD/EST		DGM/S&T	
A.S JANGHU CRE/ELECT		DGM/Elect.	
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

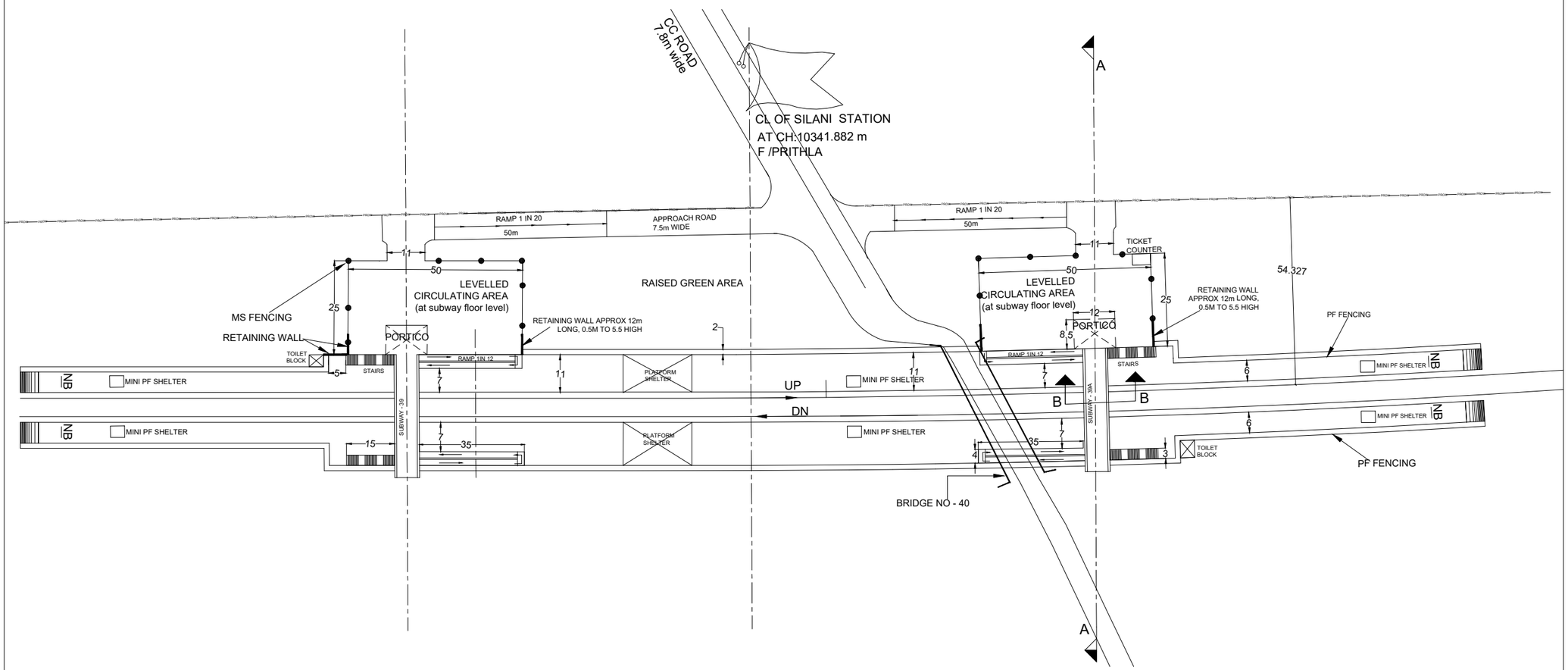
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

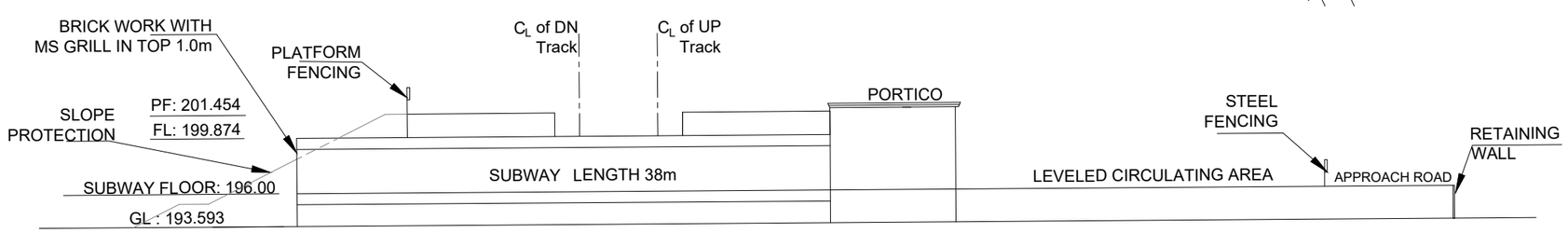
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
PRITHLA BUILDING

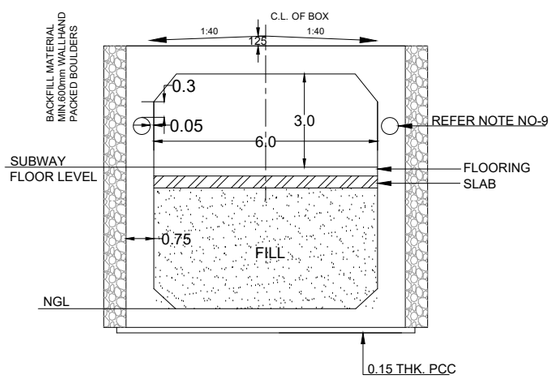
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-STN-SAD-PRI01_A0	3 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07.08.2023	11.10.2023





SECTION A-A



SECTION AT B-B

BRIDGE NO.	CHAINAGE	GL	SUBWAY FLOOR LEVEL	PFL
39	10240	193.845	195.9	199.775
39A	10440	193.593	196.00	199.874

NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE MENTIONED.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 15M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
5. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS & RAMP PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
7. FOUNDING LEVEL OF SUBWAY SHALL BE BELOW NATURAL GROUND LEVEL CONSIDERING DESIGN, BEARING CAPACITY AND SAFETY REQUIREMENTS.HOWEVER CLEAR OPENING OF THE SUBWAY SHALL NOT BE LESS THAN THAT SHOWN IN THE DRAWING.
8. CIRCULATION AREA AND STATION APPROACH ROAD INCLUDING ITS RETAINING STRUCTURE SHALL BE PAID UNDER SCHEDULE 'B'.
9. CONTRACTOR SHALL LAY 32mm DIA GI CONDUIT IN BOTH SIDE WALL OF SUBWAY AND PROVIDE JUNCTION BOX AT EVERY 5m DISTANCE WITH OPENING IN SUBWAY.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*		NEERAJ BHANDARI *CPM SOUTH*	
SUDHIR AGRAWAL *DPD/CIVIL*		VIKRAM YADAV *GM/ IE / HRIDC*	
RAJENDRA KR. BHAUGUNA *DPD/EST*		RAJU SOLANKI *DGM/CIVIL*	
A.S. JANGHU *CRE/ELECT.*		JYOTI SANGWAN *DGM/ELEC.*	
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.

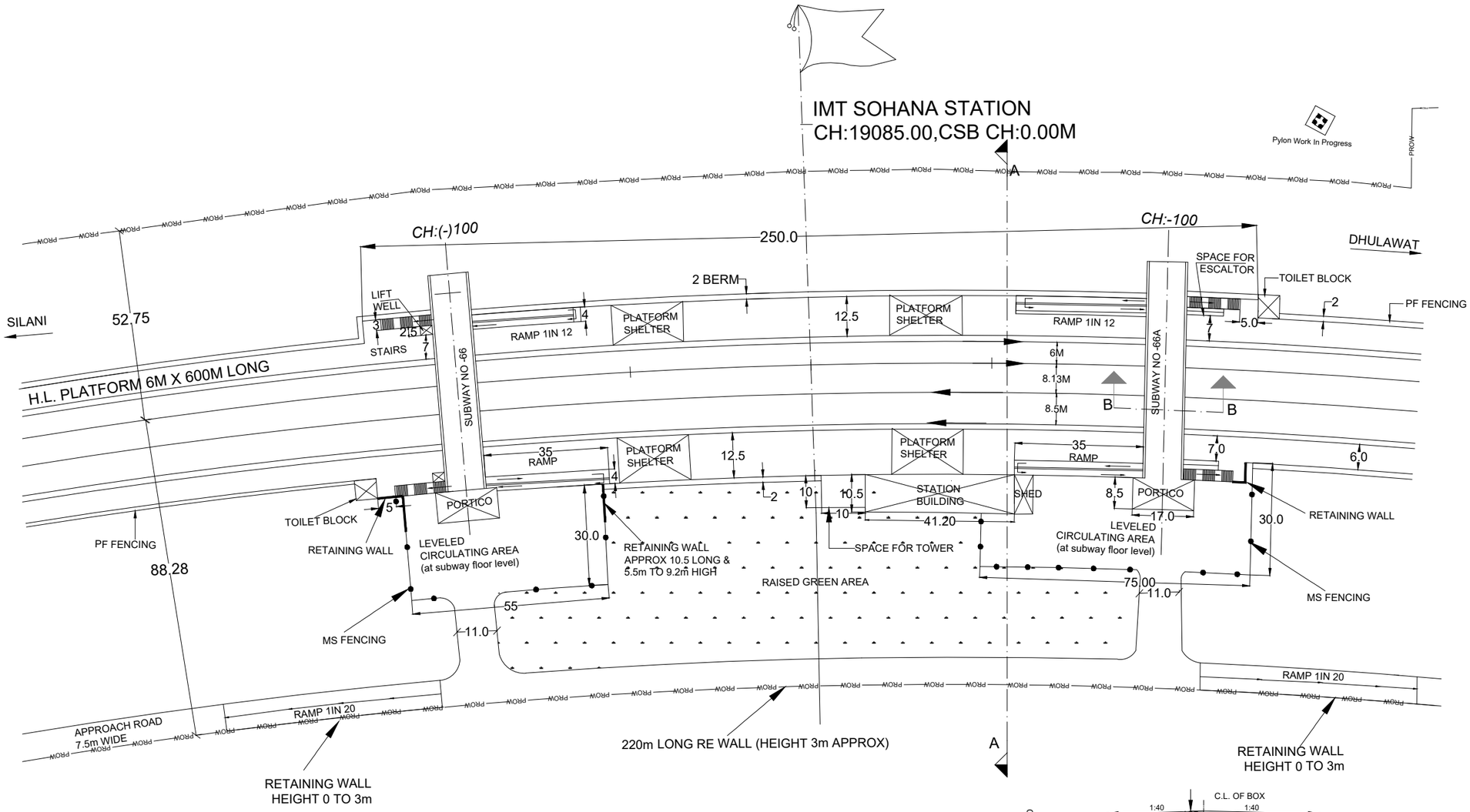
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

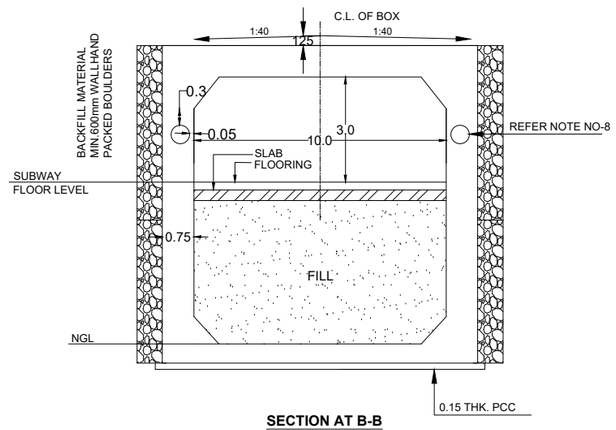
TITLE:-
CONCEPTUAL PLAN OF SILANI STATION AND SUBWAY NO.39 & 39A

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-STN-SAD-SIL01_A0	

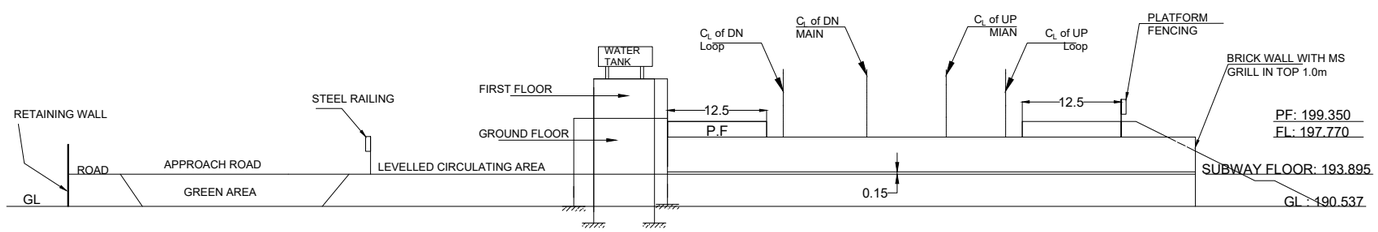
SCALE :	ISSUE DATE	REVISED DATE
NTS	27.09.2023	



BRIDGE NO.	CHAINAGE	GL	SUBWAY FLOOR LEVEL	PFL
66	18985	190.754	193.712	197.587
66A	19185	190.537	193.895	197.770



SECTION AT B-B



SECTION AT A-A

NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE MENTIONED.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 15M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. STAINLESS STEEL (SS 304) HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE & RAMP.
5. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AND RAMP AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
6. FOUNDING LEVEL OF SUBWAY SHALL BE BELOW NATURAL GROUND LEVEL CONSIDERING DESIGN, BEARING CAPACITY AND SAFETY REQUIREMENTS.HOWEVER CLEAR OPENING OF THE SUBWAY SHALL NOT BE LESS THAN THAT SHOWN IN THE DRAWING.
7. CIRCULATION AREA AND STATION APPROACH ROAD INCLUDING ITS RETAINING STRUCTURE SHALL BE PAID UNDER SCHEDULE 'B'.
8. CONTRACTOR SHALL LAY 32mm DIA GI CONDUIT IN BOTH SIDE WALL OF SUBWAY AND PROVIDE JUNCTION BOX AT EVERY 5m DISTANCE WITH OPENING IN SUBWAY.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*		NEERAJ BHANDARI *CPM SOUTH*	
SUDHIR AGRAWAL *DPD/CIVIL*		VIKRAM YADAV *GM/ IE / HRIDC*	
RAJENDRA KR. BHAUGUNA *DPD/EST*		RAJU SOLANKI *DGM/CIVIL*	
A.S. JANGHU *CRE/ELECT.*		JYOTI SANGWAN *DGM/ELEC.*	
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

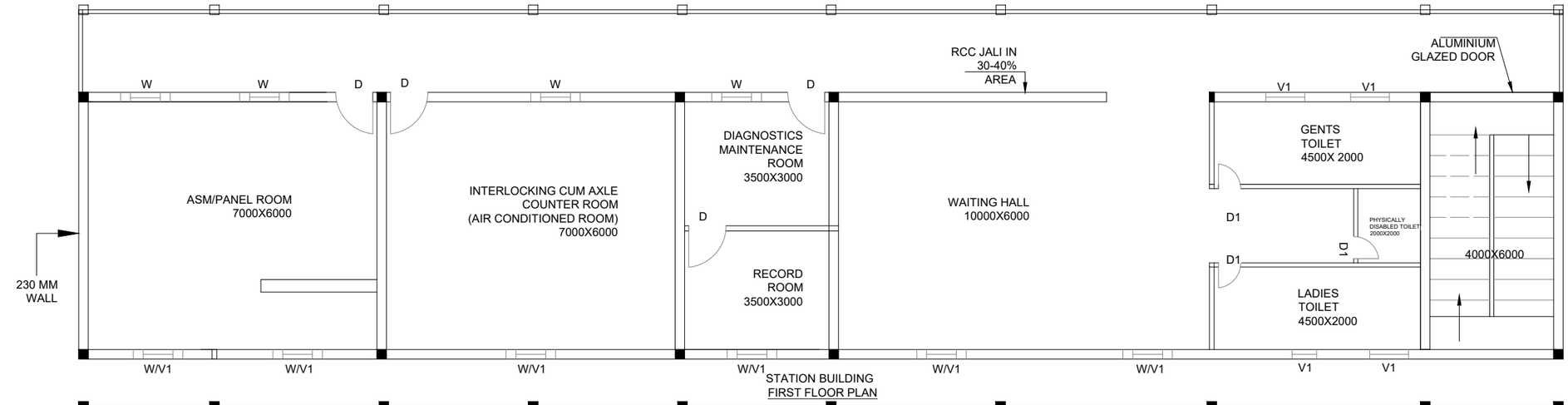
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

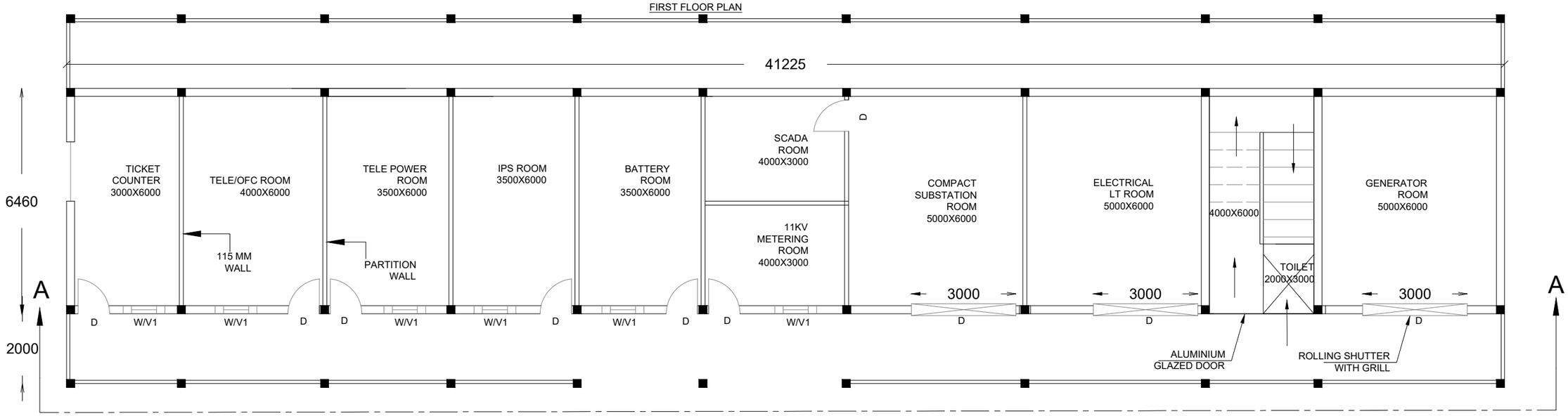
TITLE:- CONCEPTUAL PLAN OF SOHNA STATION AND SUBWAY NO.66 & 66A

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-STN-SAD-SOH01_A0	

SCALE :	ISSUE DATE	REVISED DATE
NTS	27.09.2023	



STATION BUILDING
FIRST FLOOR PLAN



STATION BUILDING
GROUND FLOOR PLAN

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL OUTERS WALLS ARE OF 230MM THICK & PARTITION WALLS ARE OF 115MM.
3. THE FLOOR LEVEL OF PANEL ROOM SHALL BE ABOUT 300 MM ABOVE PLATFORM LEVEL.
4. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.
5. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
6. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED.
7. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN0-013.
8. STAINLESS STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE PORTION.
9. FOR DETAILING OF LADIES AND GENTS TOILETS REFER DRAWING NO. GC-HRIDC-SK-GEN-007.
10. HEAVY DUTY TWO RCC SHELF IN BATTERY ROOM ON TWO SIDES 1000MM WIDE FOR BATTERIES, 100MM PLINTH SHALL BE MADE BELOW SHELF. FIRST SHELF AT 1000MM & SECOND SHELF AT 1600MM FROM GROUND LEVEL.
11. POWER CABLE ENTRY 300mm(L)x300mm(H)x600mm DEEP IN POWER ROOM.
12. TELECOM/OFC CABLE ENTRY IN POWER ROOM 300mm(L)X300mm(H)X600mm DEEP.
13. HEAVY DUTY EXHAUST FAN IN IPS & BATTERY ROOM FRONT WALL WITH SELF CLOSING FLAP.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
RAJENDRA KR. BHAUGUNA DPD/EST		DGM/S&T	
A.S JANGHU CRE/ELECT		DGM/Elect.	
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

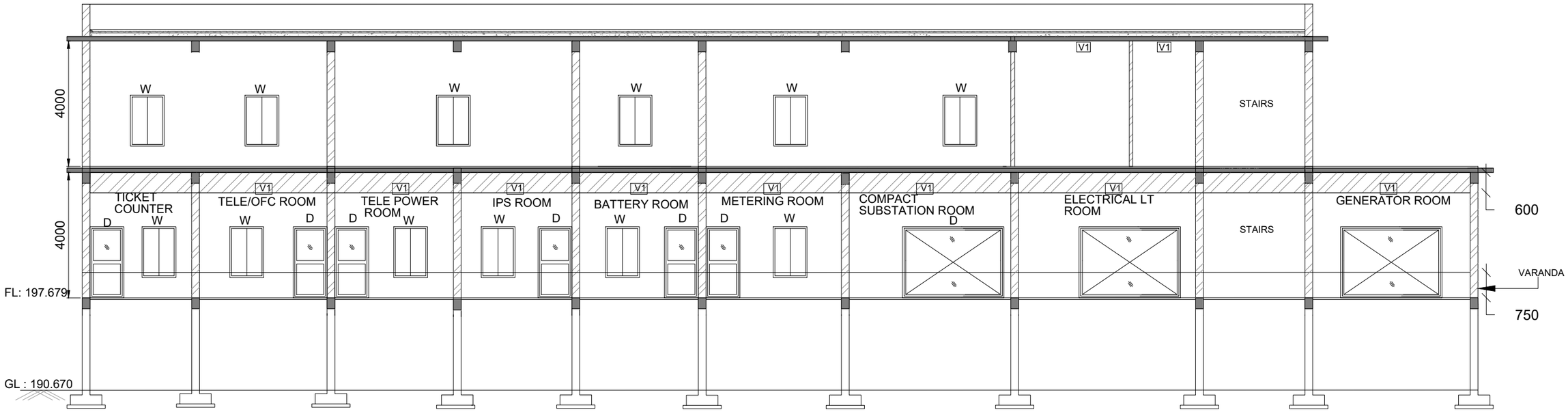
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 ARCHITECTURAL DRAWING
IMT SOHNA STATION BUILDING

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-STN-SAD-SOH01_A0	2 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	24.08.2023	



SECTIONAL ELEVATION -A

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL OUTERS WALLS ARE OF 230MM THICK & PARTITION WALLS ARE OF 115MM.
3. THE FLOOR LEVEL OF PANEL ROOM SHALL BE ABOUT 300 MM ABOVE PLATFORM LEVEL.
4. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.
5. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
6. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED.
7. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN0-013.
8. STAINLESS STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE PORTION.
9. FOR DETAILING OF LADIES AND GENTS TOILETS REFER DRAWING NO. GC-HRIDC-SK-GEN-007.
10. SELF IN BATTERY ROOM ON 3 SIDES 1M WIDE @800MM.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	NEERAJ BHANDARI CPM SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
RAJENDRA KR. BHAUGUNA DPD/EST		DGM/S&T	
A.S JANGHU CRE/ELECT		DGM/Elect.	
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 ARCHITECTURAL DRAWING
IMT SOHNA STATION BUILDING

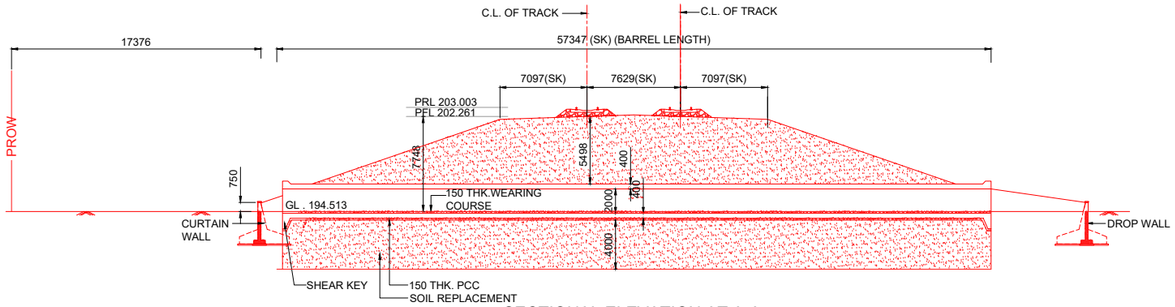
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-STN-SAD-SOH01_A0	3 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	24.08.2023	

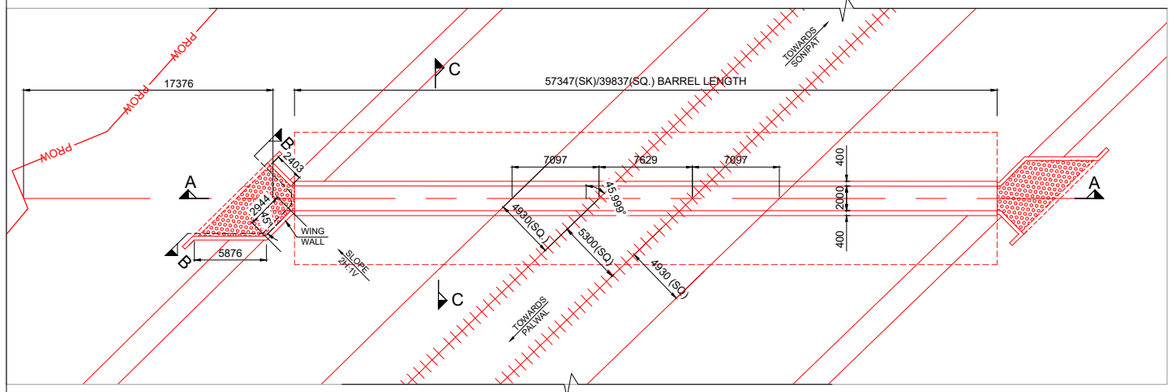
4. BRIDGES

4.1 MINOR BRIDGES

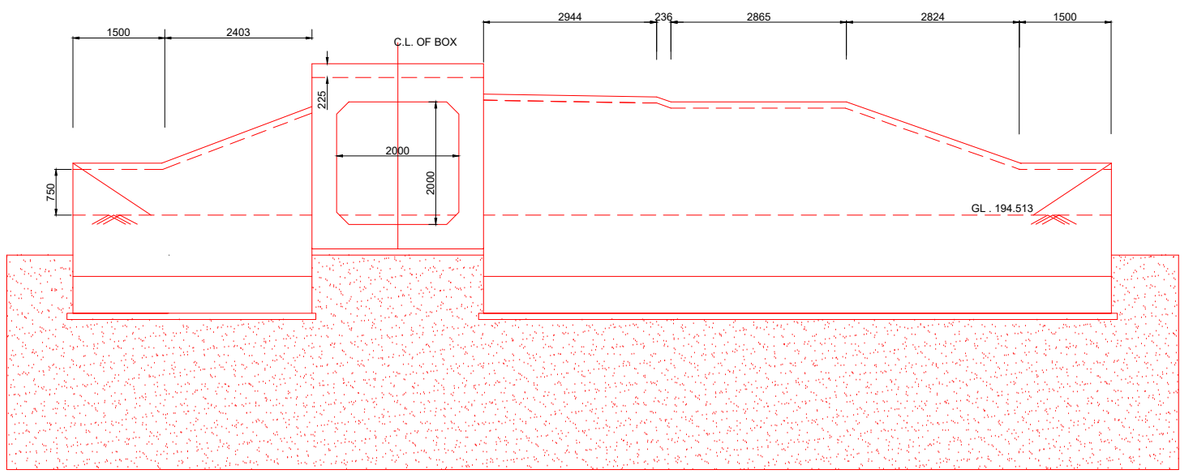
4.1.1 MAIN LINE



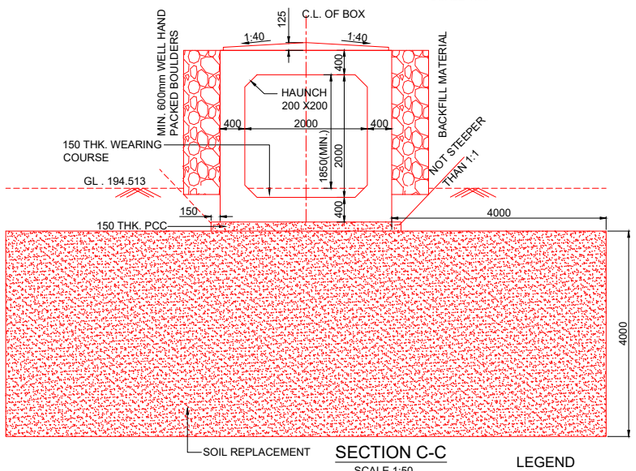
SECTIONAL ELEVATION AT A-A
SCALE 1:250



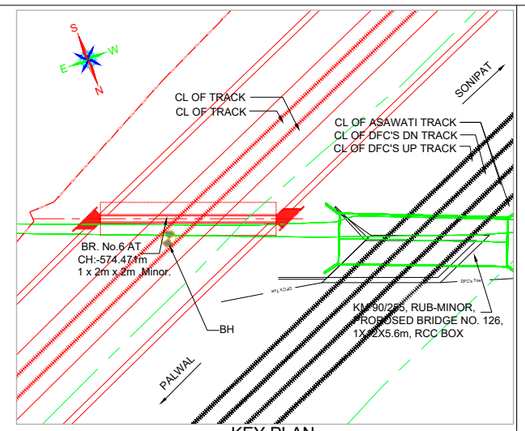
PLAN AT TOP
SCALE 1:200



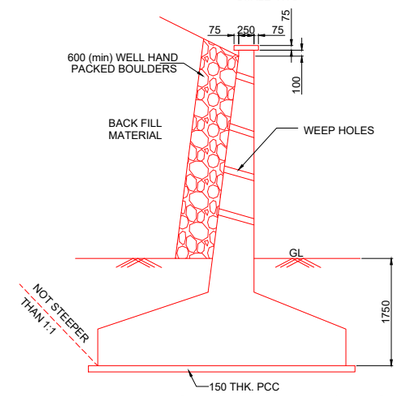
VIEW AT B-B
SCALE 1:50



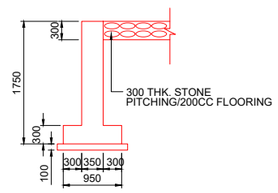
SECTION C-C
SCALE 1:50



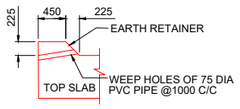
KEY PLAN
SCALE NTS



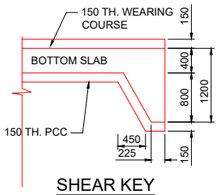
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

NOTES :

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7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
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   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. 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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13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

PROJECT:
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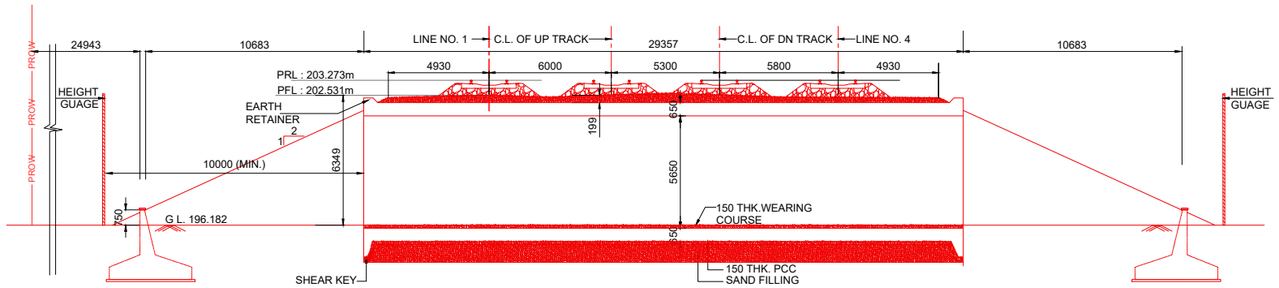
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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. 6
1x 2x 2m RCC BOX AT CH. -574.471m

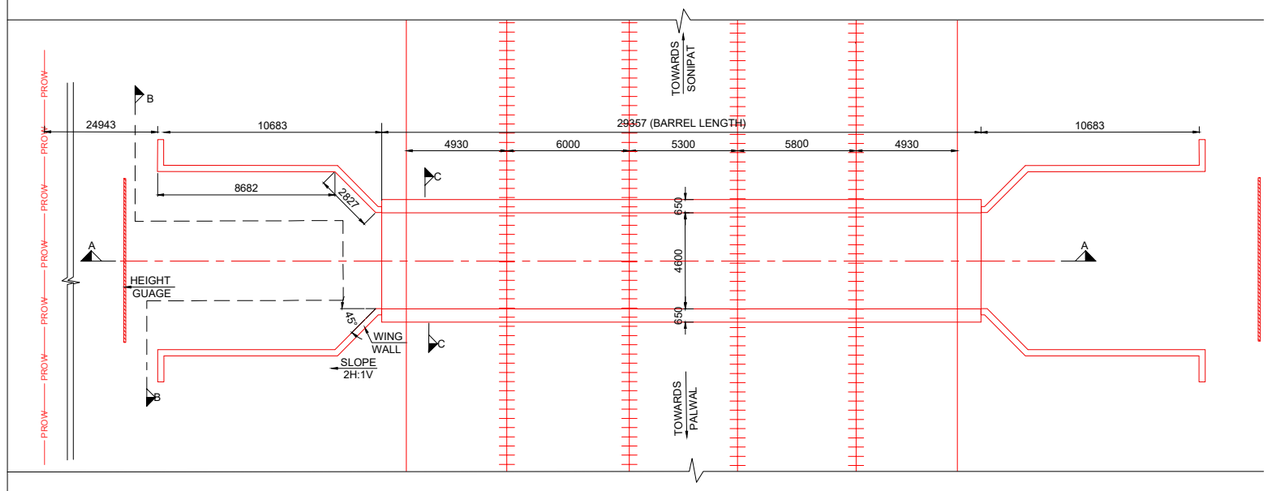
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01006_A0	1 OF 1

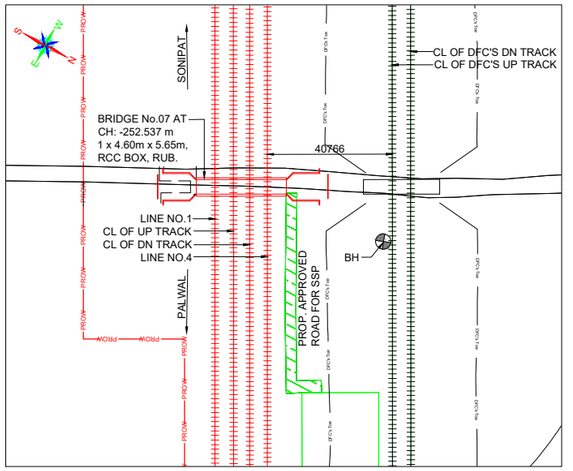
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



SECTIONAL ELEVATION AT A-A

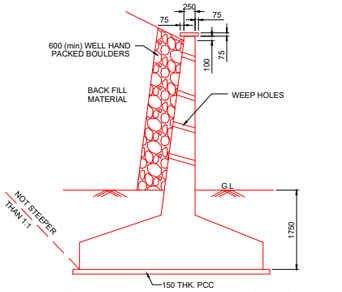
SCALE 1:150





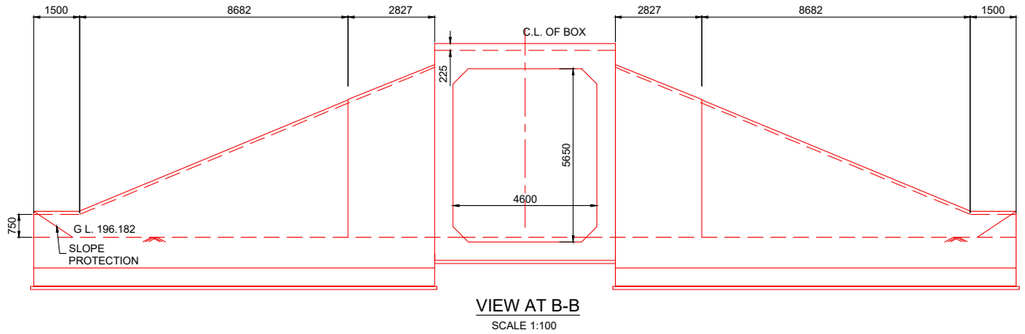
KEY PLAN

SCALE : NTS



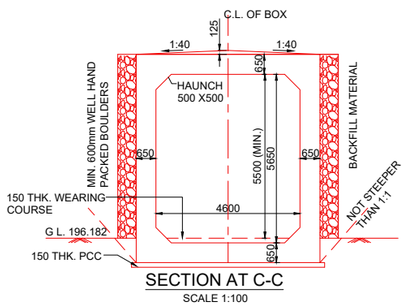
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



VIEW AT B-B

SCALE 1:100



SECTION AT C-C

SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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PFL	PROPOSED FORMATION LEVEL
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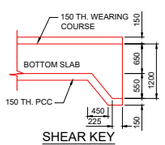
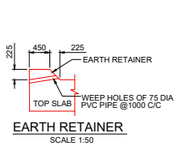


SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

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C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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

PROJECT:

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CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

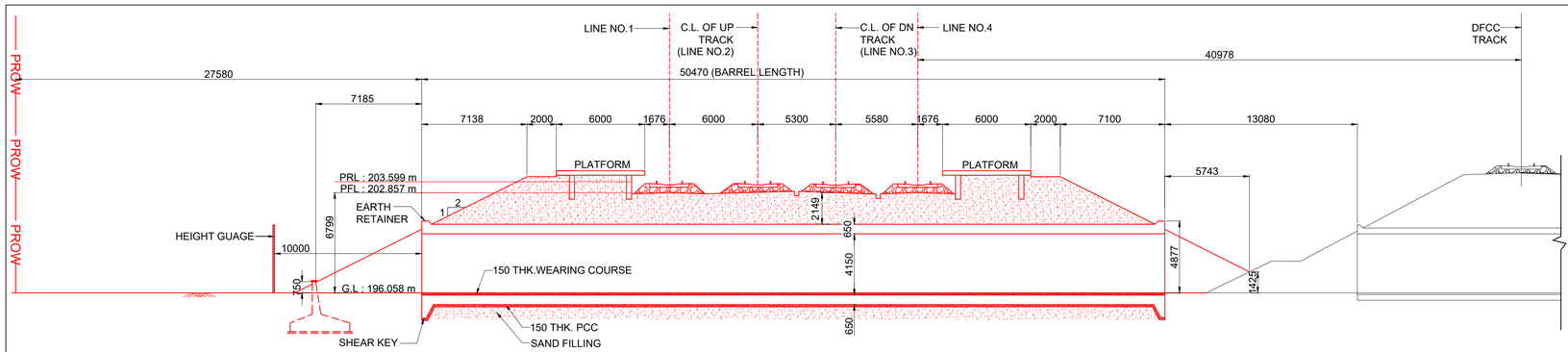
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

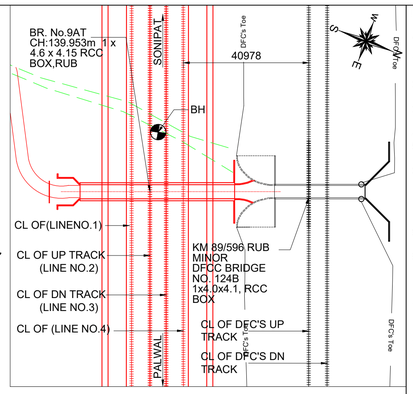
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 07, SPAN 1X4.60X5.65, RCC BOX AT CH: -252.537

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01007_A0	1 OF 1

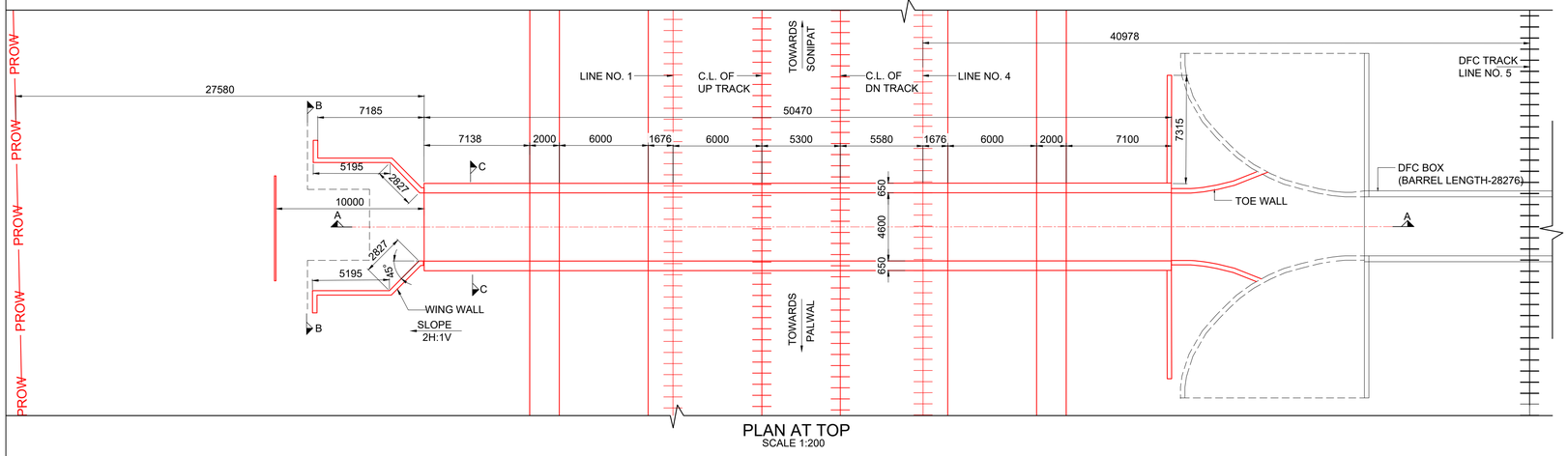
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



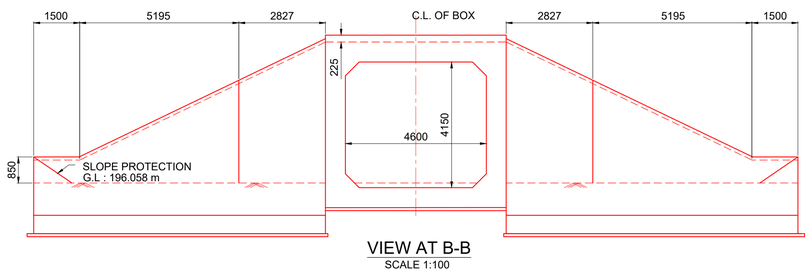
SECTIONAL ELEVATION AT A-A
SCALE 1:200



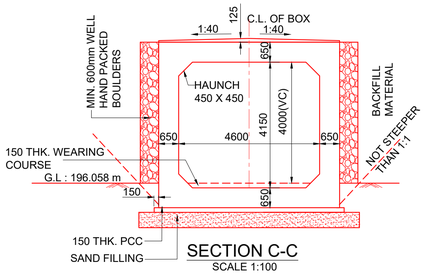
KEY PLAN
SCALE : NTS



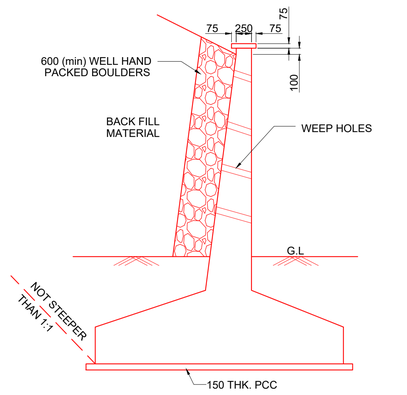
PLAN AT TOP
SCALE 1:200



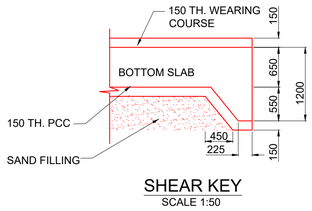
VIEW AT B-B
SCALE 1:100



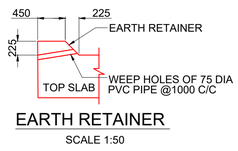
SECTION C-C
SCALE 1:100



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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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12. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.
17. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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

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

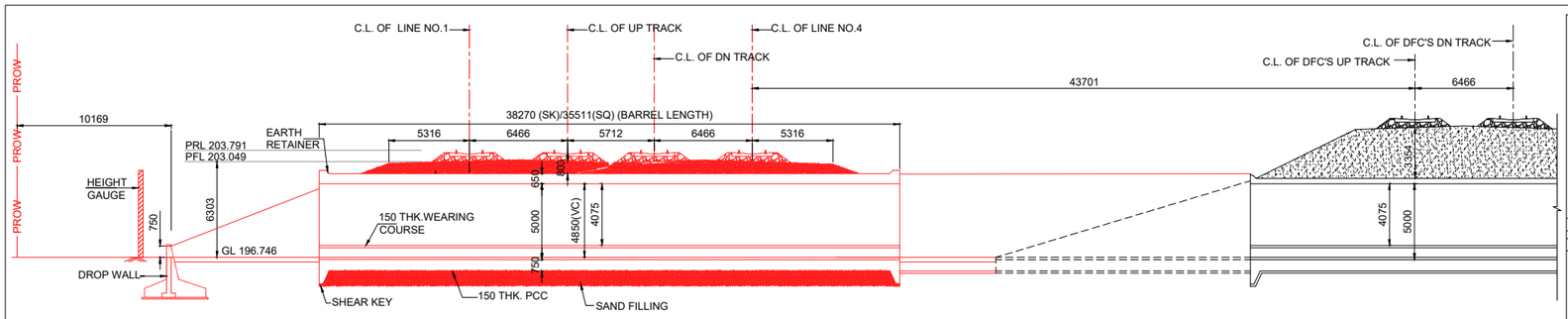
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

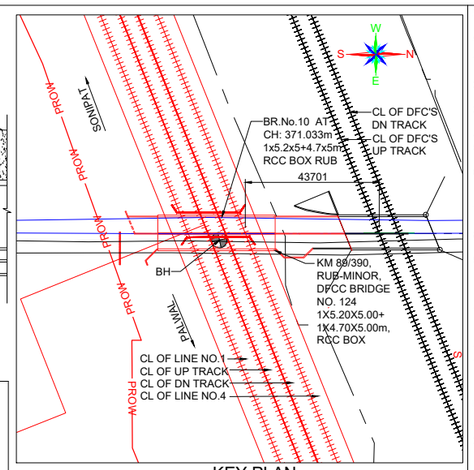
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO. 09
SPAN 1.0X4.6X4.15 RCC BOX AT CH: 139.953

DRG. NO. GC-HRIDC-C5-DRW-BRD-GAD-01009_A0
SHEET NO. 1 OF 1
SCALE : AS SHOWN
ISSUE DATE 10-10-2023
REVISED DATE



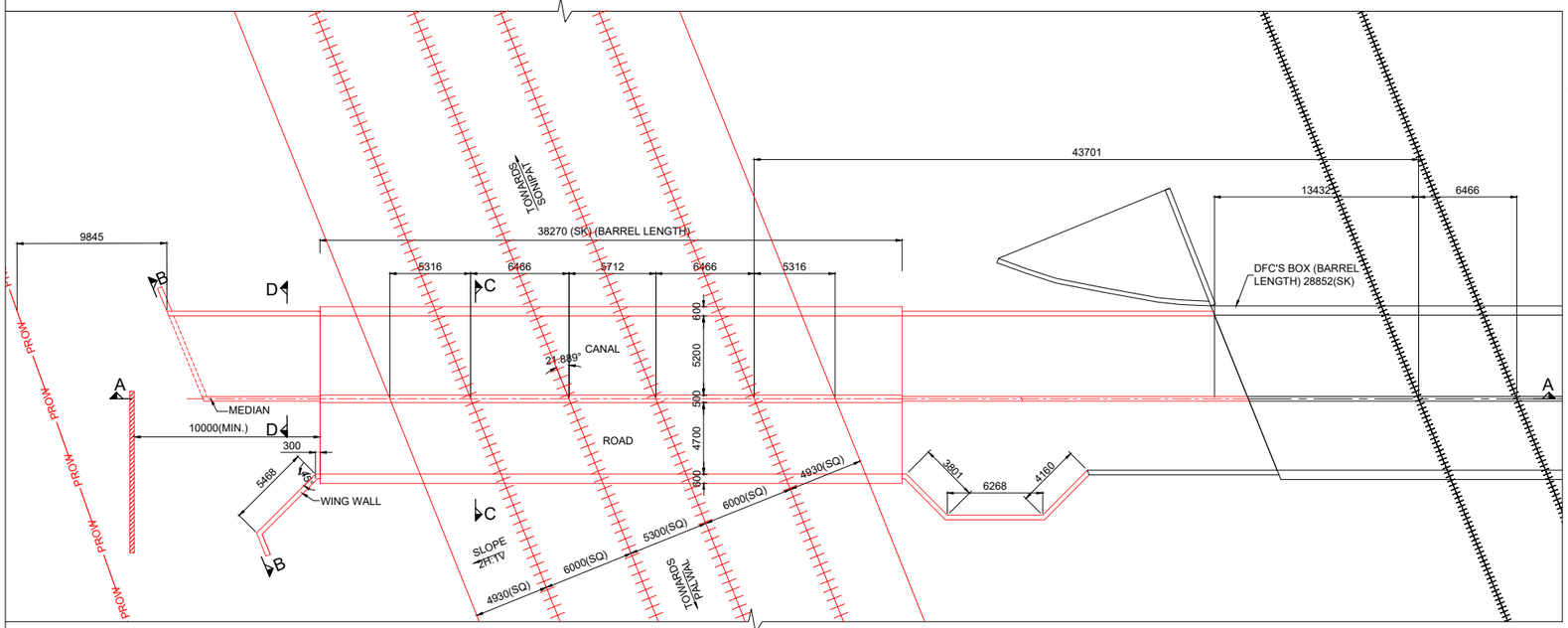
SECTIONAL ELEVATION AT A-A

SCALE 1:200



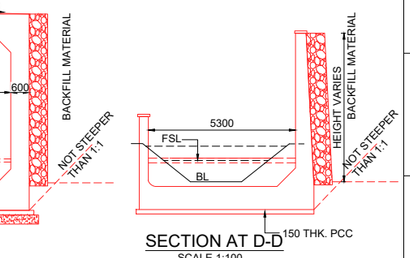
KEY PLAN

SCALE NTS



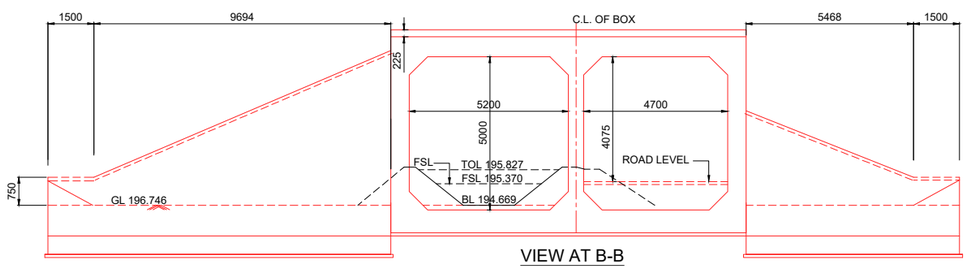
PLAN AT TOP

SCALE 1:200



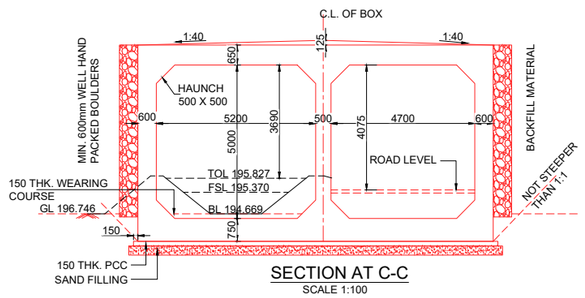
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



VIEW AT B-B

SCALE 1:100

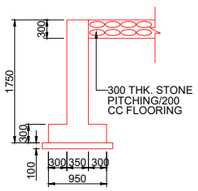


SECTION AT C-C

SCALE 1:100

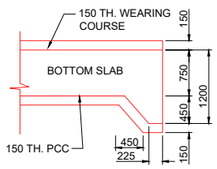
SECTION AT D-D

SCALE 1:100



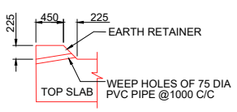
DROP/CURTAIN WALL DETAILS

SCALE 1:50



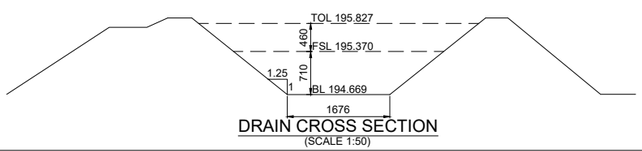
SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50



DRAIN CROSS SECTION

(SCALE 1:50)

HYDRAULIC DATA OF DRAIN

1	NAME OF CANAL	DHATRI DISTY
2	RD	25000/371
3	BED LEVEL (BL)	194.670
4	FULL SUPPLY LEVEL(FSL)	195.370
5	TOP OF LINING(TOL)	195.830
6	DISCHARGE	35cs
7	FREE BOARD	195.830

LEGEND

———	PROPOSED
———	EXISTING
— — —	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/Sig.NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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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14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

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.

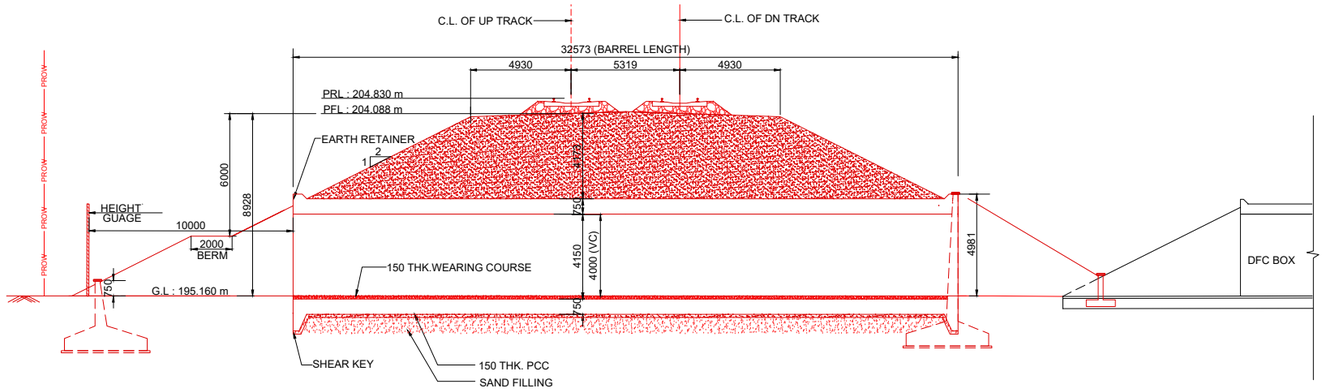
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

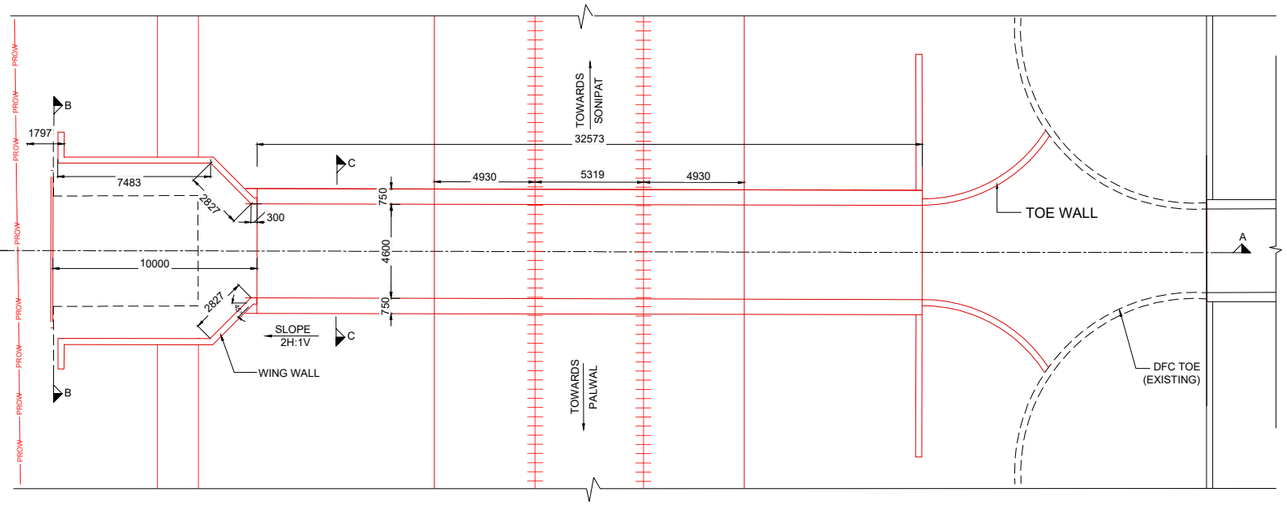
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT + RUB BRIDGE NO. 10 SPAN 1X5.2X5+1x4.7x5 RCC BOX AT CH: 371.033 (CANAL CROSSING DHATIR DISTRIBUTORY RD 25000)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_010010_A0	

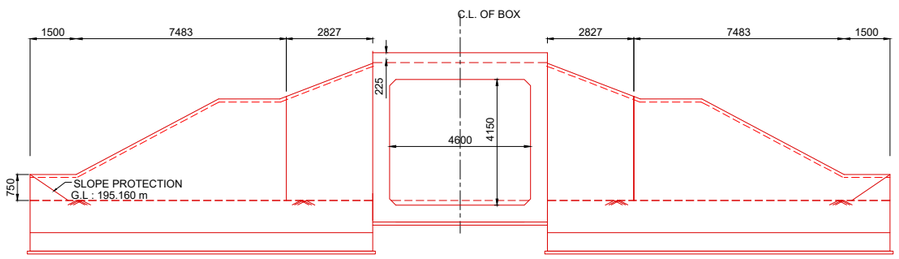
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



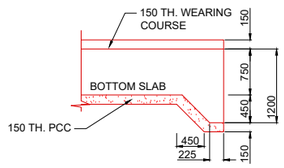
SECTIONAL ELEVATION AT A-A
SCALE 1:150



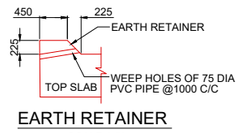
PLAN AT TOP
SCALE 1:150



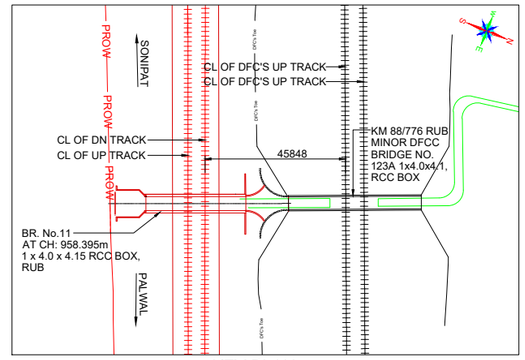
VIEW AT B-B
SCALE 1:100



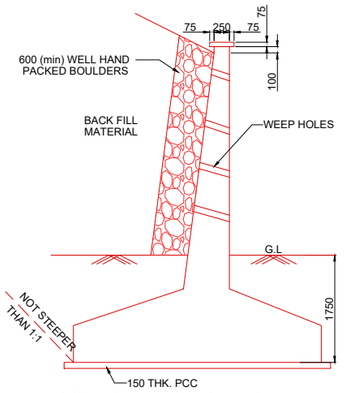
SHEAR KEY
SCALE 1:50



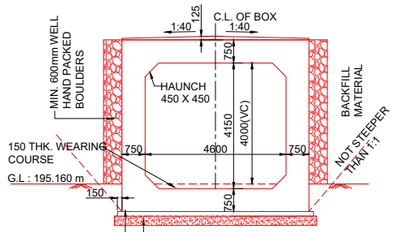
EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE : NTS



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



SECTION C-C
SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
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4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

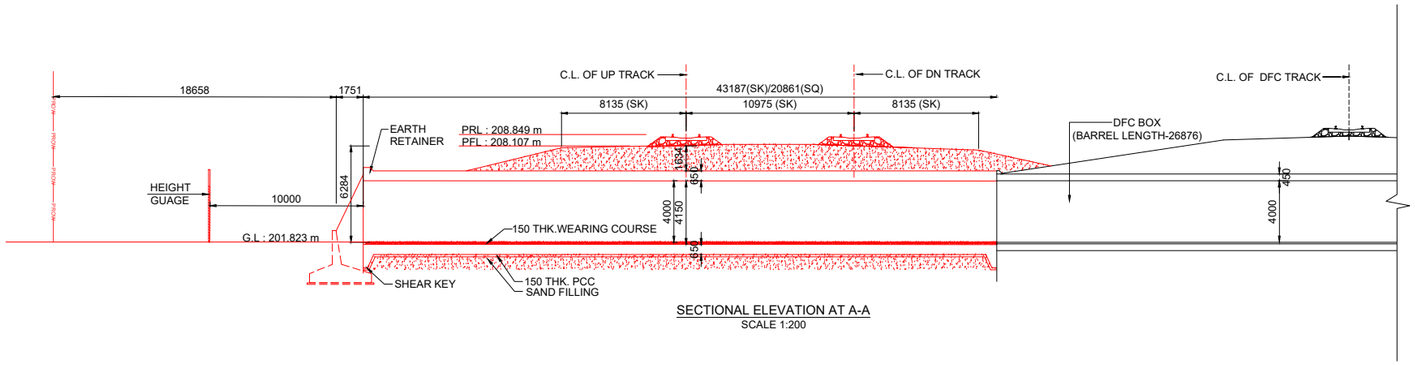
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

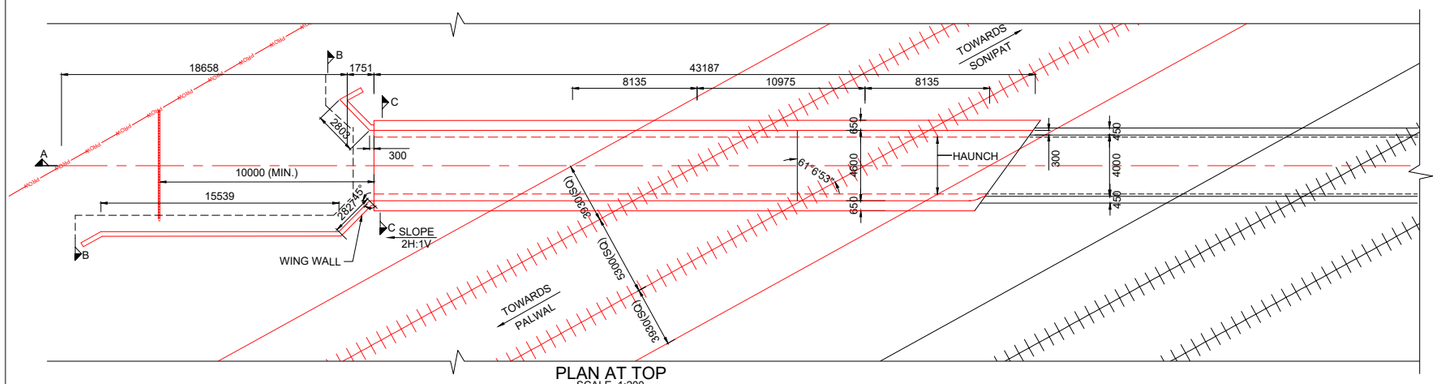
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 11
SPAN 1X4.6X4.15 RCC BOX AT CH: 958.395

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01011_A0	

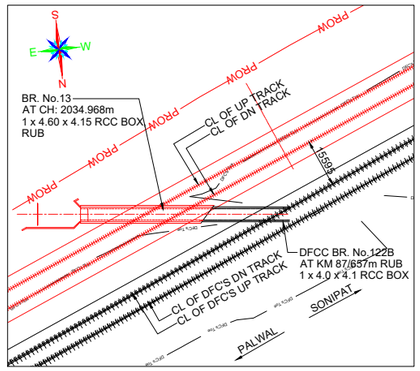
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



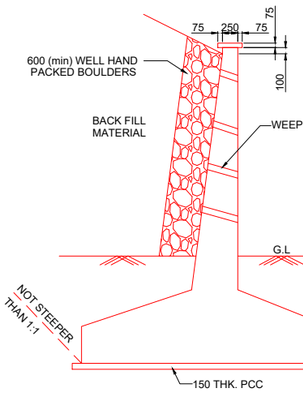
SECTIONAL ELEVATION AT A-A
SCALE 1:200



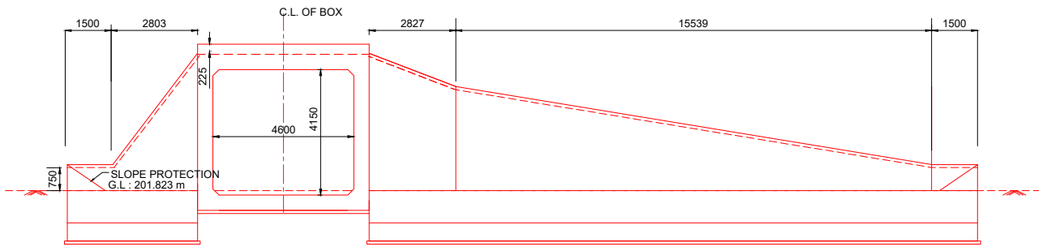
PLAN AT TOP
SCALE 1:200



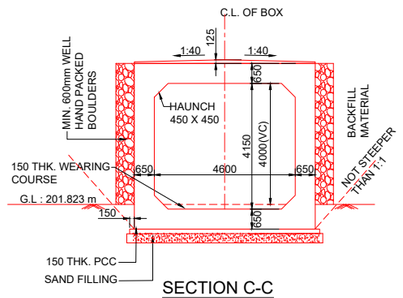
KEY PLAN
SCALE : NTS



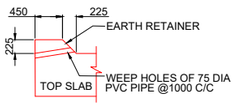
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



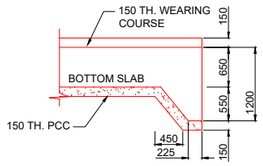
VIEW AT B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL/ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

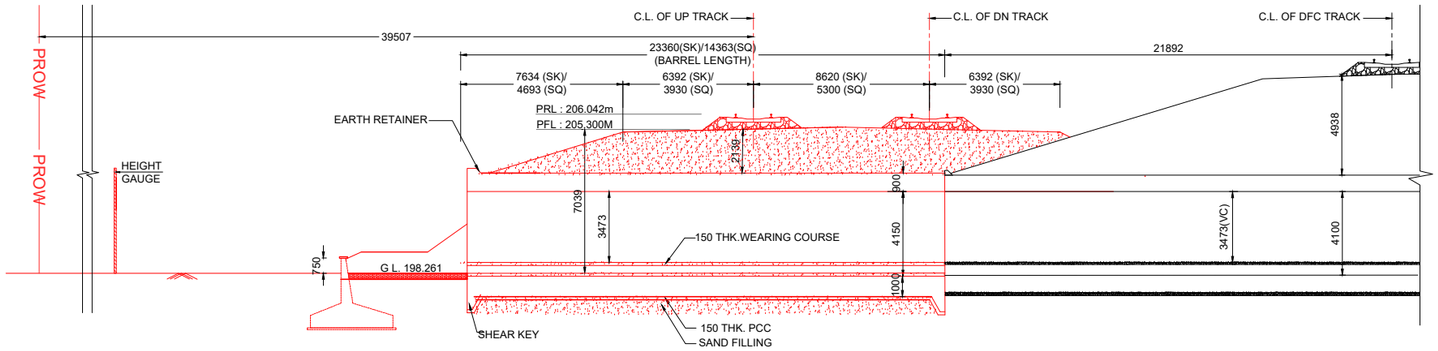
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 13
SPAN 1X4.60X4.15, RCC BOX AT CH: 2034.968

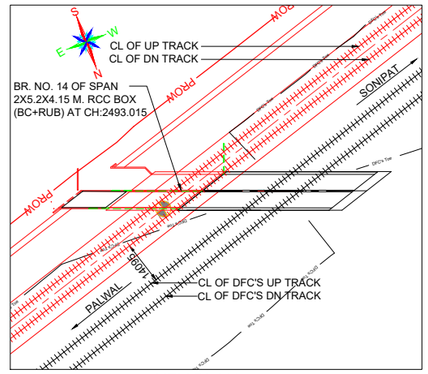
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01013_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



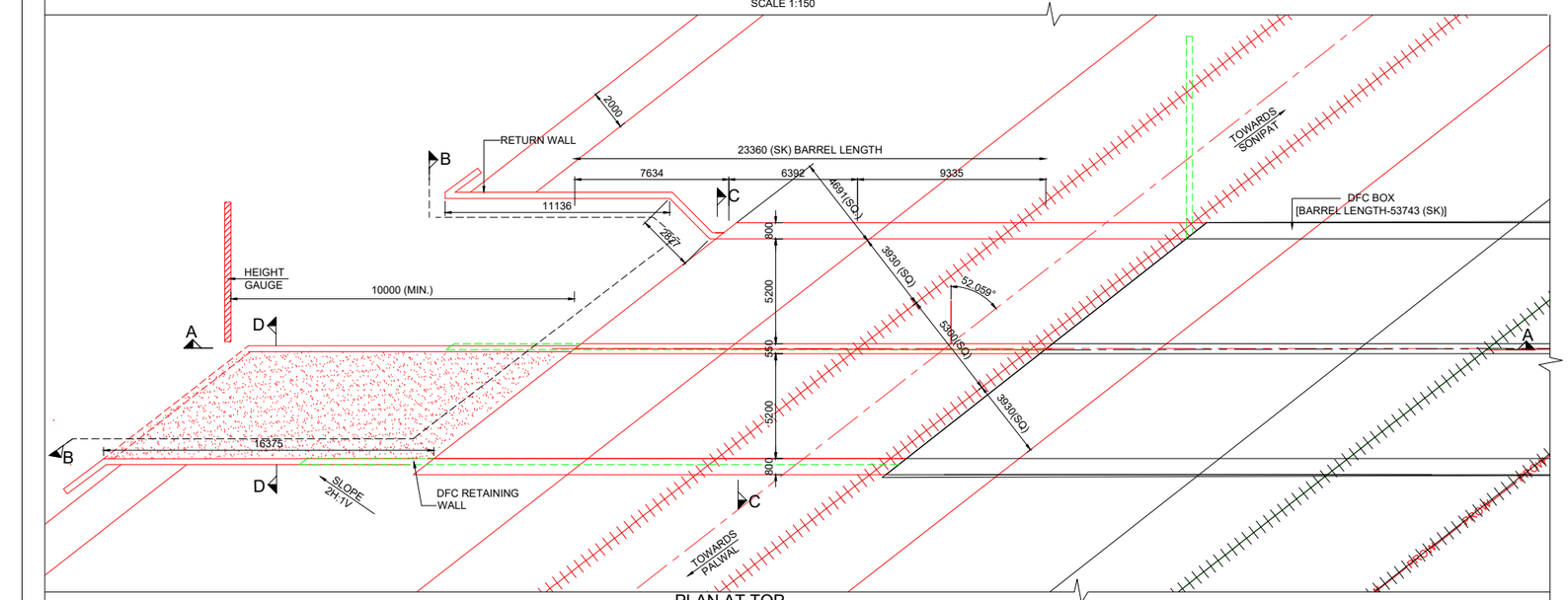
SECTIONAL ELEVATION AT A-A

SCALE 1:150



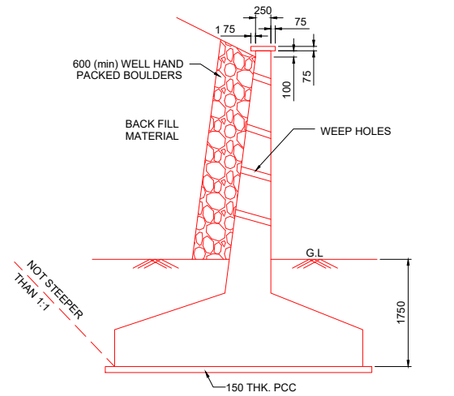
KEY PLAN

SCALE NTS



PLAN AT TOP

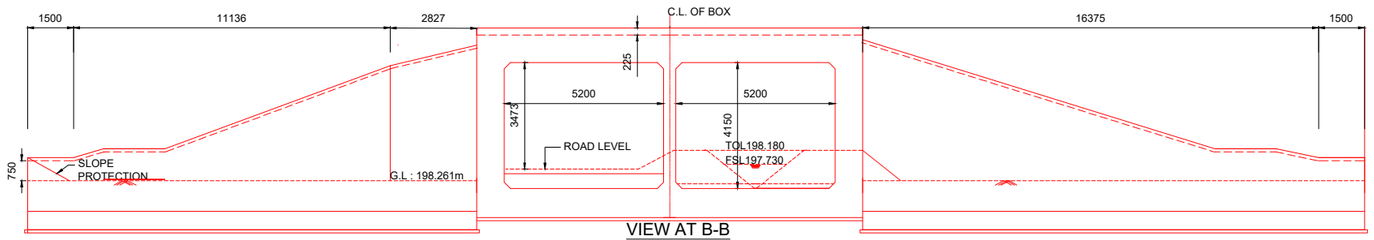
SCALE 1:150



TYPICAL DETAIL OF RETURN WALL / WING WALL

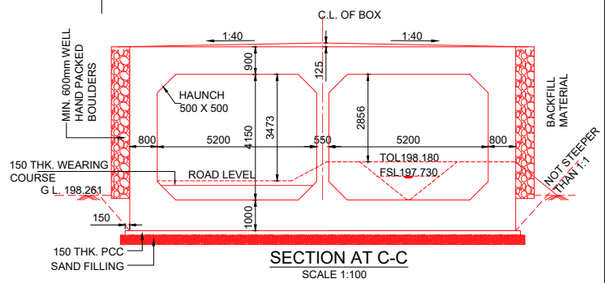
SCALE 1:50

HYDRAULIC DATA OF DRAIN		
1	NAME OF CANAL	CHANDPUR MINOR CANAL
2	RD	6500/2493.016
3	BED LEVEL(BL)	196.950
4	FULL SUPPLY LEVEL(FSL)	197.730
5	DISCHARGE	16.50CS
6	FREE BOARD	198.180
7	TOP OF LINING (T.O.L.)	198.180



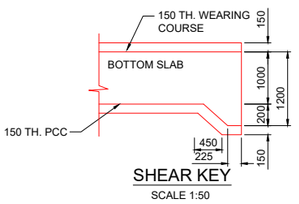
VIEW AT B-B

SCALE 1:50



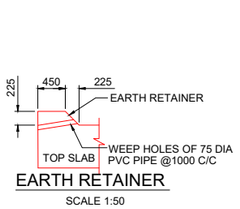
SECTION AT C-C

SCALE 1:100



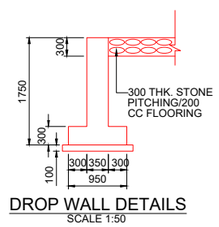
SHEAR KEY

SCALE 1:50



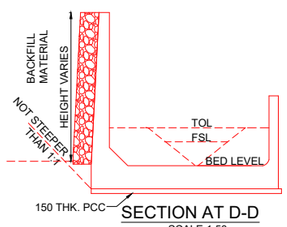
EARTH RETAINER

SCALE 1:50



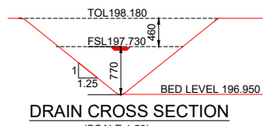
DROP WALL DETAILS

SCALE 1:50



SECTION AT D-D

SCALE 1:50



DRAIN CROSS SECTION

(SCALE 1:50)

NOTES :

A) GENERAL NOTES

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9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

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	
	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION	
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

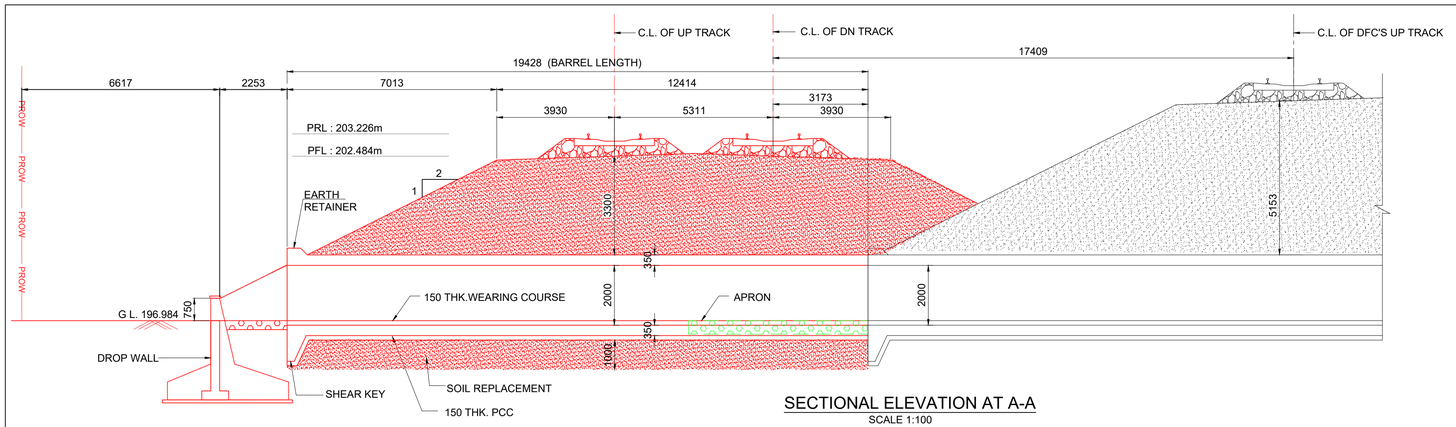
RITES Limited in consortium with SMEC International Pty. Ltd.

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

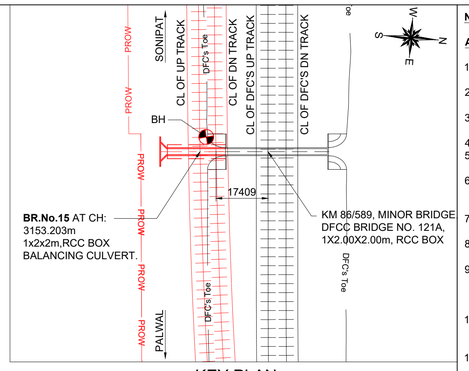
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR RUB + BALANCING CULVERT BRIDGE NO. 14 SPAN 2X5.2X4.15 RCC BOX AT CH: 2493.015 (CANAL CROSSING CHANDPUR MINOR RD 6500)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01014_A0	

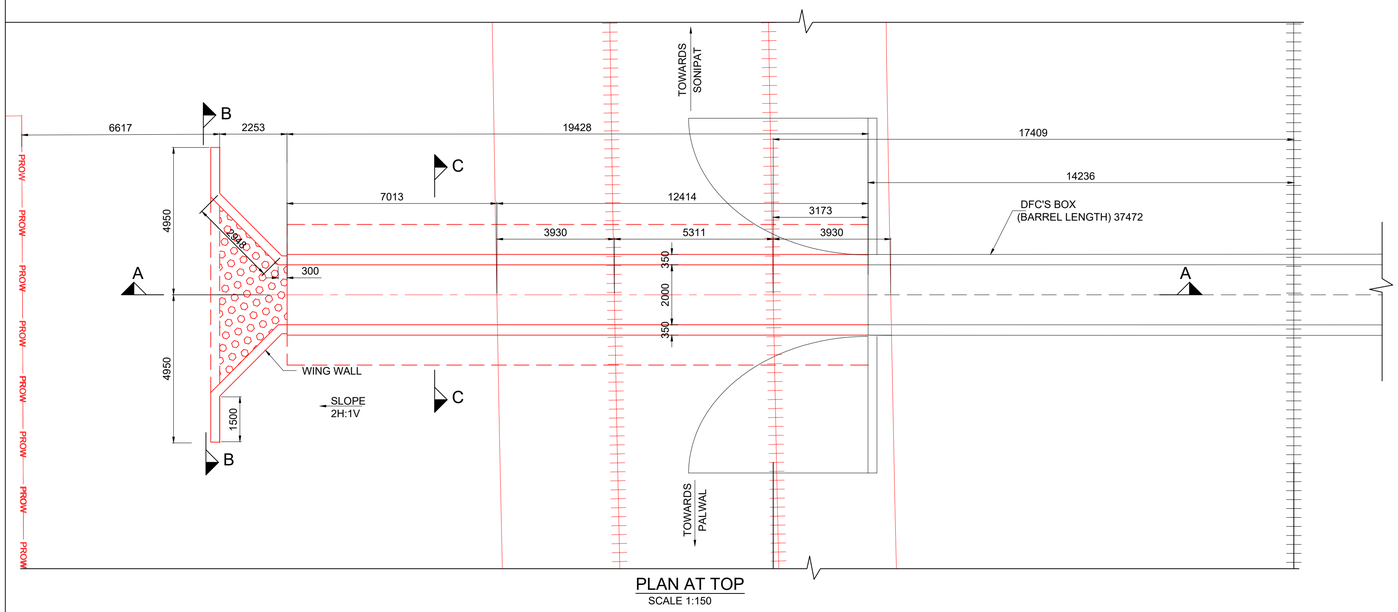
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



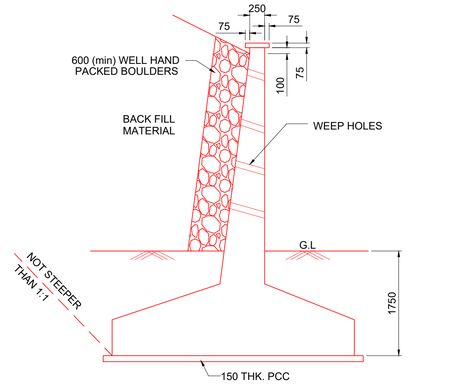
SECTIONAL ELEVATION AT A-A
SCALE 1:100



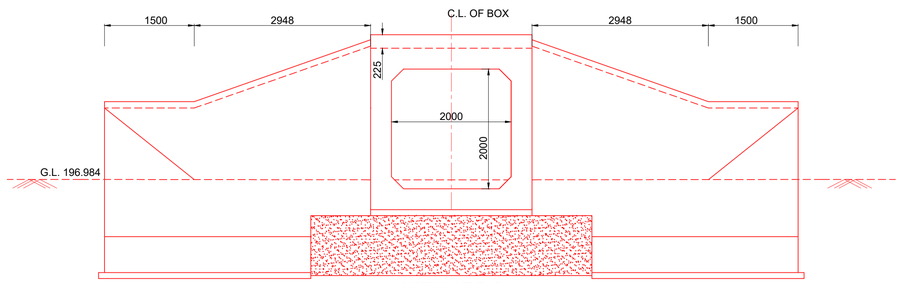
KEY PLAN
SCALE NTS



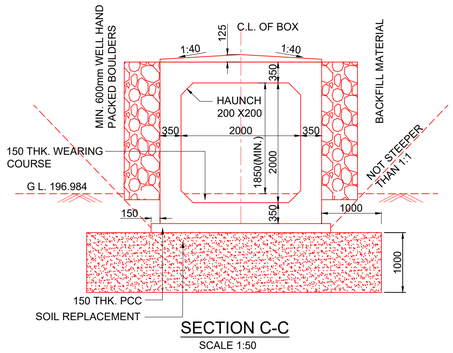
PLAN AT TOP
SCALE 1:150



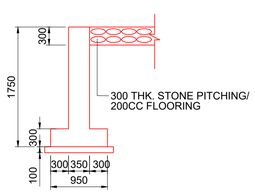
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



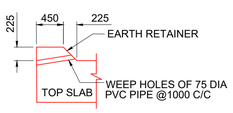
VIEW AT B-B
SCALE 1:50



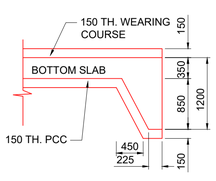
SECTION C-C
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL..
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

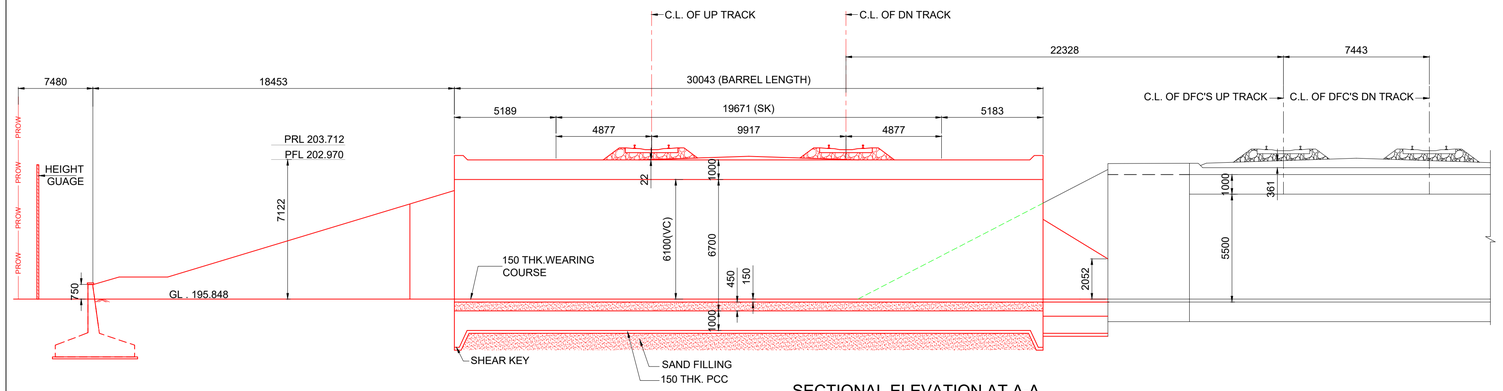
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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. 15 SPAN 1X2X2 RCC BOX AT CH: 3153.203

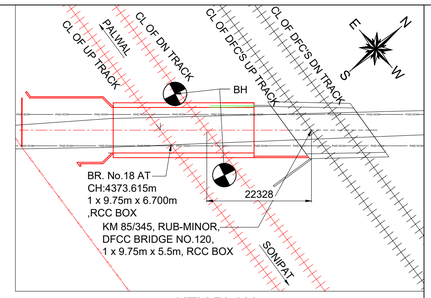
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01015_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



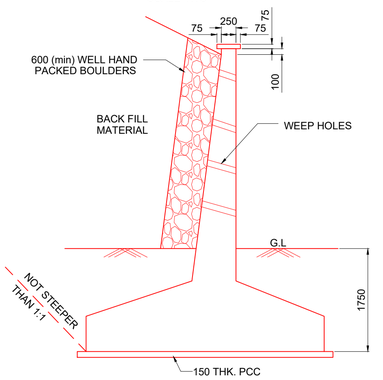
SECTIONAL ELEVATION AT A-A

SCALE 1:150



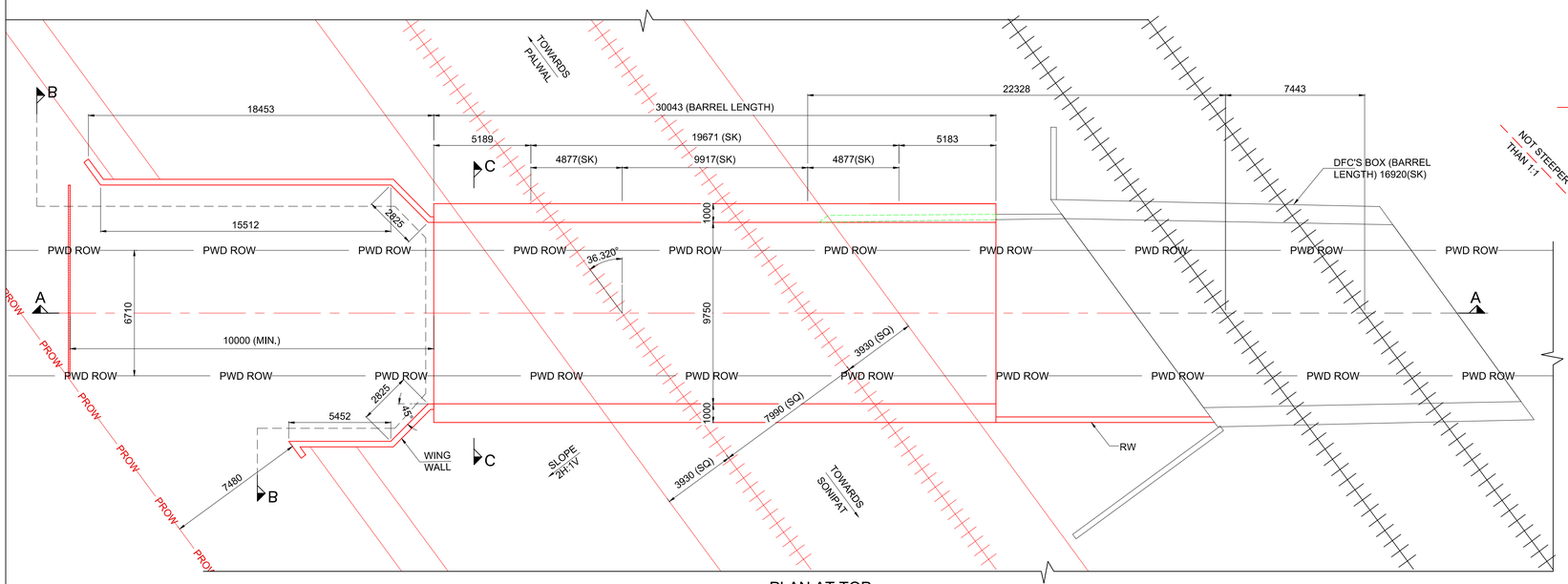
KEY PLAN

SCALE NTS



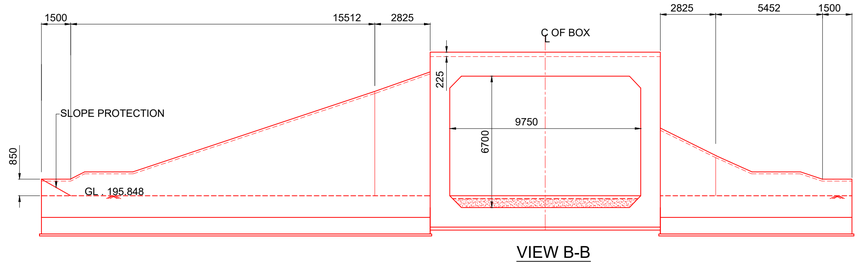
TYPICAL DETAIL OF RETAINING WALL(RW) / WING WALL

SCALE 1:50



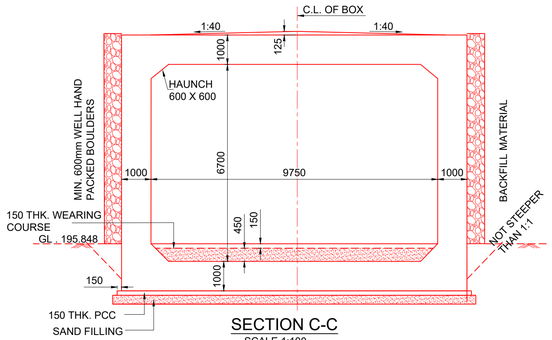
PLAN AT TOP

SCALE 1:150



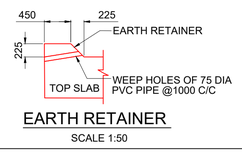
VIEW B-B

SCALE 1:150



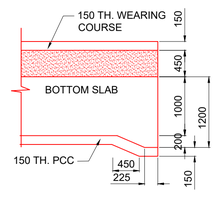
SECTION C-C

SCALE 1:100



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. REGRADING OF APPROACH ROAD HAS TO BE DONE ON OPPOSITE SIDE O DFC.

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

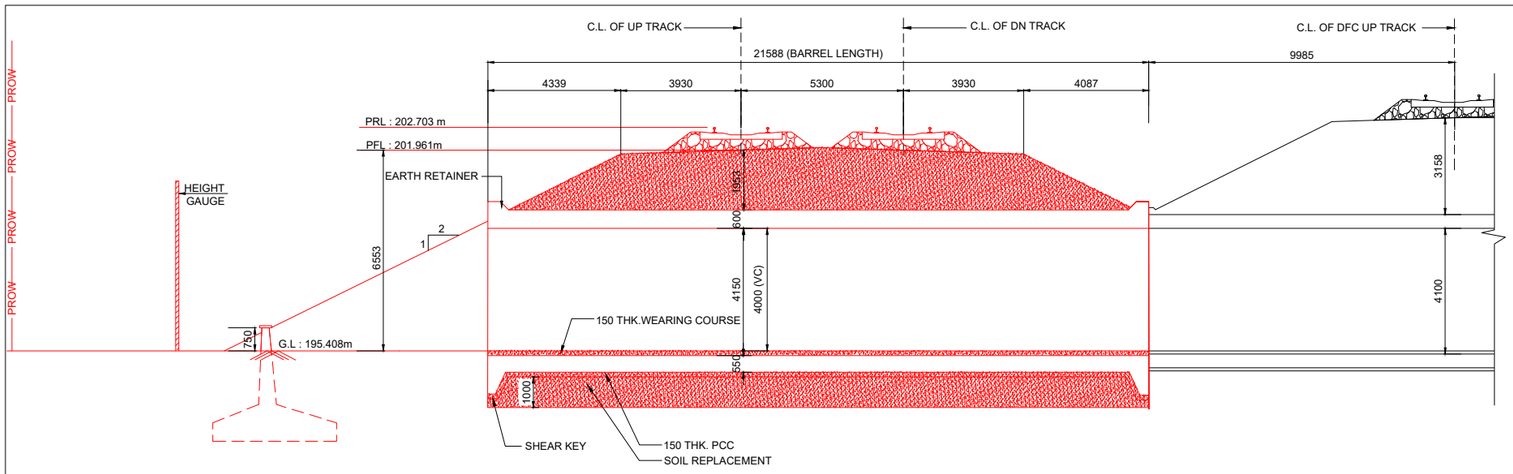
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 18
1 x 9.75m x 6.70m RCC BOX AT CH.4373.615m

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01018_A0	1 OF 1

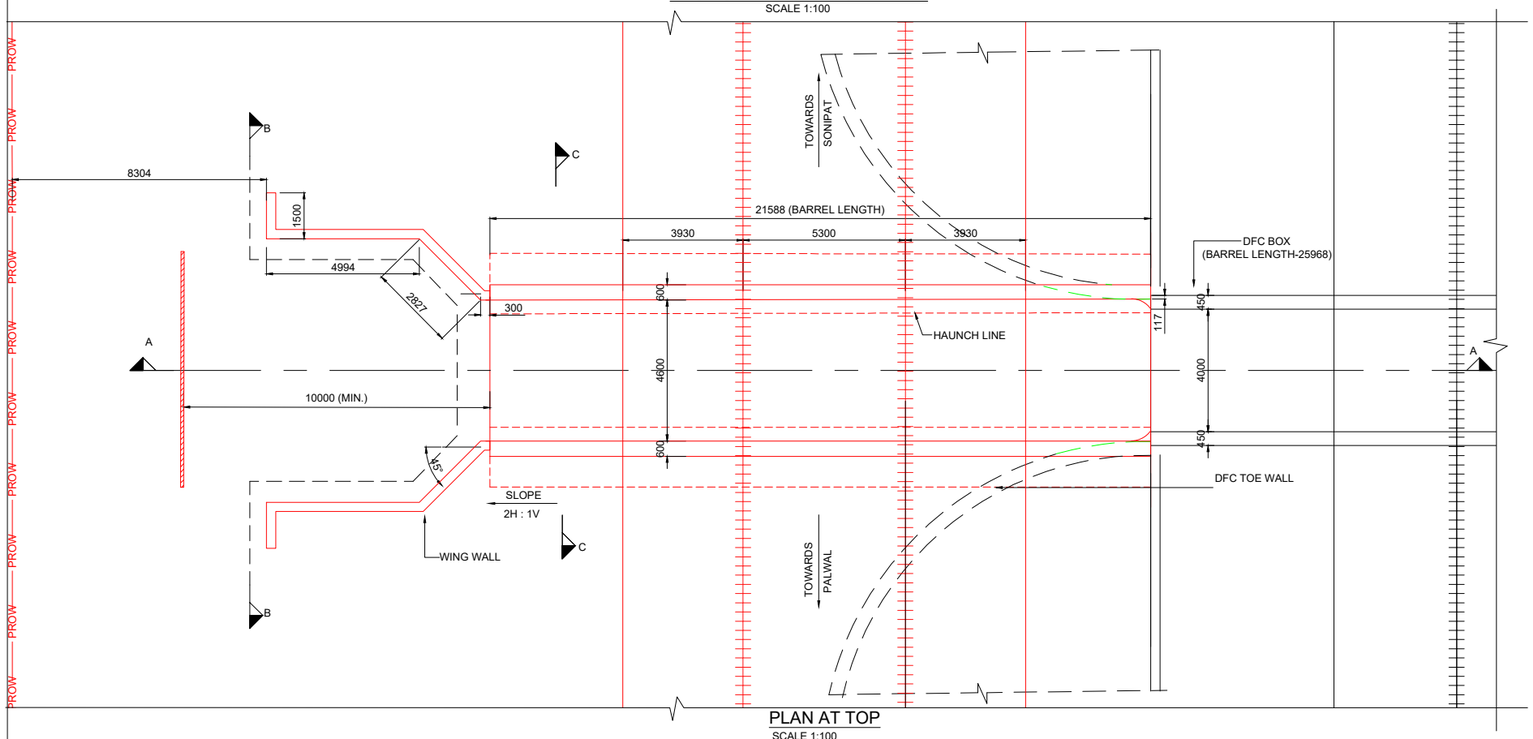
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

OLD CH: 4858.699, NEW CH: 4856.791



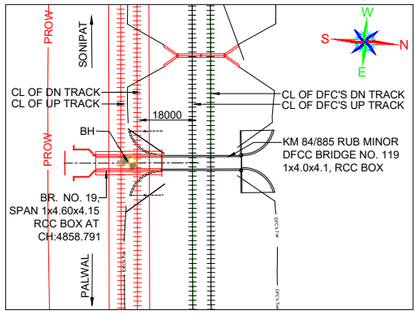
SECTIONAL ELEVATION AT A-A

SCALE 1:100



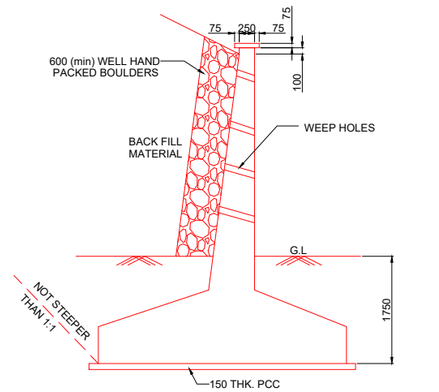
PLAN AT TOP

SCALE 1:100



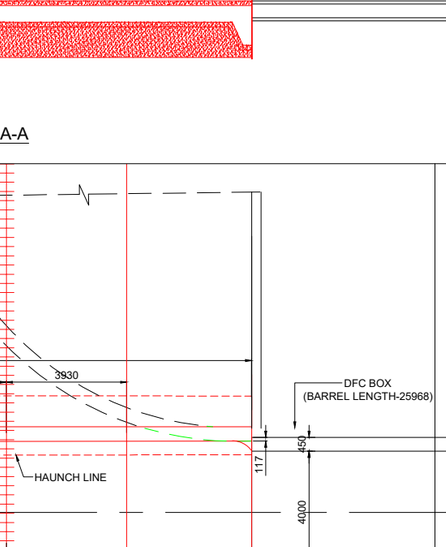
KEY PLAN

SCALE :NTS



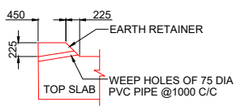
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



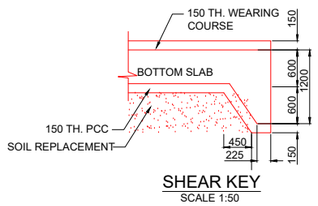
VIEW AT B-B

SCALE 1:100



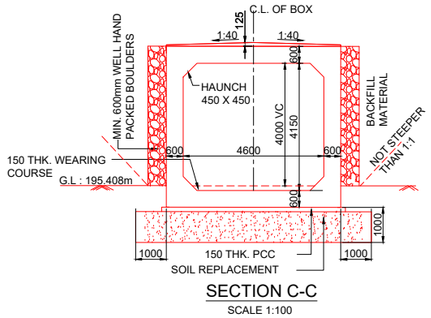
EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50



SECTION C-C

SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
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HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

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

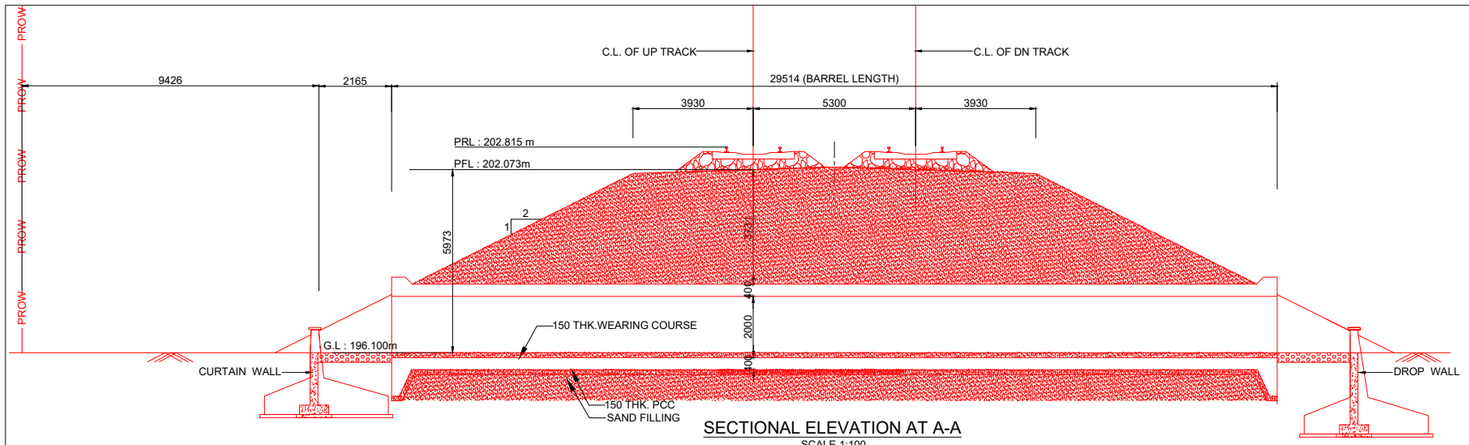
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

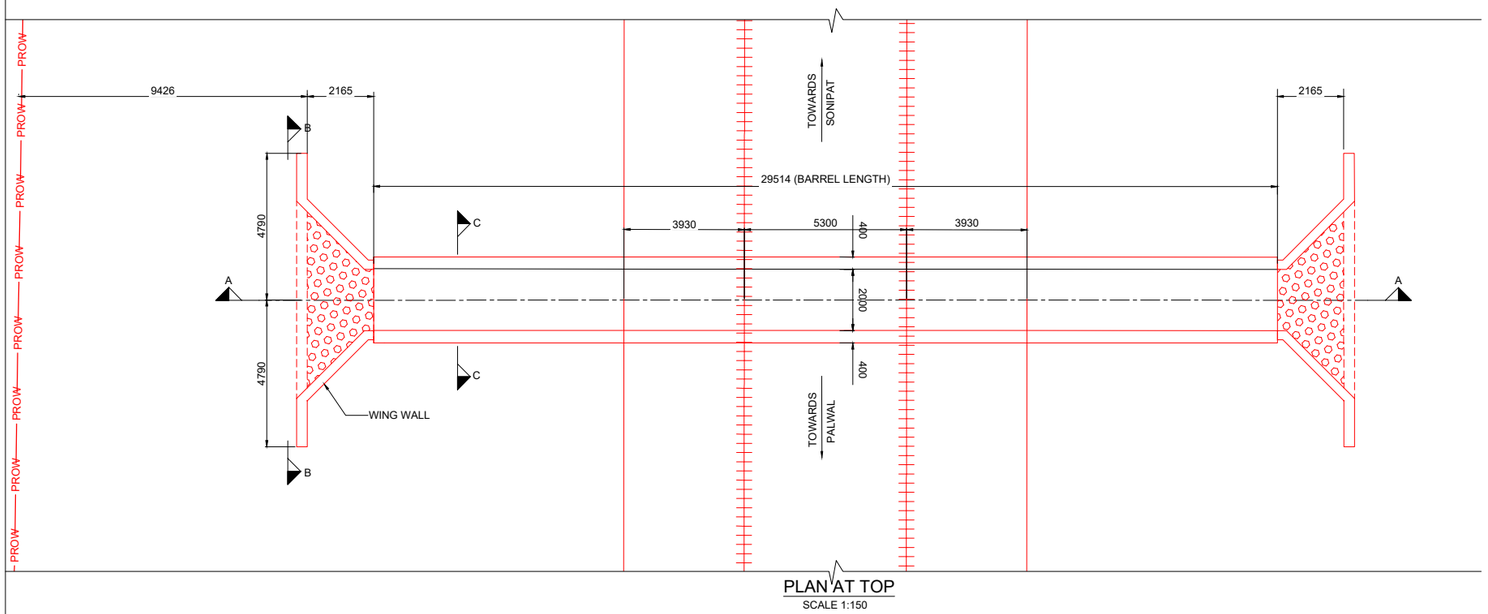
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 19 SPAN 1.0X4.6X4.15 RCC BOX AT CH: 4858.791

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01019_A1	

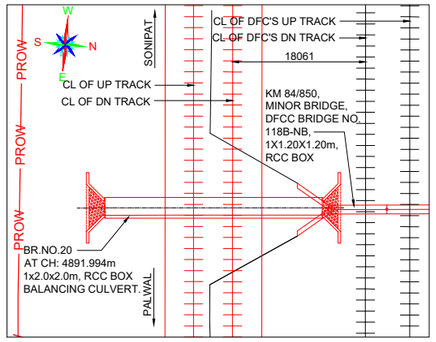
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



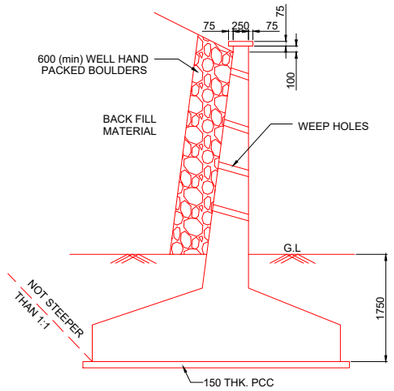
SECTIONAL ELEVATION AT A-A
SCALE 1:100



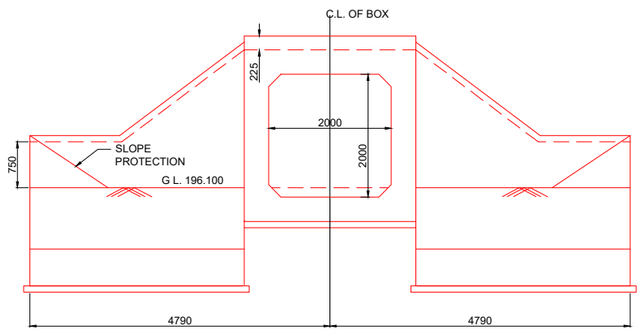
PLAN AT TOP
SCALE 1:150



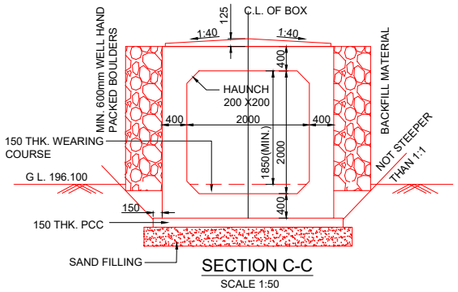
KEY PLAN
SCALE : NTS



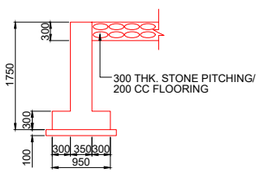
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



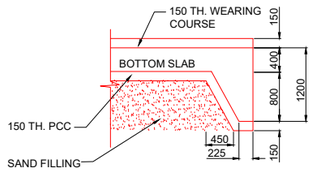
VIEW AT B-B
SCALE 1:50



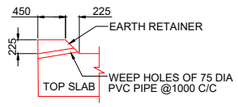
SECTION C-C
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



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. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
GRADE OF CONCRETE :
(i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
(ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

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

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

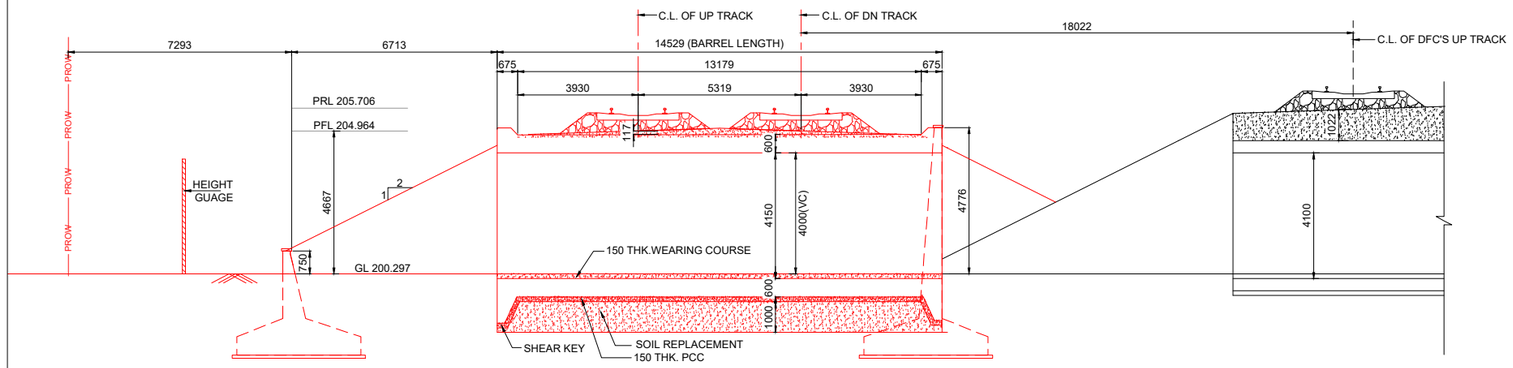
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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. 20
SPAN 1X2.0X2.0 RCC BOX AT CH.4891.994

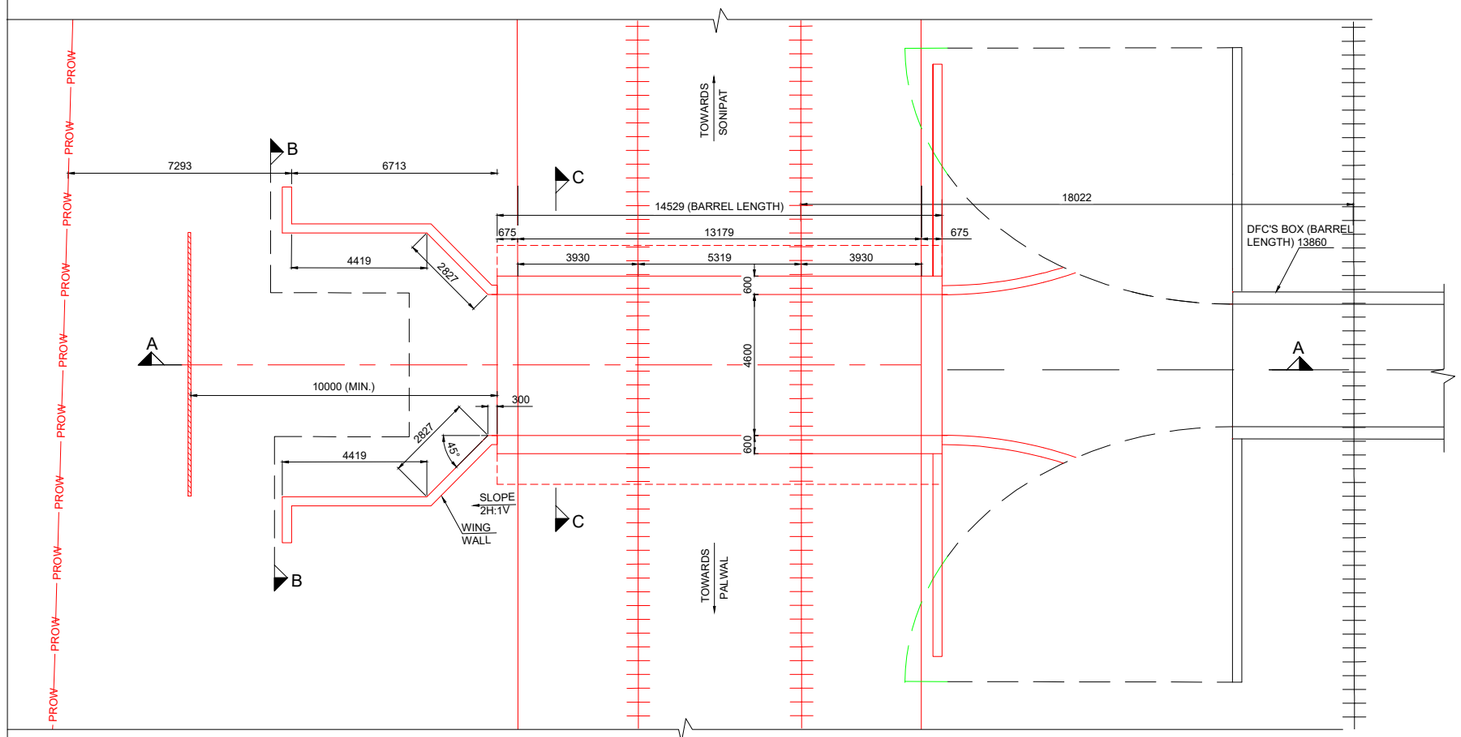
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01020_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



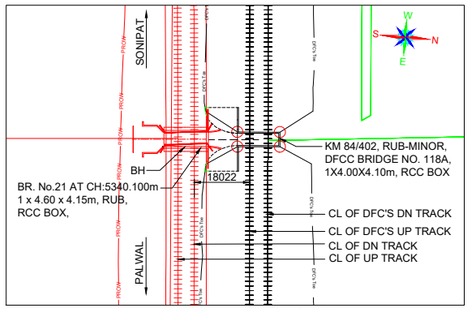
SECTIONAL ELEVATION AT A-A

SCALE 1:100



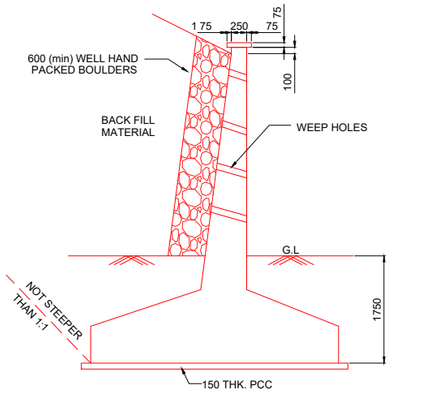
PLAN AT TOP

SCALE 1:100



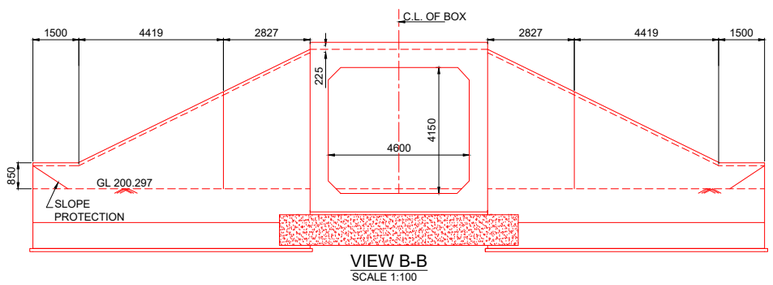
KEY PLAN

SCALE NTS



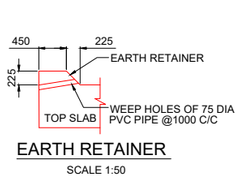
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



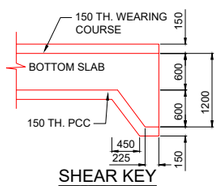
VIEW B-B

SCALE 1:100



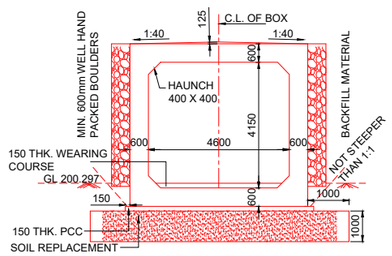
EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50



SECTION C-C

SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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.

