Tender No. HORC/HRIDC/C-4/2022

Attachment 8 to Corrigendum No. 3

Section VII-8: Tender Drawings and Documents

A- Tender Drawings

Revised and New Tender Drawings

Section VII-8
A: Tender Drawings

List of Drawings

-Black colour shows Tender drawings which have not been revised in Corrigendum No.3

-Blue colour shows Tender drawings which have been revised in Corrigendum No. 3

-Red colour shows New Tender drawings added with Corrigendum No. 3

Notes:

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

2. Only revised and new drawings added after issue of Corrigendum No. 2 are attached in this Corrigendum No. 3

S. No	TITLE	DRAWING NO.
1	**CONCEPTUAL PLAN AND LONGITUDINAL SECTION:**	
1.	Conceptual plan and longitudinal section from chainage 10.0KM to chainage 15.185KM (tunnel)	GC-HRIDC-ALL-DRW-ALN-P&P-10-15KM_A1
2.	Conceptual plan and longitudinal section from chainage 15.185KM to chainage 20.0KM	GC-HRIDC-ALL-DRW-ALN-P&P-15-20KM_A1
3.	Conceptual plan and longitudinal section from chainage 24.0KM to chainage 30.0KM (tunnel)	GC-HRIDC-ALL-DRW-ALN-P&P-24-30KM_A1
2	**TUNNEL**	
1.	Conceptual drawing for Single track tunnel cross section (Rock)	GC-HRIDC-C4-DRW-TTL-CLT-01001_A1
2.	Conceptual drawing for Single track tunnel cross section (Soil)	GC-HRIDC-C4-DRW-TTL-CLT-01002_A1
3.	Conceptual drawing for Support class III from CH: 24940 to CH: 26000	GC-HRIDC-C4-DRW-TTL-CLT-01003_A0
4.	Conceptual drawing for Support class IV from CH: 24880 to CH: 24940	GC-HRIDC-C4-DRW-TTL-CLT-01004_A0
5.	Conceptual drawing for Support class VI (i) from CH: 26000 to CH: 28420	GC-HRIDC-C4-DRW-TTL-CLT-01005_A0
6.	Conceptual drawing for Support class VI(ii) from CH: 28420 to CH: 28480	GC-HRIDC-C4-DRW-TTL-CLT-01006_A0
7.	Conceptual drawing for Tunnel typical detail of lattice girder	GC-HRIDC-C4-DRW-TTL-CLT-01007_A0
8.	Conceptual drawing for Cut & cover section of tunnel	GC-HRIDC-C4-DRW-TTL-CLT-01008_A1

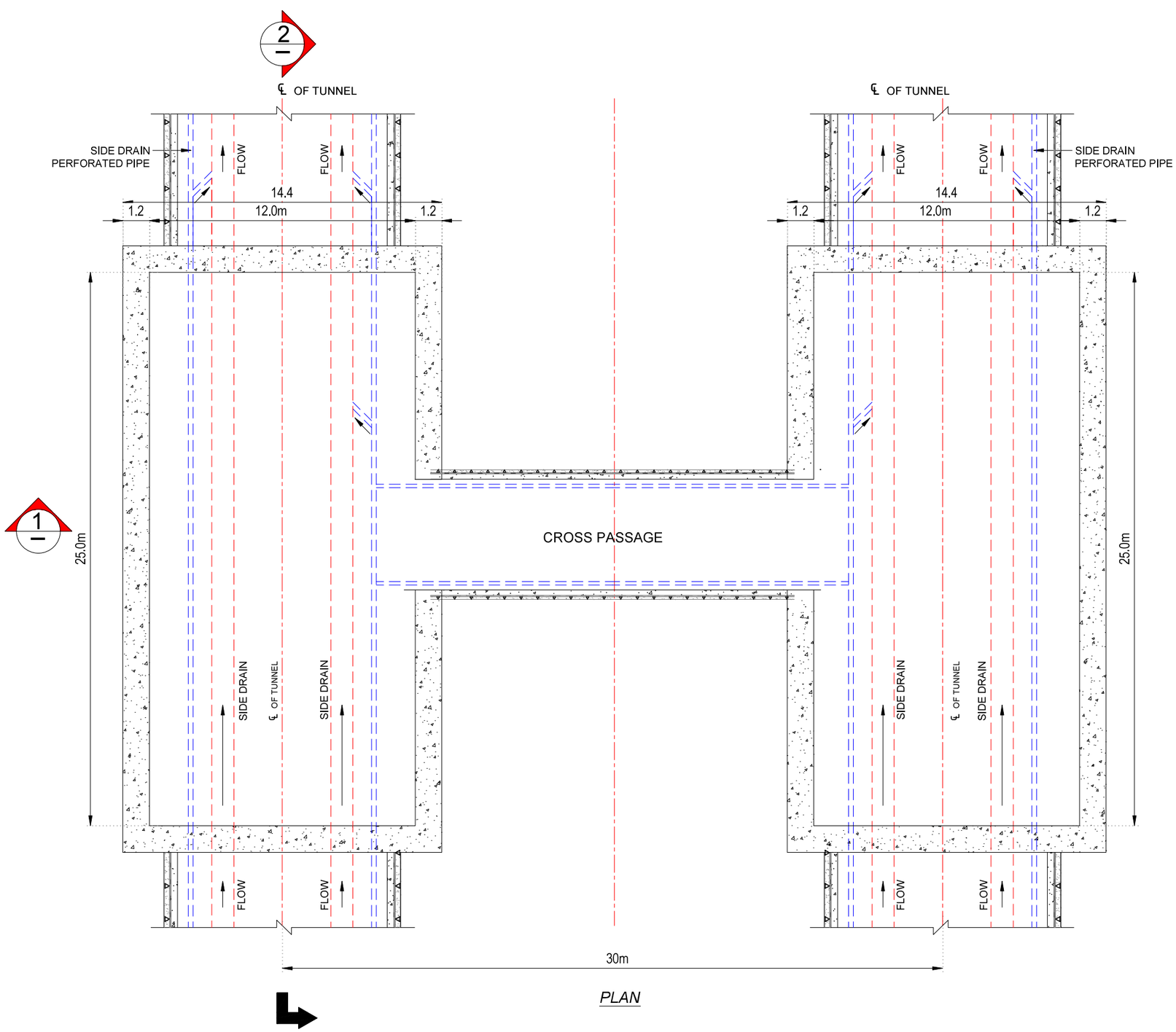
S. No	TITLE	DRAWING NO.
9.	Conceptual drawing for Cross passage junction with main tunnel	GC-HRIDC-C4-DRW-TTL-CLT-01009_A1
10.	Conceptual drawing for Permanent Ventilation shaft junction with main tunnel	GC-HRIDC-C4-DRW-TTL-CLT-01010_A2 (Sheet 1 of 3)
		GC-HRIDC-C4-DRW-TTL-CLT-01010_A2 (Sheet 2 of 3)
		GC-HRIDC-C4-DRW-TTL-CLT-01010_A2 (Sheet 3 of 3)
11.	Conceptual drawing for Construction cum utility shaft	GC-HRIDC-C4-DRW-TTL-CLT-01011_A2
12.	Conceptual drawing for Portal-1 & Abutment A2 of viaduct with drainage excavation plan & sections	GC-HRIDC-C4-DRW-TTL-CLT-01012_A1
13.	Conceptual drawing for Portal-2 & open cutting area with 100m ballastless track	GC-HRIDC-C4-DRW-TTL-CLT-01013_A1
3 BRIDGES		
3.1 MINOR BRIDGES		
1.	Conceptual general arrangement drawing for Balancing culvert Bridge no. 047 Span 1.0x2.0x2.0 RCC box at Ch: 12208.018	GC-HRIDC-C4-DRW-BRD-GAD-01047_A1
2.	Conceptual general arrangement drawing for Drain + Road Bridge no. 048 span 1x4.0×5.0+1x5×5 RCC box at Ch: 12298.962	GC-HRIDC-C4-DRW-BRD-GAD-01048_A1
3.	Conceptual general arrangement drawing for pipe culvert Bridge no. 049 span 1.0x1.80ø Pipe culvert at Ch: 12341.836	GC-HRIDC-C4-DRW-BRD-GAD-01049_A1
4.	Conceptual general arrangement drawing for Balancing culvert Bridge no. 050 Span 1.0x2.0x2.0 RCC box at Ch: 12645.715	GC-HRIDC-C4-DRW-BRD-GAD-01050_A1
5.	Conceptual general arrangement drawing canal Bridge no. 051 span 1.0x3.0x3.0 RCC box at Ch: 13114.998	GC-HRIDC-C4-DRW-BRD-GAD-01051_A1
6.	Conceptual general arrangement drawing for Balancing culvert Bridge no. 052 Span 1.0x3.0x3.0 RCC box at Ch: 13903.112	GC-HRIDC-C4-DRW-BRD-GAD-01052_A1