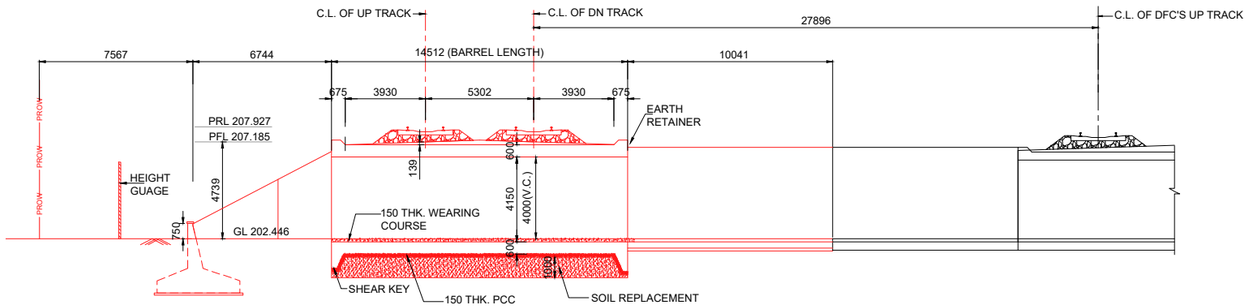
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

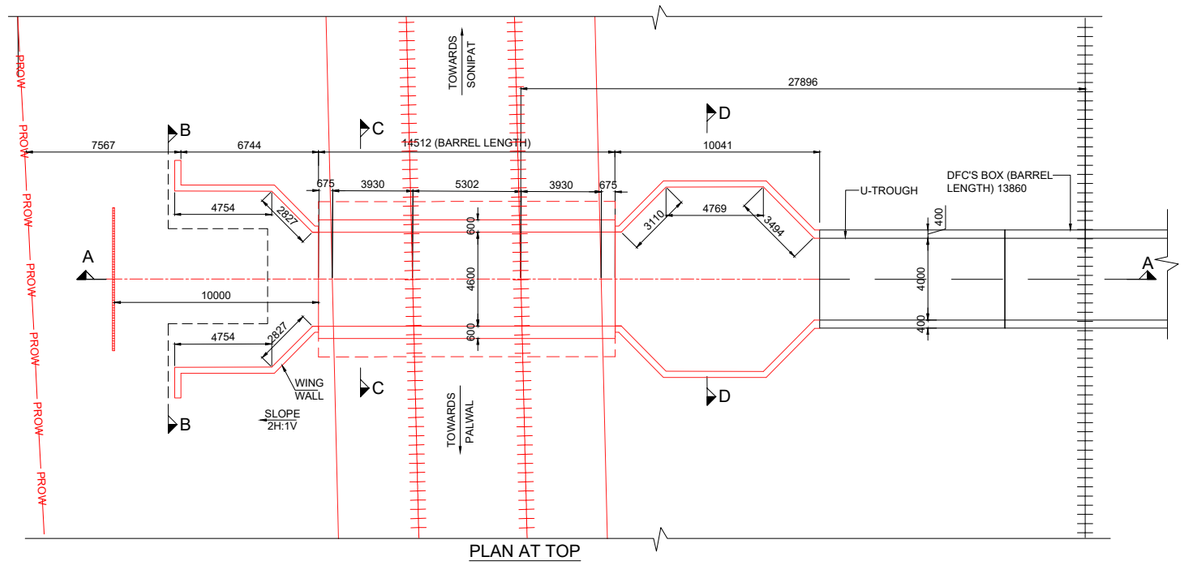
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 21
1 x 4.60 x 4.15m RCC BOX AT CH.5340.10m

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01021_A0	1 OF 1

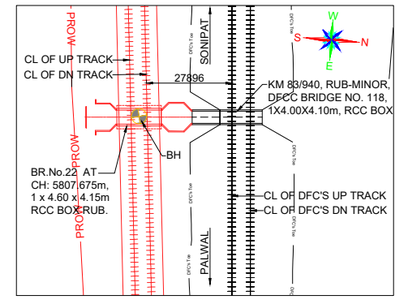
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



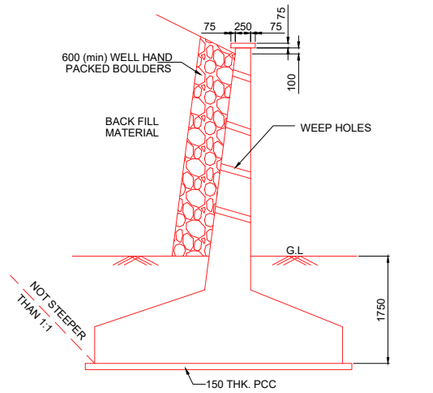
SECTIONAL ELEVATION AT A-A
SCALE 1:100



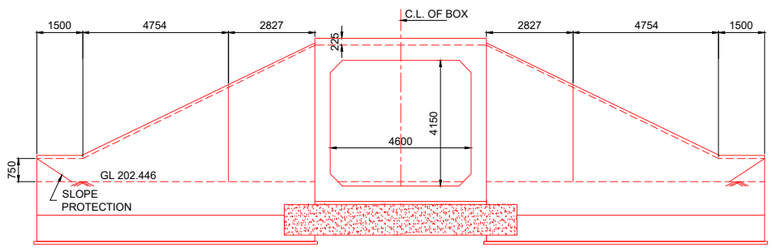
PLAN AT TOP
SCALE 1:150



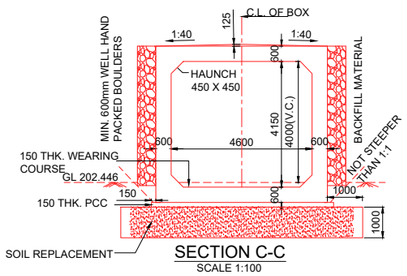
KEY PLAN
SCALE NTS



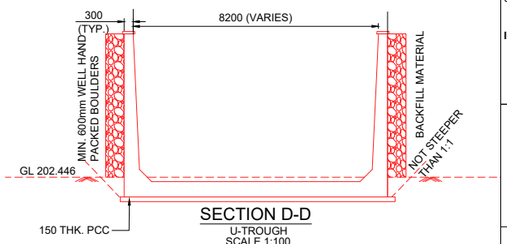
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



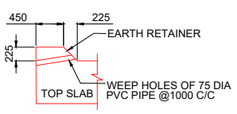
VIEW B-B
SCALE 1:100



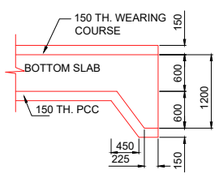
SECTION C-C
SCALE 1:100



SECTION D-D
U-TROUGH
SCALE 1:100



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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11. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
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3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
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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.

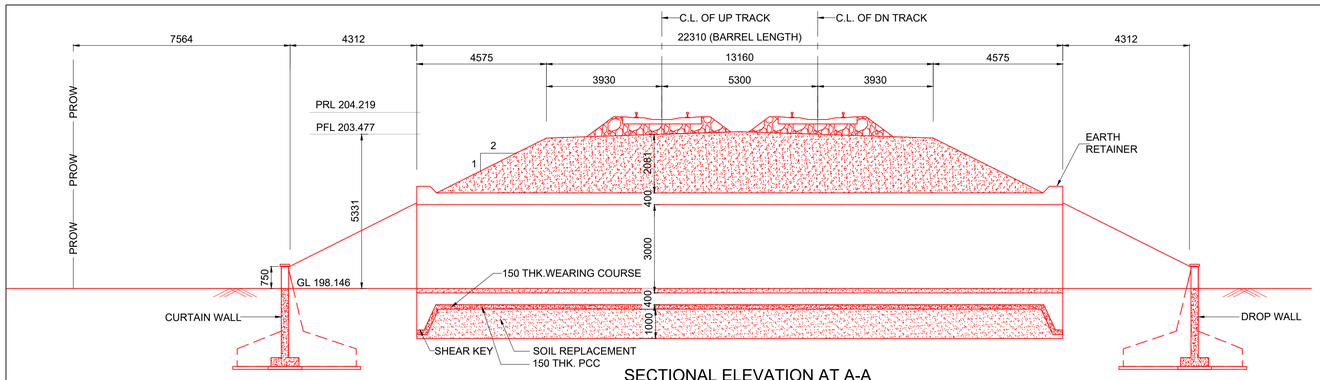
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

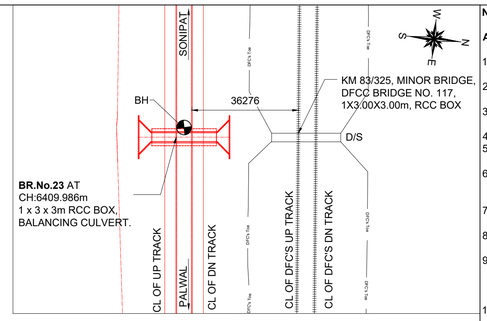
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 22
1 x 4.60x 4.15m RCC BOX AT CH.5807.675m

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01022_A0	1 OF 1

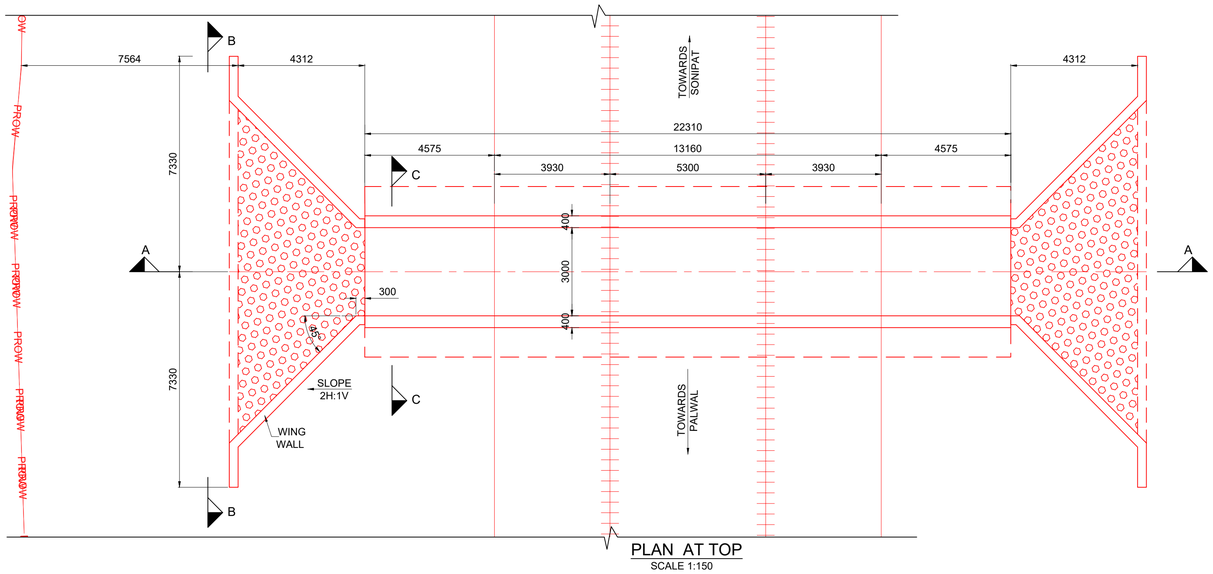
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



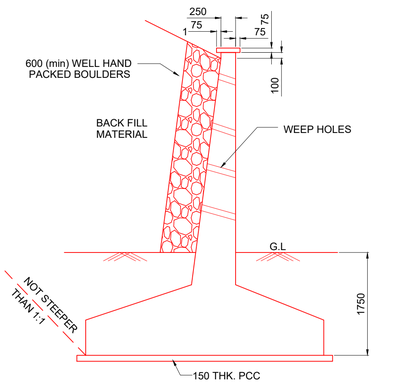
SECTIONAL ELEVATION AT A-A
SCALE 1:100



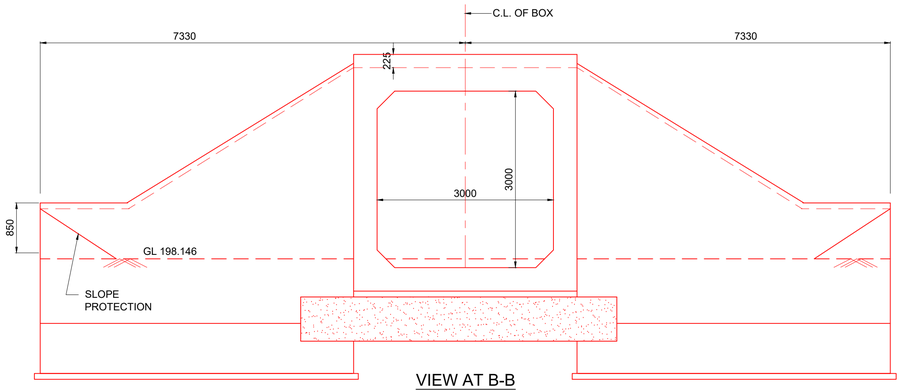
KEY PLAN
SCALE NTS



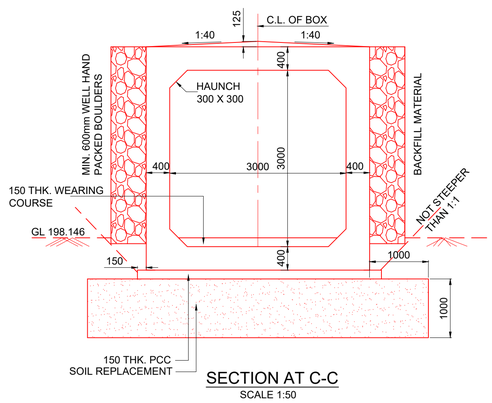
PLAN AT TOP
SCALE 1:150



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



VIEW AT B-B
SCALE 1:50



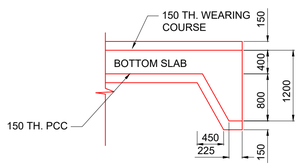
SECTION AT C-C
SCALE 1:50

LEGEND

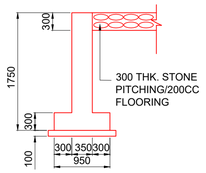
	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

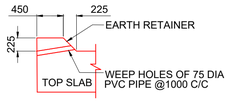
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW



SHEAR KEY
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



EARTH RETAINER
SCALE 1:50

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C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
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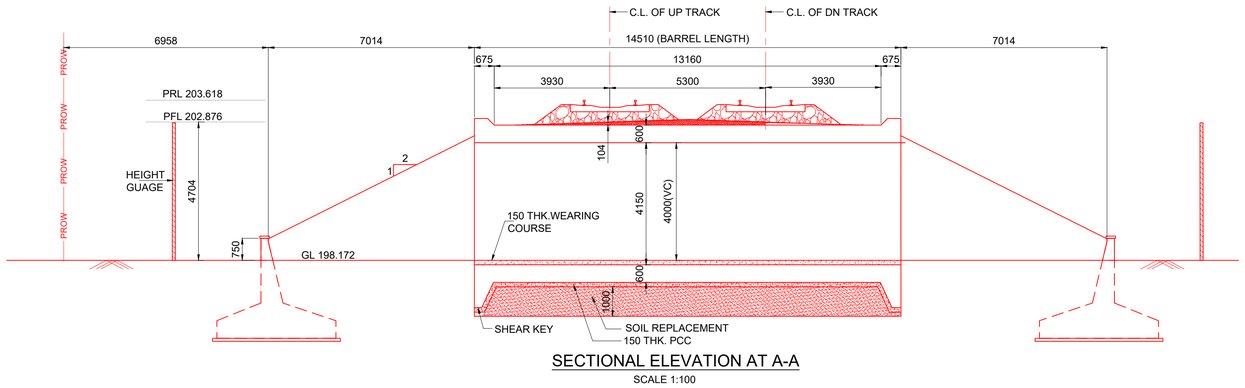
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT.BRIDGE NO. 23
1 x 3 x 3m RCC BOX AT CH.6409.986m

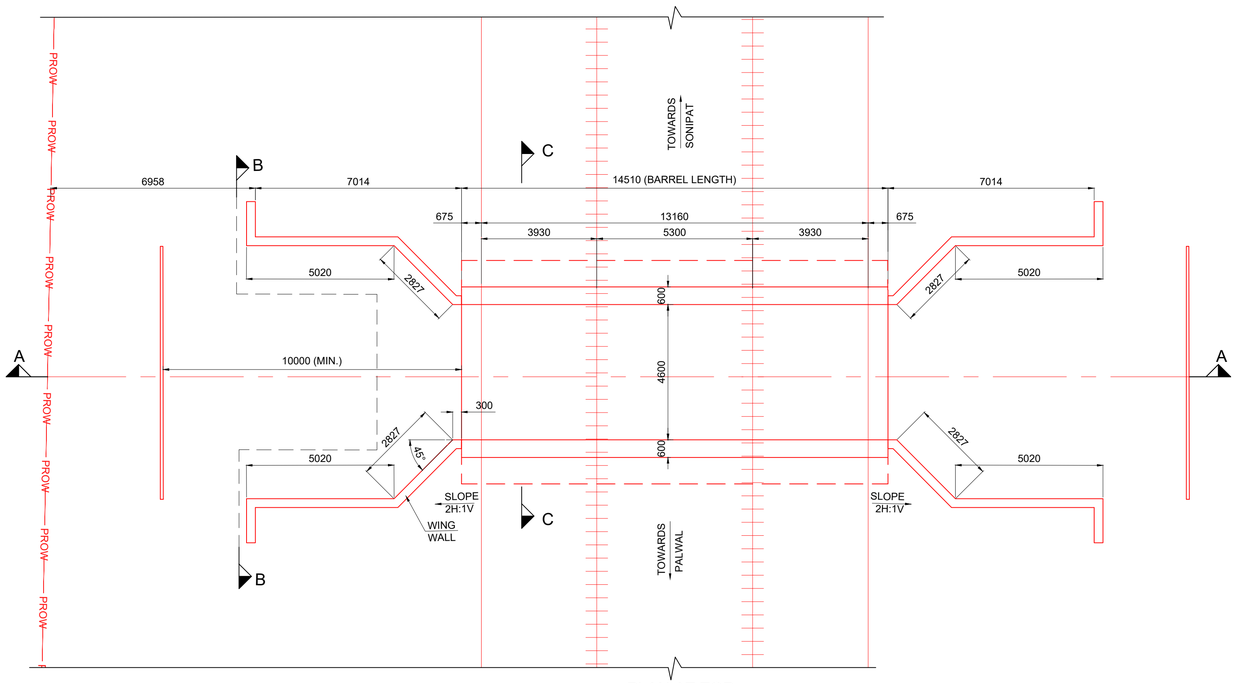
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_0023_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



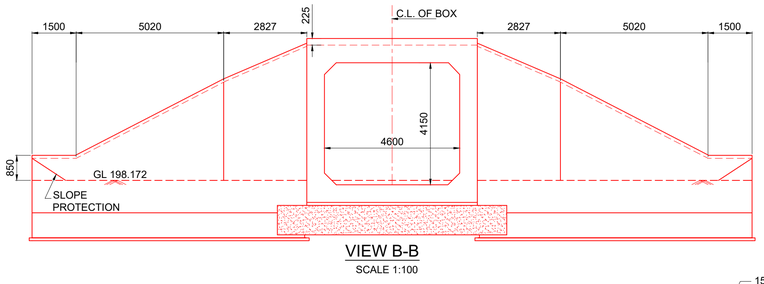
SECTIONAL ELEVATION AT A-A

SCALE 1:100



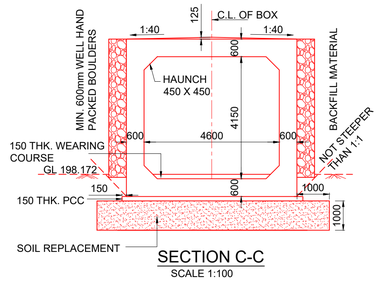
PLAN AT TOP

SCALE 1:100



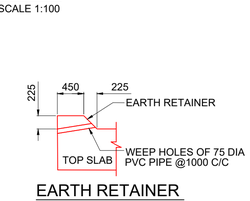
VIEW B-B

SCALE 1:100



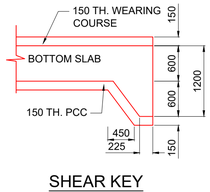
SECTION C-C

SCALE 1:100



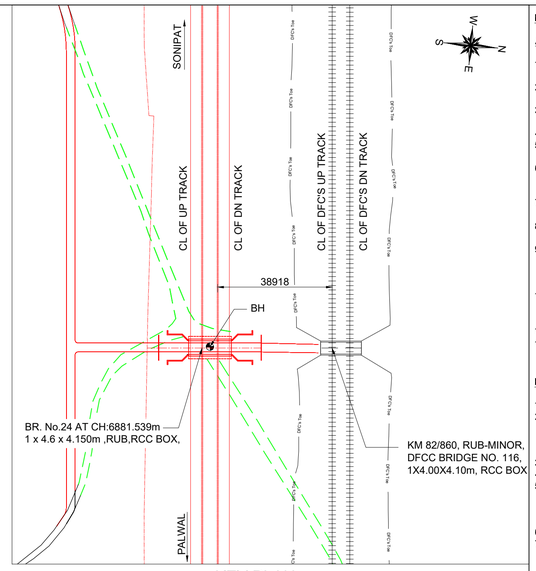
EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50



KEY PLAN

SCALE NTS

TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

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LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

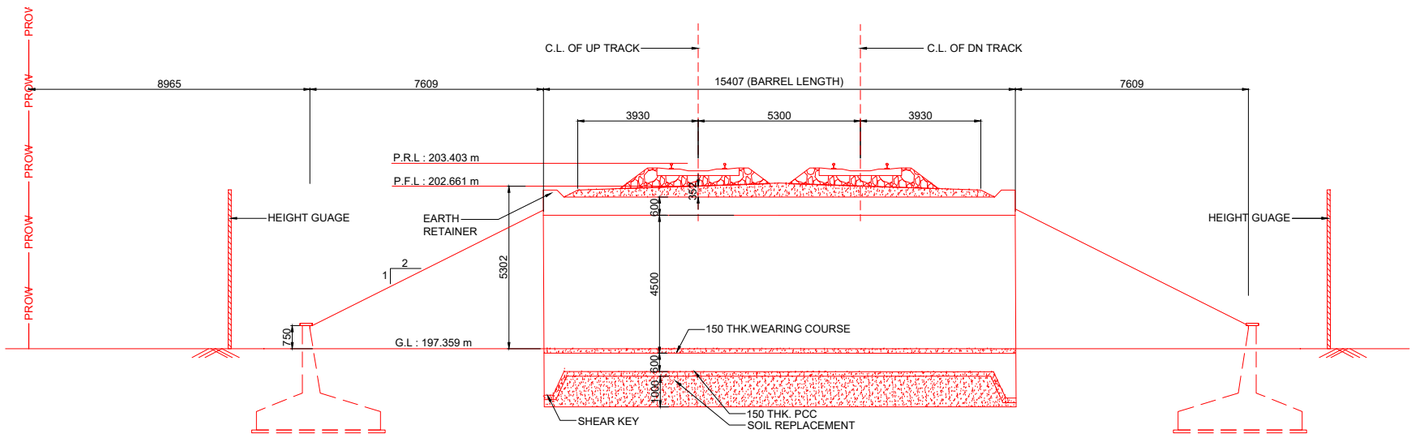
RITES Limited in consortium with SMEC International Pty. Ltd.

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

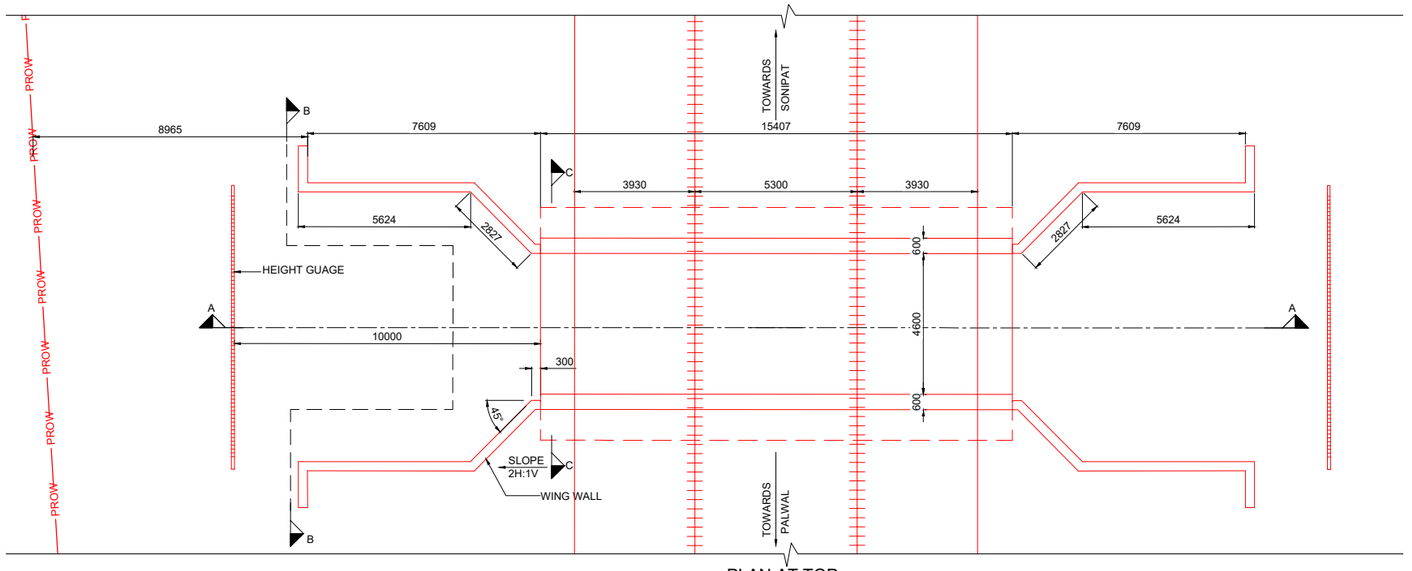
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 24 1 x 4.6 x 4.150m RCC BOX AT CH.6881.539m

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01024_A0	1 OF 1

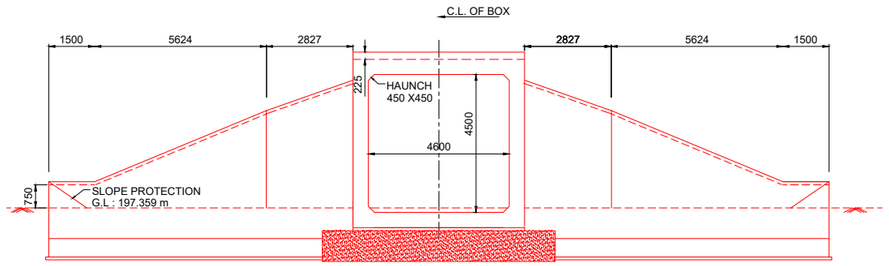
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



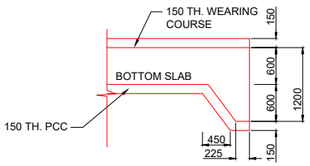
SECTIONAL ELEVATION AT A-A
SCALE 1:100



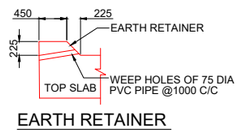
PLAN AT TOP
SCALE 1:100



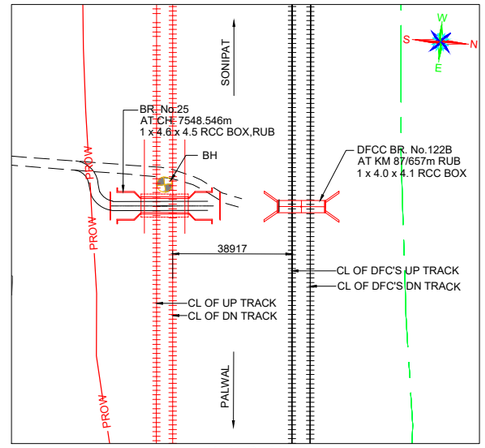
VIEW AT B-B
SCALE 1:100



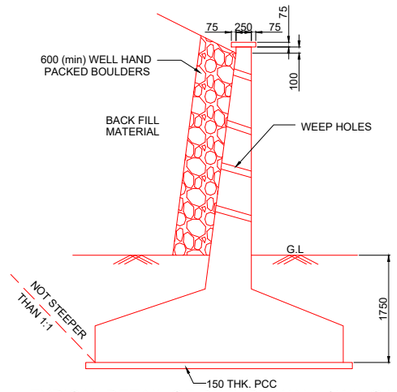
SHEAR KEY
SCALE 1:50



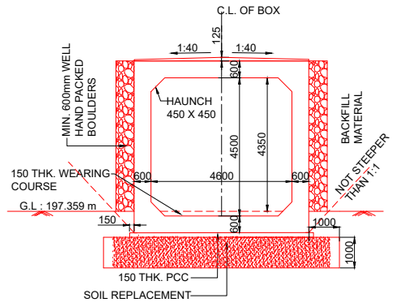
EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE : NTS



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



SECTION C-C
SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

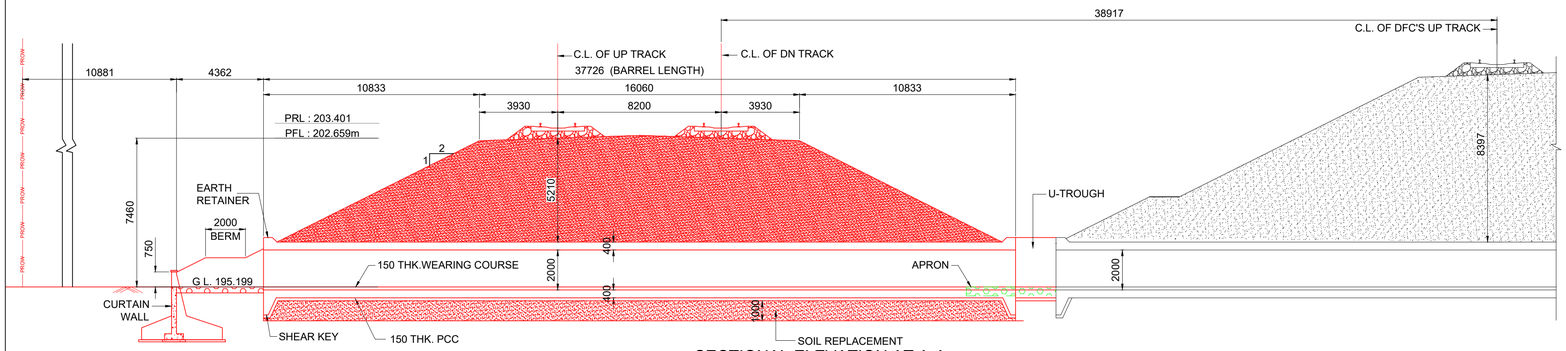
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

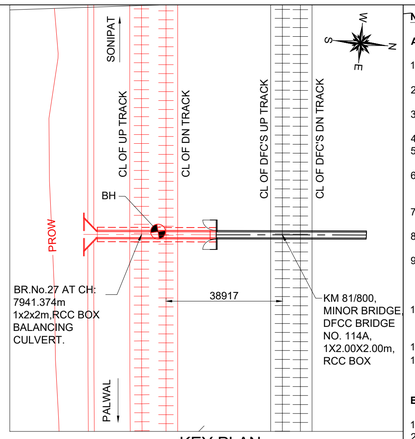
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 25
SPAN 1.0X4.60X4.50 RCC BOX AT CH: 7548.737

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01025_A0	1 OF 1

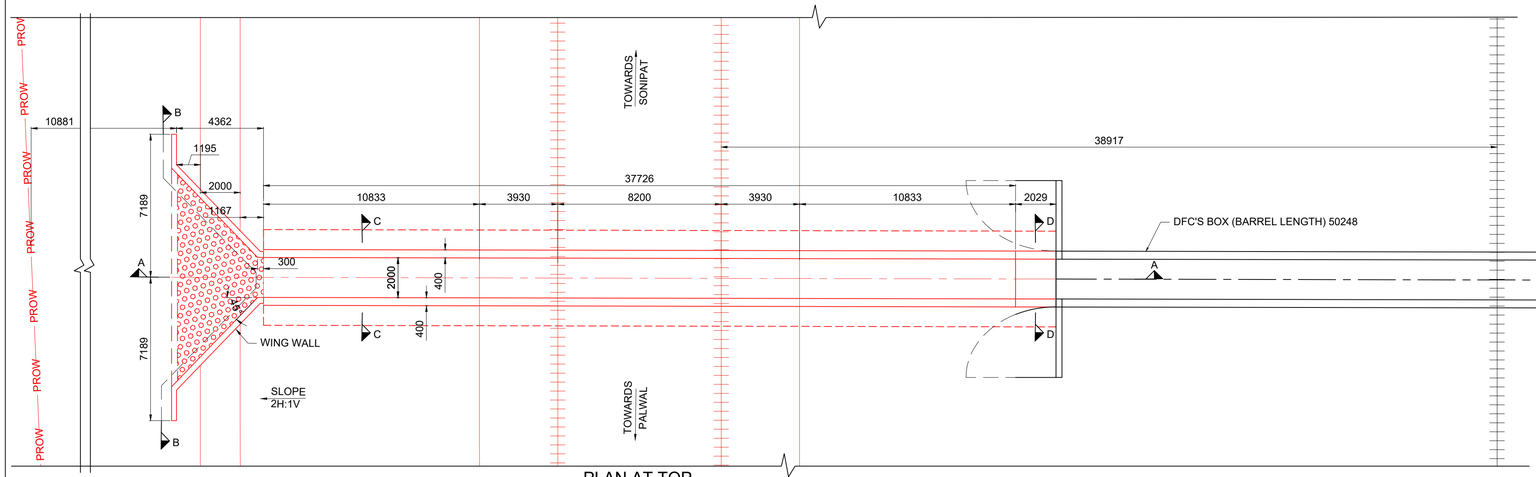
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



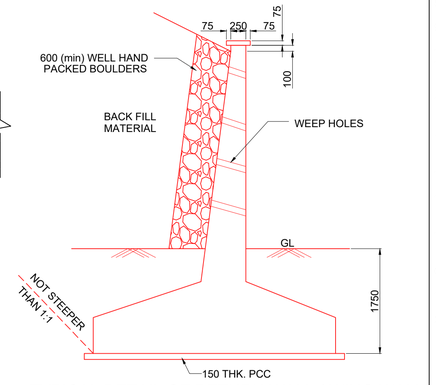
SECTIONAL ELEVATION AT A-A
SCALE 1:150



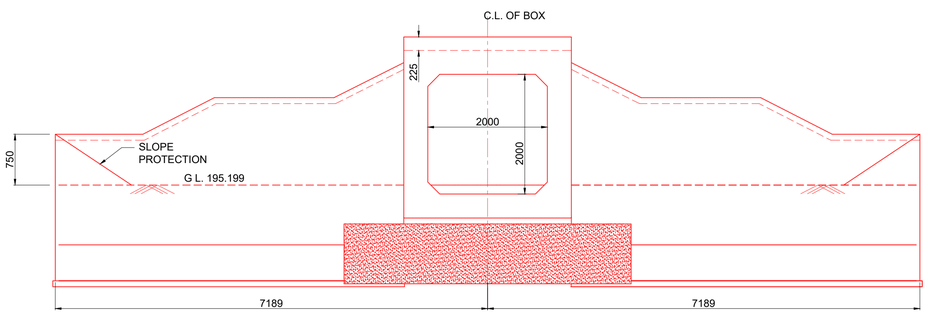
KEY PLAN
SCALE NTS



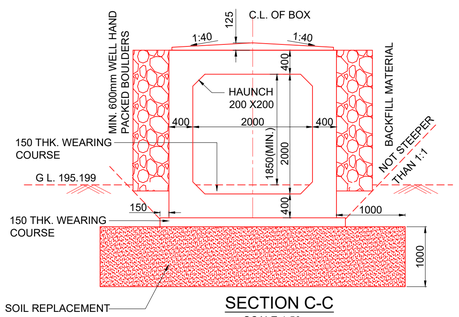
PLAN AT TOP
SCALE 1:150



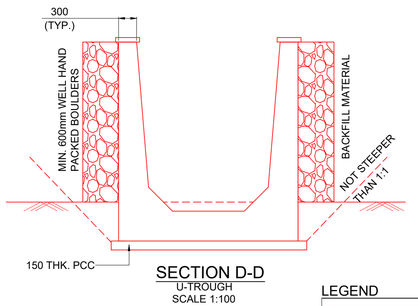
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



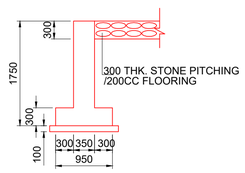
VIEW AT B-B
SCALE 1:50



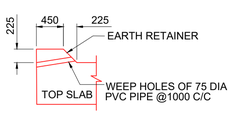
SECTION C-C
SCALE 1:50



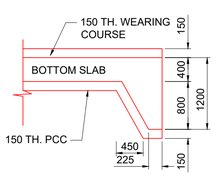
SECTION D-D
U-TROUGH
SCALE 1:100



DROP / CURTAIN WALL DETAILS
SCALE 1:50



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

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5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

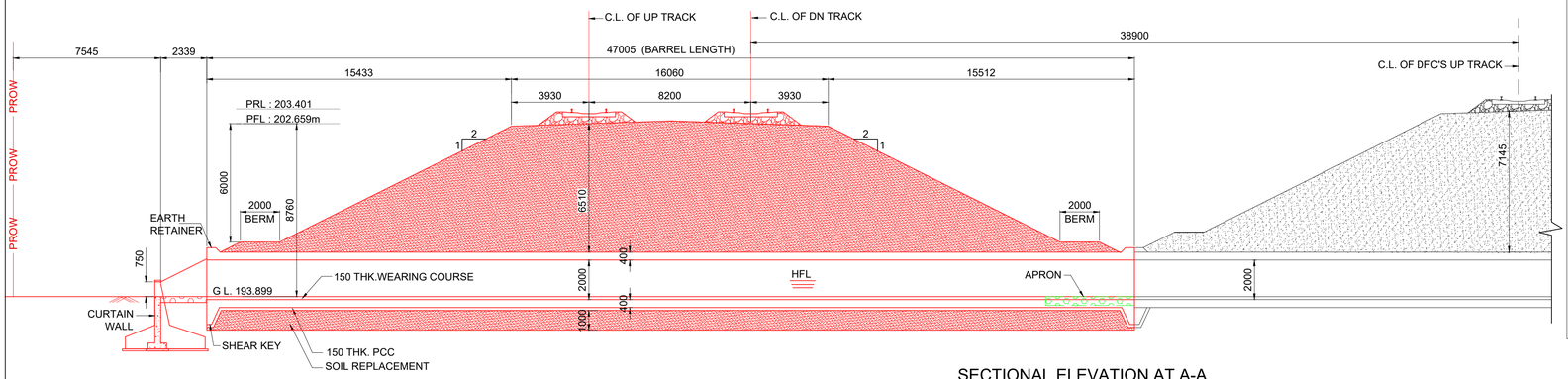
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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. 27
SPAN 1X2X2 RCC BOX AT CH: 7941.374

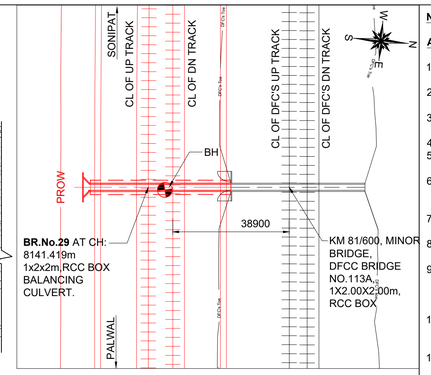
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01027_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



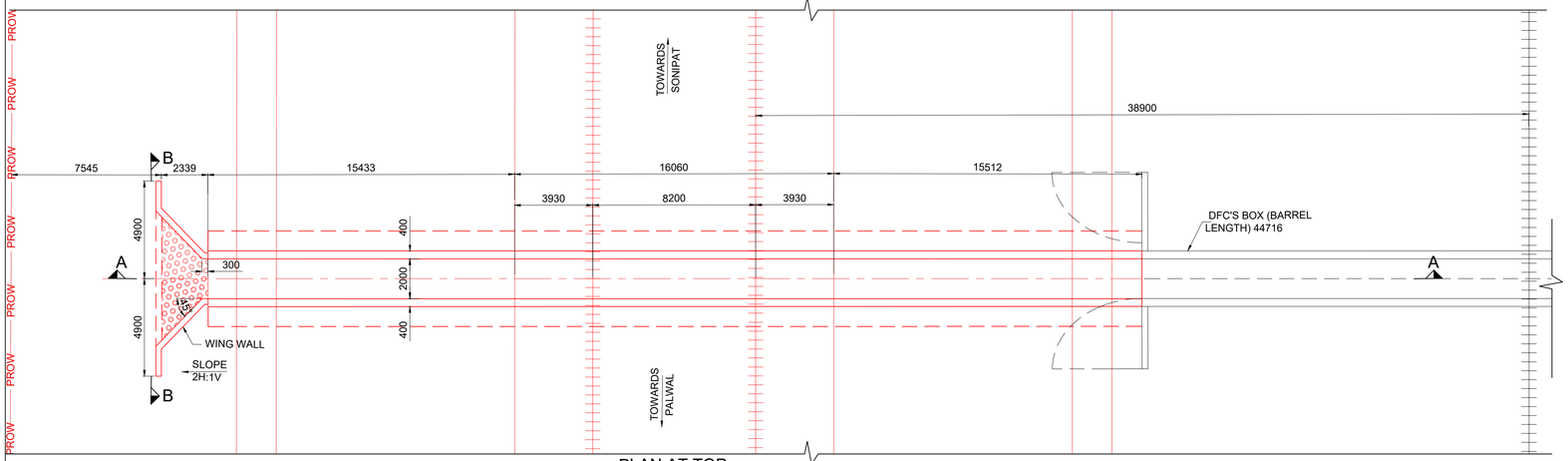
SECTIONAL ELEVATION AT A-A

SCALE 1:150



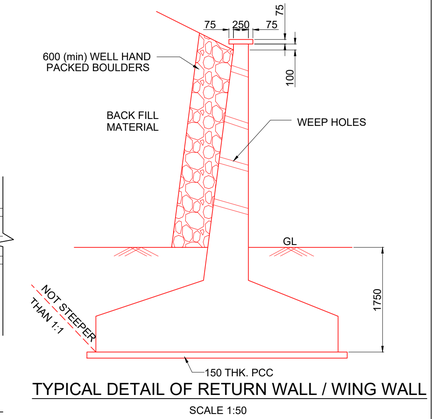
KEY PLAN

SCALE NTS



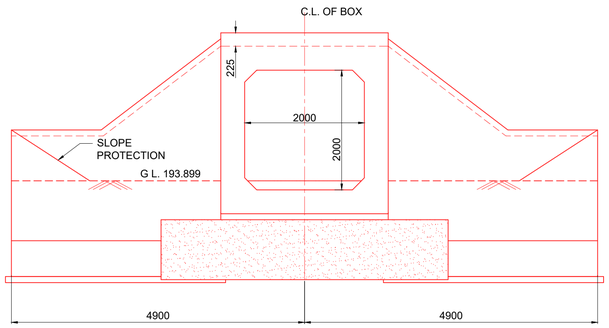
PLAN AT TOP

SCALE 1:150



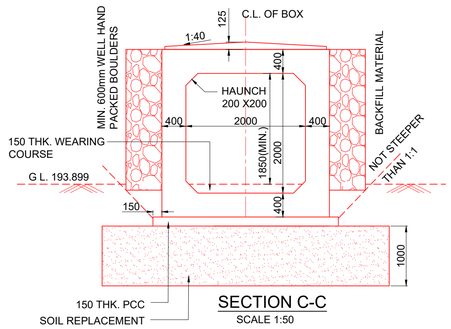
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



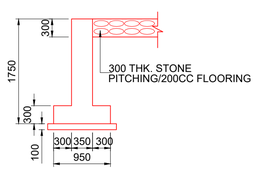
VIEW AT B-B

SCALE 1:50



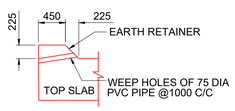
SECTION C-C

SCALE 1:50



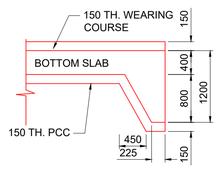
DROP / CURTAIN WALL DETAILS

SCALE 1:50



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

NOTES :

A) GENERAL NOTES

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2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
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   GRADE OF CONCRETE :
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LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	SHIV OM DWIVEDI CPM/SOUTH	Shiv
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL	Reetu	MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL	P.K. Singh		

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

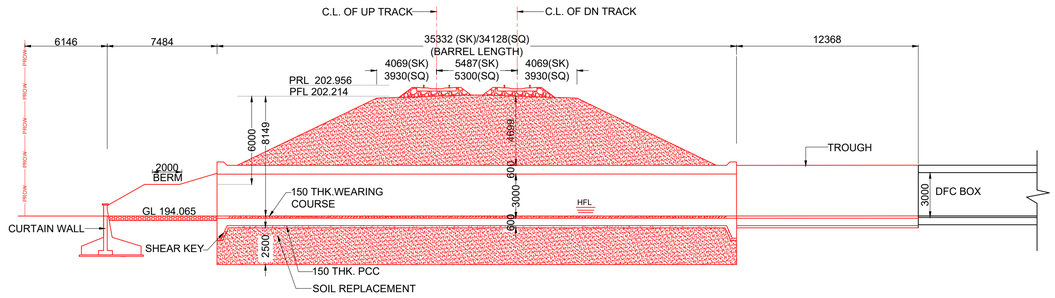
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 29 SPAN 1X2X2 RCC BOX AT CH: 8141.419

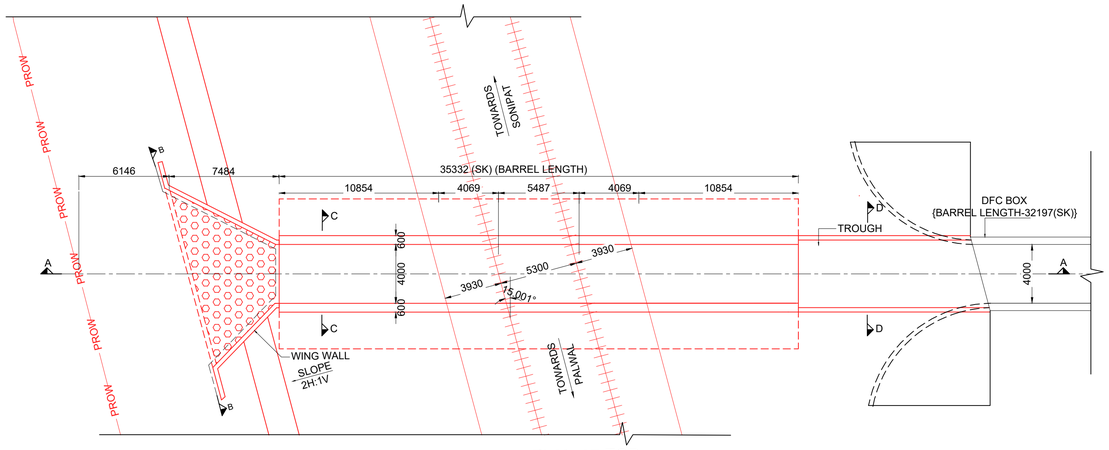
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01029_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



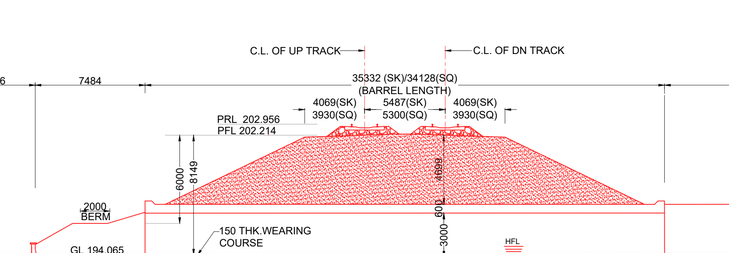
SECTIONAL ELEVATION AT A-A

SCALE 1:200



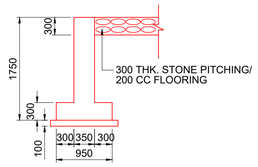
PLAN AT TOP

SCALE 1:200



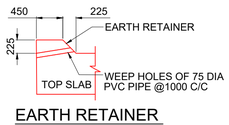
VIEW B-B

SCALE 1:100



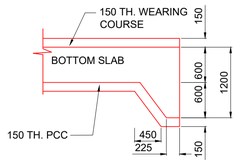
DROP / CURTAIN WALL DETAILS

SCALE 1:50



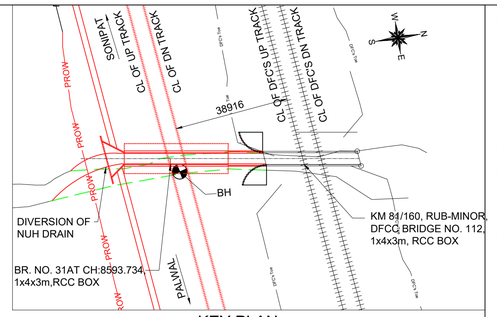
EARTH RETAINER

SCALE 1:50



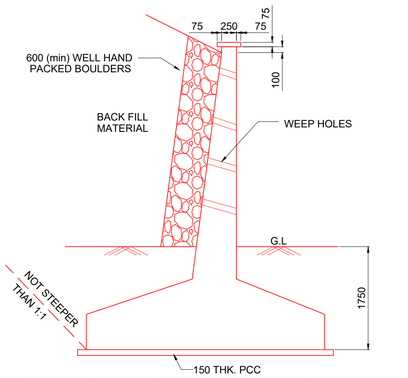
SHEAR KEY

SCALE 1:50



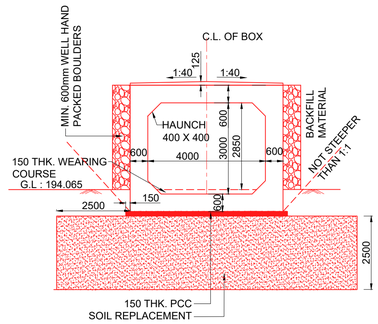
KEY PLAN

SCALE NTS



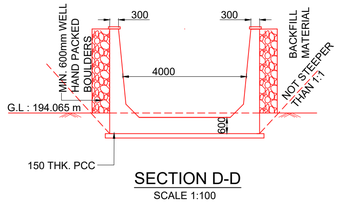
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SECTION C-C

SCALE 1:100



SECTION D-D

SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
VC	VERTICAL CLEARANCE
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

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2. WEARING COURSE PROFILE IN HORC BOX SHALL BE MAINTAINED WITH THAT OF DFC BOX. FOUNDING LEVEL OF BOX SHALL BE ADJUSTED ACCORDINGLY.
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4. CANAL IN HORC PORTION SHALL BE LINED UP TO ROW OF HORC.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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CONSULTANT:

GENERAL CONSULTANT FOR
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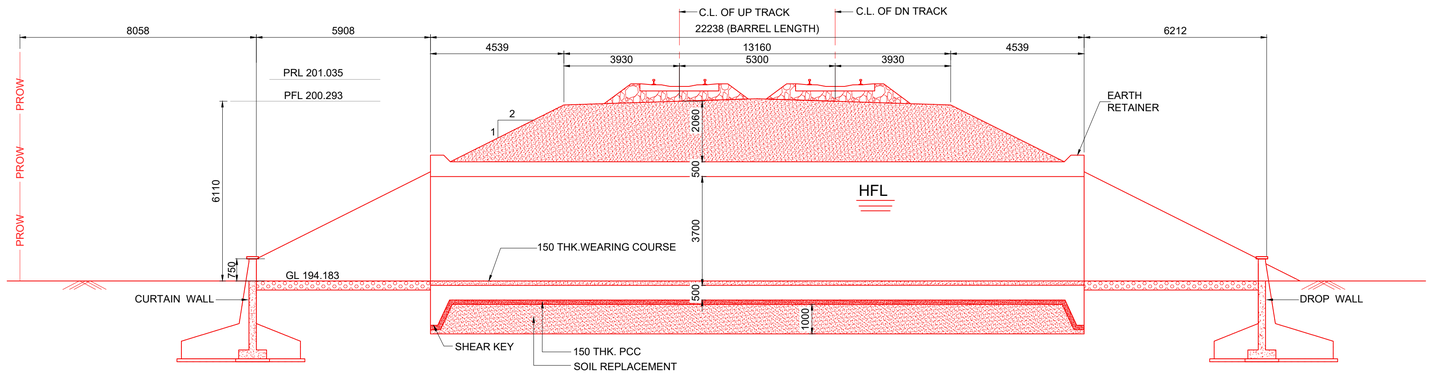
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 31
1 x 4 x 3.0m RCC BOX AT CH.8593.734m

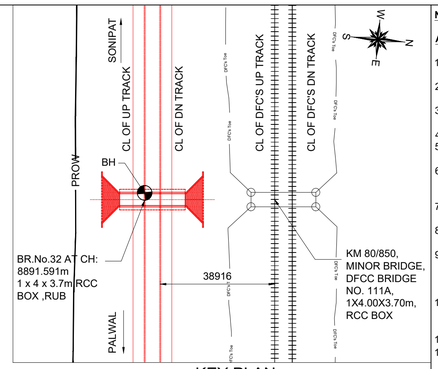
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01031_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



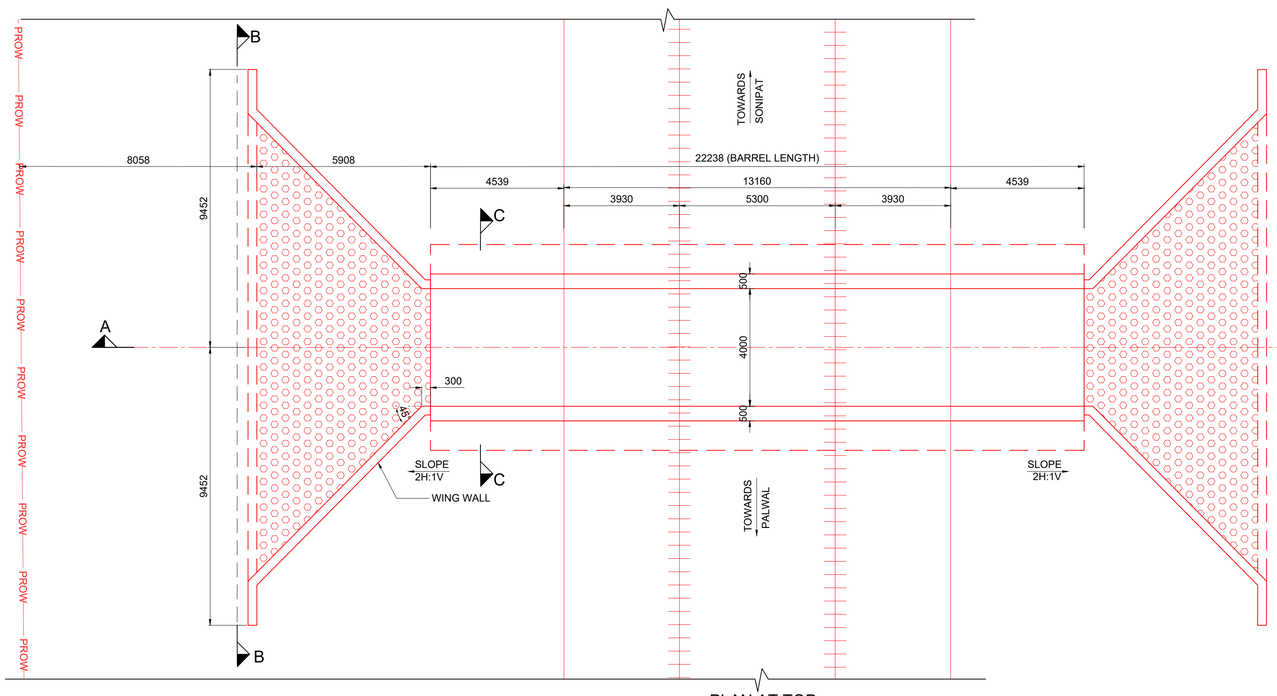
SECTIONAL ELEVATION AT A-A

SCALE 1:100



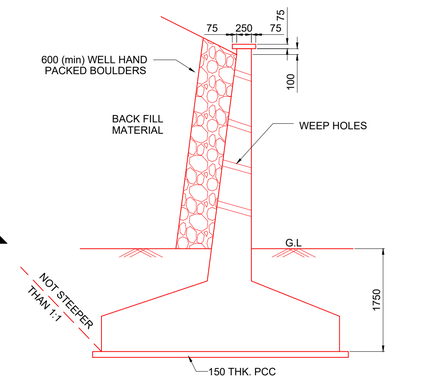
KEY PLAN

SCALE NTS



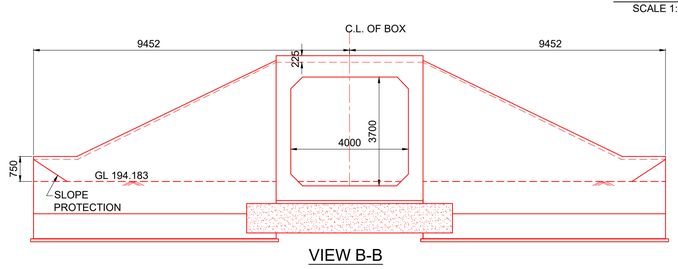
PLAN AT TOP

SCALE 1:100



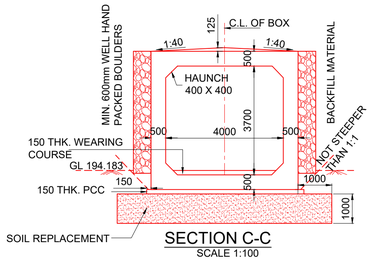
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



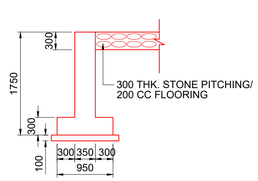
VIEW B-B

SCALE 1:100



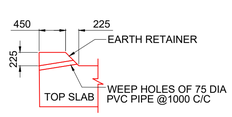
SECTION C-C

SCALE 1:100



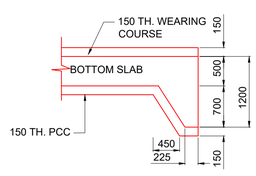
DROP / CURTAIN WALL DETAILS

SCALE 1:50



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

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LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

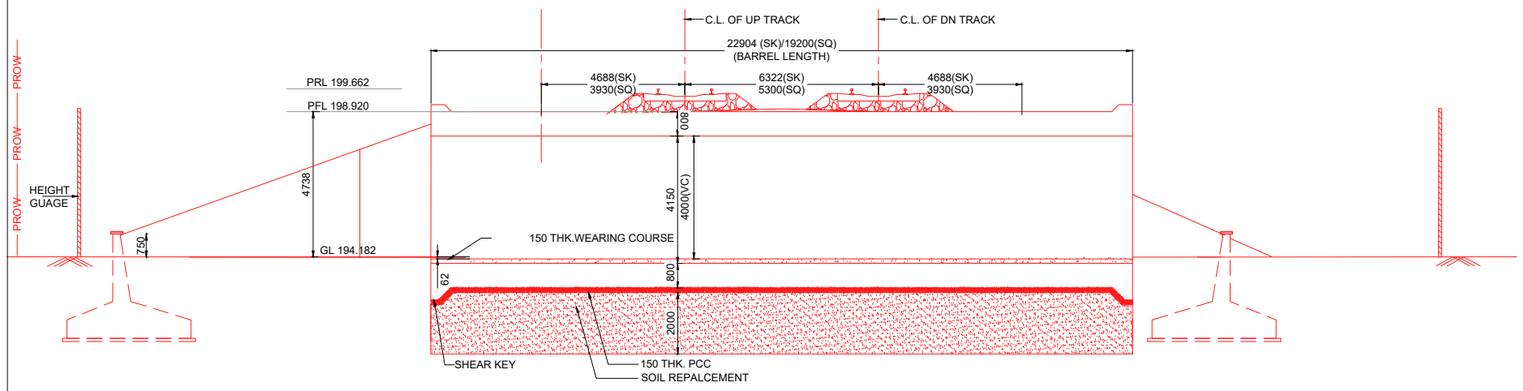
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 32 1X4.0X3.7m RCC BOX AT CH: 8891.591m

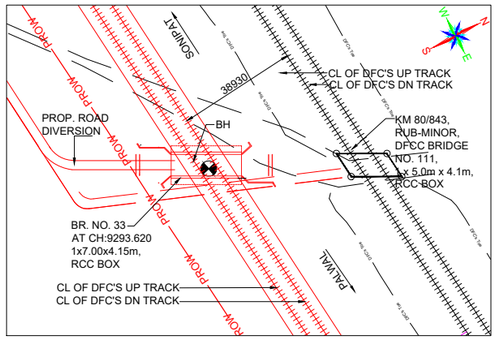
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01032_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



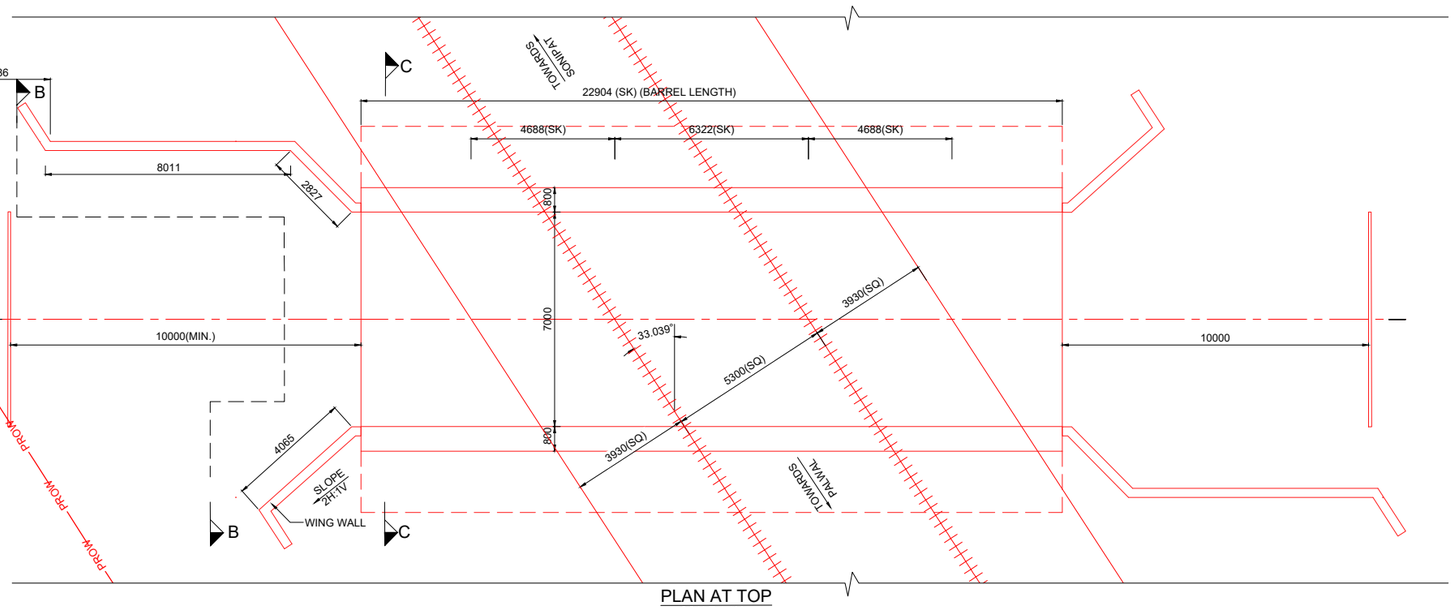
SECTIONAL ELEVATION AT A-A

SCALE 1:100



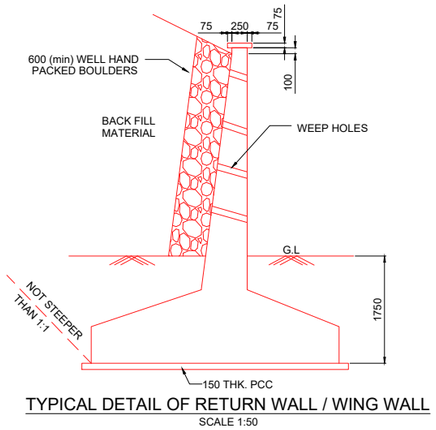
KEY PLAN

SCALE : NTS



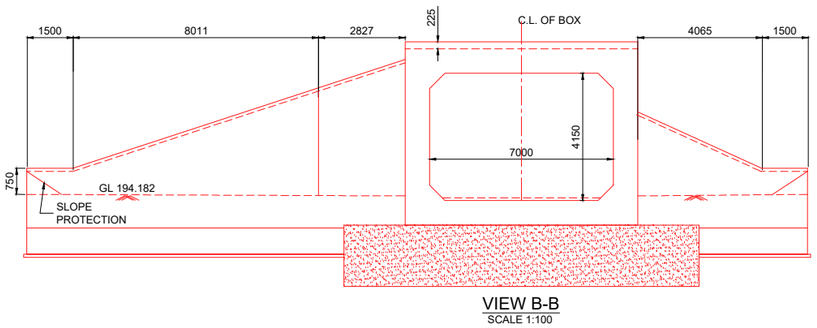
PLAN AT TOP

SCALE 1:100



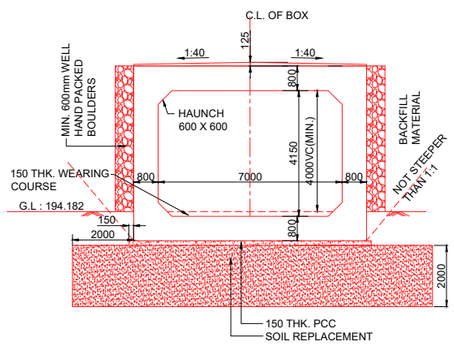
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



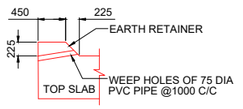
VIEW B-B

SCALE 1:100



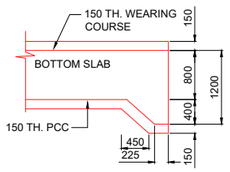
SECTION C-C

SCALE 1:100



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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

PROPOSED	
EXISTING	
DISMANTLE	

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
VC	VERTICAL CLEARANCE
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

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RITES Limited in consortium with SMEC International Pty. Ltd.

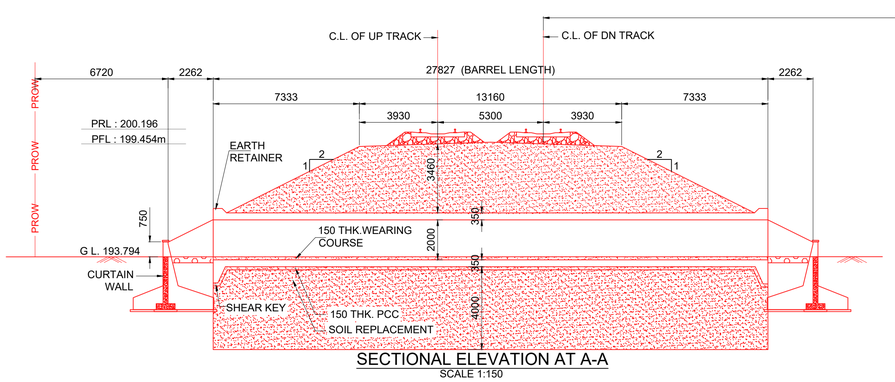
RITES THE INFRASTRUCTURE PEOPLE

SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 33 1 x 7.00 x 4.15m RCC BOX AT CH.9293.620m

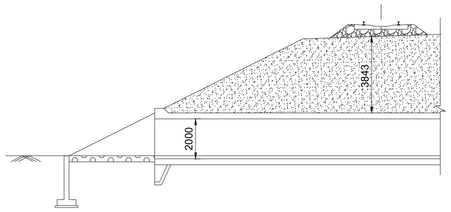
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01033_A0	1 OF 1

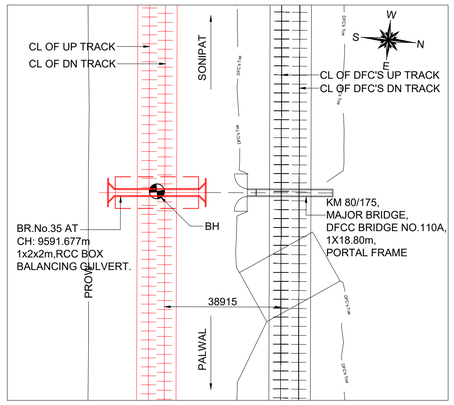
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



SECTIONAL ELEVATION AT A-A

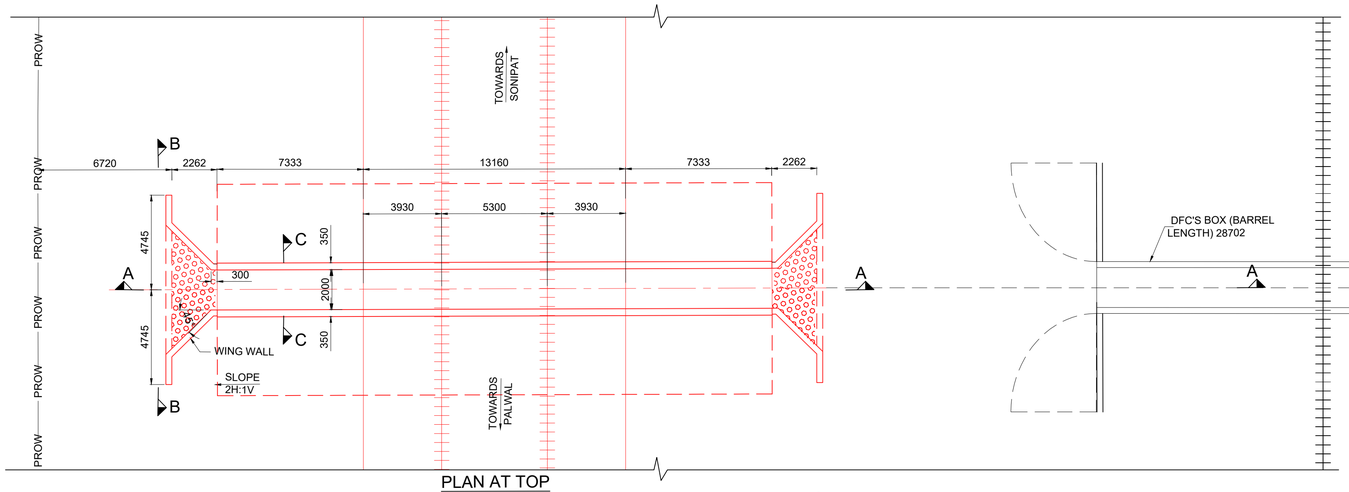
SCALE 1:150





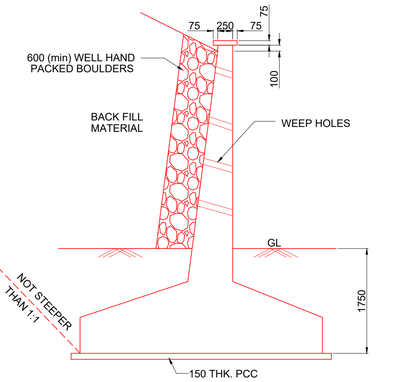
KEY PLAN

SCALE NTS



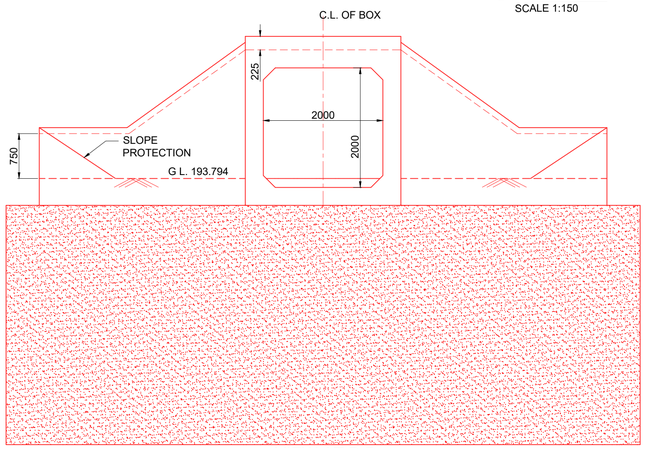
PLAN AT TOP

SCALE 1:150



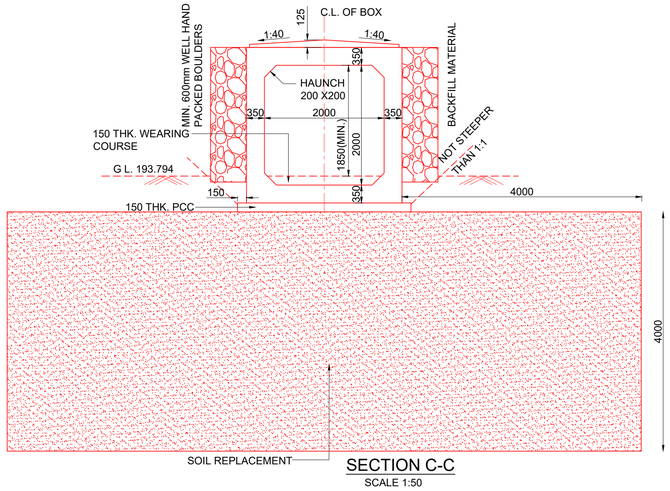
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



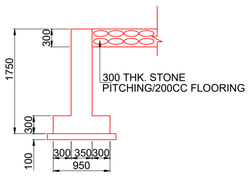
VIEW AT B-B

SCALE 1:50



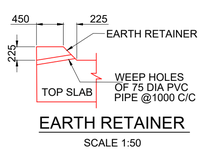
SECTION C-C

SCALE 1:50



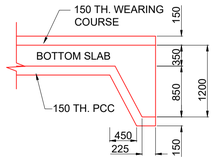
DROP / CURTAIN WALL DETAILS

SCALE 1:50



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

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B) TECHNICAL NOTES :

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   (ii) IRS CONCRETE BRIDGE CODE
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4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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7. 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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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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

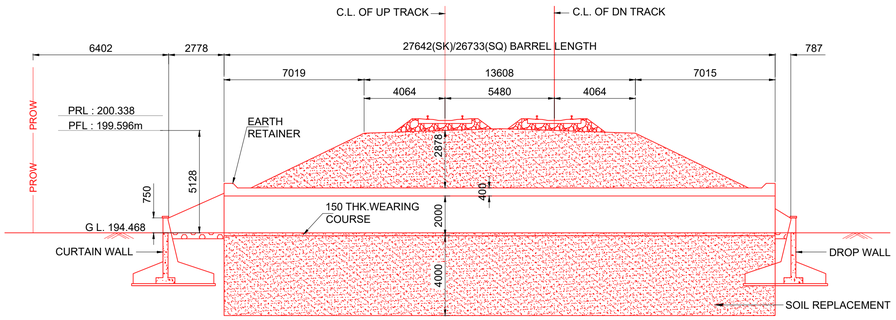
RITES Limited in consortium with SMEC International Pty. Ltd.

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

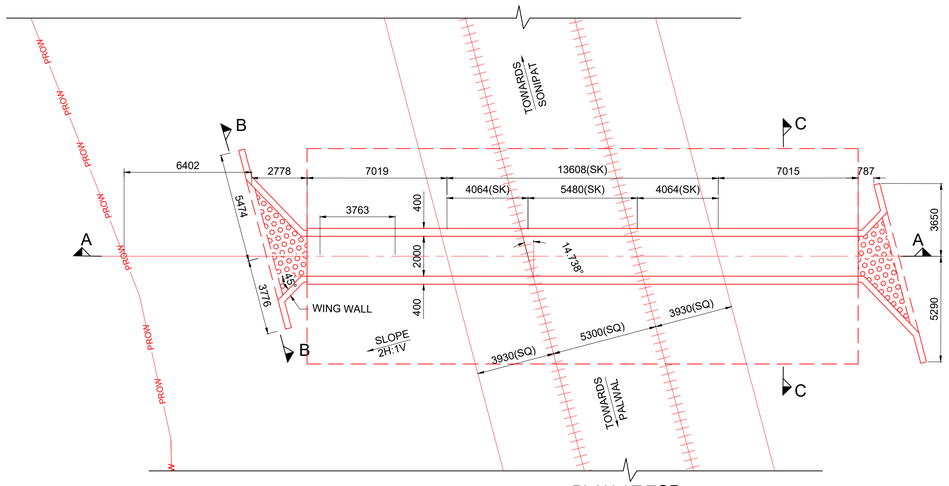
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 35 SPAN 1X2X2 RCC BOX AT CH: 9591.677

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01035_A0	1 OF 1

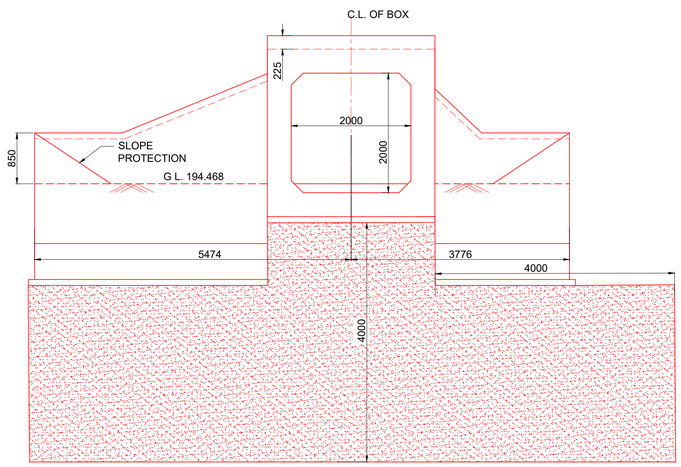
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



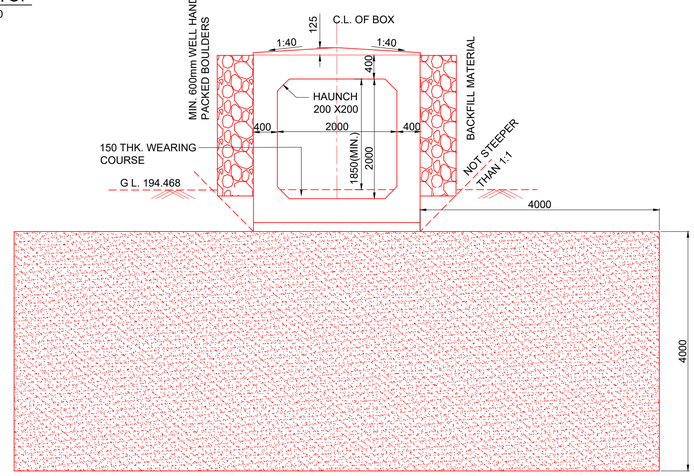
SECTIONAL ELEVATION AT A-A
SCALE 1:150



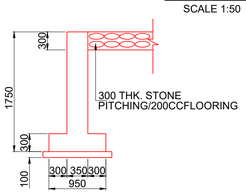
PLAN AT TOP
SCALE 1:150



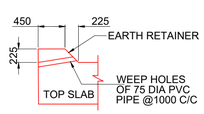
VIEW AT B-B
SCALE 1:50



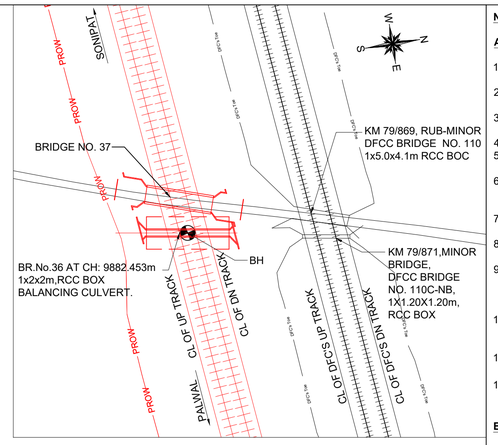
SECTION C-C
SCALE 1:50



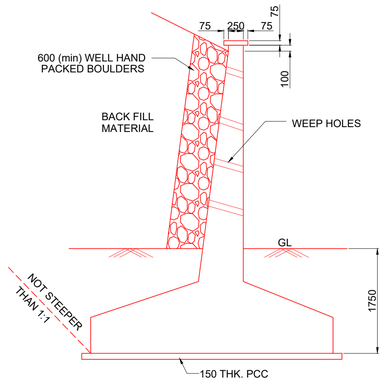
DROP / CURTAIN WALL DETAILS
SCALE 1:50



EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE NTS



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

LEGEND

PROPOSED	
EXISTING	
DISMANTLE	

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL..
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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C) OTHER NOTES :

1. 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/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

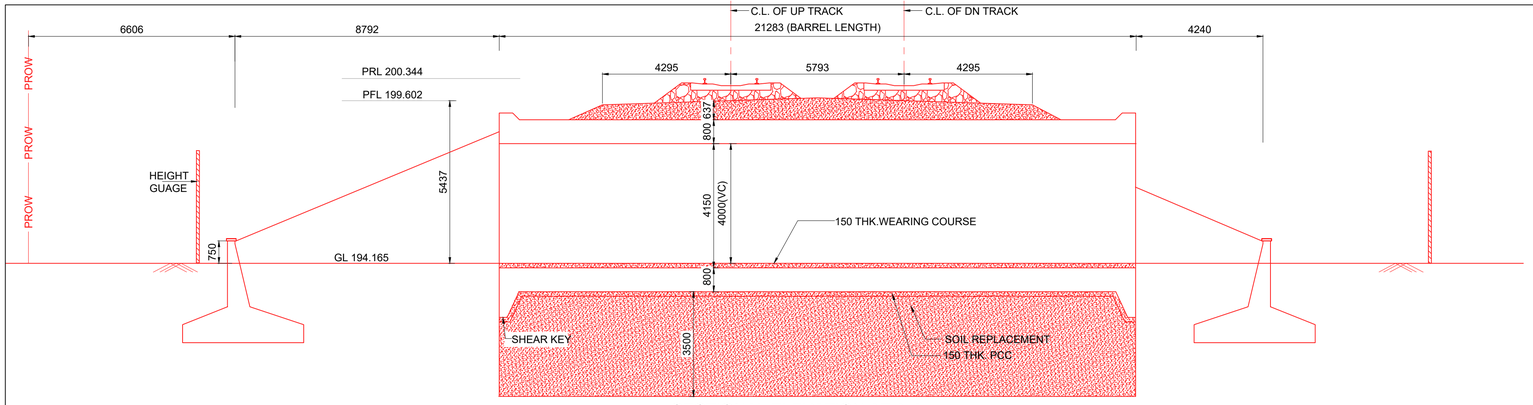
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

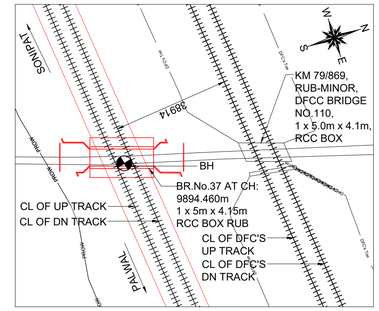
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 36
SPAN 1X2X2 RCC BOX AT CH: 9882.453

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01036_A0	1 OF 1

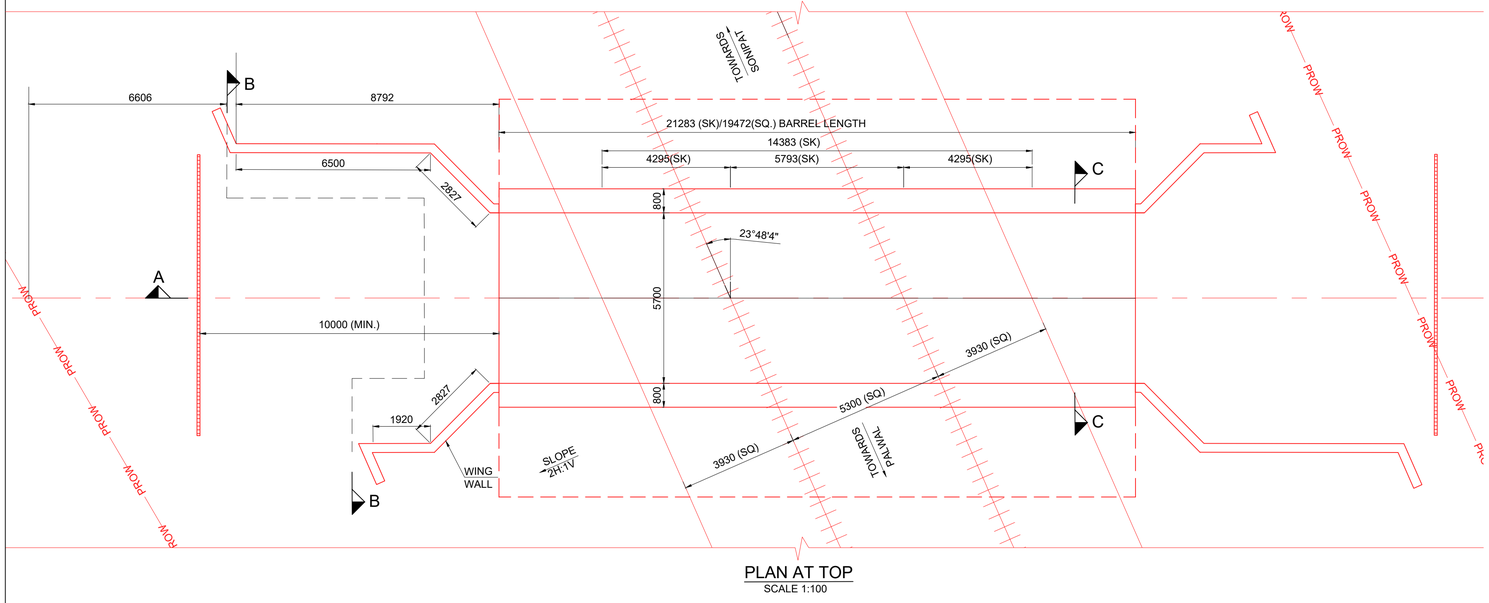
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



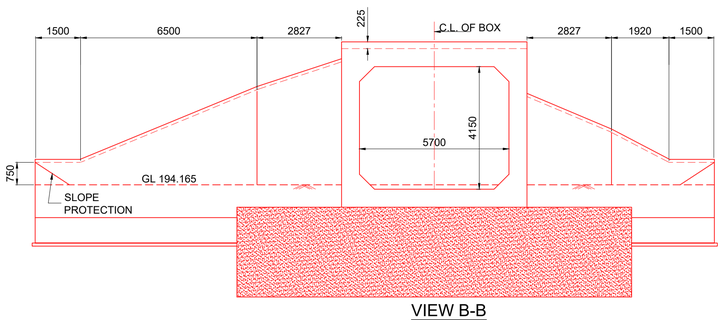
SECTIONAL ELEVATION AT A-A
SCALE 1:100



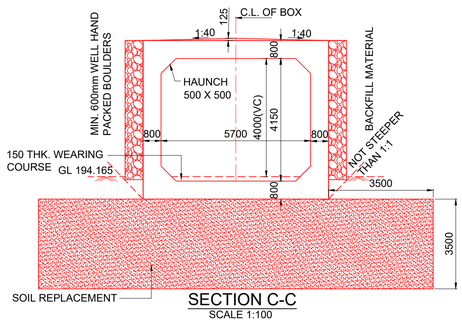
KEY PLAN
SCALE NTS



PLAN AT TOP
SCALE 1:100

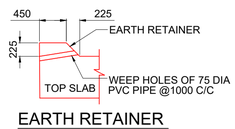


VIEW B-B
SCALE 1:100

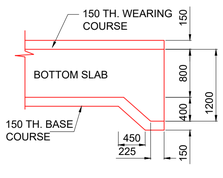


SECTION C-C
SCALE 1:100

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



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

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C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

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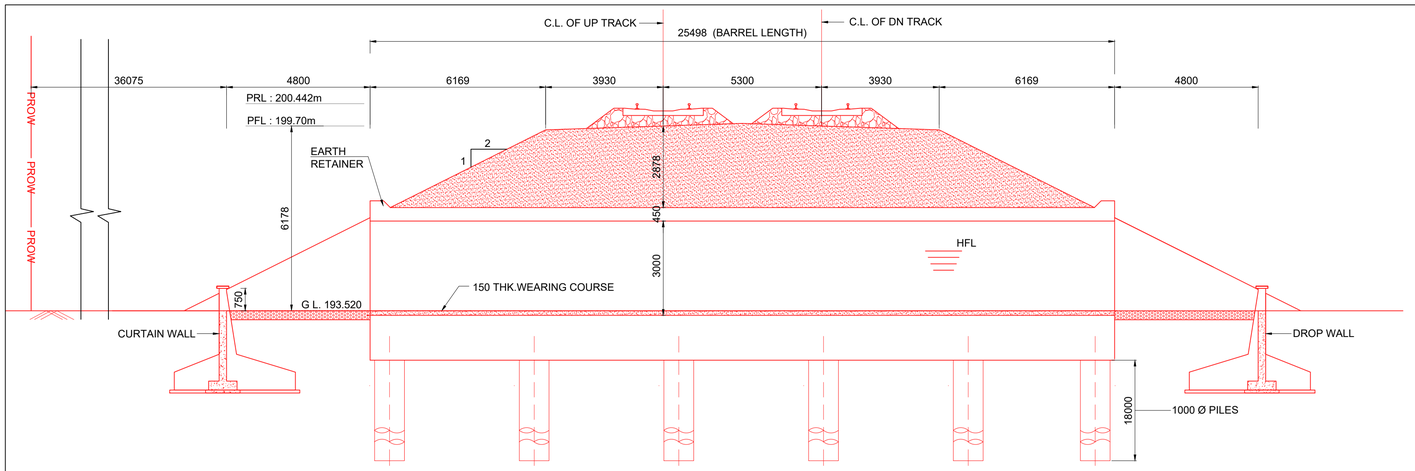
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

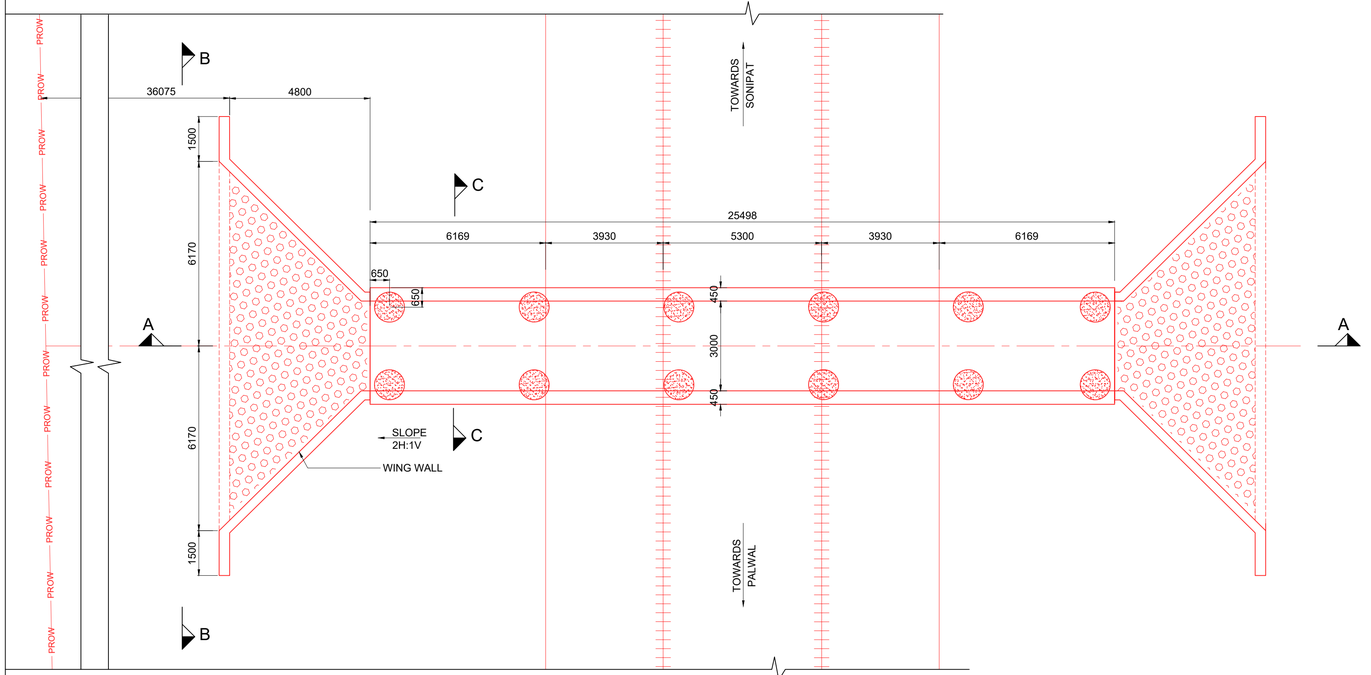
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 37 1 x 5.70 x 4.15m RCC BOX AT CH.9894.460m

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01037_A0	1 OF 1

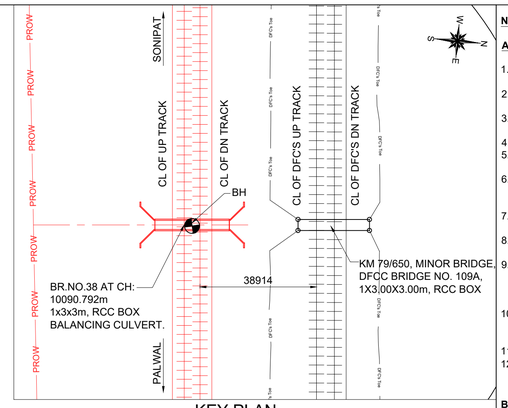
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



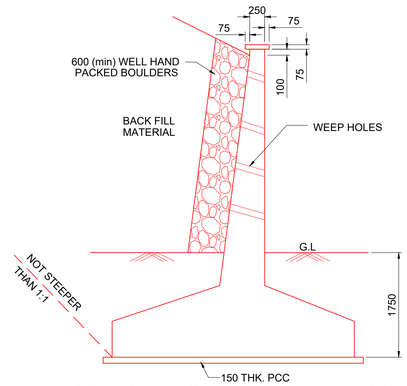
SECTIONAL ELEVATION AT A-A
SCALE 1:100



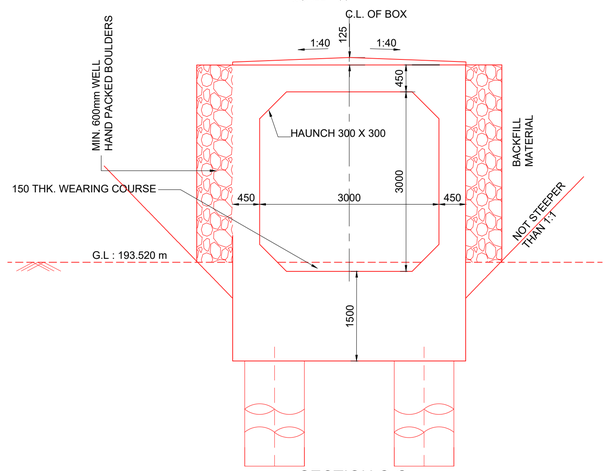
PLAN AT TOP
SCALE 1:100



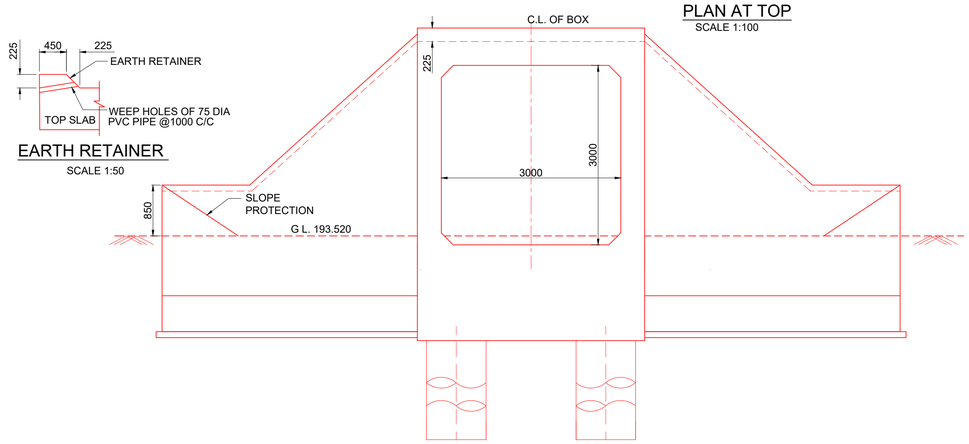
KEY PLAN
SCALE : NTS



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

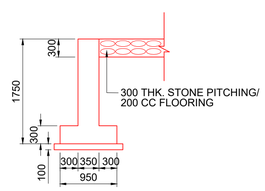


SECTION C-C
SCALE 1:100



EARTH RETAINER
SCALE 1:50

VIEW AT B-B
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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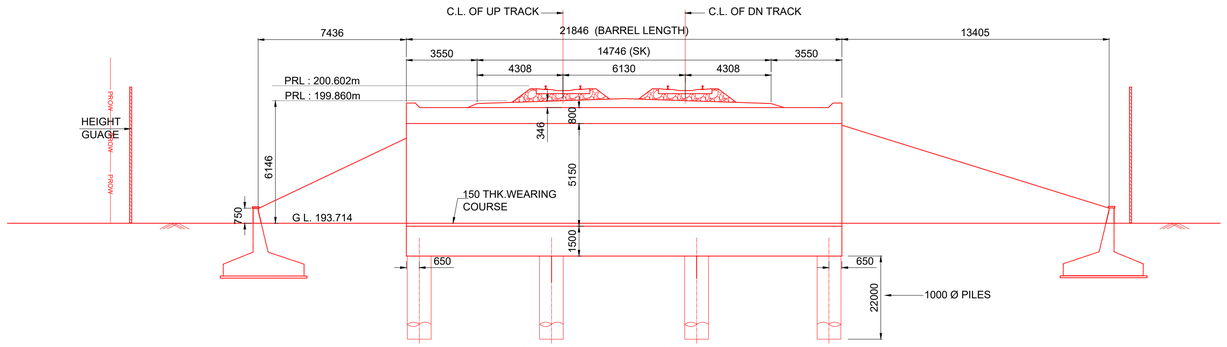
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 38 SPAN 1X3X3 RCC BOX AT CH: 10090.792

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

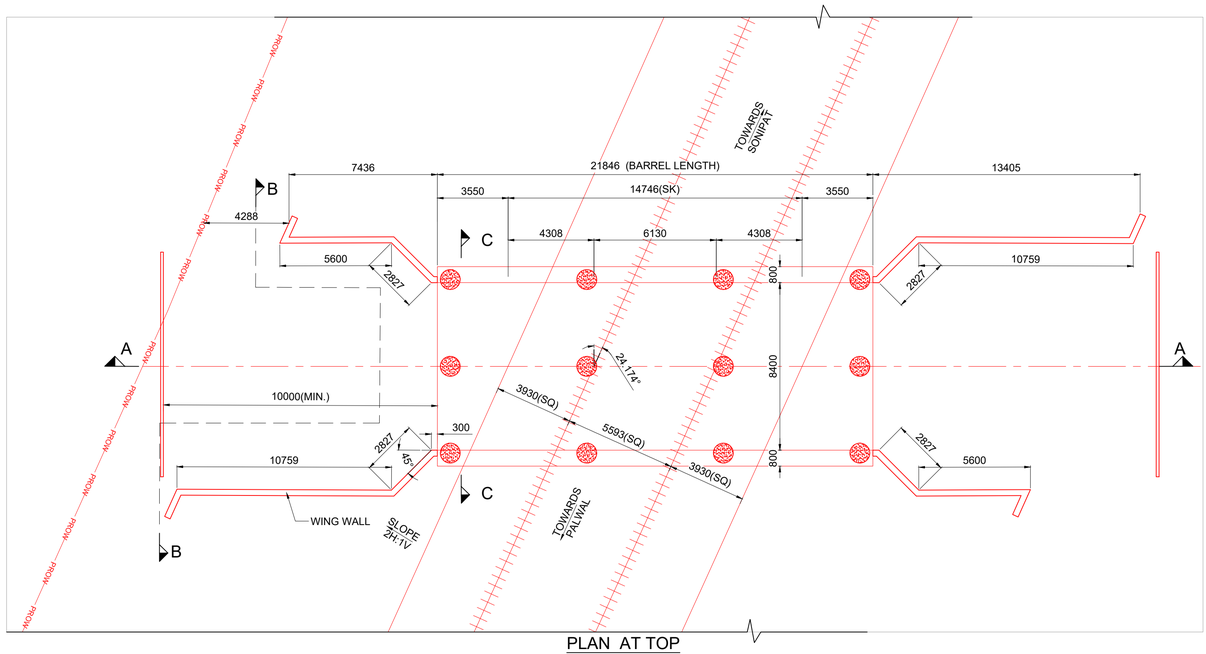
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01038_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



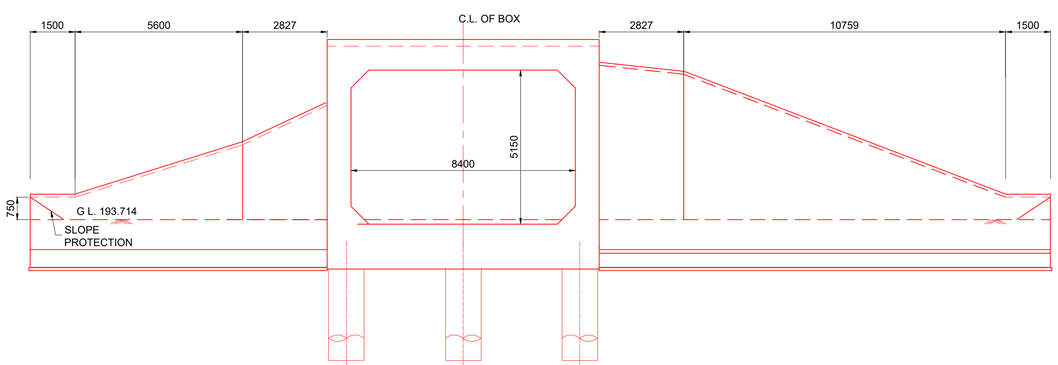
SECTIONAL ELEVATION AT A-A

SCALE 1:150



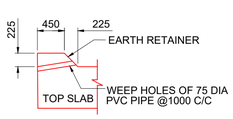
PLAN AT TOP

SCALE 1:150



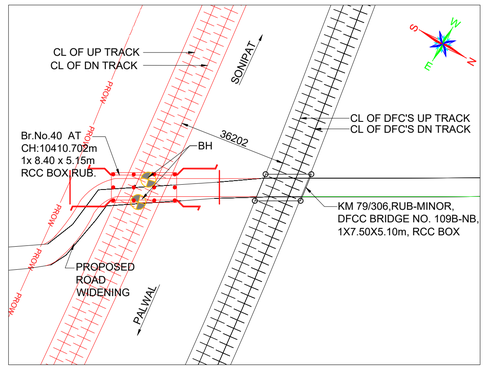
VIEW AT B-B

SCALE 1:100



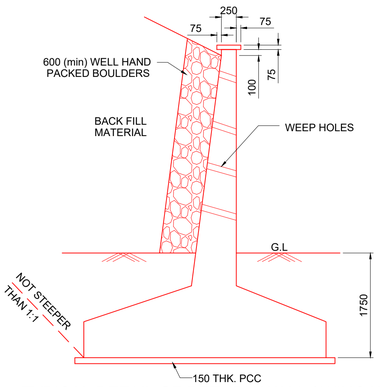
EARTH RETAINER

SCALE 1:50



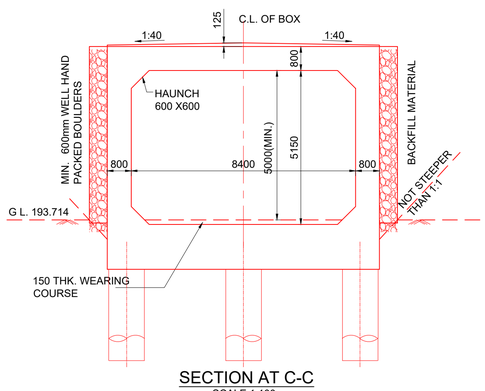
KEY PLAN

SCALE NTS



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SECTION AT C-C

SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
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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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
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13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

PROJECT:

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HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

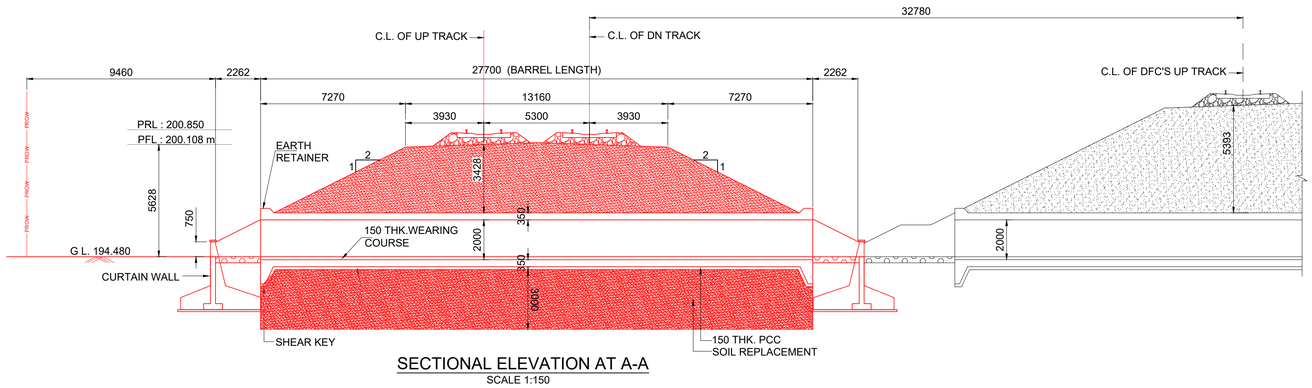
RITES Limited in consortium with SMEC International Pty. Ltd.

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

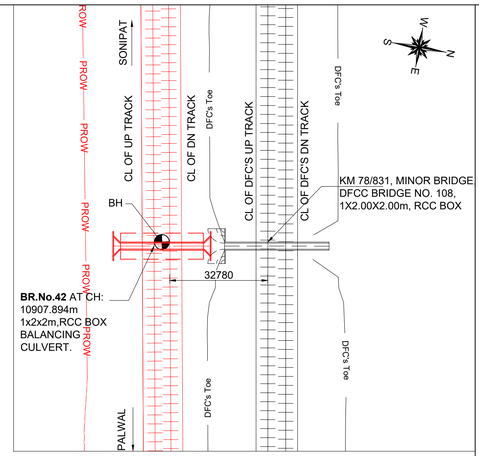
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 40 SPAN 1X8.40X5.15 RCC BOX AT CH: 10410.702

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01040_A0	1 OF 1

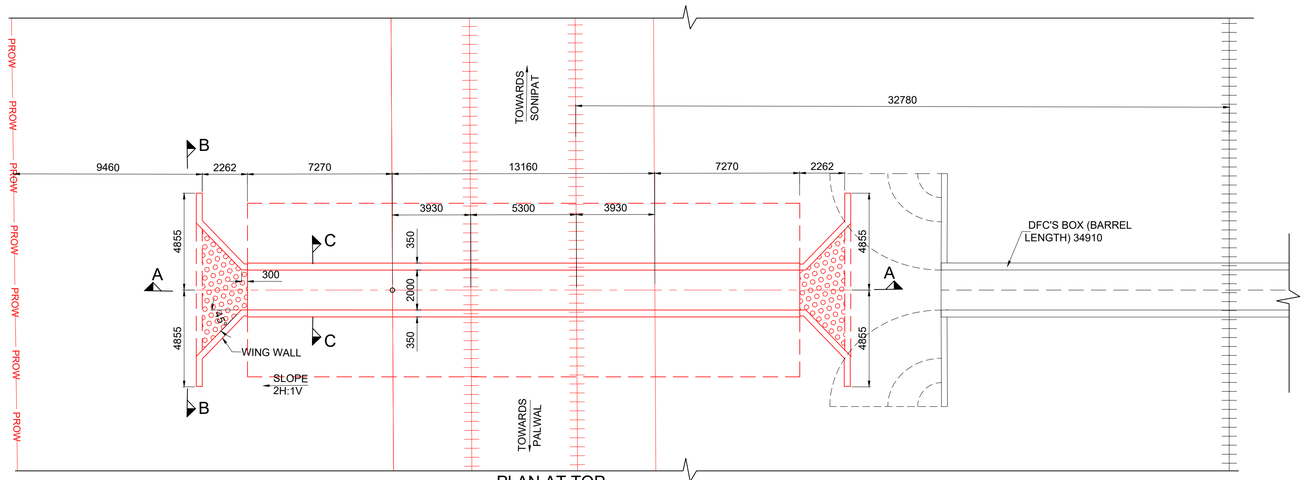
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



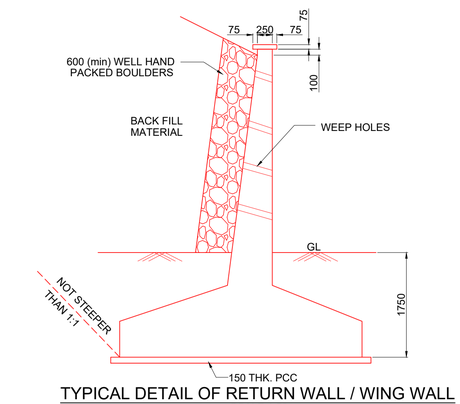
SECTIONAL ELEVATION AT A-A
SCALE 1:150



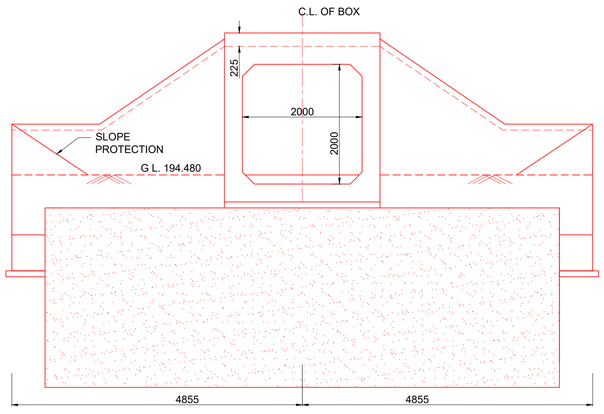
KEY PLAN
SCALE NTS



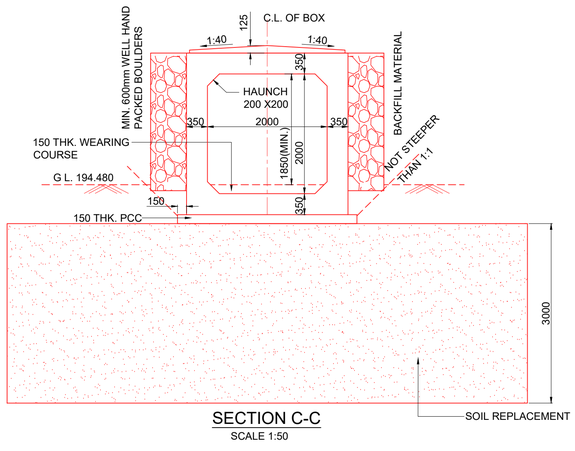
PLAN AT TOP
SCALE 1:150



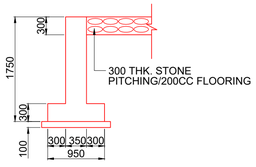
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



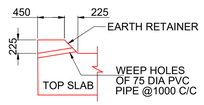
VIEW AT B-B
SCALE 1:50



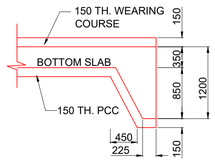
SECTION C-C
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



EARTH RETAINER
SCALE 1:50



SHEAR KEY
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
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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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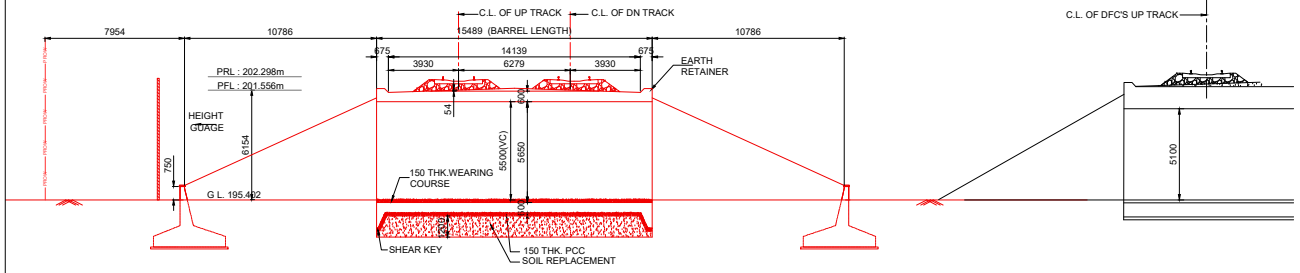
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 42 SPAN 1X2X2 RCC BOX AT CH: 10907.894

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01042_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



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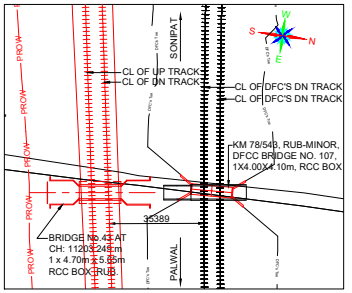
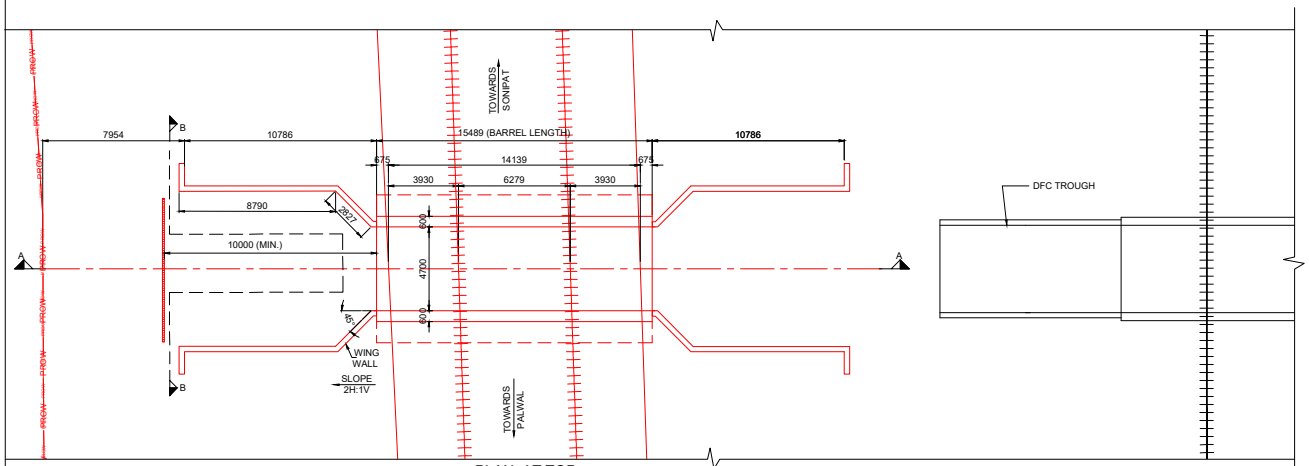
SCALE 1:150



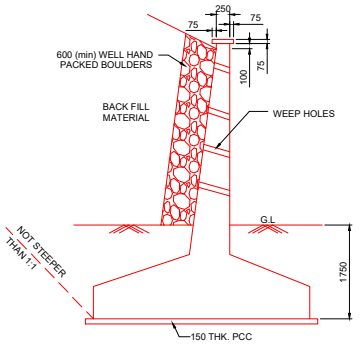
KEY PLAN

SCALE NTS



PLAN AT TOP

SCALE 1:150



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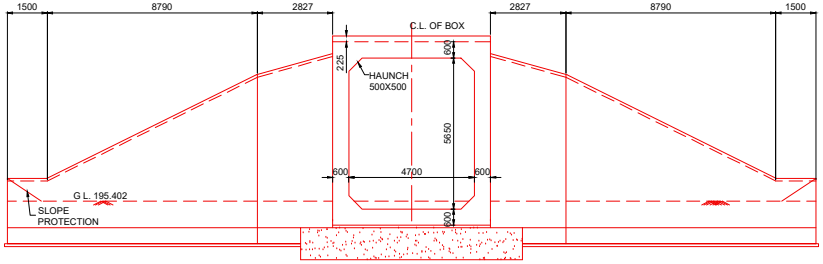
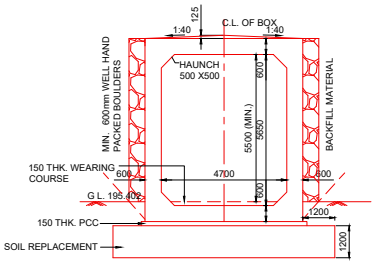


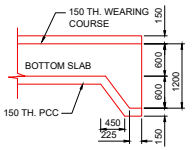
VIEW AT B-B

SCALE 1:100



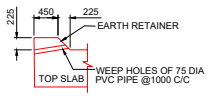
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



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	EXISTING
	DISMANTLE

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   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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.
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75MM DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M/0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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.

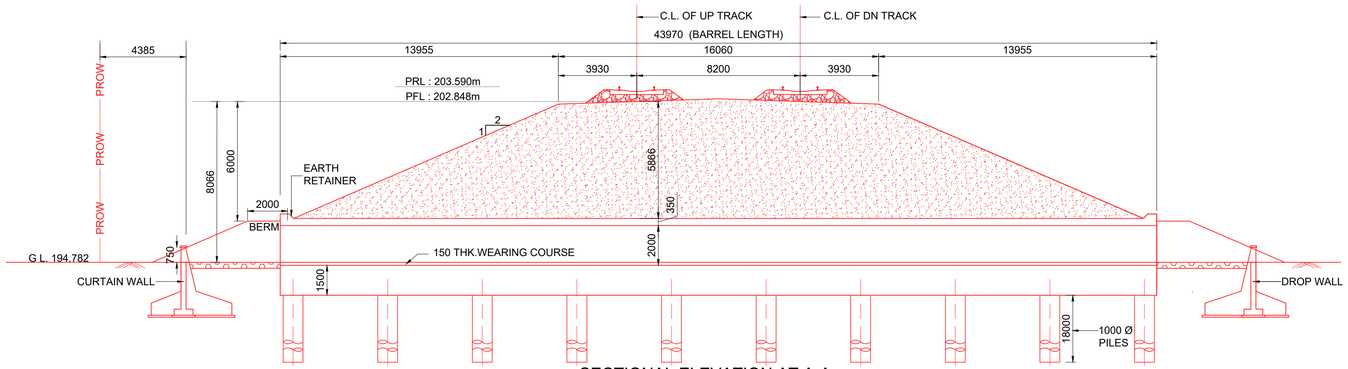
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 43 SPAN 1X4.70X5.65 RCC BOX AT CH: 11203.249

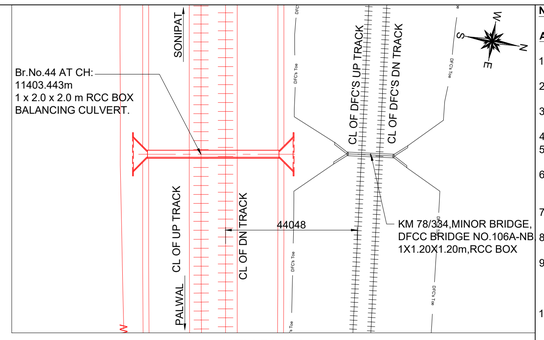
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01043_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



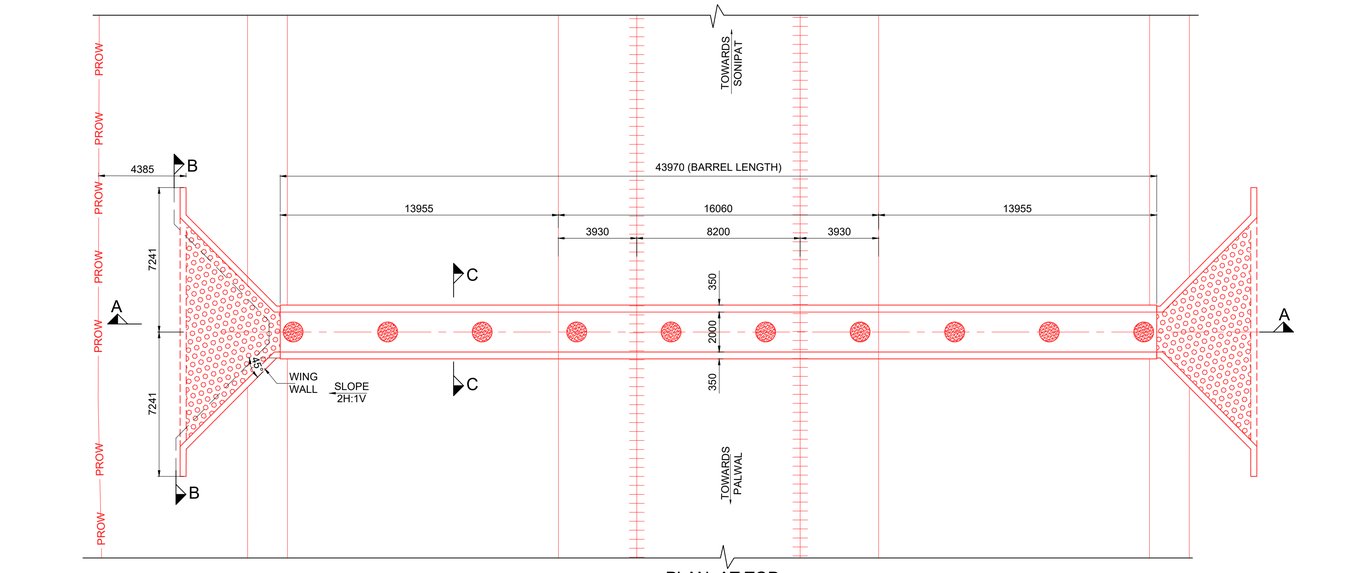
SECTIONAL ELEVATION AT A-A

SCALE 1:150



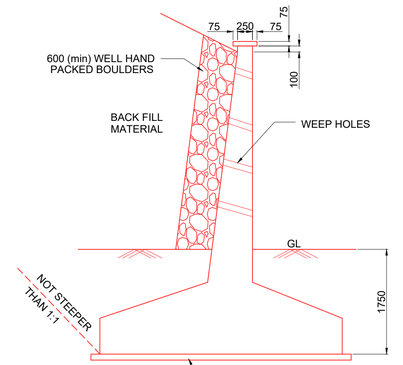
KEY PLAN

SCALE NTS



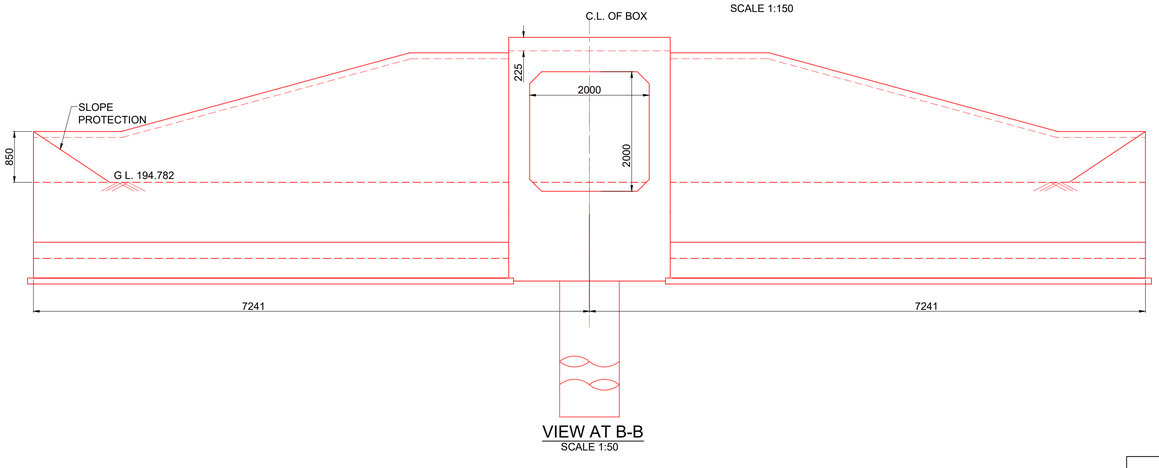
PLAN AT TOP

SCALE 1:150



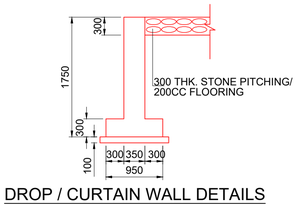
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



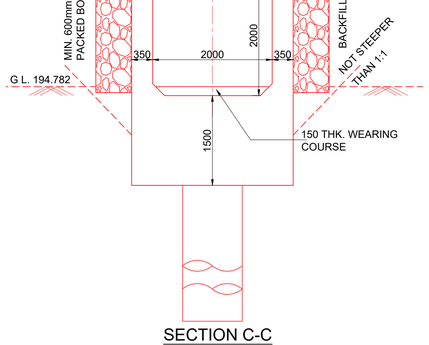
VIEW AT B-B

SCALE 1:50



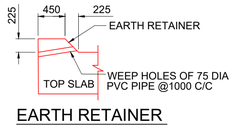
DROP / CURTAIN WALL DETAILS

SCALE 1:50



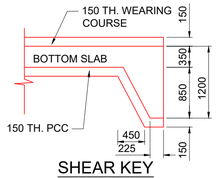
SECTION C-C

SCALE 1:50



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. 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.

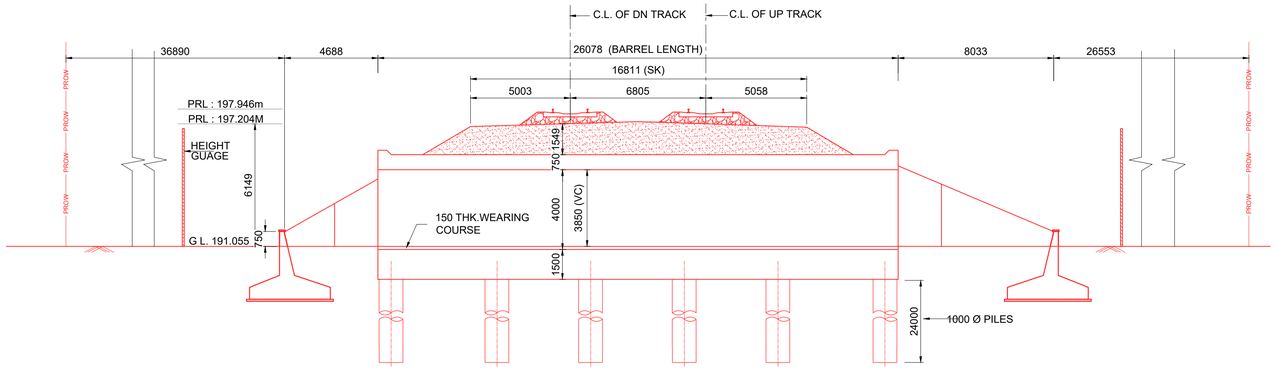
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 44 SPAN 1X2.0X2.0 RCC BOX AT CH: 11403.443

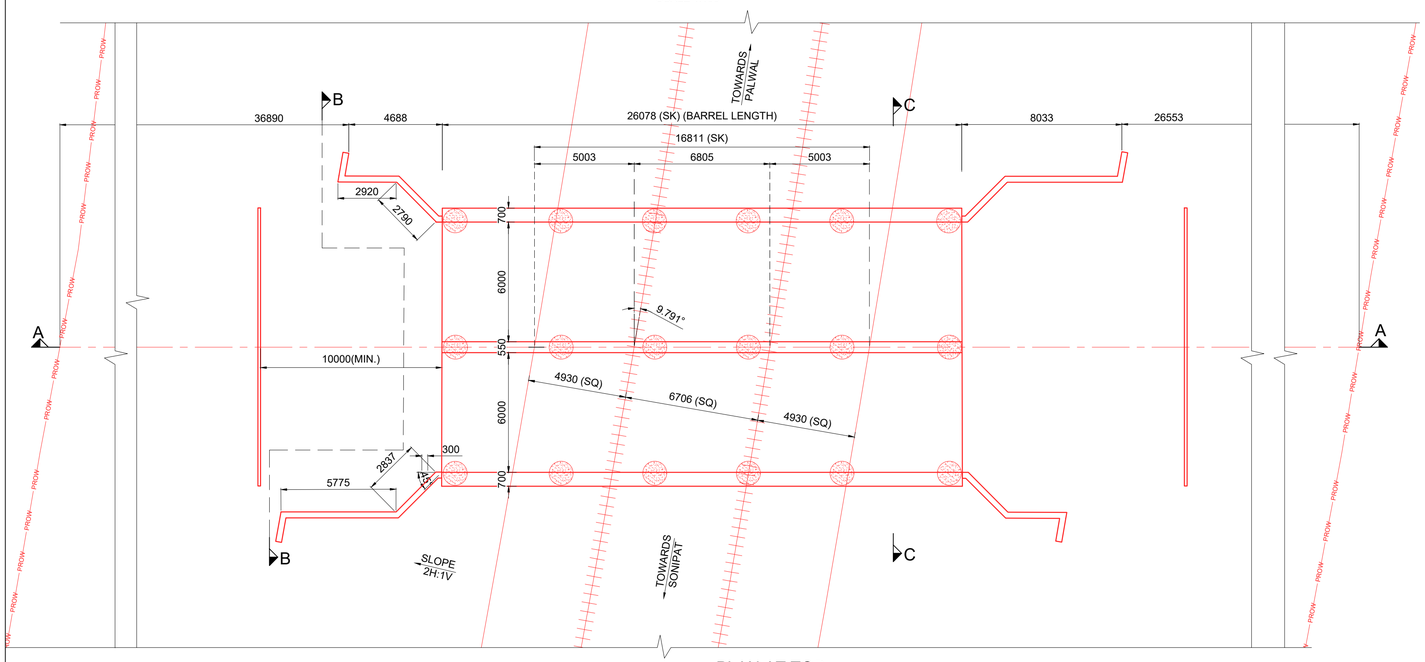
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01044_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



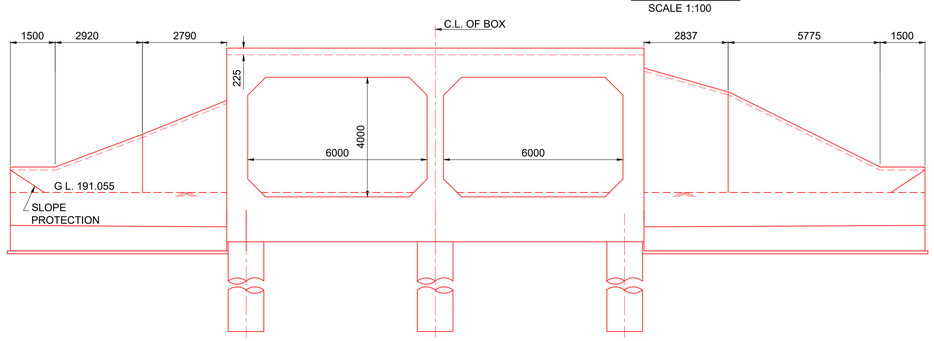
SECTIONAL ELEVATION AT A-A

SCALE 1:150



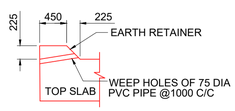
PLAN AT TOP

SCALE 1:100



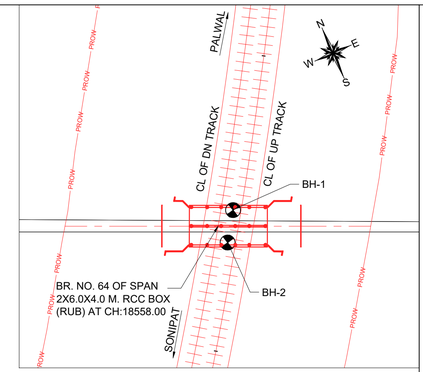
VIEW B-B

SCALE 1:100



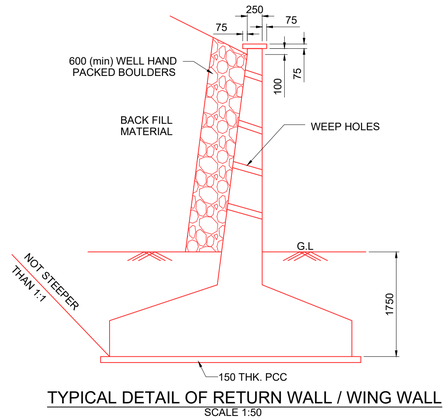
EARTH RETAINER

SCALE 1:50



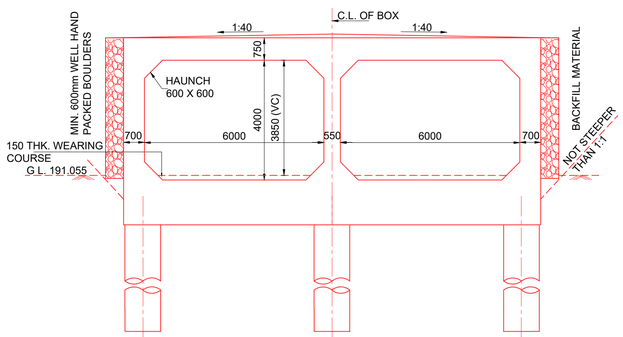
KEY PLAN

SCALE NTS



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SECTION C-C

SCALE 1:100

LEGEND

	PROPOSED
	EXISTING

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

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. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

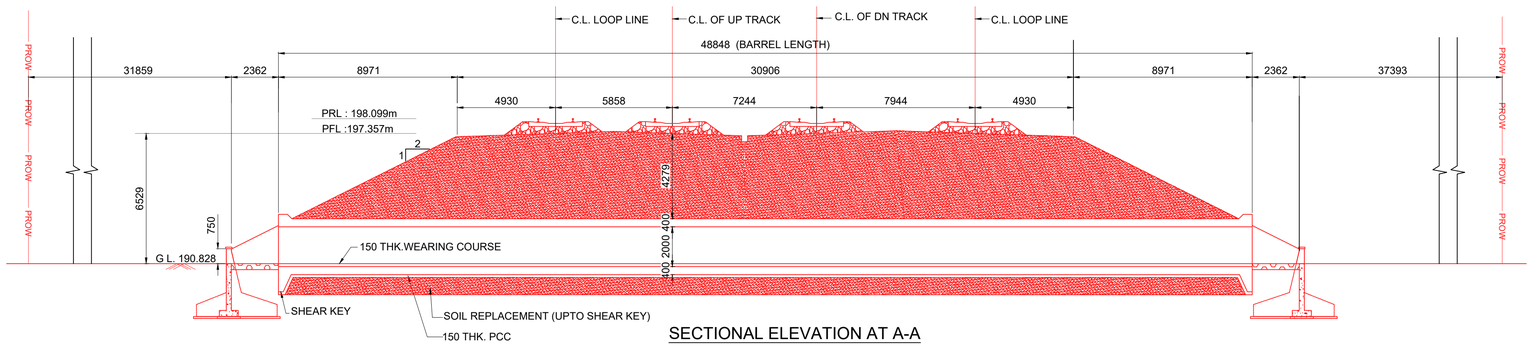
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 64 SPAN 2X6.0X4.0 RCC BOX AT CH: 18558.00

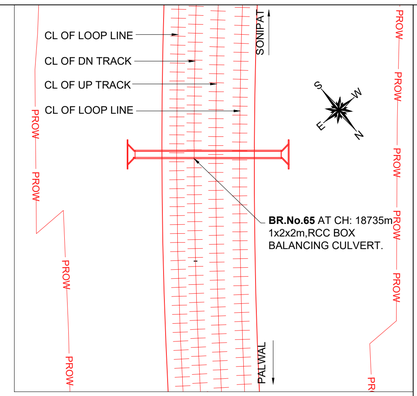
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01064_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



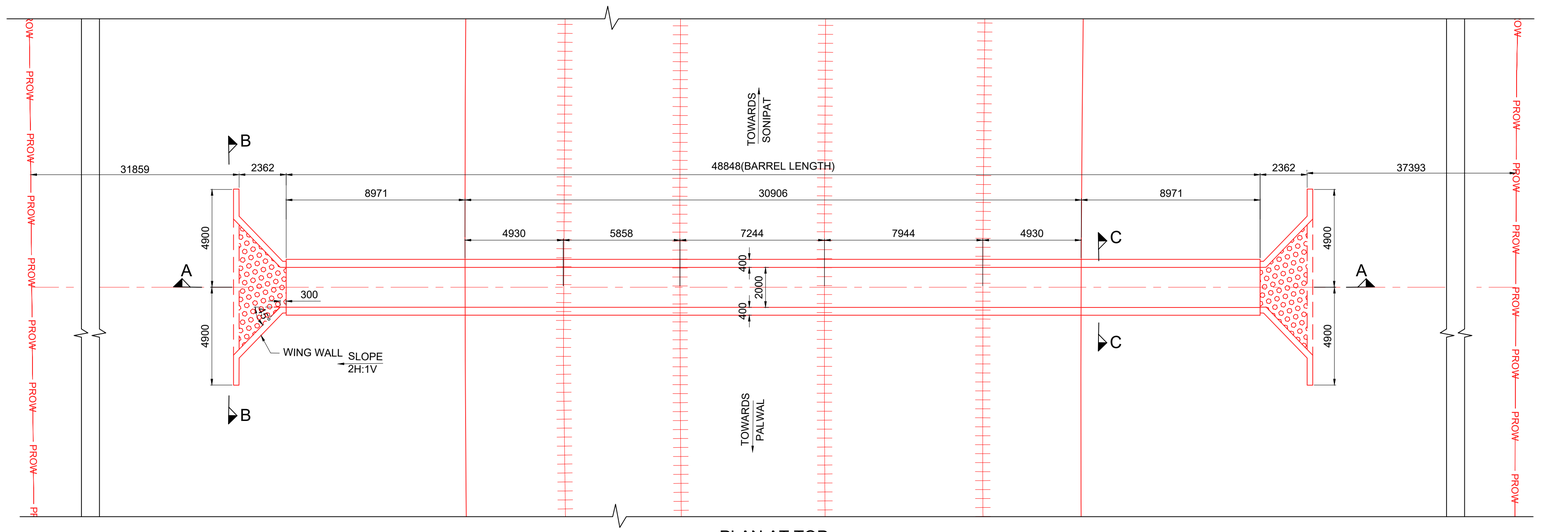
SECTIONAL ELEVATION AT A-A

SCALE 1:150



KEY PLAN

SCALE NTS

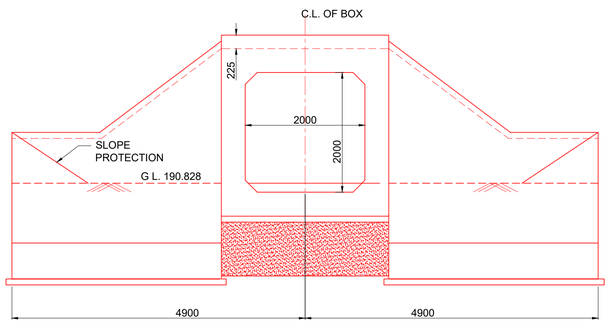


PLAN AT TOP

SCALE 1:150

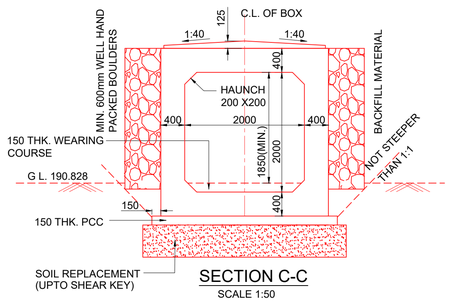
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



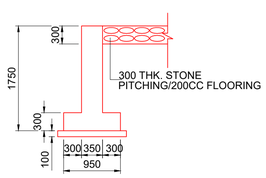
VIEW AT B-B

SCALE 1:50



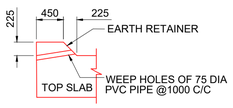
SECTION C-C

SCALE 1:50



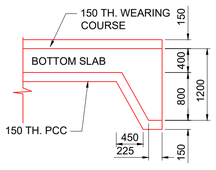
DROP / CURTAIN WALL DETAILS

SCALE 1:50



EARTH RETAINER

SCALE 1:50



SHEAR KEY

SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
VC	VERTICAL CLEARANCE
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
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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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
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   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75MM DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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.

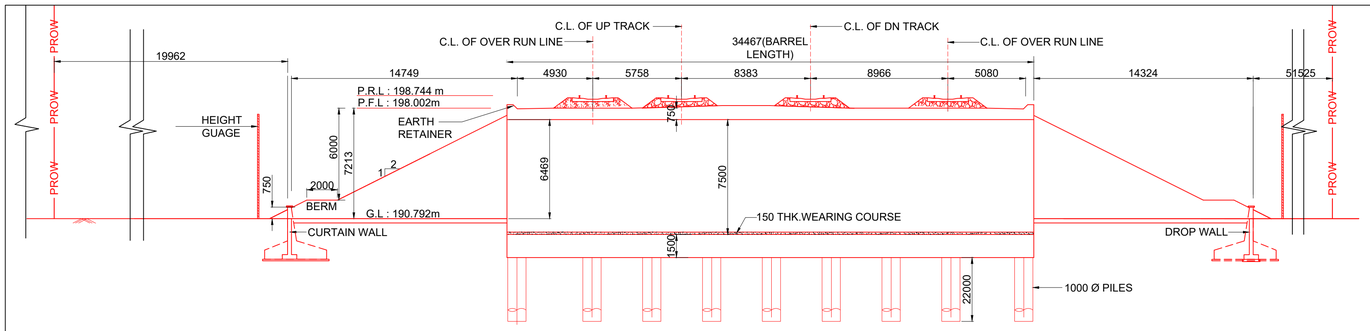
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

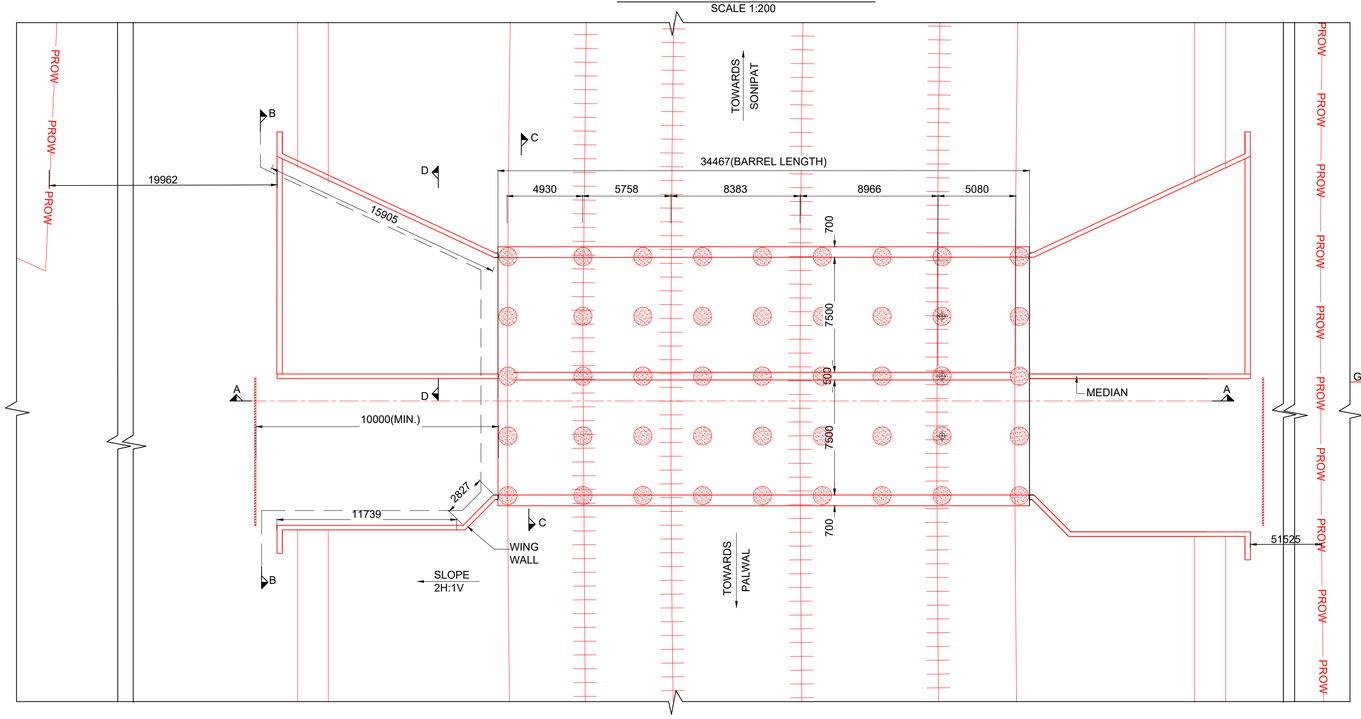
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 65 SPAN 1X2X2 RCC BOX AT CH: 18735.000

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01065_A0	1 OF 1

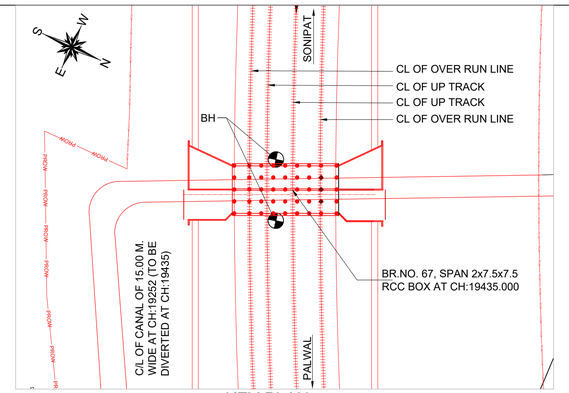
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



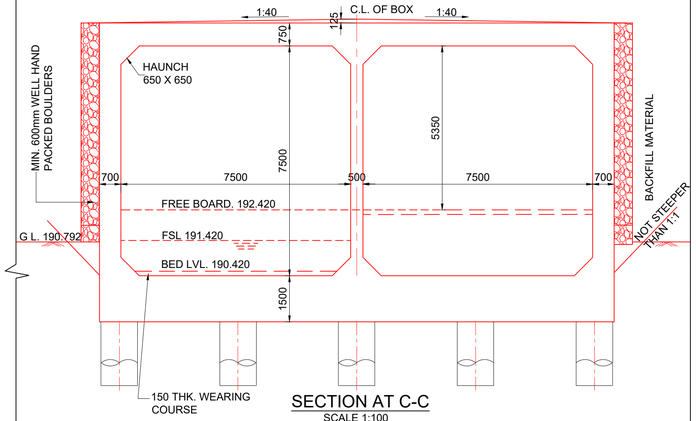
SECTIONAL ELEVATION AT A-A
SCALE 1:200



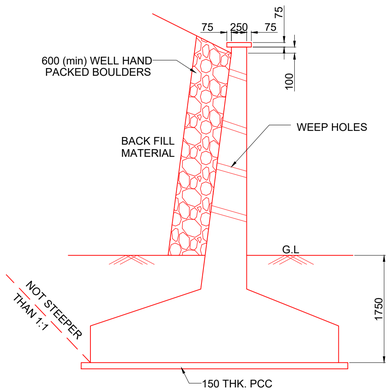
PLAN AT TOP
SCALE 1:200



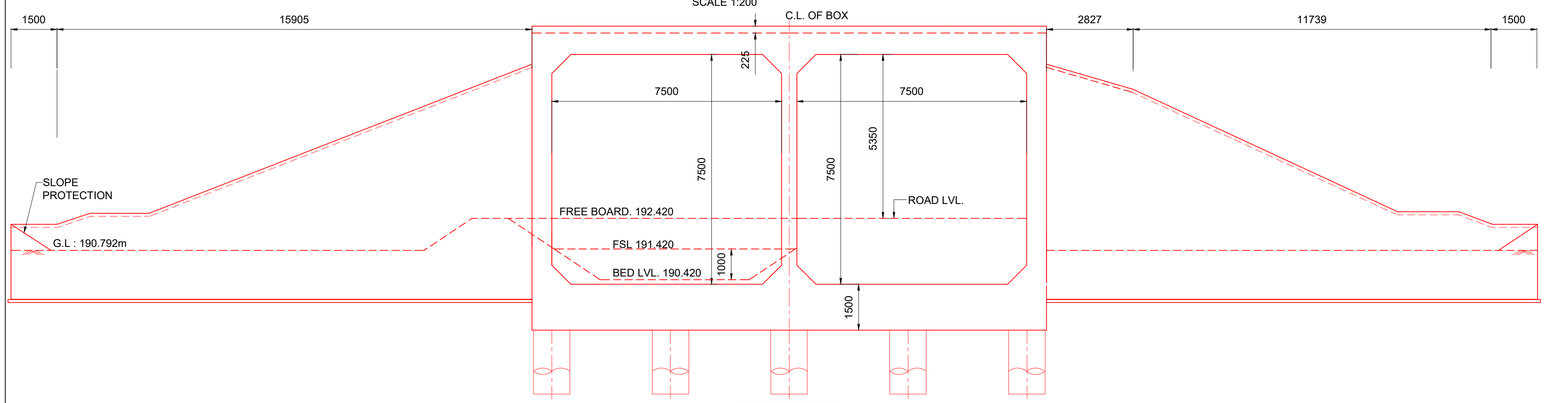
KEY PLAN
SCALE : NTS



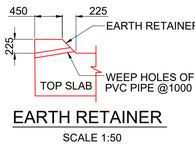
SECTION AT C-C
SCALE 1:100



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



VIEW AT B-B
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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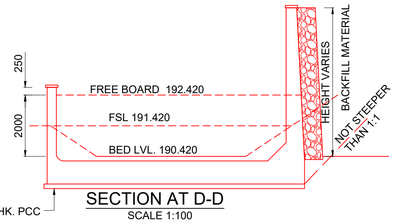
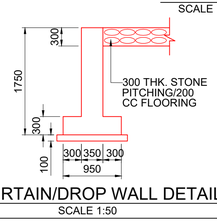


SECTION AT D-D
SCALE 1:100



CURTAIN/DROP WALL DETAILS
SCALE 1:50

HYDRAULIC DATA OF DRAIN		
1	NAME OF CANAL	REWASAN DRAIN
2	RD	19435/10350
3	BED LEVEL	190.420
4	FULL SUPPLY LEVEL	191.42
5	FREE BOARD	192.420
6	DISCHARGE	90 cusec
7	BED WIDTH	4.87
8	FSD	1.00
9	SIDE SLOPE	1.5:1
10	W S SLOPE	0.15%
11	VELOCITY	1.5ft/sec
12	ROW	49.5

NOTES :

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

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
2. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
3. 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.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

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
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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

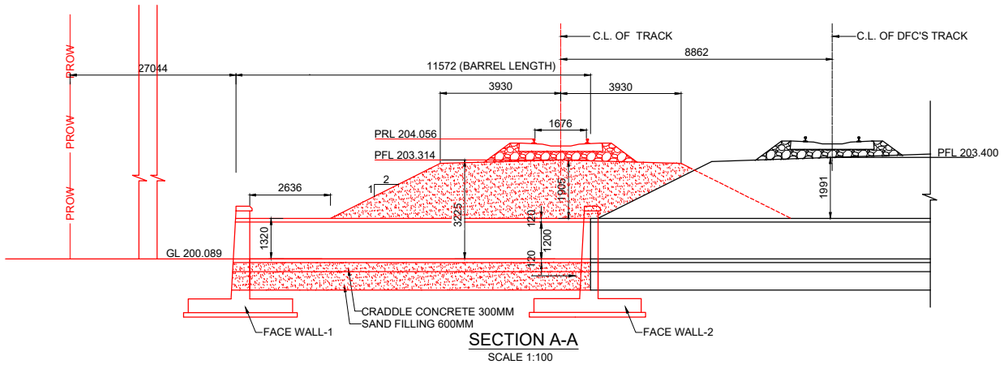
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD + BALANCING CULVERT BRIDGE NO. 67 SPAN 2.0X7.5X7.5 RCC BOX AT CH: 19435.000 (CANAL CROSSING REWASAN DRAIN RD 10350)

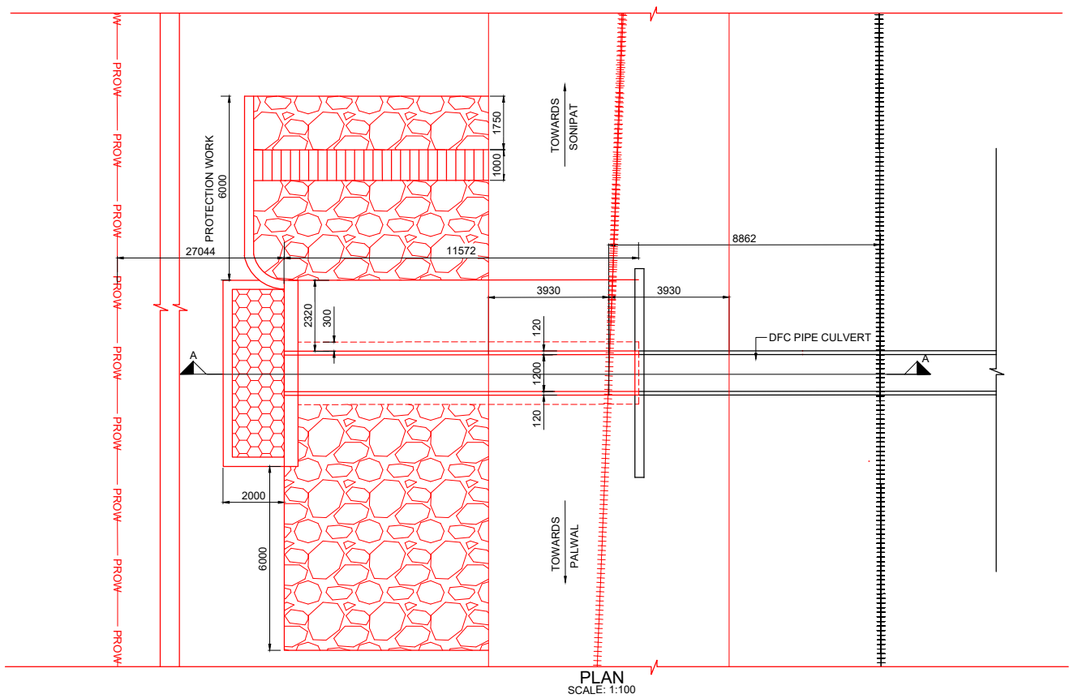
DRG. NO. GC-HRIDC-C5-DRW-BRD-GAD-01067_A1 | SHEET NO.

SCALE : AS SHOWN | ISSUE DATE 10-10-2023 | REVISED DATE

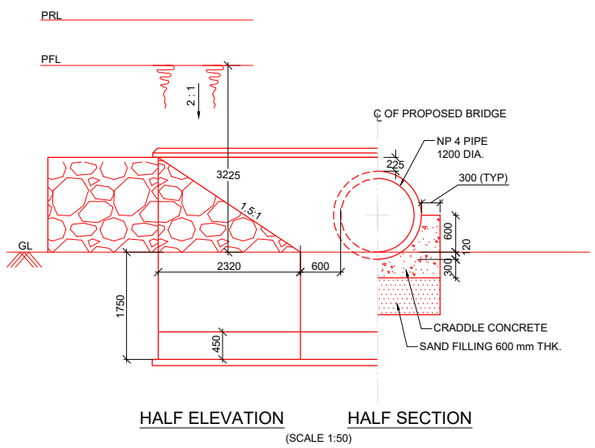
4.1.2 CONNECTING LINE



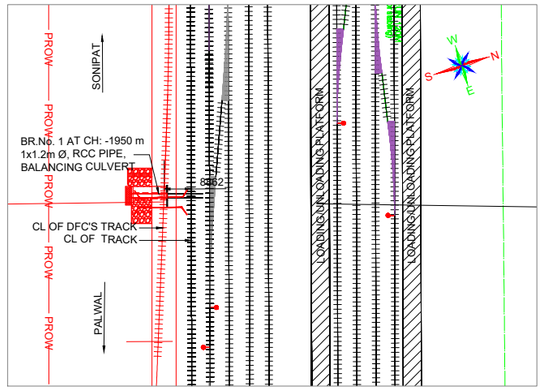
SECTION A-A
SCALE 1:100



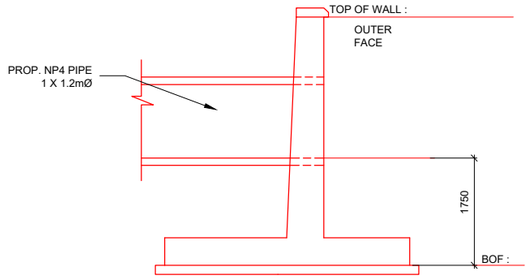
PLAN
SCALE: 1:100



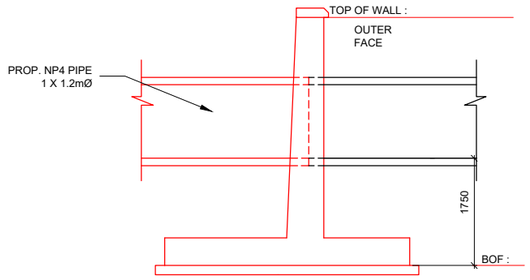
HALF ELEVATION HALF SECTION
(SCALE 1:50)



KEY PLAN
SCALE: NTS



TYPICAL DETAIL OF FACE WALL-1
(SCALE 1:75)



TYPICAL DETAIL OF FACE WALL-2
(SCALE 1:75)

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

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11. PLACEMENT LEVEL OF PIPE AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
12. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
13. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.

C) OTHER NOTES :

1. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC PIPE TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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.

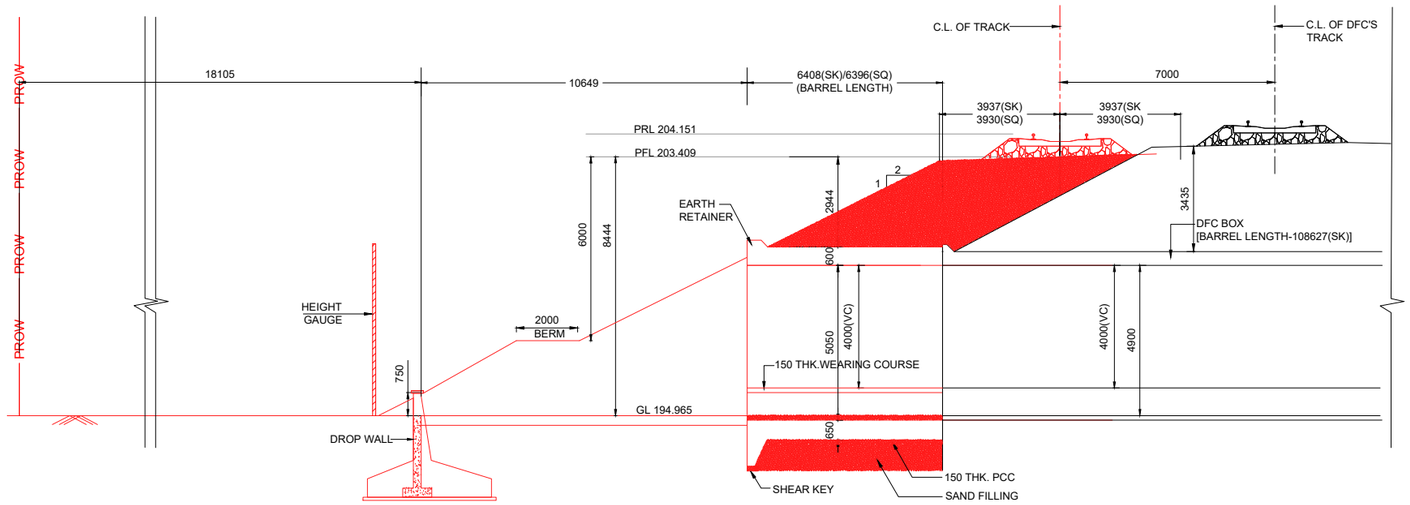
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

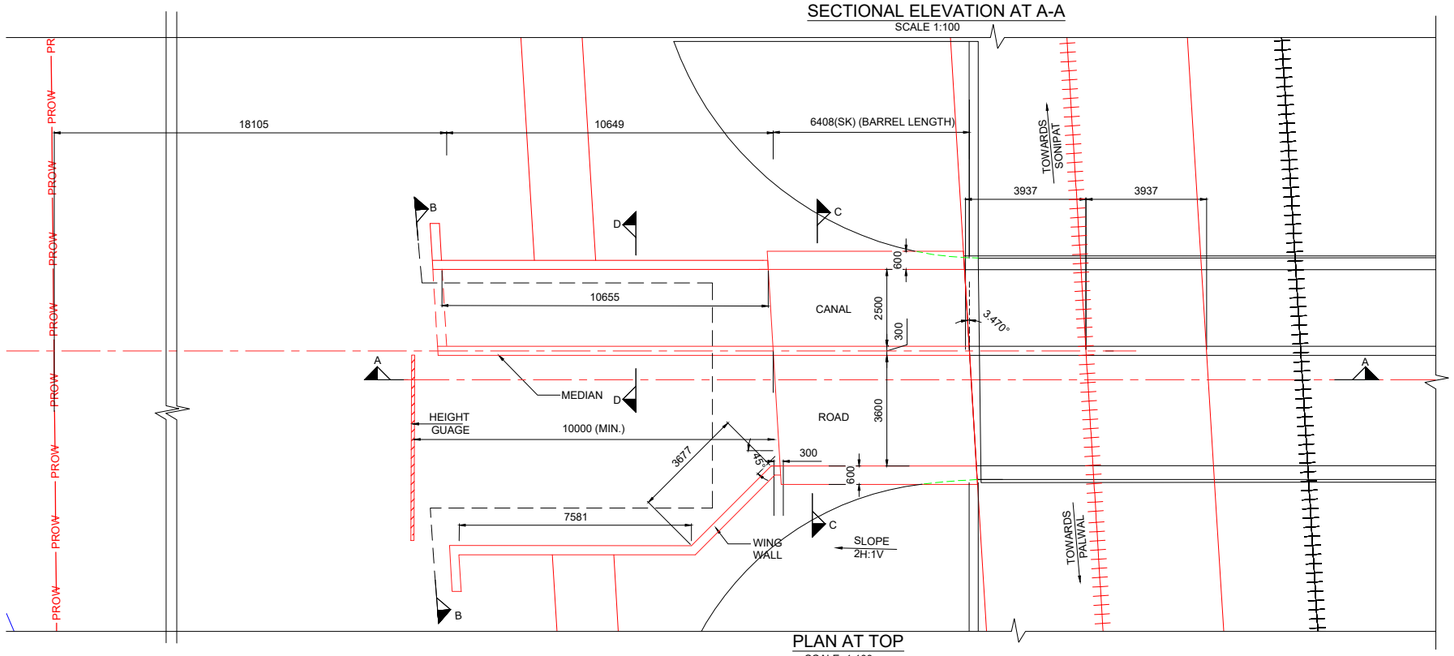
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PIPE CULVERT BRIDGE NO. 1 1X1.2 Ø AT CH.-1950.00

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01001_A0	1 OF 1

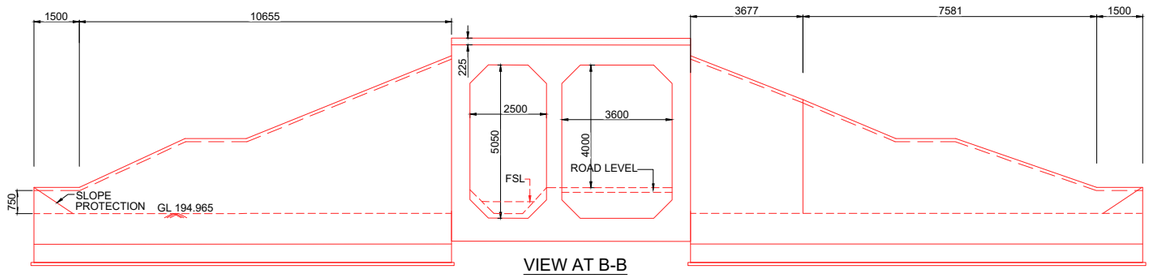
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



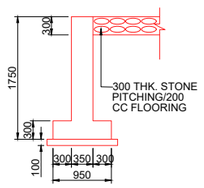
SECTIONAL ELEVATION AT A-A
SCALE 1:100



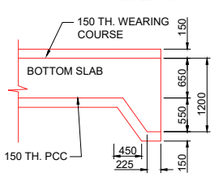
PLAN AT TOP
SCALE 1:100



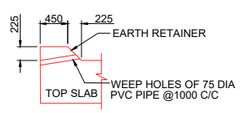
VIEW AT B-B
SCALE 1:100



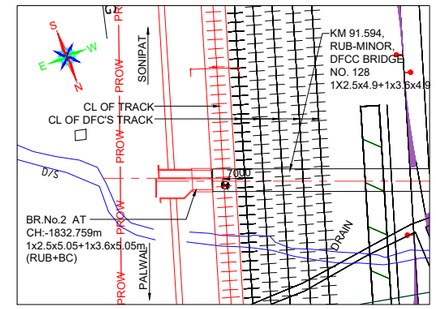
DROP WALL DETAILS
SCALE 1:50



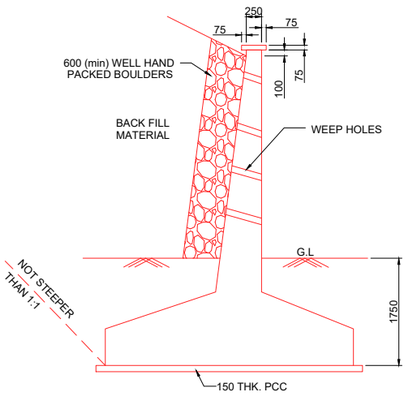
SHEAR KEY
SCALE 1:50



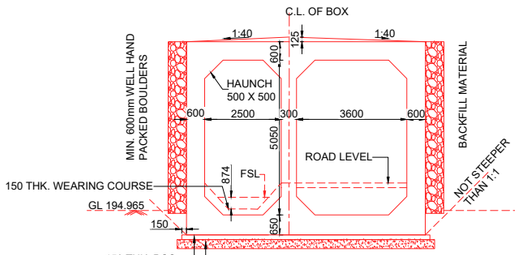
EARTH RETAINER
SCALE 1:50



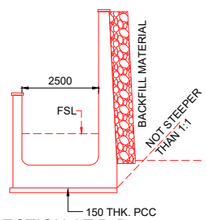
KEY PLAN
SCALE NTS



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



SECTION AT C-C
SCALE 1:100



SECTION AT D-D
SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
VC	VERTICAL CLEARANCE
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/Sig.NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

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

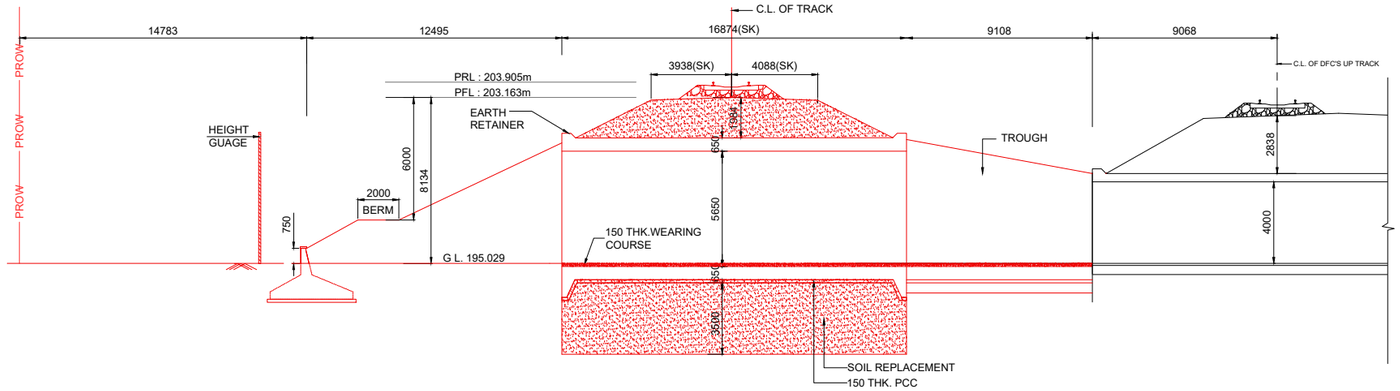
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

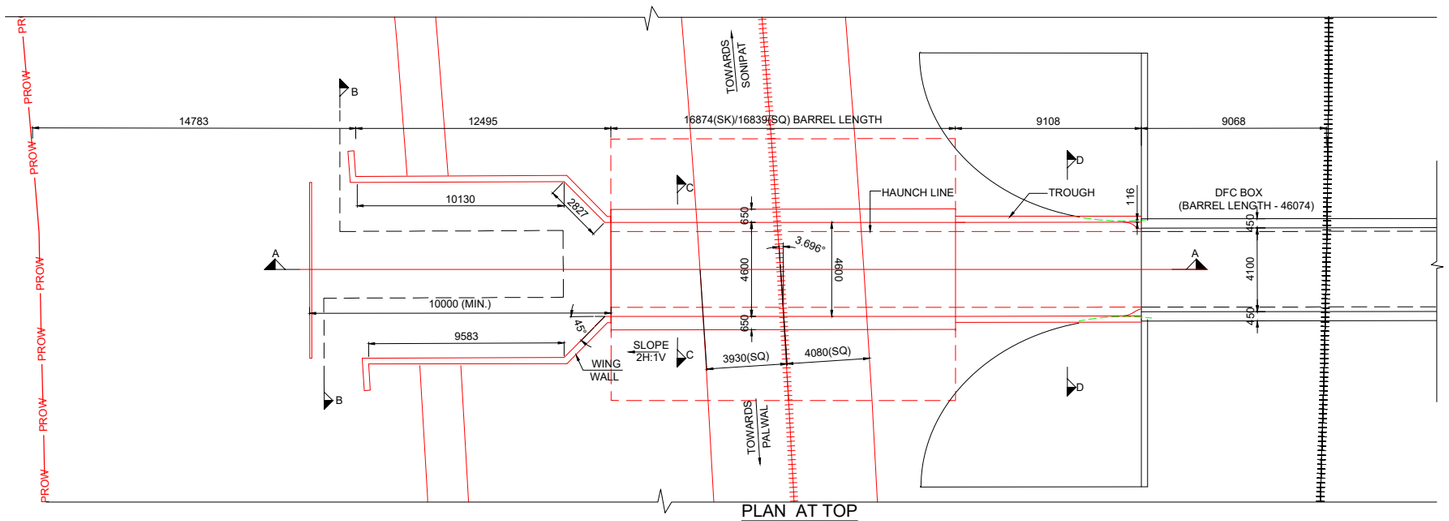
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT + RUB BRIDGE NO. 02 SPAN 1X2.5X5.05+1x3.6x5.05, RCC BOX, AT CH: -1832.759

DRG. NO. GC-HRIDC-C5-DRW-BRD-GAD_01002_A0 | SHEET NO.

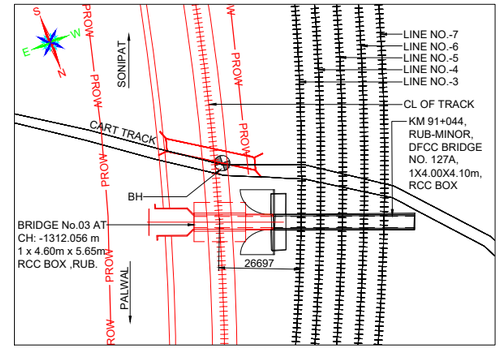
SCALE : AS SHOWN | ISSUE DATE 10-10-2023 | REVISED DATE



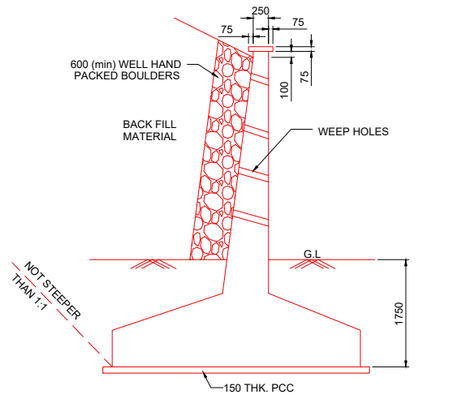
SECTIONAL ELEVATION AT A-A
SCALE 1:150



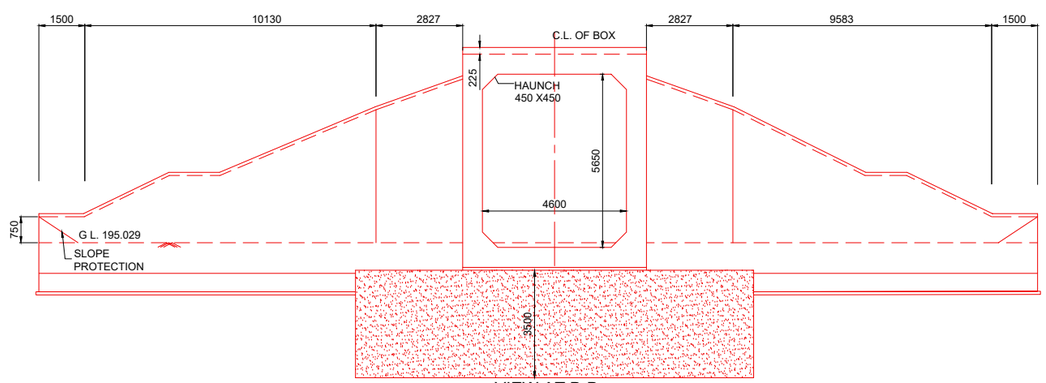
PLAN AT TOP
SCALE 1:150



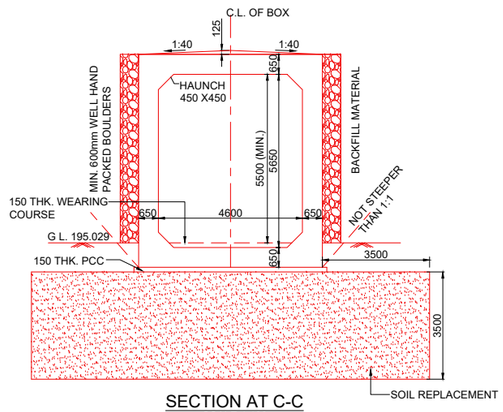
KEY PLAN
SCALE NTS



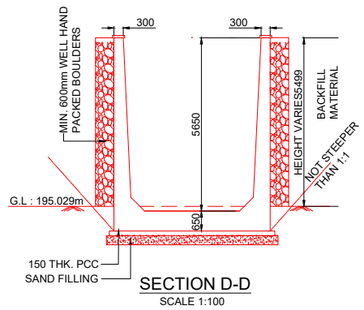
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



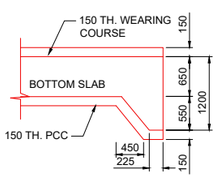
VIEW AT B-B
SCALE 1:100



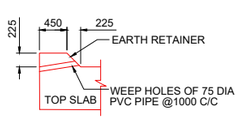
SECTION AT C-C
SCALE 1:100



SECTION D-D
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
VC	VERTICAL CLEARANCE
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

NOTES :

A) GENERAL NOTES

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2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
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10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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.
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16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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

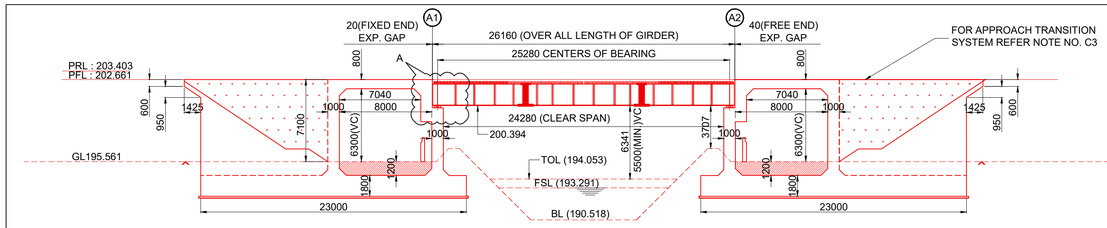
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 03, SPAN 1X4.60X5.65 RCC BOX AT CH: -1312.056

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01003_A0	1 OF 1

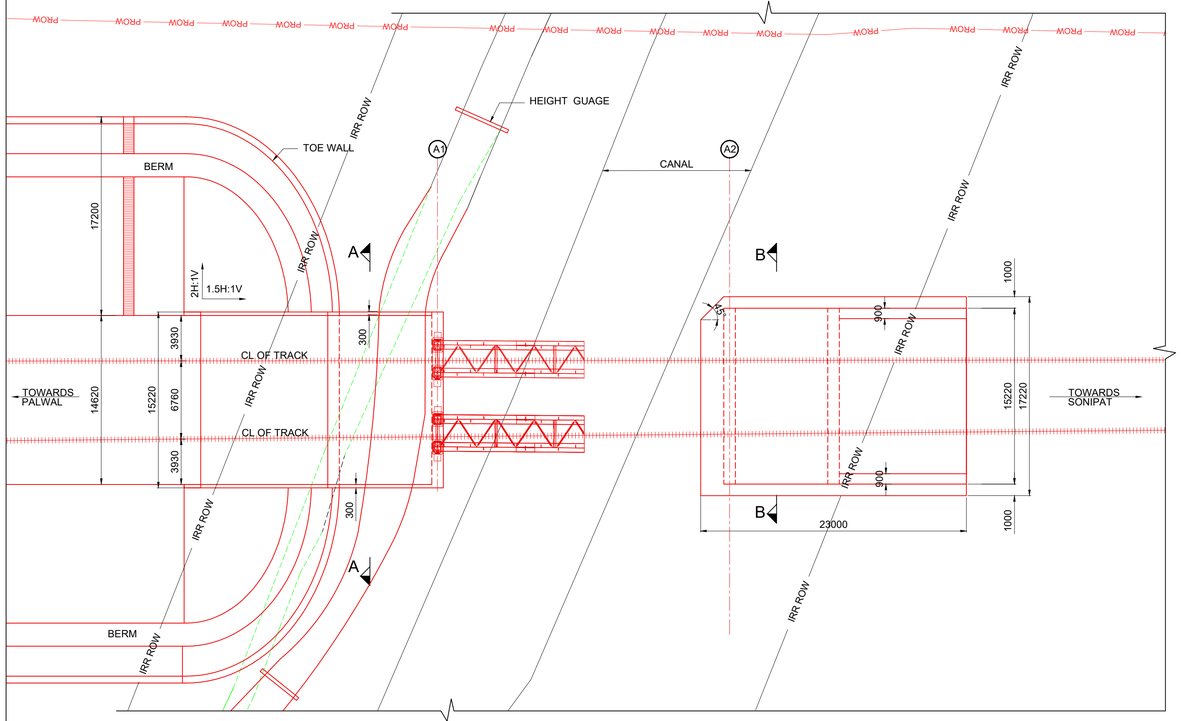
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

4.2 MAJOR BRIDGES

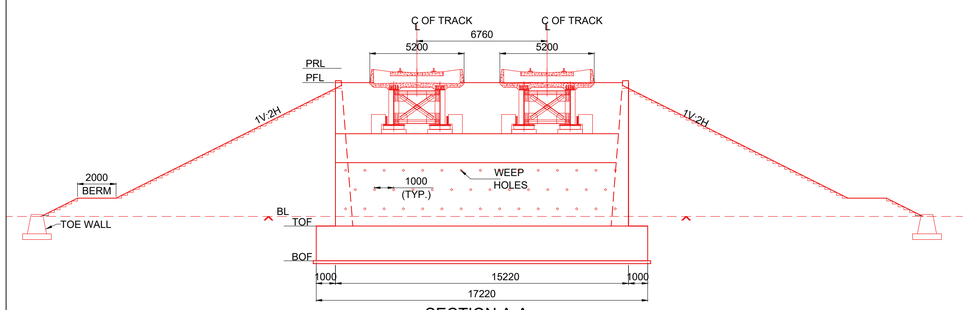
4.2.1 MAIN LINE



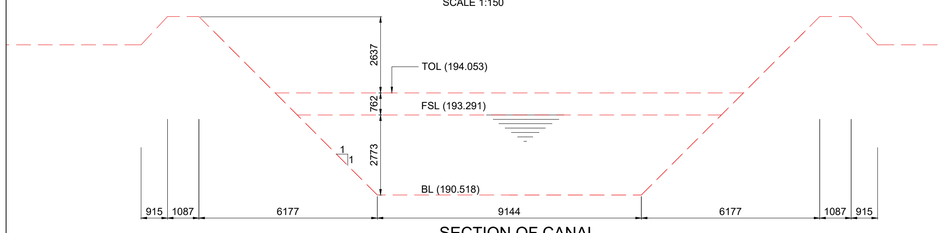
SECTIONAL ELEVATION
SCALE 1:250



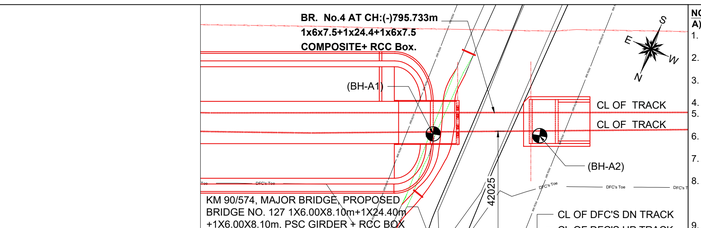
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 250



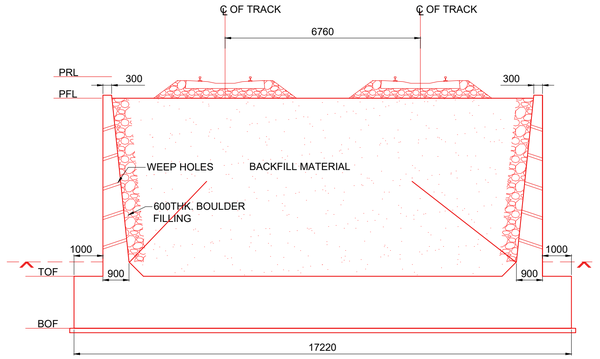
SECTION A-A
SCALE 1:150



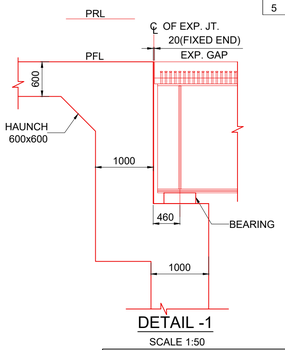
SECTION OF CANAL
(SCALE 1:100)



KEY PLAN
SCALE NTS



SECTION B-B
SCALE 1:100



DETAIL -1
SCALE 1:50

HYDRAULIC DATA OF DRAIN

1	NAME OF CANAL	GAUNCHI MAIN DRAIN
2	BED LEVEL(BL)	190.518
3	FULL SUPPLY LEVEL(FSL)	193.291
4	FREE BOARD/TOL	194.053
5	DISCHARGE	90Cs

LEGEND

	PROPOSED
	EXISTING
	DISMANTEL

CONSTRUCTION DEPTH

	PROP. LINE
1) RAIL	172 mm
2) RUBBER PAD	10 mm
3) PSC SLEEPER	210 mm
4) BALLAST	350 mm
TOTAL	742 mm

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-25.0 T (RDSO STANDARD CG),& SUB STRUCTURE-32.5T- 2008 LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL..
10. 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.
11. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
12. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
13. 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.
14. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
15. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
16. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
17. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1
18. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
19. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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.

C) OTHER NOTES :

1. FOR SUPERSTRUCTURE DETAIL FOLLOW RDSO/B-11751/R1 TO B-11751/8 (FOR CG)
2. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046(FOR CG) .
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

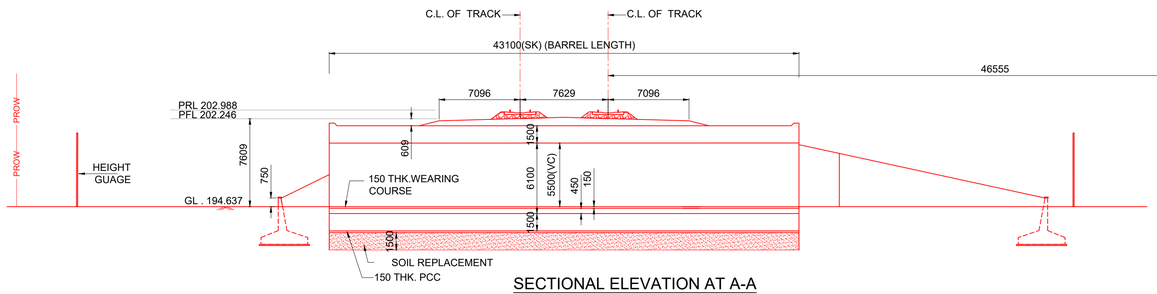
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 PROP. CANAL CROSSING BRIDGE No.4, 1x8x7.5+1x24.4+1x8x7.5 (CG+ RCC BOX) AT CH: (-)795.733m

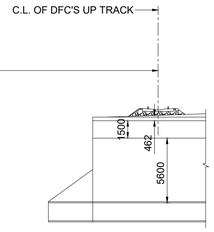
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01004_A0	1 OF 1

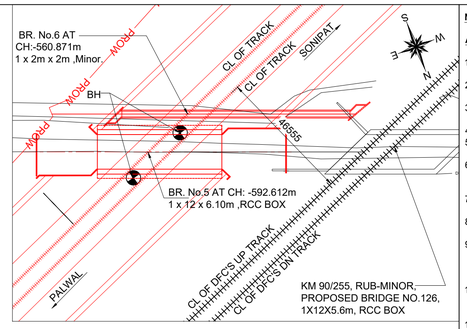
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



SECTIONAL ELEVATION AT A-A

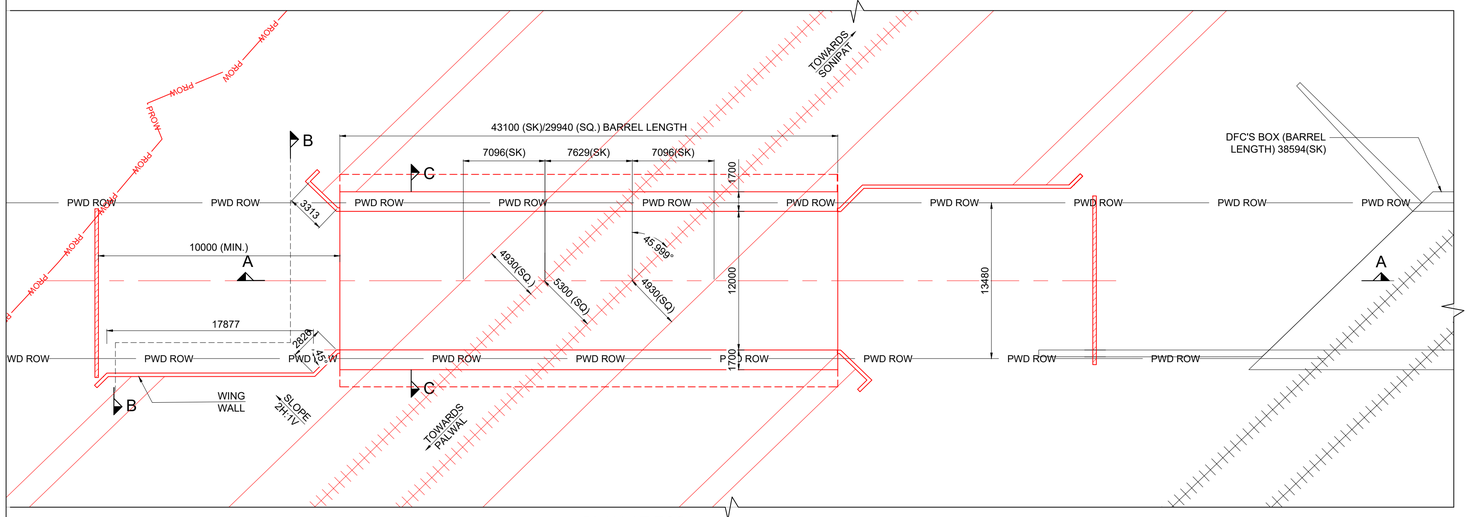
SCALE 1:250





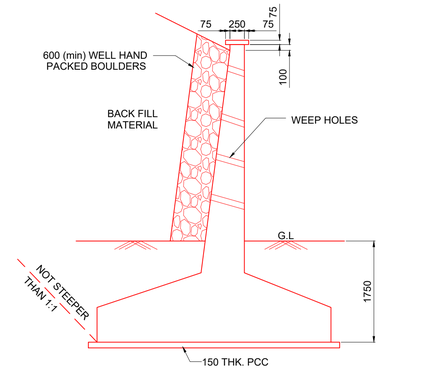
KEY PLAN

SCALE NTS



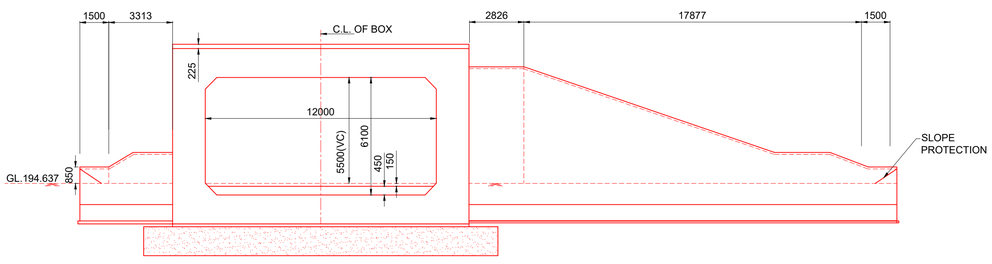
PLAN AT TOP

SCALE 1:250



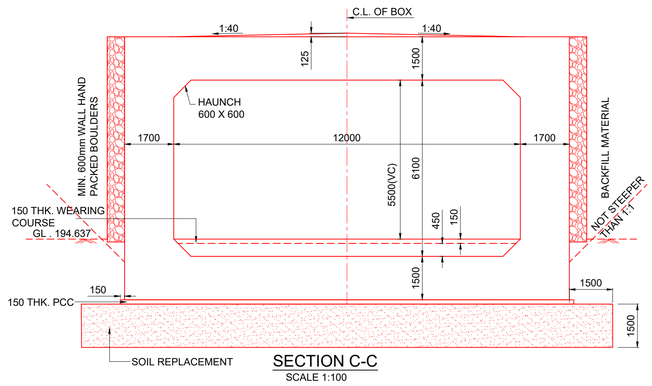
TYPICAL DETAIL OF RETAINING WALL(RW) / WING WALL

SCALE 1:50



VIEW AT B-B

SCALE 1:150



SECTION C-C

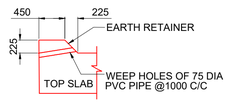
SCALE 1:100

LEGEND

	PROPOSED
	EXISTING
	DISMANTLE

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW



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. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
14. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. 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.
3. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

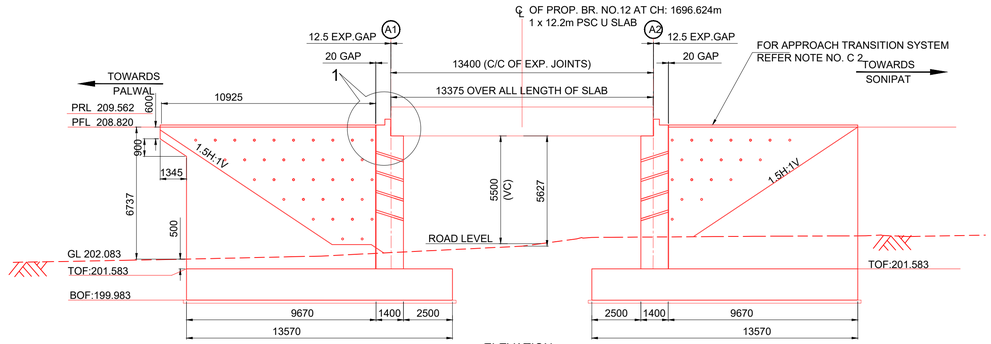
RITES Limited in consortium with SMEC International Pty. Ltd.

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

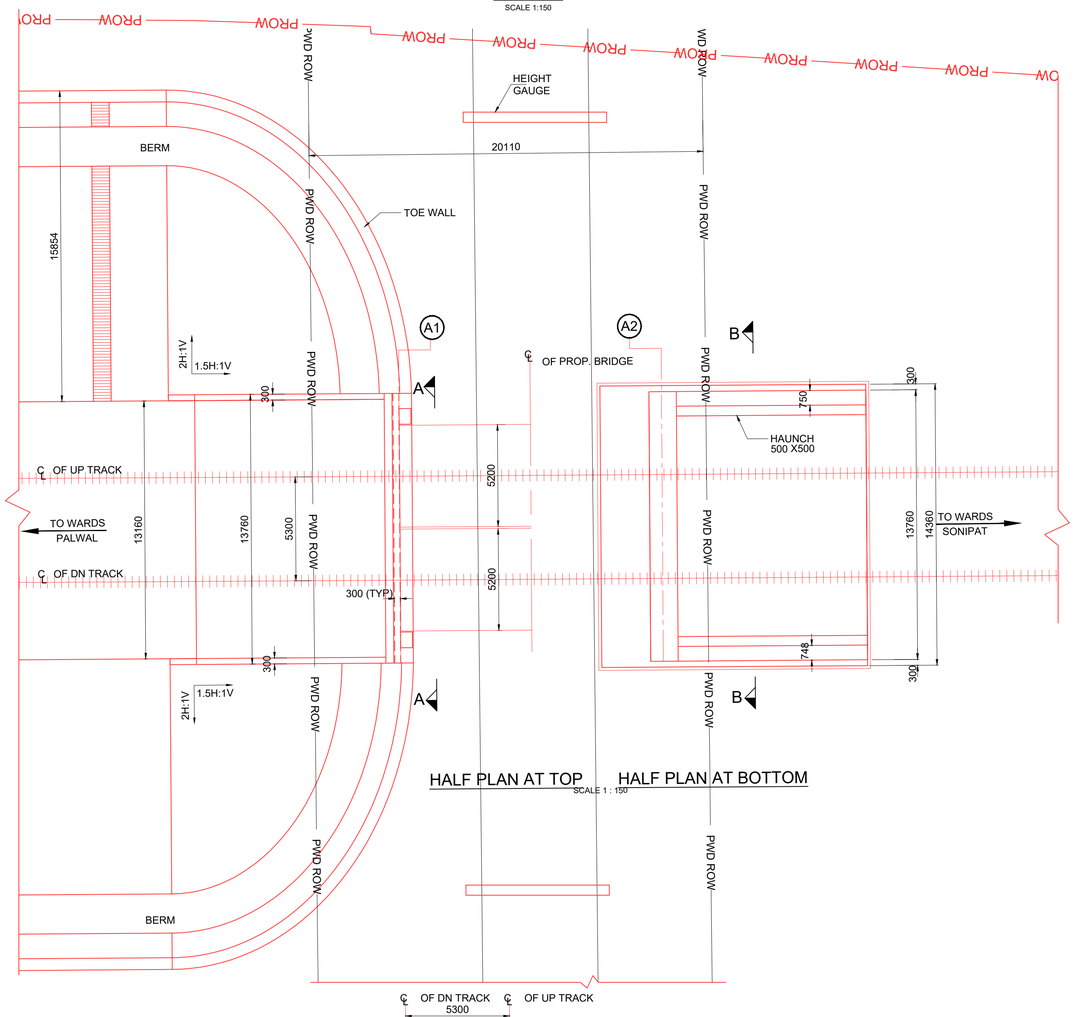
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO. 5
1x 12 x 6.10m RCC BOX AT CH. -592.612m

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01005_A0	1 OF 1

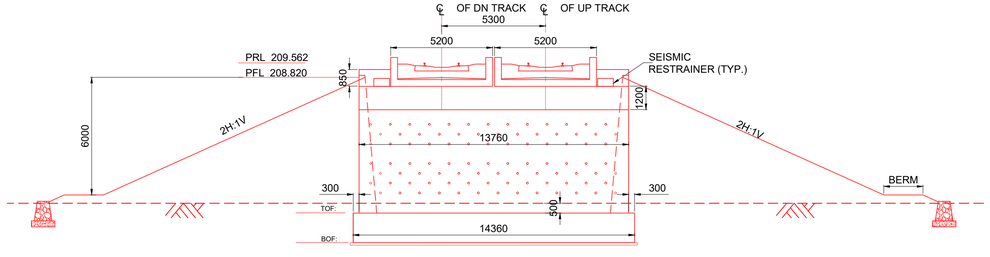
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



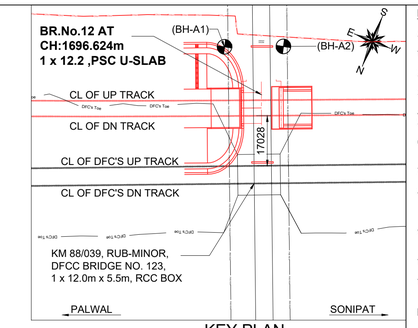
ELEVATION
SCALE 1:150



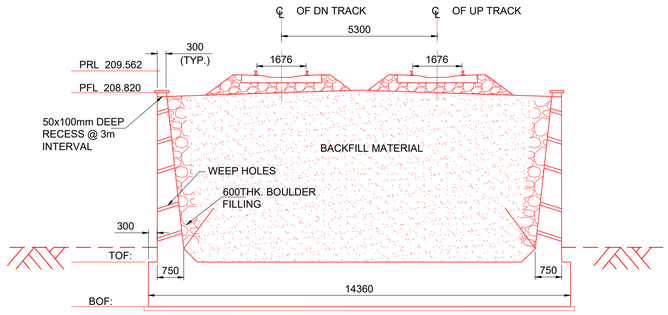
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 150



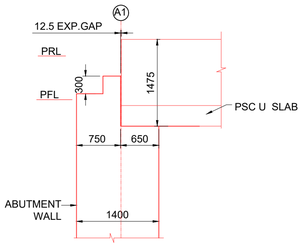
SECTION A-A
SCALE 1:150



KEY PLAN
SCALE NTS



SECTION B-B
SCALE 1:100



DETAIL -1
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD PSC U SLAB),& SUB STRUCTURE-32.5T- LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a.IRS BRIDGE RULE
   b.IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d.IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL .
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °
12. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
13. 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.
14. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
15. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
16. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
17. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1

C) OTHER NOTES :

1. FOR SUPERSTRUCTURE DETAILS FOLLOW RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
2. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
3. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
4. 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.