S. No	TITLE	DRAWING NO.
7.	Conceptual general arrangement drawing for canal Bridge no. 054 1.0x3.0x3.0 RCC box at Ch: 14601.627	GC-HRIDC-C4-DRW-BRD-GAD-01054_A1
8.	Conceptual general arrangement drawing for Road under bridge, Bridge no. 055 Span 1×5.0×5.0 RCC box at Ch: 14756.727	GC-HRIDC-C4-DRW-BRD-GAD-01055_A1
9.	Conceptual general arrangement drawing for Balancing culvert Bridge no. 056 Span 1.0x2.0x2.0 RCC box at Ch: 15100.163	GC-HRIDC-C4-DRW-BRD-GAD-01056_A1
10.	Conceptual general arrangement drawing for Road under bridge, Bridge no. 057 Span 1×5.0×5.0 RCC box at Ch: 15944	GC-HRIDC-C4-DRW-BRD-GAD-01057_A1
11.	Conceptual general arrangement drawing proposed RUB no. 060 Span 2×7.0×5.6 RCC box at Ch: 16827	GC-HRIDC-C4-DRW-BRD-GAD-01060_A2
3.2 MAJOR BRIDGES		
1.	Conceptual general arrangement drawing for stream bridge no.53 2x24.4 CG at Ch: 14472.112m	GC-HRIDC-C4-DRW-BRD-GAD-01053_A2
2.	Conceptual general arrangement drawing for Canal Br.no. 058 1 x 5 x 5.4m + 1 x 12.2m + 1 x 5 x 5.4m PSC U slab Ch: 16127	GC-HRIDC-C4-DRW-BRD-GAD-01058_A2
3.	Conceptual general arrangement drawing proposed RUB no. 059 2 x 12.2m PSC U slab Ch: 16727	GC-HRIDC-C4-DRW-BRD-GAD-01059_A2
4.	Conceptual general arrangement drawing proposed Canal Br. No. 061 1x5x5.4+1x12.2+1x5x5.4m PSC U slab Ch: 16917	GC-HRIDC-C4-DRW-BRD-GAD-01061_A2
5.	Conceptual general arrangement drawing proposed RUB no. 062 1 x 12.2m PSC U slab Ch: 17500	GC-HRIDC-C4-DRW-BRD-GAD-01062_A2