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

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
PROW	PROPOSED HORC'S ROW

LEGEND

	PROPOSED
	EXISTING

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

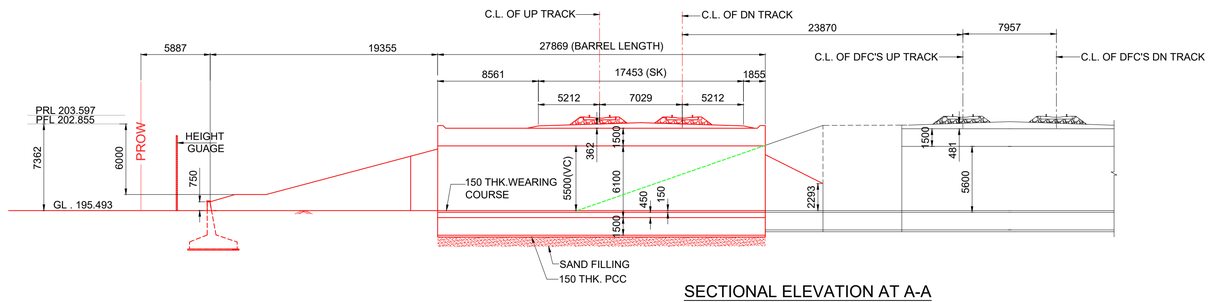
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 BRIDGE NO. 12
1 x 12.2m PSC U SLAB CH: 1696.624

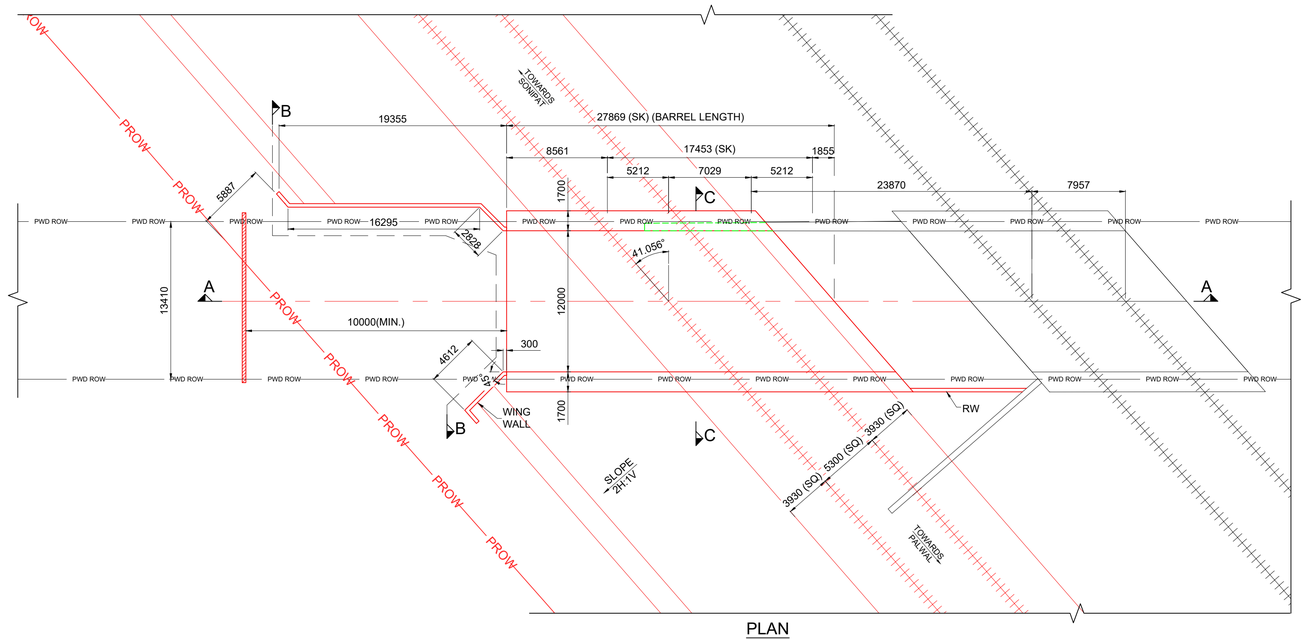
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD-01012_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



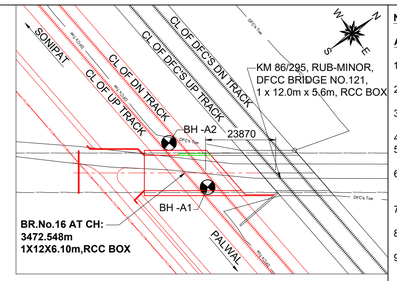
SECTIONAL ELEVATION AT A-A

SCALE 1:250



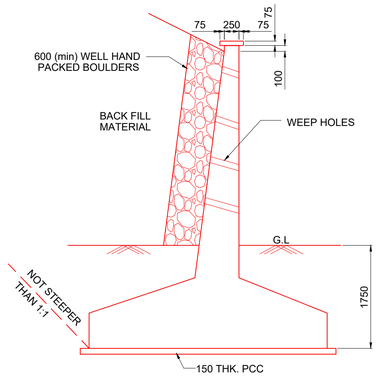
PLAN

SCALE 1:250



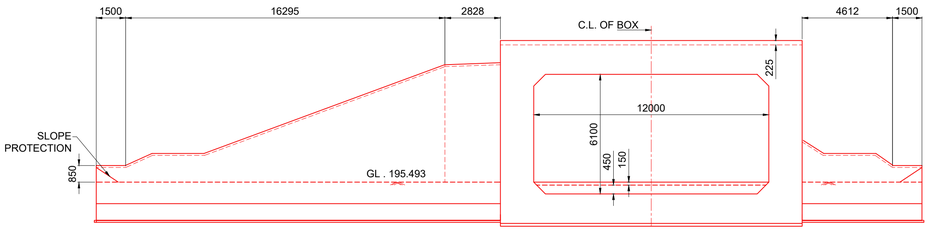
KEY PLAN

SCALE NTS



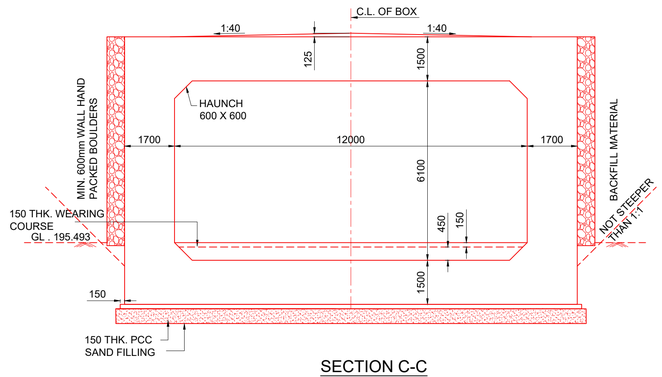
TYPICAL DETAIL OF RETAINING WALL(RW) / WING WALL

SCALE 1:50



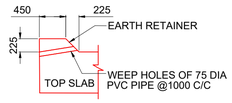
SECTION B-B

SCALE 1:150



SECTION C-C

SCALE 1:100



EARTH RETAINER

SCALE 1:50

LEGEND

	PROPOSED
	EXISTING
	DISMANTEL

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PROW	PROPOSED HORC'S ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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 SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
9. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK, CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/(Sig)NR,DFCCIL ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
12. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,

B) TECHNICAL NOTES :

1. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
2. 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
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BOX AFTER PROTECTION WORK.
9. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
10. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
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. 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.
13. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
14. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
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.
16. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

C) OTHER NOTES :

1. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
2. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

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

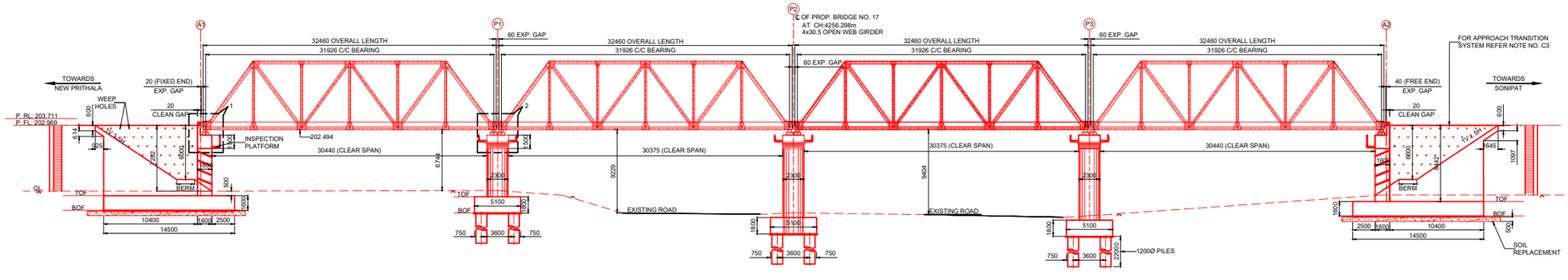
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED MAJOR BRIDGE NO. 16
1X12X6.10 m,RCC BOX CH: 3472.548m

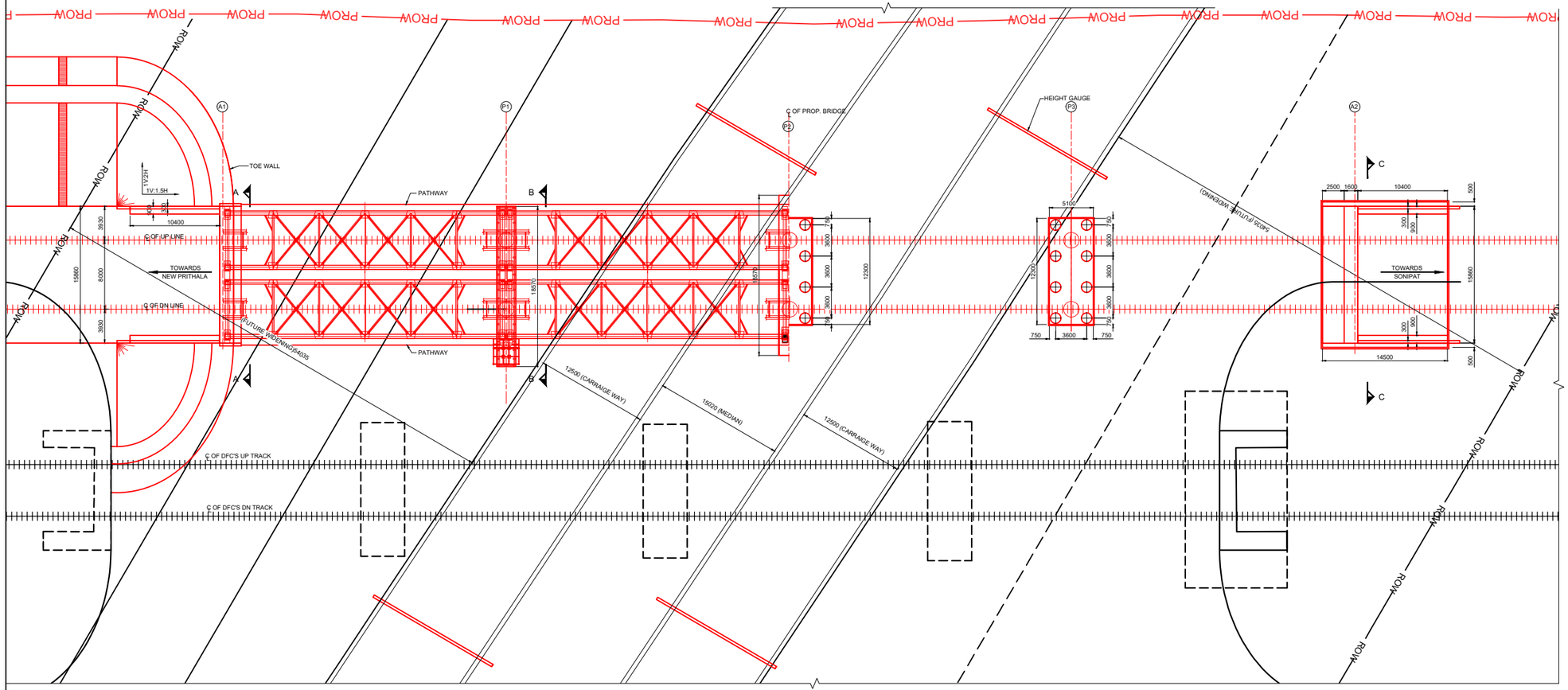
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01016_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

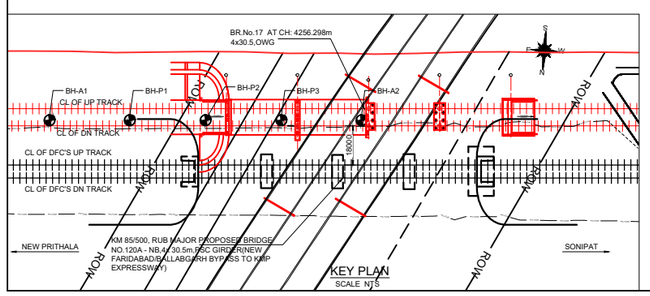


FORMATION LEVEL	202.969	202.969	202.969	202.969	202.969
GROUND LEVEL	195.685	195.765	193.280	192.950	195.262
CHAINAGE	4189.838	4223.298	4256.298	4289.298	4322.288

SECTIONAL ELEVATION
(SCALE 1:200)



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



KEY PLAN
SCALE NTS

LEGEND

	PROPOSED
	EXISTING

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTELISSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE - 25.0T & SUB STRUCTURE - 32.5T- LOADING.
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
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.
13. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
14. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
15. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
16. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1
17. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
18. 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.

C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036.
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-00145(FOR OWG) .
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
4. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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

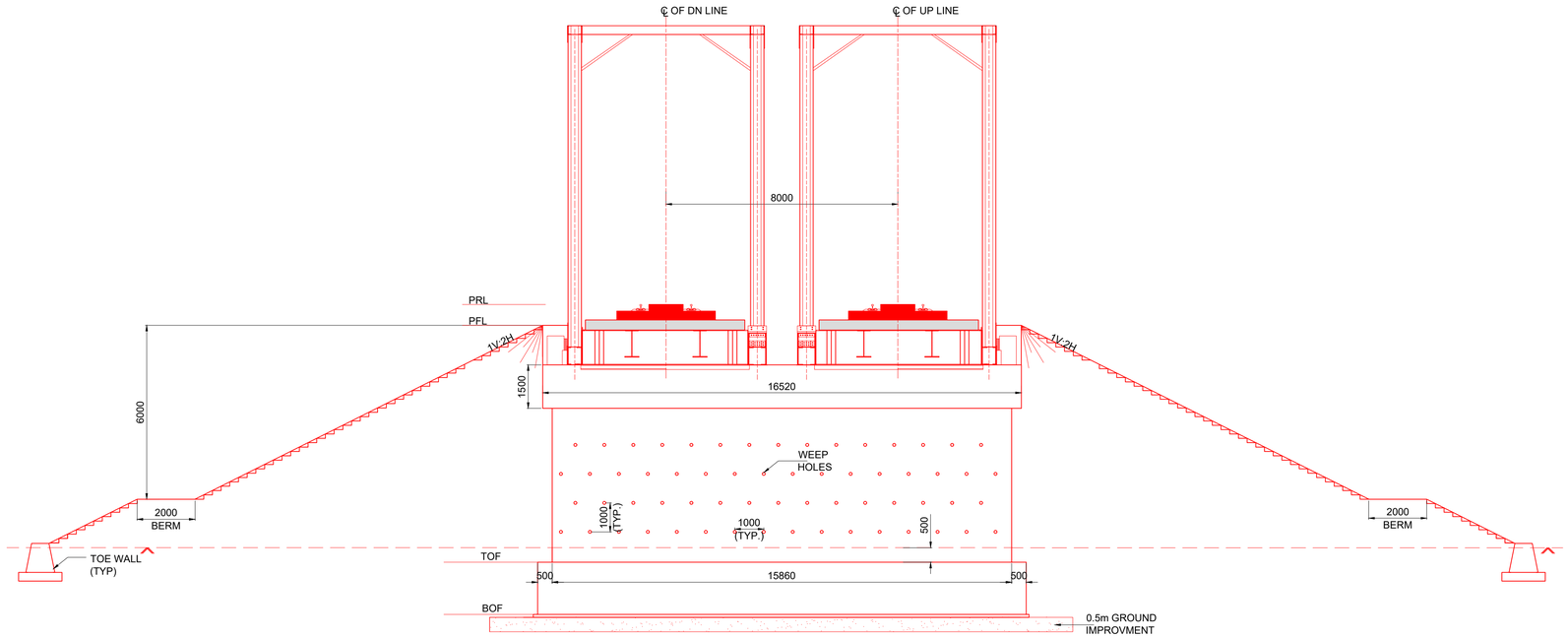
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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.17, 4X30.5 OPEN WEB GIRDER AT CH: 4256.298m. (NH-148A DND-2)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-00017_A0	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



SECTION A-A
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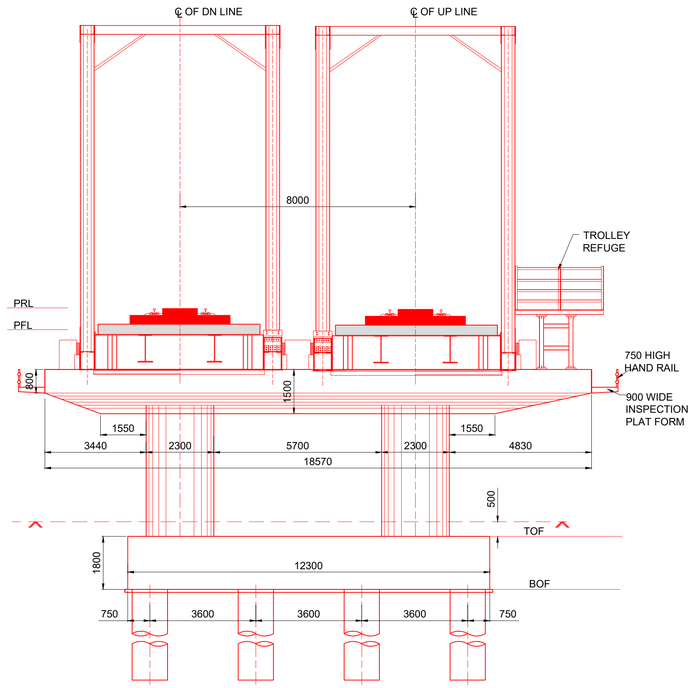
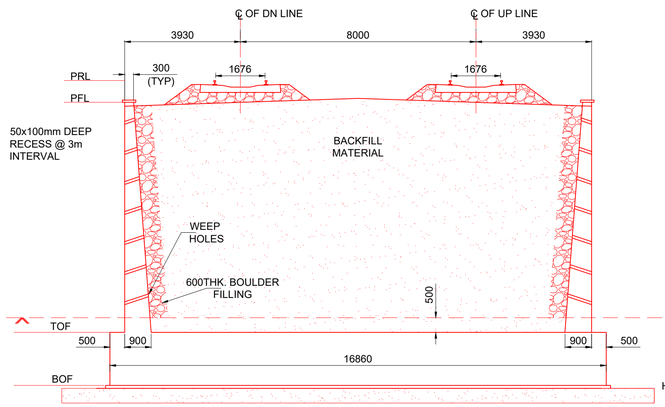
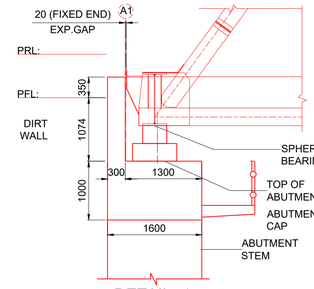


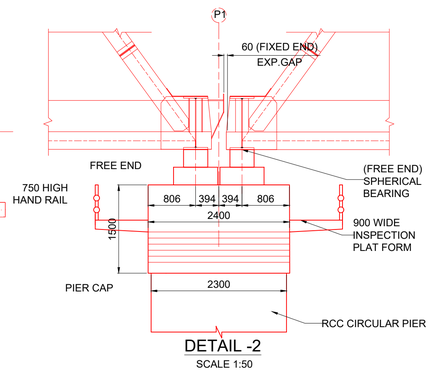
SECTION B-B
(SCALE 1:100)



SECTION C-C
(SCALE 1:100)



DETAIL -1
SCALE 1:50



DETAIL -2
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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.

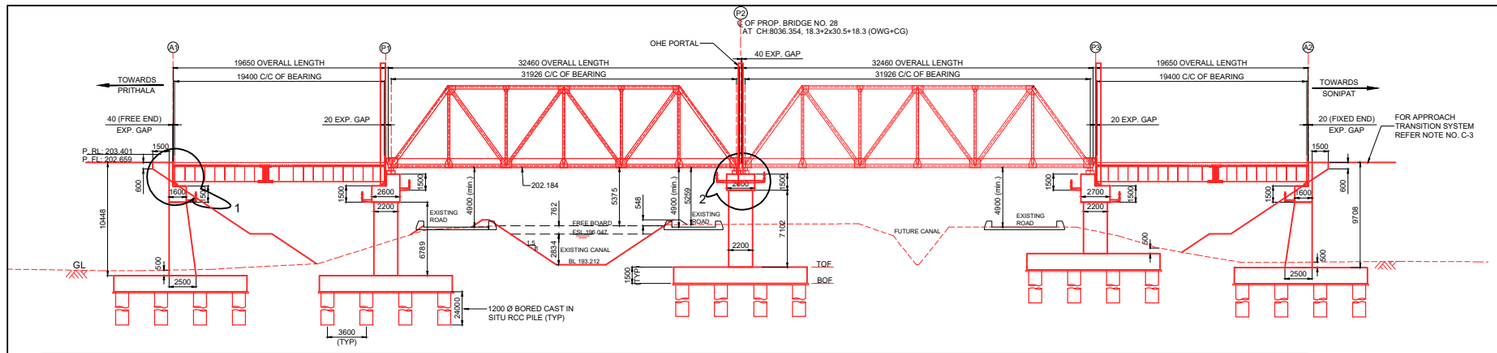
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO.17, 4X30.5 OPEN WEB GIRDER AT CH: 4256.298m. (NH-148A DND-2)

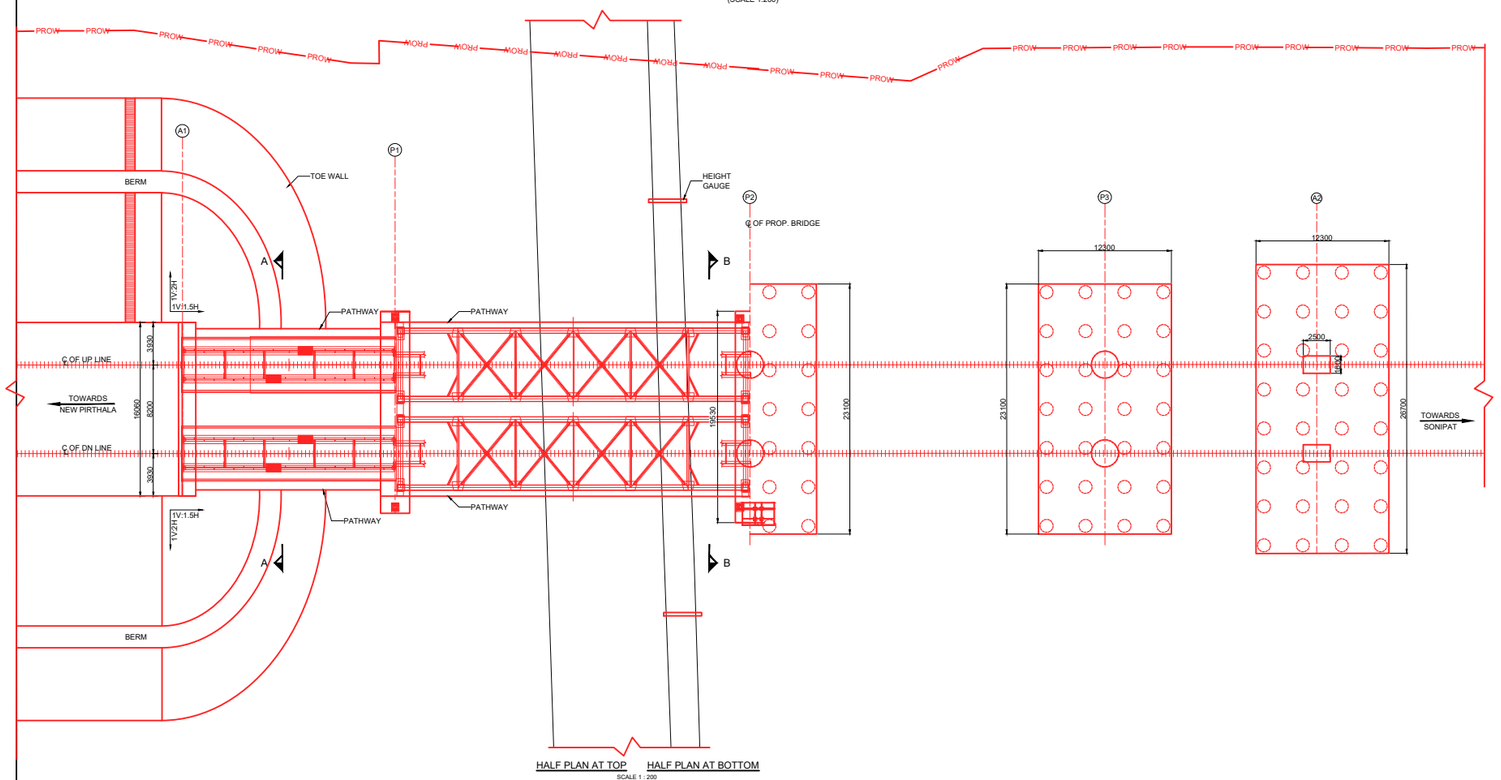
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-00017_A0	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

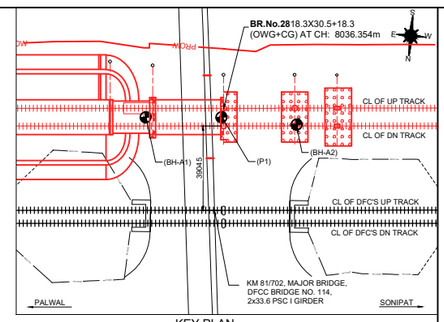


FORMATION LEVEL	202.659	202.659	202.659	202.659	202.659
GROUND LEVEL	192.717	195.423	196.721	193.479	193.446
CHAINAGE	7983.874	8003.544	8036.354	8068.164	8088.834

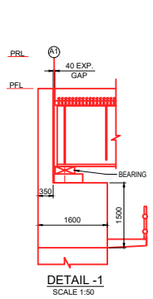
SECTIONAL ELEVATION
(SCALE 1:200)



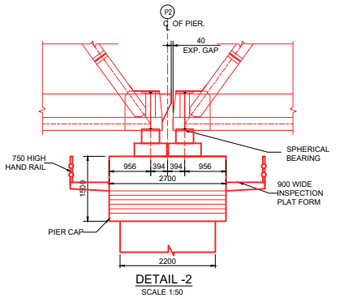
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



KEY PLAN
SCALE NTS



DETAIL -1
SCALE 1:50



DETAIL -2
SCALE 1:50

LEGEND

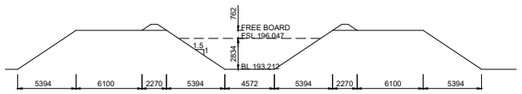
	PROPOSED
	EXISTING

ABBREVIATION

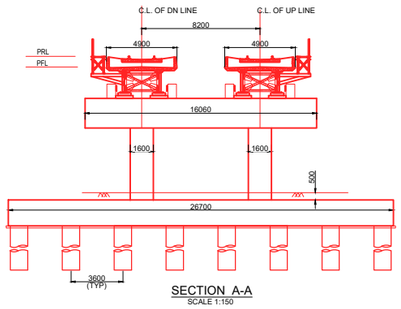
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

HYDRAULIC DATA OF DRAIN

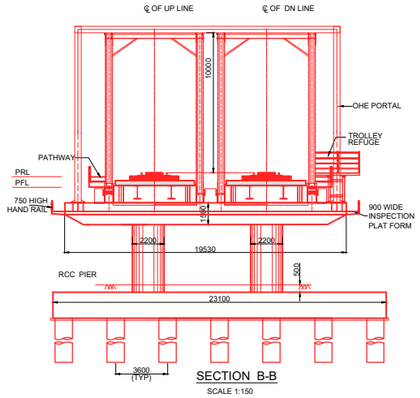
1	NAME OF CANAL	GURGAON CANAL
2	RD	8036.354/79150
3	BED LEVEL	193.212
4	FULL SUPPLY LEVEL	196.047
5	DISCHARGE	1057Cusec
6	W.S.SLOPE	0.15%
7	VELOCITY	3.25
8	FREE BOARD	0.762
9	SIDE SLOPE	1.5:1
10	BED WIDTH	4.572



CROSS SECTION OF CANAL
(SCALE 1:100)



SECTION A-A
SCALE 1:150



SECTION B-B
SCALE 1:150

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-25.0T & SUB STRUCTURE-32.5T- LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT.
13. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
14. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
15. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
16. TROUGH MAY BE REQUIRED AT SERVICE ROAD CONNECTING DFC SERVICE ROAD WITH DFC BRIDGE UPTO HORC ROW WITH VERTICAL CLEARANCE OF MIN. 4.5m.
17. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
18. 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.

C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036 & 18.3m CG SUPERSTRUCTURE FOR 25t LOADING FOR BLT.
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-0045(FOR OWG)& CBS-0046(FOR CG).
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

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.

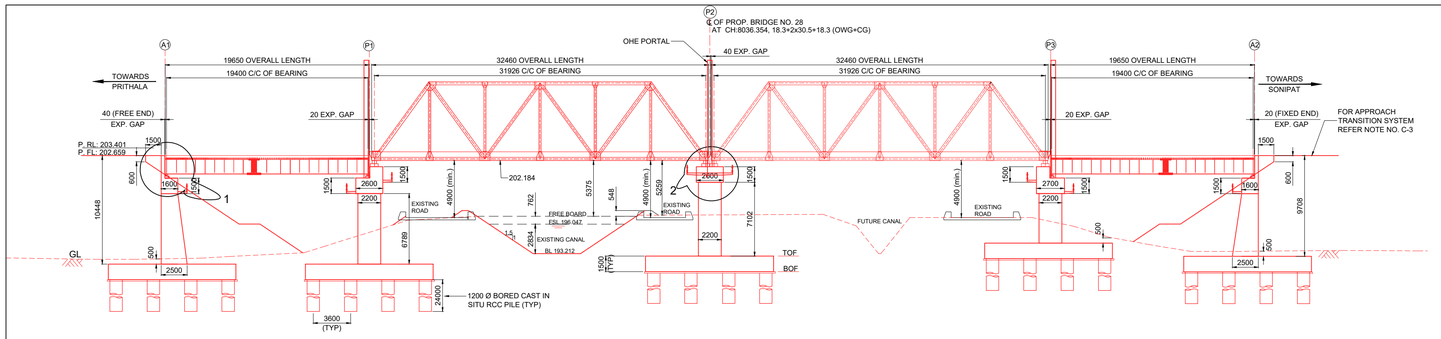
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROP. MAJOR BRIDGE NO.28
18.3X30.5+18.3(OWG+CG) AT CH: 8036.354m
(CANAL CROSSING GURGAON CANAL RD 79150)

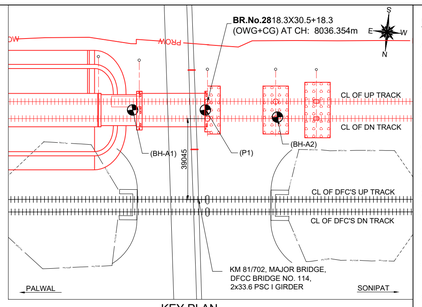
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01028_A0	1 OF1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

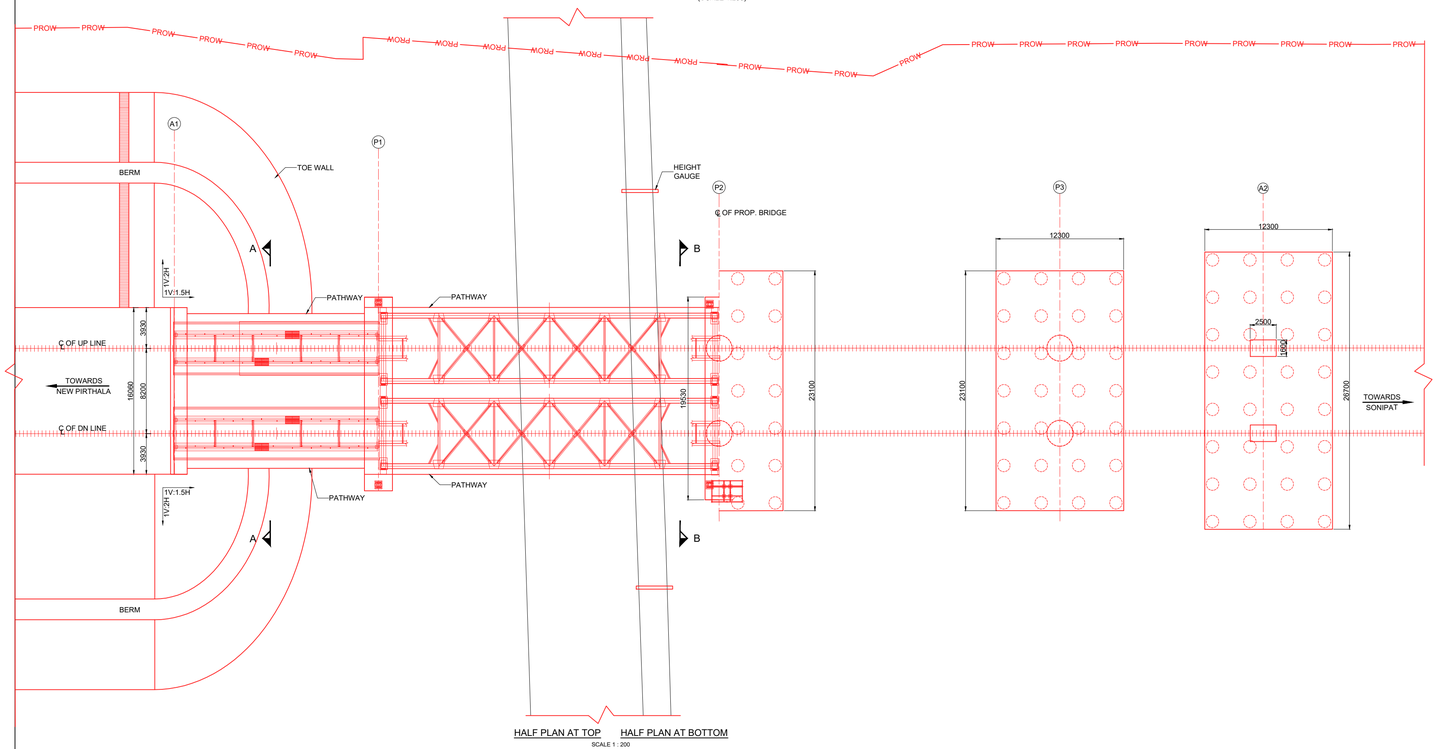


FORMATION LEVEL	202.659	202.659	202.659	202.659	202.659
GROUND LEVEL	192.717	195.423	196.721	193.479	193.446
CHAINAGE	7983.874	8003.544	8036.354	8068.164	8088.834

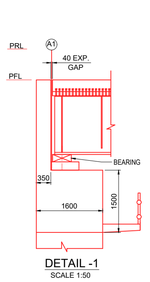
SECTIONAL ELEVATION
(SCALE 1:200)



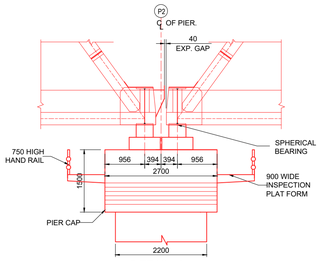
KEY PLAN
SCALE NTS



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



DETAIL -1
SCALE 1:50



DETAIL -2
SCALE 1:50

LEGEND

	PROPOSED
	EXISTING

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

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

HYDRAULIC DATA OF DRAIN

1	NAME OF CANAL	GURGAON CANAL
2	RD	8036.354/79150
3	BED LEVEL	193.212
4	FULL SUPPLY LEVEL	196.047
5	DISCHARGE	1057Cusec
6	W.S SLOPE	0.15%
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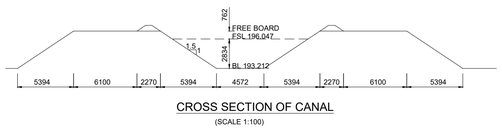
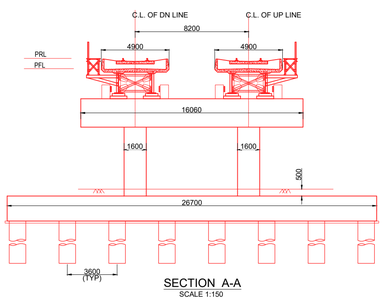
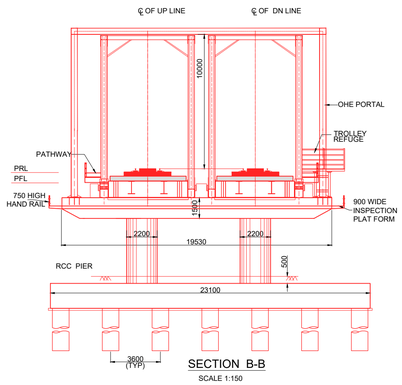
8	FREE BOARD	0.762
9	SIDE SLOPE	1.5:1
10	BED WIDTH	4.572



CROSS SECTION OF CANAL
(SCALE 1:100)



SECTION A-A
SCALE 1:150



SECTION B-B
SCALE 1:150

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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10. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (OWG) AND 25T (CG) SUB STRUCTURE-32.5T- LOADING.
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a.IRS BRIDGE RULE
   b.IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d.IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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7. 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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16. TROUGH MAY BE REQUIRED AT SERVICE ROAD CONNECTING DFC SERVICE ROAD WITH DFC BRIDGE UPTO HORC ROW WITH VERTICAL CLEARANCE OF MIN. 4.5m.
17. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
18. 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.

C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036 & 18.3m CG SUPERSTRUCTURE FOR 25t LOADING FOR BLT.
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-0045(FOR OWG)& CBS-0046(FOR CG).
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4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

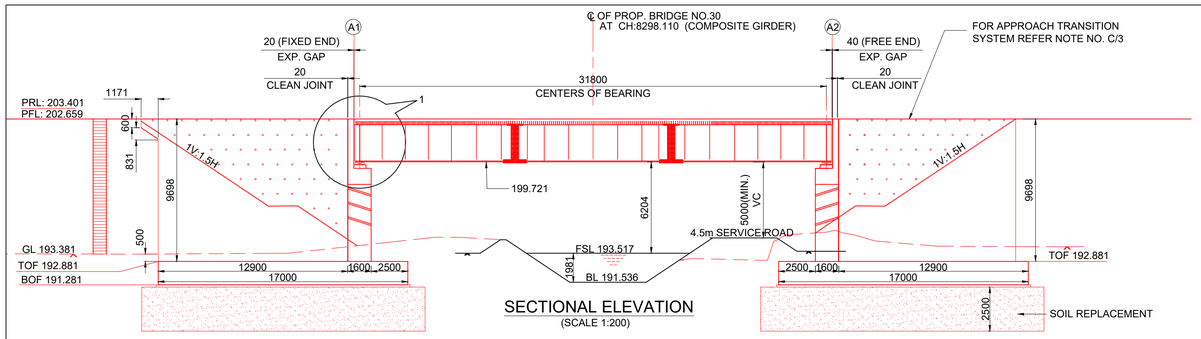
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

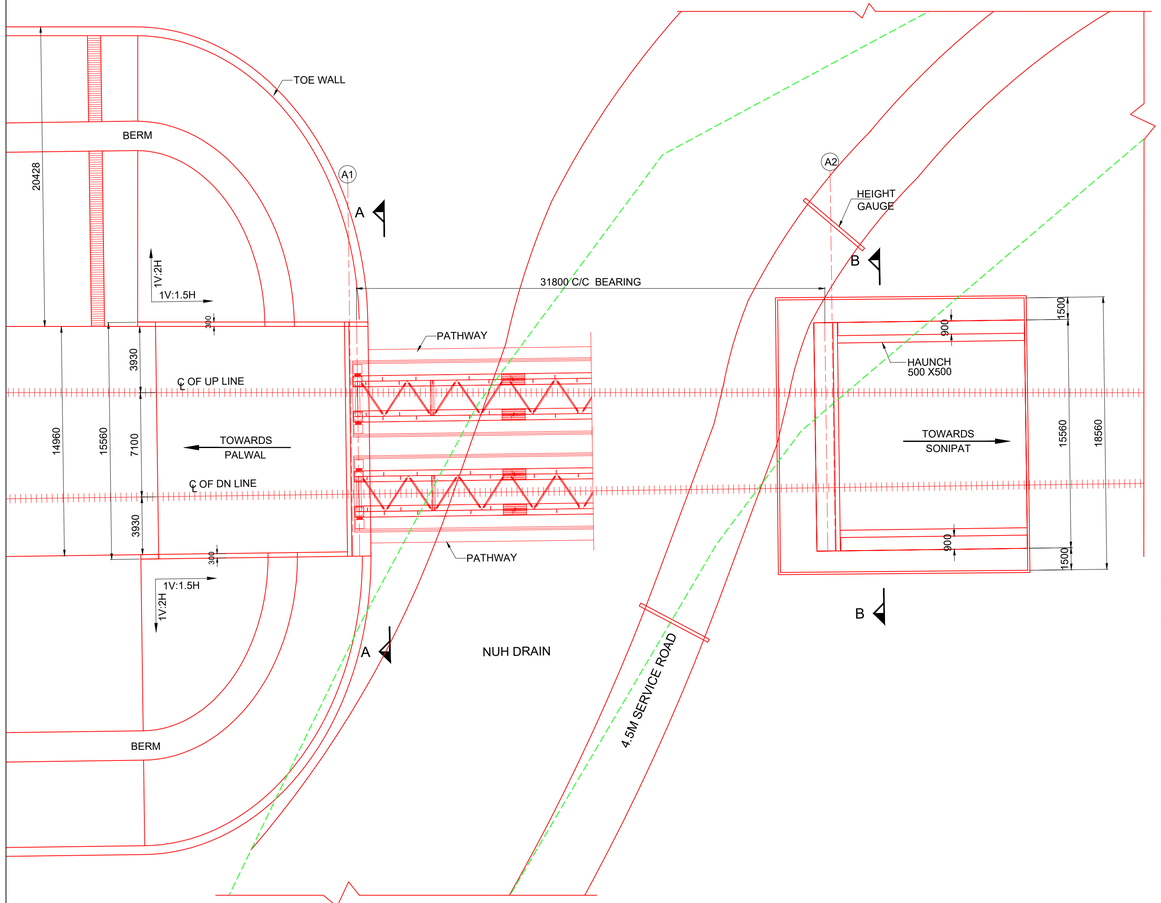
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROP. MAJOR BRIDGE NO.28
18.3X30.5+18.3(OWG+CG) AT CH: 8036.354m
(CANAL CROSSING GURGAON CANAL RD 79150)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01028_A0	1 OF1

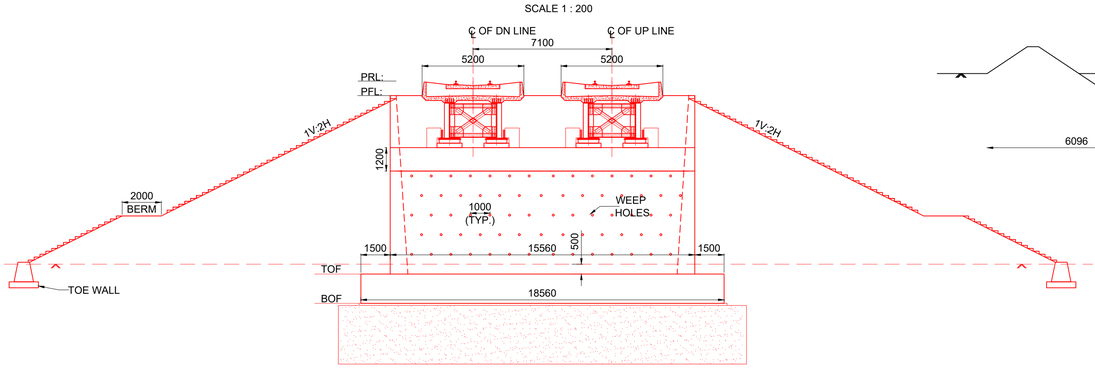
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



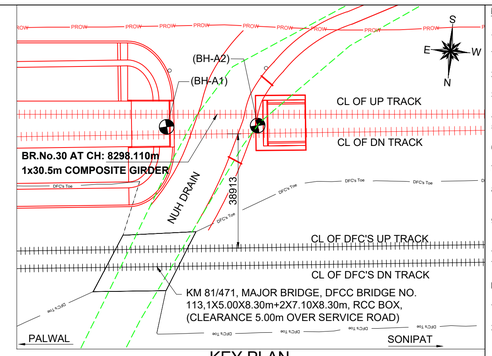
SECTIONAL ELEVATION
(SCALE 1:200)



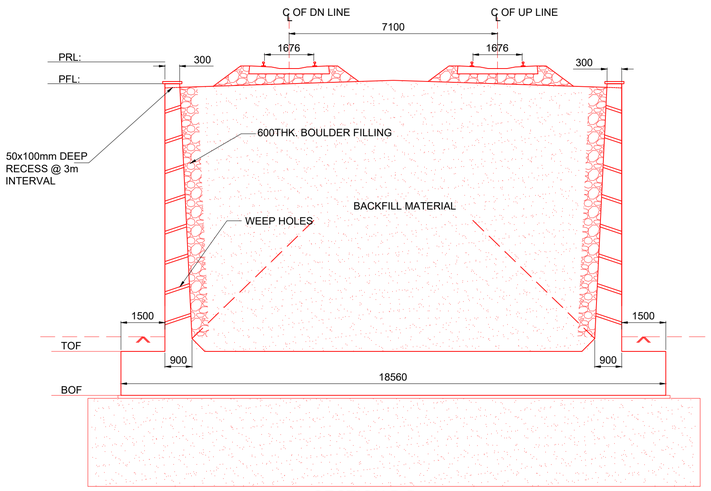
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



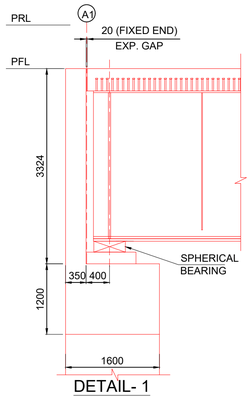
SECTION A-A
SCALE 1:150



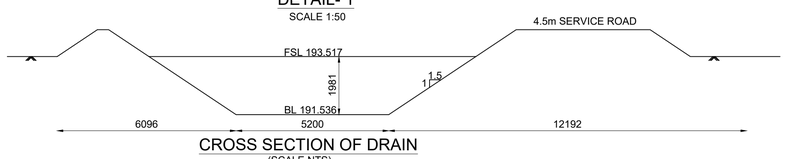
KEY PLAN
SCALE NTS



SECTION B-B
SCALE 1:100



DETAIL- 1
SCALE 1:50



CROSS SECTION OF DRAIN
(SCALE NTS)

HYDRAULIC DATA OF DRAIN

1	NAME OF CANAL	NUH DRAIN
2	RD	8298.110/87645
3	BED LEVEL (BL)	191.530m
4	FULL SUPPLY LEVEL (FSL)	193.510m
5	DISCHARGE	500Cusec
6	W S SLOPE	0.35%
7	VELOCITY	-

LEGEND

	PROPOSED
	EXISTING
	DISMANTEL

CONSTRUCTION DEPTH

1) RAIL	172 mm
2) RUBBER PAD	10 mm
3) PSC SLEEPER	210 mm
4) BALLAST	350 mm
TOTAL	742 mm

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-25.0T (RDSO STANDARD CG) & SUB STRUCTURE-32.5T- LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL..
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
12. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORIZONTAL AND 1000 MM C/C VERTICALLY IN RETURN WALL & ABUTMENT THROUGHOUT.
13. 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.
14. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
15. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
16. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
17. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1
18. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
19. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

C) OTHER NOTES :

1. FOR SUPERSTRUCTURE DETAILS FOLLOW RDSO DWG. NO: RDSO/B-11754/R2 TO B-11754/6.
2. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO.CBS-9046(FOR CG).
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
4. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.
5. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

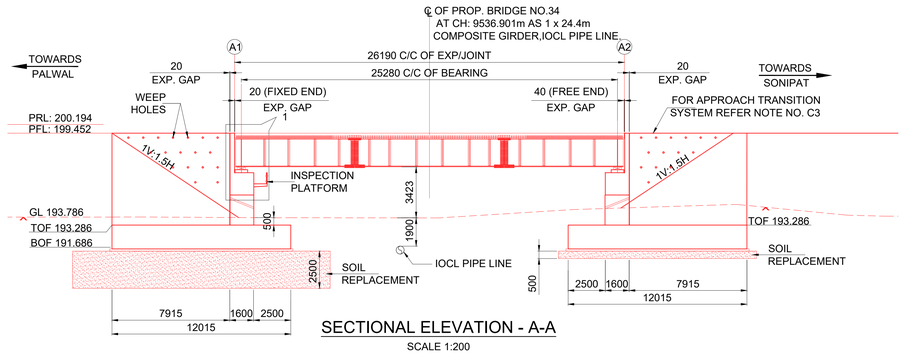
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 PROP. DRAIN CROSSING BRIDGE NO.30,
1X30.5 (COMPOSITE GIRDER) AT CH: 8298.110m
(CANAL CROSSING NUH DRAIN RD 87645)

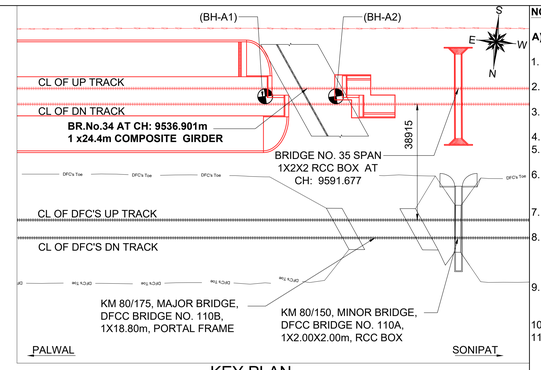
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01030_A0	1 OF1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



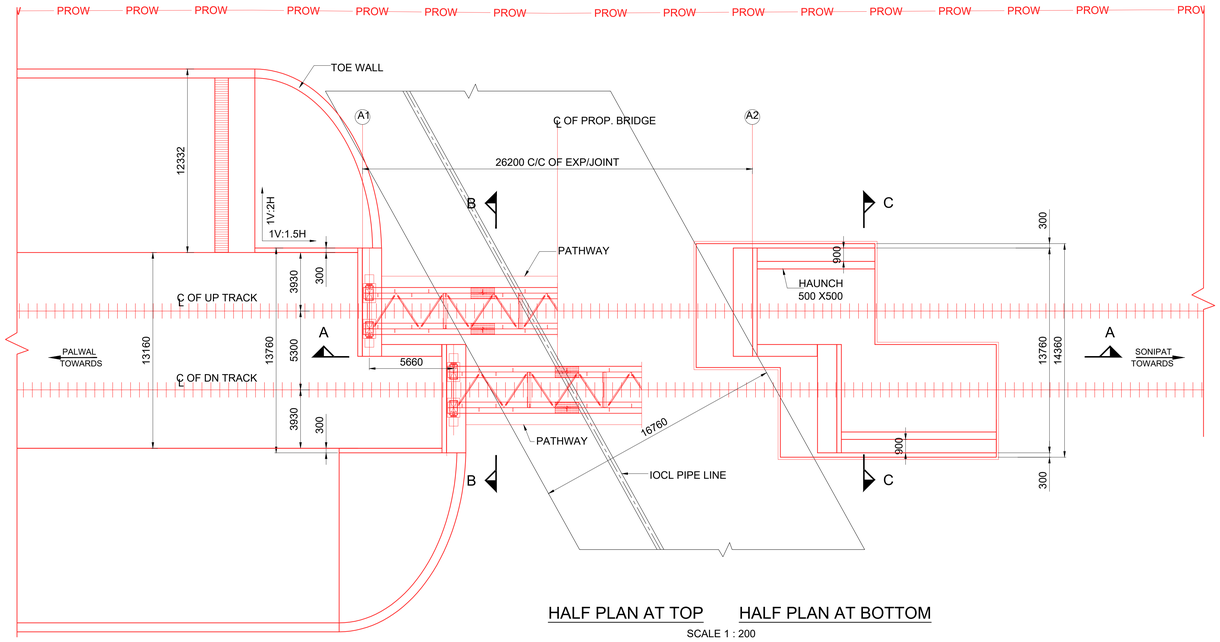
SECTIONAL ELEVATION - A-A

SCALE 1:200



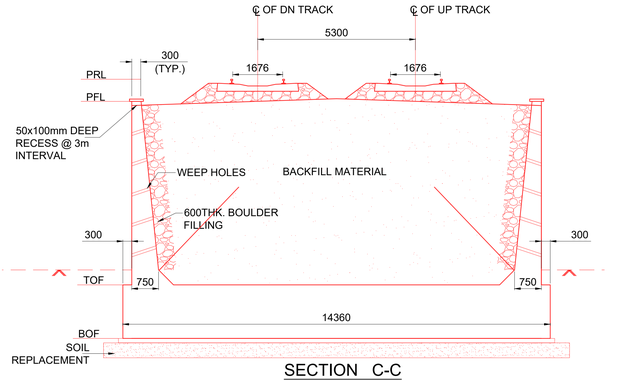
KEY PLAN

SCALE NTS



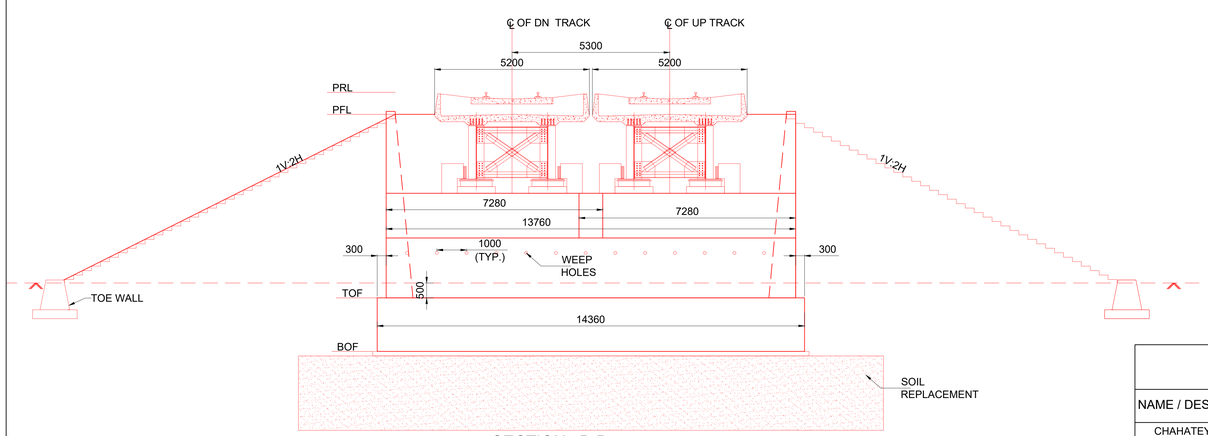
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



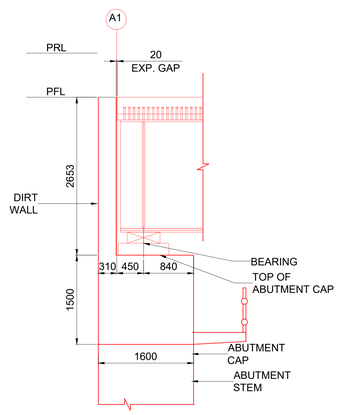
SECTION C-C

SCALE 1:100



SECTION B-B

SCALE 1:100



DETAIL -1

SCALE 1:50

LEGEND

	PROPOSED
	EXISTING

CONSTRUCTION DEPTH

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3) PSC SLEEPER	210 mm
4) BALLAST	350 mm
TOTAL	742 mm

ABBREVIATION

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PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
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PROW	PROPOSED HORC ROW
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   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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10. 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.
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13. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
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16. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
17. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1

C) OTHER NOTES :

1. THE SPECIFICATIONS FOR THE SUPERSTRUCTURE REFER 24.4m COMPOSITE GIRDER RDSO/B-11754/R2 TO B-11754/6.
2. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046(FOR CG) .
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
4. GROUND IMPROVEMENT DEPTH SHALL BE AS PER DETAILED GT INVESTIGATION AND DESIGN REQUIREMENTS.

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

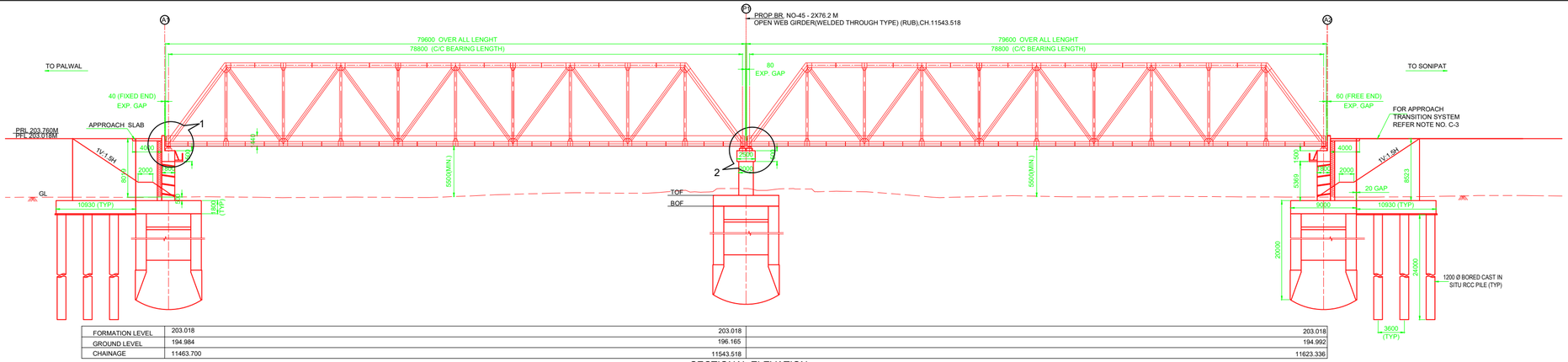
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED IOCL CROSSING BRIDGE NO. 34
1 x24.4m (CG) AT CH.9536.901m

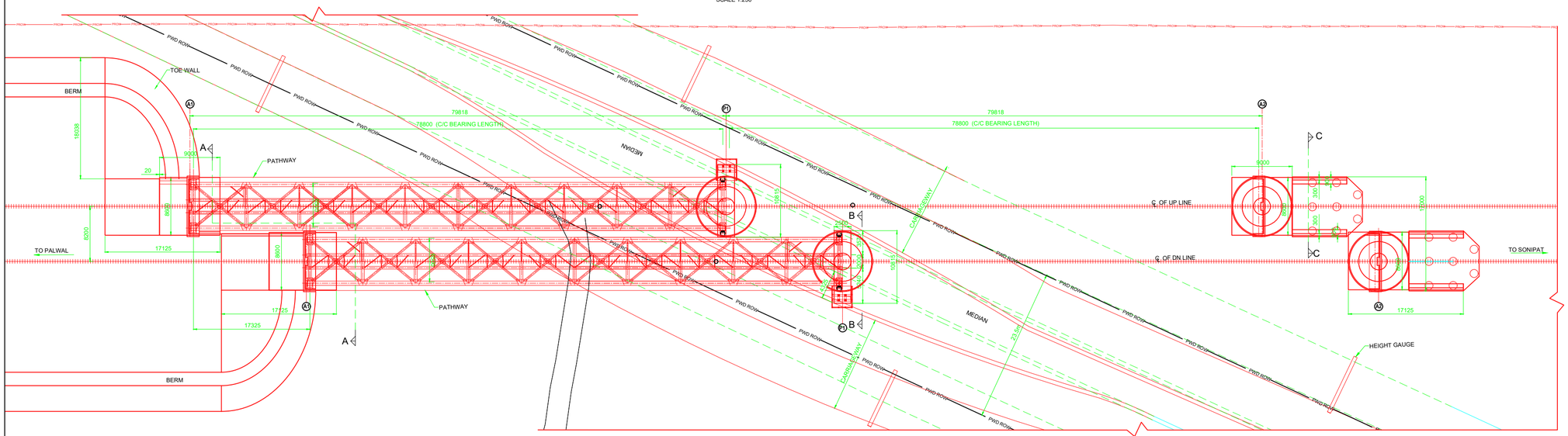
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-BRD-GAD_01034_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

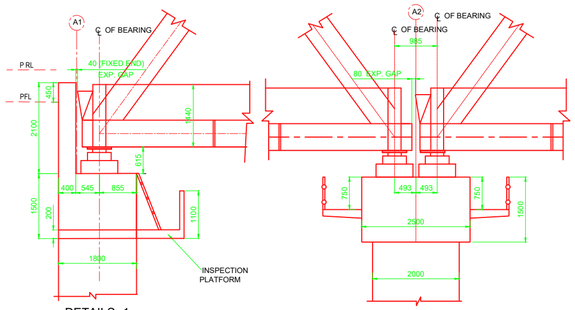


FORMATION LEVEL	203.018	203.018	203.018
GROUND LEVEL	194.984	196.165	194.992
CHAINAGE	11463.700	11543.518	11623.336

SECTIONAL ELEVATION
SCALE 1:250

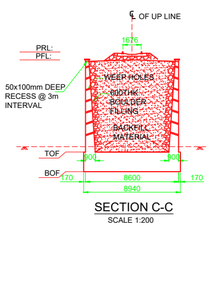


HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 250

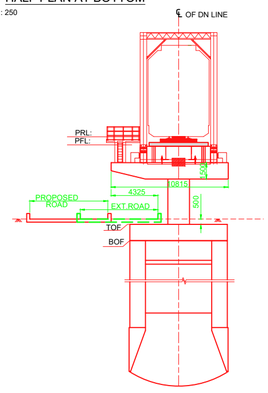


DETAILS -1
SCALE 1:50

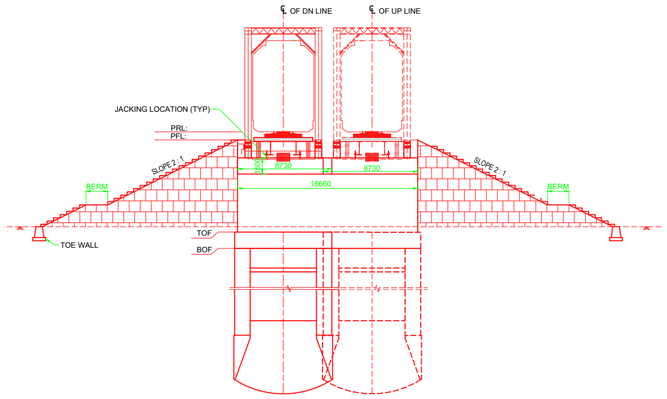
DETAILS -2
SCALE 1:50



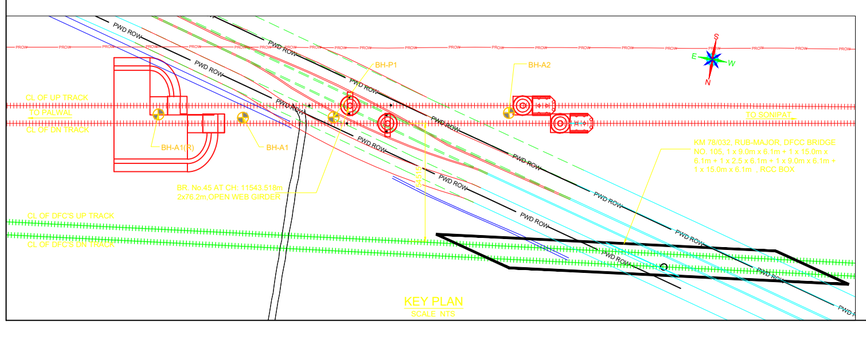
SECTION C-C
SCALE 1:200



SECTION B-B
SCALE 1:200



SECTION A-A (ABUTMENT)
SCALE 1:200



KEY PLAN
SCALE: NTS

LEGEND

	PROPOSED
	EXISTING
	DISMANTEL

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
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7. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK, CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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B) TECHNICAL NOTES :

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   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
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8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
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11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
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18. 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.

C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036.
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-0045(FOR OWG)
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- GENERAL ARRANGEMENT DRAWING
FOR PROP. MAJOR BRIDGE NO.045,
AT CH: 11543.518m 2X76.2 (OPEN WEB GIRDER)
(NH 919 PALWAL SOHNA ROAD)

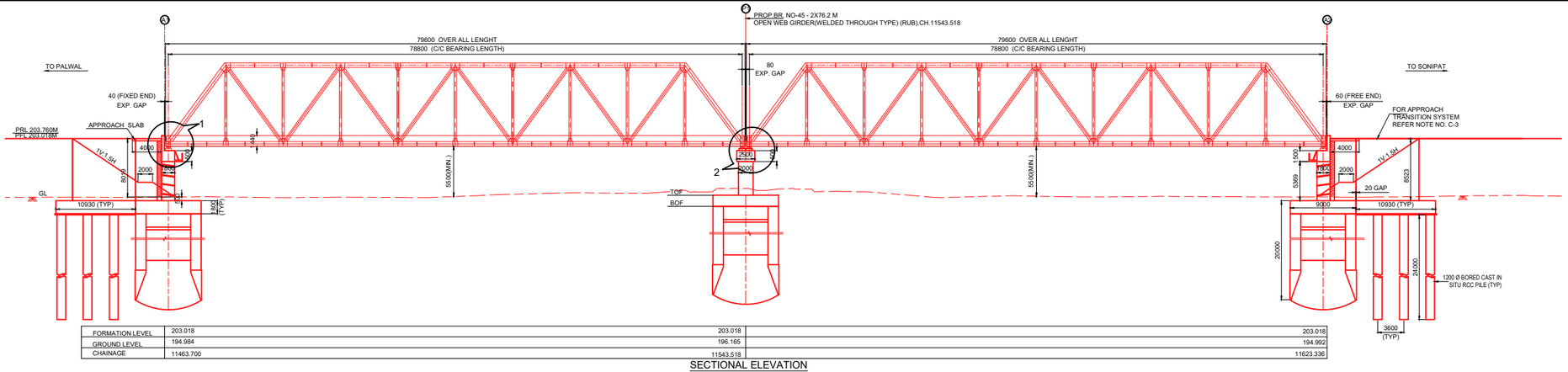
DRG. NO. GC-HRIDC-C5-DRG-BRD-GAD-01045_A0

SHEET NO. 1 OF1

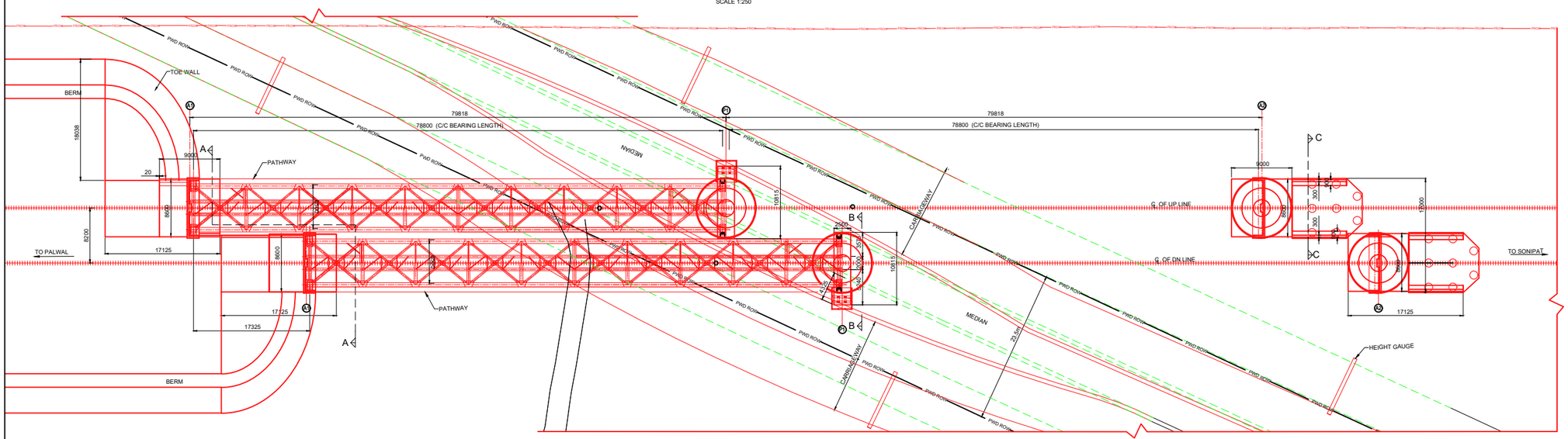
SCALE : AS SHOWN

ISSUE DATE 23-08-2023

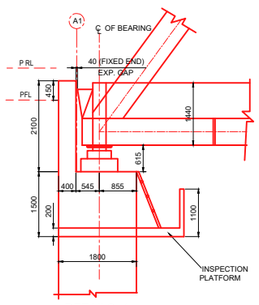
REVISED DATE



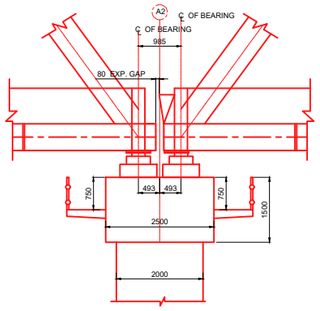
SECTIONAL ELEVATION
SCALE 1:250



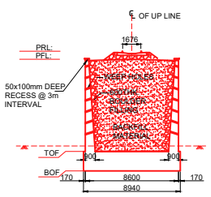
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 250



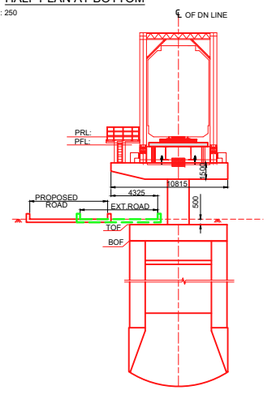
DETAILS -1
SCALE 1:50



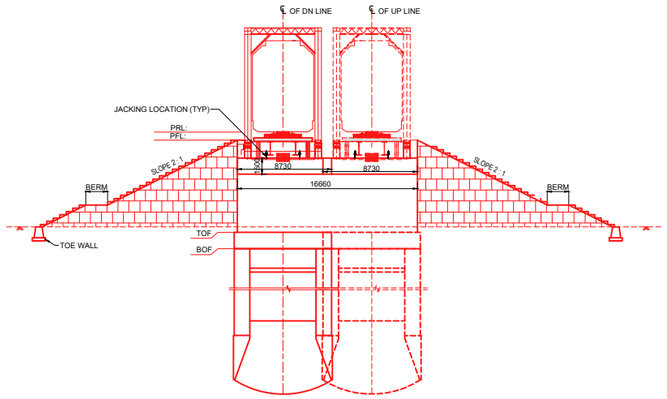
DETAILS -2
SCALE 1:50



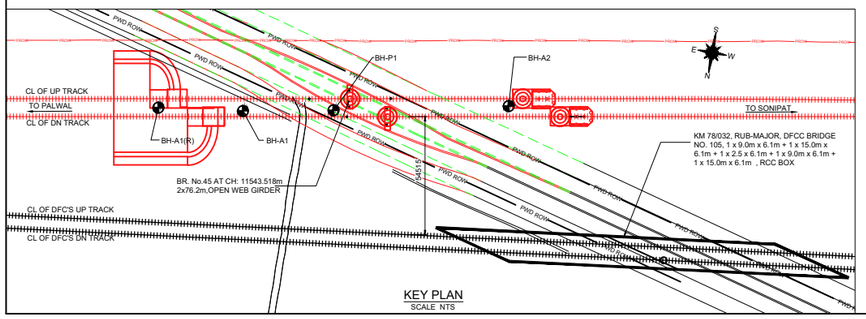
SCALE 1:200



SECTION B-B
SCALE 1:200



SECTION A-A (ABUTMENT)
SCALE 1:200



KEY PLAN
SCALE NTS

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC, REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG) AND 25T (RDSO STANDARD PSC U SLAB), SUB STRUCTURE-32.5T- LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT.
13. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
14. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
15. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
16. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1
17. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
18. 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.

C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036.
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-0045(FOR OWG)
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

	PROPOSED
	EXISTING
	DISMANTEL

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

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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

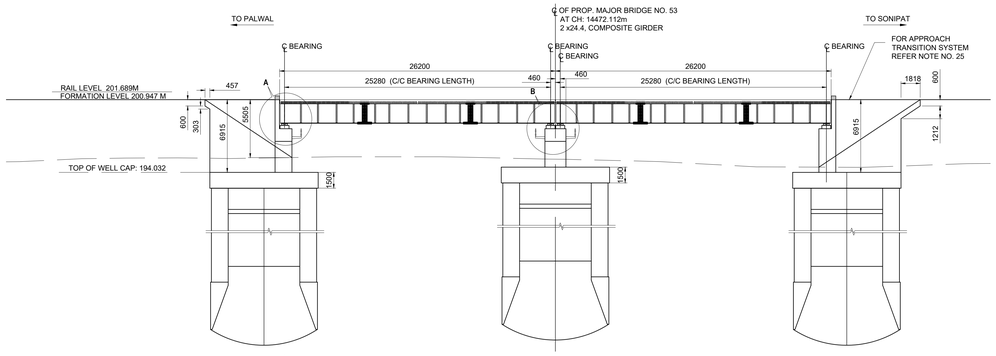
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 PROP. MAJOR BRIDGE NO.045,
AT CH: 11543.518m 2X76.2 (OPEN WEB GIRDER)
(NH 919 PALWAL SOHNA ROAD)

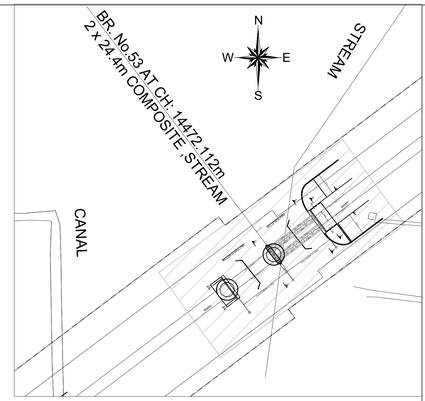
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01045_A0	1 OF1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	23-08-2023	



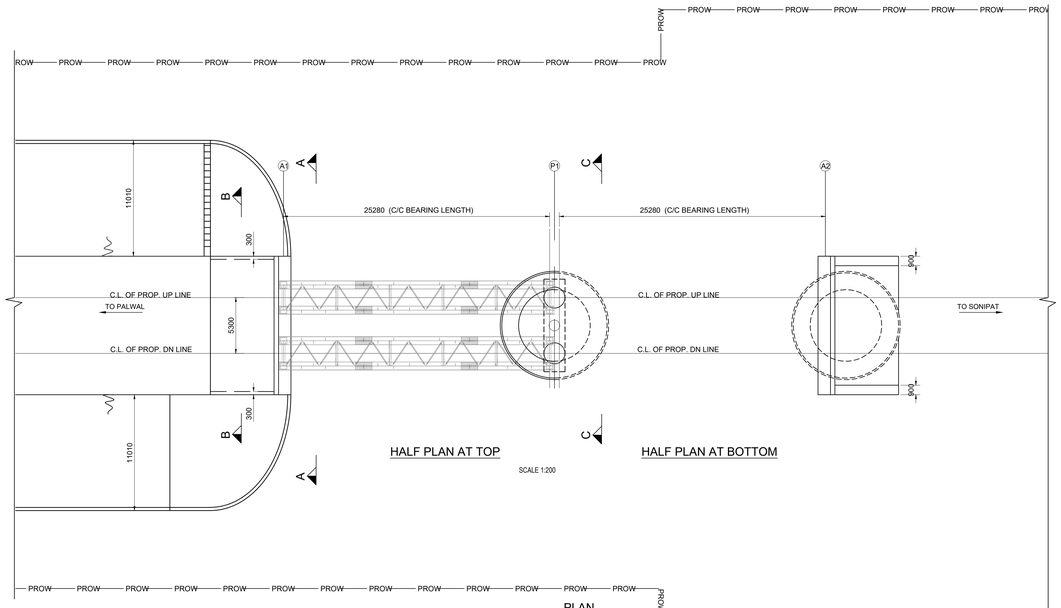
FORMATION LEVEL	200.947	200.947	200.947
GROUND LEVEL	195.402	195.520	194.915
CHAINAGE	14446.452	14472.112	14497.772

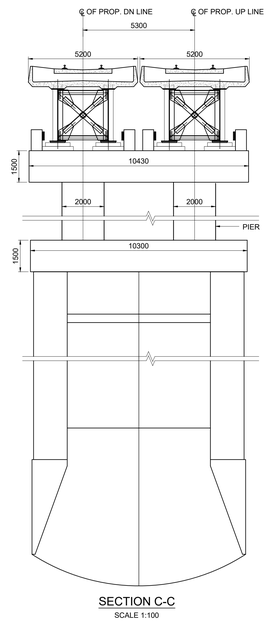
SECTIONAL ELEVATION
SCALE 1:200



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 (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 WALLWEARING COURSE(WC)----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BACK FILL BEHIND RETURN WALL/WING WALL SHALL BE AS PER CL 7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL/WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL 7.5.2. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.CONFORMING TO IS-3117.
15. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
16. 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.
17. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-11751/R1 TO 11751/8.
18. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
19. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
20. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
21. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
22. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046 (FOR CG).
23. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
24. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.





SECTION C-C
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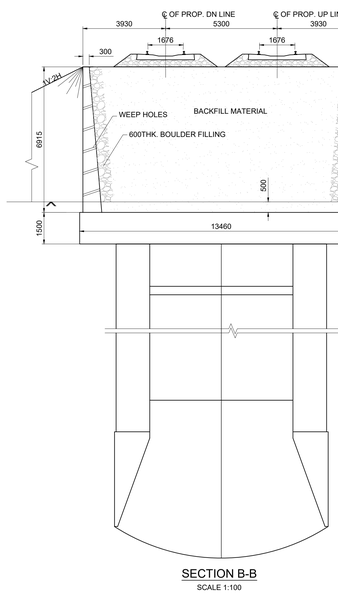

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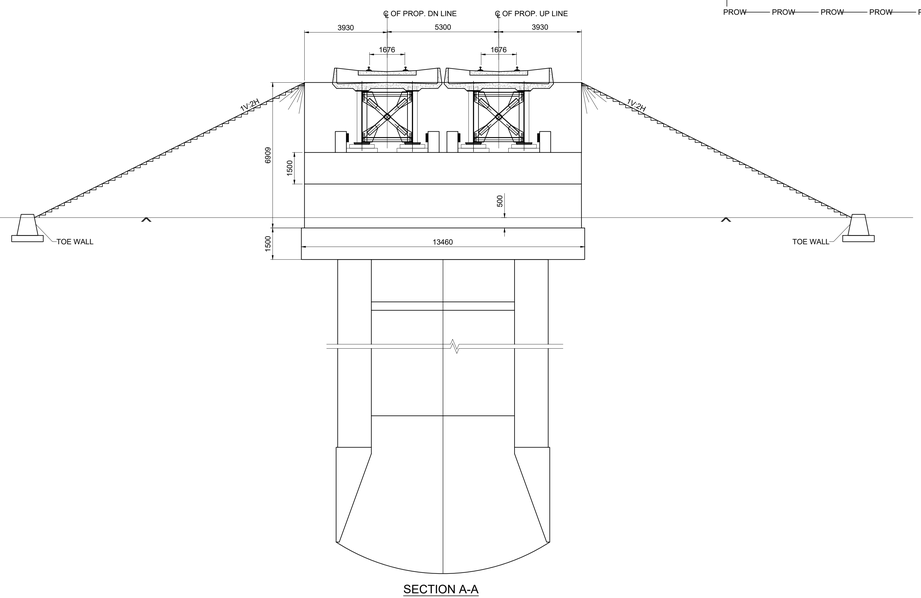
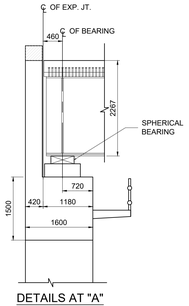
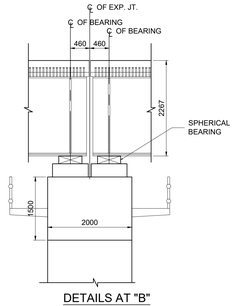


SECTION A-A
SCALE 1:100



DETAILS AT "A"
SCALE 1:50



DETAILS AT "B"
SCALE 1:50

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

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

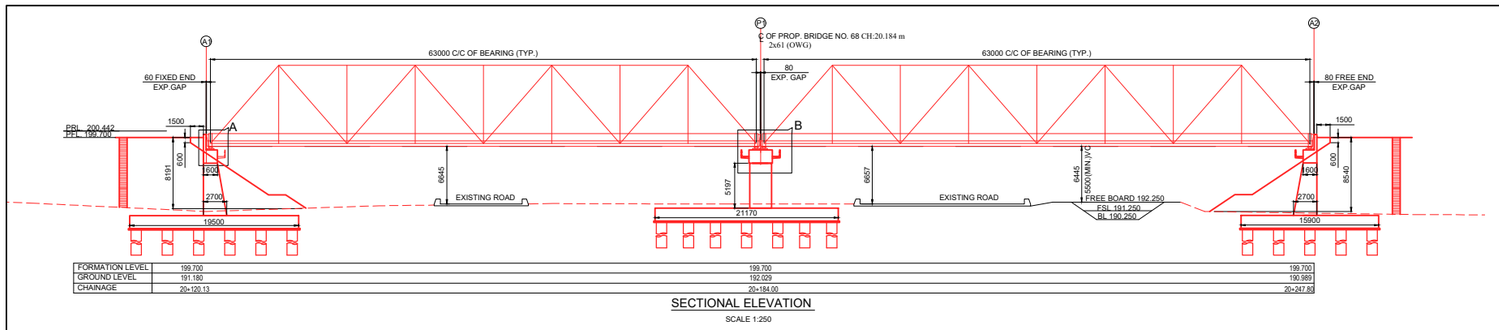
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR STREAM BRIDGE NO.53
2x24.4 CG AT CH: 14472.112m

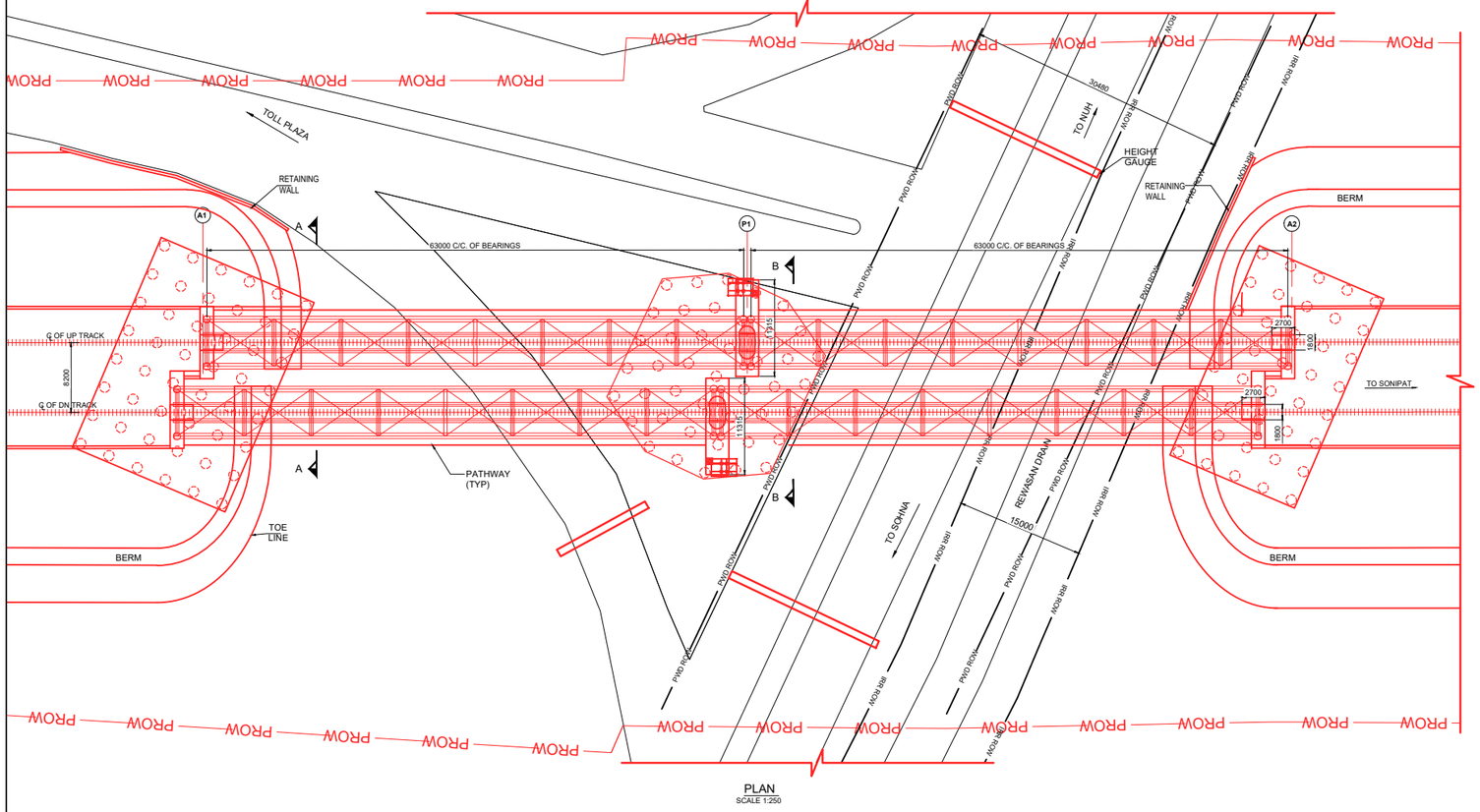
DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-BRD-GAD-01053_A2	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	10-01-2023



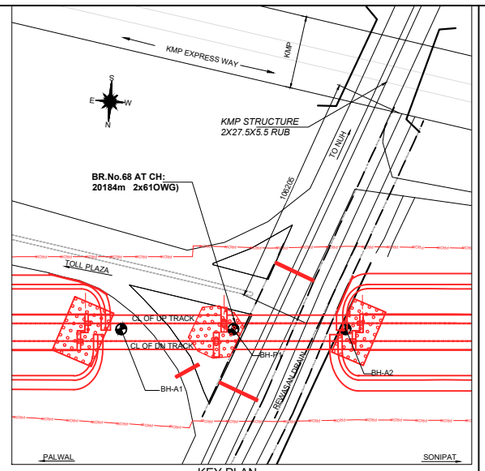
SECTIONAL ELEVATION

SCALE 1:250



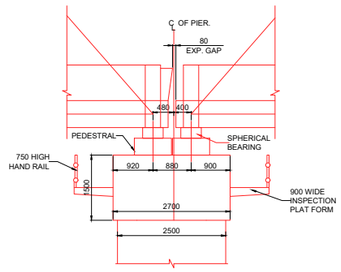
PLAN

SCALE 1:250



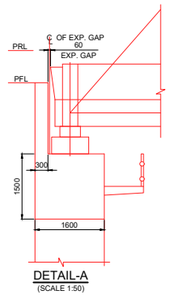
KEY PLAN

SCALE NTS



DETAIL-B

(SCALE 1:50)



DETAIL-A

(SCALE 1:50)

LEGEND

	PROPOSED
	EXISTING

NOTES :

A) GENERAL NOTES

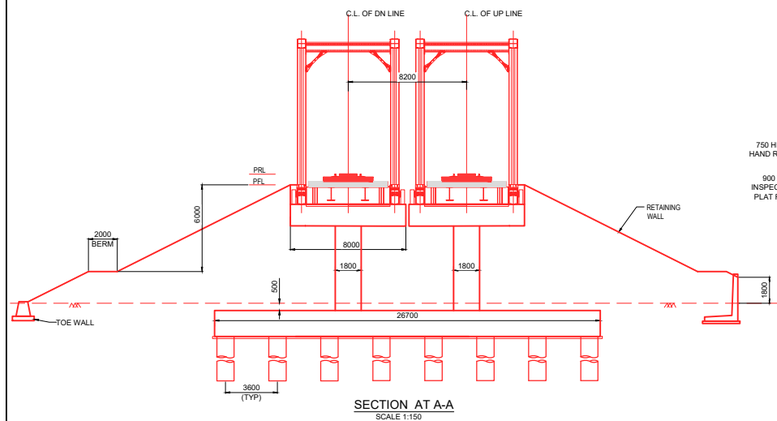
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-25T SUB STRUCTURE-32.5T-LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT.
13. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
14. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
15. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
16. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1
17. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
18. 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.

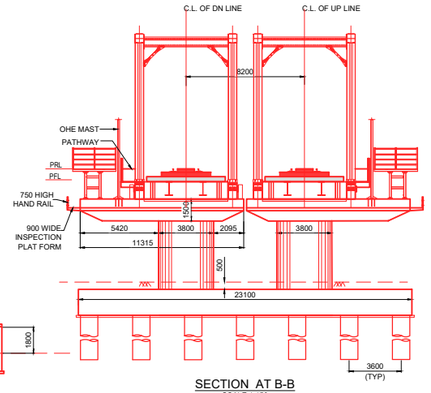
C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-0045(FOR OWG) .
3. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.



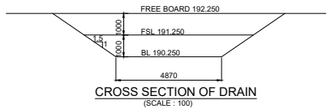
SECTION AT A-A

SCALE 1:150



SECTION AT B-B

SCALE 1:150



CROSS SECTION OF DRAIN

(SCALE : 100)

HYDRAULIC DATA OF DRAIN

1	NAME OF CANAL	REWASAN DRAIN
2	RD	20185/6670
3	BED LEVEL (BL)	190.250m
4	FULL SUPPLY LEVEL (FSL)	191.250m
5	FREE BOARD	192.250m
6	DISCHARGE	90 cusec
7	BED WIDTH	4.87m
8	FSD	1.00 m
9	SIDE SLOPE	1.5:1
10	W S SLOPE	0.15%
11	VELOCITY	0.048m/sec
12	ROW	49.5
13	FREE BOARD	192.25

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ 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.

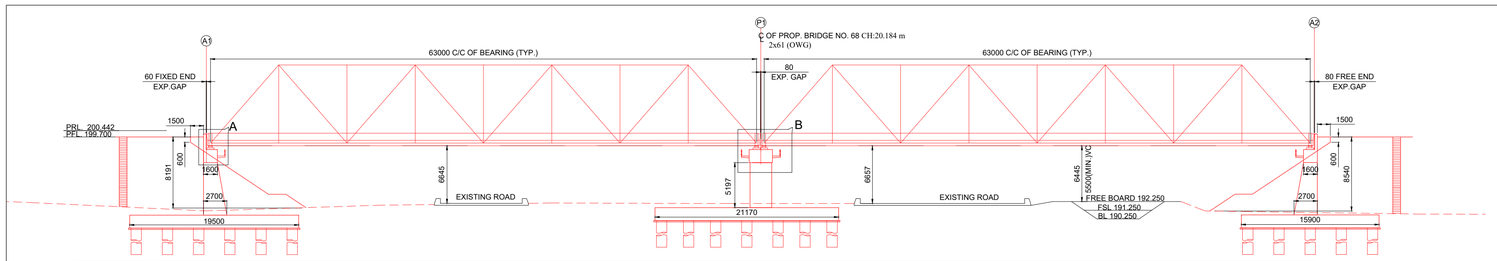
RITES THE INFRASTRUCTURE PEOPLE

SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROP. MAJOR RUB NO.68 2x61 (OWG) AT CH: 20184m. (CANAL CROSSING REWASAN DRAIN RD 6670) NH-248A

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01068_A0	1 OF 1

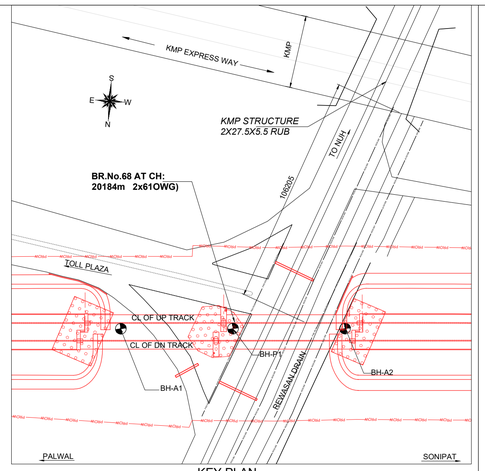
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



FORMATION LEVEL	199.700	199.700	199.700
GROUND LEVEL	191.180	192.029	190.989
CHAINAGE	20+120.13	20+184.00	20+247.80

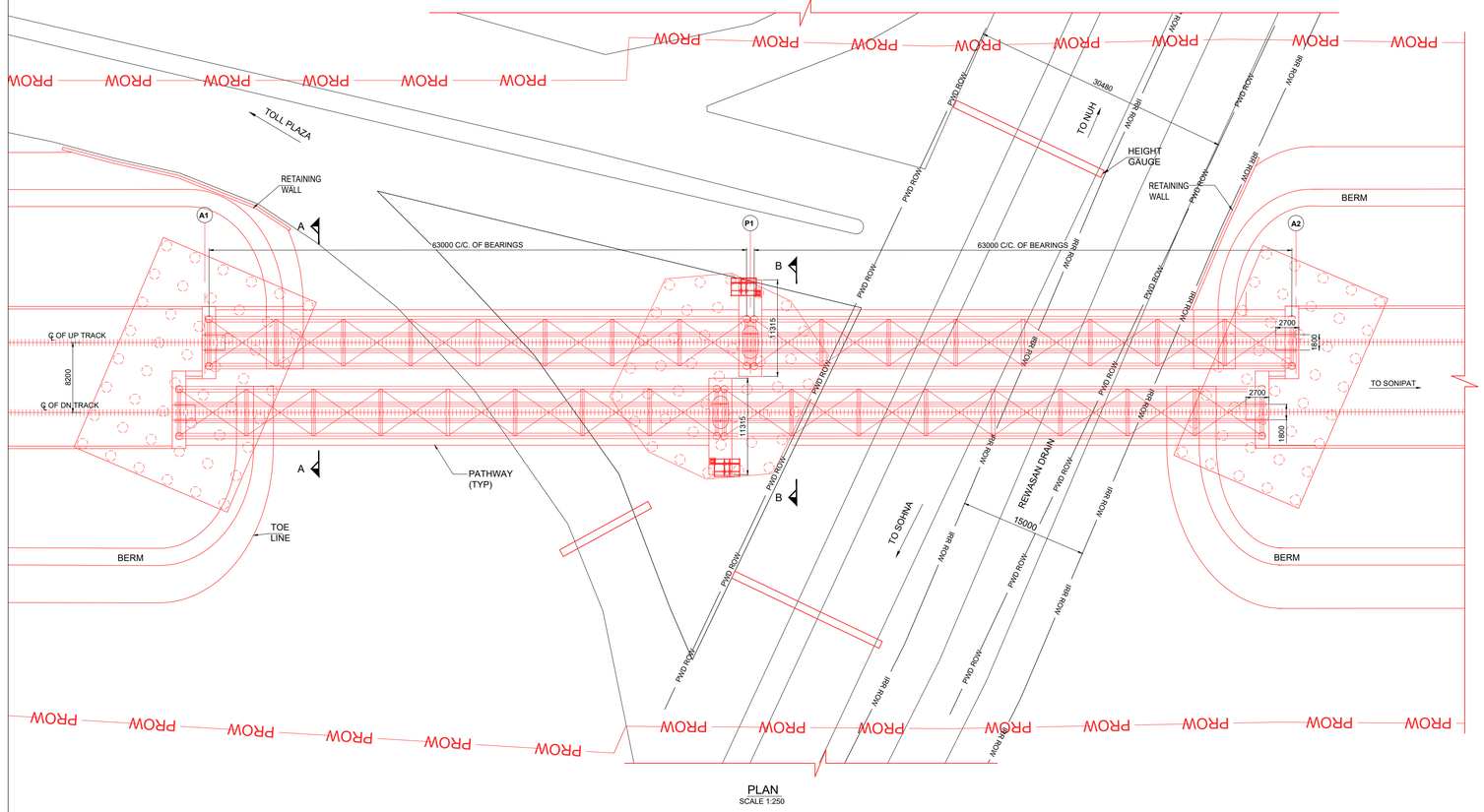
SECTIONAL ELEVATION

SCALE 1:250



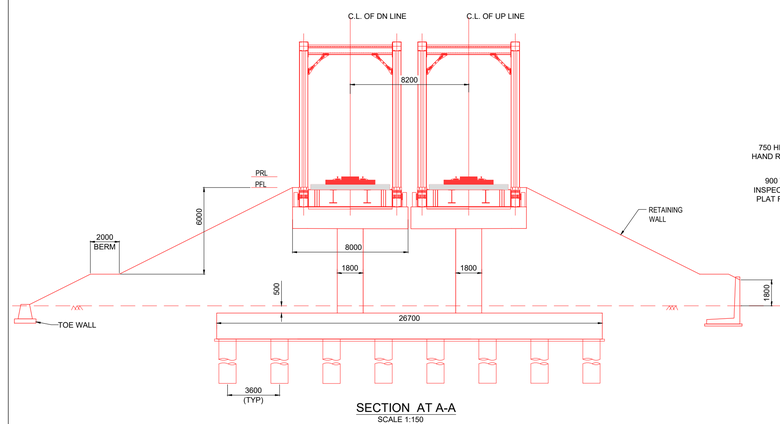
KEY PLAN

SCALE NTS



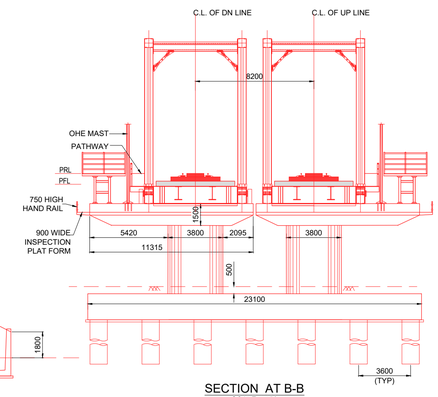
PLAN

SCALE 1:250



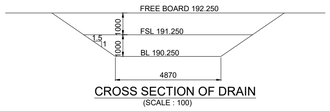
SECTION AT A-A

SCALE 1:150



SECTION AT B-B

SCALE 1:150



CROSS SECTION OF DRAIN

(SCALE : 100)

HYDRAULIC DATA OF DRAIN

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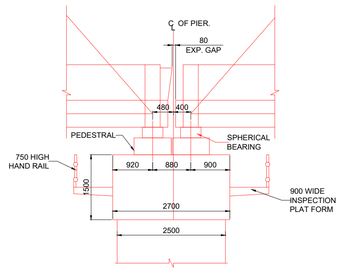
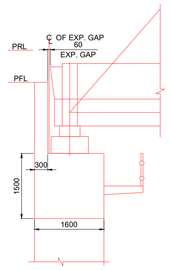
10	W S SLOPE	0.15%
11	VELOCITY	0.048m/sec
12	ROW	49.5
13	FREE BOARD	192.25



DETAIL-B

(SCALE 1:50)



DETAIL-A

(SCALE 1:50)

LEGEND

	PROPOSED
	EXISTING

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

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
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THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
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NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY 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. ENGINEER IN CHARGE SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. ENGINEER IN CHARGE SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (OWG) SUB STRUCTURE-32.5T- LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
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6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. 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
8. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE SIDES ON BOTH ENDS OF THE BRIDGE AFTER PROTECTION WORK.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
10. 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.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT.
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15. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
16. DETAIL OF TOE WALL SHALL BE PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-014_A1
17. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
18. 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.

C) OTHER NOTES :

1. THE CONTRACTOR SHALL DESIGN OWG (WITH SLAB) FOR 25t LOADING AS PER SKETCH NO. GC-HRIDC-SK-GEN-036
2. PATHWAY SHALL BE PROVIDED AS PER ARRANGEMENT GIVEN IN RDSO DWG. NO. CBS-0045(FOR OWG) .
3. RCC LINING SHALL BE CONSTRUCTED FOR CANAL UPTO ROW OF HORC.

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/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL		MOHD. ISHAK EXECUTIVE/CIVIL	
PUSHPENDRA KR.SINGH SDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROP. MAJOR RUB NO.68 2x61 (OWG) AT CH: 20184m. (CANAL CROSSING REWASAN DRAIN RD 6670) NH-248A

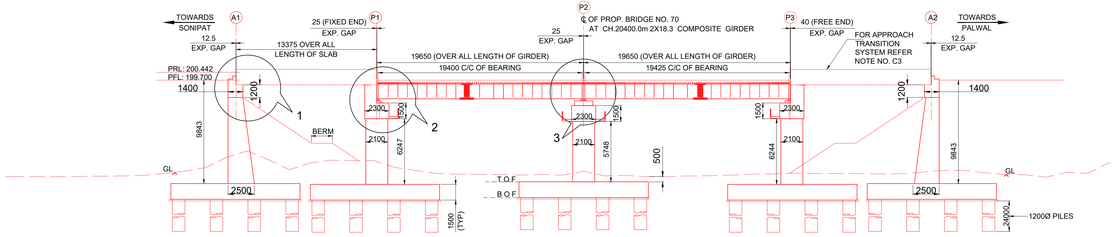
DRG. NO. GC-HRIDC-C5-DRG-BRD-GAD-01068_A0

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 10-10-2023

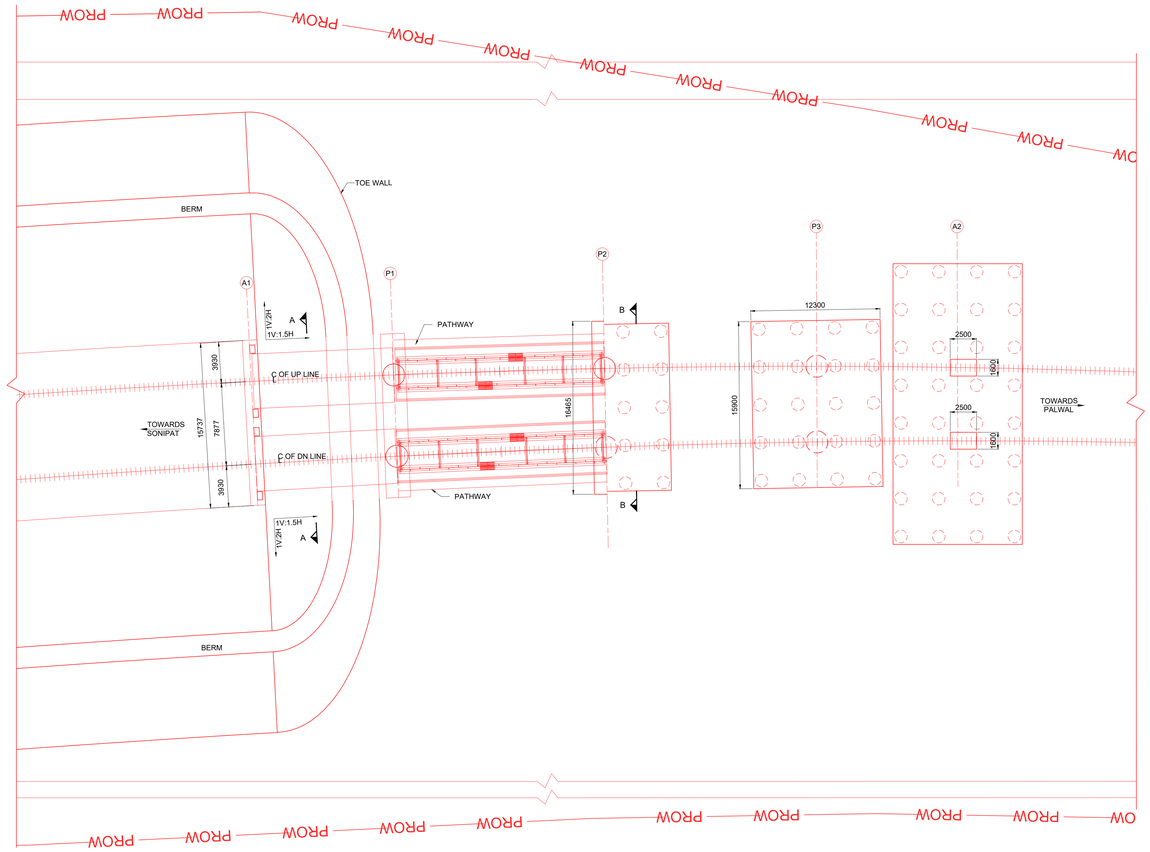
REVISED DATE



FORMATION LEVEL	199.700	199.700	199.700	199.700	199.700
GROUND LEVEL	198.857	190.657	191.025	190.586	190.456
CHAINAGE	20366.60	20380	20400	20420	20433.40

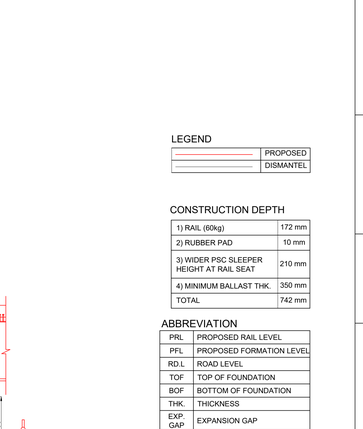
SECTIONAL ELEVATION

SCALE 1:200



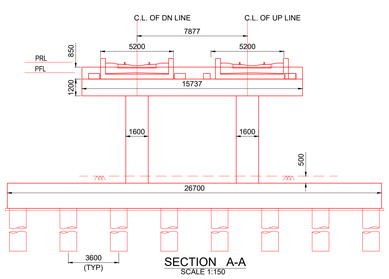
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



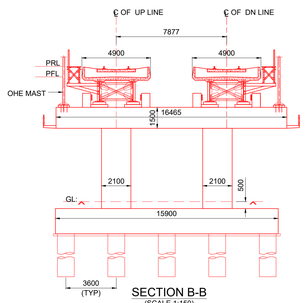
KEY PLAN

SCALE NTS



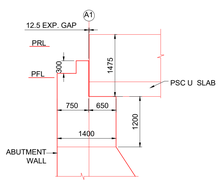
SECTION A-A

SCALE 1:150



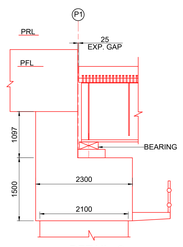
SECTION B-B

(SCALE 1:150)



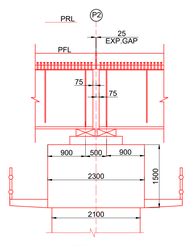
DETAIL -1

SCALE 1:50



DETAIL -2

SCALE 1:50



DETAIL -3

SCALE 1:50

LEGEND

	PROPOSED
	DISMANTEL

CONSTRUCTION DEPTH

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4) MINIMUM BALLAST THK.	350 mm
TOTAL	742 mm

ABBREVIATION

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PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
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12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT.
13. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
14. SIZE, TYPE OF FOUNDATION & GROUND IMPROVEMENT DETAILS SHOWN ARE TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
15. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.