S. No	TITLE	DRAWING NO.
4	**MISCELLANEOUS DRAWINGS (CONCEPTUAL PLANS)**	
1.	Jurisdictional sketch of C-4 package	GC-HRIDC-C4-SK-CIVIL-001_A1
2.	Schematic diagram of HORC tunnel	GC-HRIDC-C4-SK-TUNNEL-001_A1
3.	Conceptual Plan Typical embankment/cutting profile	GC-HRIDC-SK-GEN-001_A2
4.	Conceptual Plan Drains for Embankment	GC-HRIDC-SK-GEN-008_A2
5.	Conceptual Plan Steel barricade	GC-HRIDC-SK-GEN-009
6.	Conceptual Plan Interfacing location bank benching	GC-HRIDC-C4-SK-012_A2
7.	Conceptual Plan CC Toe wall	GC-HRIDC-SK-GEN-014_A2
8.	Conceptual Plan Typical details of protection work	GC-HRIDC-SK-GEN-015_A1
9.	Conceptual Plan Barbed wire fencing	GC-HRIDC-SK-GEN-016_A1
10.	Conceptual Plan for Transition system of bridge approaches	GC-HRIDC-SK-GEN-019_A1
11.	Conceptual plan for Trolley Refuge in embankment	GC-HRIDC-SK-GEN-022
12.	Conceptual plan for Trolley Refuge in cutting	GC-HRIDC-SK-GEN-023
13.	Conceptual sketch for NP4 pipe of 450mm Dia	GC-HRIDC-SK-GEN-028_A1
14.	Conceptual sketch for precast RCC box 500 x 500 mm size	GC-HRIDC-SK-GEN-029_A1
15.	Conceptual general arrangement drawing crossing of HORC rail line below Vadodara expressway	GC-HRIDC-SK-GEN-030_A0
16.	Typical sketch for approach road of RUBs.	GC-HRIDC-SK-GEN-031_A0
17.	Conceptual sketch for details of stairs from cutting in formation to ground	GC-HRIDC-C4-SK-TUNNEL-002_A0
5	**GENERAL ELECTRICAL SERVICES DRAWINGS**	
1.	Indicative layout plan of Sub-station 11/0.433KV near utility shaft	GC-HRIDC-C4-DRW-TTL-ELE-001_A2
2.	Indicative layout plan of Sub-station 11/0.433KV	GC-HRIDC-C4-DRW-TTL-ELE-002_A2
3.	Power supply for lighting arrangement (indicative)	GC-HRIDC-C4-DRW-TTL-ELE-003_A2
4.	Power supply arrangement for emergency and maintenance power socket diagram (indicative)	GC-HRIDC-C4-DRW-TTL-ELE-004_A2
5.	Single line diagram of HT system in tunnel (indicative)	GC-HRIDC-C4-DRW-TTL-ELE-005_A1

S. No	TITLE	DRAWING NO.
6	**LAND AREA FOR TUNNEL**	
1.	Land area near Portal-1	HRIDC-C4-SK-LANDPLAN-001_A1
2.	Land area near permanent Ventilation shaft 1 & 2	HRIDC-C4-SK-LANDPLAN-002_A1
3.	Land area near Construction cum utility shaft	HRIDC-C4-SK-LANDPLAN-003_A1
4.	Land area near permanent Ventilation shaft 3 & 4	HRIDC-C4-SK-LANDPLAN-004_A1
5.	Land details from Ch: 28341m to 29680m	HRIDC-C4-SK-LANDPLAN-005_A1

Tunnel



PLAN

NOTES:-

1. ALL DIMENSIONS, NORTHING & EASTING AND LEVELS ARE IN METER, UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSIONS SHALL BE MEASURED FROM DRAWING.
3. TUNNEL EXCAVATED BY HEADING, BENCHING / MULTI DRIFT METHOD (NATM).
4. THE GRADE OF SHOTCRETE WITH SFRS AS PER DETAIL DESIGN.
5. PROPOSED SUPPORT SYSTEM IS BASED ON GIR PROVIDED BY GEOLOGIST. ACTUAL SUPPORT SYSTEM MAY BE REVISED BASED ON ACTUAL RESPONSE OF STRATA DURING EXCAVATION.
6. DRAINAGE PIPE SHALL BE 150mmØ, PERFORATED PVC PIPE WRAPPED WITH NON-WOVEN GEOTEXTILE FABRIC AS PER IS-4989
7. EXCAVATION SEQUENCE WILL BE PROVIDED BASED ON GFC.
8. PIPE ROOFING/FOREPULING OF 114 MM DIA SHALL BE PROVIDED WHERE EVER IT IS REQUIRED.
9. SELF DRILLING ANCHOR OF CAPACITY 190 KN SHALL BE PROVIDED FOR PRIMARY SUPPORT DURING EXCAVATION.
10. LATTICE GIRDER 25-25-32 OF DEPTH 187 MM/ ISMB 200 MM SHALL BE INCASED IN SFRS OF MINIMUM THICKNESS 250 MM.
11. DIMENSION OF PRIMARY SUPPORT & CONCRETE ARE TENTATIVE.
12. INSERT PLATES SHALL BE PROVIDED IN THE WALL FOR PROVISION OF SS STAIRS OF MINIMUM WIDTH OF 1.5M.
13. ROOFING SYSTEM OVER SHAFTS SHALL BE PROVIDED AS PER DBR.

LOCATION	
SHAFT-1	CH:26080
SHAFT-2	
SHAFT-3	CH:27680
SHAFT-4	

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/S*	
		AM/S&T	
REETU PATIAL *CDE /CIVIL*			
AMARNATH SINGH *CRE/S&T*		*AM/Civil/Plg.*	
STIPHEN SAHOO *SRE/Elect.*		*JGM/L&U*	

PROJECT:- HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:- HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