C) OTHER NOTES :

1. FOR SUPERSTRUCTURE DETAIL FOLLOW RDSO DWG. NO: RDSO/B-11753/R1 TO B-11753/7R1 (FOR CG) & RDSO 10281,10281/1 AND 10281/2(FOR PSC U SLAB).
2. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045(FOR OWG) .
3. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	SHIV OM DWIVEDI CPM/SOUTH	Shivom
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANK DGM/CIVIL	
REETU PATIAL CDE/ CIVIL	Reetu	MOHD. ISHAK EXECUTIVE/CIVIL	Mohd Ishak
PUSHPENDRA KR.SINGH SDE/ CIVIL	P.K. Singh		

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

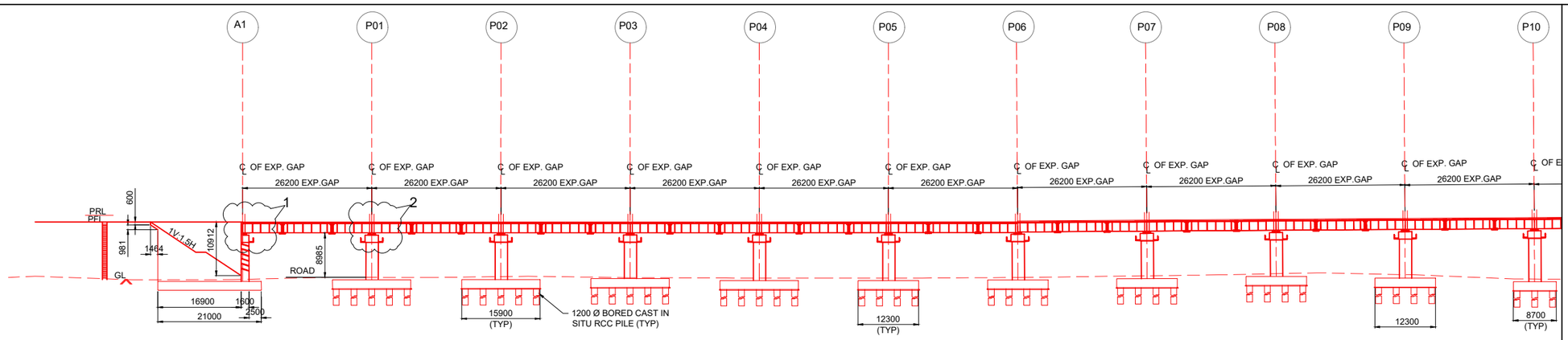
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROP. MAJOR BRIDGE NO.69 12.2+2X18.3+12.2 (CG+PSC U SLAB) AT CH: 20400m

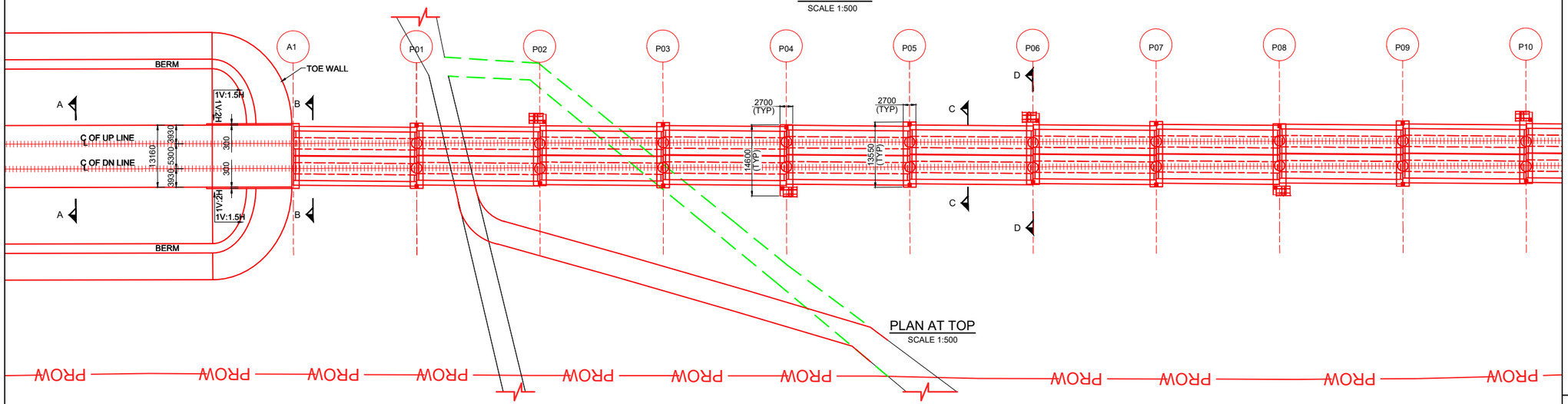
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01069_A0	1 OF1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	

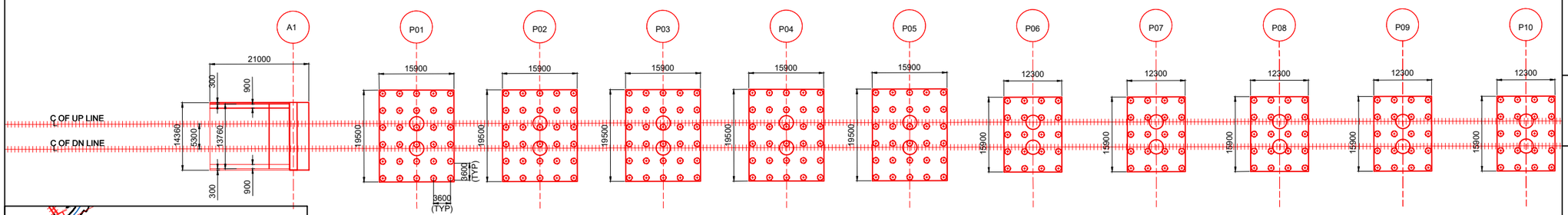


FORMATION LEVEL	202.557	202.557	202.557	202.557	202.557	202.645	202.817	202.989	203.161	203.334	203.506
GROUND LEVEL	191.203	191.606	191.757	191.551	191.466	191.458	191.584	191.825	192.364	192.156	191.258
CHAINAGE	20942.473	20968.673	20994.873	21021.073	21047.273	21073.473	21099.673	21125.873	21152.073	21178.273	21204.473

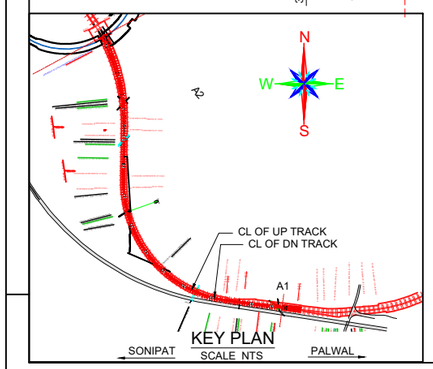
ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500



KEY PLAN
SCALE NTS

LEGEND

	PROPOSED
	EXISTING
	DISMANTEL

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

ABBREVIATION

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
RD.L	ROAD LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
THK.	THICKNESS
EXP. GAP	EXPANSION GAP
CC	CEMENT CONCRETE
TYP.	TYPICAL
GL	GROUND LEVEL
PROW	PROPOSED HORC ROW
ROW	ROAD ROW

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
4. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
5. THE EXISTING DETAILS ARE AS PER PRELIMINARY SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION
6. THE CONTRACTOR SHALL VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. THE CONTRACTOR SHALL ENSURE THE SAFETY OF DFC TRACK AND STRUCTURE DURING EXECUTION OF WORK.
8. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE/OFC DURING EXECUTION OF WORK. CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/ (Sig.)/ NR, DFCCI ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
11. DETAILED GAD SHALL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.

B) TECHNICAL NOTES :

1. STANDARD OF LOADING :- SUPER STRUCTURE- 25T, SUB STRUCTURE-32.5T-LOADING..
2. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   a. IRS BRIDGE RULE
   b. IRS CONCRETE BRIDGE CODE
   c. IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   d. IS 2911 PART-1 SECTION-2.
3. SEISMIC ZONE- IV
4. EXPOSURE CONDITION-MODERATE.
5. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
   GRADE OF CONCRETE :
   a. ALL RCC /WEARING COURSE : M:35/DETAILED DESIGN DRG.
   b. LEVELING COURSE/PCC : M:20/DETAILED DESIGN DRG.
6. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786.
7. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, ON APPROACHES OF VIADUCT ABUTMENT A1 SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
8. INSPECTION STEPS SHALL BE PROVIDED ON BOTH SIDES OF ABUTMENT A1 OF THE VIADUCT.
9. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL. .
10. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFORMING TO IS: 3117.
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE. ANGLE OF INTERNAL FRICTION OF BACKFILL SHALL NOT BE LESS THAN 33 °.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT.
13. THE STRUCTURAL DIMENSIONS AND SIZES SHOWN ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
14. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
15. VIADUCT SHALL BE PROVIDED WITH LWR & BLT AS PER DETAILED DESIGN.
16. C-4 CONTRACTOR SHALL CONSTRUCT ABUTMENT A-2 OF VIADUCT AND HANDOVER THE SITE TO C-5 CONTRACTOR FOR CONSTRUCTION OF SUPERSTRUCTURE. C-5 CONTRACTOR SHALL PROVIDE THE DESIGN PARAMETERS FOR CONSTRUCTION OF ABUTMENT OF A-2 TO C-4 CONTRACTOR.
17. SPAN ARRANGEMENT BETWEEN P149 AND ABUTMENT A2 ARE NON-STANDARD AND WILL BE FINALISED AFTER FINALISATION OF EXISTING ROCK PROFILE AND AVAILABILITY OF SEATING WIDTH FOR ABUTMENT A2.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ CIVIL	P.K.Singh		

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 VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

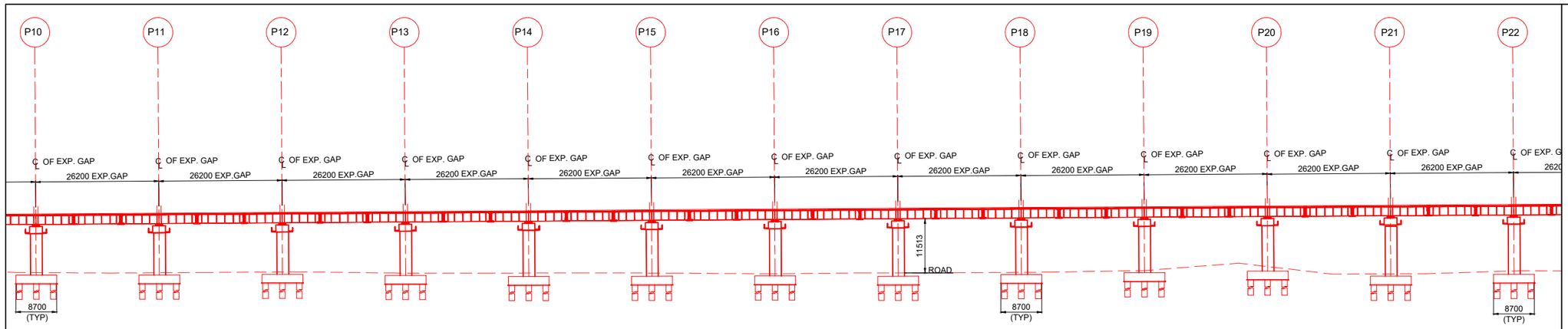
DRG. NO. GC-HRIDC-C5-DRG-BRD-GAD-01070_A0

SHEET NO. 1 OF 15

SCALE : AS SHOWN

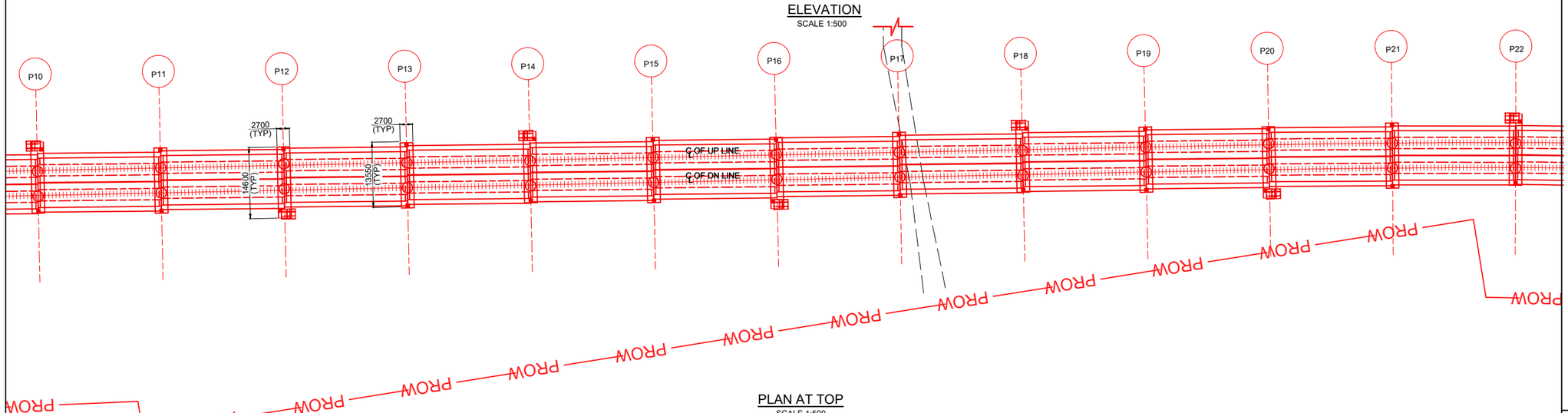
ISSUE DATE 12-10-2023

REVISED DATE

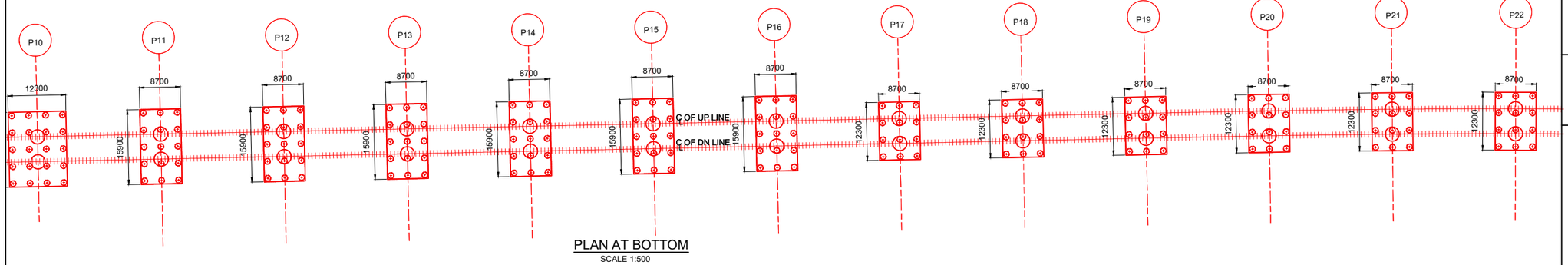


203.506	203.679	203.851	204.024	204.196	204.368	204.541	204.709	204.868	205.027	205.186	205.344	205.503
191.258	191.223	191.393	191.164	191.168	191.163	191.017	191.198	191.314	191.713	192.508	190.995	191.611
21204.473	21230.673	21256.873	21283.073	21309.273	21335.473	21361.673	21387.873	21414.073	21440.273	21466.473	21492.673	21518.873

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500

NOTES :

A) GENERAL NOTES

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3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. : GC-HRIDC-C5-DRG-BRD-GAD-01070_A0(1 OF 15).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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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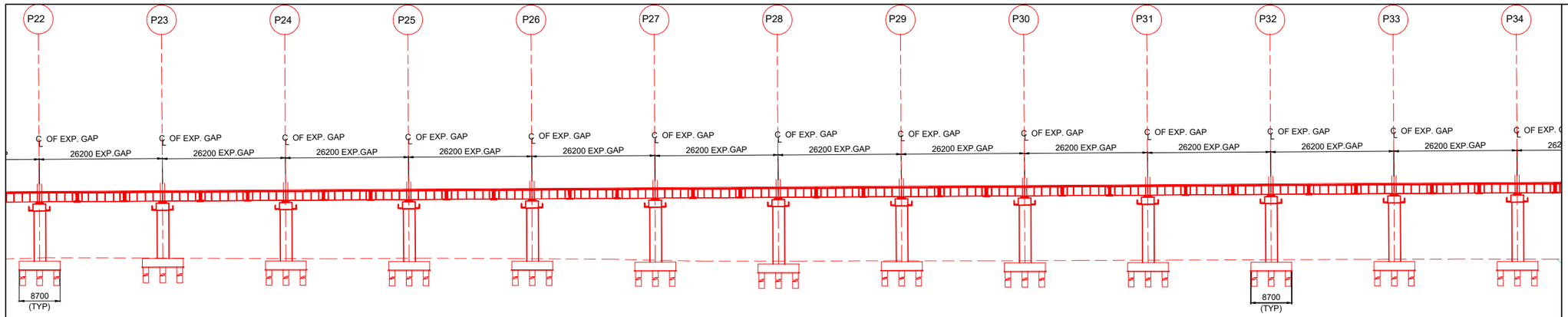
RITES Limited in consortium with SMEC International Pty. Ltd.

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

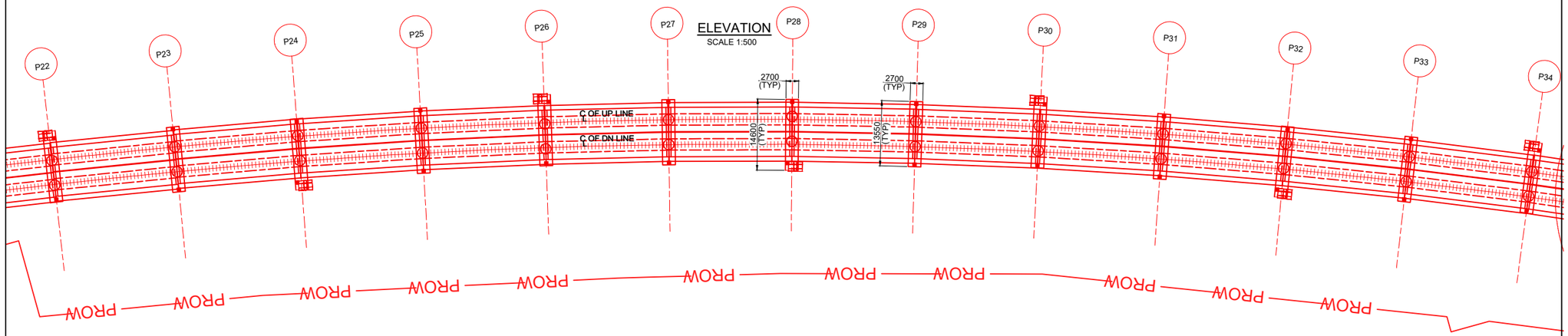
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

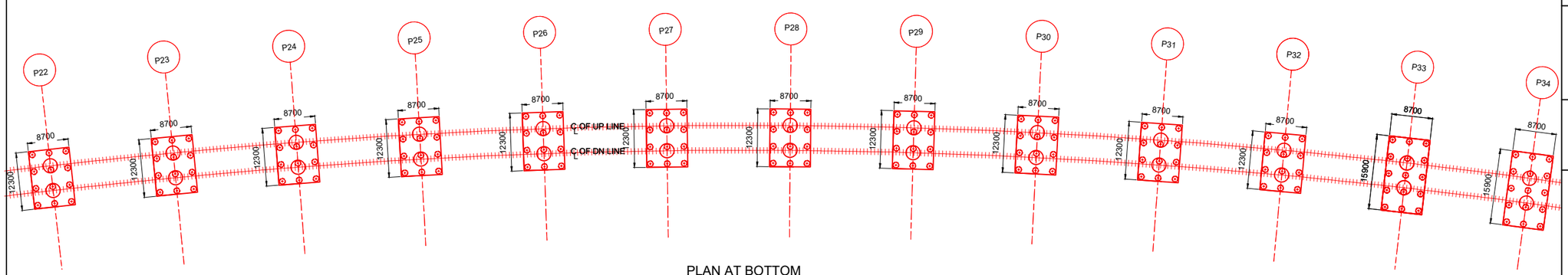
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	2 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



205.503	205.662	205.821	205.980	206.138	206.297	206.456	206.615	206.773	206.932	207.091	207.250	207.409
191.611	191.560	191.452	191.539	191.416	191.108	190.899	191.013	191.008	191.117	191.226	191.312	191.341
21518.873	21545.073	21571.273	21597.473	21623.673	21649.873	21676.073	21702.273	21728.473	21754.673	21780.873	21807.073	21833.273





PLAN AT BOTTOM
SCALE 1:500

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GC/HORC		HRIDC	
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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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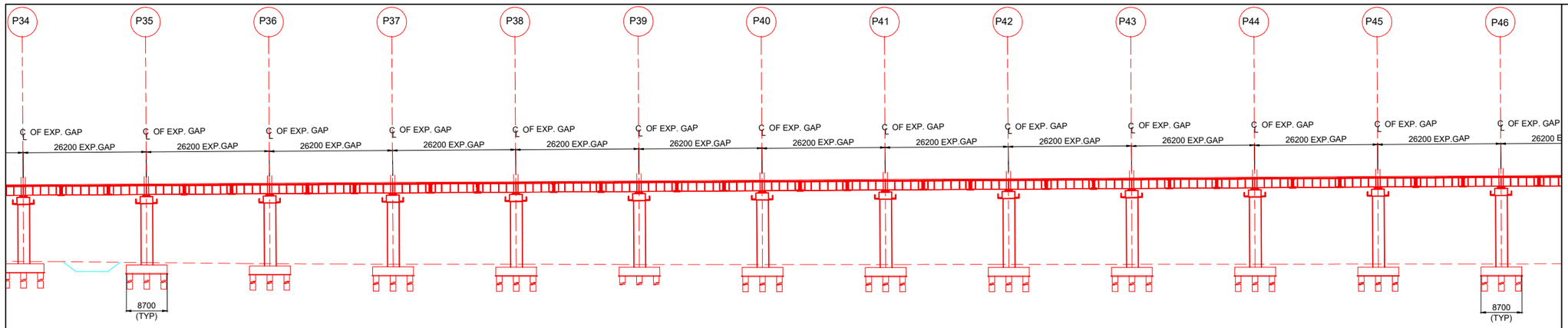
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

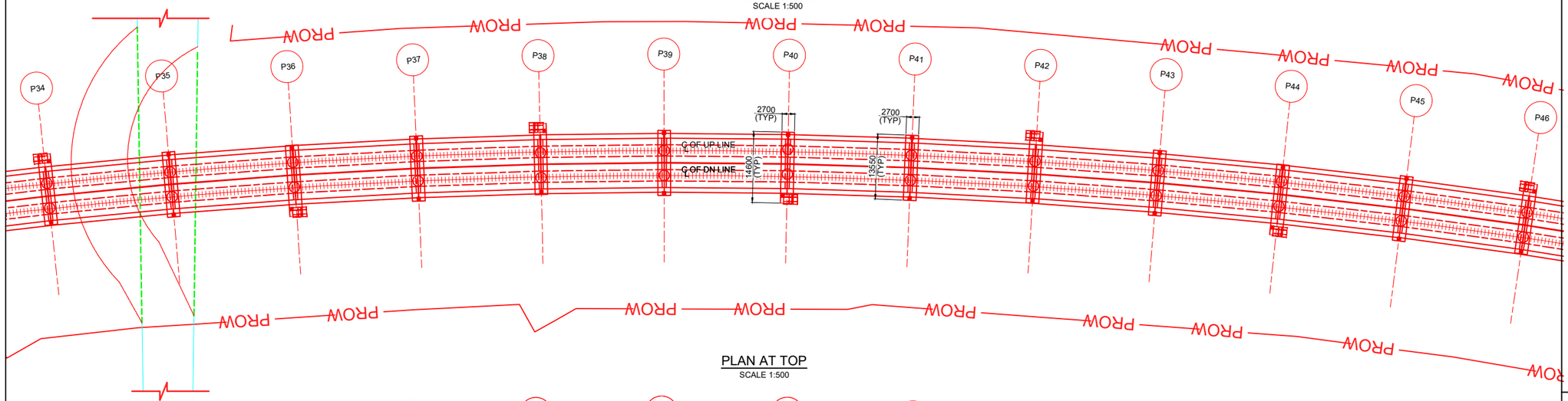
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	3 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

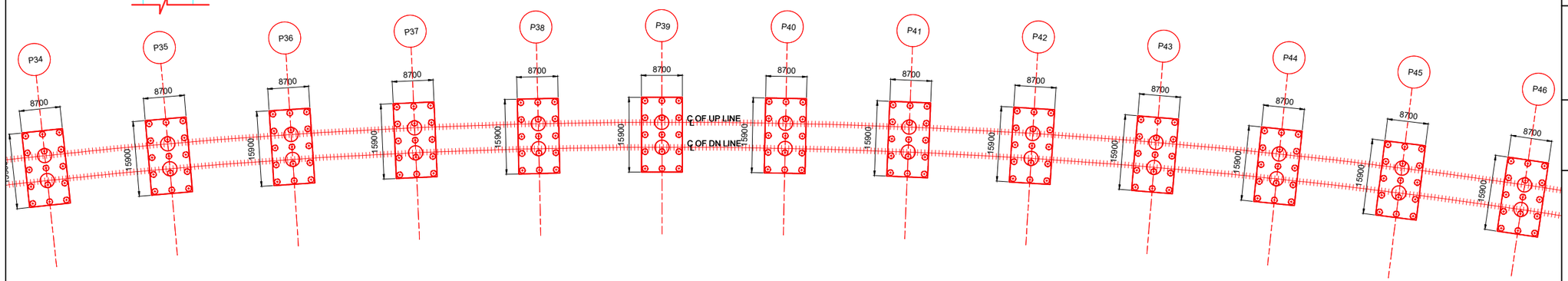


409	207.567	207.726	207.885	208.044	208.202	208.361	208.520	208.679	208.838	208.996	209.155	209.314
341	191.108	190.876	190.778	190.767	190.704	190.694	190.700	190.724	190.748	190.774	190.800	190.827
273	21859.473	21885.673	21911.873	21938.073	21964.273	21990.473	22016.673	22042.873	22069.073	22095.273	22121.473	22147.673

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500

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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
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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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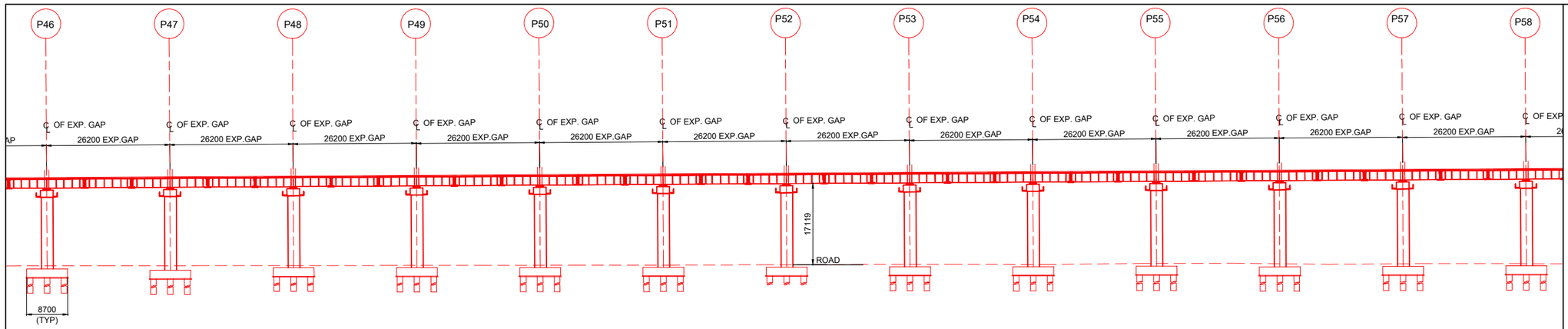
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

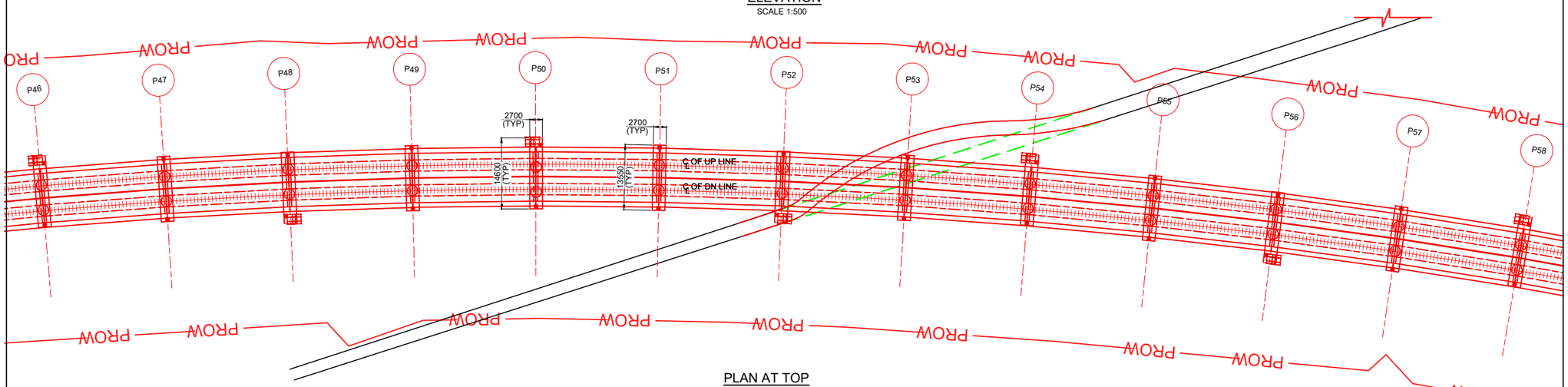
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	4 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

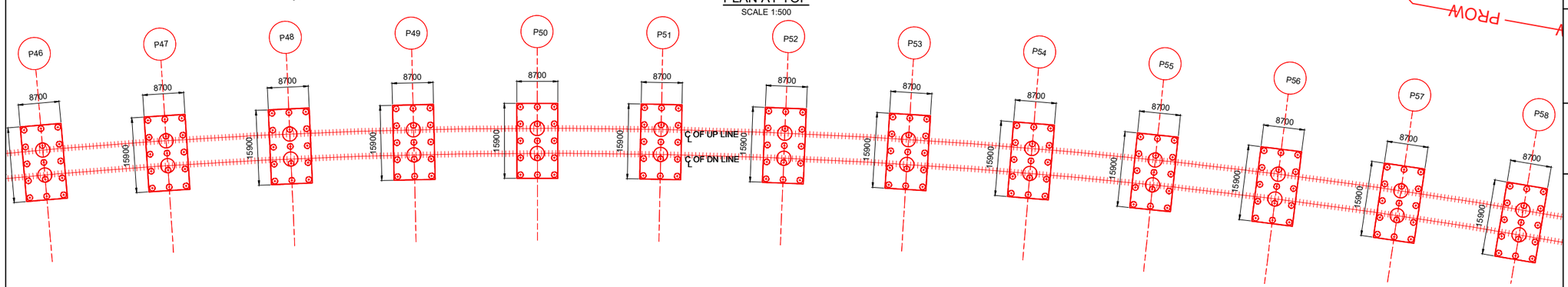


209.314	209.473	209.632	209.790	209.949	210.108	210.267	210.425	210.584	210.743	210.902	211.061	211.219
190.827	190.856	190.885	190.916	190.947	190.982	191.068	191.134	191.099	191.339	191.265	191.272	191.284
22147.673	22173.873	22200.073	22226.273	22252.473	22278.673	22304.873	22331.073	22357.273	22383.473	22409.673	22435.873	22462.073

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
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PROJECT:
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CLIENT:
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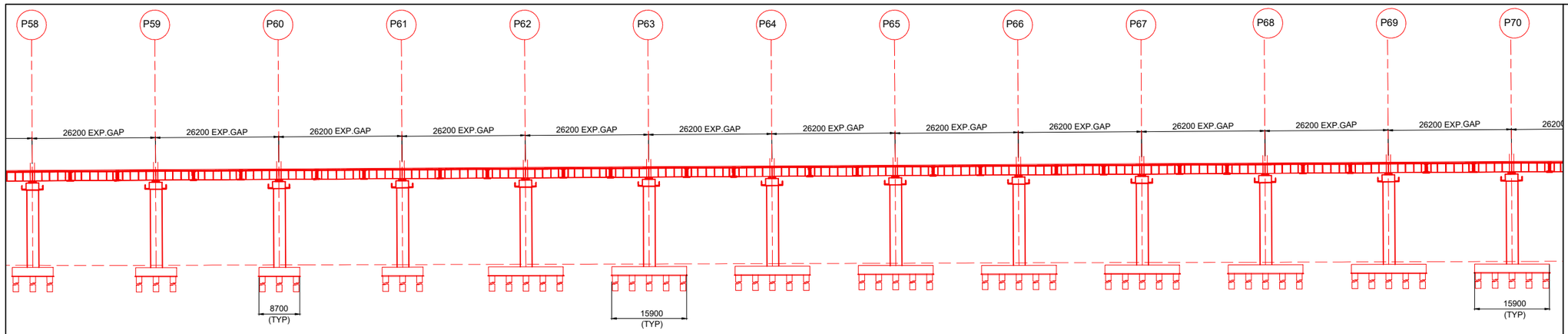
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

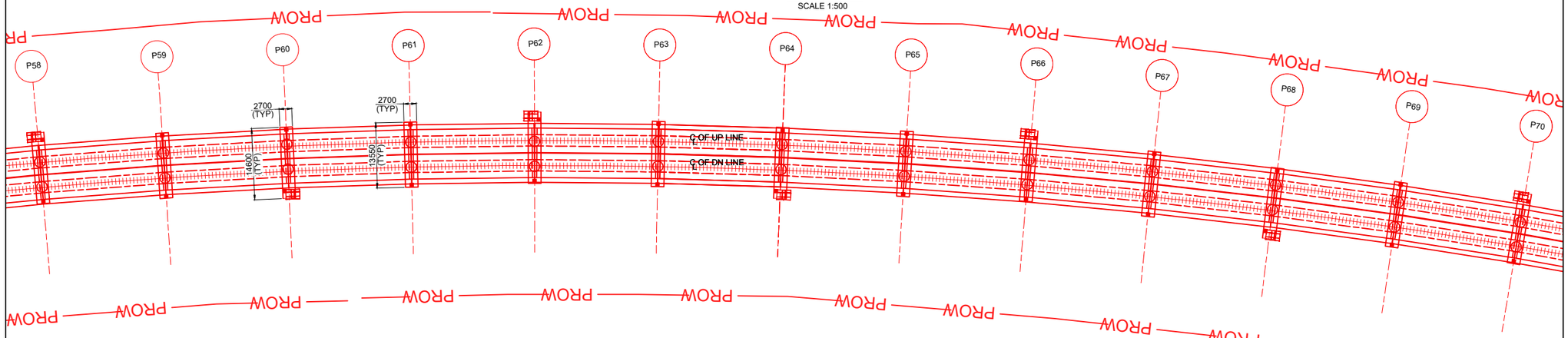
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	5 OF 15

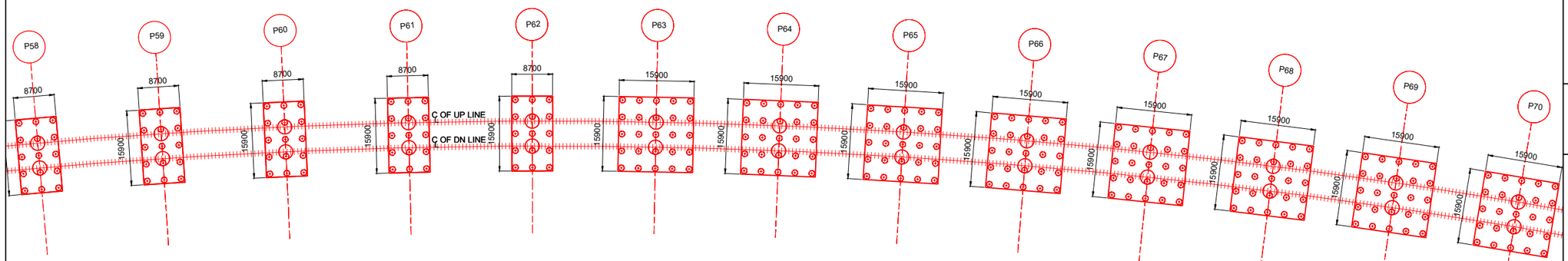
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. : GC-HRIDC-C5-DRG-BRD-GAD-01070_A0(1 OF 15).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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.

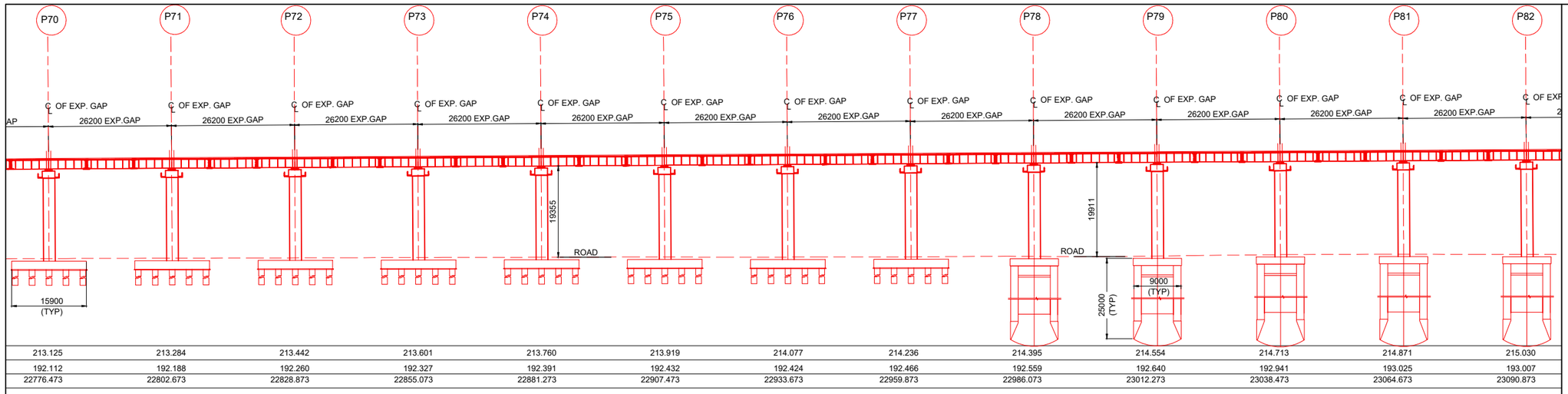
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

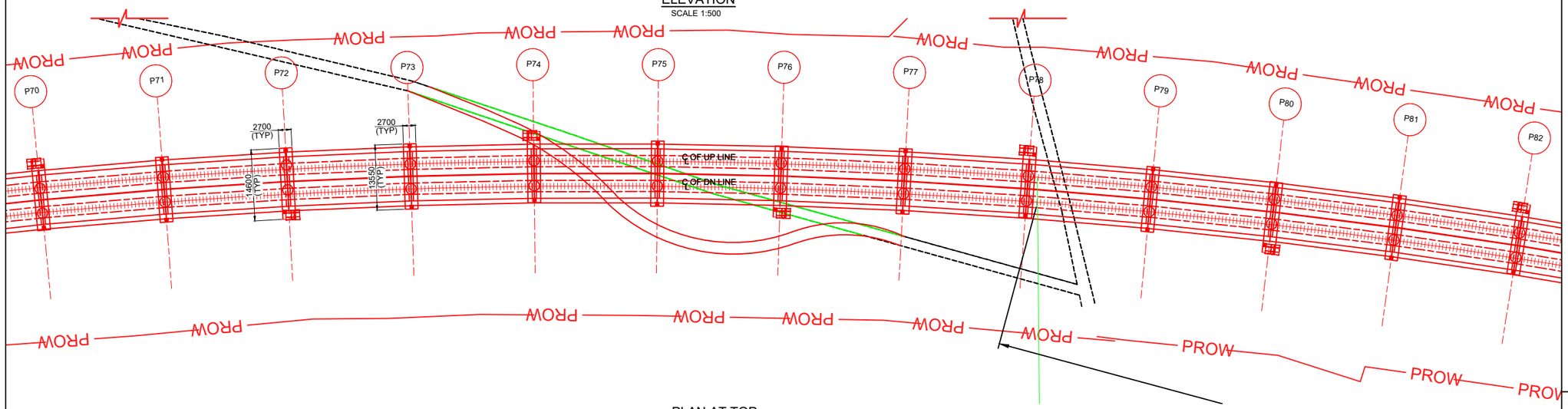
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	6 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

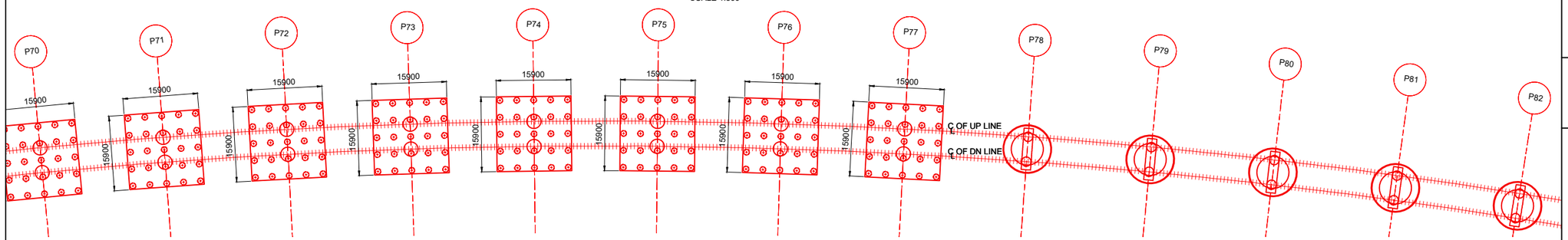


213.125	213.284	213.442	213.601	213.760	213.919	214.077	214.236	214.395	214.554	214.713	214.871	215.030
192.112	192.188	192.260	192.327	192.391	192.432	192.424	192.466	192.559	192.640	192.941	193.025	193.007
22776.473	22802.673	22828.873	22855.073	22881.273	22907.473	22933.673	22959.873	22986.073	23012.273	23038.473	23064.673	23090.873

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500

NOTES :

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GC/HORC		HRIDC	
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SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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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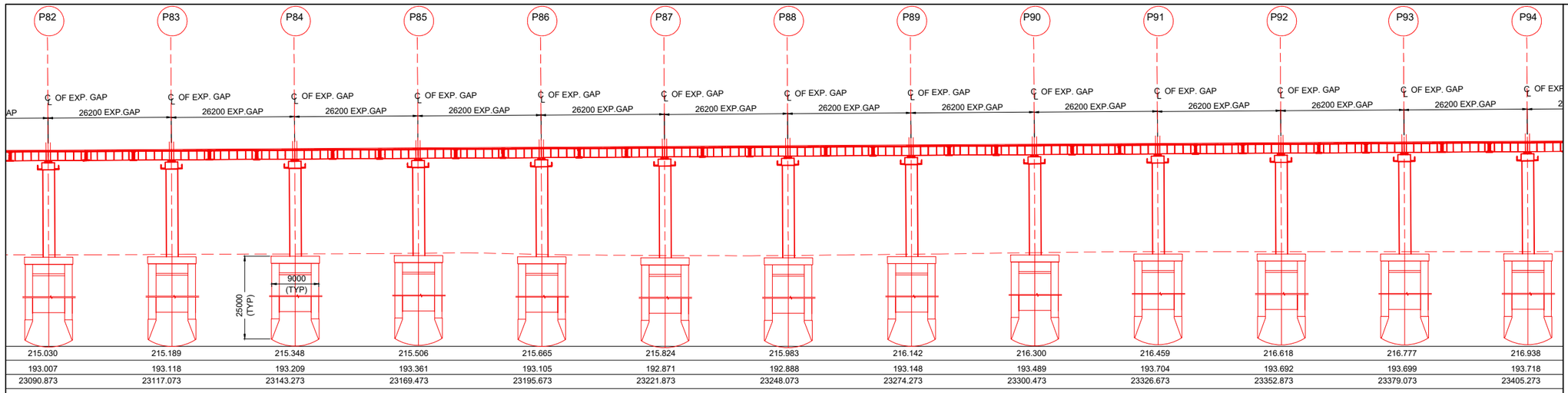
RITES Limited in consortium with SMEC International Pty. Ltd.

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

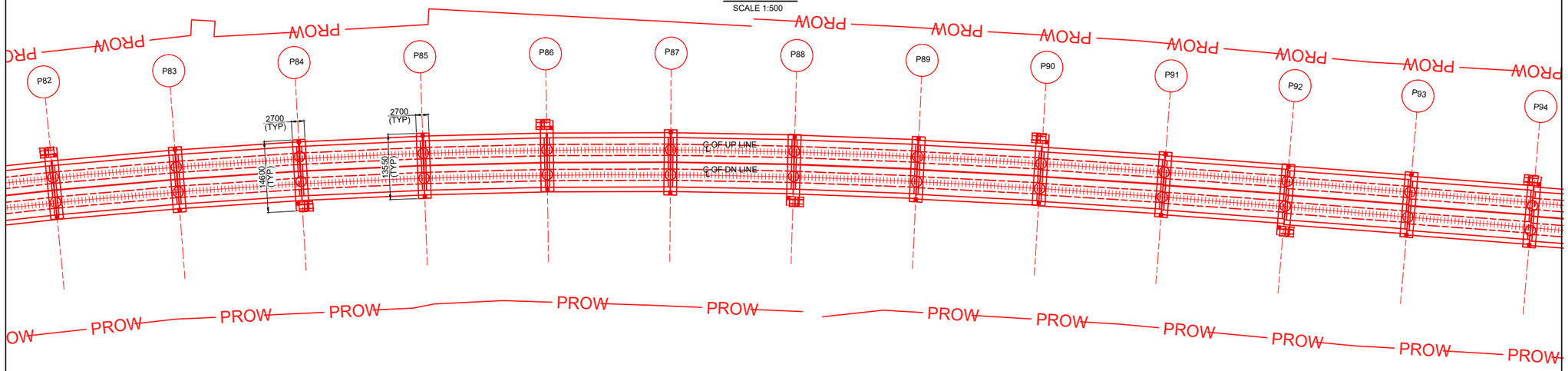
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	7 OF 15

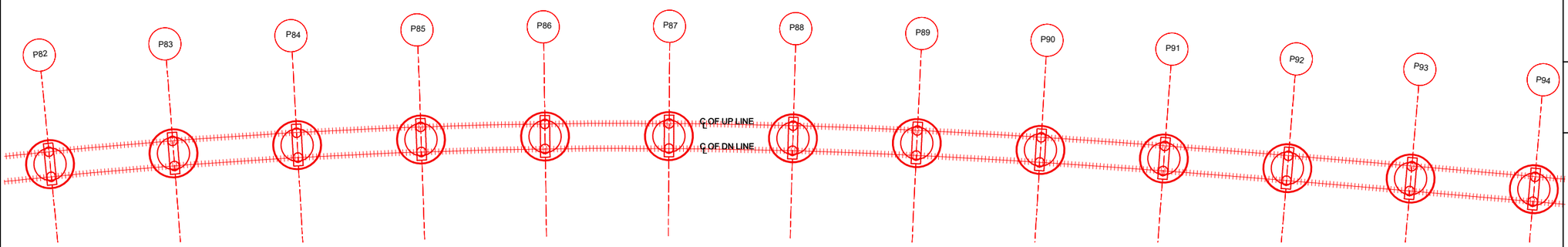
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500

NOTES :

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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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.

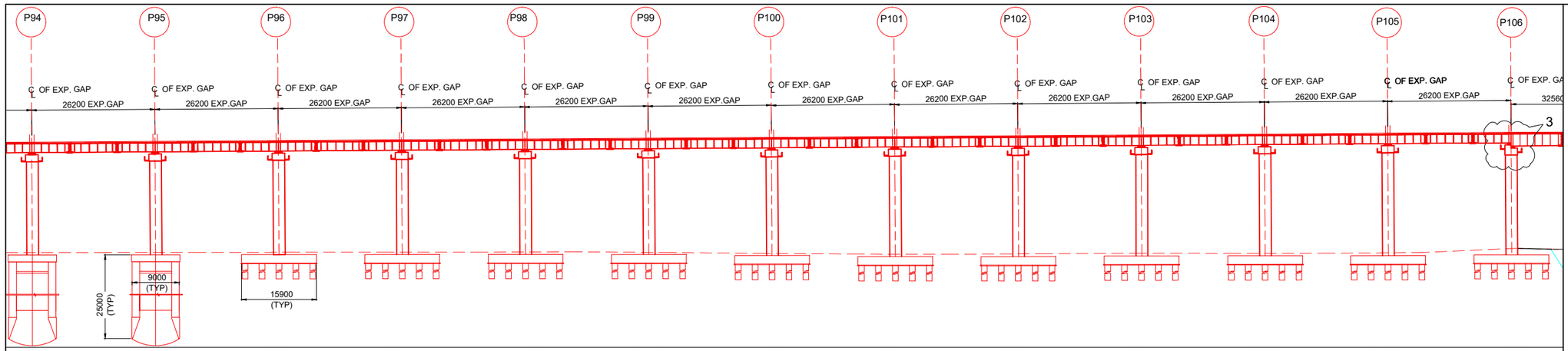
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

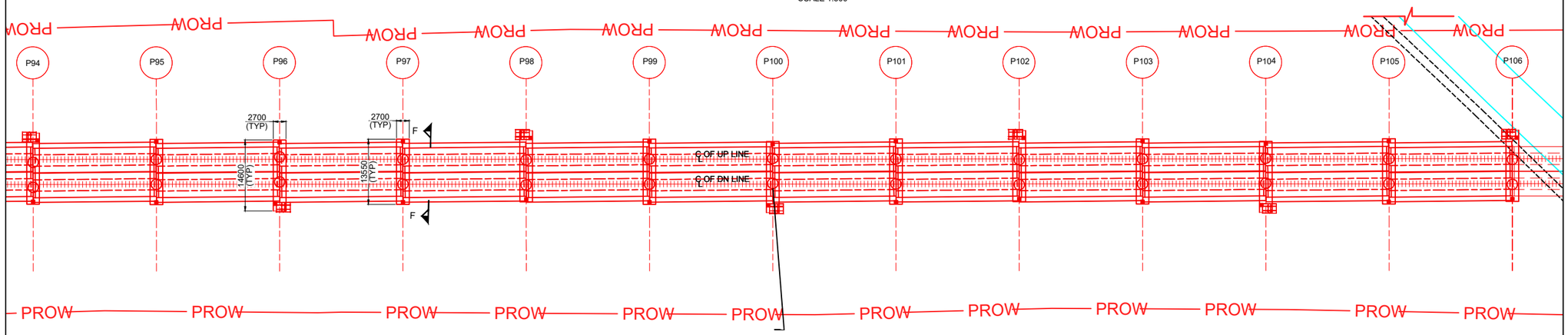
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	8 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

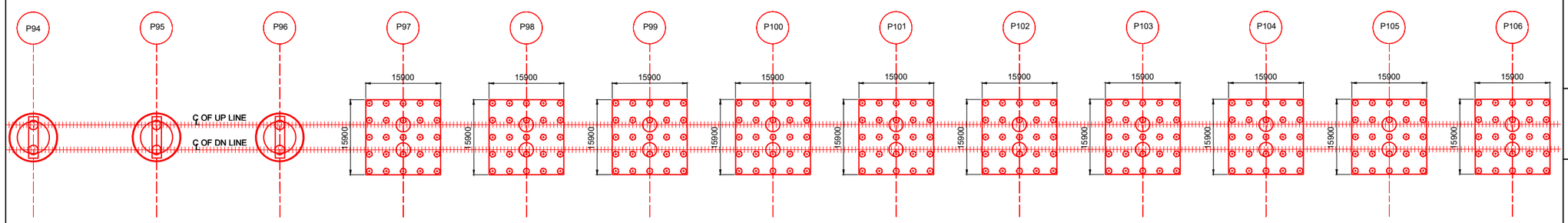


216.938	217.111	217.283	217.455	217.628	217.800	217.972	218.145	218.317	218.490	218.662	218.834	219.049
193.718	193.746	193.777	193.796	193.837	193.760	193.525	193.384	193.440	193.585	193.557	193.668	194.478
23405.273	23431.473	23457.673	23483.873	23510.073	23536.273	23562.473	23588.673	23614.873	23641.073	23667.273	23693.473	23726.033

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
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REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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.

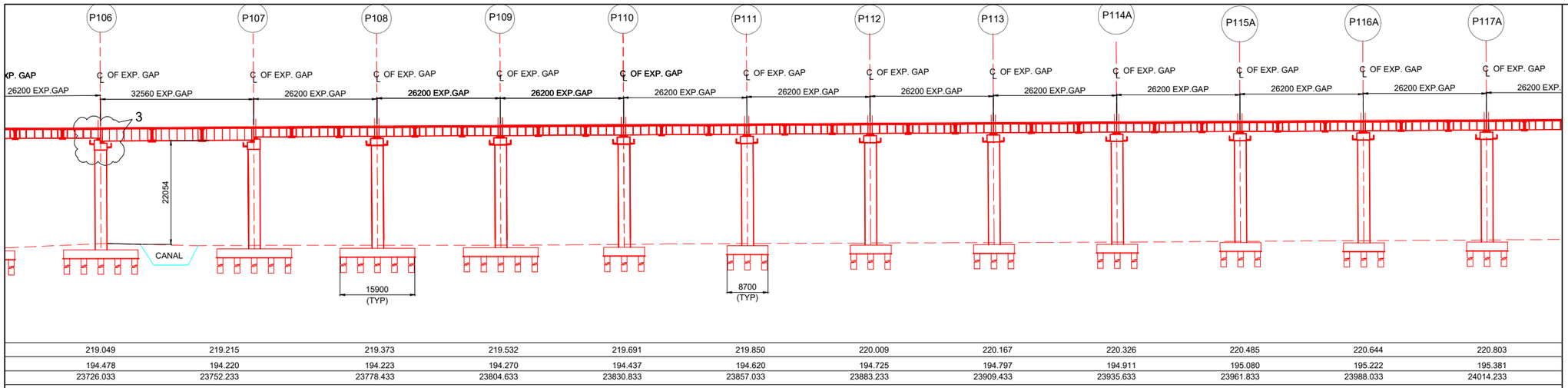
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR VIADUCT BR. NO.70, SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10 (COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

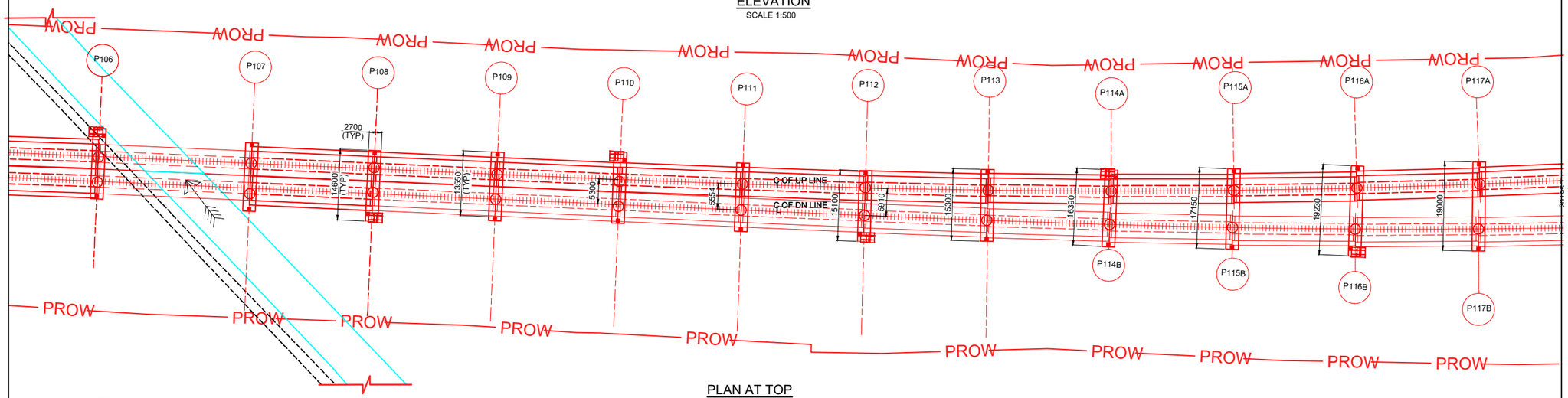
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	9 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

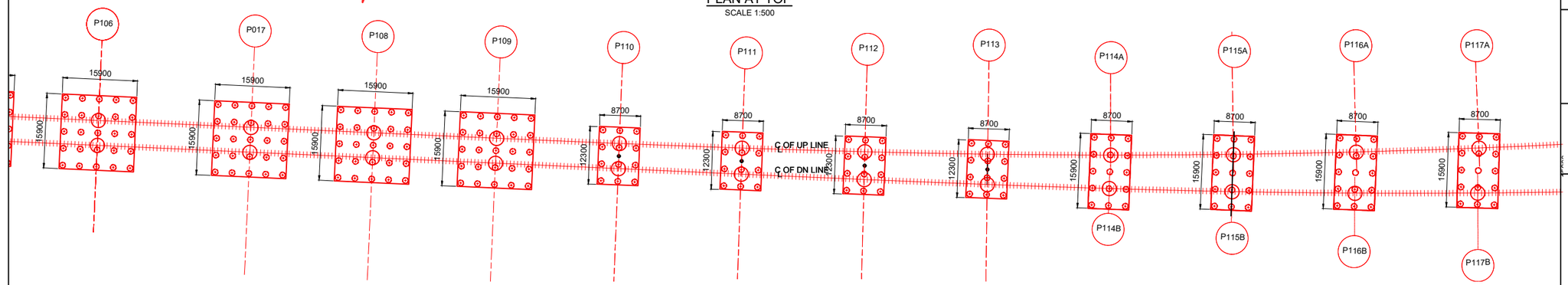


219.049	219.215	219.373	219.532	219.691	219.850	220.009	220.167	220.326	220.485	220.644	220.803
194.478	194.220	194.223	194.270	194.437	194.620	194.725	194.797	194.911	195.080	195.222	195.381
23726.033	23752.233	23778.433	23804.633	23830.833	23857.033	23883.233	23909.433	23935.633	23961.833	23988.033	24014.233

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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.

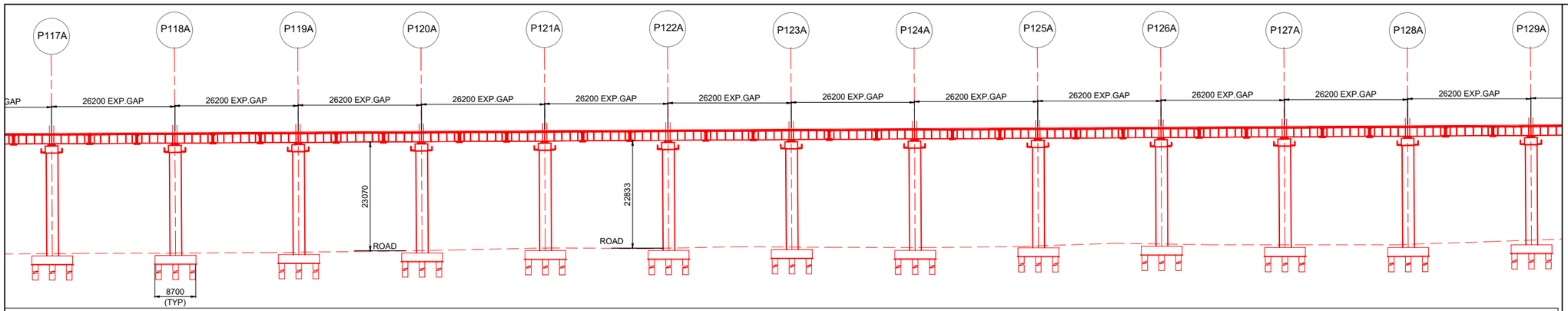
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

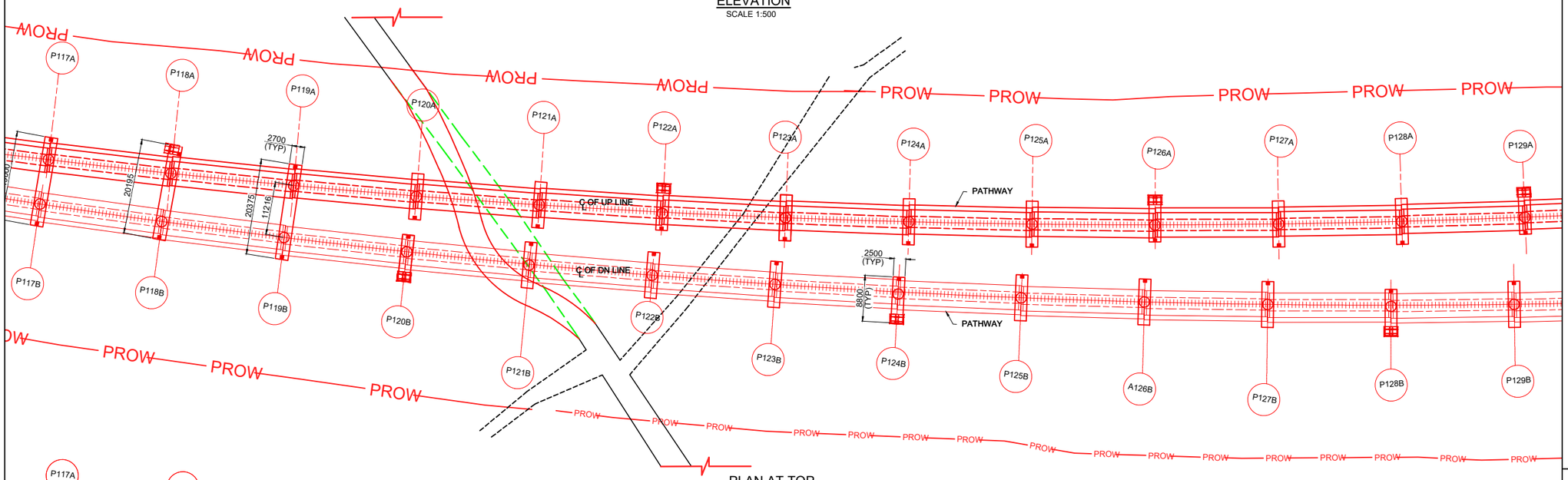
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	10 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

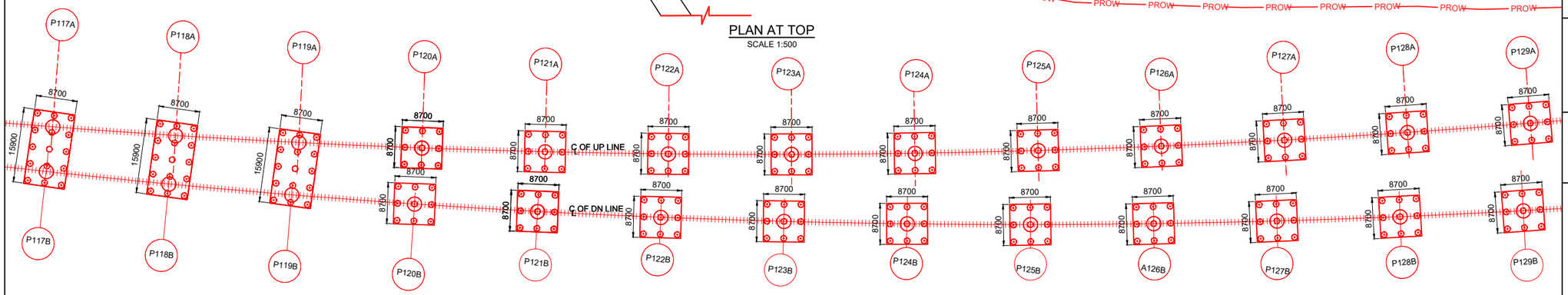


220.803	220.961	221.120	221.279	221.438	221.596	221.755	221.914	222.073	222.232	222.390	222.549	222.708
195.381	195.496	195.676	196.041	196.568	196.555	196.768	196.660	197.017	197.419	197.272	197.348	198.246
24014.233	24040.433	24066.633	24092.833	24119.033	24145.233	24171.433	24197.633	24223.833	24250.033	24276.233	24302.433	24328.633

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



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GC/HORC		HRIDC	
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PROJECT:
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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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
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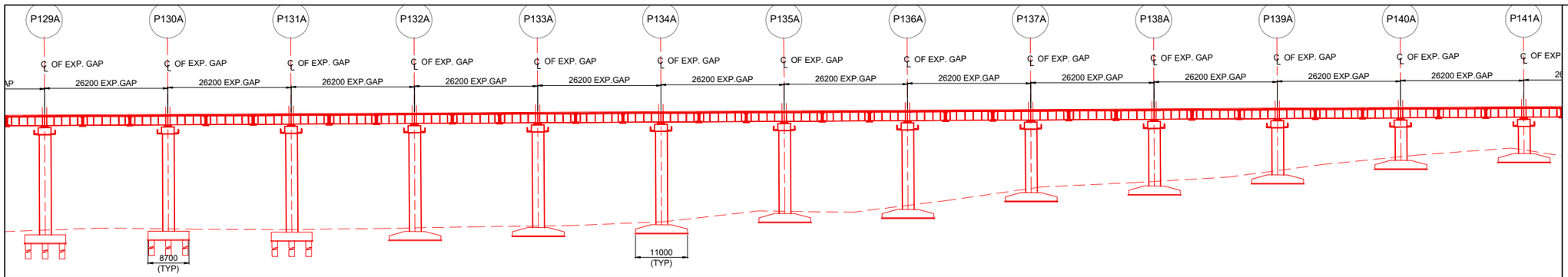
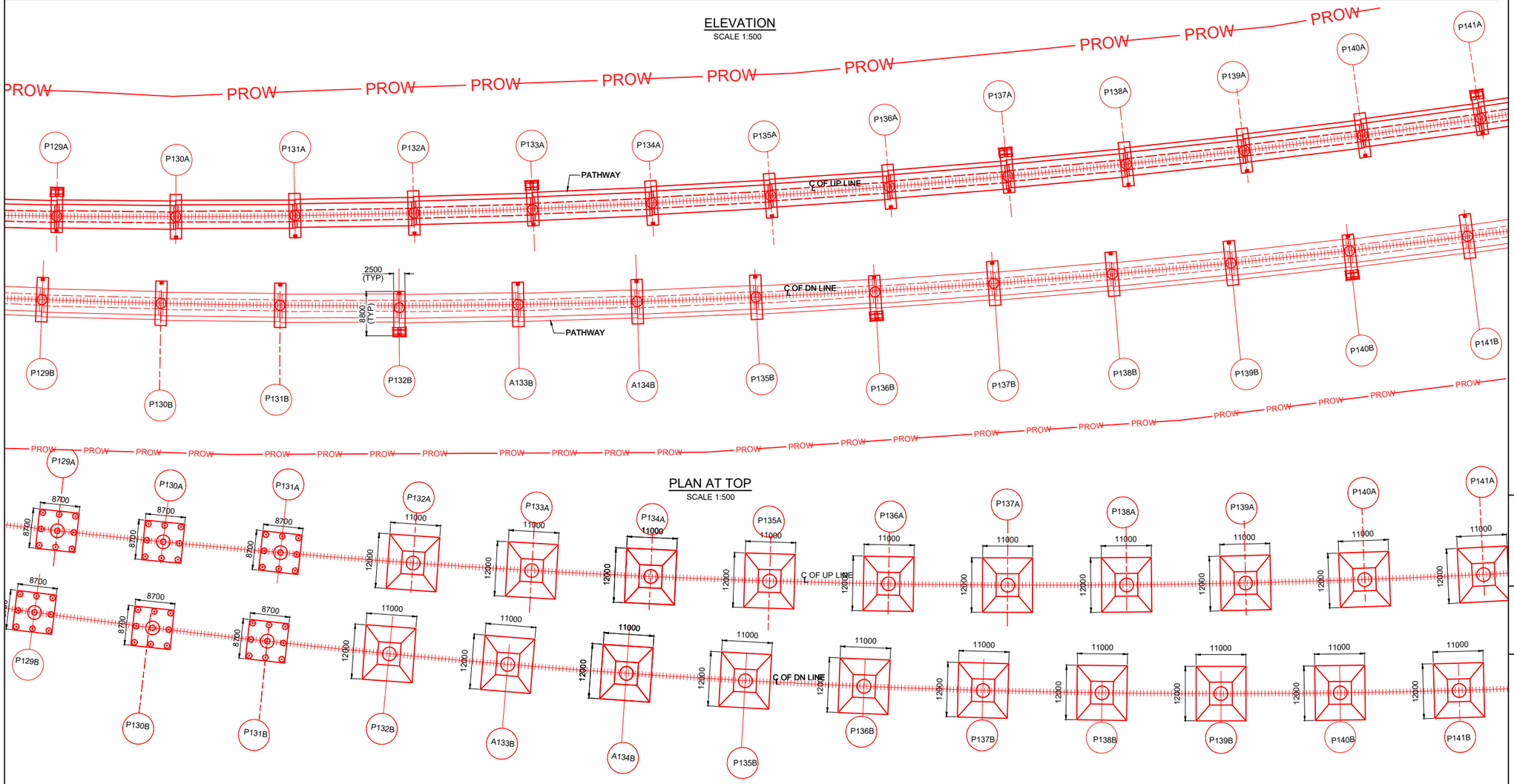
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	11 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



222.708	222.867	223.025	223.184	223.343	223.502	223.661	223.819	223.978	224.137	224.296	224.454	224.613
198.246	198.502	198.350	198.723	199.115	200.025	202.237	203.537	207.157	208.602	210.938	213.878	215.211
24328.633	24354.833	24381.033	24407.233	24433.433	24459.633	24485.833	24512.033	24538.233	24564.433	24590.633	24616.833	24643.033

ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500

PLAN AT BOTTOM
SCALE 1:500

NOTES :

A) GENERAL NOTES

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GC/HORC		HRIDC	
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PROJECT:
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CLIENT:
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CONSULTANT:
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RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
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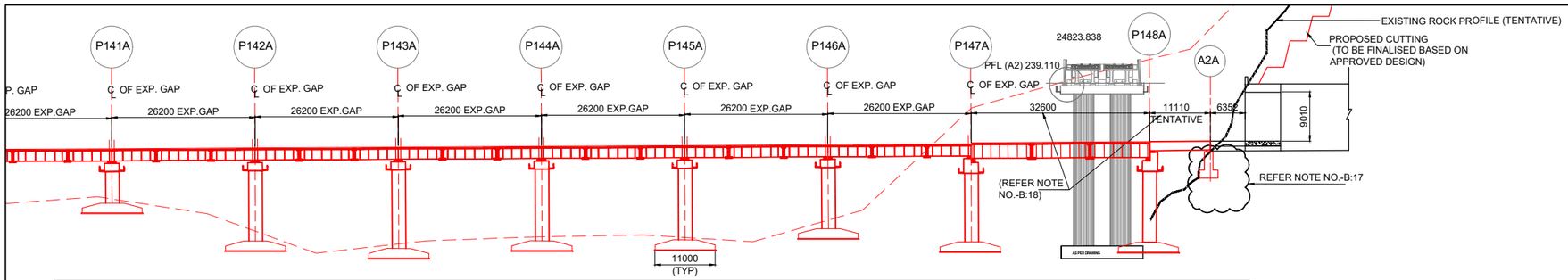
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	12 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



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215.211	209.257	207.101	208.363	208.215	211.504	232.023	240.781	246.299
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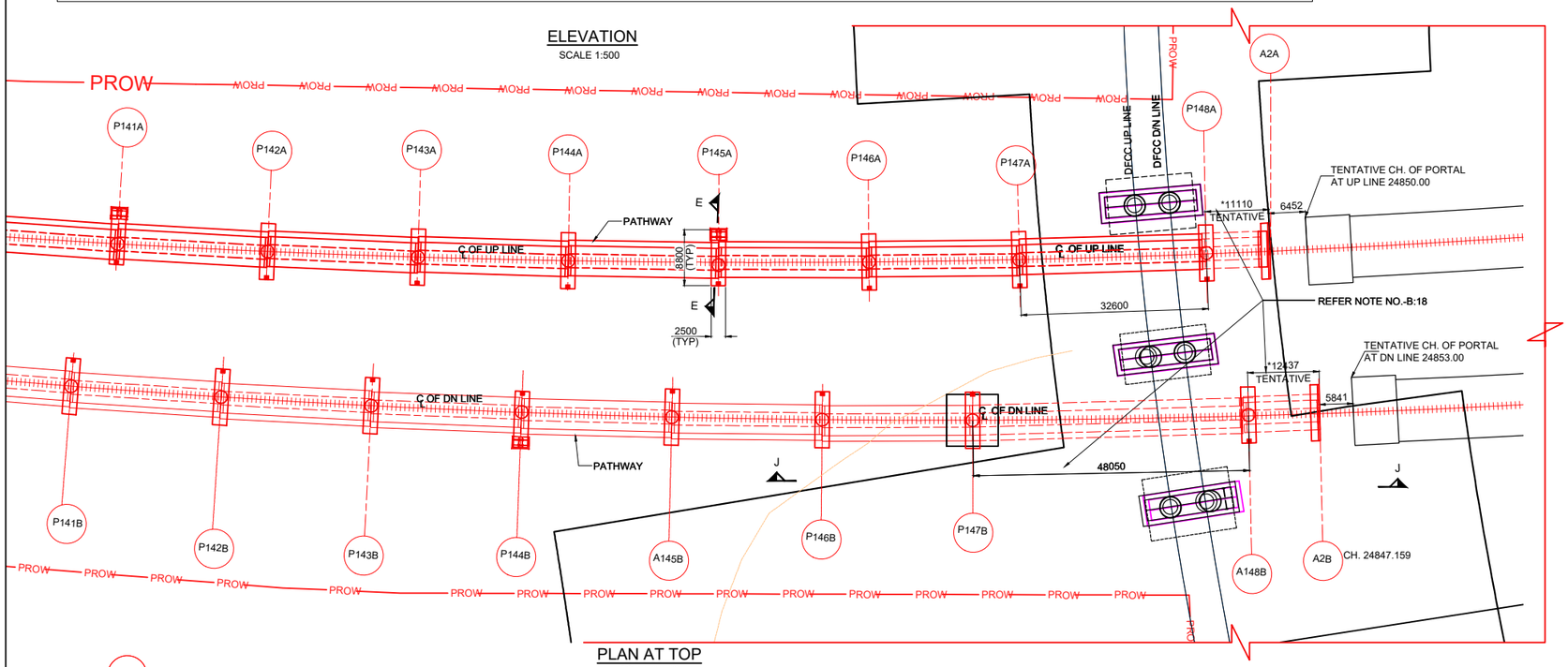
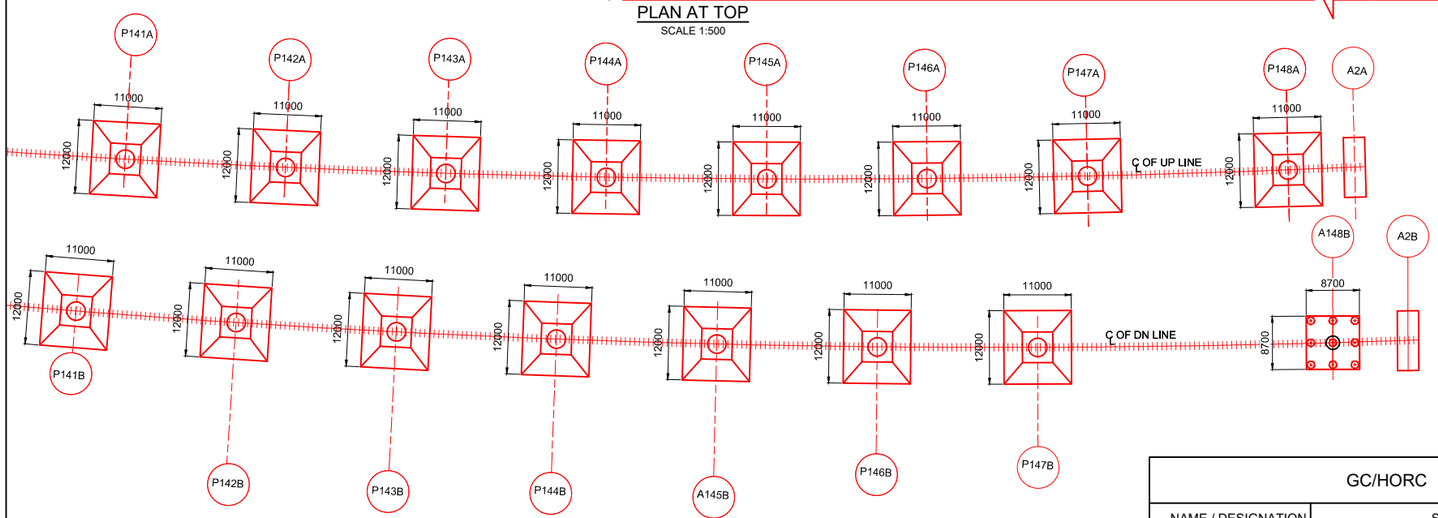
ELEVATION
SCALE 1:500



PLAN AT TOP
SCALE 1:500



PLAN AT BOTTOM
SCALE 1:500

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. : GC-HRIDC-C5-DRG-BRD-GAD-01070_A0(1 OF 15).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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

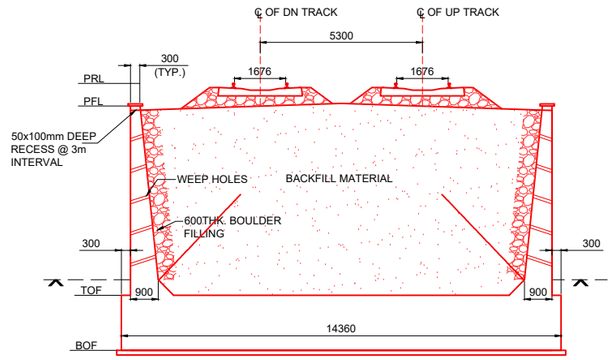
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

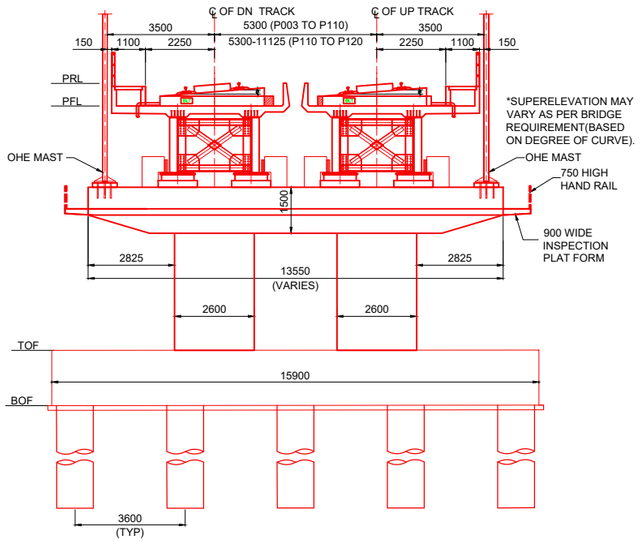
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	13 OF 15

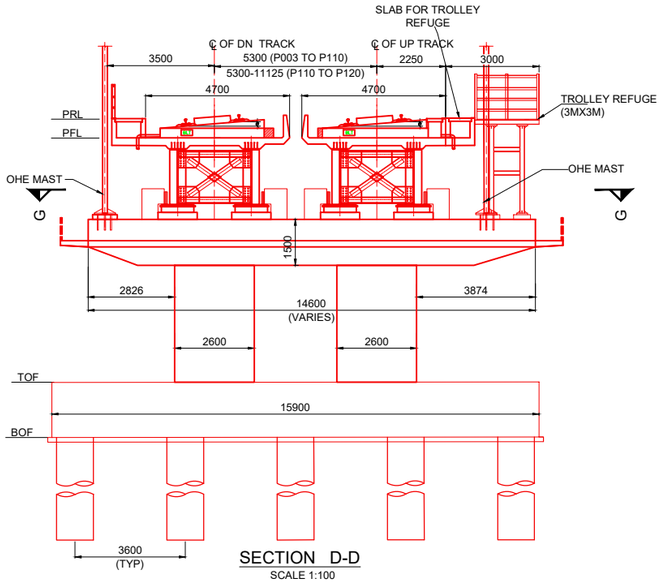
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



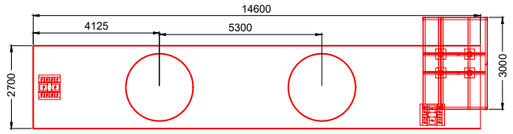
SECTION A-A
SCALE 1:100



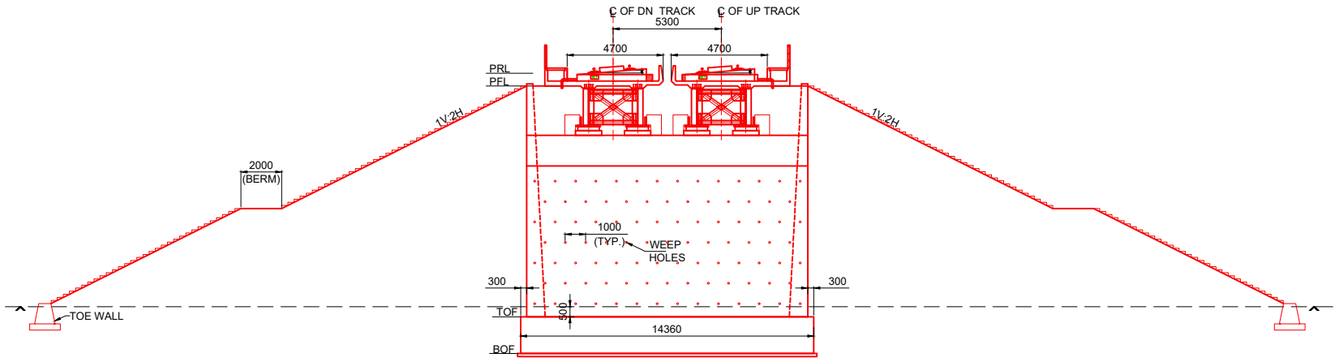
SECTION C-C
SCALE 1:100



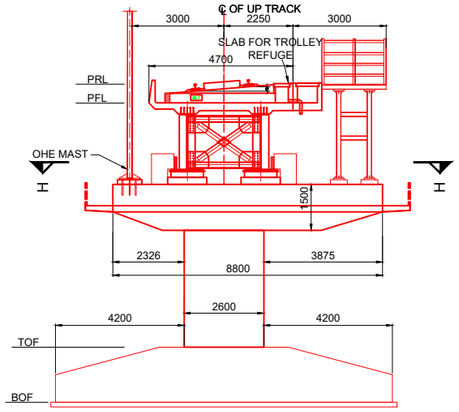
SECTION D-D
SCALE 1:100



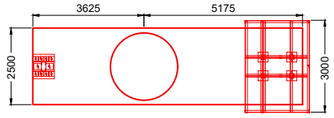
SECTION G-G
SCALE 1:100



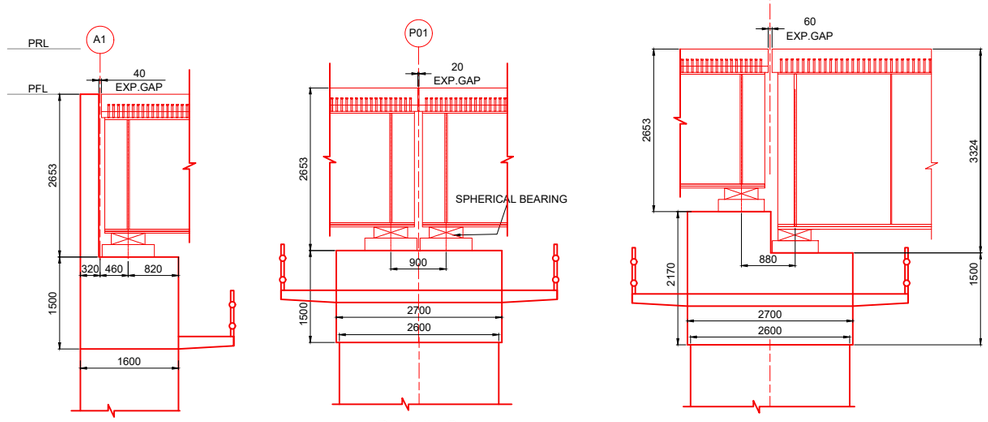
SECTION B-B
SCALE 1:150



SECTION E-E
SCALE 1:100
(P121TO P150)



SECTION H-H
SCALE 1:100



DETAIL -1
SCALE 1:50

DETAIL -2
SCALE 1:50

DETAIL -3
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. : GC-HRIDC-C5-DRG-BRD-GAD-01070_A0(1 OF 15).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL	Reetu		
PUSHPENDRA KR.SINGH SDE/ CIVIL	P.K.Singh		

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

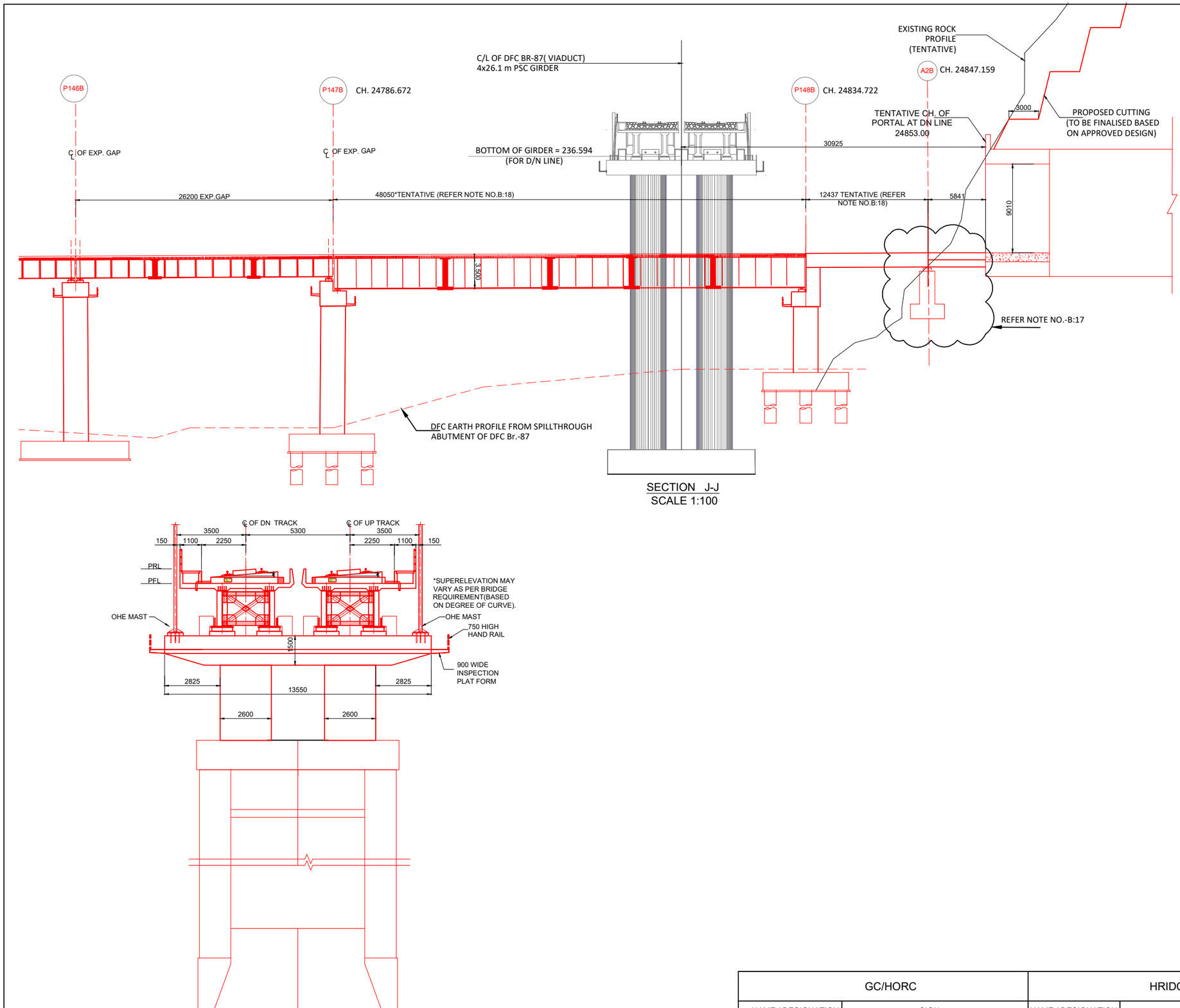
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

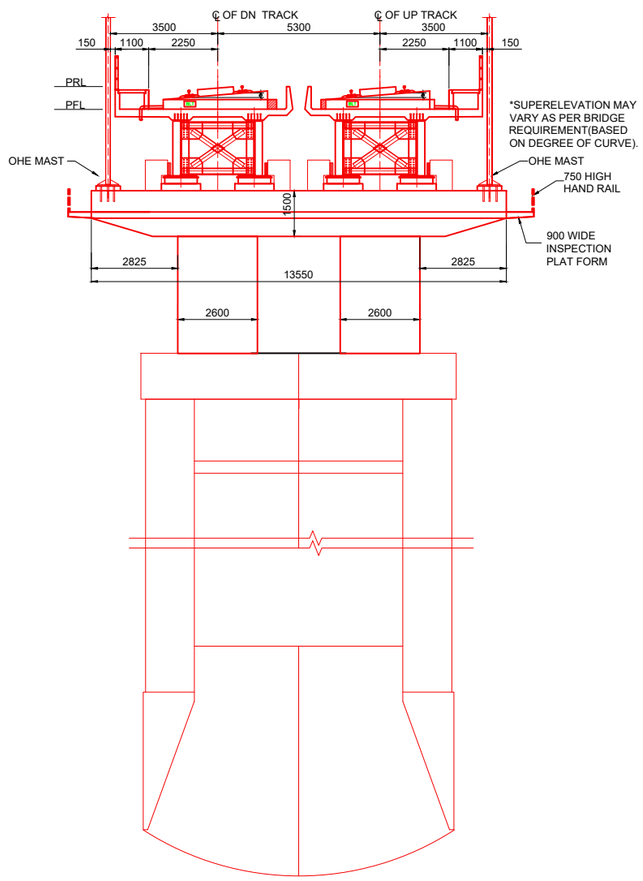
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR VIADUCT BR. NO.70, SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10 (COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	14 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	



SECTION J-J
SCALE 1:100



SECTION F-F
SCALE 1:100

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
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3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. : GC-HRIDC-C5-DRG-BRD-GAD-01070_A0(1 OF 15).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		NEERAJ BHANDARI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
REETU PATIAL CDE/ CIVIL			
PUSHPENDRA KR.SINGH SDE/ 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.

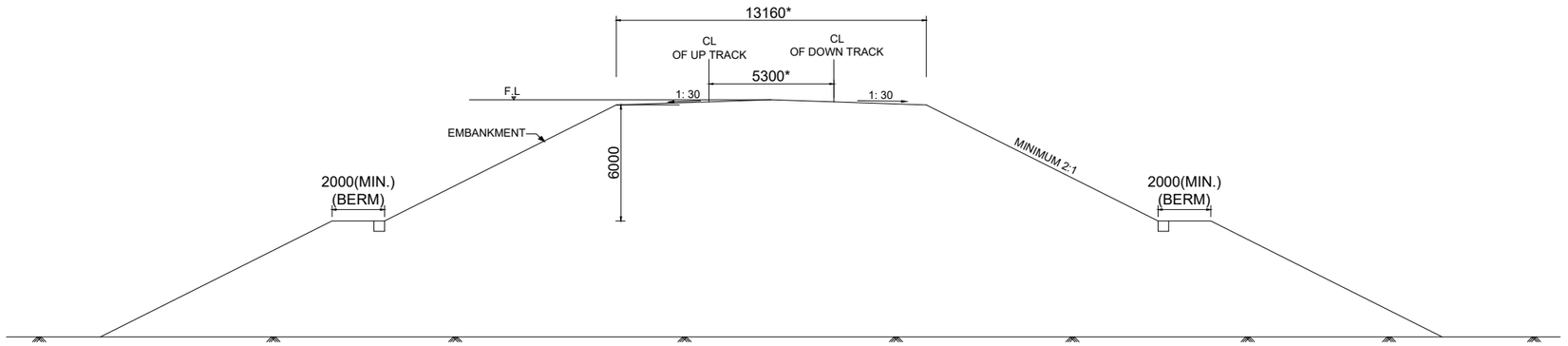
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR VIADUCT BR. NO.70,
SPAN: 105X24.4+1X30.5+41x24.4 +1x30+1x11.10
(COMPOSITE GIRDER) FROM CH: 20942.473M TO 24843.543M

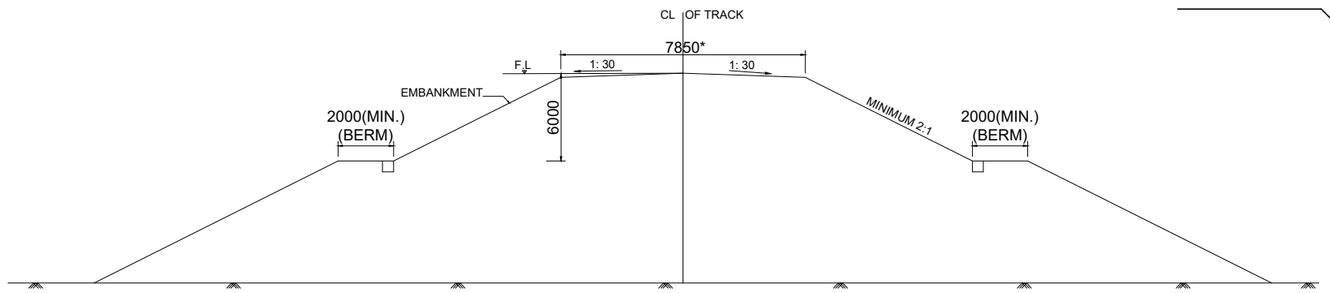
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRG-BRD-GAD-01070_A0	15 OF 15

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	12-10-2023	

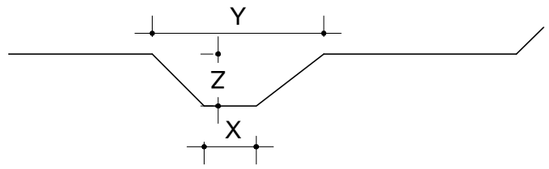
5. MISCELLANEOUS DRAWINGS (CONCEPTUAL PLANS)



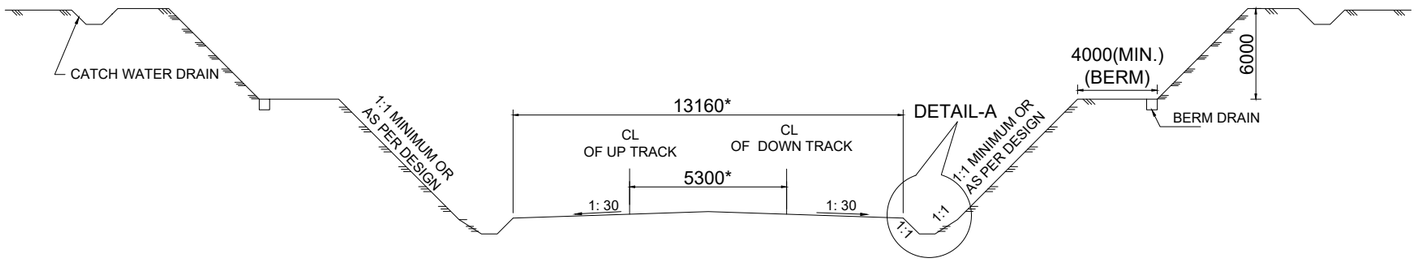
TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR DOUBLE TRACK)



TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR SINGLE TRACK)



DETAIL-A



TYPICAL CROSS-SECTION OF CUTTING
(FOR DOUBLE TRACK)

NOTES:
1. ALL DIMENSION ARE IN MM.
2. DEPTH OF BALLAST CUSHION SHOULD BE PROVIDED AS PER PARA 212(2) OF IRPWM.
3. CROSS SLOPE OF 1IN 30 SHALL BE PROVIDED.
4. MINIMUM FORMATION WIDTH OF 13160 MM SHALL BE ENSURED FOR NEW WORKS IN BOTH EMBANKMENT AND IN CUTTING (EXCLUDING SIDE DRAIN)
5. * FORMATION WIDTH SHALL BE INCREASED BASED ON CURVE & SUPER ELEVATION AS PER IRSOD.
6. X, Y, Z DIMENSIONS SHALL BE AS PER DESIGN.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
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.

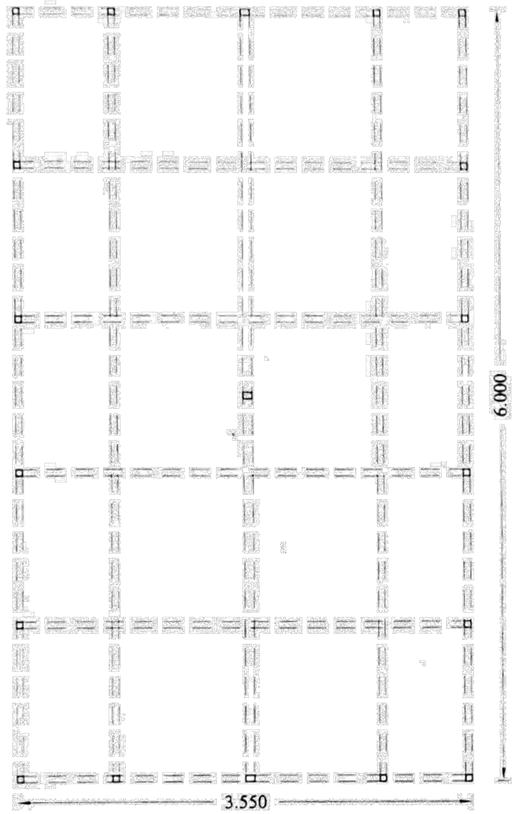
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

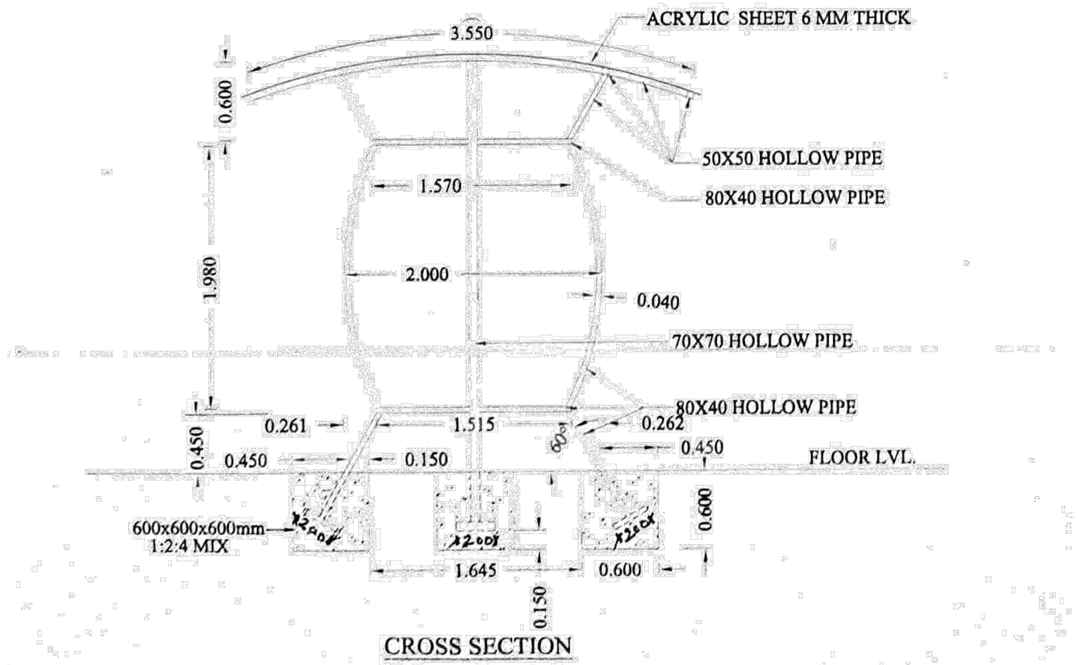
TITLE:- CONCEPTUAL PLAN
TYPICAL EMBANKMENT/CUTTING PROFILE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-001_A1	

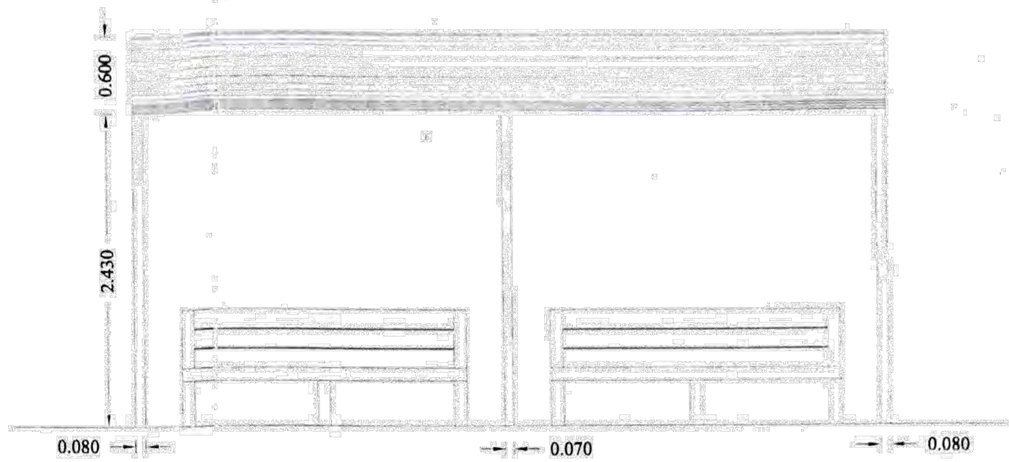
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



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 S.S. Pipe purlins self tapping screw etc. on structure roof of shelter
3- This sketch is only for architectural purpose. Hollow Circular/ square/ rectangular sections of S.S. shall be used. Size mentioned in the drawing are tentative and shall be as per detailed design.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

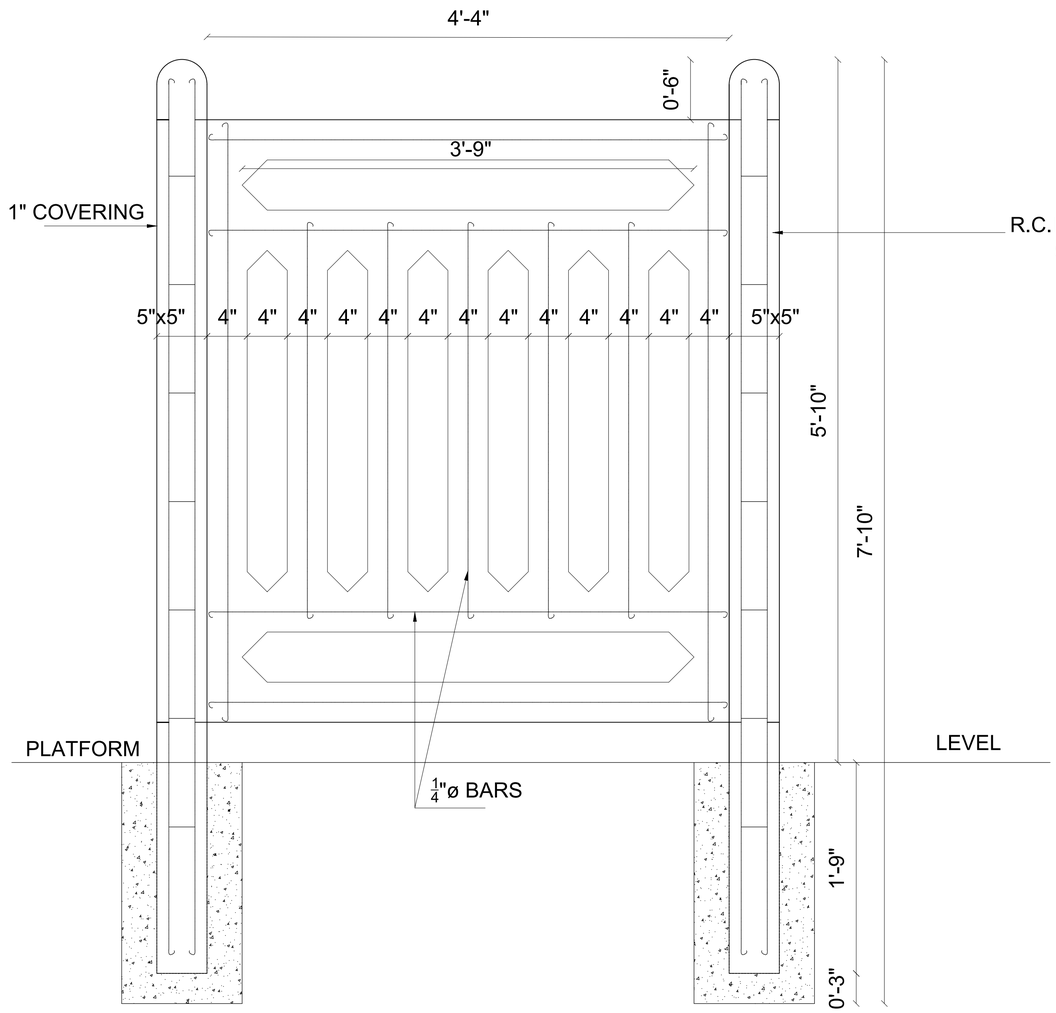
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

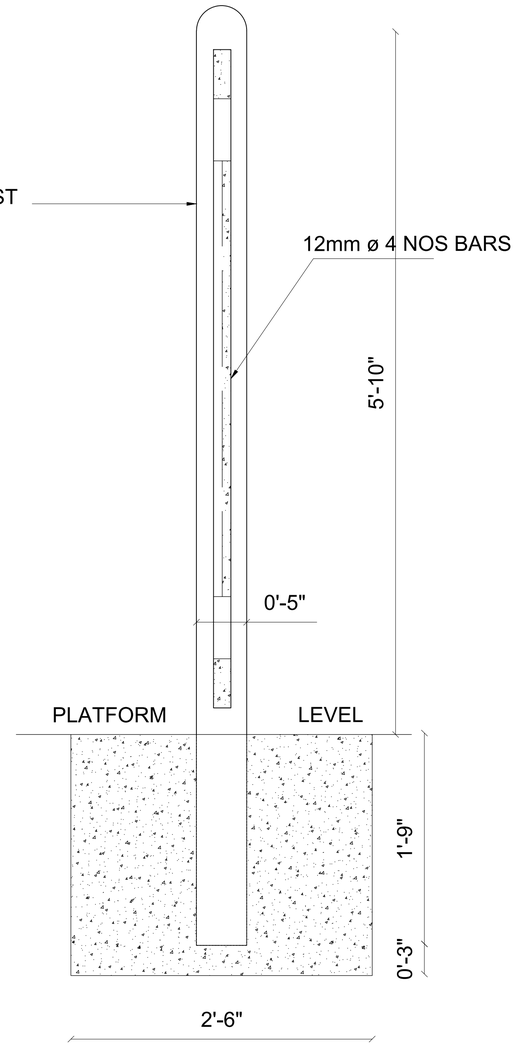
TITLE:- CONCEPTUAL PLAN
MINI PLATFORM SHELTER

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-003	1 OF 1

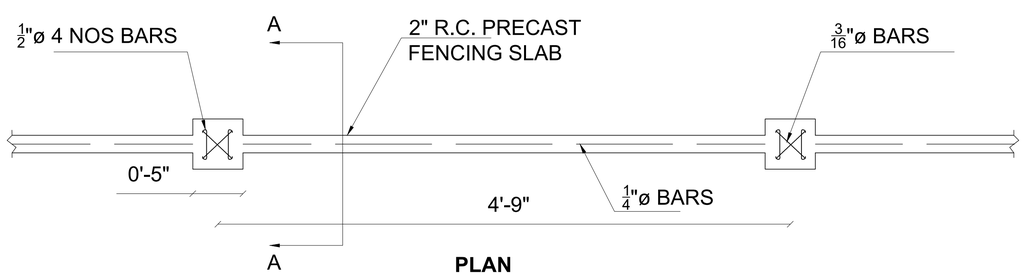
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



ELEVATION



SECTION AT A-A



PLAN

NOTES:
1. ALL DIMENSION ARE IN INCHES UNLESS OR OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

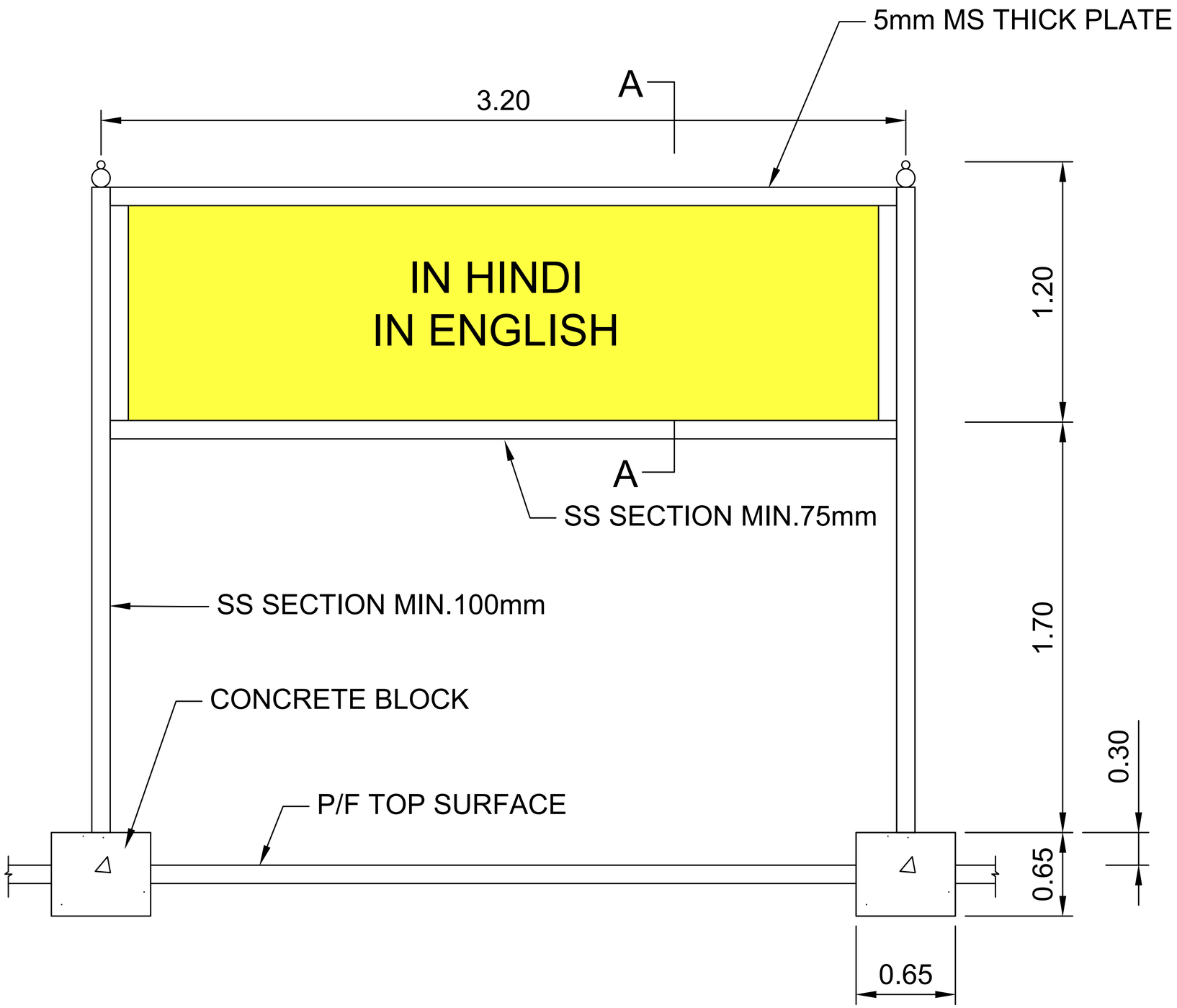
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

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

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-004	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



Notes:

1. THE PRINCIPAL NAME BOARDS PAINTED ON BOTH FACES SHOULD BE FIXED AT BOTH THE ENDS OF THE PLATFORM AND GENERALLY ORIENTED AT RIGHT ANGLE TO THE TRACK.
2. THE ACTUAL ANGEL AT WHICH THE NAME BOARD ARE FACED SHOULD BE DETERMINED BY THE SITE CONDITIONS ENSURING THE CRITERIA THAT THE NAME BOARDS ARE CLEARLY VISIBLE FROM APPROACHING TRAINS.
3. BOARD TO BE PAINTED YELLOW WITH BLACK LETTERS.
4. THE STATION NAME SHALL BE EXHIBITED IN THE FOLLOWING ORDER: REGIONAL LANGUAGE, HINDI AND ENGLISH.
5. HEIGHT OF LETTERS SHALL BE 300 MM, THICKNESS IN PROPORTIONS TO THE STYLE OF THE SCRIPT.
6. THE LOWER EDGE OF THE PRINCIPAL BOARD SHOULD BE 2M ABOVE THE PLATFORM.
7. THE PAINTING WORK SHALL BE COMMENCE ONLY AFTER THE SATISFACTORY SURFACE PREPARATION INSPECTED AND APPROVED BY THE ENGINEER.
8. 2 COATS OF APPROVED BRAND YELLOW PAINT SHALL BE APPLIED OVER THE ONE COAT OF PRIMER.
9. THE APPLIED COAT OF PAINT SHALL BE UNIFORM AND FREE FROM BRUSH MARKS, SACK MARKS, BLEMISHES ETC.
10. SS SECTION SIZE TO BE ADOPTED SHALL BE BASED UPON DETAILED DESIGN. SIZE SHALL NOT BE LESS THAN THAT MENTION DRAWING (CIRCULAR /SQUARE/RECTANGLE).

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

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

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

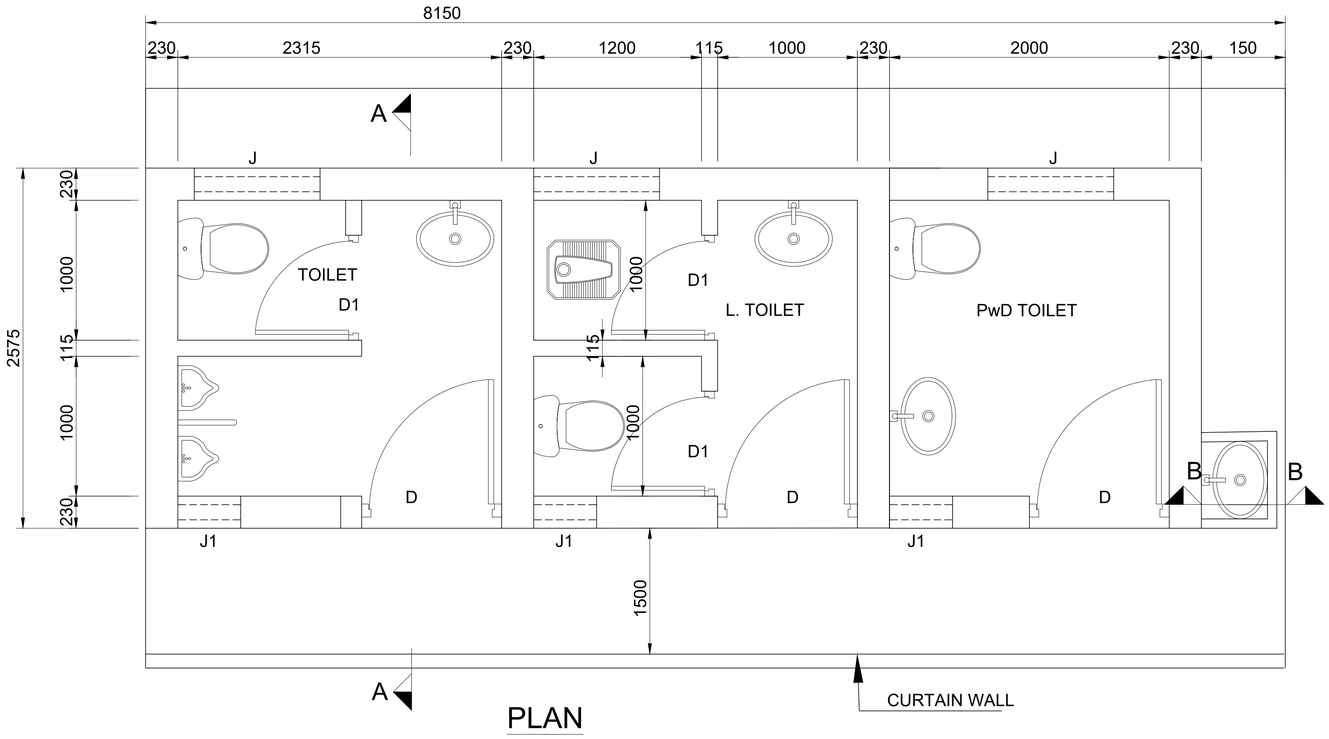
TITLE:- CONCEPTUAL PLAN
STATION NAME BOARD

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

SHEET NO.

SCALE : AS SHOWN

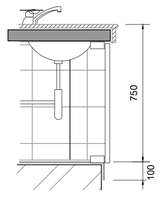
ISSUE DATE 11-11-2022 28.12.2022



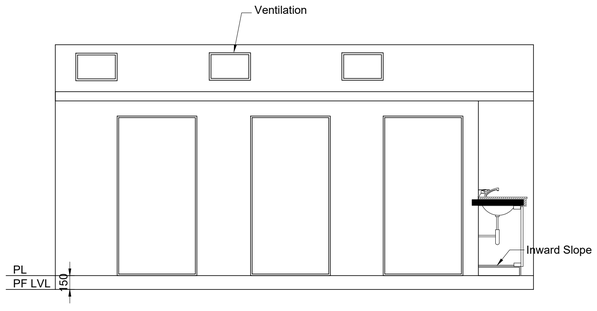
PLAN

NOTES :

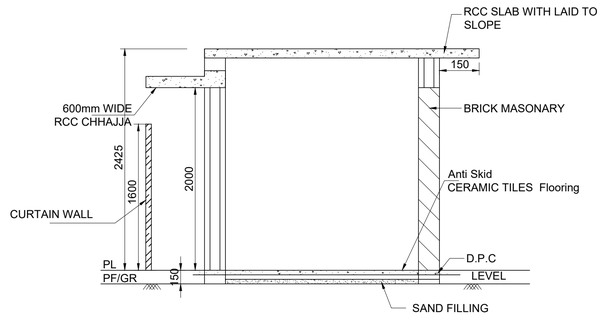
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. FLOORING WITH ANTISKID CERAMIC TILES TO BE PROVIDED.
3. INSIDE WALLS SHALL BE PROVIDED WITH GLAZED TILES OF APPROVED QUALITY UPTO CEILING.
4. WHITE GLAZED FLAT BACK LIPPED/ FRONT URINAL 430X260X350MM SIZE WITH PVC AUTOMATIC FLUSHING CISTERN.
5. VITREOUS CHINA SQUATTING TYPE URINAL OF SIZE 450X350X100MM TO CONFORM IS 771-1963 WITH AUTOMATIC FLUSHING CISTERN.
6. WASH BASIN OF SIZE 630MM X 450MM WITH CP BRASS PILLAR TAP OUTSIDE THE TOILET AND 550MM X 400MM WITH CP BRASS PILLAR TAP SHALL BE PROVIDED INSIDE THE TOILETS.
7. PLUMBING TO BE CONCEALED.
8. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY.
9. DRAINAGE IS TO BE CONNECTED TO SOAK PIT OF SUITABLE CAPACITY.
10. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).



SECTION B-B



FRONT ELEVATION



SECTION A-A

SCHEDULE OF JOINERY

REF.		SIZE
D	PVC DOOR	900x2000
J	RCC JALI (RAIN PROOF TYPE)	900x600
J1	RCC JALI (RAIN PROOF TYPE)	450x300

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

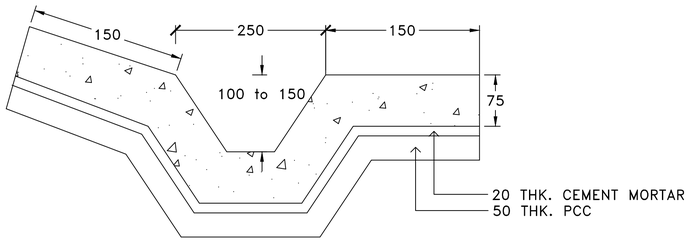
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

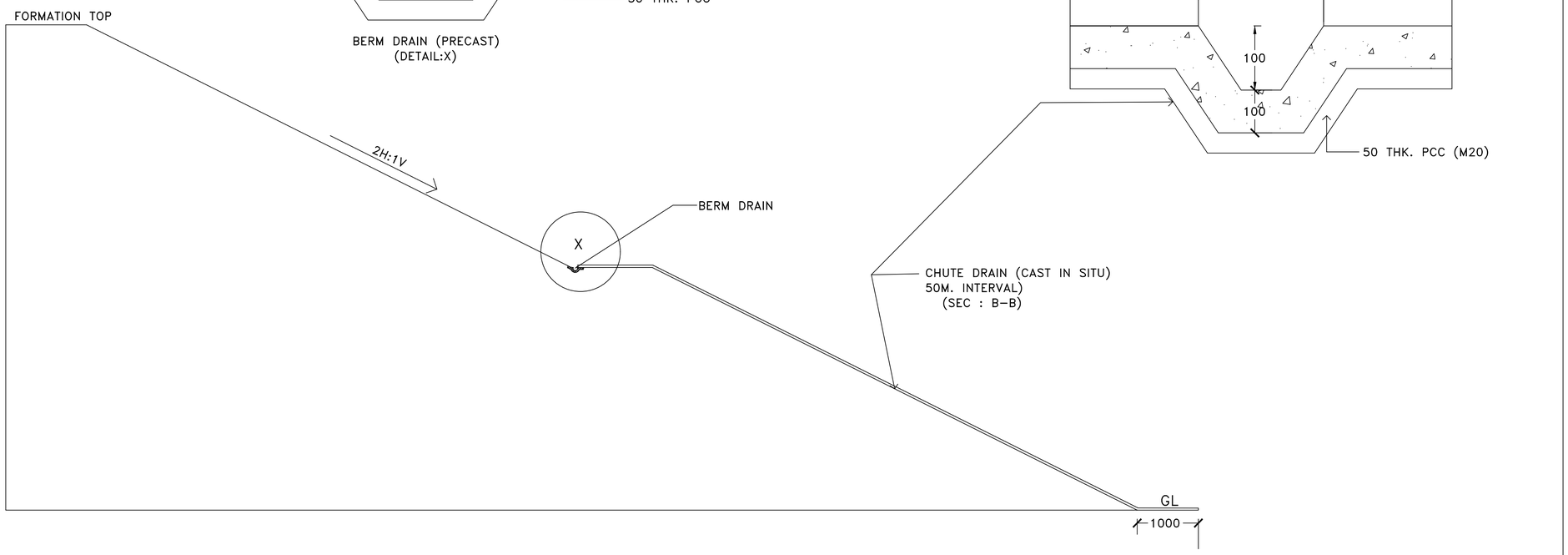
TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON END PLATFORMS

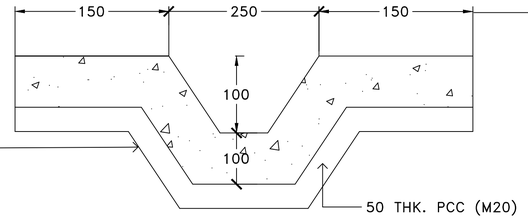
DRG. NO. GC-HRIDC-SK-GEN-007_A1 | SHEET NO. 1 OF1

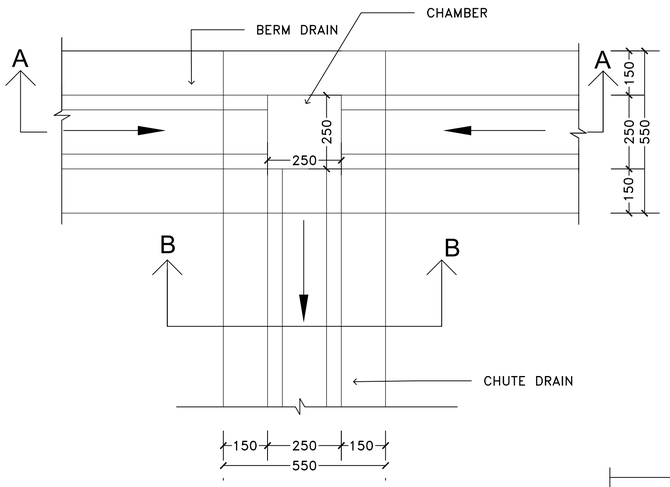
SCALE : AS SHOWN | ISSUE DATE 28.12.2022

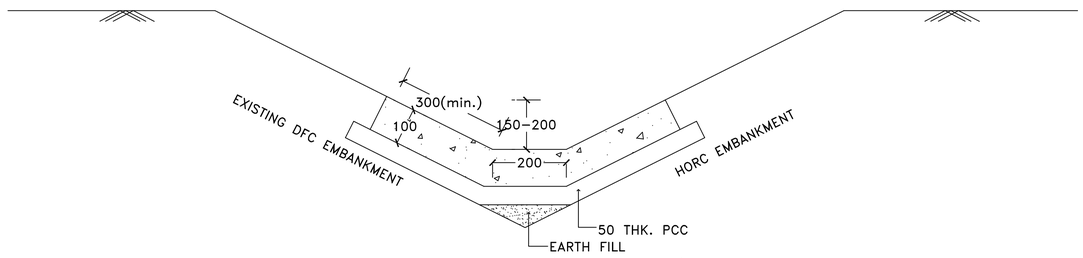


BERM DRAIN (PRECAST)
(DETAIL:X)

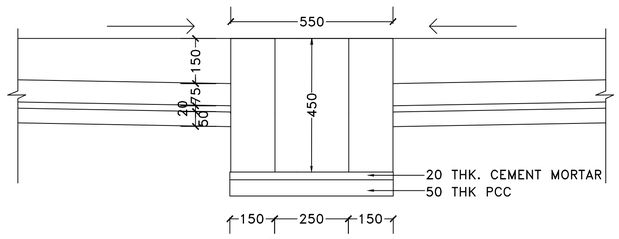








DRAIN BETWEEN (CAST IN SITU)
HORC & DFC EMBANKMENT



(SEC:A–A)

NOTES :-
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. MIN. GRADE OF CONCRETE
   A) PRECAST M35
   B) CAST IN SITU M25
   C) PCC M20

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	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.

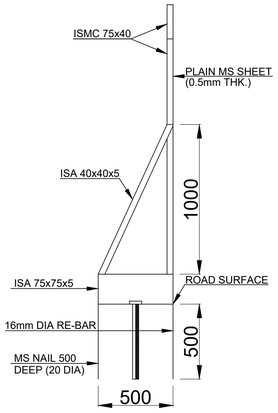
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

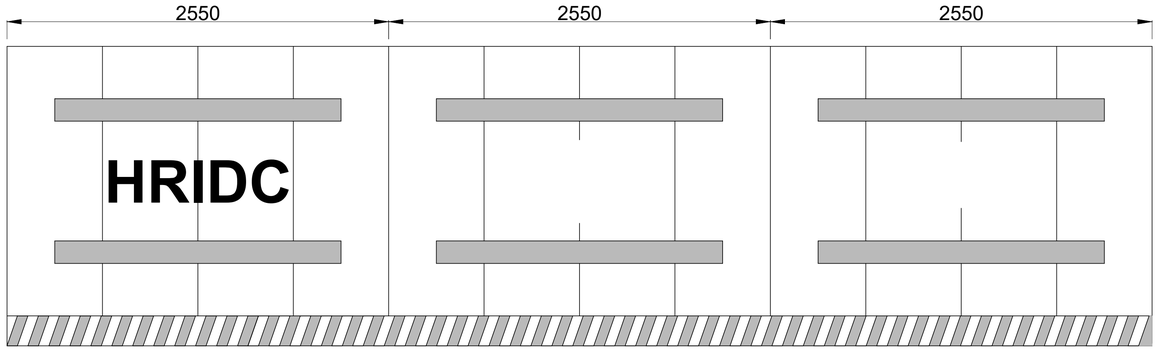
TITLE:-
CONCEPTUAL PLAN
DRAINS FOR EMBANKMENT

SKETCH NO. GC-HRIDC-SK-GEN-008_A1	SHEET NO. 1 OF 1

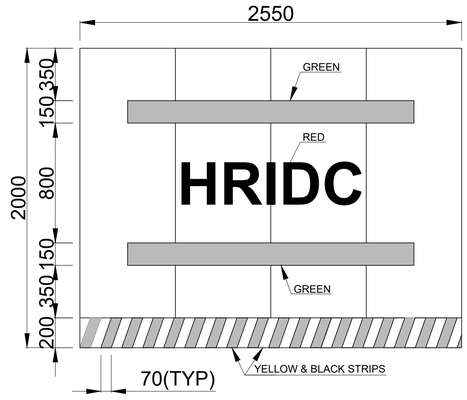
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	09.09.2023	



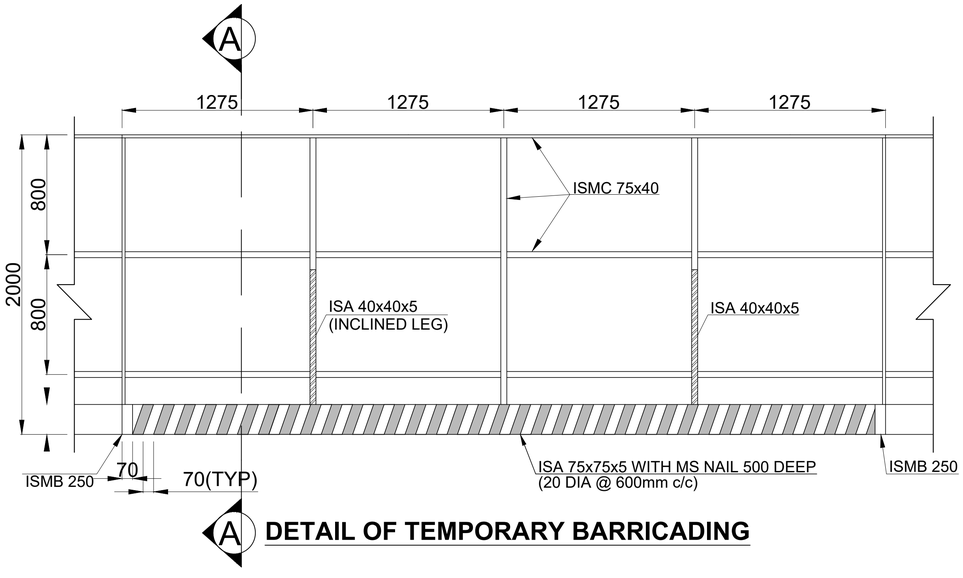
SECTION A-A



ELEVATION OF ONE UNIT OF TEMPORARY BARRICADING



ELEVATION OF ONE SET OF TEMPORARY BARRICADING



DETAIL OF TEMPORARY BARRICADING

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. THIS BARRICADING SHALL BE USED AT LOCATION OF ROAD AND PEDESTRIAN TRAFFIC.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

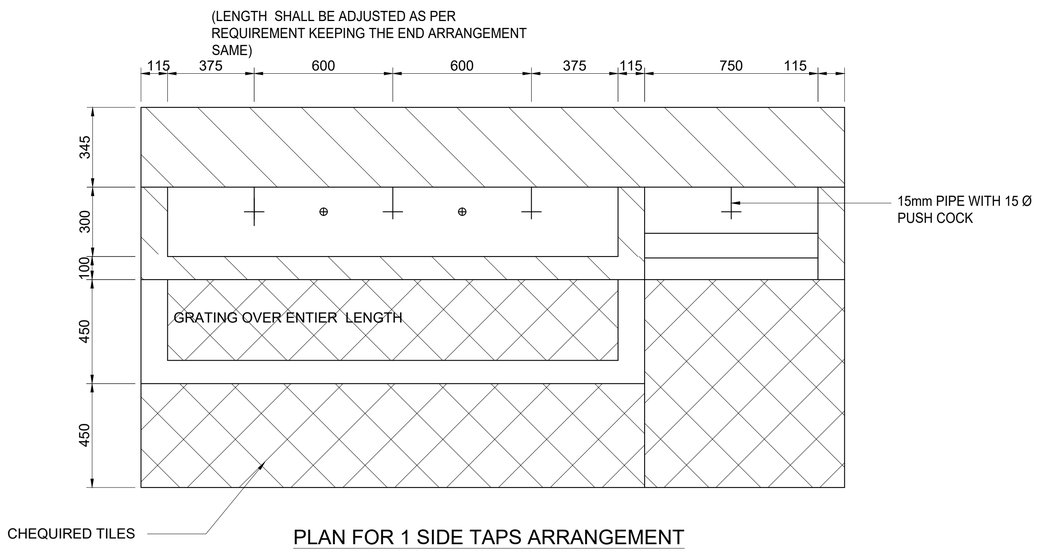
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

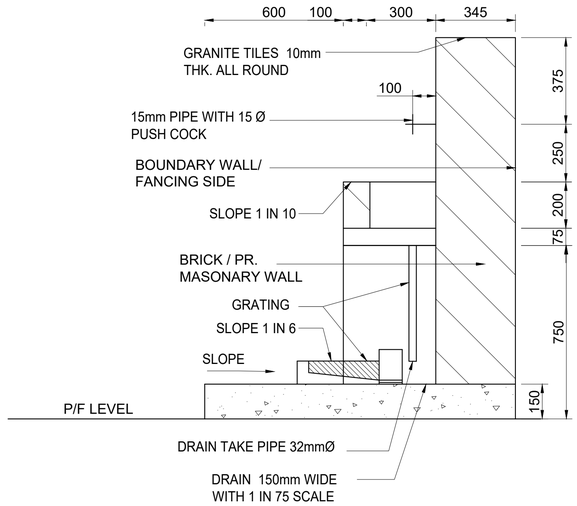
TITLE:- CONCEPTUAL PLAN
STEEL BARRICADE

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

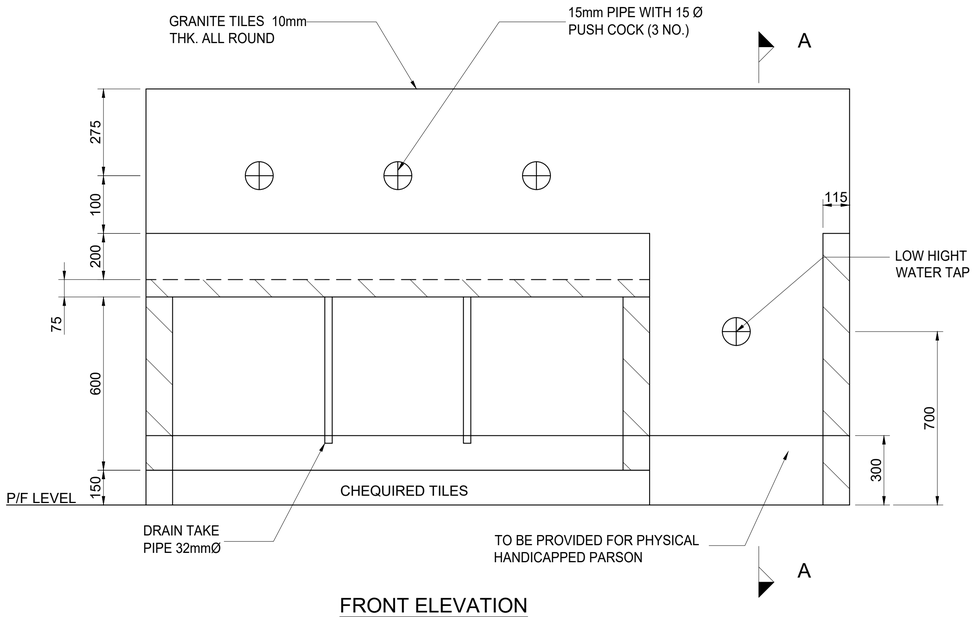
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



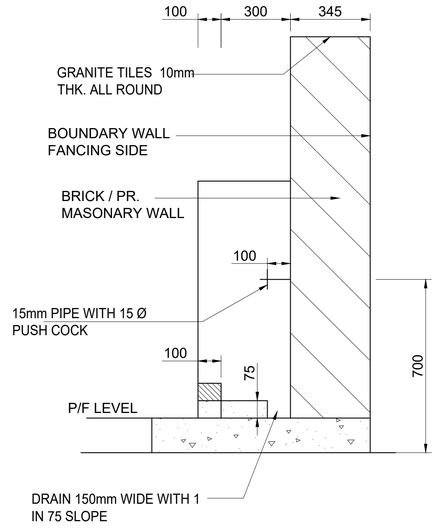
PLAN FOR 1 SIDE TAPS ARRANGEMENT



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. CP BRASS TAPS WITH ANTI-SABOTAGE FITTINGS.
5. LOW HEIGHT WATER TAP TO BE PROVIDED FOR PHYSICALLY HANDICAPPED PERSONS.
6. ALL DIMENSIONS ARE TENTATIVE AND MAY VARY AS PER THE REQUIREMENT.

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

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

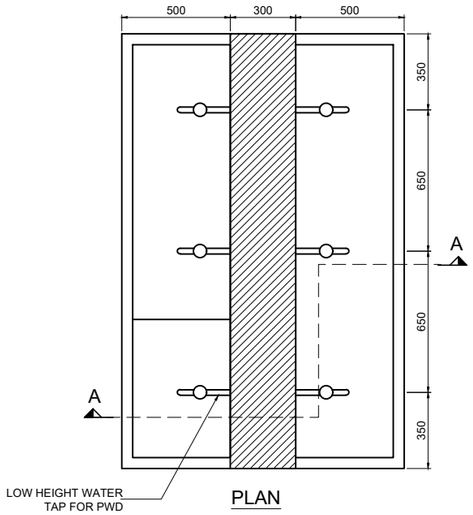
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

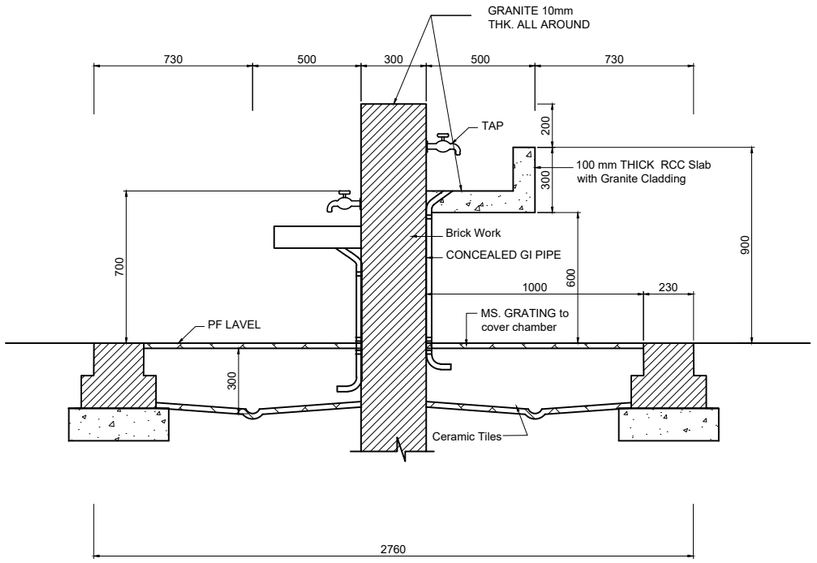
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH ONE SIDE TAPS ARRANGEMENT (END PLATFORM)

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-010_A1	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



PLAN



SECTION A-A

NOTES :

1. ALL DIMENSIONS ARE IN MM .
2. ALL EXPOSED SURFACE SHALL BE OF GRANITE CLADDING
3. CP BRASS TAPS WITH ANTY SABOTAGE FITTINGS.
4. SEPARATE DRAINAGE PLAN SHALL BE REFERRED FOR EFFLUENT DISCHARGE etc.
5. ALL DIMENSIONS ARE TENTATIVE AND MAY VARY AS PER THE REQUIREMENT.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

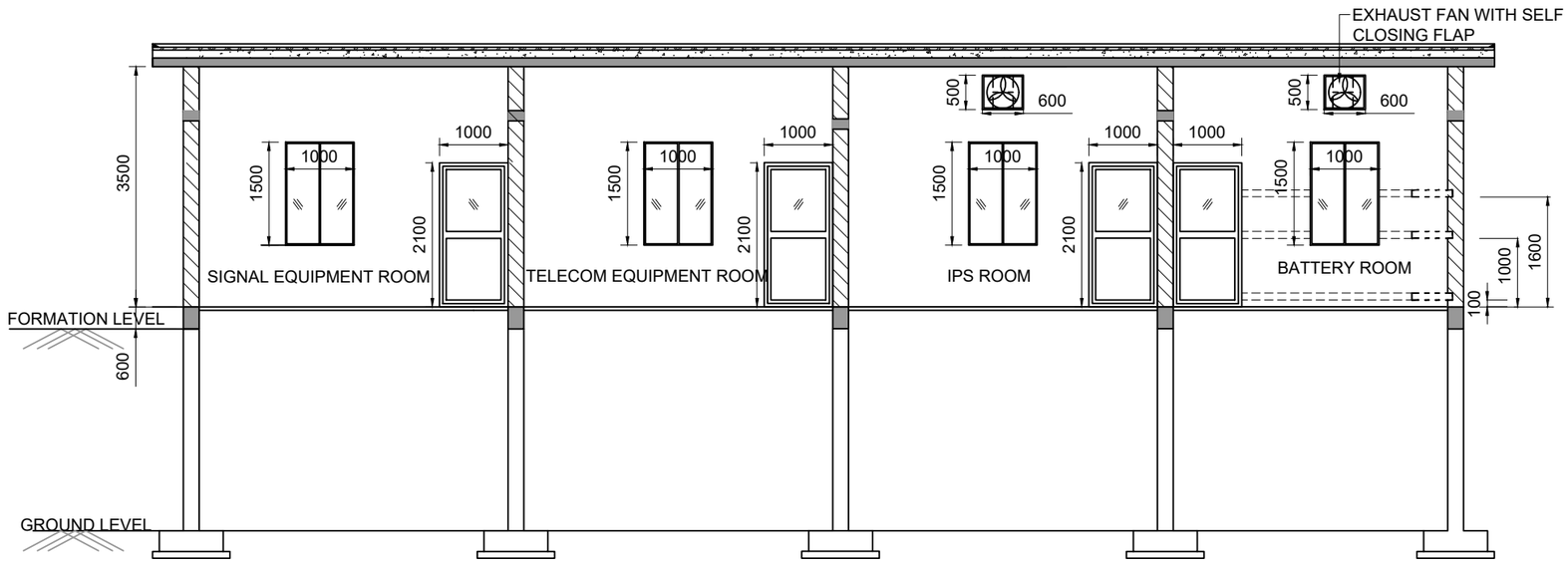
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

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

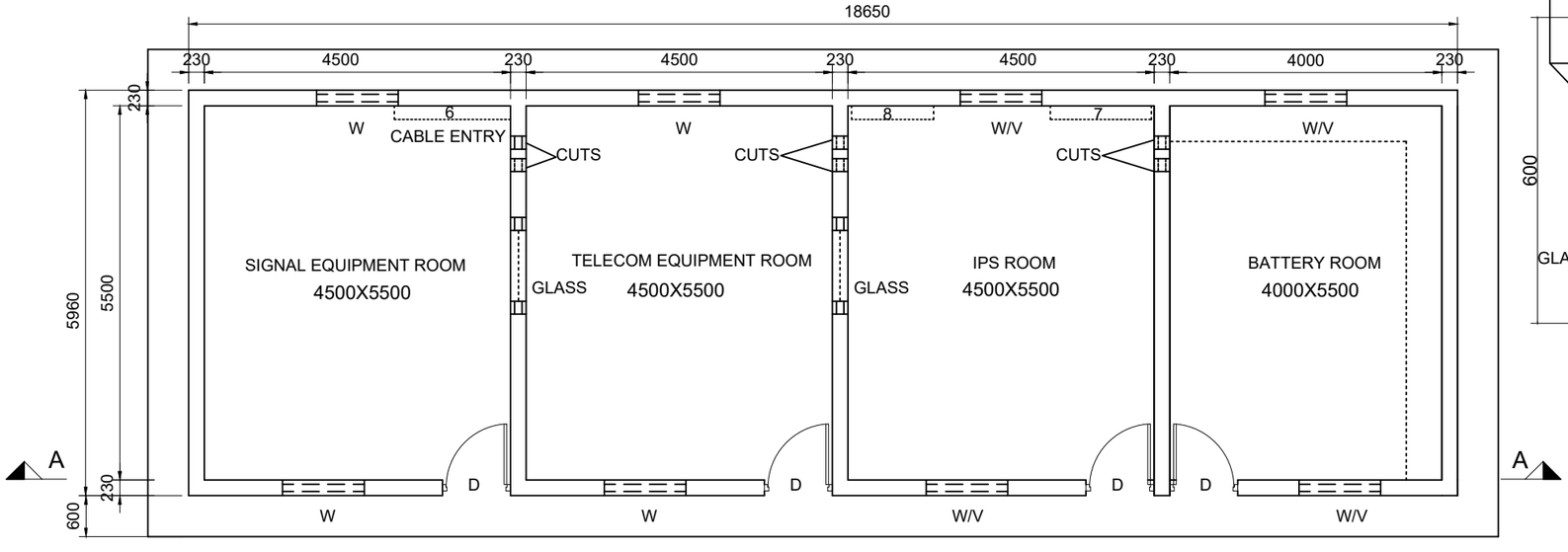
DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-011_A1	

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



SECTION ELEVATION A-A

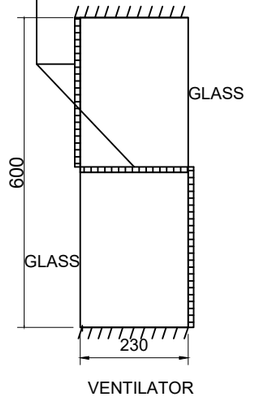
(SCALE 1:100)



PLAN

(SCALE 1:100)

FINE STAINLESS STEEL (SS) WIRE MESH



SCHEDULE

DOOR	2100x1000
WINDOW	1000x1500
VENTILATOR	600x500

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. PLINTH LEVEL SHALL BE KEPT AT LEAST 600mm ABOVE FORMATION LEVEL.
3. HEAVY DUTY TWO RCC SHELF IN BATTERY ROOM ON TWO SIDES 1000MM WIDE FOR BATTERIES, 100MM PLINTH SHALL BE MADE BELOW SHELF. FIRST SHELF AT 1000MM & SECOND SHELF AT 1600MM FROM GROUND LEVEL.
4. TWO OPENINGS 100mmX100mm AT 2500mm FROM FLOOR IN PARTITION WALLS.
5. OPENING DUCT FOR CABLE ENTRY IN FLOOR OF EQUIPMENT ROOM @ 1000mm(L)X 600mm(H)X 600mm DEEP.
6. POWER CABLE ENTRY 300mm(L)x300mm(H)x600mm DEEP IN POWER ROOM.
7. TELECOM/OFC CABLE ENTERY IN POWER ROOM 300mm(L)X300mm(H)X600mm DEEP.
8. MS STEEL GRILL ON WINDOWS & VENTILATORS.
9. EQUIPMENT ROOM TO BE PROTECTED FOR DUST.
10. 1000mmX600mm TOUGHENED GLASS IN THE PARTITION WALL BETWEEN EQUIPMENT ROOM & IPS ROOM.
11. OIL PAINT IN INTERIOR IN S & T EQUIPMENT ROOM.
12. HEAVY DUTY EXHAUST FAN IN IPS & BATTERY ROOM FRONT WALL WITH SELF CLOSING FLAP.
13. SIGNAL & TELECOME EQUIPMENT ROOM SHALL BE AIRCONDITIONED.

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
RAJENDRA KR. BHAUGUNA DPD / EST			
C.S TEWARI SRE/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.

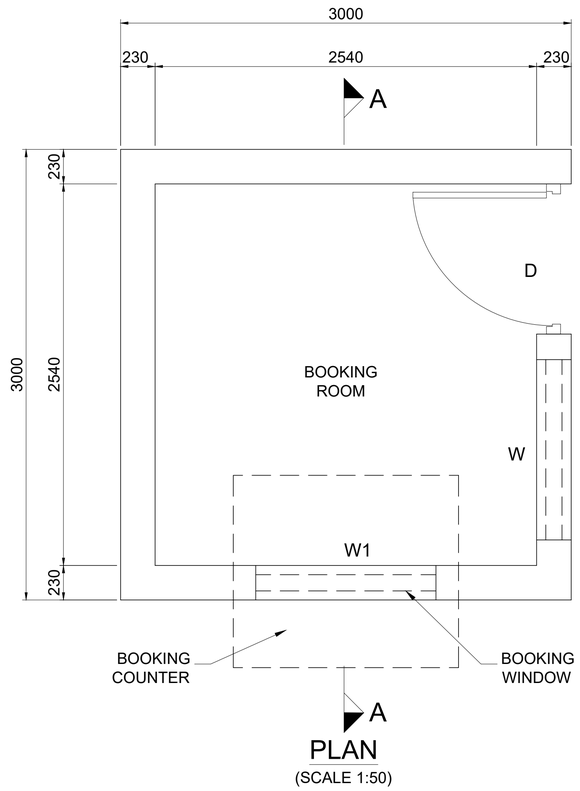
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

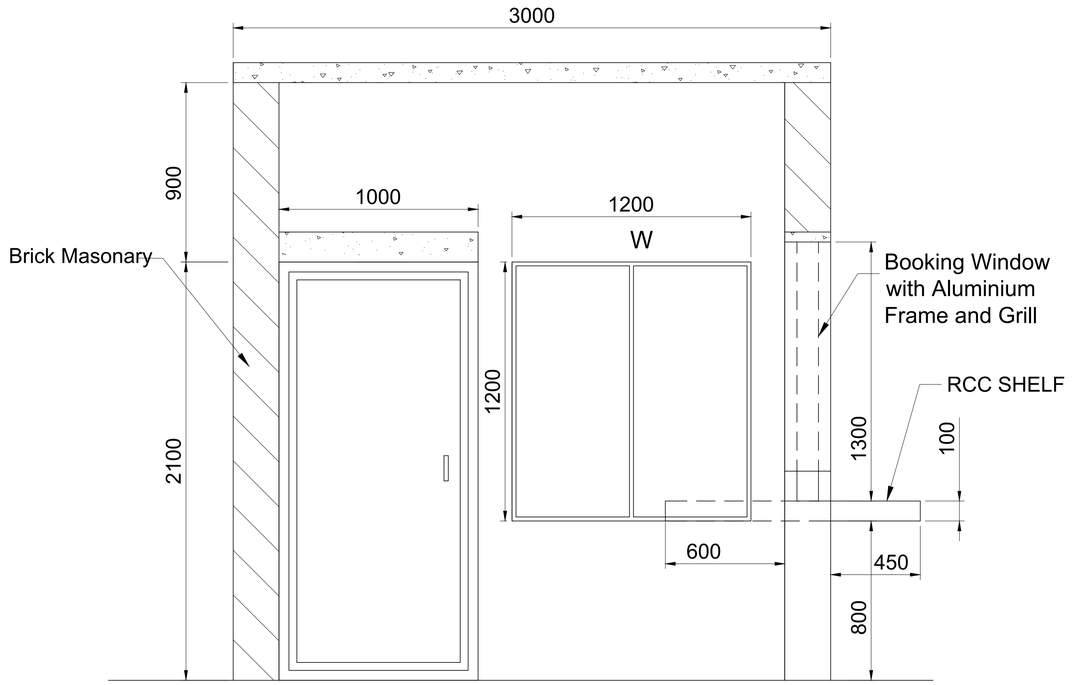
TITLE:-
CONCEPTUAL PLAN OF AUTO LOCATION HUT (S & T)

SKETCH NO.	SHEET NO.
GC-HRIDC-SK-GEN-012	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	31-08-2023	



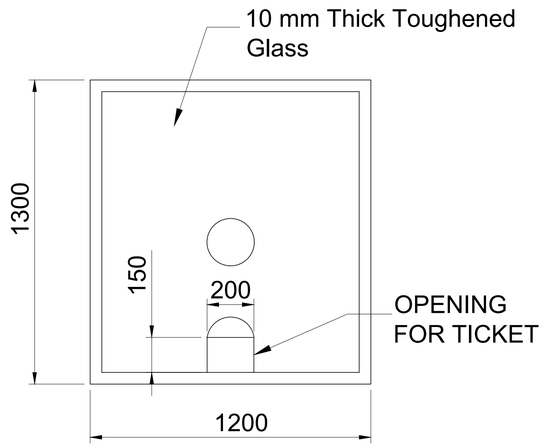
PLAN
(SCALE 1:50)



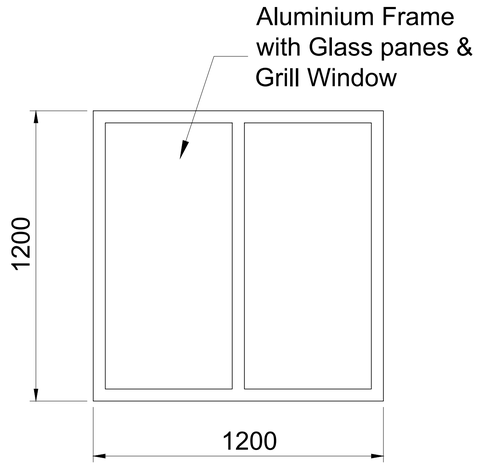
SECTION A-A
(SCALE 1:50)

NOTES :

1. ALL DIMENSIONS ARE IN MILIMETERS.
2. DEPTH 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		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE / CIVIL			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

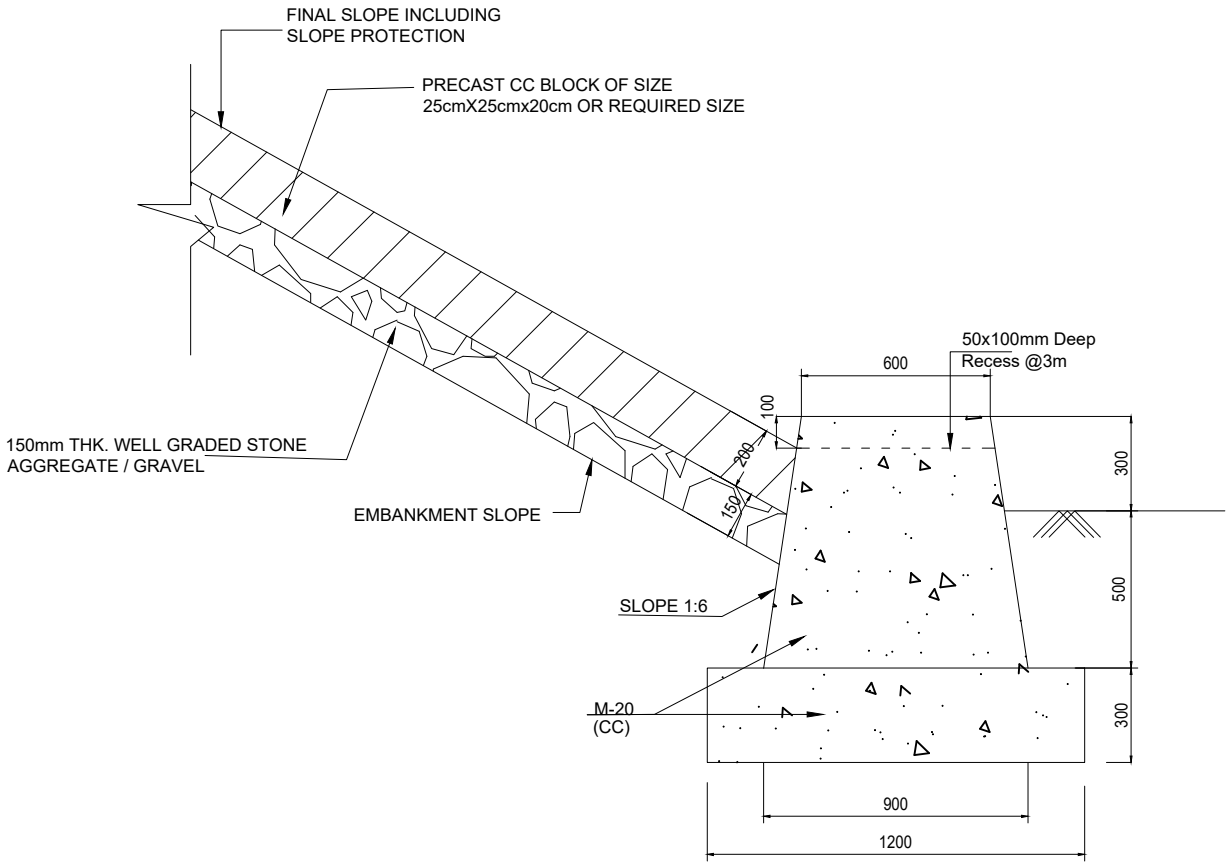
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:-
CONCEPTUAL PLAN TICKET COUNTER

SKETCH NO.	SHEET NO.
GC-HRIDC-SK-GEN-013	1OF1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	16-08-2023	



TOE WALL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS OTHERWISE MENTIONED.
2. M-20 GRADE CONCRETE SHALL BE USED FOR TOE WALL.
3. 25MM EXPANSION GAP SHALL BE PROVIDED AT 30m (MAX.) OF LENGTH OF WALL.

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

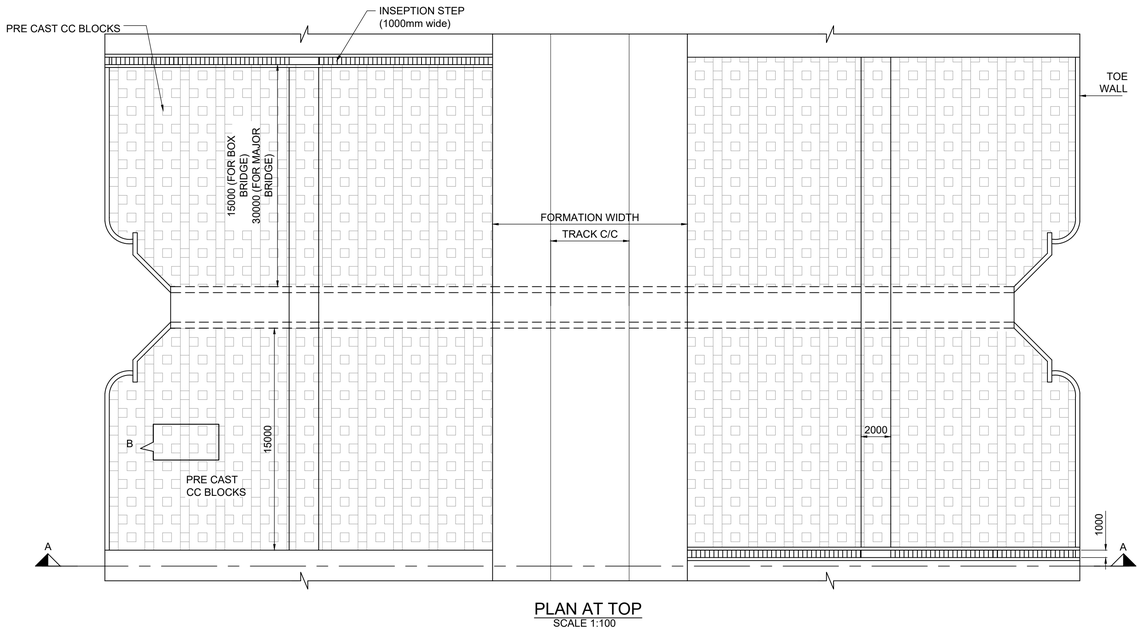
TITLE:- CONCEPTUAL PLAN
CC TOE WALL

DRG. NO. GC-HRIDC-SK-GEN-014_A1

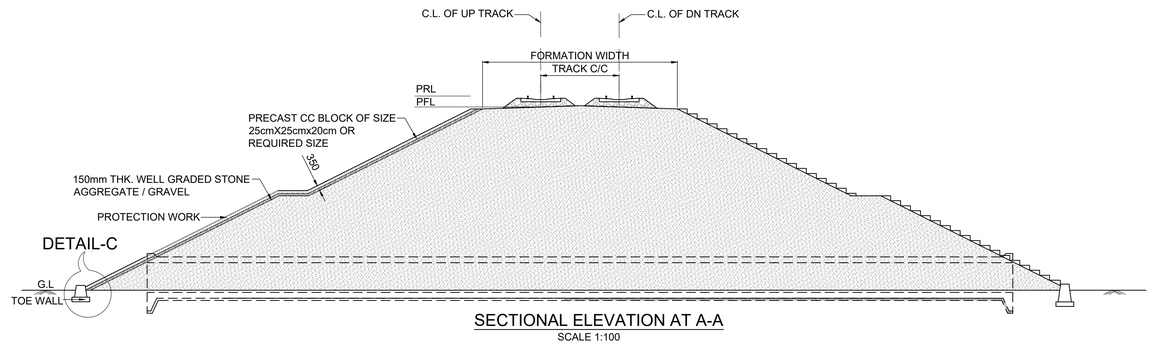
SHEET NO. 1 OF 1

SCALE : AS SHOWN

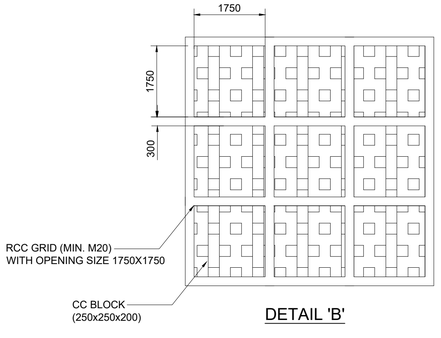
ISSUE DATE 28.12.2022



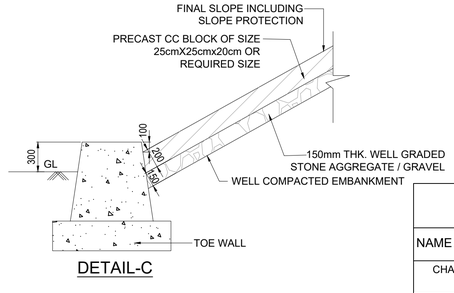
PLAN AT TOP
SCALE 1:100



SECTIONAL ELEVATION AT A-A
SCALE 1:100



DETAIL 'B'



DETAIL-C

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.
4. THIS SKETCH SHALL BE READ ALONG WITH CONCEPTUAL PLAN CC TOE WALL NO. GC-HRIDC-SK-GEN-014-A1.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

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

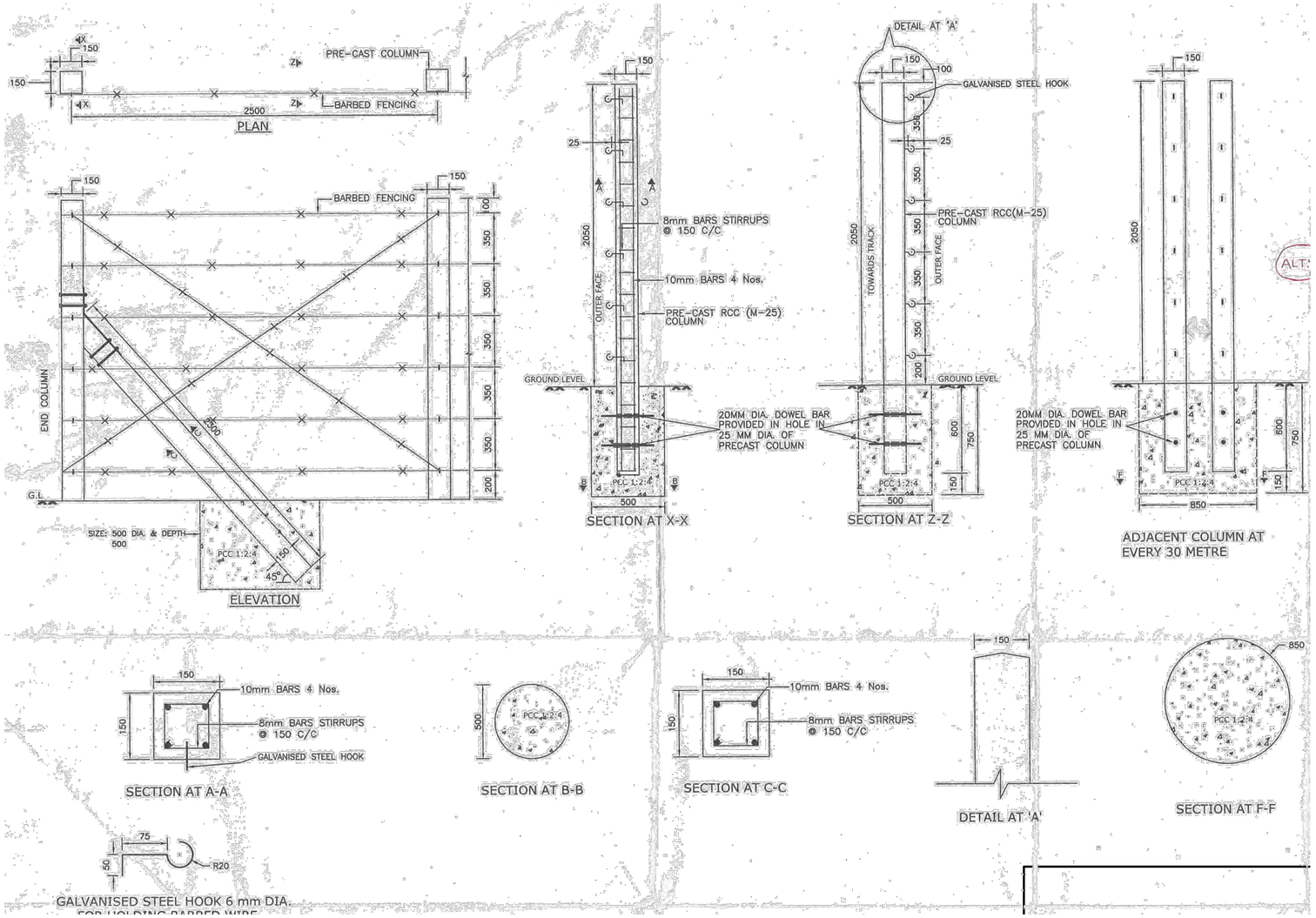
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 OF BRIDGE

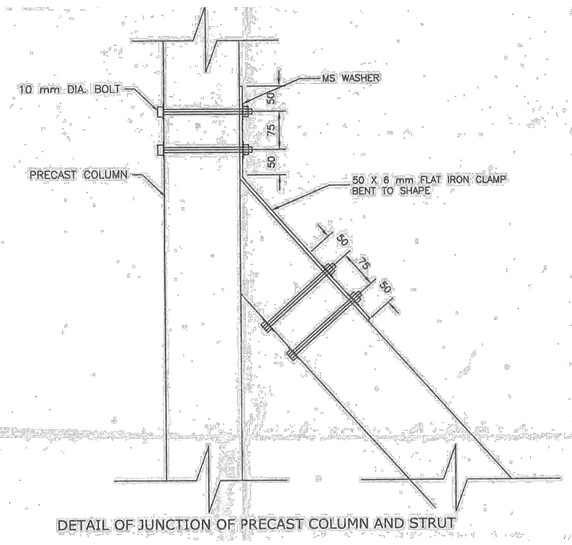
DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-015_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
2. BARBED FENCING SHALL BE MADE OF G.I. BARBED WIRES CONFIRMING TO IS: 278. THE WEIGHT OF G.I. BARBED WIRE SHALL BE AS PER SOR.
3. THE G.I BARBED WIRES SHALL BE FIXED TO THE COLUMNS WITH HOOKS MADE OF 6 mm DIA. GALVANIZED STEEL. ANOTHER END OF GALVANIZED STEEL HOOK SHALL BE PLACED BEHIND STIRRUPS AND TIED WITH STIRRUPS AS PER DRAWING TO PROVIDE STRENGTH.
4. FOR ERECTION OF WIRE FENCING, RECOMMENDATIONS GIVEN IN IS:4996-1984 SHALL BE FOLLOWED. FENCING WIRE SHALL BE TIED TO GALVANISED STEEL HOOKS WITH SHORT PIECE OF LIGHT WIRE.
5. M-25 GRADE CONCRETE SHALL BE USED IN PRECAST COLUMN/ STRUT. COLUMN/ STRUT SHALL BE CAST AT CENTRALIZED DEPOT UNDER CONTROLLED CONDITION AS PER IS :456-2000.
6. TMT BARS OF GRADE FE 415/ 500 OF SPECIFIED DIA. SHALL BE USED. TMT BAR SHALL BE CONFIRMING TO IS:1786 (LATEST).
7. ZONAL RAILWAY MAY PAINT THEIR INITIALS (SUCH AS NR, SER etc.) ON COLUMN AND STRUT.
8. STRUT OR BRACE SHALL BE FIXED WITH END RCC COLUMN BY SUITABLE ARRANGEMENT AS DETAILED IN DRAWING. 50 X 6 mm MS FLAT SHALL BE USED TO CONNECT STRUT/BRACE TO RCC COLUMN. 10 mm DIA. MS BOLT BLACK HEXAGONAL HEAD ROUND NECK WITH HEXAGONAL NUTS AND TWO WASHER SHALL BE USED. AFTER TIGHTING NUT, END OF BOLT SHALL BE HAMMERED TO MAKE ANTITHEFT.
9. SUPPORTING STRUT SHALL BE PROVIDED AT FIRST / END COLUMN OR CHANGE OF DIRECTION.
10. 1:20 SLOPE SHALL BE PROVIDED ON TOP OF COLUMN AT THE TIME OF CASTING.
11. AT EVERY 30 METRE TWO COLUMN SHALL BE GROUTED SIDE BY SIDE.
12. IN UNDULATING AREA, COLUMN SHALL BE PLACED ACCORDINGLY SO THAT BARBED WIRE ARE ALIGNED HORIZONTAL. VERTICALITY OF COLUMN SHALL BE CHECKED DURING ERECTION.
13. FOUNDATION SHALL BE DUG USING AUGAR/ MECHANICAL BORING EARTH SHALL BE RAMMED PROPERLY AND 50 MM SAND SHALL BE PLACED BEFORE FOUNDATION CASTING. FOUNDATION SHALL BE CURED PROPERLY.
14. THIS CATLE FENCE SHALL BE PROVIDED AT RAILWAY BOUNDARY.
15. IS:456(LATEST) SHALL BE FOLLOWED IN ALL R.C.C & P.C.C WORKS.



Notes:

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

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

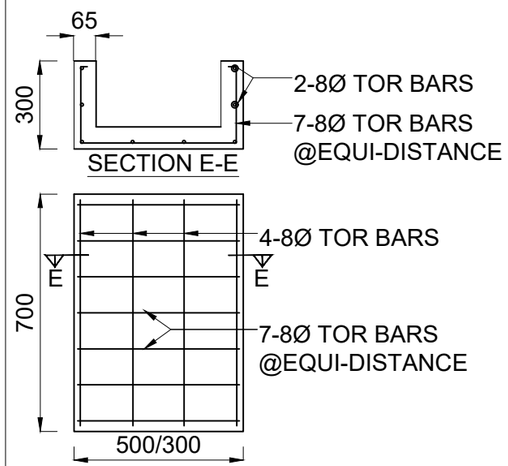
TITLE:- CONCEPTUAL PLAN
BARBED WIRE FENCING

DRG. NO. GC-HRIDC-SK-GEN-016_A1

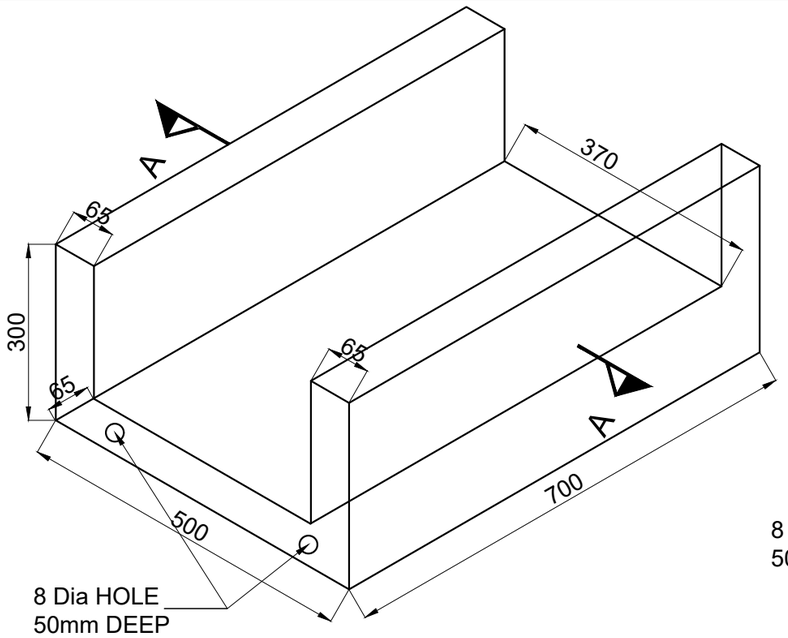
SHEET NO. 1 OF 1

SCALE : AS SHOWN

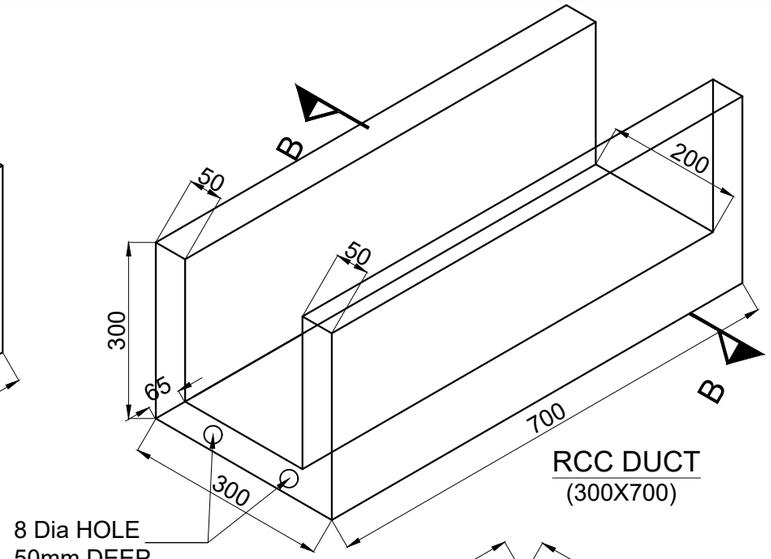
ISSUE DATE 28.12.2022



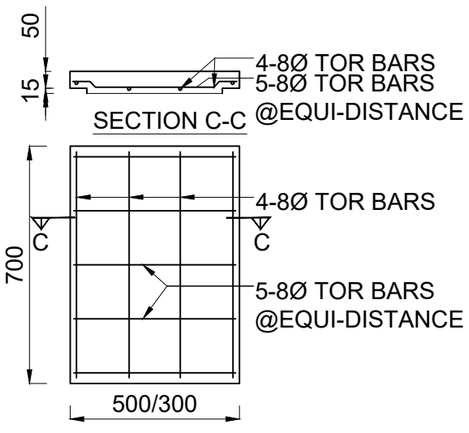
BOTTOM PLAN OF
RCC DUCT



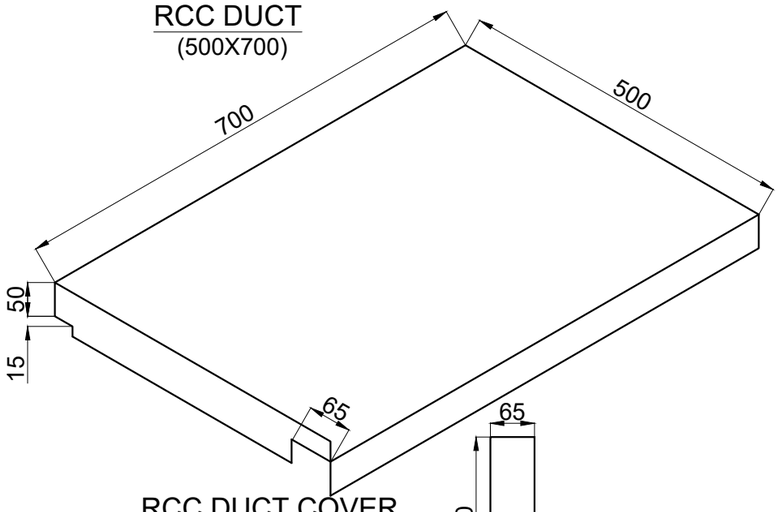
RCC DUCT
(500X700)



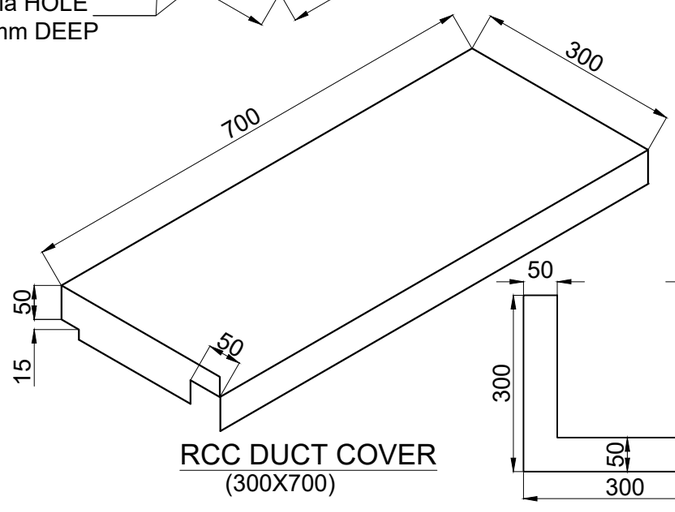
RCC DUCT
(300X700)



BOTTOM PLAN OF
RCC DUCT COVER

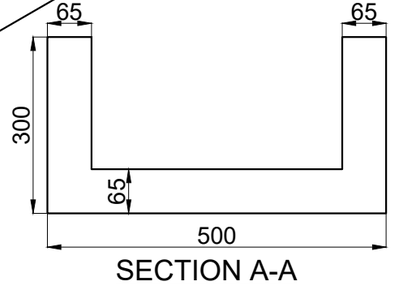


RCC DUCT COVER
(500X700)



RCC DUCT COVER
(300X700)

SECTION B-B



SECTION A-A

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS .
2. RCC DUCT SHALL BE LAID AT A DEPTH SUCH THAT THE TOP OF RCC COVER IS AT THE DEPTH OF MINIMUM 690mm BELOW GROUND LEVEL.
3. THE TRUNKING OF SEGMENT TO BE DONE BY PUTTING MS RODS OF 8 mm DIA x 100mm LONG (AS PER IS:432 PART(i)-1982 IN THE TWO HOLES PROVIDED.
4. DUCT SHOULD BE RCC PRECAST (FACTORY MADE) OF M-35 GRADE.
5. THIS DRAWING IS DEVELOPMENT FOR INCIDENTAL VEHICLE LOAD OF 10KN/M² OVER AND ABOVE EARTH PRESSURE.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
RAJENDRA KR. BHAUGUNA DPD/E&T.		JYOTI SANGWAN DGM/Elect.	
PRATIBHA KUMARI SRE/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.

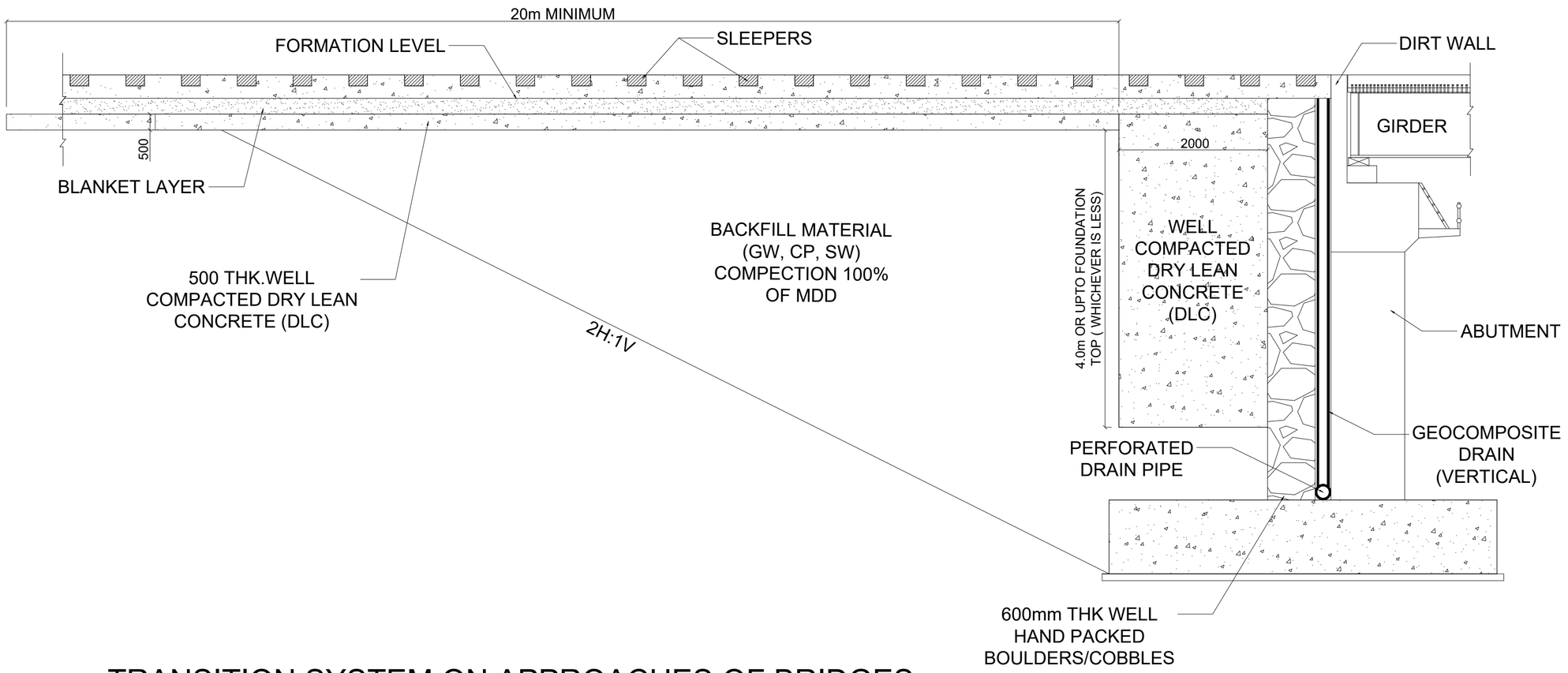
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL PLAN
RCC DUCT OF SIGNALLING CABLE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-017	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	09.09.2023



TRANSITION SYSTEM ON APPROACHES OF BRIDGES

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN.
3. THIS DRAWING IS PREPARED BASED UPON REFER RDSO REPORT NO. GE:R-50 DATED JULY-2021 FOR DETAILS THIS REPORT SHALL BE FOLLOWED.
4. GEOCOMPOSITE DRAINS TO BE USED BEHIND BRIDGE ABUTMENT SHALL BE AS PER RDSO/2018/GE:IRS-006, MARCH-2019 AND COMPREHENSIVE GUIDELINE AND SPECIFICATIONS FOR RAILWAY FORMATION.
5. PROVISION IN RETURN WALL SHALL BE KEPT TO TAKE OUT THE DISCHARGE FROM PERFORATED DRAIN PIPE.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

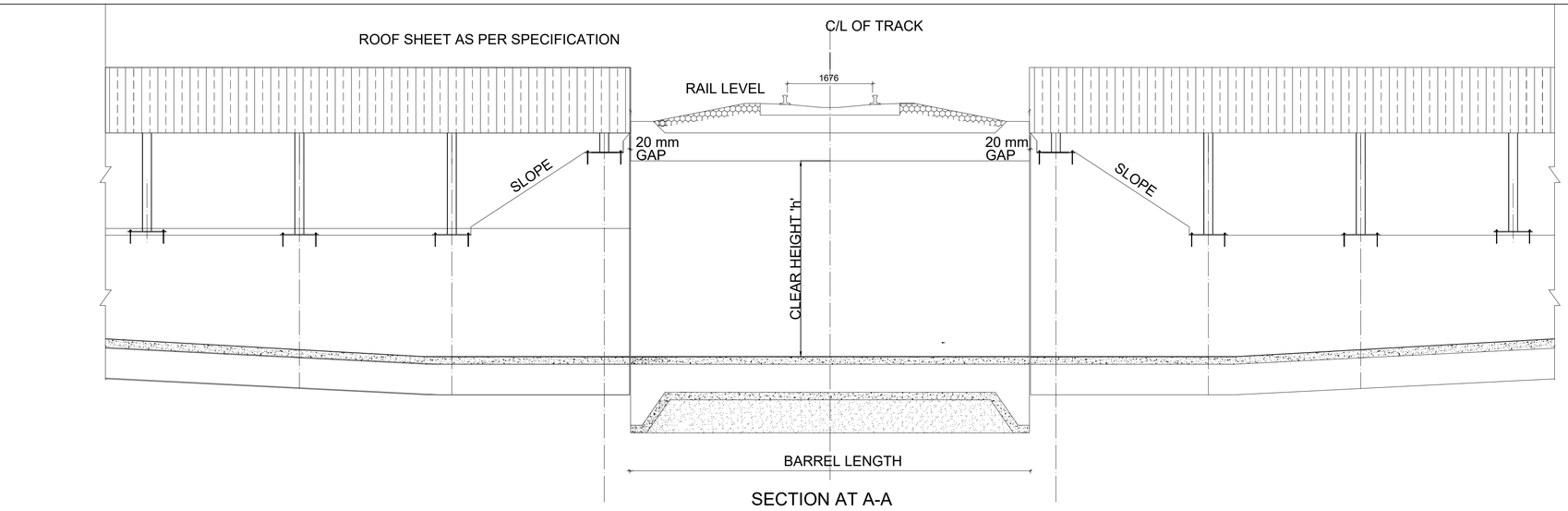
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

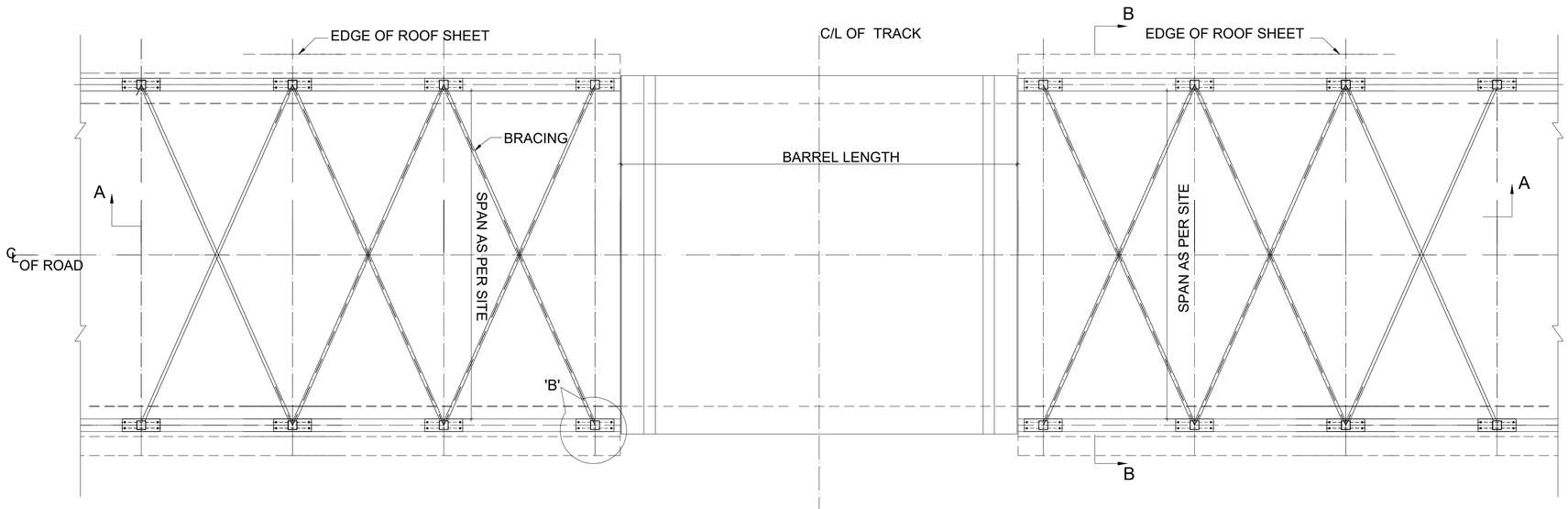
TITLE:-
CONCEPTUAL PLAN FOR
TRANSITION SYSTEM OF BRIDGE APPROACHES

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-019	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



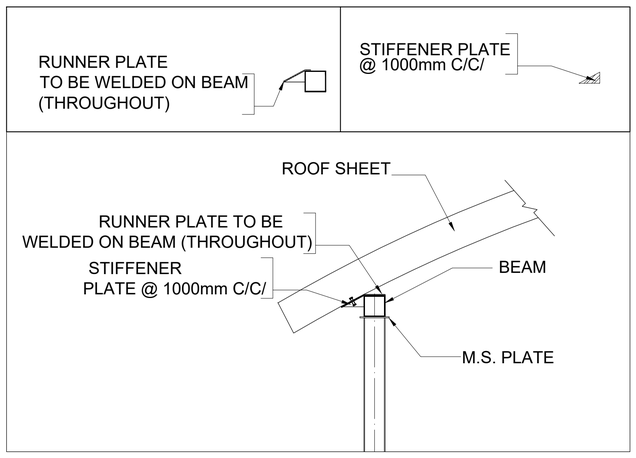
SECTION AT A-A



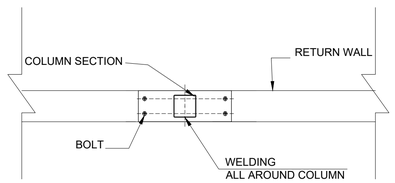
PLAN

NOTES :

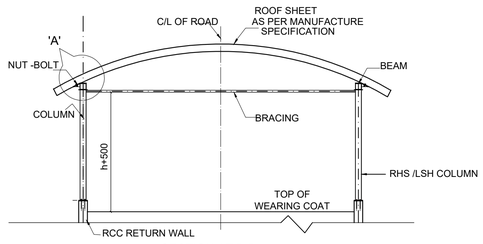
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED OTHERWISE.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. VERIFY ALL SCHEDULE OF DIMENSION BEFORE EXECUTION OF WORK AT SITE. ENGINEER IN CHARGE SHOULD ENSURE THE SAFETY OF TRACK/EXISTING STRUCTURES BEFORE EXECUTION OF WORK.
4. STRUCTURAL STEEL SHALL CONFORM TO IS : 2062.
5. ALL WELD SHALL BE ALL AROUND CONTINUOUS UNLESS OTHERWISE MENTIONED.
6. SIZE AND SPACING OF STRUCTURAL MEMBERS SHALL BE FINALIZED AFTER DETAILED DESIGN.
7. RDSO REPORT NO. RDSO/WKS/2015/3 SHALL BE FOLLOWED FOR SELF-SUPPORTING ROOFING SYSTEM DETAILS, ITS INSTALLATION AND MATERIAL SPECIFICATION.
8. ROOF COVERING SHALL BE OF HIGH QUALITY, HIGH GRADE, PRE COATED GALVALUME SHEET OF MINIMUM THICKNESS 0.9mm.
9. PROFLEX ROOFING SYSTEM SHALL BE ADOPTED FOR SELF-SUPPORTING ROOFING.
10. ROOFING PANELS SHALL BE MECHANICALLY SEAMED (INTERLOCK) AND FREE FROM NOTES, NUT, BOLTS OVERLAPS AND SEALANTS.
13. AFTER ERECTION OF ROOFING, IT SHALL BE BOLTED WITH THE SUPPORTING STRUCTURE BY SELF-SPLITTING SCREWS.



DETAIL AT 'A'
NOT TO SCALE



DETAIL AT 'B'
NOT TO SCALE



SECTION AT B-B
DETAILS OF COVER SHED (COVER ON APPROACH ROAD)

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

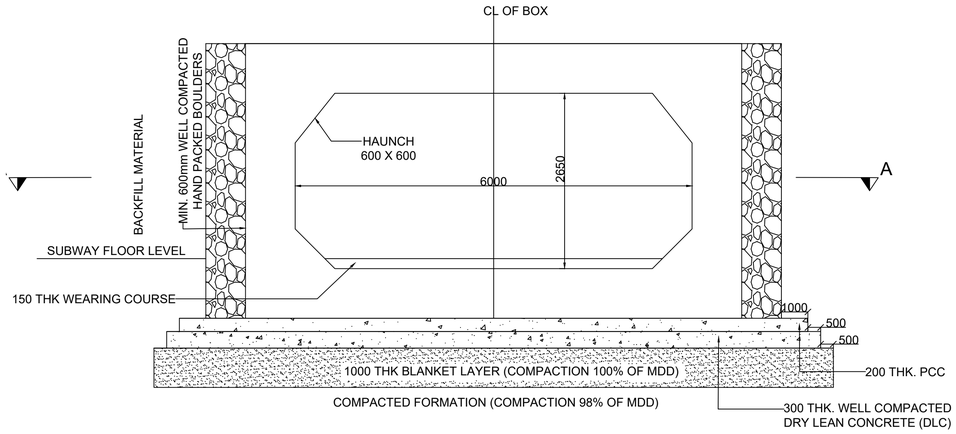
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

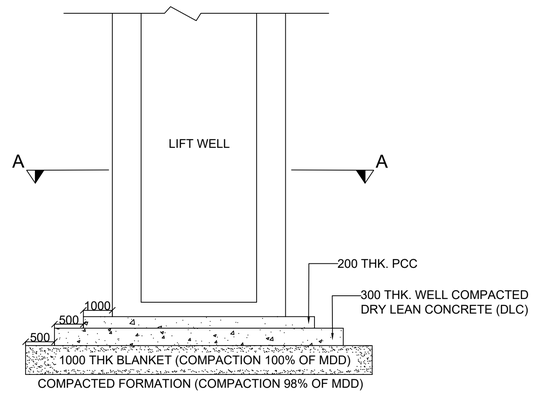
TITLE:- CONCEPTUAL PLAN FOR SELF SUPPORTING ROOF COVERING SHED

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-020	1 OF 1

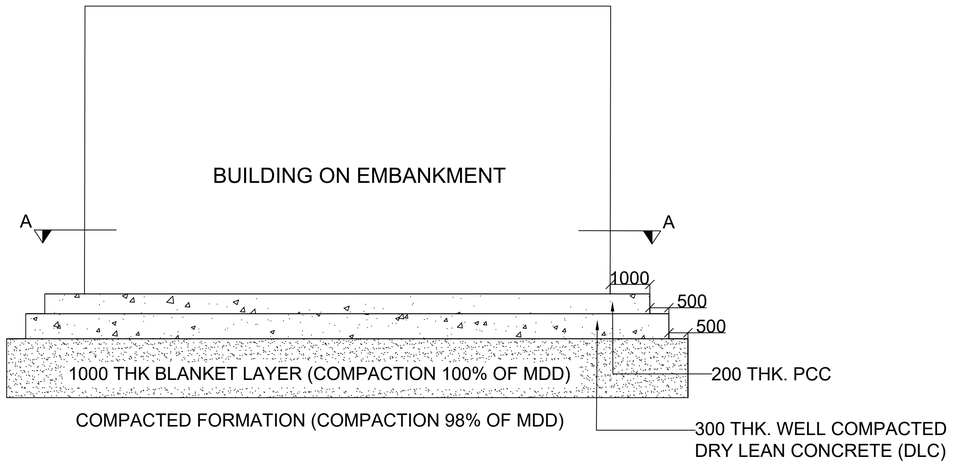
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



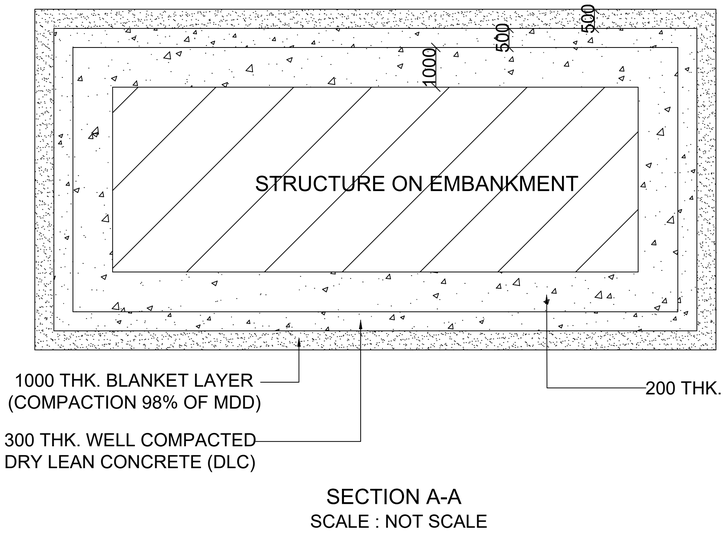
FORMATION DETAIL BELOW SUBWAY BOX



FORMATION DETAIL BELOW LIFT WELL



FORMATION DETAIL BUILDING



SECTION A-A
SCALE : NOT SCALE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. FOR BLANKET LAYER DETAILS FOLLOW RDSO SPECIFICATION NO.: RDSO82020/GR:IRS-004 (COMPREHENSIVE GUIDELINE AND SPECIFICATION FOR RAILWAY FORMATION).

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

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

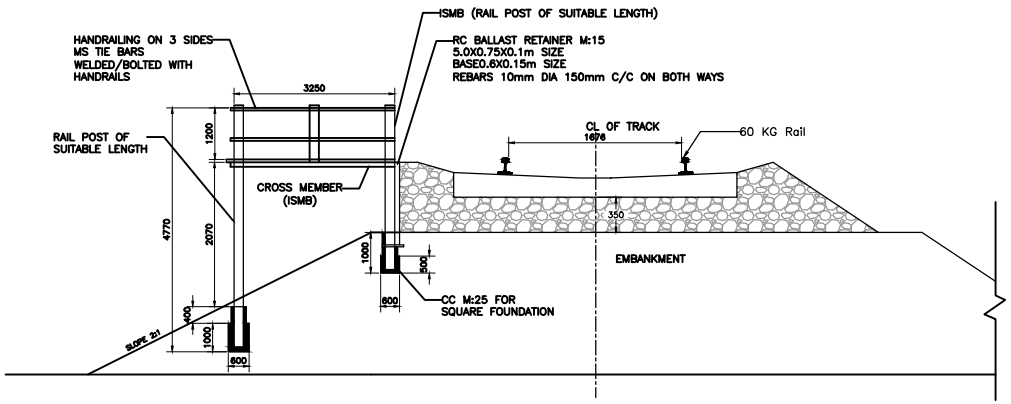
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

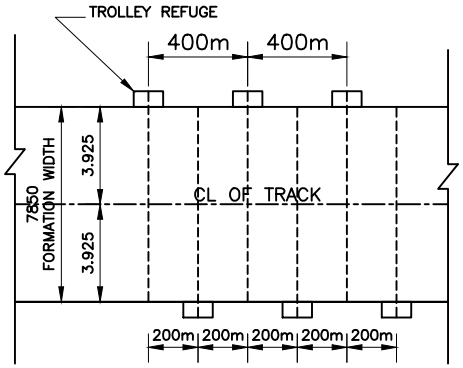
TITLE:- CONCEPTUAL PLAN FOR FORMATION DETAIL BELOW OF SUBWAY AND LIFT WELL

DRG. NO. GC-HRIDC-SK-GEN-021
SHEET NO. 1 OF 1

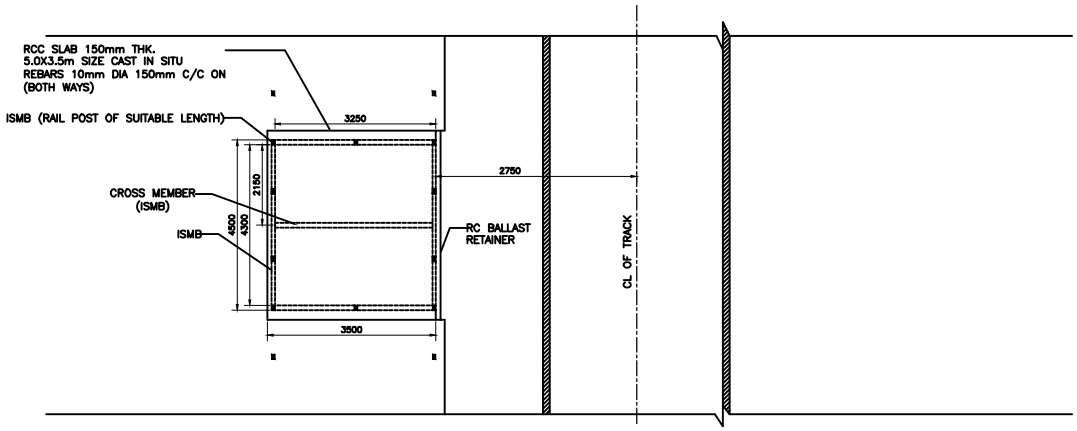
SCALE : AS SHOWN
ISSUE DATE 28.12.2022



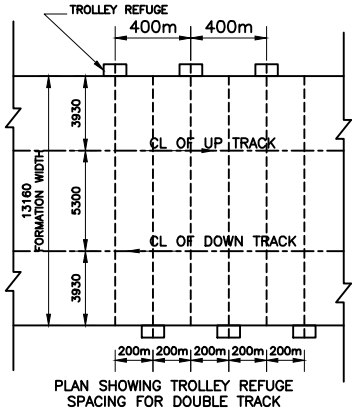
SECTIONAL ELEVATION



PLAN SHOWING TROLLEY REFUGE
SPACING FOR SINGLE TRACK



PLAN



PLAN SHOWING TROLLEY REFUGE
SPACING FOR DOUBLE TRACK

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.

2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

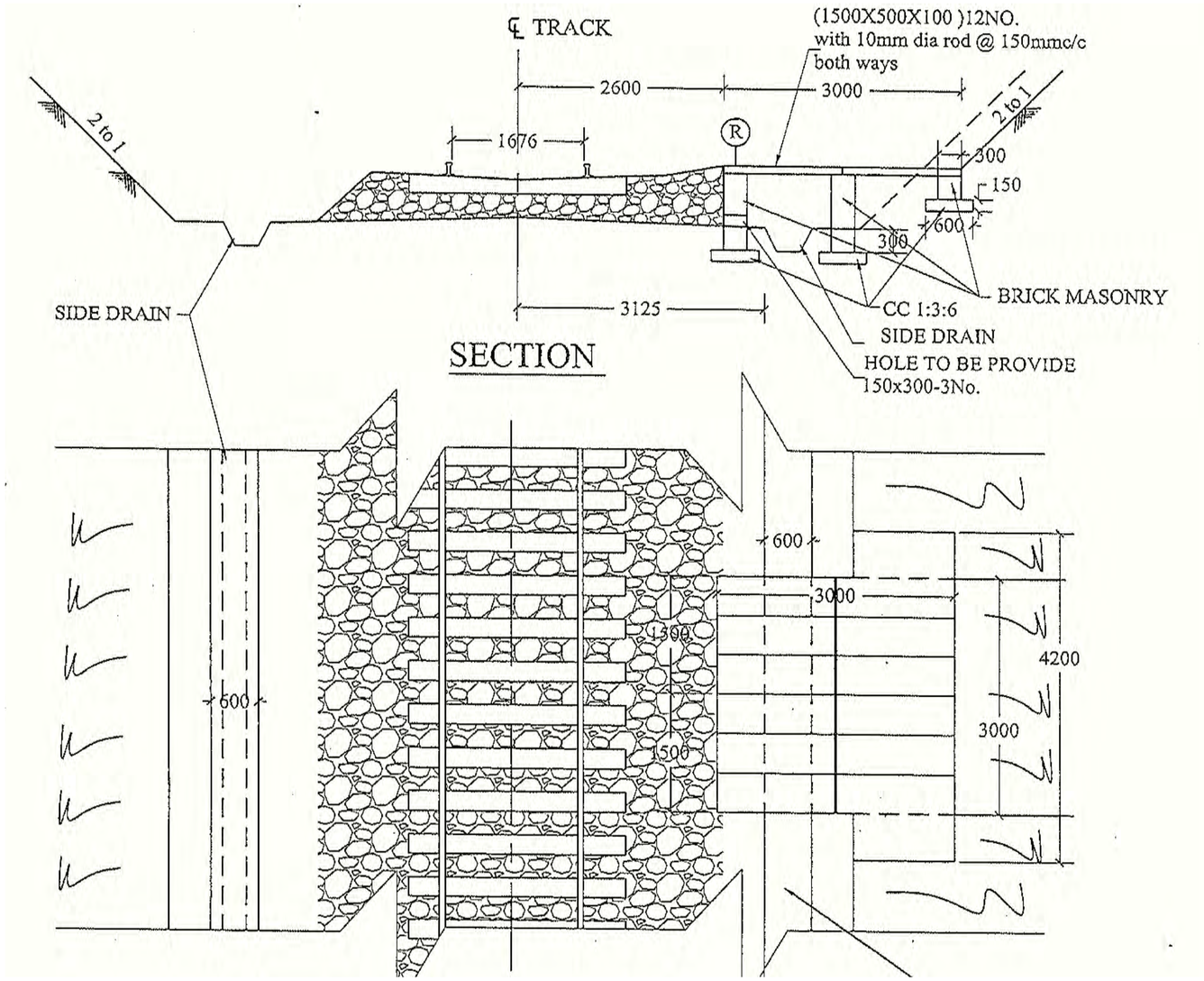
TITLE:- CONCEPTUAL PLAN FOR TROLLEY REFUGE IN EMBANKMENT

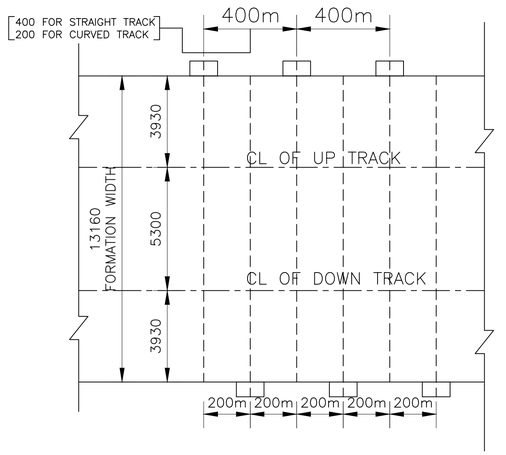
DRG. NO. GC-HRIDC-SK-GEN-022

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022





PLAN SHOWING TROLLEY REFUGE
SPACING FOR DOUBLE TRACK

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. RCC PRECAST SLAB M35 (1500X500X100)

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

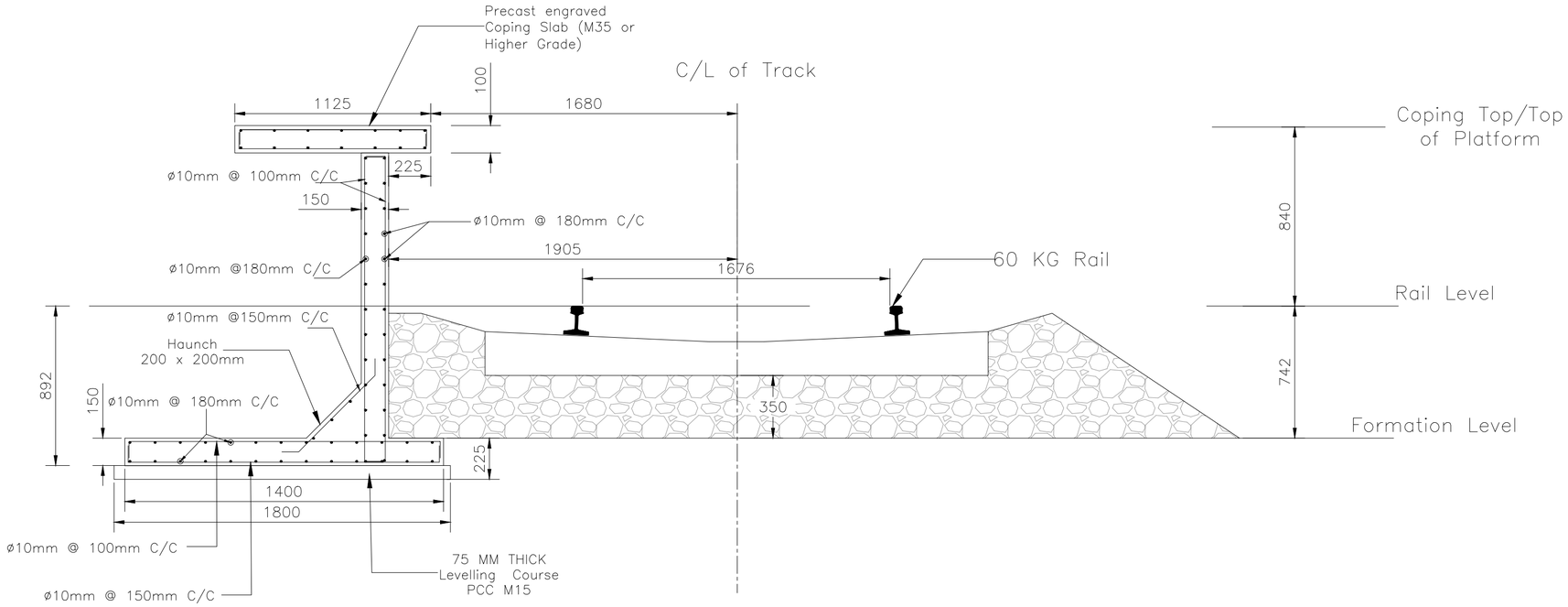
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:-
CONCEPTUAL PLAN FOR
TROLLEY REFUGE IN CUTTING

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-023	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



SECTION FOR PLATFORM WALL

NOTES:

1. ALL DIMENSION ARE IN MILLIMETERS EXPECT LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. 25MM CLEAR COVER SHALL BE PROVIDED TO ALL TYPES OF OUTERMOST REINFORCEMENT.
3. #INDICATES HIGH YIELD STRENGTH STEEL Fe-500 D(TMT) CONFORMING TO I.S. 2008.
4. ANCHORAGE SHALL BE 50 X DIA OF BARS & NOT MORE THAN 50% BARS SHALL BE LAPPED AT ONE SECTION. THE DISTANCE BETWEEN TWO LAPS SHALL BE MORE THAN 1.5 TIMES THE LAP LENGTH.
5. 50mm DIA. PVC PIPE AS WEEP HOLES ARE TO BE PROVIDED IN PLATFORM/TOE WALL @1000mm C/C HORIZONTALLY AND VERTICALLY STAGGERED. MINIMUM 50mm DISTANCE BETWEEN PIPE FACE & ALL STEEL MUST BE MAINTAINED.
6. THE BACK FILL IS TO BE PROVIDED CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE CODE. COMPACTION OF BACKFILL SHALL BE DONE AFTER COMPACTING THE SOIL GIVING PASSIVE PRESSURE FROM TRACK SIDE.
7. CONCRETE GRADE OF PLATFORM WALL SHALL BE M:35.
8. IT SHALL BE DESIGNED FOR SEISMIC ZONE IV.
9. COPING SLAB IS NOT MONOLITHICALLY CAST WITH WALL. IT SHALL BE PRESENT ON PLATFORM WALL TOP USING 1:3 CEMENT-SAND MORTAR COPING SHALL BE KEPT AFTER THE COMPACTION OF BACKFILL.
10. SIZE & REINFORCEMENT SHOWN IN DRAWING IS TENTATIVE AND DETAILED DESIGN SHALL TAKE CARE OF THE REQUIREMENT OF SEISMIC ZONE IV.
11. 25MM EXPANSION GAP SHALL BE PROVIDED AFTER EVERY 25m LENGTH.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

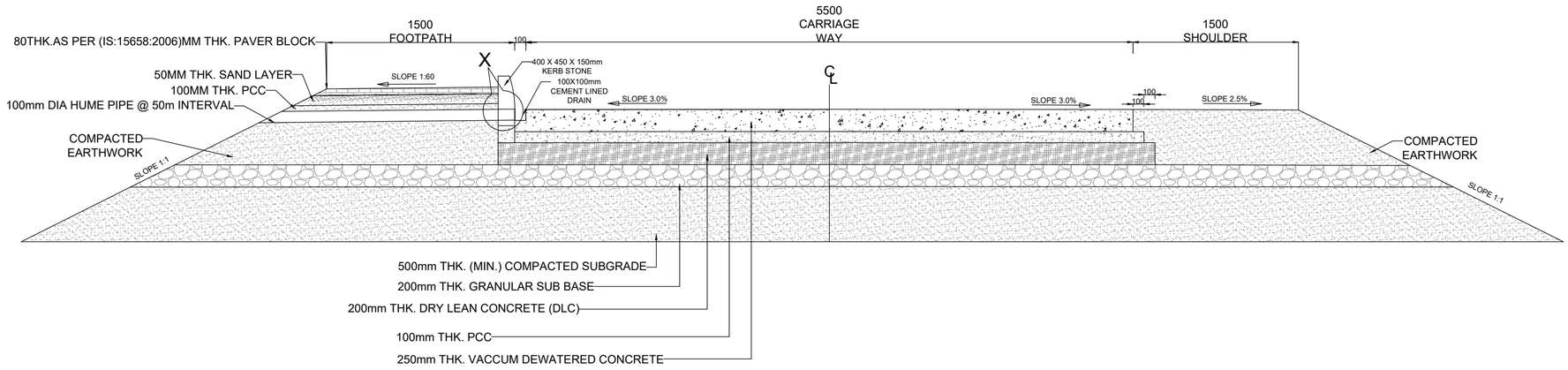
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

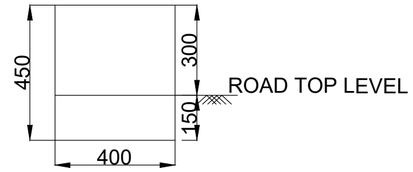
TITLE:- CONCEPTUAL SKETCH FOR RCC PLATFORM WALL

DRG. NO. GC-HRIDC-SK-GEN-024 | SHEET NO. 1 OF 1

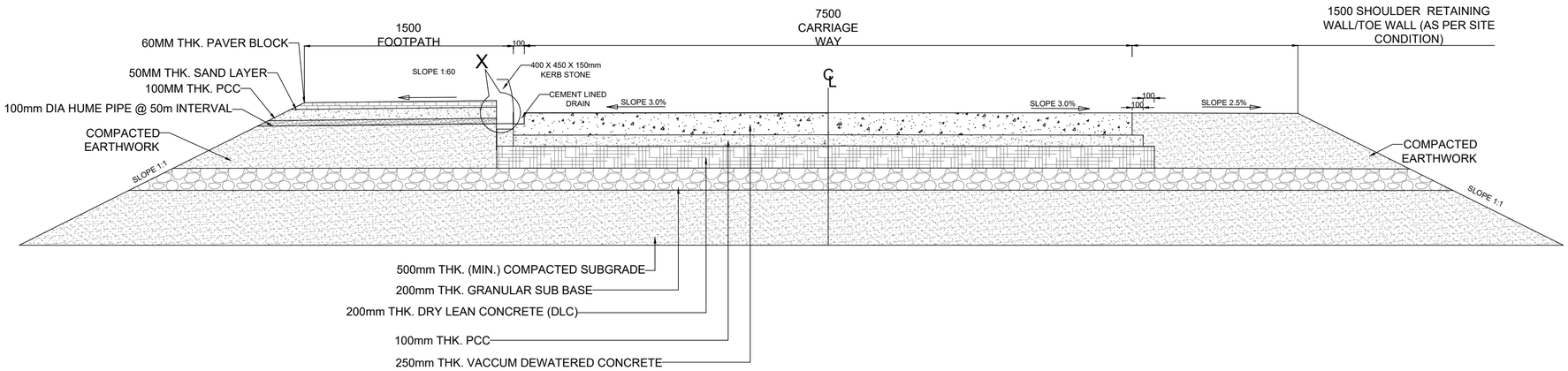
SCALE : AS SHOWN | ISSUE DATE 28.12.2022



TYPICAL CROSS-SECTION OF SINGLE LANE ROAD



DETAIL OF X



TYPICAL CROSS-SECTION OF DOUBLE LANE ROAD

NOTES:
1. ALL DIMENSION ARE IN MILLIMETERS EXPECT LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. ROAD SHALL BE CONSTRUCTED AS PER MORTH STANDARDS.
3. LAYING OF PAVE BLOCK SHALL BE AS PER IRC PROVISION.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

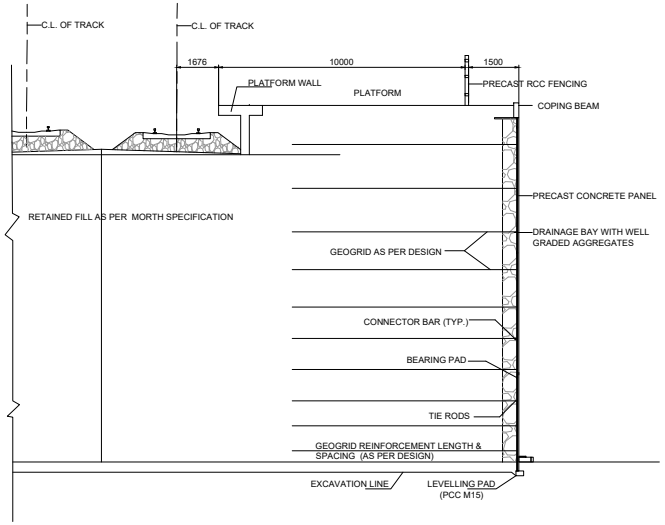
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

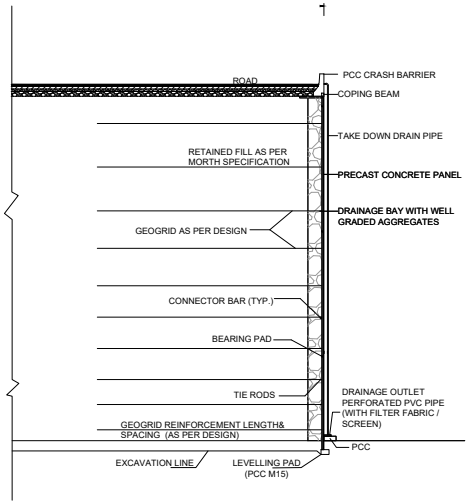
TITLE:- CONCEPTUAL SKETCH FOR SINGLE & DOUBLE LANE ROAD

DRG. NO. GC-HRIDC-SK-GEN-025 | SHEET NO. 1 OF 1

SCALE : AS SHOWN | ISSUE DATE 28.12.2022



TYPICAL CROSS SECTION OF REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT AND PRECAST PANEL FACING FOR RAIL PLATFROM



TYPICAL CROSS SECTION OF REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT AND PRECAST PANEL FACING FOR ROAD

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED OTHERWISE.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. DESIGNS, DETAILING OF RE WALL SHALL BE AS PER MORTH SPECIFICATION.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

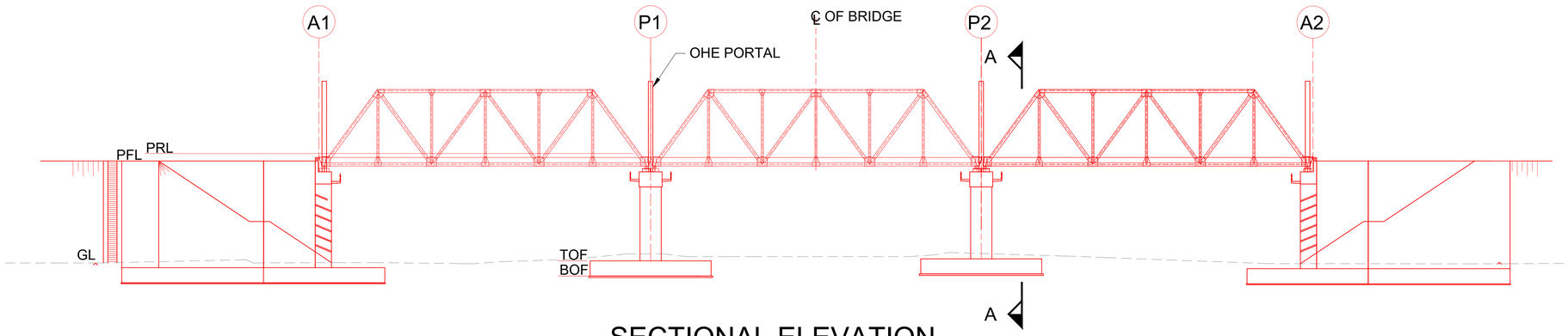
TITLE:- CONCEPTUAL SKETCH FOR REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT

DRG. NO. GC-HRIDC-SK-GEN-026

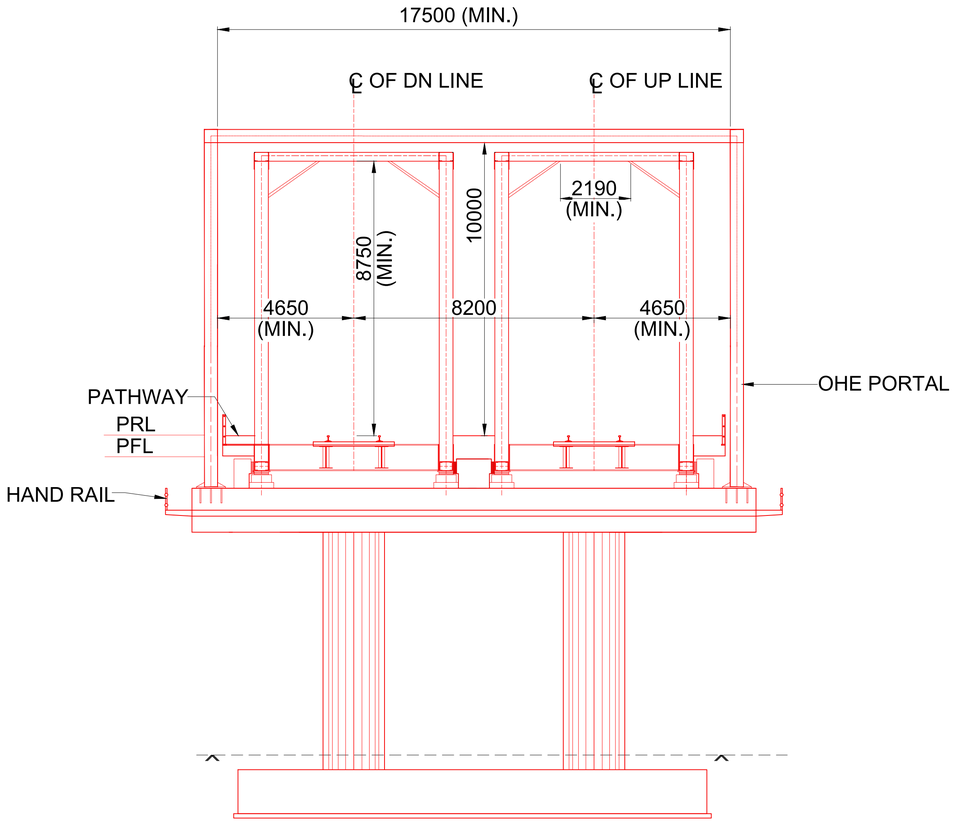
SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



SECTIONAL ELEVATION



SECTION A-A

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. EARTHING ARRANGEMENT SHALL BE MADE AT EACH OHE MAST LOCATION AS PER SKETCH NO. GC-HRIDC-C5-SK-GEN-38.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
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.