GC/HORC DRG. NO:- GC-HRIDC-C4-DRW-TTL-CLT-01010_A2 SHEET: 1 OF 3

DRAWING NAME: CONCEPTUAL DRAWING FOR PERMANENT VENTILATION SHAFT JUNCTION WITH MAIN TUNNEL

ISSUE DATE: 07.11.2022 REVISED DATE: 09.01.2023

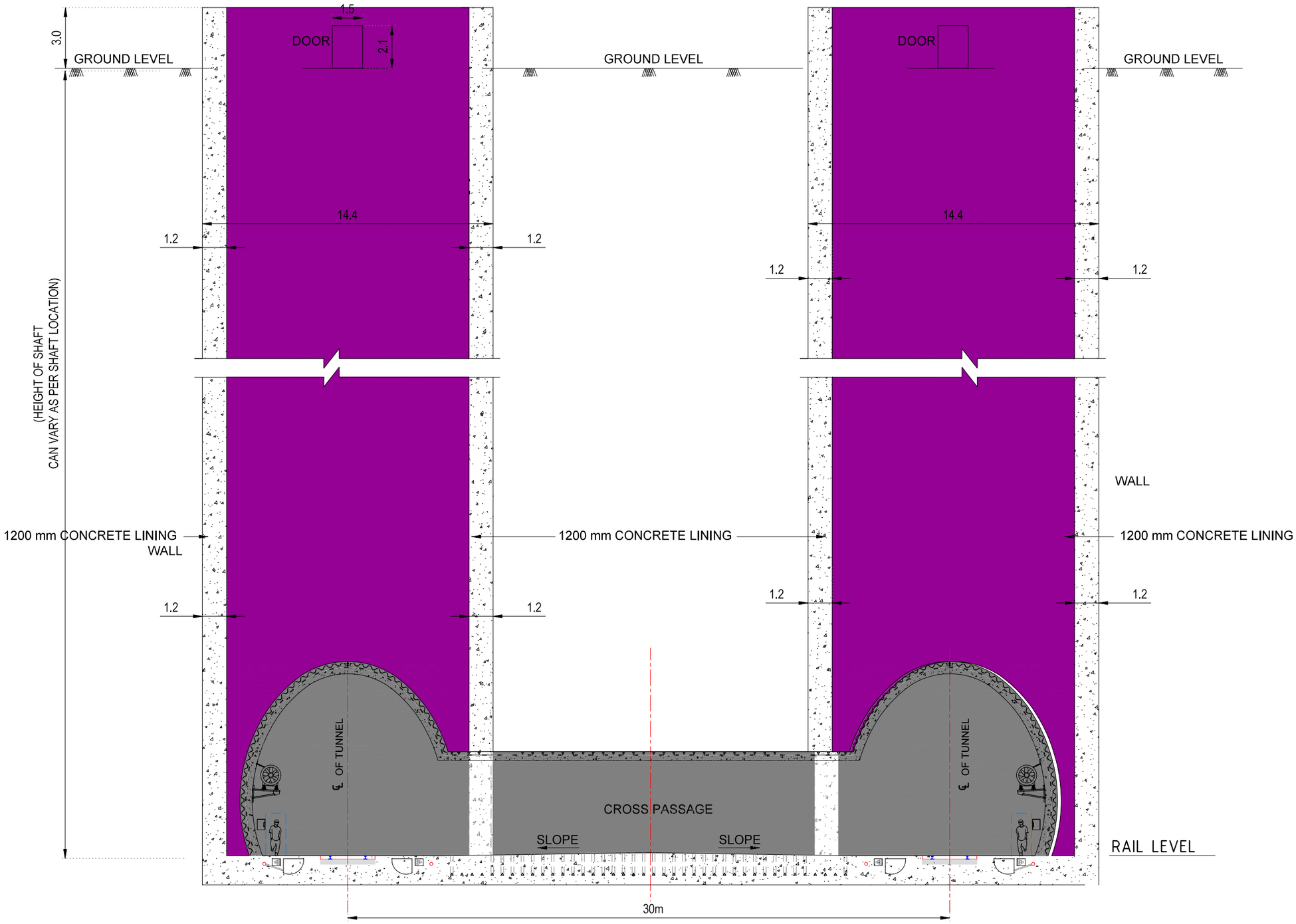
SCALE:- AS SHOWN

SMC DRG. NO:- SMC/HRIDC/TUN/CS-7

CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company

SIVENDRA KUMAR *TUNNEL DESIGNER* | B.R.SHARMA *Sr.CONSULTANT / TUNNEL* | A. A. SAMANT *PROJECT INCHARGE*

RELEASED FOR: ☐ PRELIMINARY FOR APPROVAL ☑ TENDER ☐ CONSTRUCTION



SECTIONAL ELEVATION 1-1

NOTES:-

1. ALL DIMENSIONS, NORTHING & EASTING AND LEVELS ARE IN METER, UNLESS OTHERWISE SPECIFIED.
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10. LATTICE GIRDER 25-25-32 OF DEPTH 187 MM/ ISMB 200 MM SHALL BE INCASED IN SFRS OF MINIMUM THICKNESS 250 MM.
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12. INSERT PLATES SHALL BE PROVIDED IN THE WALL FOR PROVISION OF SS STAIRS OF MINIMUM WIDTH OF 1.5M.

LOCATION	
SHAFT-1	CH:26080
SHAFT-2	
SHAFT-3	CH:27680
SHAFT-4	

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/S*	
		AM/S&T	
REETU PATIAL *CDE /CIVIL*			
AMARNATH SINGH *CRE/S&T*		*AM/Civil/Plg.*	
STIPHEN SAHOO *SRE/Elect.*		*JGM/L&U*	

PROJECT:- HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:- HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT: GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