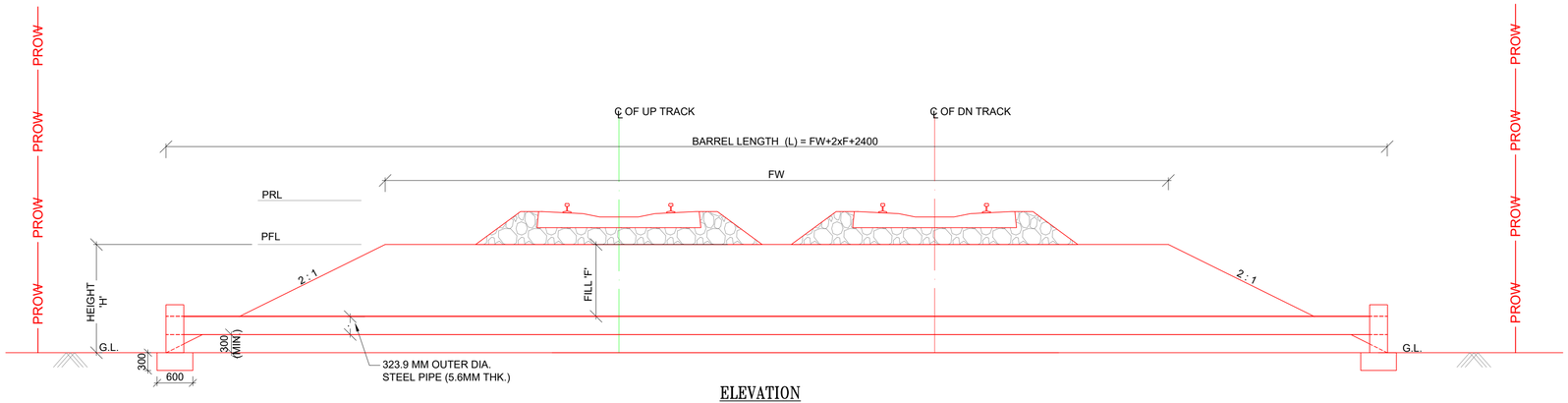
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN

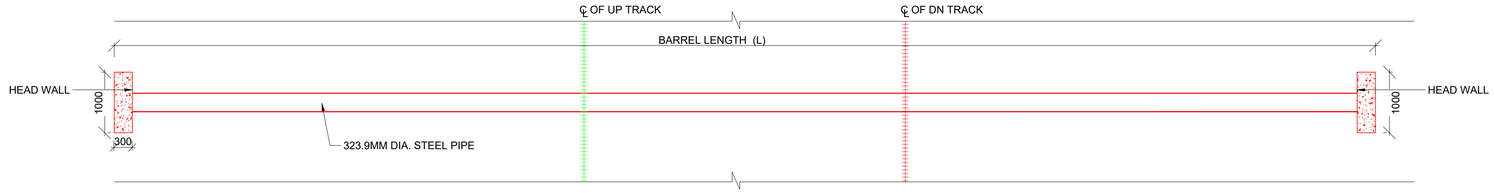
OHE PORTAL FOR OWG GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-035	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	09.09.2023



ELEVATION
(SCALE 1:50)



PLAN
(SCALE 1:50)

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. A MIN. CUSHION BELOW BOTTOM OF SLEEPER OF 600MM SHALL BE ENSURED FOR CASING PIPE.
3. THE PIPE SHOULD BE OF MILD STEEL FABRICATED AS PER IS: 3589 FROM STEEL PLATES CONFORMING TO IS : 2062.
4. PIPE SHALL BE LAID UNDER RAILWAY TRACK AS PER RDSO REPORT NO. BS-105.
5. JOINTING OF TWO PIPES SHALL BE DONE AS PER CLAUSE 17 OF IS : 3589.

LEGEND

PFL	FORMATION LEVEL
PRL	RAIL LEVEL
GL	GROUND LEVEL
FW	FORMATION WIDTH

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

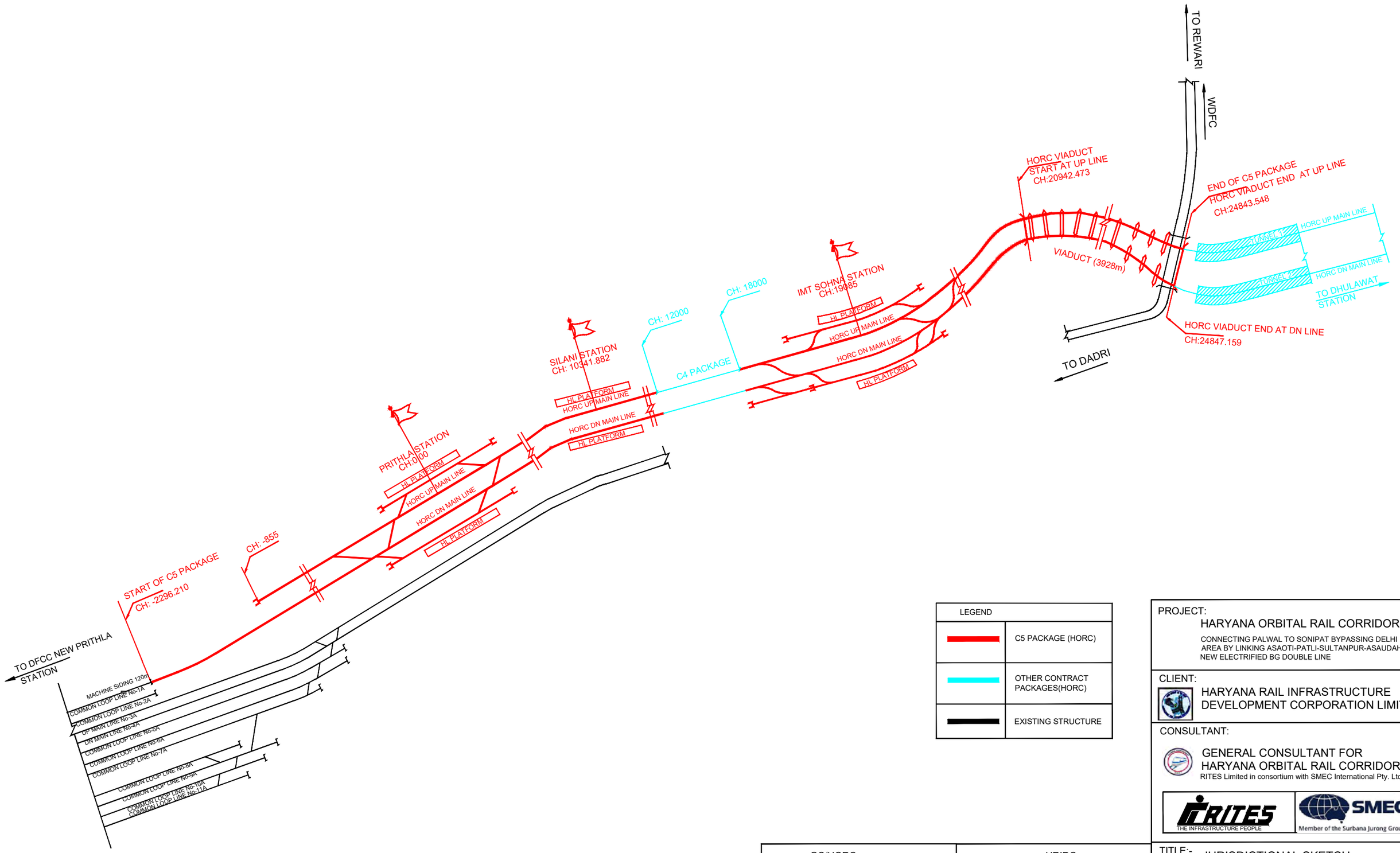
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:-
CONCEPTUAL PLAN FOR
MILD STEEL PIPE 323.9MM OUTER DIA
FOR FUTURE UTILITIES

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-30	1 OF1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	10-10-2023	



LEGEND	
	C5 PACKAGE (HORC)
	OTHER CONTRACT PACKAGES(HORC)
	EXISTING STRUCTURE

NOTES:

- JURISDICTION OF C5 PACKAGE SHOWN IN RED COLOUR.
- CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHLA STATION TAKEN AS 0.00m, WITH RESPECT TO UP MAIN LINE.
- ALL CHAINAGES ARE MARKED IN METER. NO DIMENSION SHALL BE SCALED FROM THE DRAWING, ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

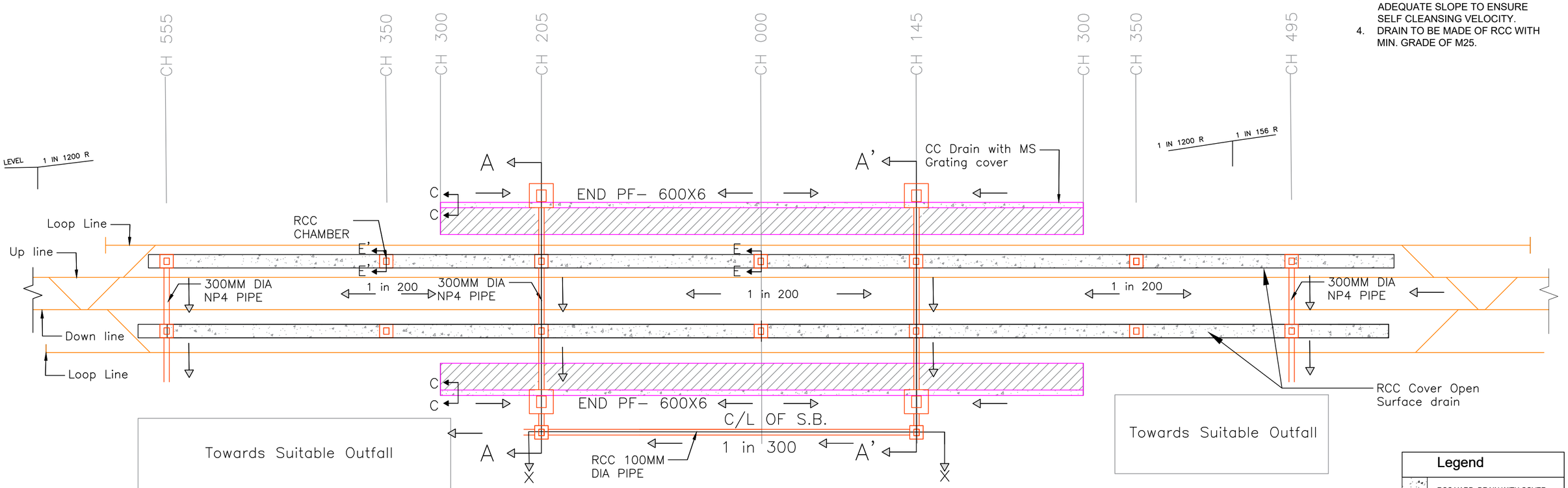
TITLE:- JURISDICTIONAL SKETCH OF C-5 PACKAGE

SKETCH NO.	SHEET NO.
GC-HRIDC-C5-SK-CIVIL-001_A0	

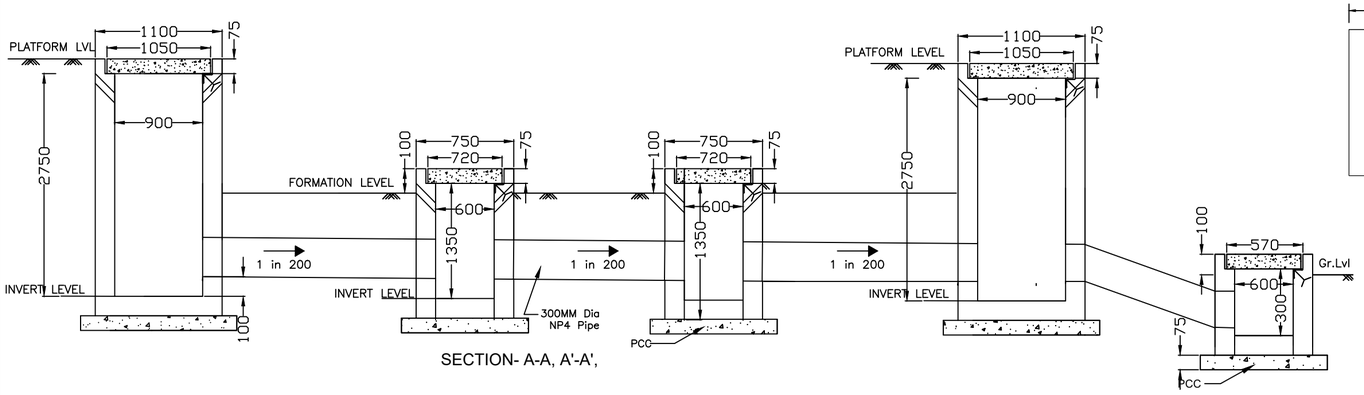
SCALE :	ISSUE DATE	REVISED DATE
NTS	09.09.2023	

DRAINAGE PLAN OF PRITHALA STATION

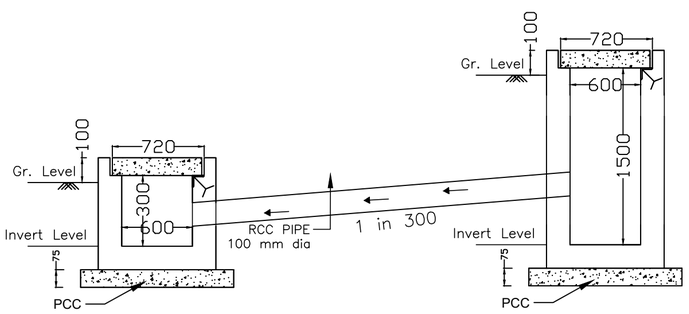
NOTE:-
1. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. PRECAST RCC COVER TO BE PROVIDED AS PER DRAWING.
3. DRAIN TO BE PROVIDED WITH ADEQUATE SLOPE TO ENSURE SELF CLEANSING VELOCITY.
4. DRAIN TO BE MADE OF RCC WITH MIN. GRADE OF M25.



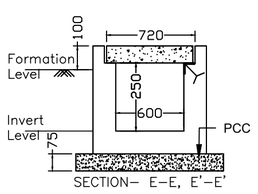
YARD AND PLATFORM DRAINAGE PLAN



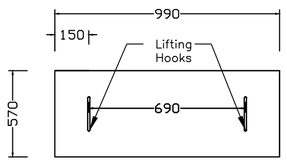
SECTION- A-A, A'-A',



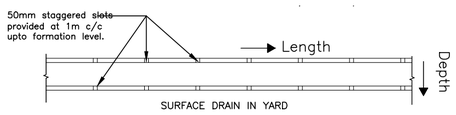
SECTION- X-X



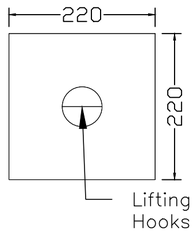
SECTION– E–E, E'–E'



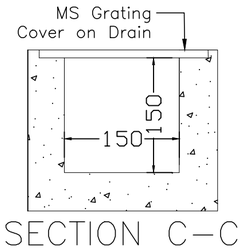
TYP. RCC drain cover with lifting arrangement



SURFACE DRAIN IN YARD



Platform Drain



SECTION C–C

CHAINAGE	0	-205	145
FRL	0	-171	121
DRAIN SLOPE	LEVEL	RISE 1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-1025	-725
TOTAL DEPTH	-250.000	-1104.167	-1095.833

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

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

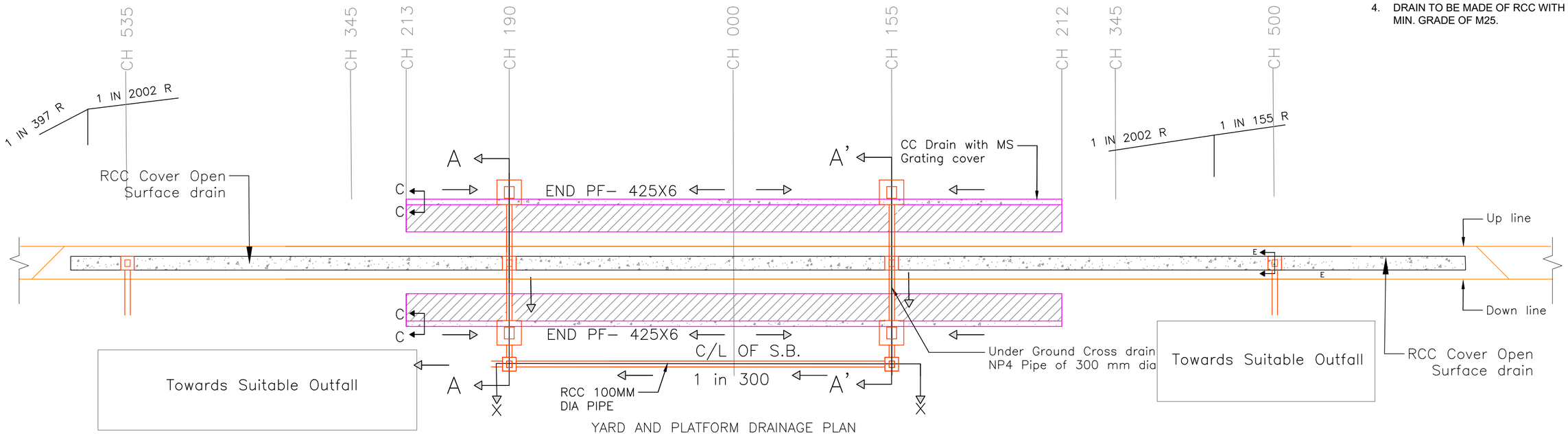
TITLE:- CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (PRITHLA)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-SK-CIVIL-002-A1	1 OF 1

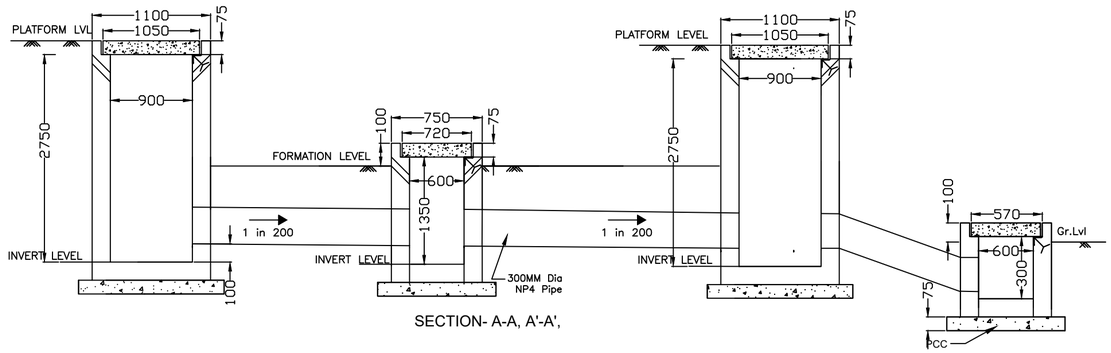
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	14-09-2023	

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.

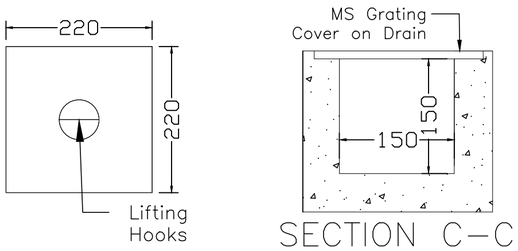
DRAINAGE PLAN OF SILANI STATION



YARD AND PLATFORM DRAINAGE PLAN



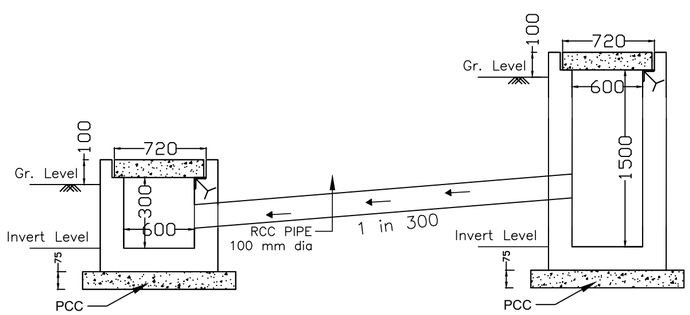
SECTION- A-A, A'-A',



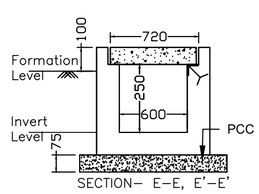
Platform Drain

SECTION C–C

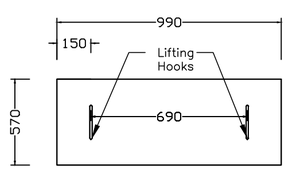
CHAINAGE	0	-190	155
FRL	0	-95	77
DRAIN SLOPE	LEVEL	RISE 1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-950	-775
TOTAL DEPTH	-250.000	-1105.095	-1102.423



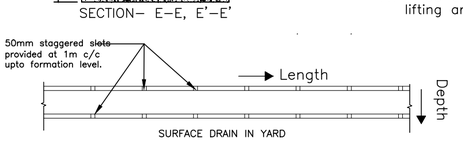
SECTION- X-X



SECTION– E–E, E'–E'



TYP. RCC drain cover with lifting arrangement



SURFACE DRAIN IN YARD

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

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

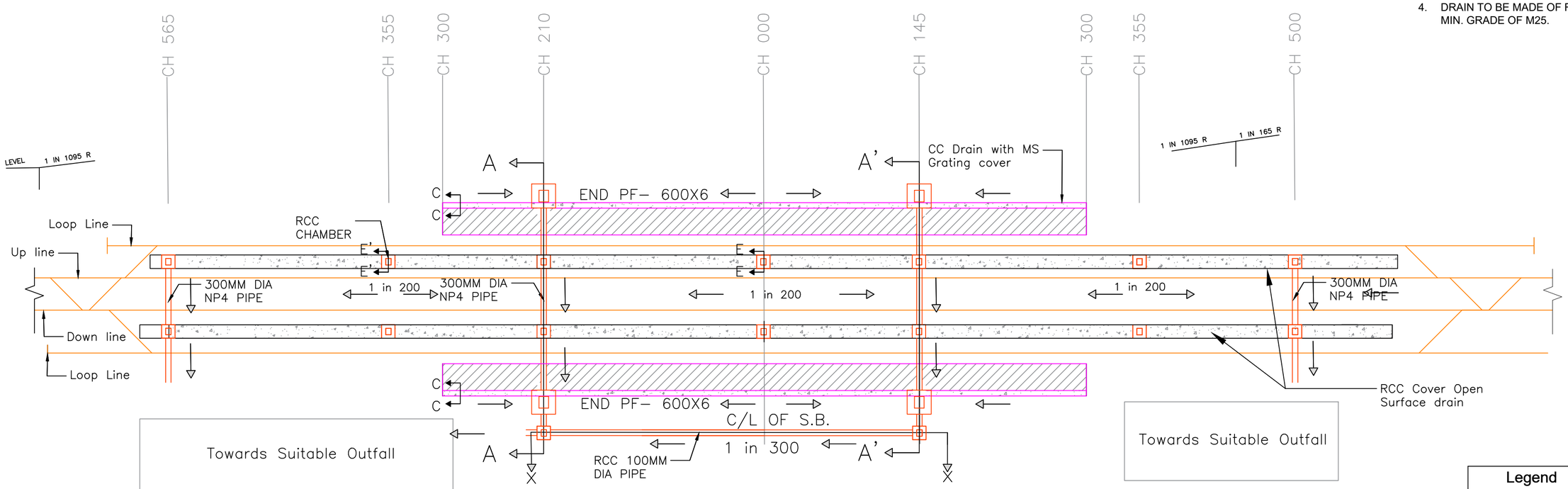
TITLE:- CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (SILANI)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-SK-CIVIL-003-A1	1 OF 1

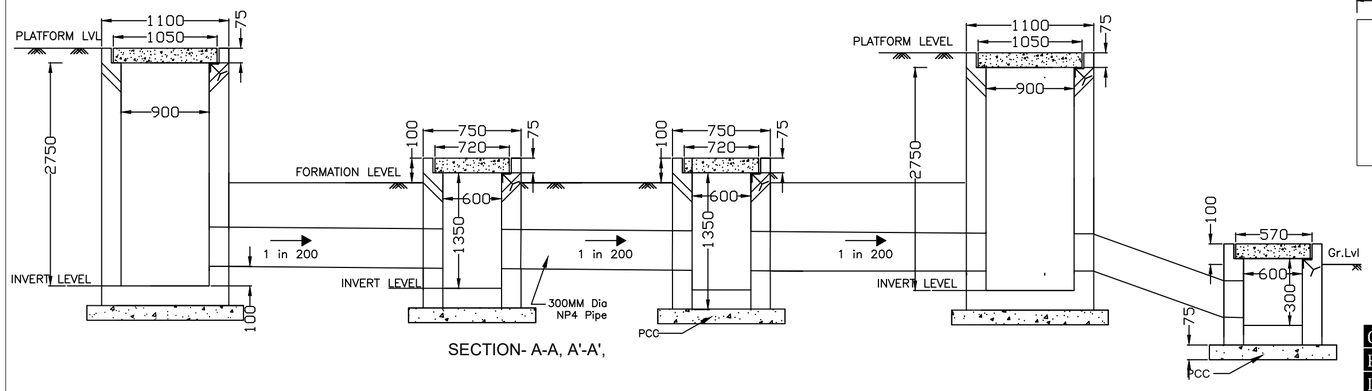
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	14-09-2023	

DRAINAGE PLAN OF IMT SOHNA STATION

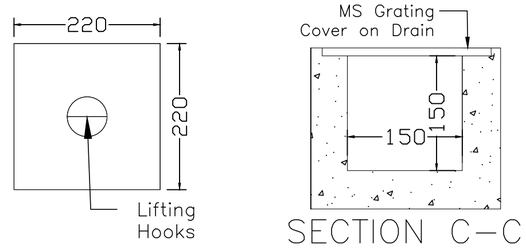
NOTE:-
1. ALL DIMENSION ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. PRECAST RCC COVER TO BE PROVIDED AS PER DRAWING.
3. DRAIN TO BE PROVIDED WITH ADEQUATE SLOPE TO ENSURE SELF CLEANSING VELOCITY.
4. DRAIN TO BE MADE OF RCC WITH MIN. GRADE OF M25.



YARD AND PLATFORM DRAINAGE PLAN



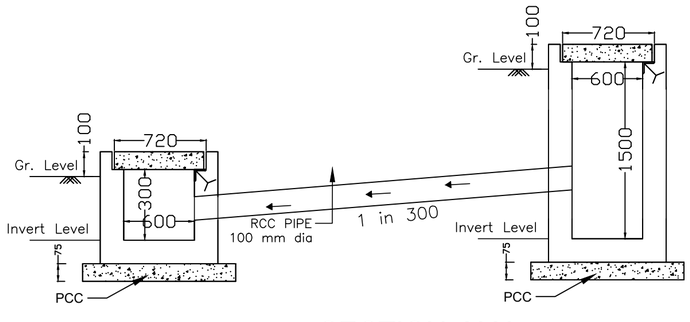
SECTION- A-A, A'-A',



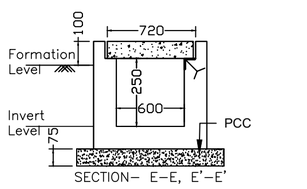
Platform Drain

SECTION C–C

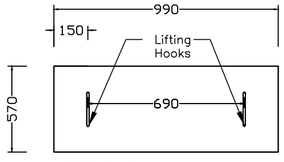
CHAINAGE	0	-210	145
FRL	0	-192	132
DRAIN SLOPE	LEVEL	RISE 1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-1050	-725
TOTAL DEPTH	-250.000	-1108.219	-1107.420



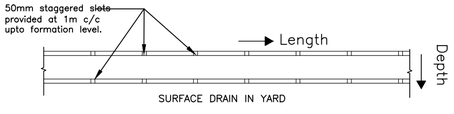
SECTION- X-X



SECTION– E–E, E'–E'



TYP. RCC drain cover with lifting arrangement



SURFACE DRAIN IN YARD

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/ SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
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.

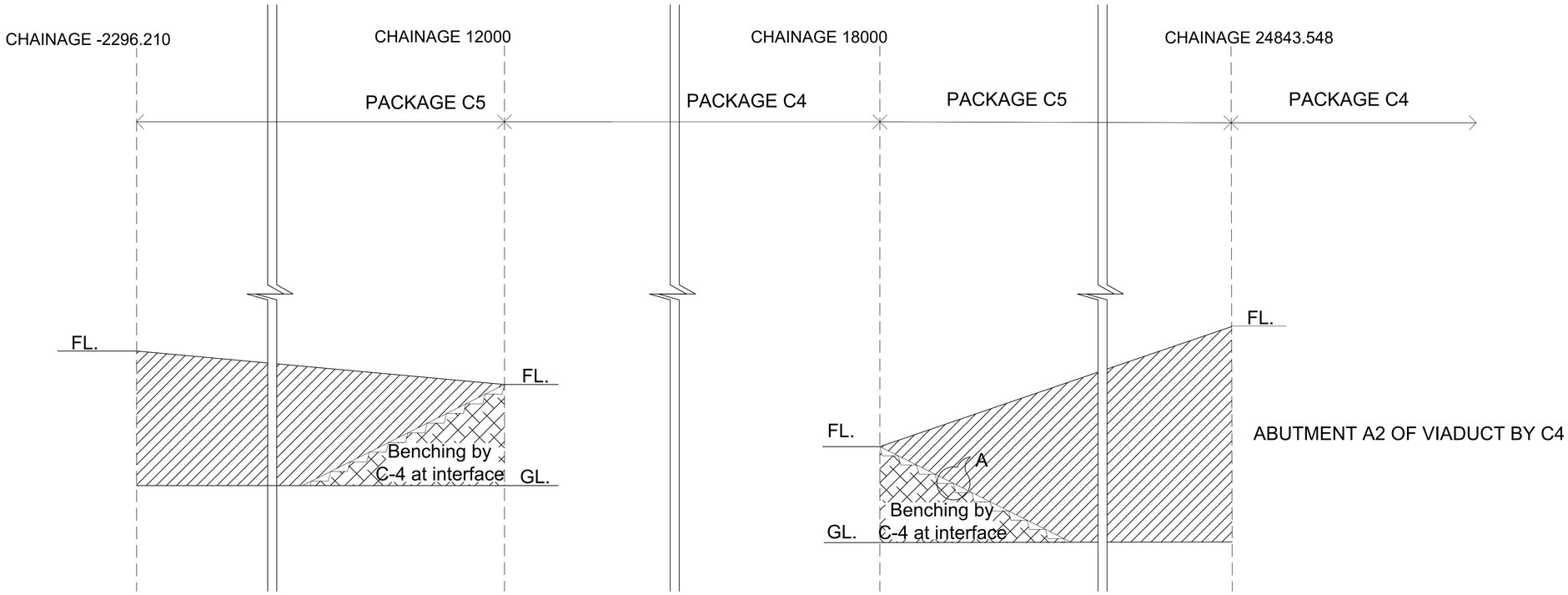
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

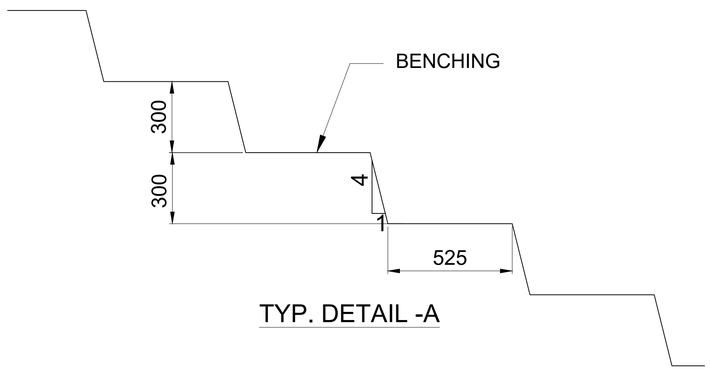
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
DRAINAGE ARRANGEMENT (IMT SOHNA)

DRG. NO.	SHEET NO.
GC-HRIDC-C5-SK-CIVIL-004-A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	14-09-2023	





TYP. DETAIL -A

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 C5
   - AREA IS NOT IN THE SCOPE OF C5

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/CIVIL	
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-C5-SK-CIVIL-009_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	09.09.2023	

N.Rly.

Northern Railway

Headquarters Office,
Baroda House,
New Delhi.
Date: 22/11/2021

No. SD/TP/2021

C.A.O./Const.
Northern Railway,
Kashmere Gate, Delhi.

C.A.O.-II/Const.,
Northern Railway,
Kashmere Gate, Delhi.

C.A.O./C/USBRL,
Northern Railway,
Jammu Tawi.

Divisional Railway Manager,
Northern Railway,
DLI, FZR, LKO, MB & UMB.

Sr. Divisional Engineer/Co-ord.,
Northern Railway,
DLI, FZR, LKO, MB & UMB.

Type Plan No. O-104/2021

Sub: Standard Type Plan of "Powder Toilet for Divyangjans"

In spite of the enabling policies and guidelines at national and state level regarding divyang toilet, there have been challenges faced by implementers and service providers because of lack of skills to deal with Divyang toilet due to in-adequate information.

In order to satiate the desire of Divyang Toilet, a Type Plan No. P-45/2019 (NRHQE Plan No. HQ/05/07-2019) of "Toilet & Ramp for Divyangs" has been already circulated earlier. In that, toilet enclosed both Water Closet & bathing facilities. A new Type Plan of "Powder Toilet for Divyangs" has been prepared, wherever, space is constrained. It encloses Water Closet with wash basin only. The layout plan conforms "Harmonised Guidelines and Space Standards for Barrier Free Built Environment for Person with Disability and Elderly Person (2016)" issued by MoUD, Govt. of India.

This Type Plan No. O-104/2021 (NRHQE No. HQ/20/11-2021) regarding **"Powder Toilet for Divyangs"** has been uploaded on Northern Railway website https://nr.indianrailways.gov.in/ and can be downloaded. This may be circulated to all concerned for implementation of instructions contained therein.

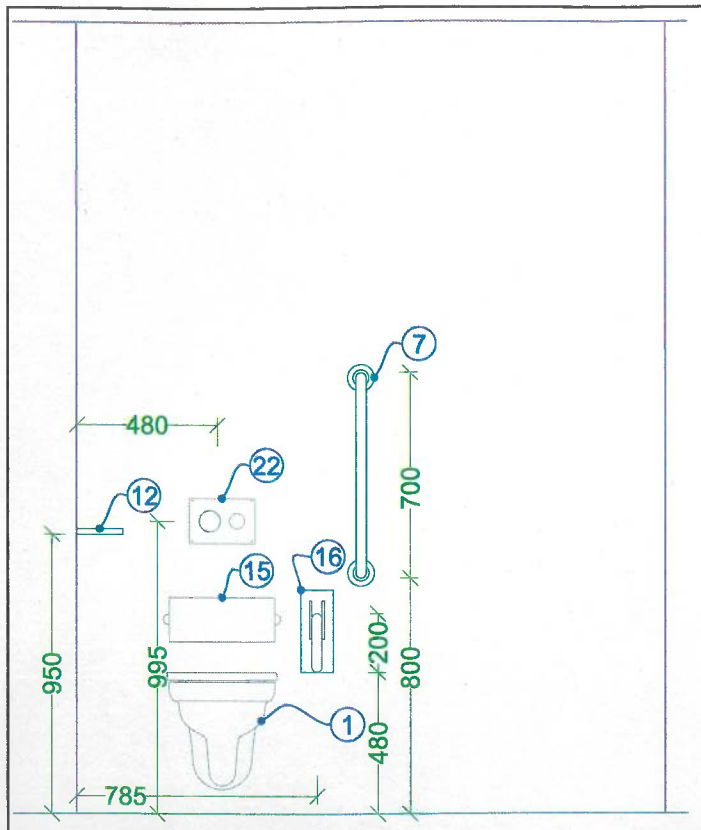
If any discrepancy found in above Type Plan, kindly inform this office. You may also send your comments/remarks/suggestions, if any to this office so that necessary improvements/ corrections may be incorporated.

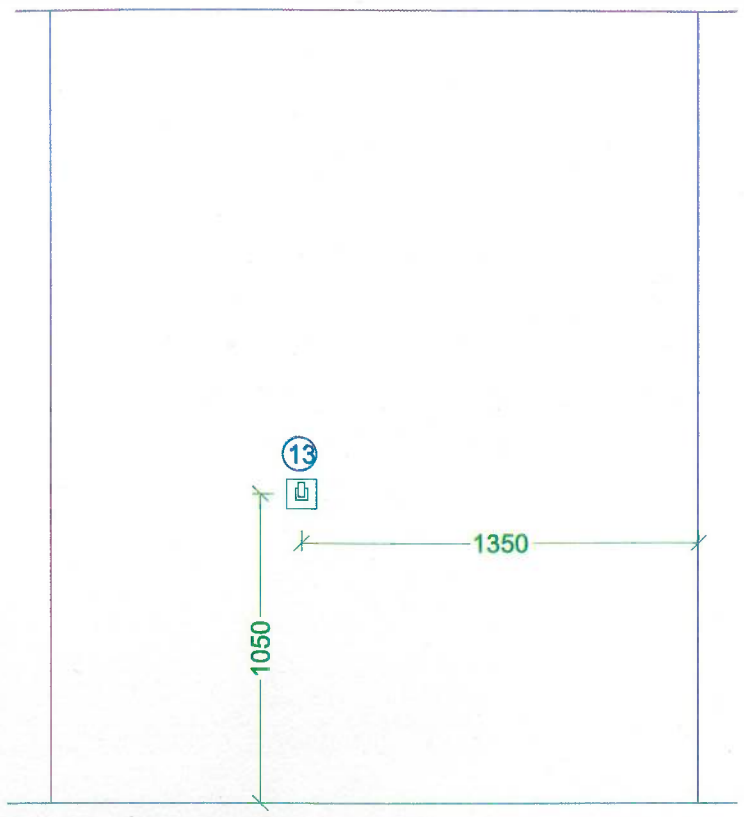
Encl. - as above

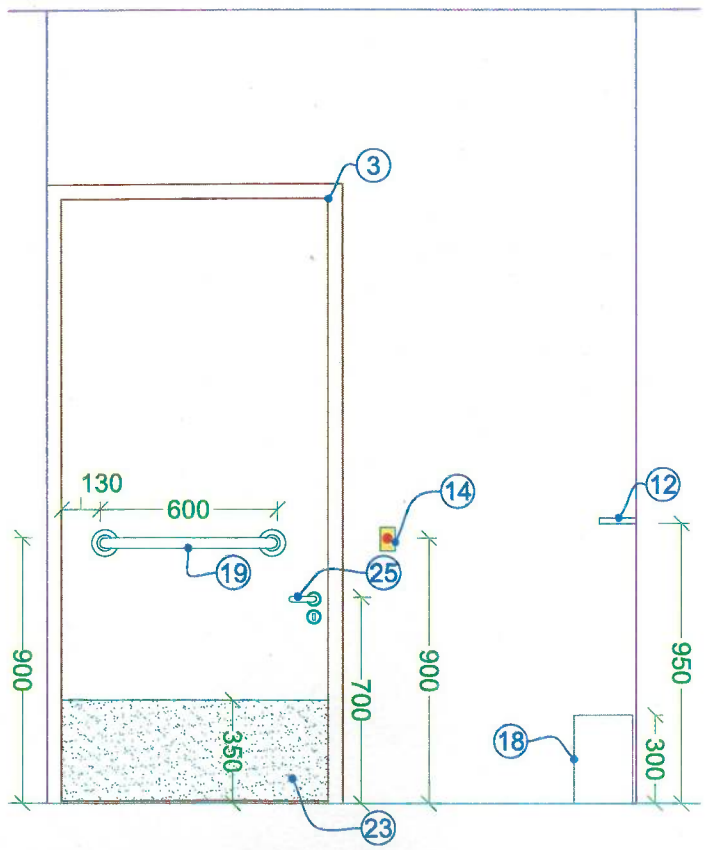
22/11/21

Name: (K.K. SHARMA)
Dy. Chief Engineer/ Stn.Dev.
For General Manager/Engg.

N.Rly.



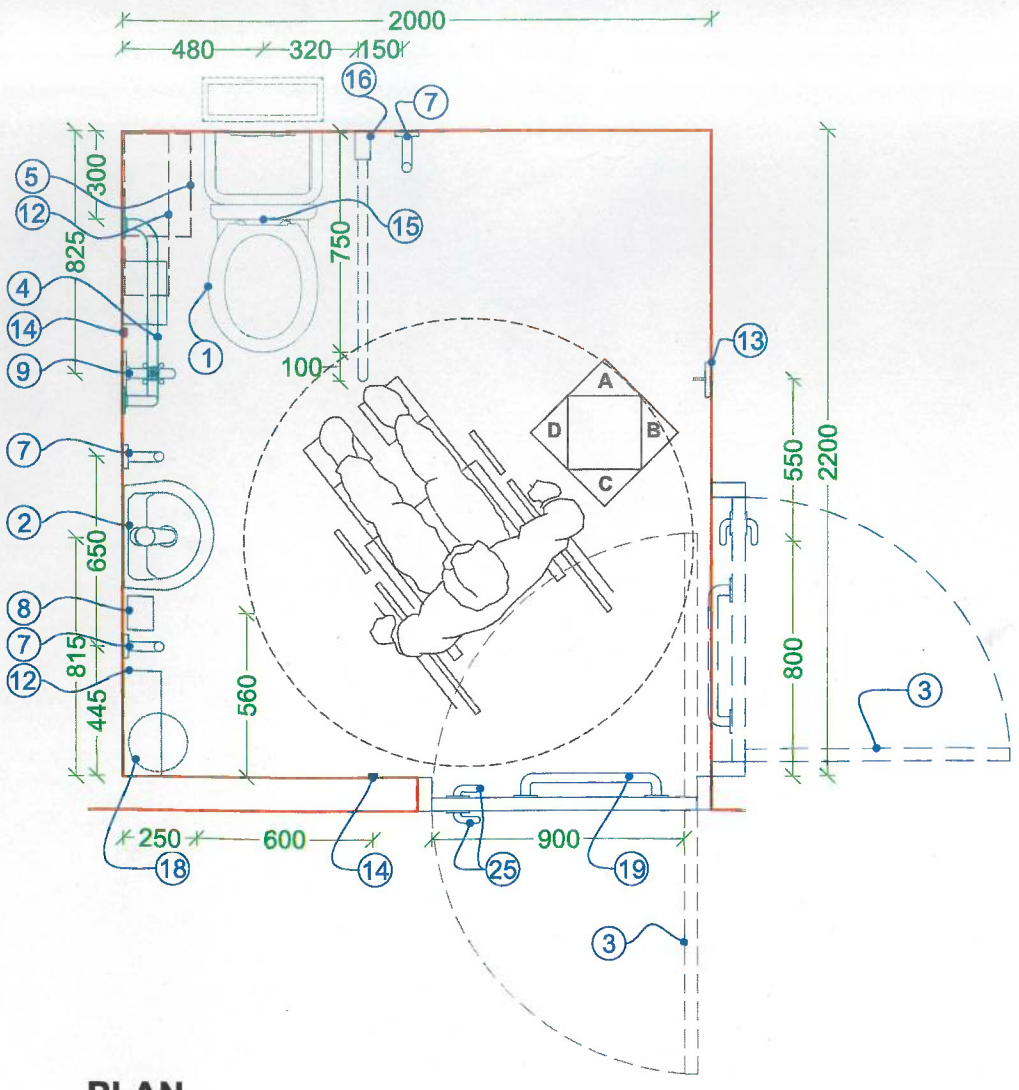




ELEVATION 'A'

ELEVATION 'B'

ELEVATION 'C'

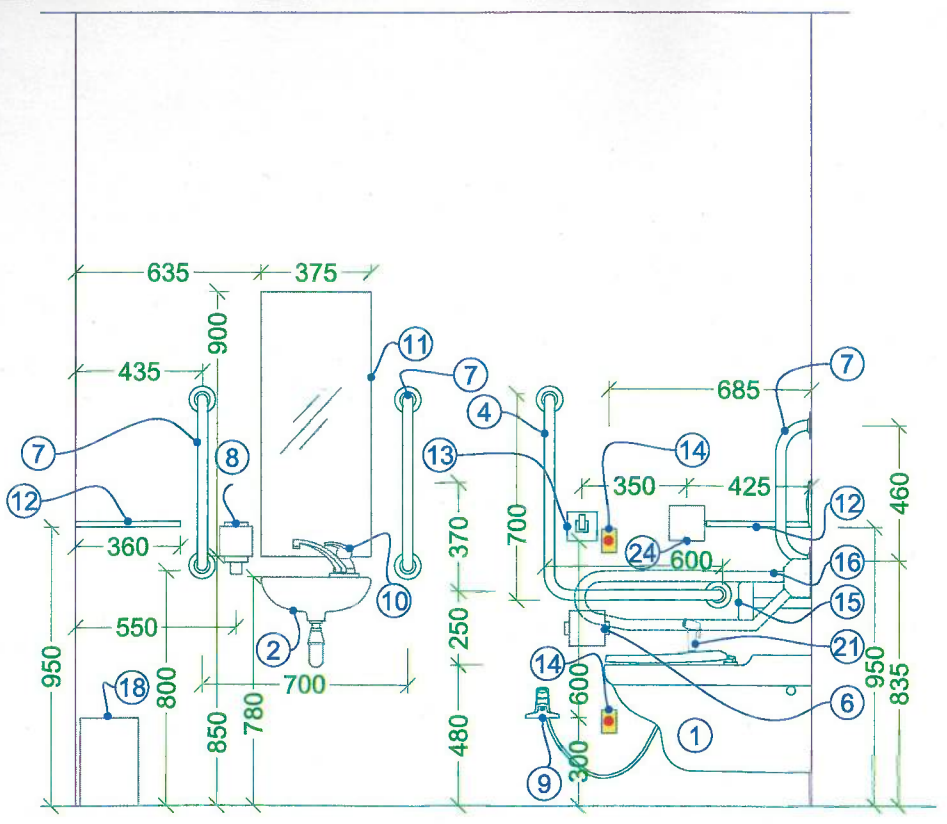


PLAN

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

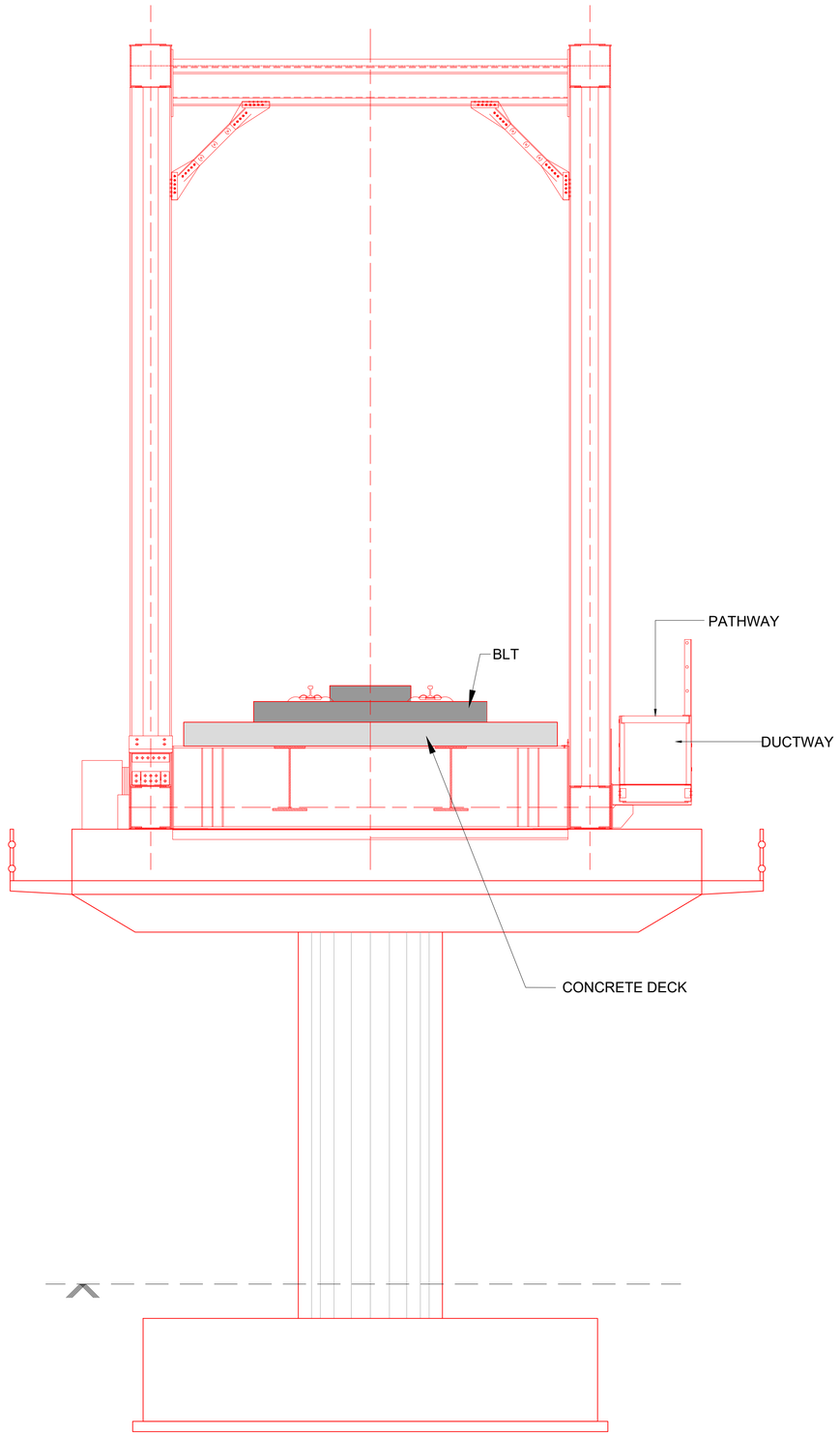
MONA SRIVASTAVA (CE/STN. DEV.)	22/11/21
K.K. SHARMA (DY.CE/STN. DEV.)	22/11/21
MOHD. SHARIF (PREPARED BY: SSE/ARCH.)	10 Nov '2021

NORTHERN RAILWAY

TYPE PLAN

POWDER TOILET FOR DIVYANGS

CASE NO. SD/TP/2021	CANCEL PLAN NO. : NIL
SCALE : 1:25@A3	SHEET NO.: 01 OF 01
N.R.H.Q.E. PLAN NO. :	HQ/20/11-2021



CROSS SECTION

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. OWG,SUPERSTRUCTURE SHALL BE DESIGN WITH CONCRETE DECK FOR BLT.
3. TROLLEY REFUGE,PATHWAY AND MAN REFUGE SHALL BE PROVIDED AS PER CBS-0045 OWG.

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

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

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

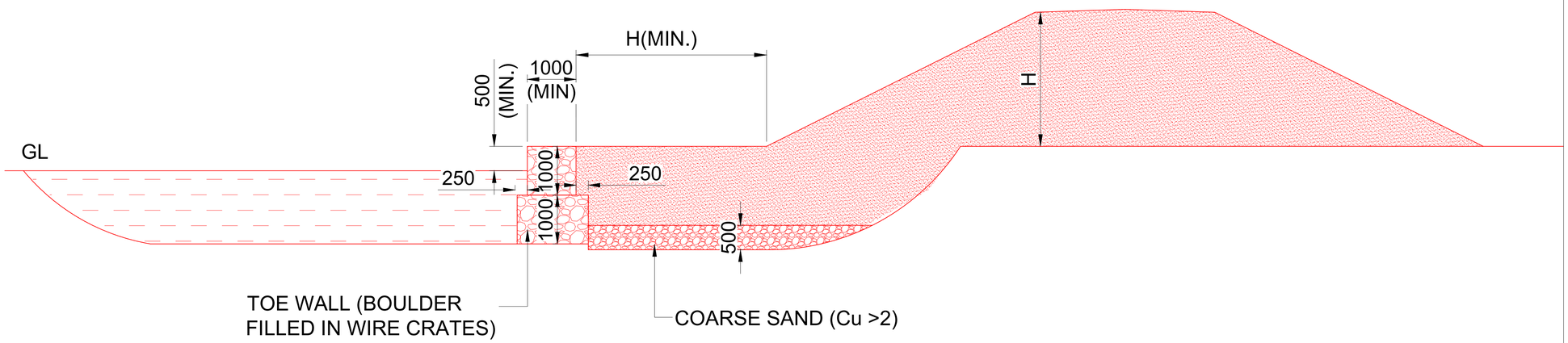
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN

OWG WITH CONCRETE DECK FOR BLT

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-036	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	09.09.2023



NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE MENTIONED.

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

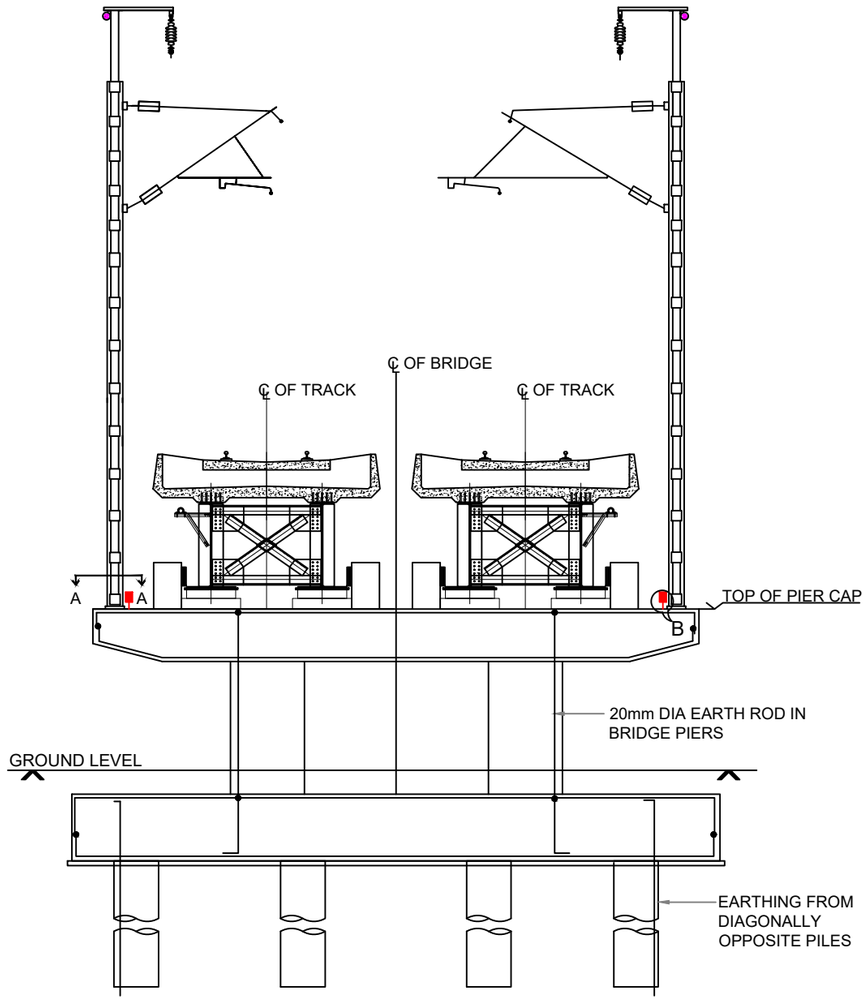
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL PLAN

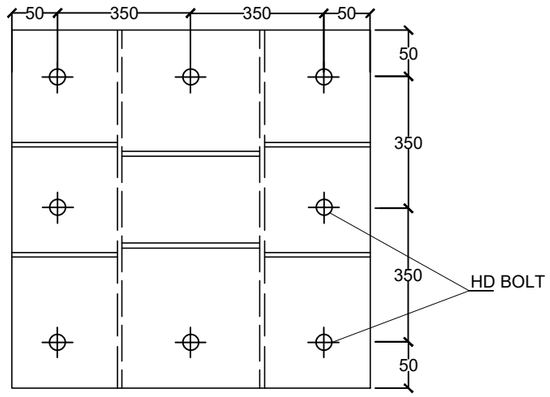
GROUND IMPROVEMENT FOR EMBANKMENT AT POND/WATER LOGED AREA

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-037	1 OF 1

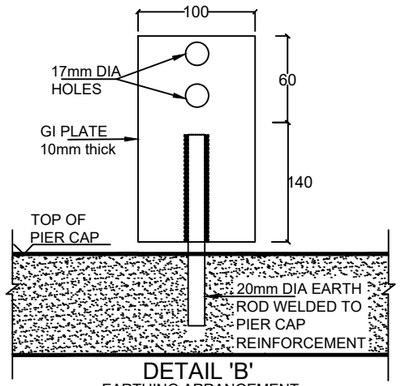
SCALE :	ISSUE DATE
AS SHOWN	09.09.2023



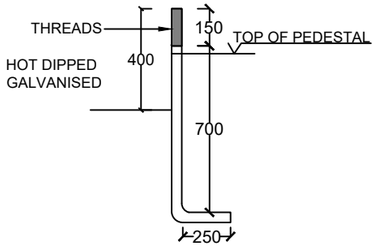
SECTION SHOWING LOCATIONS OF AEC, BEC AND THEIR INTER CONNECTIONS TO STEEL OHE MAST



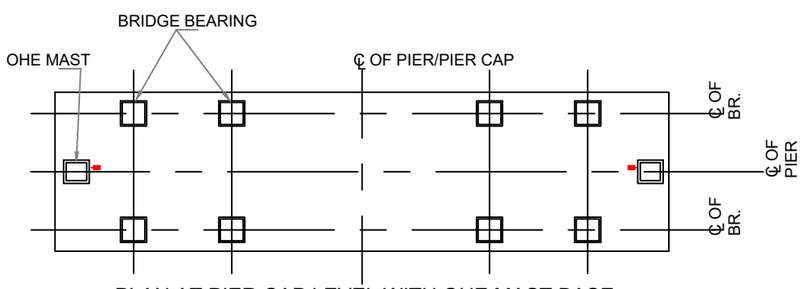
OHE STRUCTURE FIXING BOLTS AND BASE PLATE SECTION AT A- A



DETAIL 'B'
EARTHING ARRANGEMENT



BOLT DETAIL



PLAN AT PIER CAP LEVEL WITH OHE MAST BASE

NOTES:
1. ALL DIMENSIONS ARE IN MILIMETERS.
2. DESIGN DETAILS OF TEMPLATE FOR HOLDING DOWN BOLT FOR OHE BASE PLATE AT PIER, DIA OF BOLT, LENGTH, SHAPE, MATERIAL AND LOCATION SHALL BE PROVIDED BY OHE CONTRACTOR TO CIVIL CONTRACTOR.
3. CIVIL CONTRACTOR SHALL SUPPLY HOT DIP GALVANISED HOLDING DOWN BOLTS WITH 5MM THICK TEMPLATE AND ERECT IN COORDINATION WITH OHE CONTRACTOR.
4. EARTHING GI PLATE SHALL BE PROVIDED BY CIVIL CONTRACTOR WELDED WITH 20MM DIA ROD FOR OHE EARTHING WITH PIER EARTHING.
5. GI PLATE SIZE 200X100X10MM HAVING TWO HOLES OF 17MM DIA EACH SHALL BE PROVIDED BY CIVIL CONTRACTOR.
6. 20MM DIA ROD SHALL BE 140MM OUTSIDE THE CONCRETE.
7. REINFORCEMENT OF TWO DIAGONALLY OPPOSITE PILES SHALL BE CONNECTED WITH PIER & PIER CAP BY MIN. 20MM DIA STEEL ROD FOR EARTHING.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/ HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/ Elect.	
REETU PATIAL CDE/CIVIL			
STIPHEN SAHOO SRE/Elect.			

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

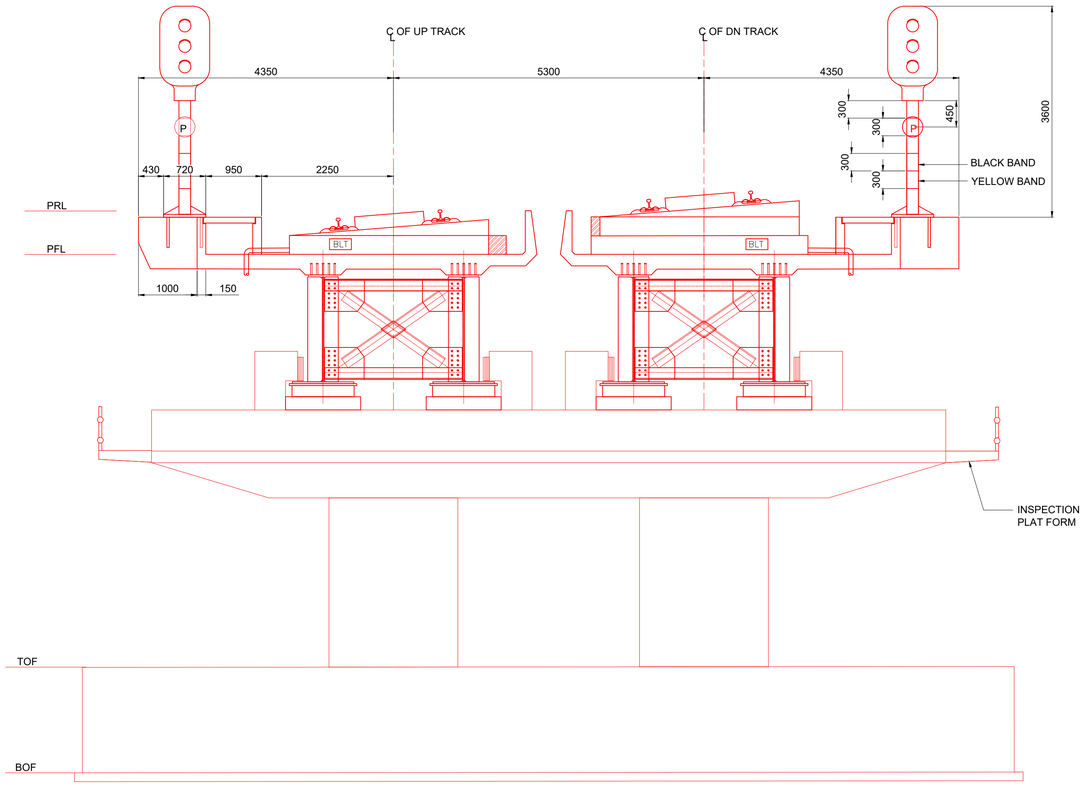
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

TITLE:- CONCEPTUAL PLAN FOR OHE EARTHING & OHE BOLT FIXING ARRANGEMENT ON BRIDGES

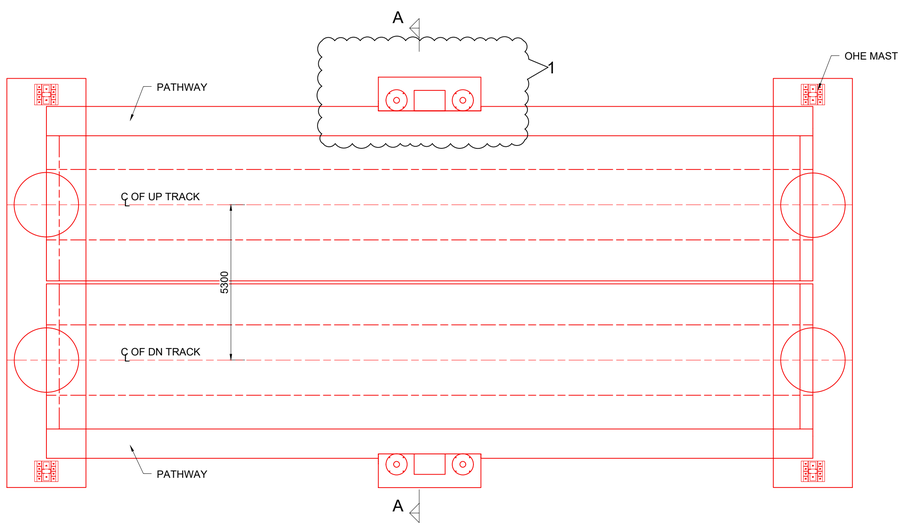
DRG. NO.	SHEET NO.
GC-HRIDC-C5-SK-GEN-38	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	22.09.2023	



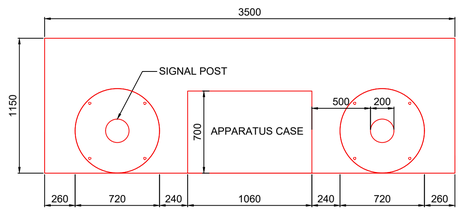
CROSS SECTION A-A

SCALE 1:50



PLAN

SCALE 1:100



DETAIL-1

SCALE 1:25

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. SIGNAL POST SHALL BE INSTALLED AT CH. 21020.6872,22199.6872,23404.8872 & 24616.4472 ON BOTH SIDE OF VIADUCT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
RAJENDRA KR. BHAUGUNA DPD/E&T.		JYOTI SANGWAN DGM/Elect.	
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.

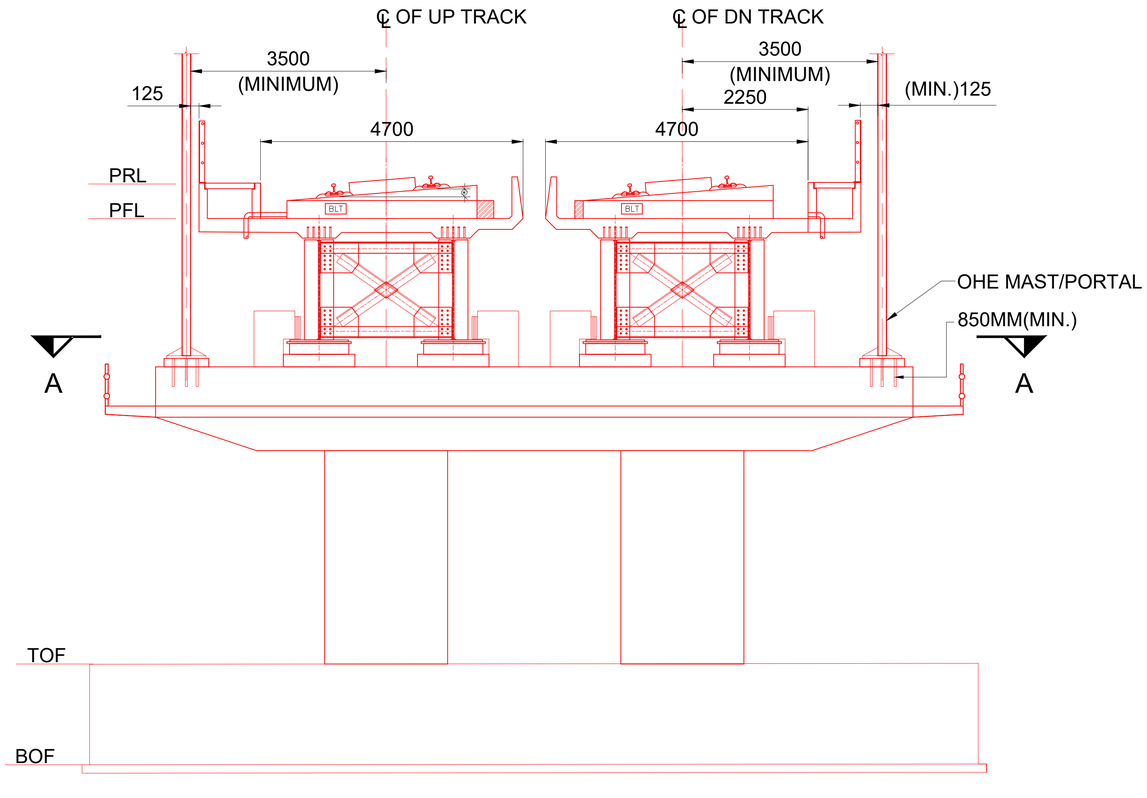
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN

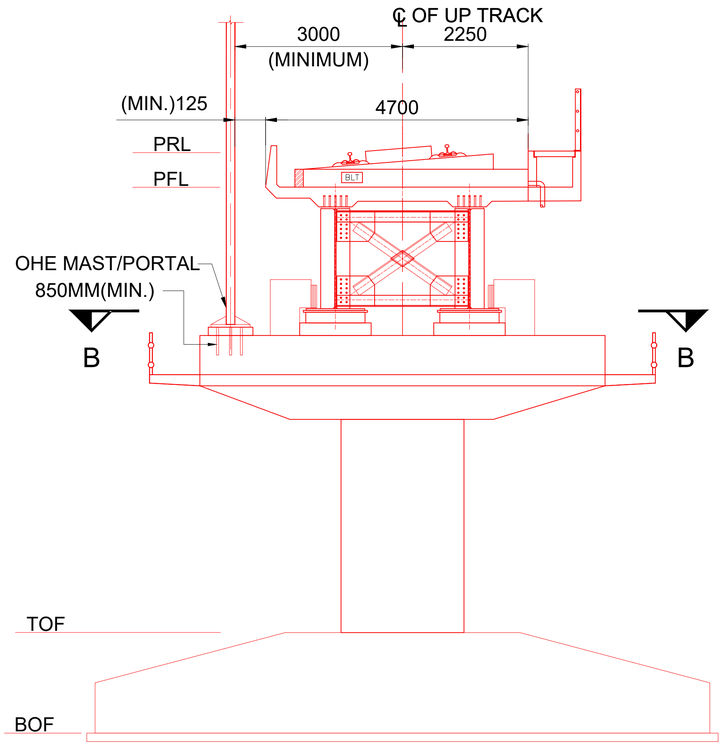
LOCATION OF SIGNAL POST FOR COMPOSITE GIRDER BRIDGES

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-034	1 OF 1

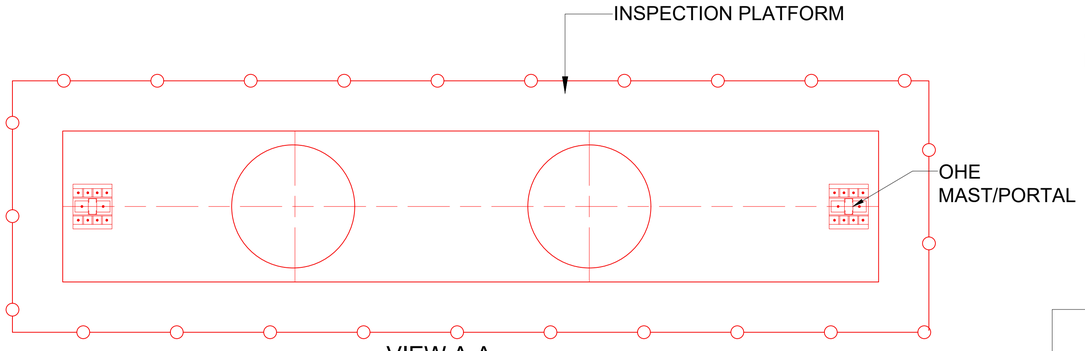
SCALE :	ISSUE DATE
AS SHOWN	31.08.2023



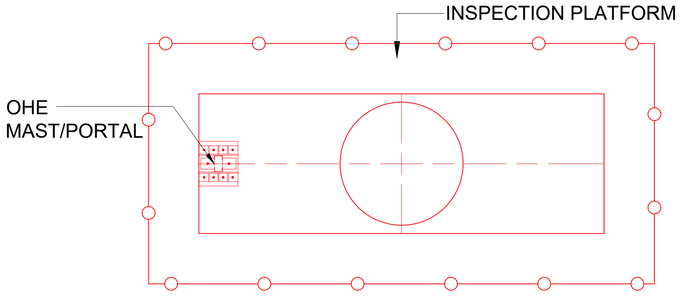
OHE LOCATION FROM CH. 20915 TO 24040



OHE LOCATION FROM CH. 24040 TO 24843



VIEW A-A



VIEW B-B

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. CHAINAGES SHOWN ARE TENTATIVE AND MAY CHANGE DURING EXECUTION.
4. THE EARTHING ARRANGEMENT, EARTHING PLATES HOLDING DOWN BOLTS, TEMPLATES ETC. SHALL BE PROVIDED BY CIVIL CONTRACTOR AS MENTIONED IN SKETCH NO. GC-HRIDC-C5-SK-GEN-38.
5. OHE CONTRACTOR SHALL PROVIDE DETAILS OF GUY ROD ANCHOR ARRANGEMENT ON VIADUCT & CIVIL CONTRACTOR SHALL PROVIDE THE SAME AS PER DRG. NO.GC-HRIDC-SYS4-DRW-ELE-007_A0.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
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.

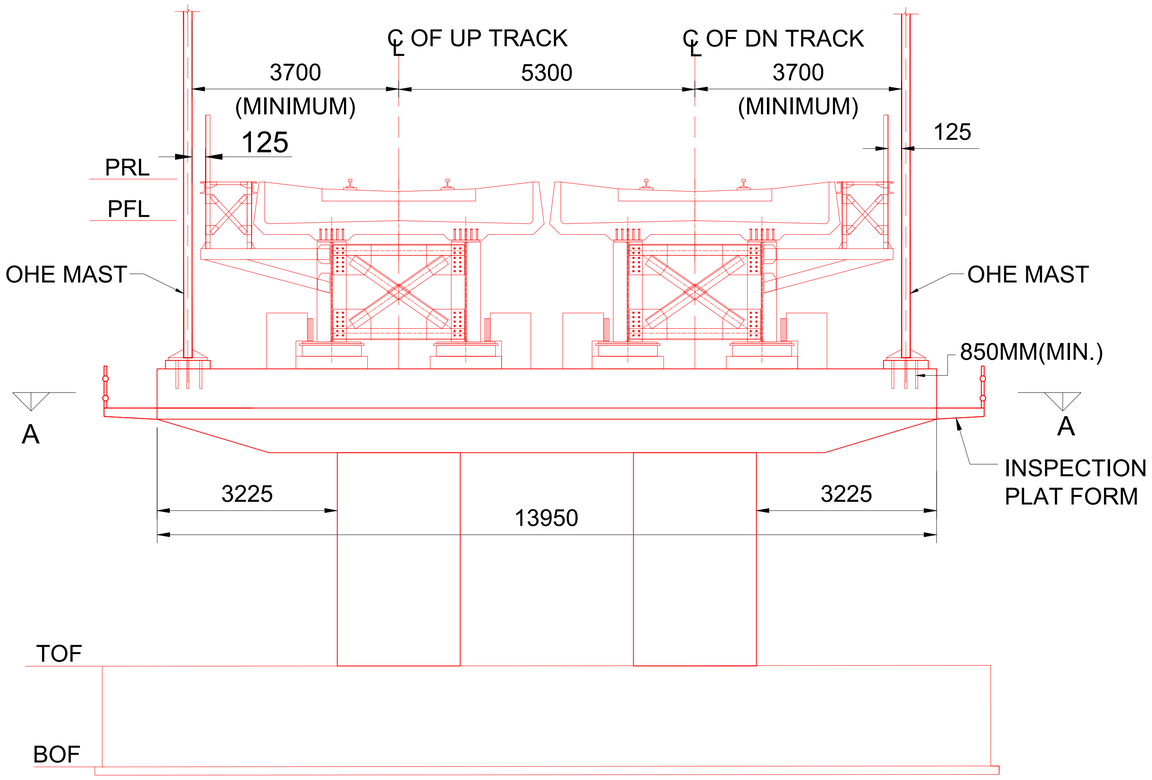
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL PLAN
LOCATION OF OHE MAST IN VIADUCT

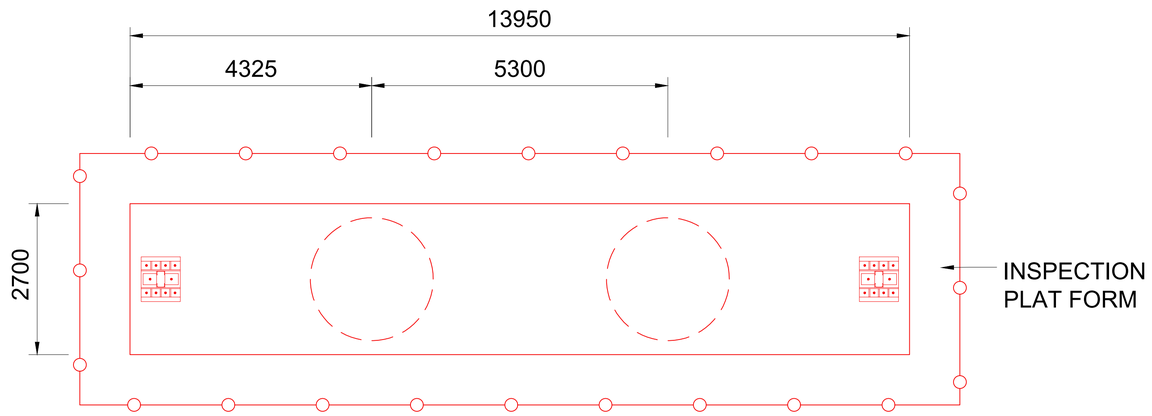
DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-032	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	09.09.2023



PIER ELEVATION

SCALE 1:150



SECTION A-A

SCALE 1:150

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. THE EARTHING ARRANGEMENT, EARTHING PLATES HOLDING DOWN BOLTS, TEMPLATES ETC. SHALL BE PROVIDED BY CIVIL CONTRACTOR AS MENTIONED IN SKETCH NO. GC-HRIDC-C5-SK-GEN-38.
4. OHE CONTRACTOR SHALL PROVIDE DETAILS OF ANCHOR ARRANGEMENT ON BRIDGE & CIVIL CONTRACTOR SHALL PROVIDE THE SAME AS PER DRG. NO.GC-HRIDC-SYS4-DRW-ELE-007_A0.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
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.

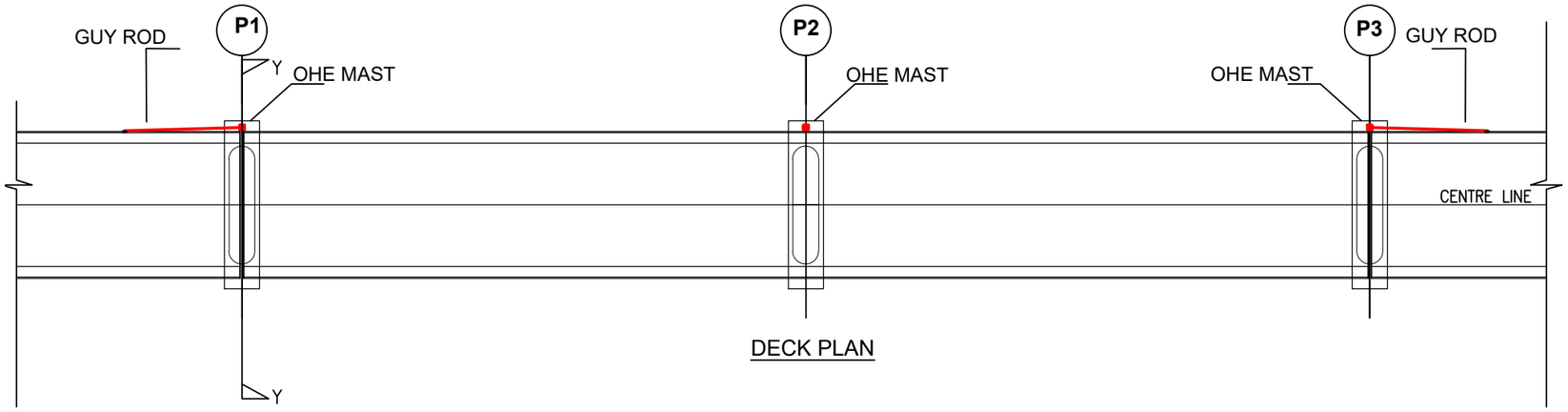
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN

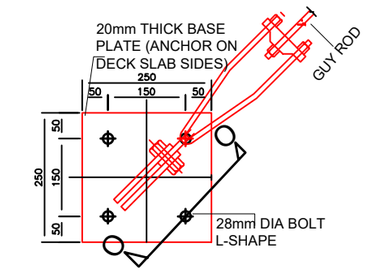
LOCATION OF OHE MAST FOR COMPOSITE GIRDER BRIDGES

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-031	1 OF 1

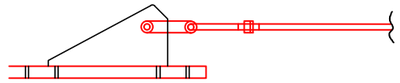
SCALE :	ISSUE DATE
AS SHOWN	09.09.2023



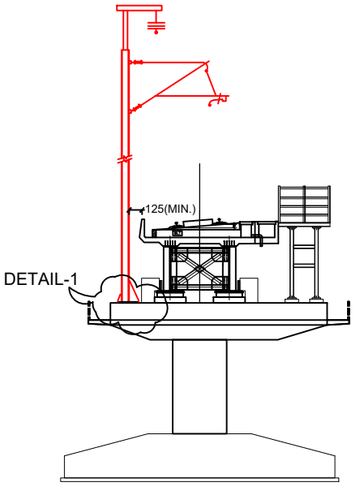
DECK PLAN



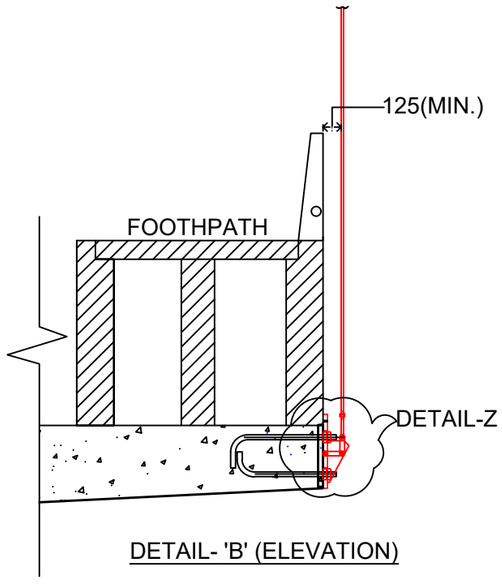
GUY ROD BASE PLATE
DETAIL -Z (PLAN)



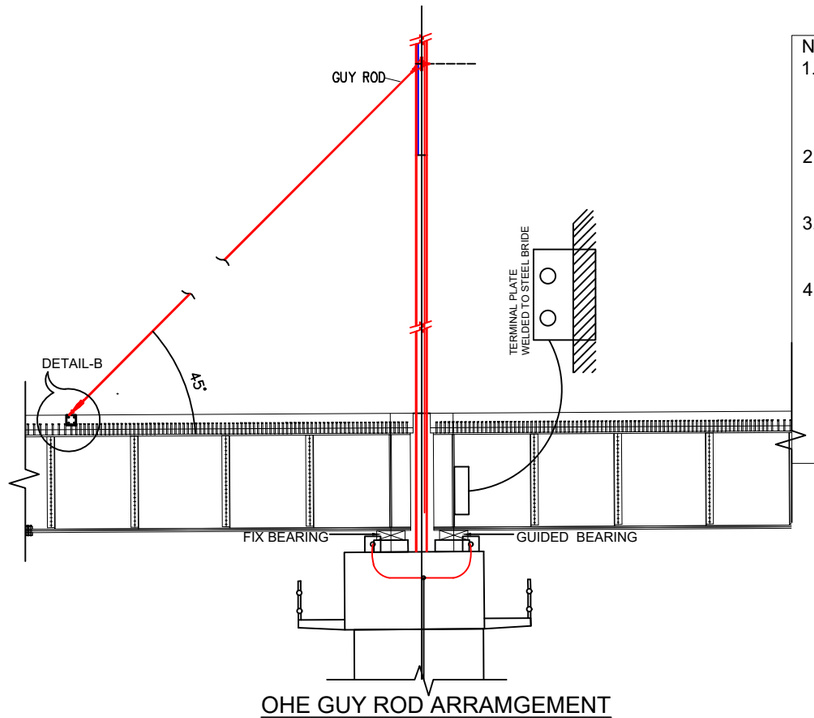
SECTION O-O



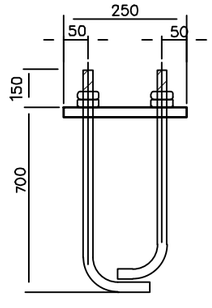
SECTION Y-Y



DETAIL- 'B' (ELEVATION)



OHE GUY ROD ARRAMGEMENT



GI BOLT DETAIL

NOTE :
1. SIZES ARE INDICATIVE AND MINIMUM, HOWEVER CONTRACTOR MAY BE REQUIRED TO PROVIDE HIGHER AS APPROVED BY THE ENGINEER.
2. APPROX. 12 NUMBER GUY ROD SHALL BE PROVIDED IN TRACK PER KM.
3. OHE CONTRACTOR SHALL PROVIDE GUY ROD LOCATION TO CIVIL CONTRACTOR.
4. OHE CONTRACTOR SHALL PROVIDE DESIGN DETAILS OF GUY ROD GI BOLTS AND METAL COMPOSITION TO CIVIL CONTRACTOR. CIVIL CONTRACTOR SHALL ARRANGE GUY ROD GI BOLTS AND ERECT THE SAME ON VIADUCT IN CORDINATION WITH OHE CONTRACTOR.

OHE SCOPE	
CIVIL SCOPE	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/ HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/ Elect.	
REETU PATIAL CDE/CIVIL			
STIPHEN SAHOO SRE/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL 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

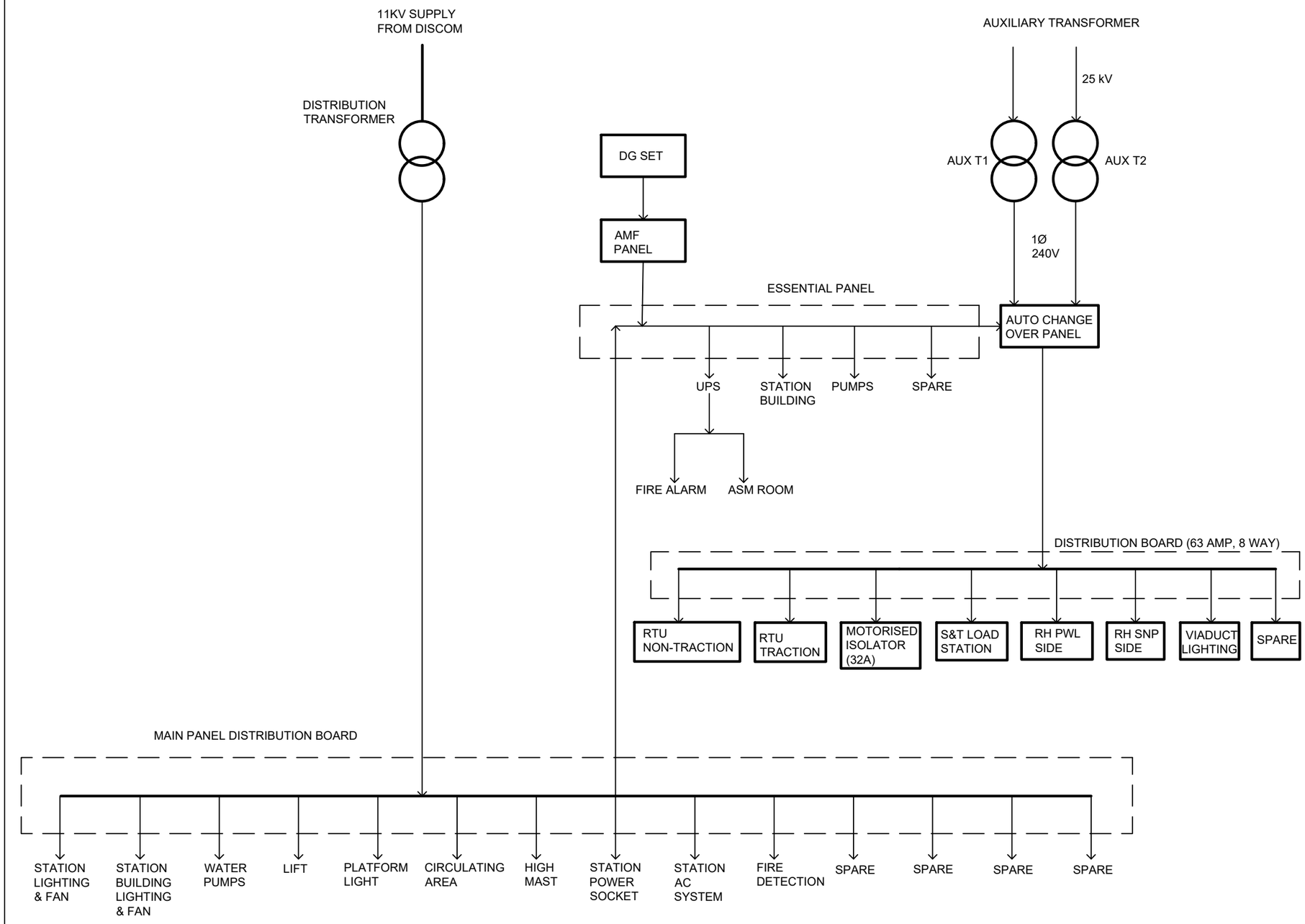
TITLE:- INDICATIVE OHE GUY ROD ARRANGEMENT ANCHOR ON VIADUCT

DRG. NO.	SHEET NO.
GC-HRIDC-SYS1-DRW-ELE-007_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	22.09.2023	

II. General Electrical Services Drawings

INDICATIVE LT SUPPLY SYSTEM WITH LOCAL, DG & AUXILIARY TRANSFORMER SUPPLY



GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

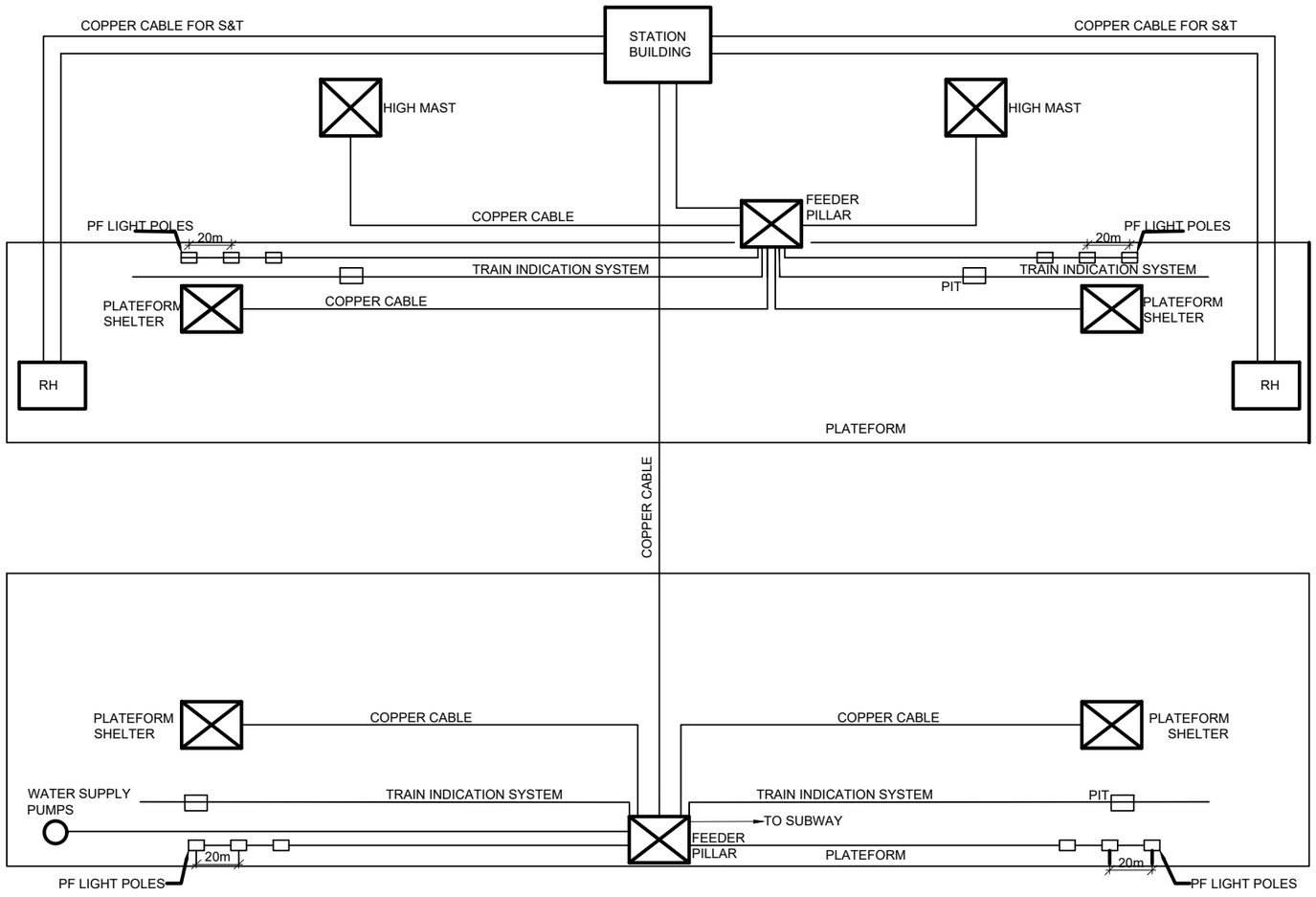
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
INDICATIVE LT SUPPLY SYSTEM WITH LOCAL, DG & AUXILIARY TRANSFORMER SUPPLY

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-001_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	08.07.2023	16.10.2023

INDICATIVE LT SUPPLY DISTRIBUTION DIAGRAM



NOTES:

1. FOR TRAIN INDICATION SYSTEM, THE PIT SHALL BE PROVIDED AT EVERY 50m.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
VIKAS KUMAR HARIT SRE/GEN/Elect.			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

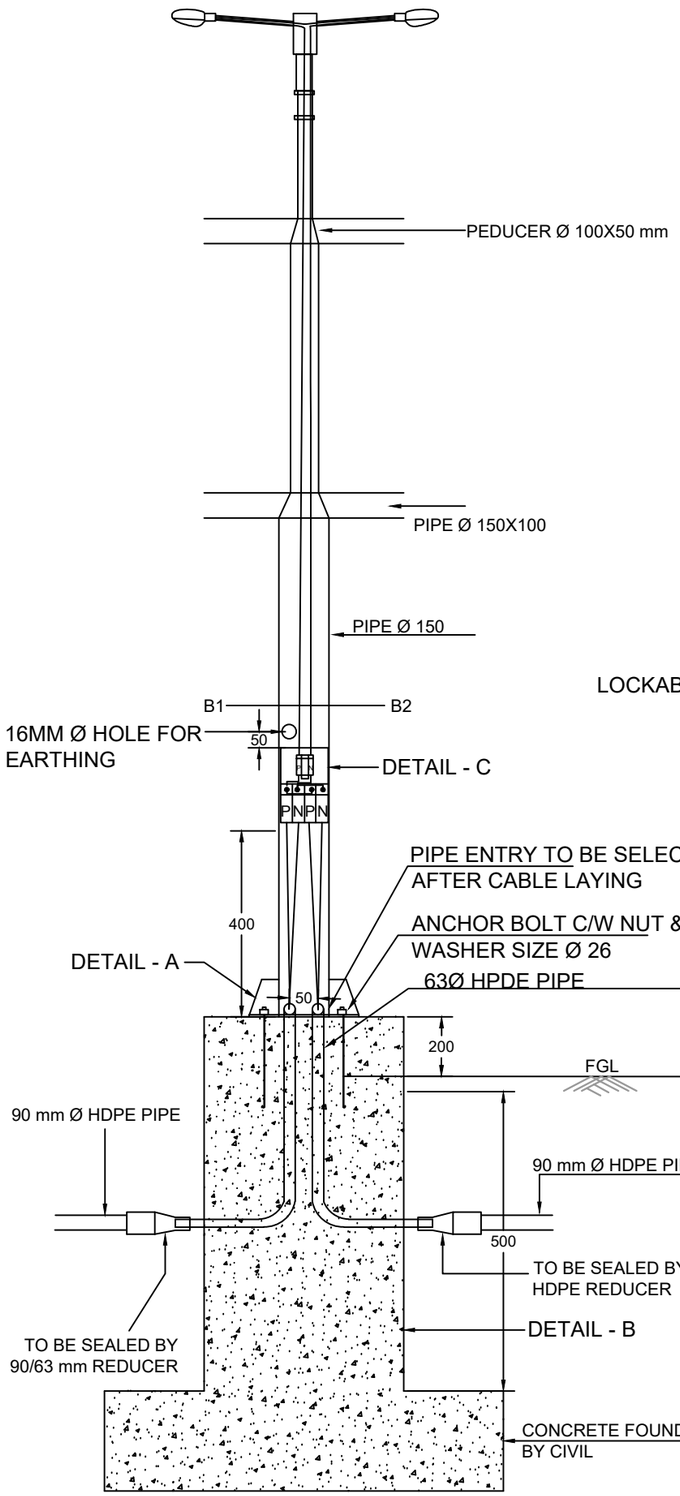
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-

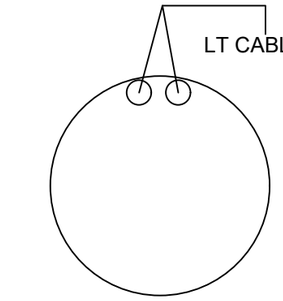
INDICATIVE LT SUPPLY DISTRIBUTION DIAGRAM

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-002_A0	

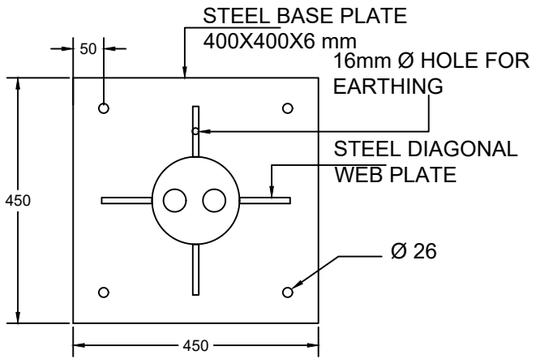
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN		09.09.2023



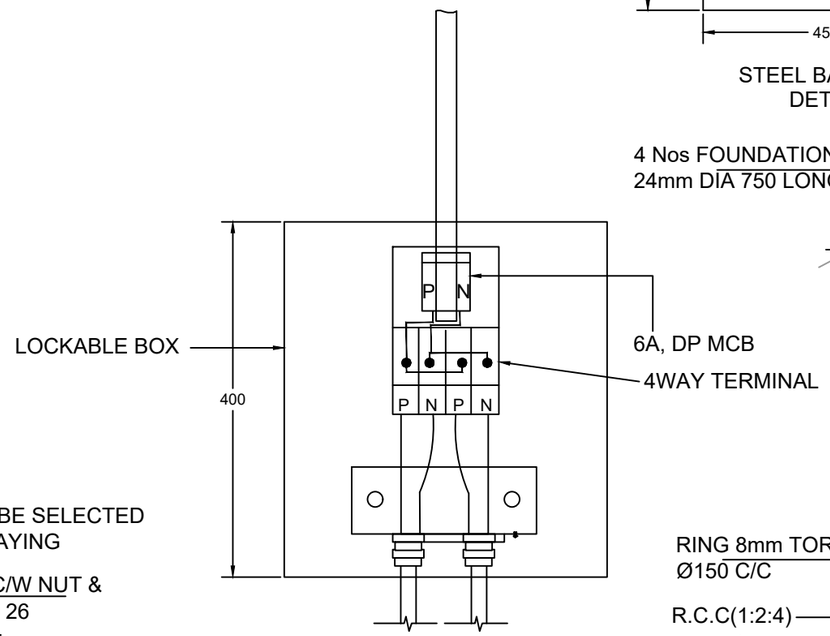
DECORATIVE LIGHT POLE DETAILS



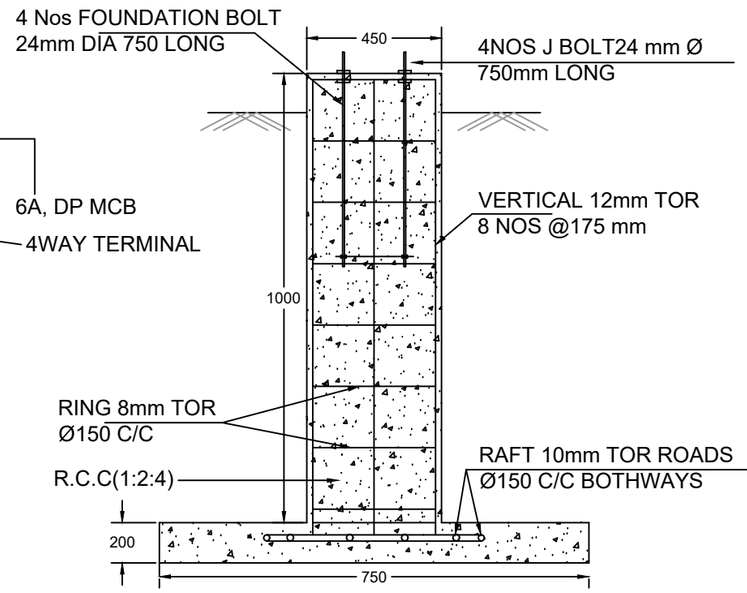
CROSS-SECTION OF B1 - B2
DETAILS-C



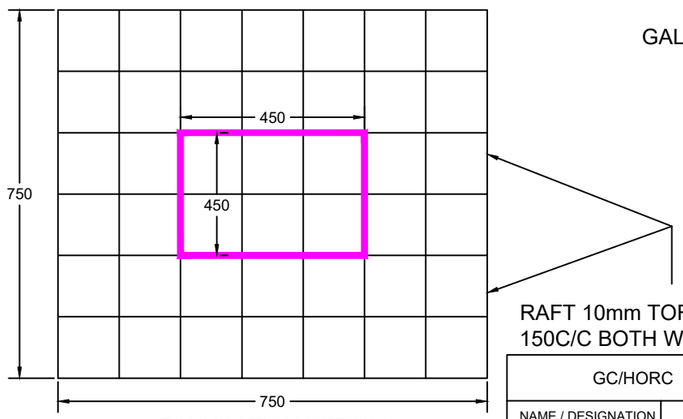
STEEL BASE PLATE
DETAIL - A



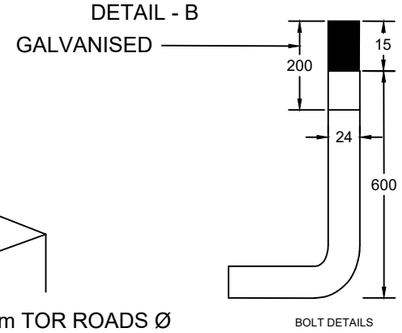
DETAIL - C



DETAIL - B



FOUNDATION DETAILS



BOLT DETAILS

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LOOSE WIRES SHOULD BE BOUND NEATLY BY CABLE TIES.
3. EARTH WIRE TO BE SEPERATELY RUN & CONNECTED TO THE COLUMN EARTHING TERMINAL.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		VIKRAM YADAV GM/ A&IE/ HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		JYOTI SANGWAN DGM/ Elect.	
A.S. JANGHU CRE/Elect.			
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

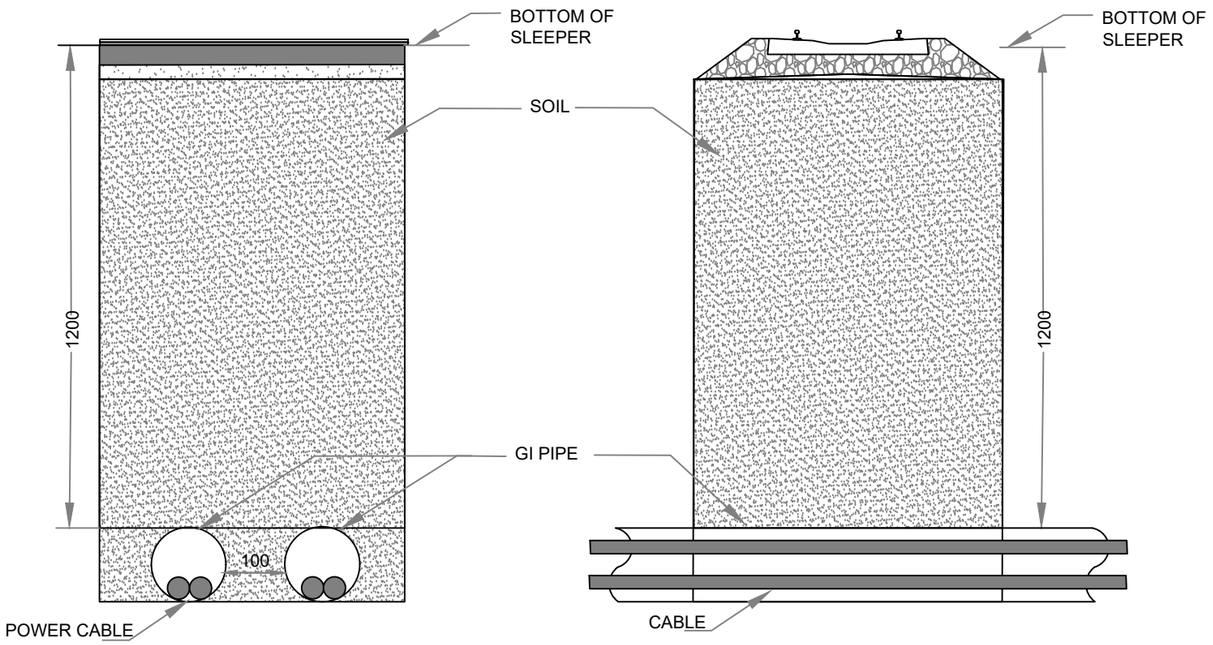
TITLE:-
INDICATIVE ARRANGEMENT OF DECORATIVE STREET LIGHT POLE AT STATION AND PLATFORM

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-03_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	26.08.2023	

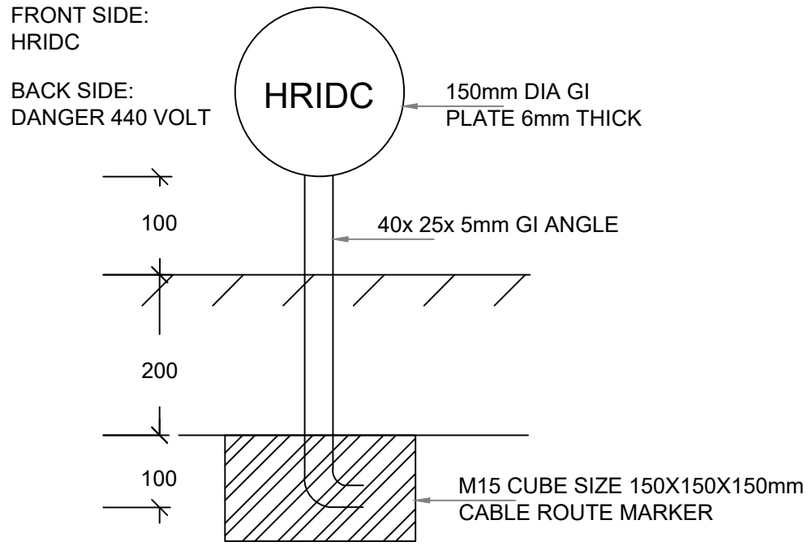
NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETRE.
2. FOR TRACK CROSSING GI PIPE 125mm Ø SHALL BE PROVIDED.
3. ROUTE MARKER SHALL BE PROVIDED AT EVERY 100m AND ON CHANGE OF DIRECTION OF CABLE ROUTE.