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

GC/HORC DRG. NO:- GC-HRIDC-C4-DRW-TTL-CLT-01010_A2 SHEET: 2 OF 3

DRAWING NAME: CONCEPTUAL DRAWING FOR PERMANENT VENTILATION SHAFT JUNCTION WITH MAIN TUNNEL

ISSUE DATE: 07.11.2022 REVISED DATE: 09.01.2023

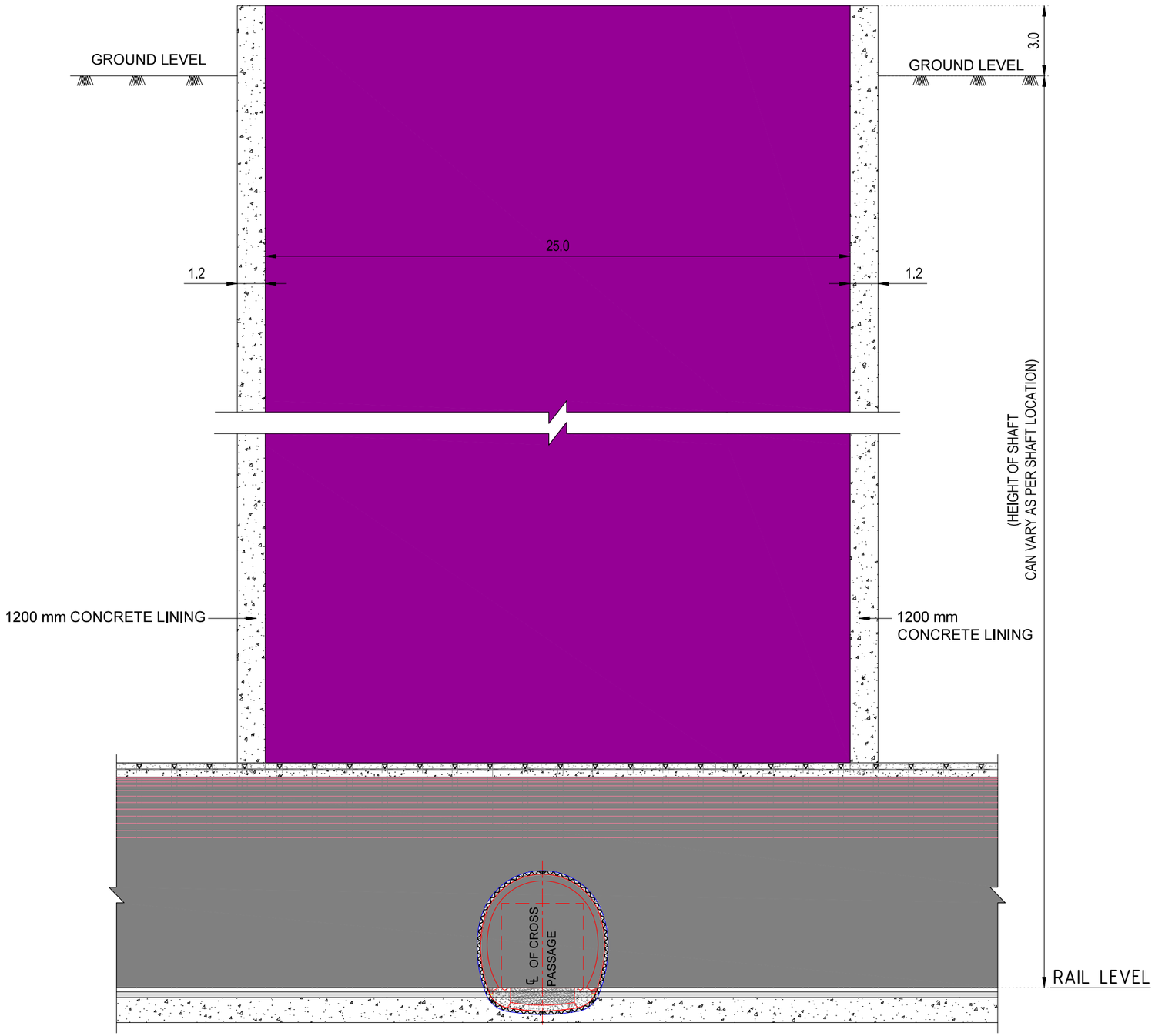
SCALE:- AS SHOWN

SMC DRG. NO:- SMC/HRIDC/TUN/CS- 7

CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company

SIVENDRA KUMAR *TUNNEL DESIGNER* | B.R.SHARMA *Sr.CONSULTANT / TUNNEL* | A. A. SAMANT *PROJECT INCHARGE*

RELEASED FOR: ☐ PRELIMINARY FOR APPROVAL ☑ TENDER ☐ CONSTRUCTION



SECTIONAL ELEVATION 2-2

NOTES:-

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4. THE GRADE OF SHOTCRETE WITH SFRS AS PER DETAIL DESIGN.
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6. DRAINAGE PIPE SHALL BE 150mmØ, PERFORATED PVC PIPE WRAPPED WITH NON-WOVEN GEOTEXTILE FABRIC AS PER IS-4989
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LOCATION	
SHAFT-1	CH:26080
SHAFT-2	
SHAFT-3	CH:27680
SHAFT-4	

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/S*	
		AM/S&T	
REETU PATIAL *CDE /CIVIL*			
AMARNATH SINGH *CRE/S&T*		*AM/Civil/Plg.*	
STIPHEN SAHOO *SRE/Elect.*		*JGM/L&U*	

PROJECT:- HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:- HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

GC/HORC DRG. NO:- GC-HRIDC-C4-DRW-TTL-CLT-01010_A2 SHEET: 3 OF 3

DRAWING NAME: CONCEPTUAL DRAWING FOR PERMANENT VENTILATION SHAFT JUNCTION WITH MAIN TUNNEL

ISSUE DATE: 07.11.2022 REVISED DATE: 06.01.2023

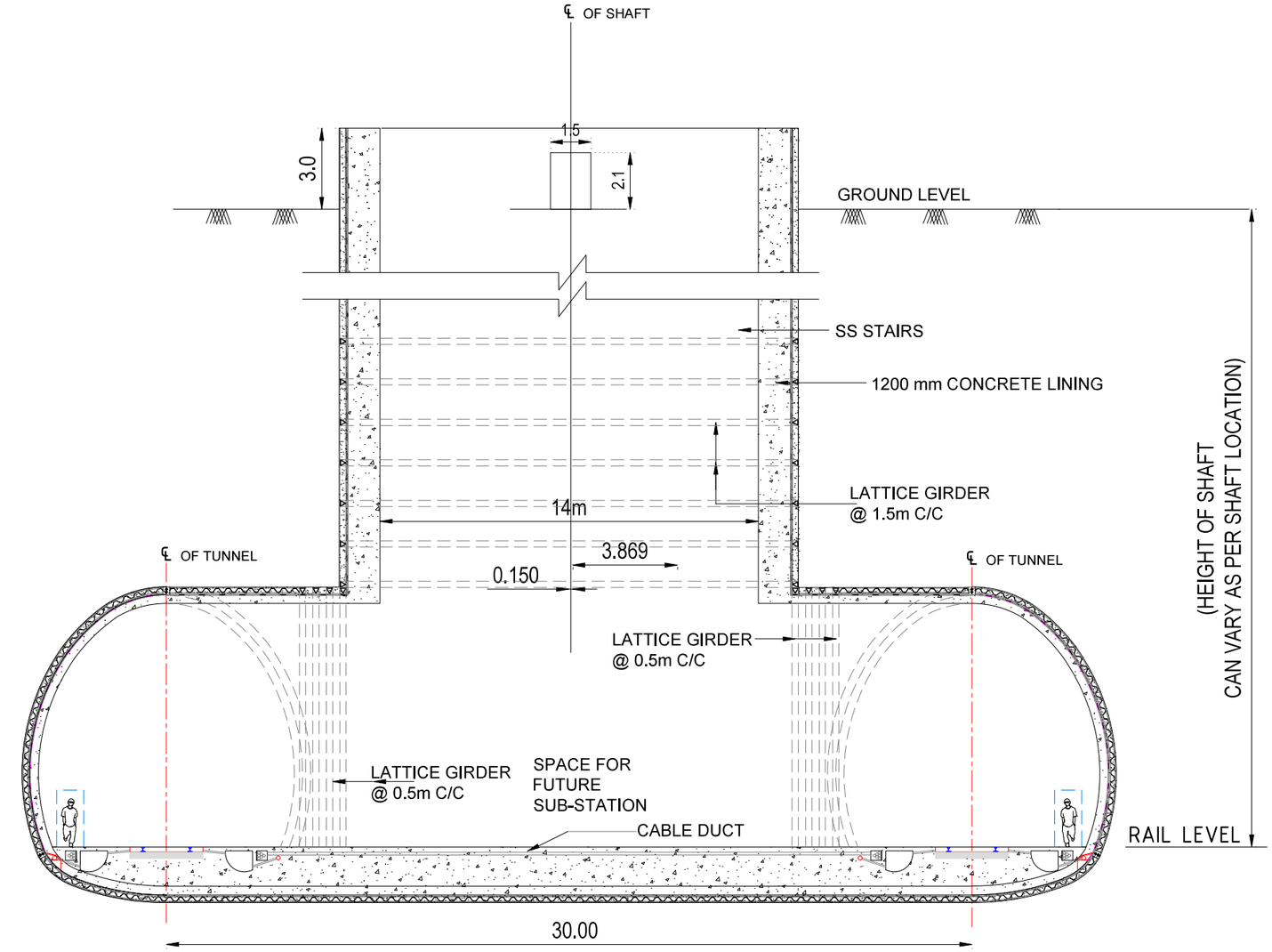
SCALE:- AS SHOWN

SMC DRG. NO:- SMC/HRIDC/TUN/CS-7

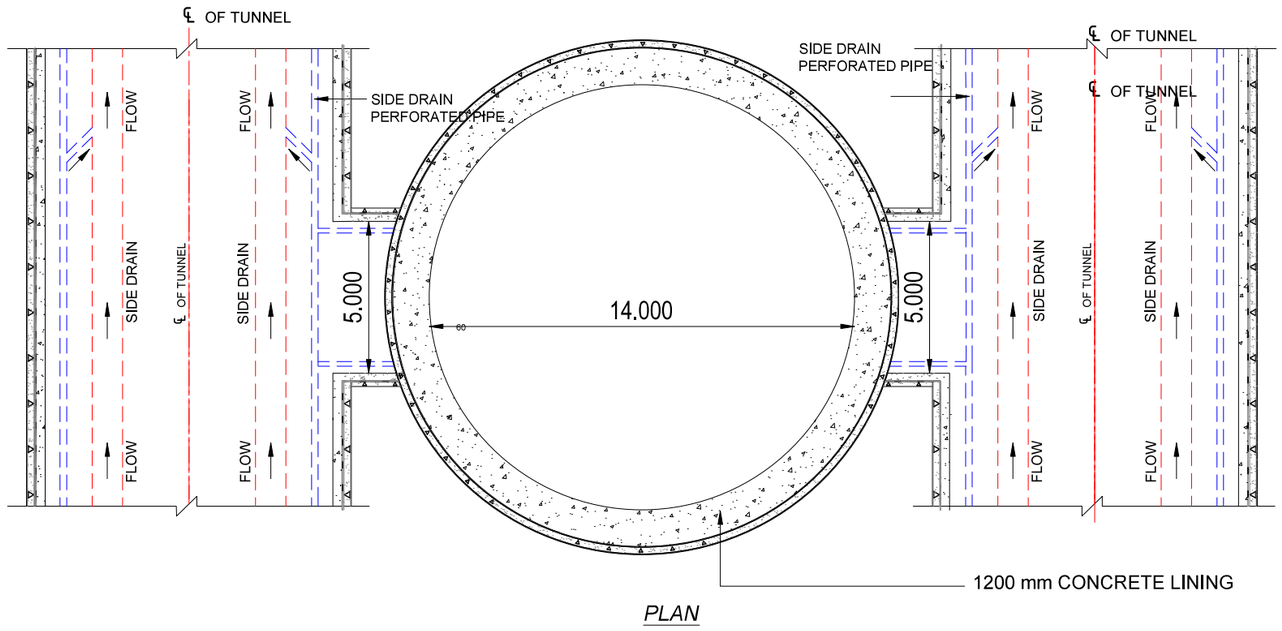
CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company

SIVENDRA KUMAR *TUNNEL DESIGNER* | B.R.SHARMA *Sr.CONSULTANT / TUNNEL* | A. A. SAMANT *PROJECT INCHARGE*

RELEASED FOR: ☐ PRELIMINARY FOR APPROVAL ☑ TENDER ☐ CONSTRUCTION



SECTIONAL ELEVATION



PLAN

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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*		SHIV OM DWIVEDI *CPM/HRIDC*	
SUDHIR AGRAWAL *DPD/CIVIL*		RAJU SOLANKI *DGM/CIVIL/S*	
		AM/S&T	
REETU PATIAL *CDE /CIVIL*			
AMARNATH SINGH *CRE/S&T*		*AM/Civil/Plg.*	
STIPHEN SAHOO *SRE/Elect.*		*JGM/L&U*	