ACROSS THE TRACK

ACROSS THE TRACK



GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

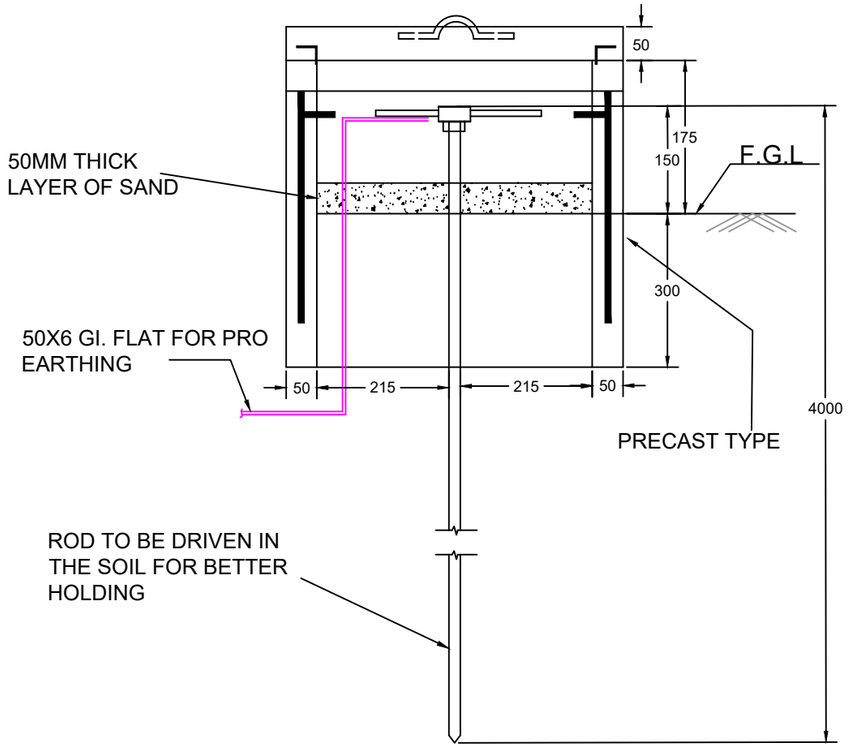
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:-
INDICATIVE CABLE ROUTE PLAN FOR TRACK CROSSING OF POWER CABLE AND ROUTE MARKER

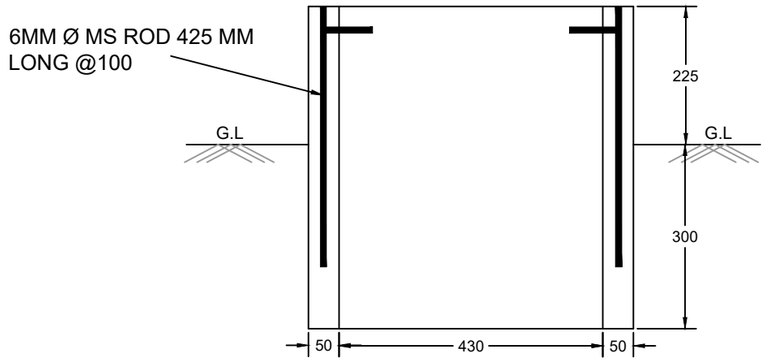
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-04_A0	

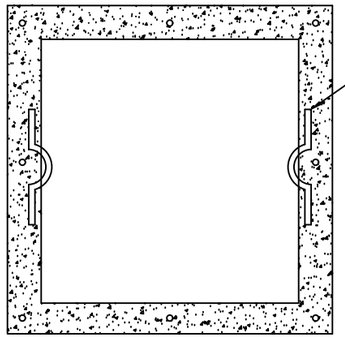
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	21.09.2023	



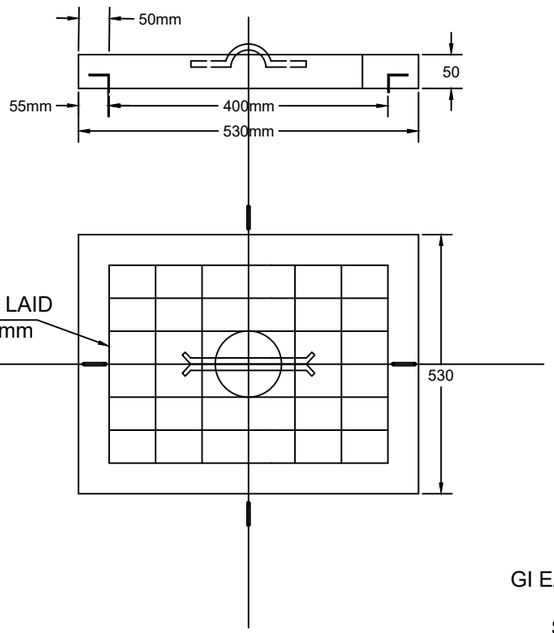
TYPICAL ARRANGEMENT
OF EARTH ELECTRODE

DETAIL - 1

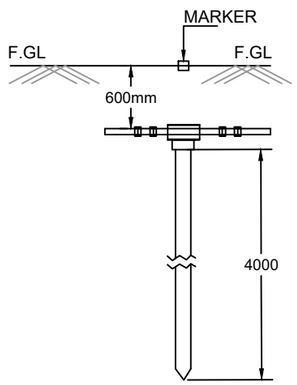




DETAIL - 2

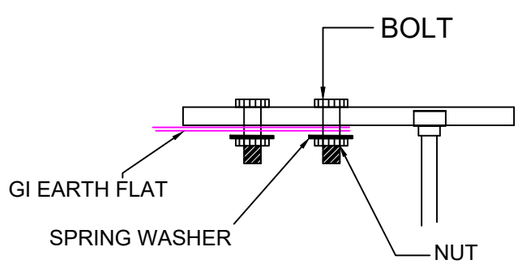


DETAIL - 3

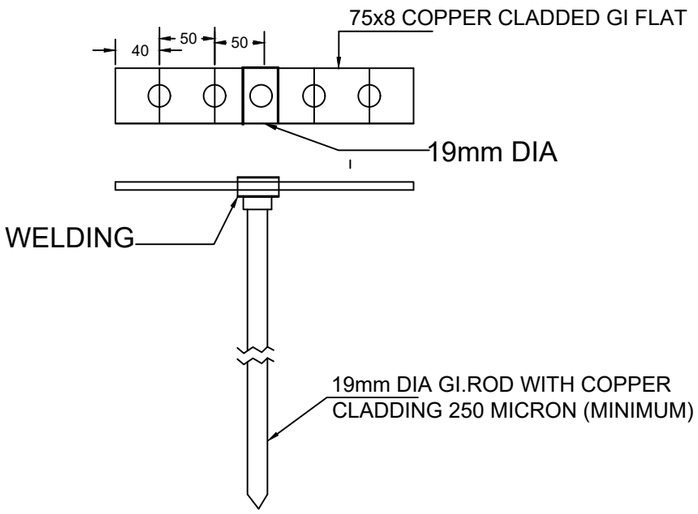


FABRICATION DETAILS OF EARTH
ELECTRODE LENGTH OF 3M

DETAIL - 4



DETAIL - 4A



DETAIL - 5

NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THE CONCRETE BOX AND COVER SHALL BE CAST WITH RCC M25 GRADE CONCRETE.
3. 75X8 FLAT 280MM LONG SHALL BE WELDED WITH ROD BEFORE COPPER CLADDING.
4. EARTH GI BOLTSHALL BE PROVIDED WITH GI SPRING WASHER AND NUT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	VIKRAM YADAV GM/ A&IE/ HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		JYOTI SANGWAN DGM/ Elect.	
A.S. JANGHU CRE/Elect.			
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

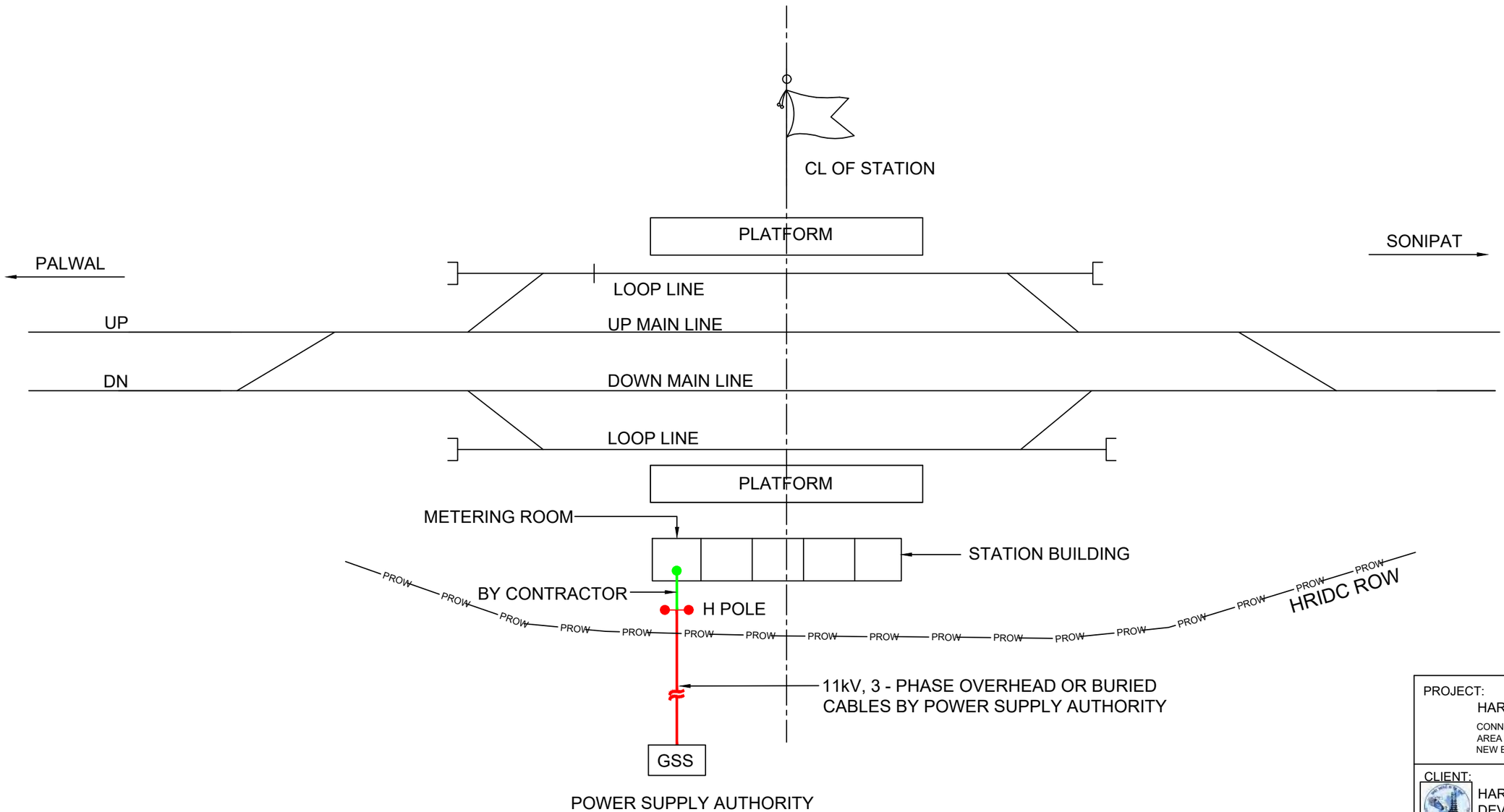
TITLE:- INDICATIVE EARTHING ARRANGEMENT OF ELECTRICAL SYSTEM BY COPPER CLADDED ELECTRODE

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-05_A0	1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	26.08.2023	

NOTES :

1. RED:- POWER SUPPLY AUTHORITY SCOPE
2. GREEN:- CONTRACTOR'S SCOPE



GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

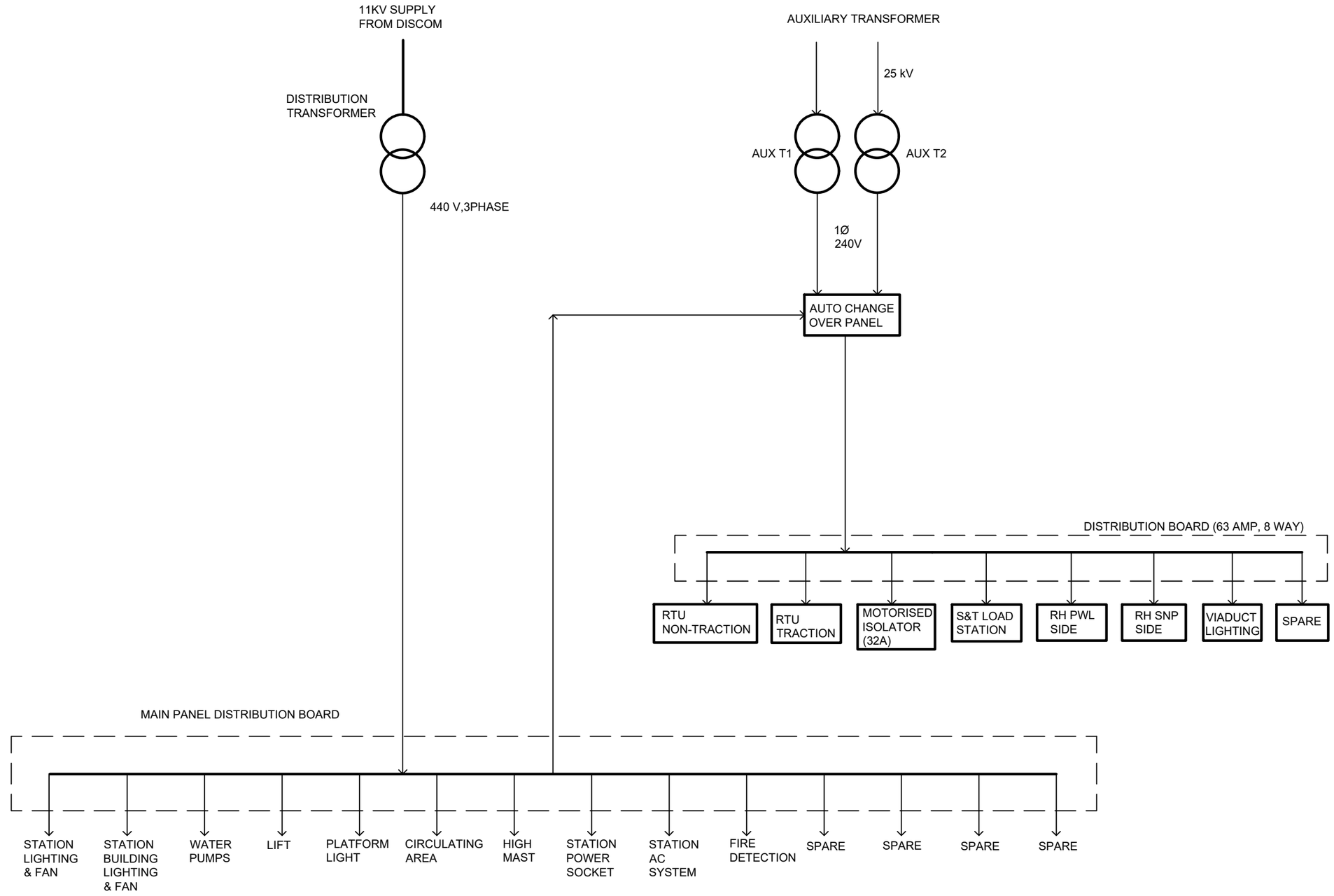
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- INDICATIVE SCHEMATIC DRAWING OF 11 KV POWER SUPPLY ARRANGEMENT.

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-06_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	29.08.2023	

INDICATIVE LT SUPPLY SYSTEM WITH LOCAL, DG & AUXILIARY TRANSFORMER SUPPLY



GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

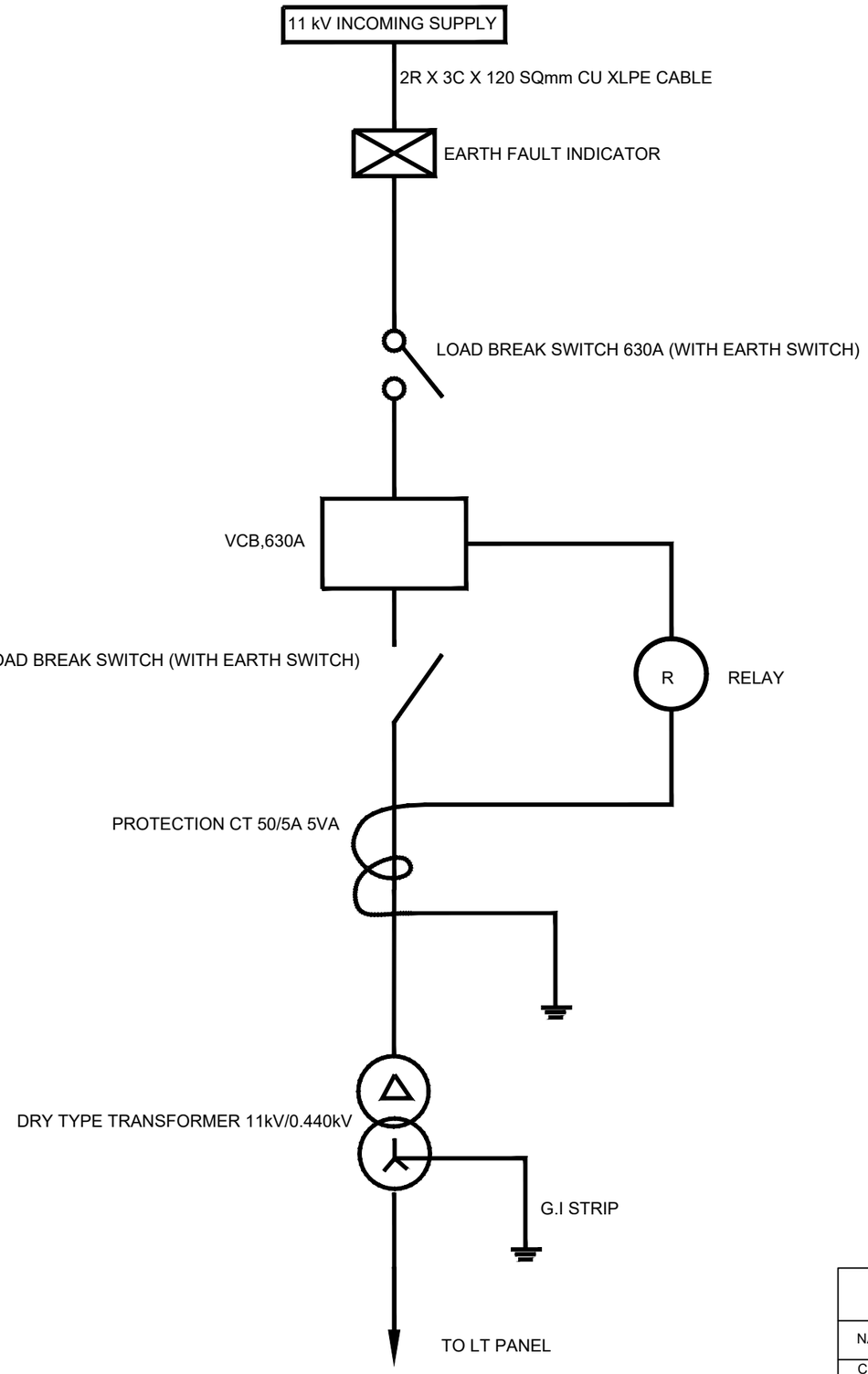
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
INDICATIVE LT SUPPLY SYSTEM WITH LOCAL & AUXILIARY TRANSFORMER SUPPLY

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-007_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	22.09.2023	16.10.2023

COMPACT SUBSTATION SLD



GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
A.S.JANGHU CRE/ELECT.		JYOTI SANGWAN DGM/Elect.	
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

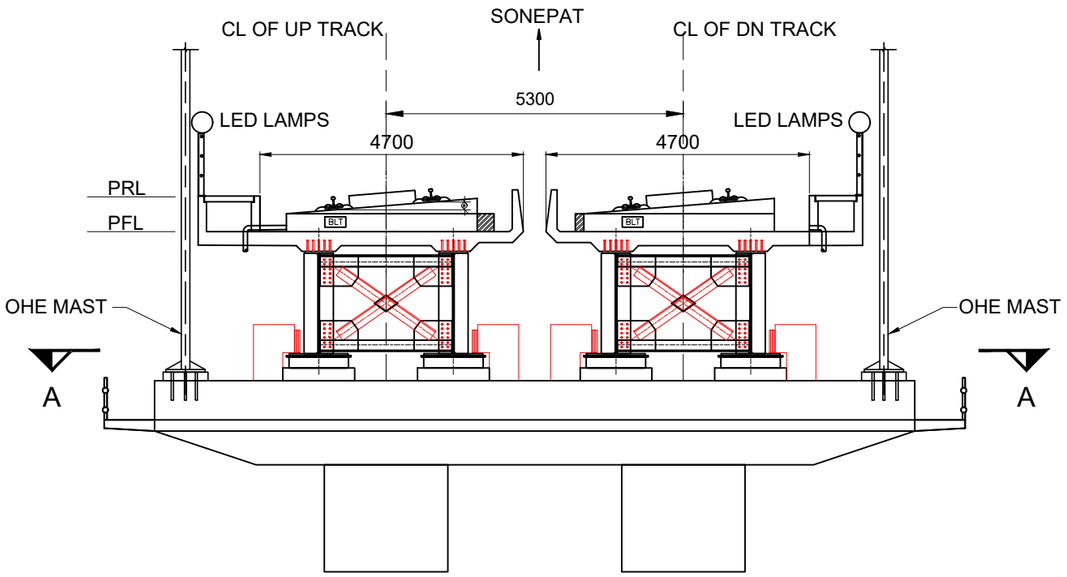
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

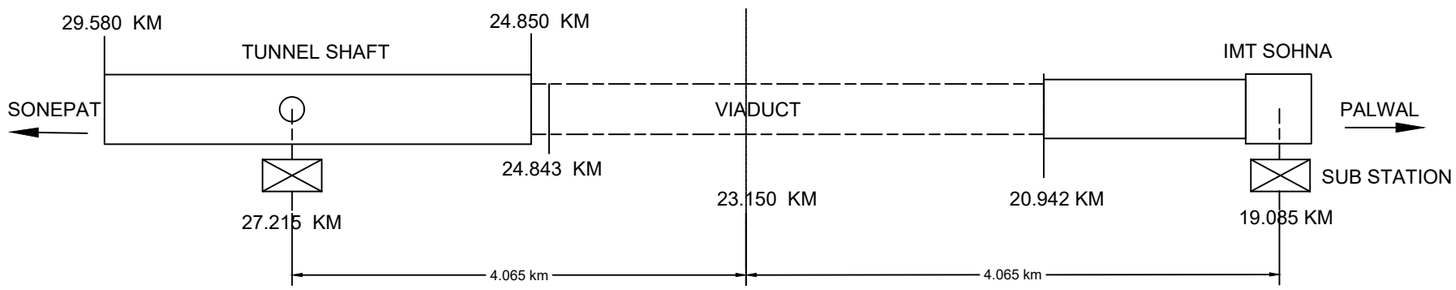
TITLE:- INDICATIVE COMPACT SUBSTATION (CSS) SINGLE LINE DIAGRAM

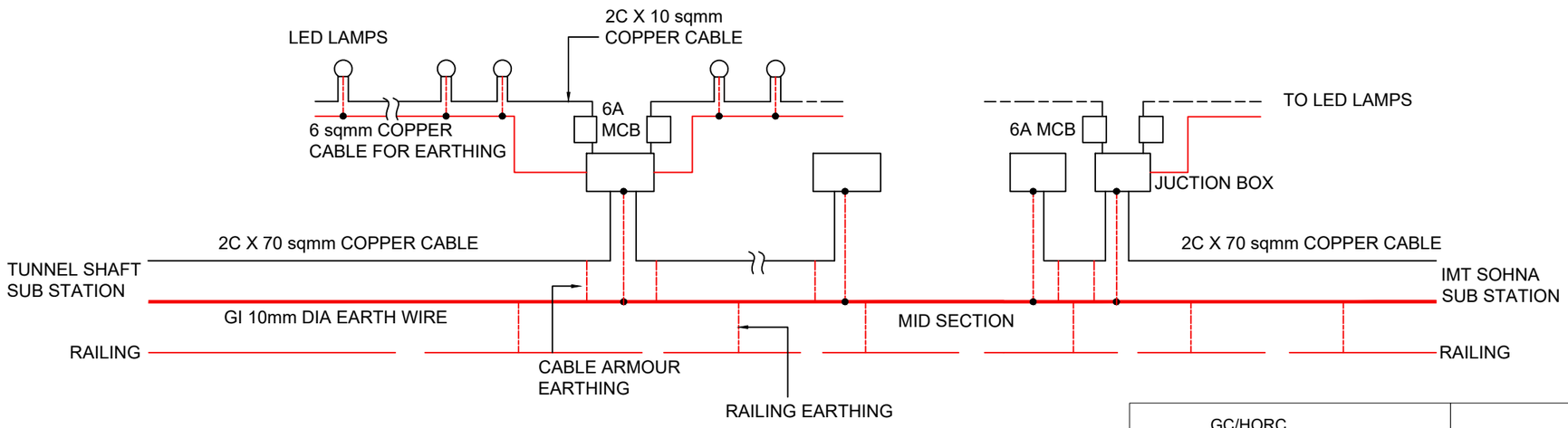
DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-08_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	22.09.2023	



VIADUCT TYPICAL SECTION





NOTES:

1. CIVIL CONTRACTOR SHALL PROVIDE VIADUCT RAILINGS IN LENGTHS NOT EXCEEDING 15m. THE DISTANCE BETWEEN TWO ADJACENT RAILINGS SHALL BE MINIMUM 50mm.
2. IF RAILING LENGTH IN ONE STRETCH EXCEEDS 15m, THAN BOTH RAILINGS SHALL BE EARTHED WITH 10mm DIA GI WIRE AT EVERY 20m.
3. THE 2C X 70 sqmm CABLE ARMOUR SHALL BE EARTHED AT EVERY END POINT OF CABLE WITH 10mm DIA GI WIRE.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/SOUTH	
SUDHIR AGRAWAL DPD/CIVIL		VIKRAM YADAV GM/ A&IE/HRIDC	
REETU PATIAL CDE/CIVIL		JYOTI SANGWAN DGM/Elect.	
A.S.JANGHU CRE/ELECT.			
VIKAS KUMAR HARIT SRE/GEN/Elect.			

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

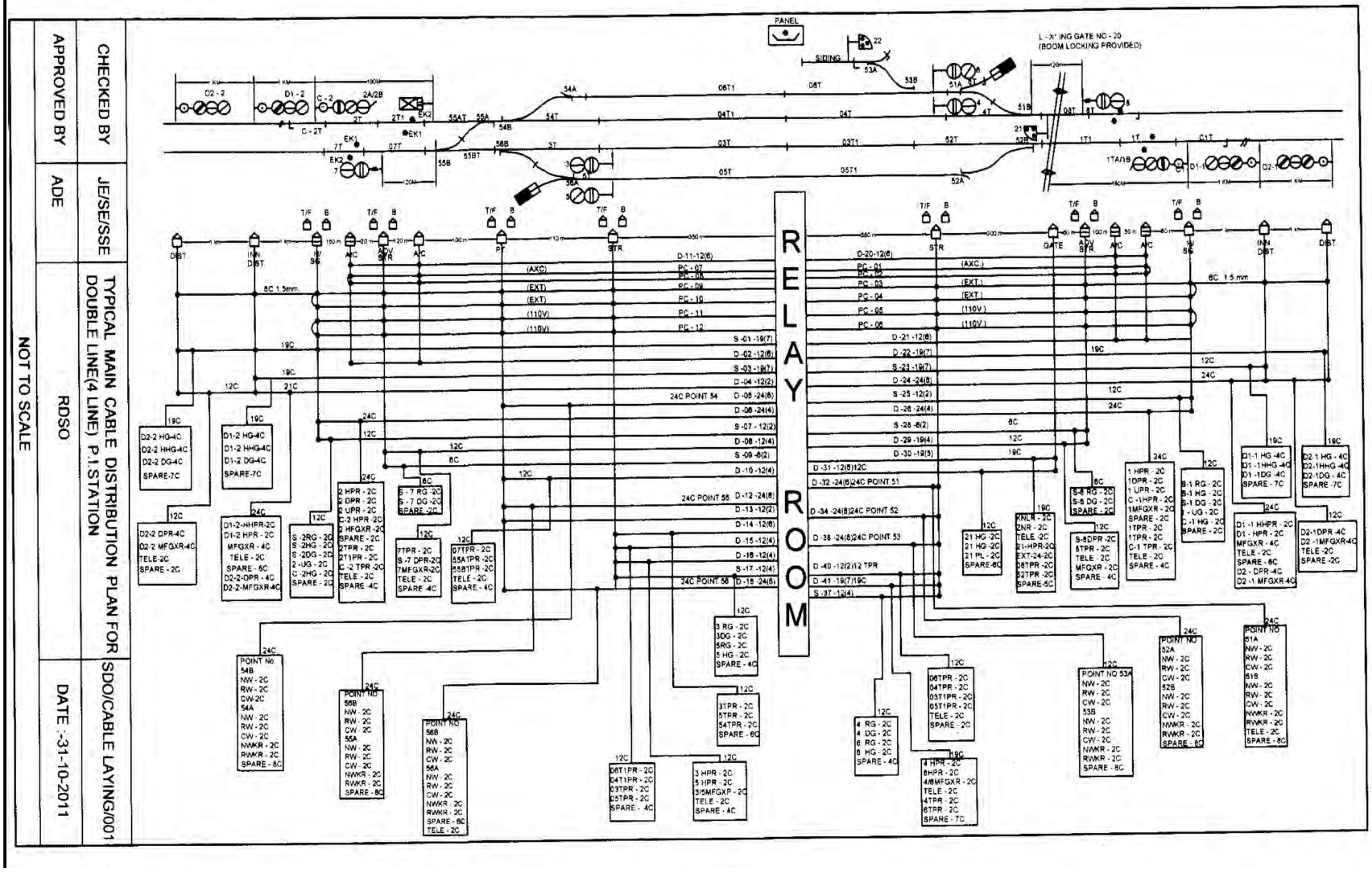
TITLE:-
INDICATIVE VIADUCT LIGHTING AND RAILING EARTHING ARRANGEMENT

DRG. NO.	SHEET NO.
GC-HRIDC-C5-DRW-ELE-09_A0	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	12.10.2023

III. Signalling & Telecommunication Drawings

Annexure- 4


NOT TO SCALE
APPROVED BY
ADE
CHECKED BY
JE/SE/SSE
TYPICAL MAIN CABLE DISTRIBUTION PLAN FOR DOUBLE LINE(4 LINE) P.I.STATION
RDSO
SDO/CABLE LAYING/001
DATE :-31-10-2011
PANEL
SIDING
L - X ING GATE NO - 20
(BOOM LOCKING PROVIDED)
RELAY ROOM
DIST
INN DIST
HOME SIG
ADV STR
STR
GATE
PF
D-11-12(6)
D-20-12(6)
24C POINT 54
24C POINT 55
24C POINT 56
24C POINT 51
24C POINT 52
24C POINT 53
8C 1.5mm
D2-2 HG-4C
D2-2 HHG-4C
D2-2 DG-4C
SPARE-7C
D2-2 DPR-4C
D2-2 MFGXR-4C
TELE-2C
SPARE - 2C
D1-2 HG-4C
D1-2 HHG-4C
D1-2 DG-4C
SPARE-7C
D1-2-HHPR-2C
D1-2 HPR - 2C
MFGXR - 4C
TELE - 2C
SPARE - 6C
D2-2-DPR - 4C
D2-2-MFGXR-4C
S -2RG - 2C
S -2HG - 2C
S -2DG - 2C
2 -UG - 2C
C -2HG - 2C
SPARE - 2C
2 HPR - 2C
2 DPR - 2C
2 UPR - 2C
C-2 HPR-2C
2 MFGXR -2C
SPARE - 2C
2TPR - 2C
2T1PR - 2C
C -2 TPR -2C
TELE - 2C
SPARE -4C
S -7 RG -2C
S -7 DG -2C
SPARE -2C
7TPR - 2C
S -7 DPR-2C
7MFGXR-2C
TELE - 2C
SPARE -4C
07TPR - 2C
55ATPR -2C
55BTPR -2C
TELE - 2C
SPARE - 4C
POINT No
54B
NW - 2C
RW - 2C
CW-2C
54A
NW - 2C
RW - 2C
CW - 2C
NWKR - 2C
RWKR - 2C
SPARE - 8C
POINT NO
55B
NW - 2C
RW - 2C
CW - 2C
55A
NW - 2C
RW - 2C
CW - 2C
NWKR - 2C
RWKR - 2C
SPARE - 8C
POINT NO
56B
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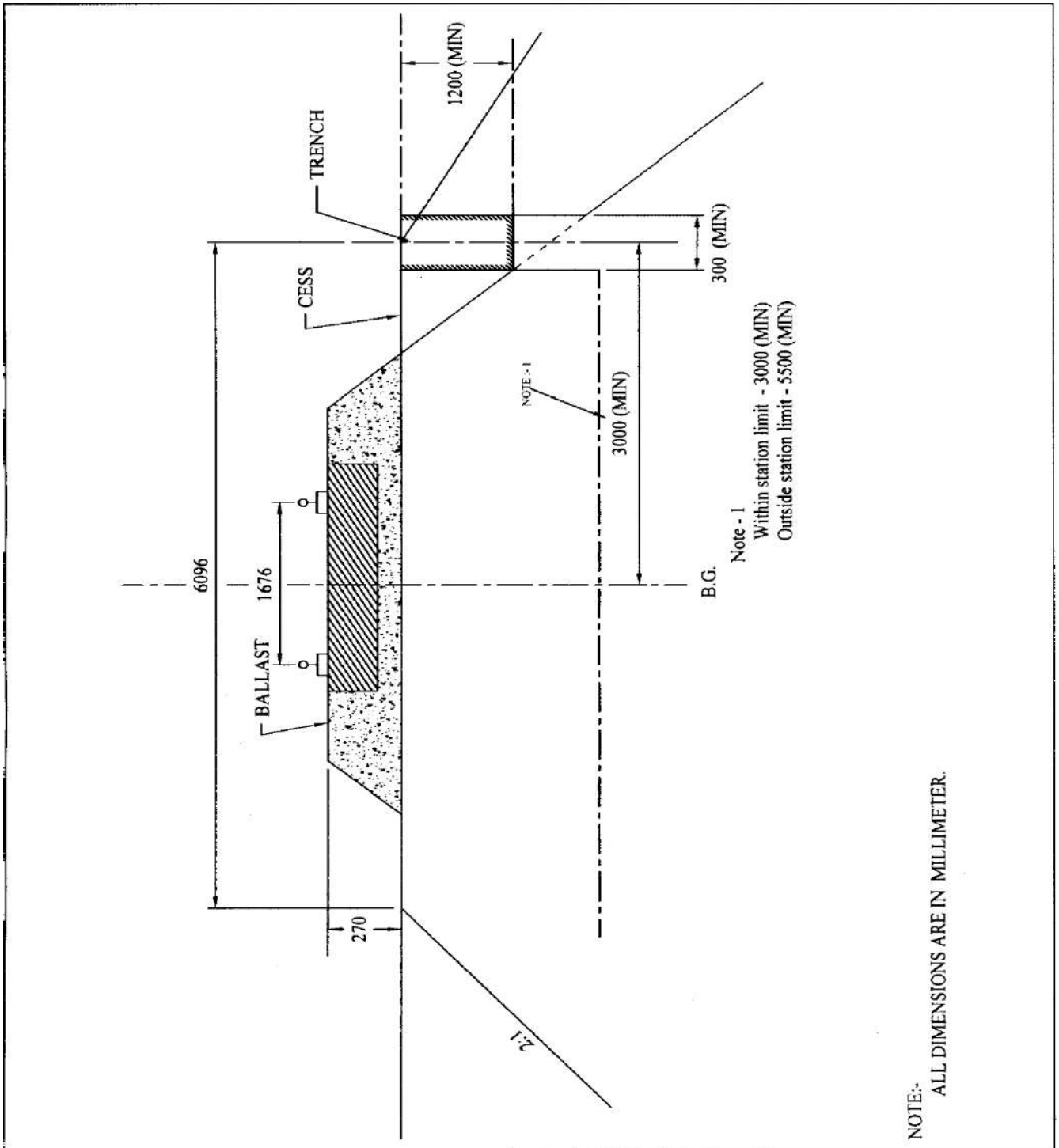
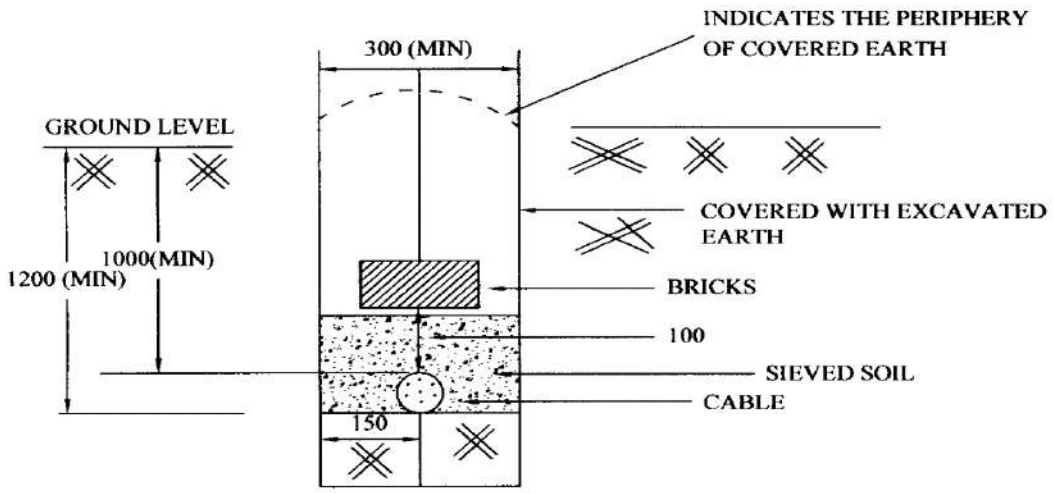
RW - 2C
CW - 2C
56A
NW - 2C
RW - 2C
CW - 2C
NWKR - 2C
RWKR - 2C
SPARE - 6C
TELE - 2C
06T1PR - 2C
04T1PR - 2C
03TPR - 2C
05TPR - 2C
SPARE - 4C
3 RG - 2C
3DG - 2C
5RG - 2C
5 HG - 2C
SPARE - 4C
3TPR - 2C
5TPR - 2C
54TPR - 2C
SPARE - 6C
3 HPR - 2C
5 HPR - 2C
3/5MFGXP - 2C
TELE - 2C
SPARE - 4C
4 RG - 2C
4 DG - 2C
6 RG - 2C
6 HG - 2C
SPARE - 4C
06TPR - 2C
04TPR - 2C
03T1PR - 2C
05T1PR - 2C
TELE - 2C
SPARE - 2C
4 HPR - 2C
6HPR - 2C
4/6MFGXR - 2C
TELE - 2C
4TPR - 2C
6TPR - 2C
SPARE - 7C
POINT NO 53A
NW - 2C
RW - 2C
CW - 2C
53B
NW - 2C
RW - 2C
CW - 2C
NWKR - 2C
RWKR - 2C
SPARE - 8C
POINT NO
52A
NW - 2C
RW - 2C
CW - 2C
52B
NW - 2C
RW - 2C
CW - 2C
NWKR - 2C
RWKR - 2C
SPARE - 8C
POINT NO
51A
NW - 2C
RW - 2C
CW - 2C
51B
NW - 2C
RW - 2C
CW - 2C
NWKR - 2C
RWKR - 2C
TELE - 2C
SPARE - 8C
21 HG -2C
21 HG -2C
21 PL - 2C
SPARE-6C
XNLR - 2C
ZNR - 2C
TELE -2C
21-HPR-2C
EXT-24-2C
06TPR -2C
52TPR -2C
SPARE-5C
S-8 RG - 2C
S-8 DG - 2C
SPARE - 2C
S-8DPR -2C
8TPR - 2C
TELE - 2C
MFGXR - 2C
SPARE - 4C
1 HPR - 2C
1DPR - 2C
1 UPR - 2C
C -1HPR - 2C
1MFGXR - 2C
SPARE - 2C
1TPR - 2C
1TPR - 2C
C-1 TPR - 2C
TELE - 2C
SPARE - 4C
B-1 RG - 2C
B-1 HG - 2C
B-1 DG - 2C
1 - UG - 2C
C -1 HG - 2C
SPARE - 2C
D1 -1 HHPR - 2C
D1 - HPR - 2C
MFGXR - 4C
TELE - 2C
SPARE - 6C
D2 - DPR -4C
D2 -1 MFGXR 4C
D1-1 HG -4C
D1 -1HHG -4C
D1 -1DG -4C
SPARE - 7C
D2-1 HG - 4C
D2-1HHG -4C
D2-1DG - 4C
SPARE -7C
D2-1DPR -4C
D2 -1MFGXR-4C
TELE -2C
SPARE -2C

Annexure-6

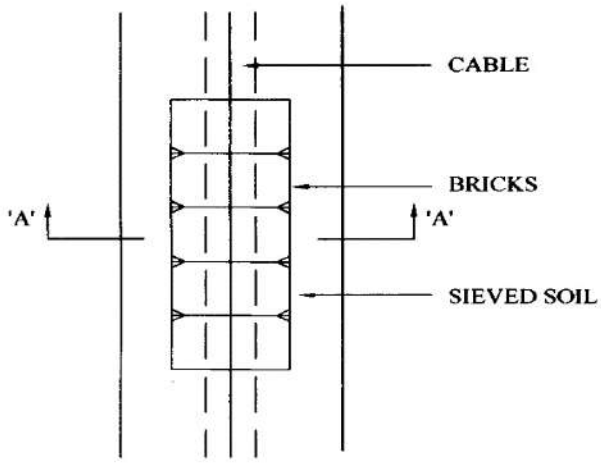


CHECKED BY	JE/SE/SSE	POSITION OF TRENCHES FOR CABLE LAYING	SDO/CABLE LAYING /002
APPROVED BY	ADE	R D S O	DATE : 31-10-2011
NOT TO SCALE			

Annexure-7



CUT SECTION 'AA'

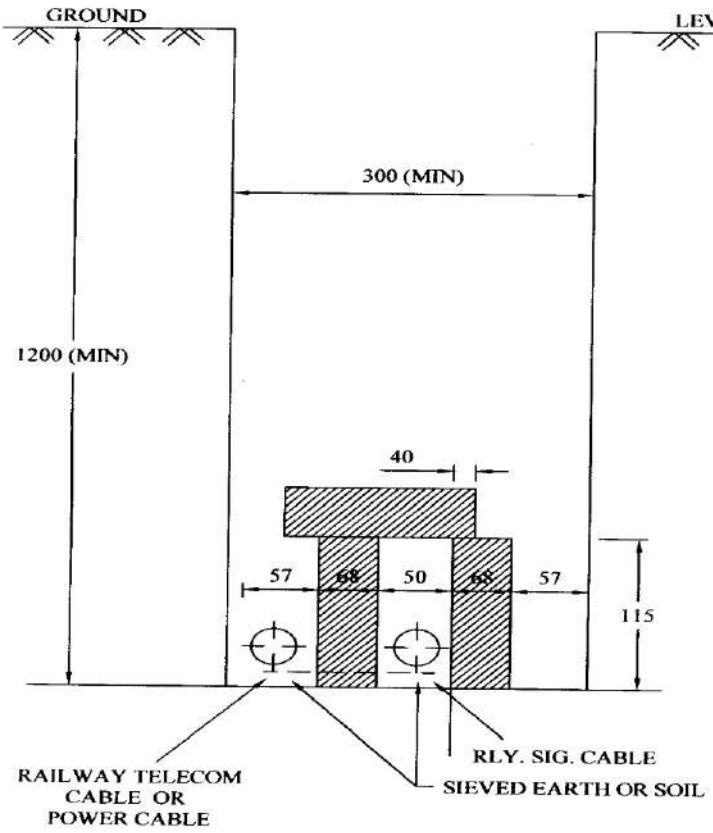


PLAN VIEW

NOTE :
1. ALL DIMENSIONS ARE IN MILLIMETER.

CHECKED BY	JE/SE/SSE	CABLE TRENCH	SDO/CABLE LAYING/003
APPROVED BY	ADE	R. D. S. O.	DATE : 31-10-2011
NOT TO SCALE			

Annexure-9



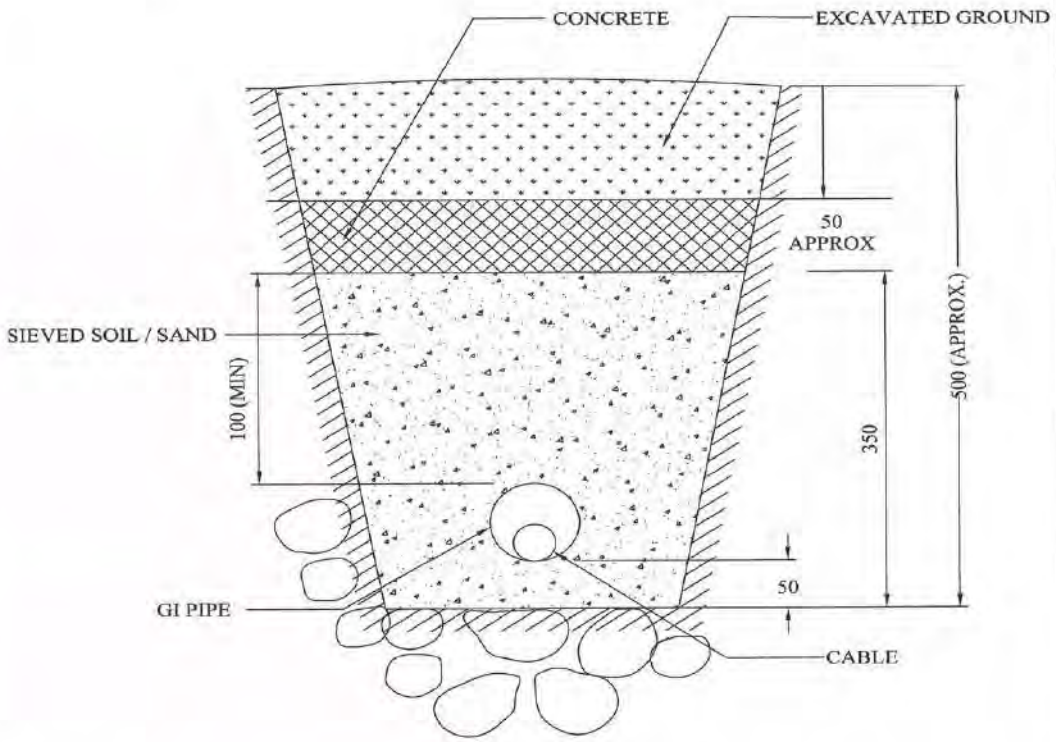
NOTE:

2. TELECOM CABLE/POWER CABLE TO BE LAID AWAY FROM THE TRACK
1. DIMENSIONS ARE IN MILLIMETRES

CHECKED BY	JE/SE/SSE	LAYING OF SIGNALLING CABLE & TELECOM/POWER CABLE IN SAME TRENCH	SDO/CABLE LAYING/004
APPROVED BY		R. D. S. O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-11

ANNEXURE-11



NOTE:-

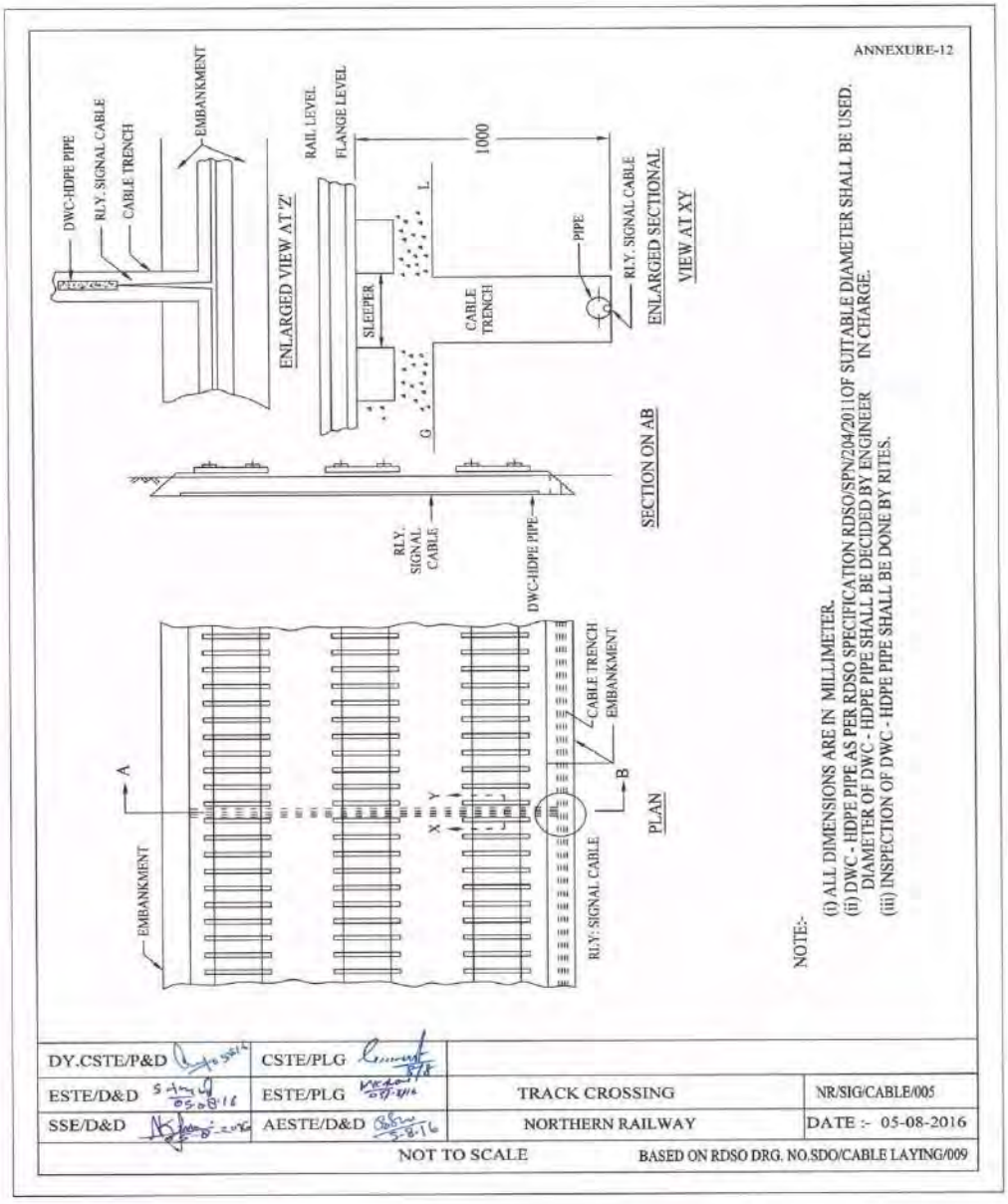
(i)ALL DIMENSIONS ARE IN MILLIMETER.

(ii) G.I PIPE OF MEDIUM GRADE OF ISI MARK AS PER IS:1239(PART-I) OF SUITABLE DIAMETER SHALL BE USED. DIAMETER OF G.I.PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.

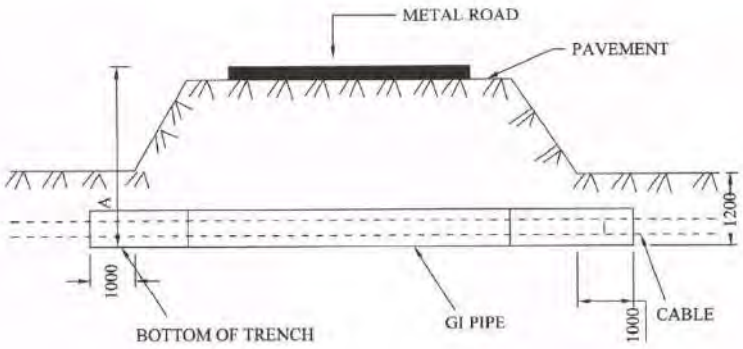
(iiI) INSPECTION OF G.I PIPE SHALL BE DONE BY RITES.

DY.CSTE/P&D	CSTE/PLG		
ESTE/D&D	ESTE/PLG	LAYING OF CABLES IN ROCKY AREA	NR/SIG/CABLE/004
SSE/D&D	AESTE/D&D	NORTHERN RAILWAY	DATE :- 05-08-2016
	NOT TO SCALE		BASED ON RDSO DRG. NO.SDO/CABLE LAYING/008

Annexure-12


ANNEXURE-12
DWC-HDPE PIPE
RLY. SIGNAL CABLE
CABLE TRENCH
EMBANKMENT
RAIL LEVEL
FLANGE LEVEL
1000
ENLARGED VIEW AT 'Z'
SLEEPER
L
G
CABLE TRENCH
PIPE
RLY. SIGNAL CABLE
ENLARGED SECTIONAL VIEW AT XY
SECTION ON AB
RLY. SIGNAL CABLE
DWC-HDPE PIPE
A
B
X
Y
CABLE TRENCH
EMBANKMENT
EMBANKMENT
RLY. SIGNAL CABLE
PLAN
NOTE:-
(i) ALL DIMENSIONS ARE IN MILLIMETER.
(ii) DWC - HDPE PIPE AS PER RDSO SPECIFICATION RDSO/SPN/204/2011 OF SUITABLE DIAMETER SHALL BE USED. DIAMETER OF DWC - HDPE PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.
(iii) INSPECTION OF DWC - HDPE PIPE SHALL BE DONE BY RITES.
DY.CSTE/P&D
CSTE/PLG
ESTE/D&D
ESTE/PLG
SSE/D&D
AESTE/D&D
TRACK CROSSING
NR/SIG/CABLE/005
NORTHERN RAILWAY
DATE :- 05-08-2016
NOT TO SCALE
BASED ON RDSO DRG. NO.SDO/CABLE LAYING/009

ANNEXURE-13



NOTE:-

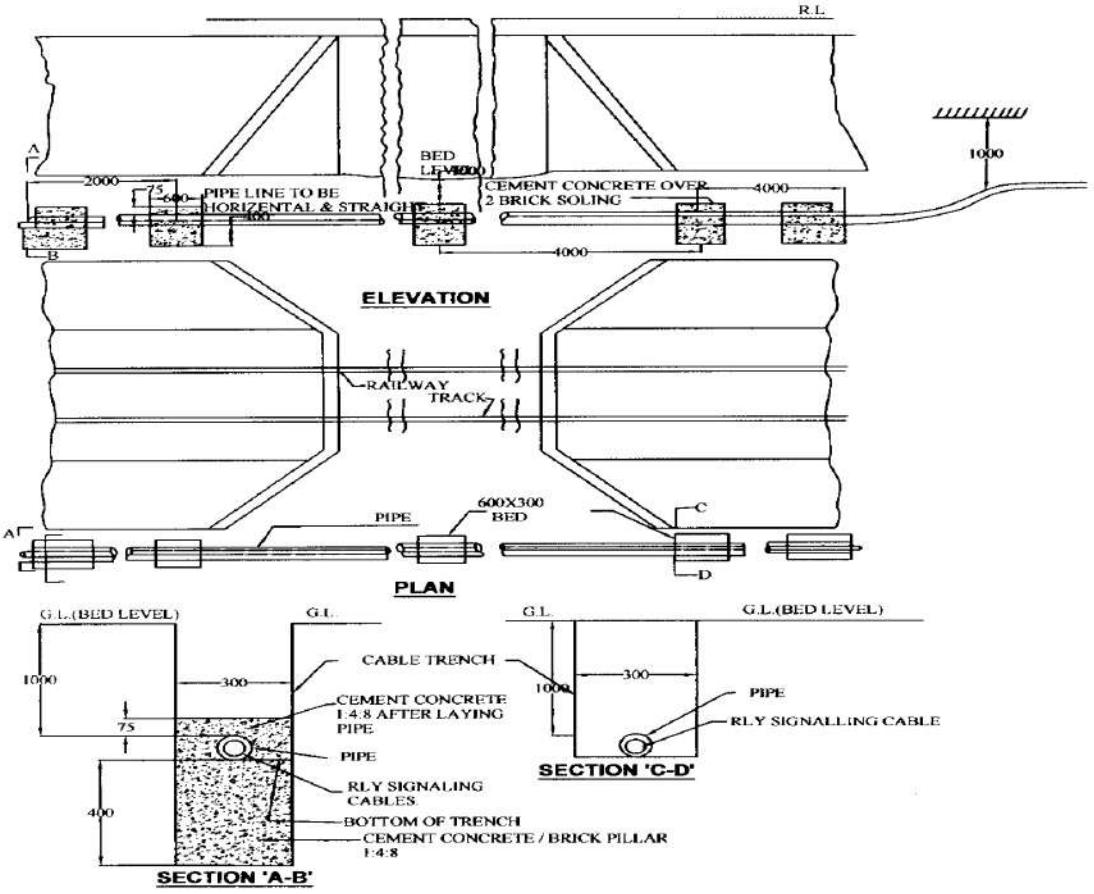
(i) ALL DIMENSIONS ARE IN MILLIMETER.

(ii) G.I PIPE OF MEDIUM GRADE OF ISI MARK AS PER IS:1239(PART-I) OF SUITABLE DIAMETER SHALL BE USED. DIAMETER OF G.I.PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.

(iii) INSPECTION OF G.I.PIPE SHALL BE DONE BY RITES.

DY.CSTE/P&D	CSTE/PLG		
ESTE/D&D	ESTE/PLG	ROAD CROSSINGS	NR/SIG/CABLE/006
SSE/D&D	AESTE/D&D	NORTHERN RAILWAY	DATE :- 05-08-2016
	NOT TO SCALE		BASED ON RDSO DRG. NO.SDO/CABLE LAYING/010

Annexure-14



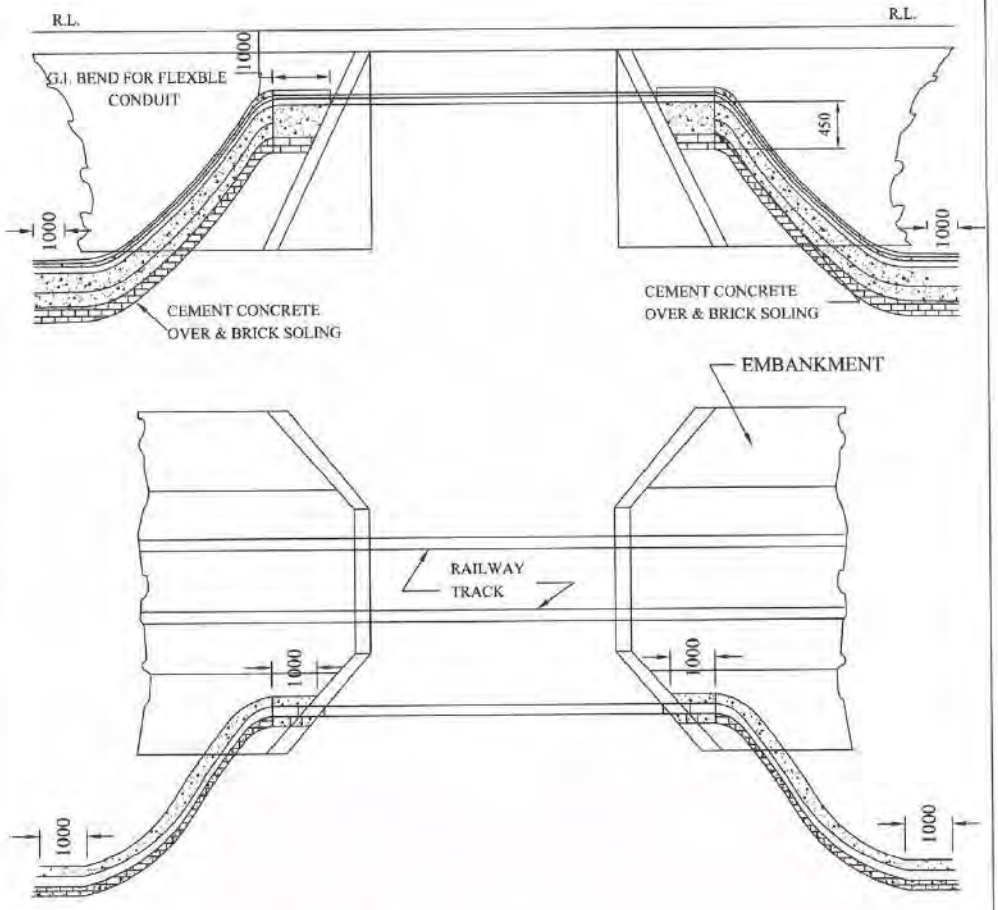
NOTE:-

ALL DIMENSIONS ARE IN MILLIMETER.

CHECKED BY	JE/SE/SSE	CABLE LAYING ON CULVERTS WITH LOW FLOOD LEVEL	SDO/CABLE LAYING/011
APPROVED BY	ADE	R.D.S.O	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-15

ANNEXURE-15



NOTE:-

(i) ALL DIMENSIONS ARE IN MILLIMETER.

(ii) ON APPROACH OF CULVERTS, DWC- HDPE PIPE OF SUITABLE DIAMETERAS PER RDSO SPECIFICATION RDSO/SPN/204/2011 SHALL BE USED.DIAMETER OF DWC -HDPE PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.

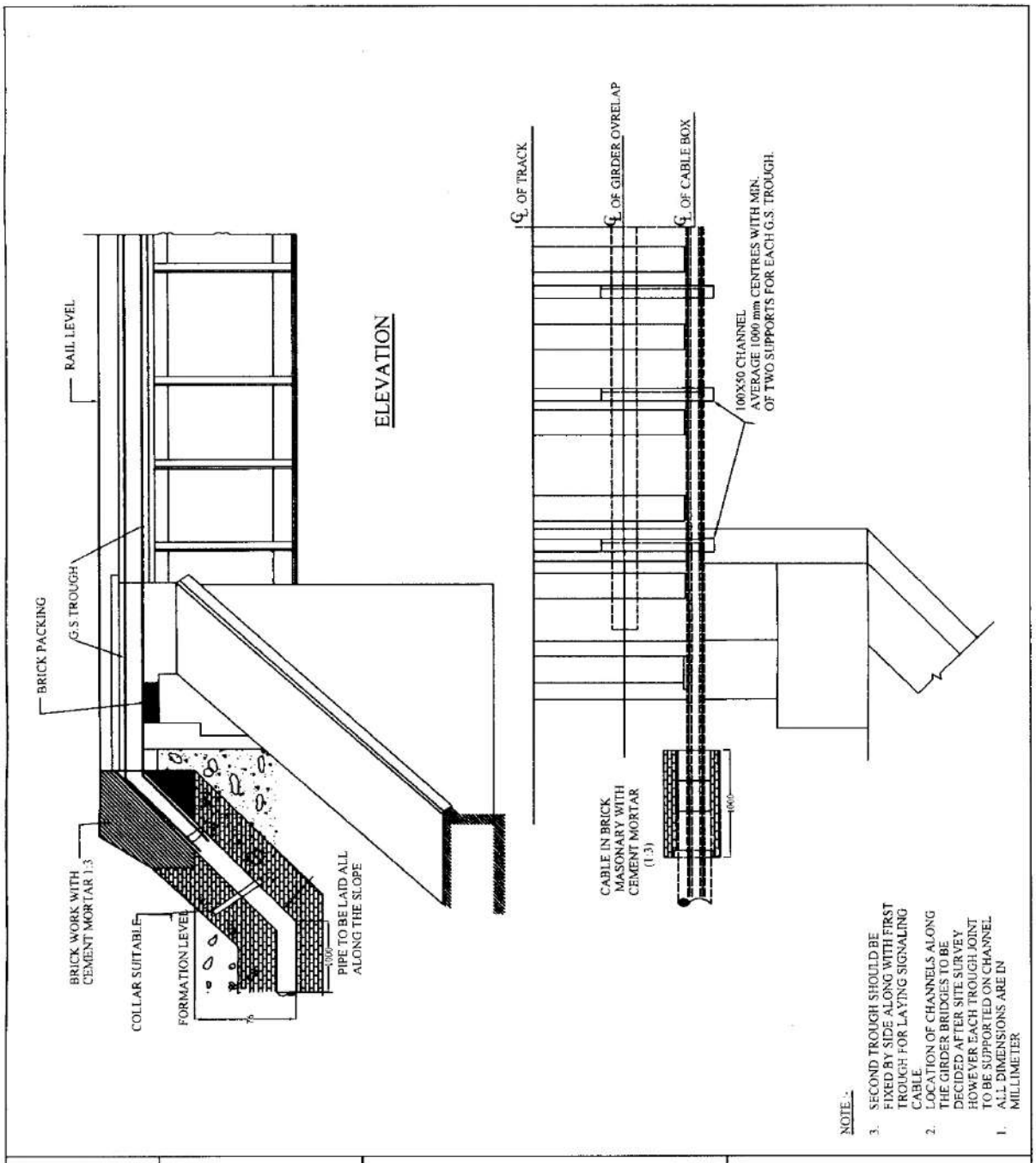
(iii) ON CULVERT PORTION, PERFORATED G.I PIPE OF MEDIUM GRADE OF ISI MARK AS PER IS:1239(PART-I) OF SUITABLE DIAMETER SHALL BE USED. DIAMETER OF G.I.PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.

(iv) AT JUNCTION POINT OF G.I AND DWC PIPE, A G.I.BEND OF 112.5 DEGREE,1 MTR. LENGTH AS PER IS-1239(Part-2) AND OVERLAPPING 250MM. WITH DWC PIPE SHALL BE USED.

(v) INSPECTION OF DWC-HDPE AND G.I. PIPE SHALL BE DONE BY RITES.

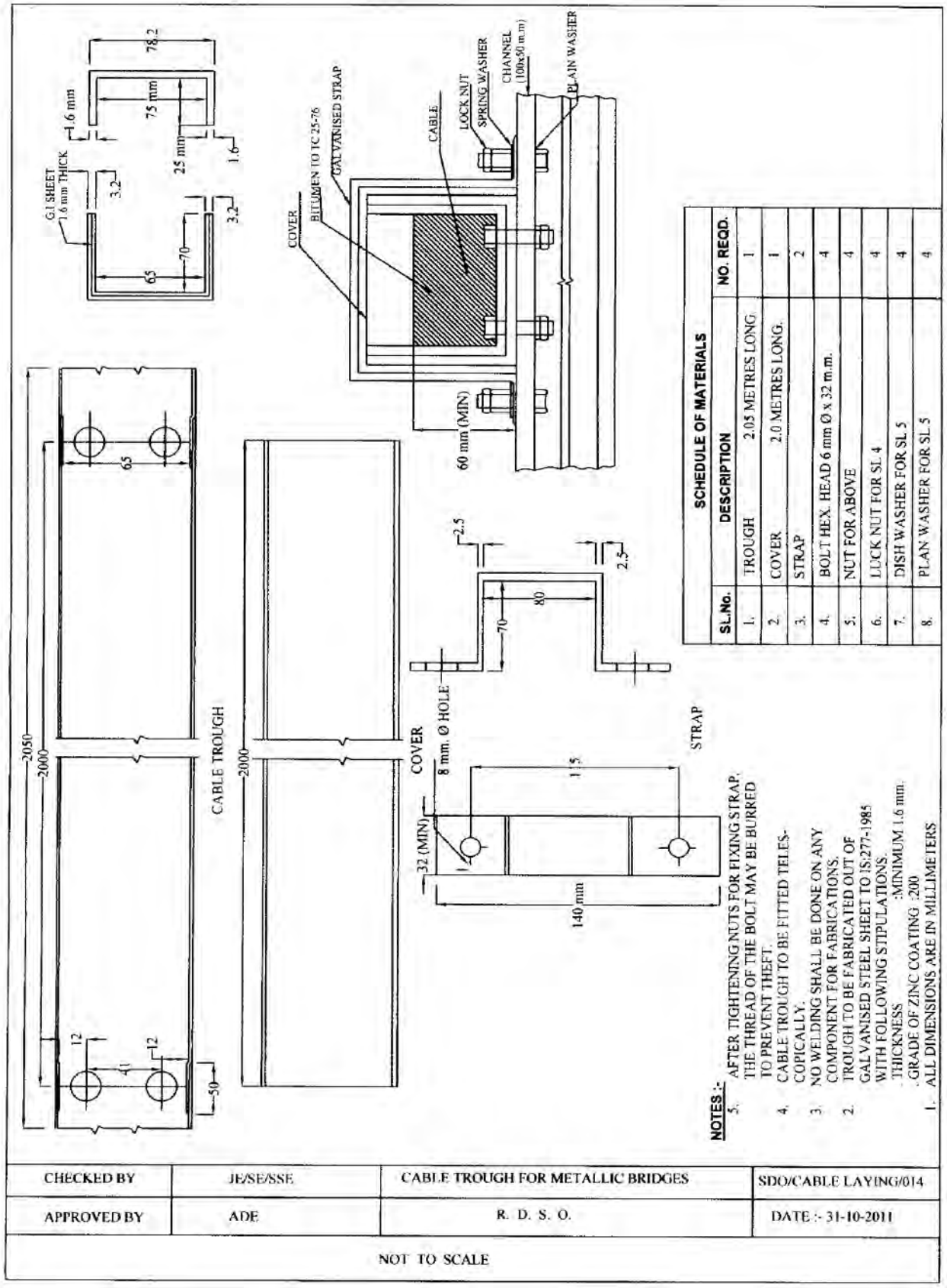
DY.CSTE/P&D	CSTE/PLG		
ESTE/D&D	ESTE/PLG	CABLE LAYING ON CULVERTS WITH HIGH FLOOD LEVEL	NR/SIG/CABLE/007
SSE/D&D	AESTE/D&D	NORTHERN RAILWAY	DATE :- 05-08-2016
		NOT TO SCALE	BASED ON RDSO DRG. NO.SDO/CABLE LAYING/012

Annexure-16



CHECKED BY	JE/SE/SSE	CABLE LAYING ON METALLIC BRIDGES	SDO/CABLE LAYING/013
APPROVED BY	ADE	R. D. S. O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-17



SCHEDULE OF MATERIALS

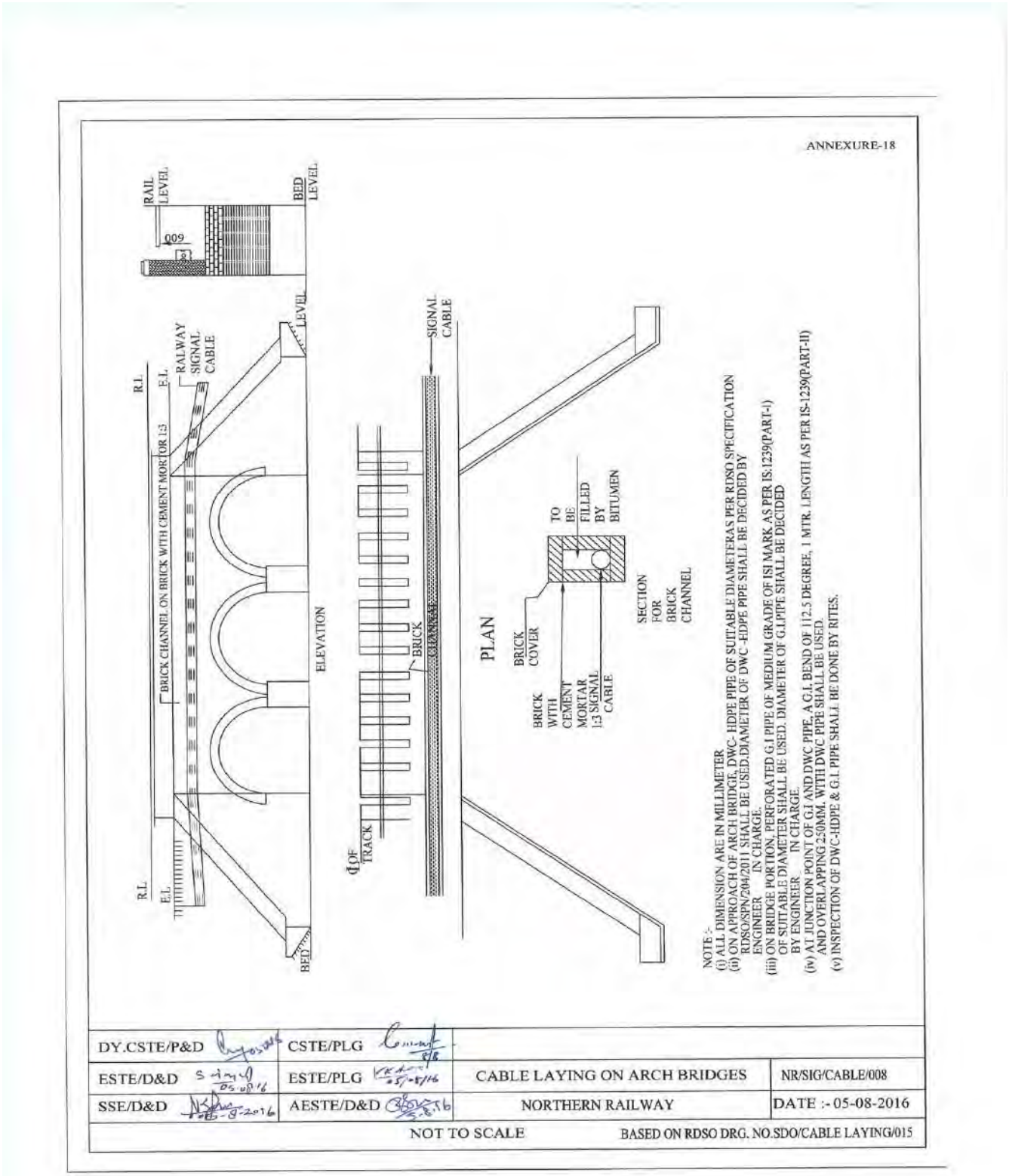
SL.No.	DESCRIPTION	NO. REQD.
1.	TROUGH 2.05 METRES LONG	1
2.	COVER 2.0 METRES LONG.	1
3.	STRAP	2
4.	BOLT HEX. HEAD 6 mm Ø x 32 m.m.	4
5.	NUT FOR ABOVE	4
6.	LOCK NUT FOR SL 4	4
7.	DISH WASHER FOR SL 5	4
8.	PLAN WASHER FOR SL 5	4

NOTES :-

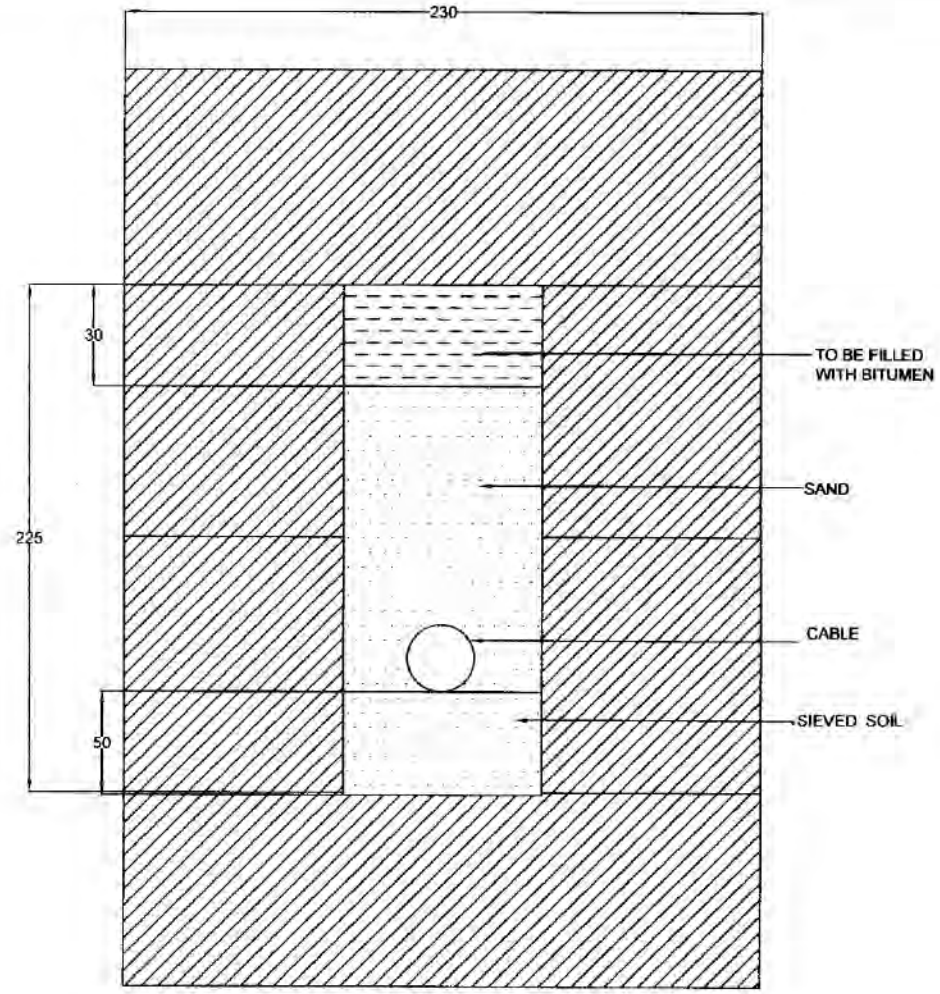
5. AFTER TIGHTENING NUTS FOR FIXING STRAP, THE THREAD OF THE BOLT MAY BE BURRED TO PREVENT THEFT.
4. CABLE TROUGH TO BE FITTED TELES-COPICALLY.
3. NO WELDING SHALL BE DONE ON ANY COMPONENT FOR FABRICATIONS.
2. TROUGH TO BE FABRICATED OUT OF GALVANISED STEEL SHEET TO IS:277-1985 WITH FOLLOWING STIPULATIONS.
   THICKNESS :MINIMUM 1.6 mm.
   GRADE OF ZINC COATING :200
1. ALL DIMENSIONS ARE IN MILLIMETERS

CHECKED BY	JE/SE/SSE	CABLE TROUGH FOR METALLIC BRIDGES	SDO/CABLE LAYING/014
APPROVED BY	ADE	R. D. S. O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-18


ANNEXURE-18
RAIL LEVEL
BED LEVEL
009
LEVEL
R.L
E.L
RALWAY SIGNAL CABLE
BRICK CHANNEL ON BRICK WITH CEMENT MORTOR 1:3
ELEVATION
SIGNAL CABLE
BRICK CHANNEL
PLAN
BRICK COVER
BRICK WITH CEMENT MORTAR 1:3 SIGNAL CABLE
TO BE FILLED BY BITUMEN
SECTION FOR BRICK CHANNEL
NOTE :-
(i) ALL DIMENSION ARE IN MILLIMETER
(ii) ON APPROACH OF ARCH BRIDGE, DWC- HDPE PIPE OF SUITABLE DIAMETER AS PER RDSO SPECIFICATION RDSO/SPN/204/2011 SHALL BE USED.DIAMETER OF DWC -HDPE PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.
(iii) ON BRIDGE PORTION, PERFORATED G.I PIPE OF MEDIUM GRADE OF ISI MARK AS PER IS:1239(PART-I) OF SUITABLE DIAMETER SHALL BE USED. DIAMETER OF G.I.PIPE SHALL BE DECIDED BY ENGINEER IN CHARGE.
(iv) AT JUNCTION POINT OF G.I AND DWC PIPE, A G.I. BEND OF 112.5 DEGREE, 1 MTR. LENGTH AS PER IS-1239(PART-II) AND OVERLAPPING 250MM, WITH DWC PIPE SHALL BE USED.
(v) INSPECTION OF DWC-HDPE & G.I. PIPE SHALL BE DONE BY RITES.
DY.CSTE/P&D
CSTE/PLG
ESTE/D&D
ESTE/PLG
SSE/D&D
AESTE/D&D
CABLE LAYING ON ARCH BRIDGES
NR/SIG/CABLE/008
NORTHERN RAILWAY
DATE :- 05-08-2016
NOT TO SCALE
BASED ON RDSO DRG. NO.SDO/CABLE LAYING/015

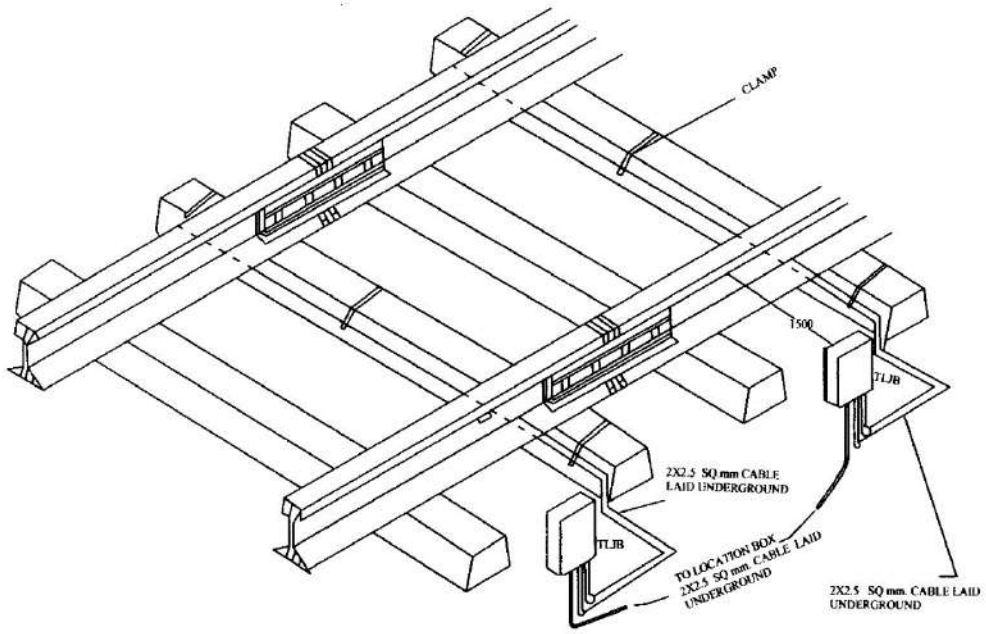
Annexure-19



NOTE :-
ALL DIMENTION ARE IN MILLIMETER.

CHECKED BY	JE/SE/SSE	BRICK MASONRY CHANNEL FOR ARCH BRIDGE	SDO/CABLE LAYING /016
APPROVED BY	ADE	R. D. S. O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-20

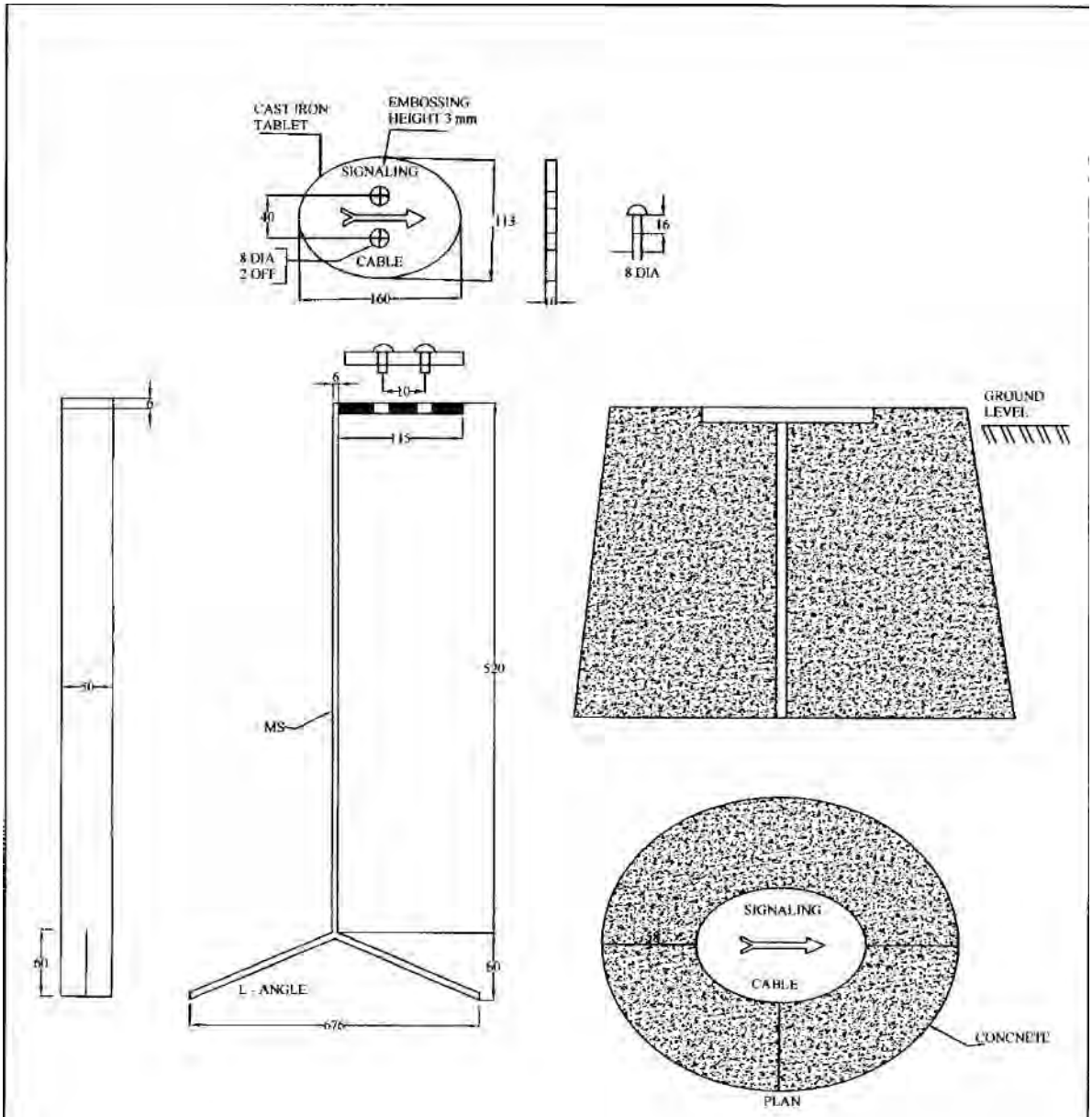


NOTE:-

ALL DIMENSIONS ARE IN MILLIMETER.

CHECKED BY	JE/SE/SSE	ARRANGMENT OF JUMPER CABLE	SDO/CABLE LAYING/017
APPROVED BY	ADE	R.D.S.O	DATE :- 31-10-2011
NOT TO SCALE			

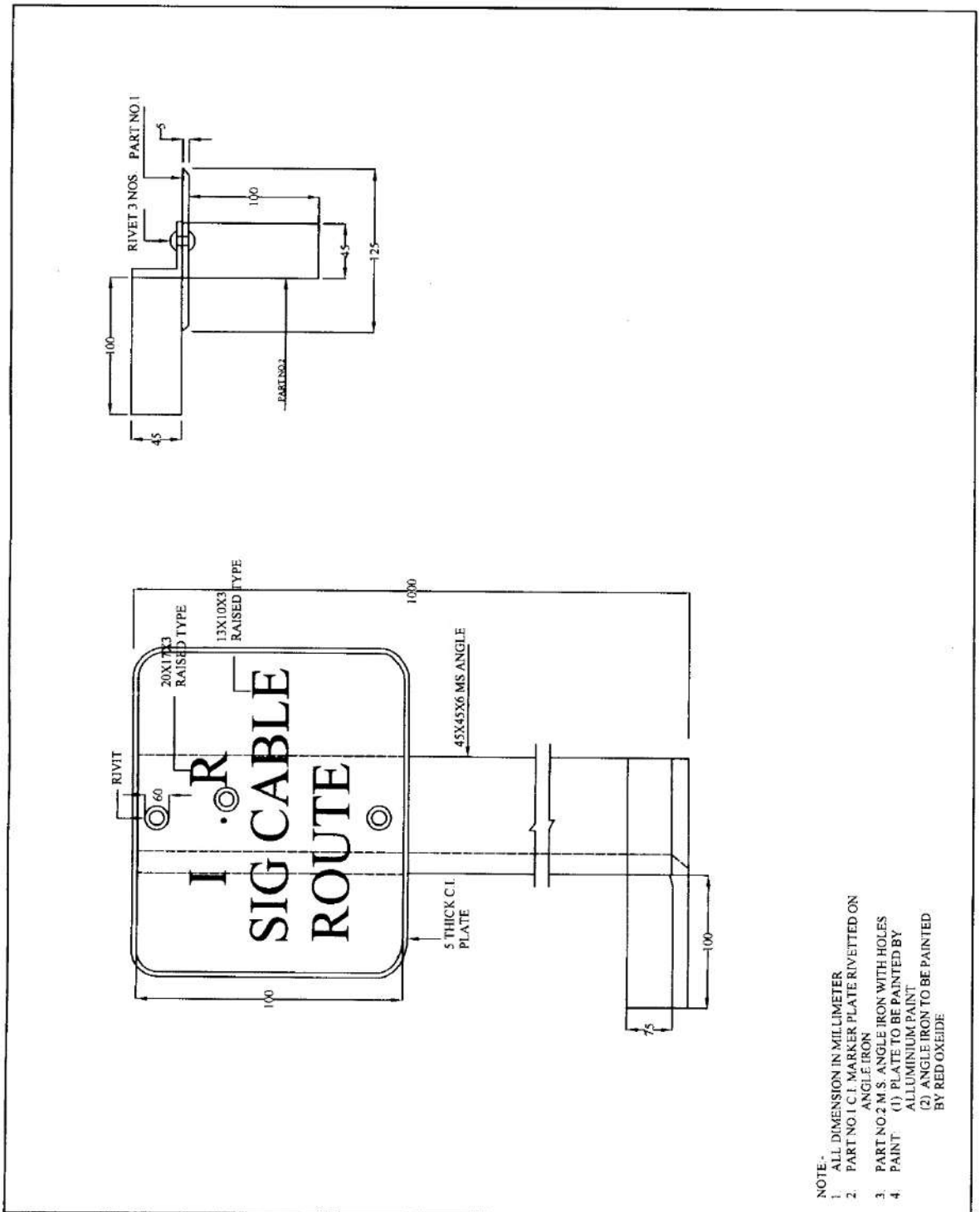
Annexure-21



NOTE :-
1. ALL DIMENSION ARE IN MM.
2. CAST IRON TABLET IS TO BE RIVETTED TO THE L - ANGLE ON THE 2 HOLES

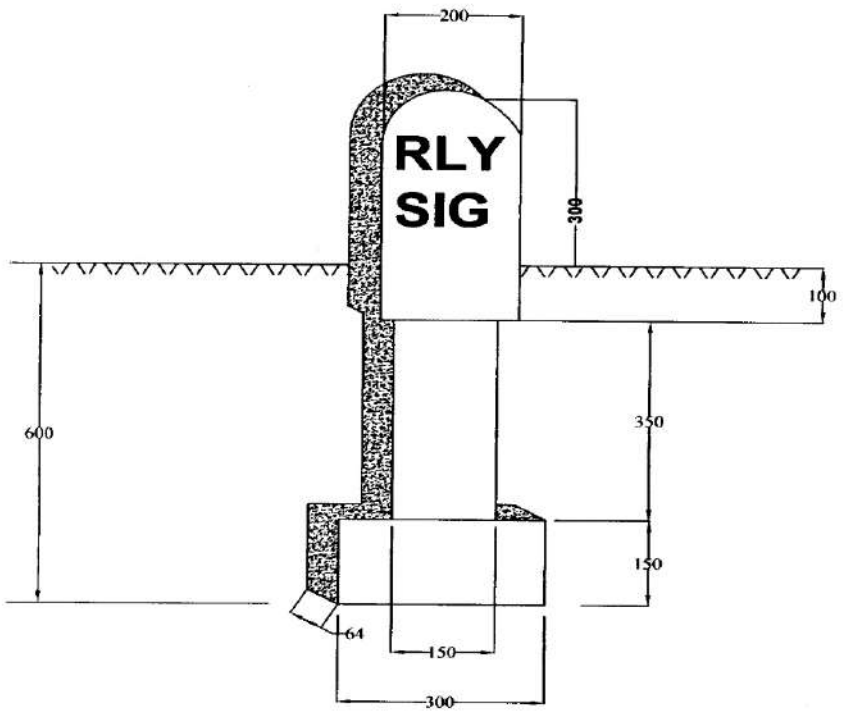
CHECKED BY	JE/SE/SSE	CI CABLE MARKER & CONCRETING	SDO/CABLE LAYING/018
APPROVED BY	ADE	R. D. S. O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-22



CHECKED BY	JE/SE/SSE	CI CABLE MARKER	SDO/CABLE LAYING/019
APPROVED BY	ADE	R.D.S.O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-23

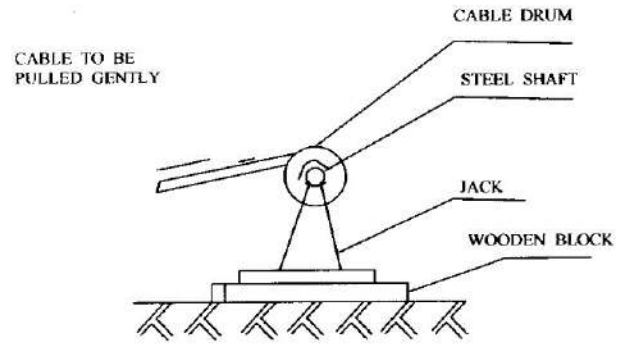


NOTE:-

1. ALL DIMENTIONS ARE IN MILLIMETER
2. PAINTED WHITE LETTERS ON RED BACKGROUND.
3. FOUNDATION CONCRETE OF 300 mm FROM THE BASE OF THE MARKER SHALL BE DONE AT SITE AT ALL PLACES WITH MIX 1:3:5.
4. COMPONENT CONCRETE SHALL BE OF M25 MIX AND WIRE MESH OF 1.5MM THICKMESS SHALL BE USED.
5. THE ENGRAVING OF "RLY" & "SIG" SHALL BE DONE ON BOTH SIDES OF THE MARKER.

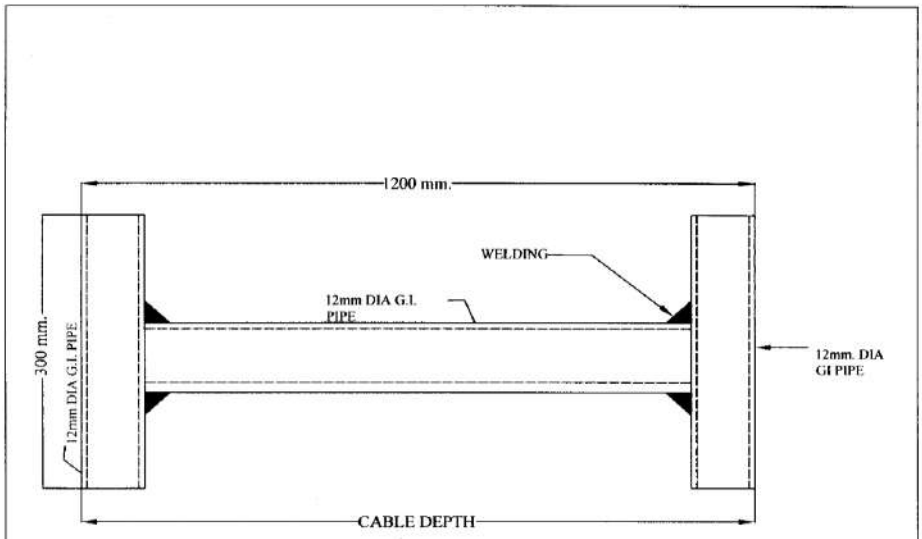
CHECKED BY	JE/SE/SSE	CONCRETE CABLE MARKER	SDO/CABLE LAYING/020
APPROVED BY	ADE	R.D.S.O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-24



CHECKED BY	JE/SE/SSE	METHOD OF UNROLLING CABLE	SDO/CABLE LAYING /021
APPROVED BY	ADE	R.D.S.O.	DATE :- 31-10-2011
NOT TO SCALE			

Annexure-25



NOTE :-
ALL DIMENTION ARE IN MILLIMETER.

CHECKED BY	JE/SE/SSE	RULE MADE OF PIPE FOR MEASURING TRENCH DEPTH	SDO/CABLE LAYING/022
APPROVED BY	ADE	R. D. S. O.	DATE :- 31-10-2011
NOT TO SCALE			

Note: ALL the above sketches/Drawings/Diagram given are only indicative. The detailed drawings shall be proposed by the Contractor and approved by the Engineer.

(End of Appendix 2)