PROJECT:- HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:- HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

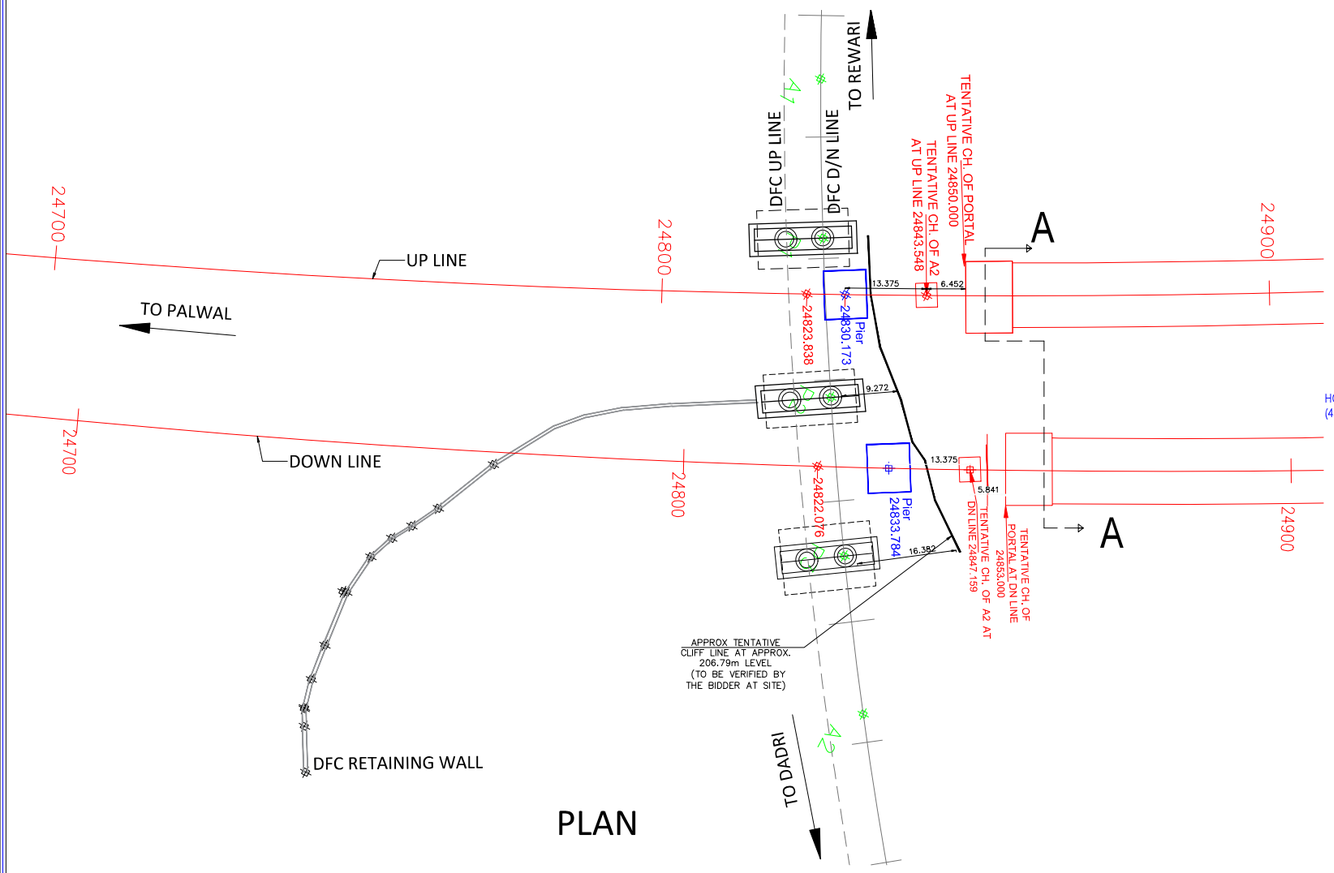
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC DRG. NO:-	GC-HRIDC-C4-DRW-TTL-CLT-01011_A2
DRAWING NAME	CONCEPTUAL DRAWING FOR CONSTRUCTION CUM UTILITY SHAFT
ISSUE DATE: 07.11.2022	REVISED DATE: 09.01.2023
SCALE:- AS SHOWN	
SMC DRG. NO:-	SMC/HRIDC/TUN/CS- 7

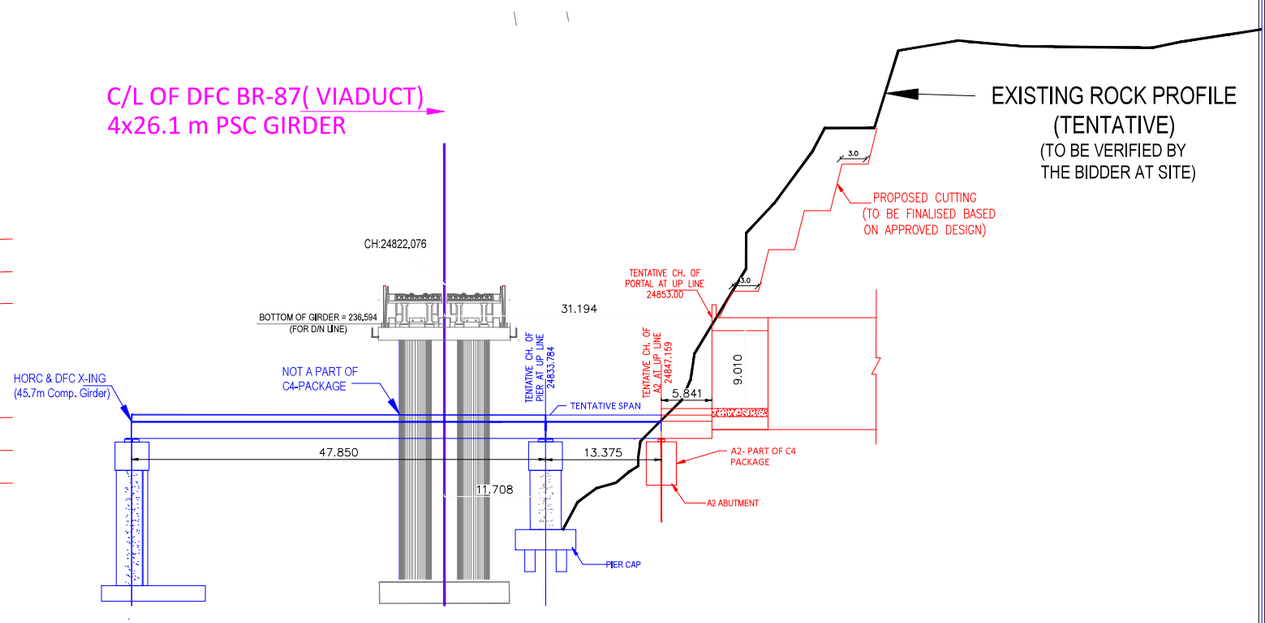
CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company

SIVENDRA KUMAR *TUNNEL DESIGNER*	B.R.SHARMA *Sr.CONSULTANT / TUNNEL*	A. A. SAMANT *PROJECT INCHORGE*

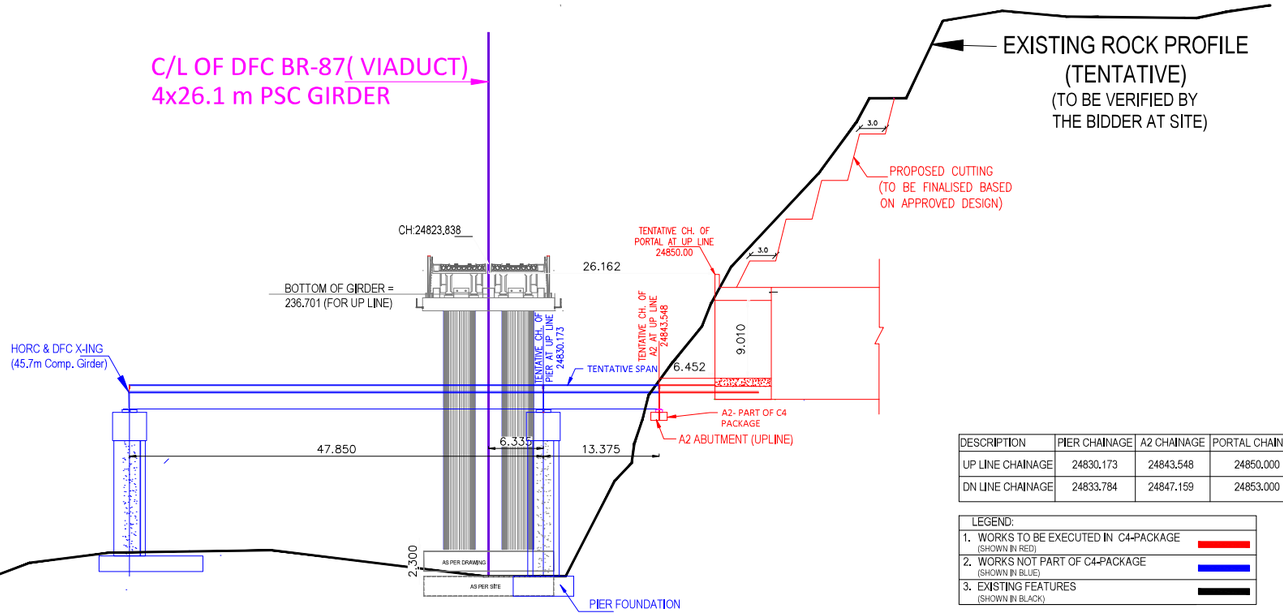
RELEASED FOR: ☐ PRELIMINARY FOR APPROVAL ☑ TENDER ☐ CONSTRUCTION



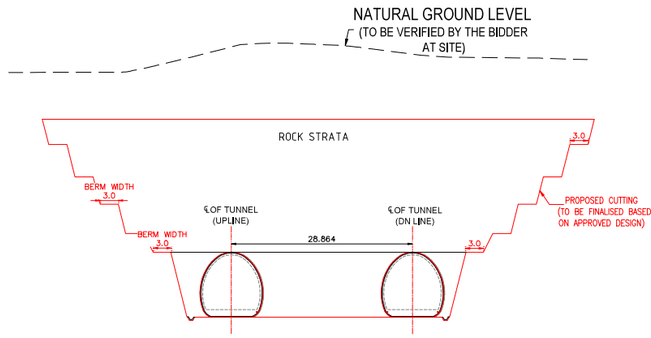
PLAN



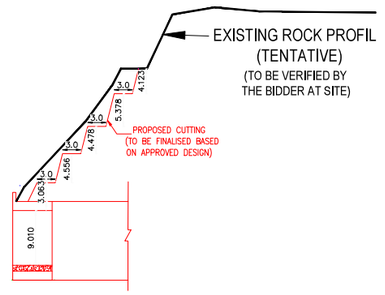
SECTION AT DN LINE



SECTION AT UP LINE



SECTION A-A
(ELEVATION)



SECTION A-A
(SIDE VIEW)

DESCRIPTION	PIER CHAINAGE	A2 CHAINAGE	PORTAL CHAINAGE
UP LINE CHAINAGE	24830.173	24843.548	24850.000
DN LINE CHAINAGE	24833.784	24847.159	24853.000

LEGEND:
1. WORKS TO BE EXECUTED IN C4-PACKAGE (SHOWN IN RED)
2. WORKS NOT PART OF C4-PACKAGE (SHOWN IN BLUE)
3. EXISTING FEATURES (SHOWN IN BLACK)

NOTE:
1. THE CHAINAGE OF PORTALS OF UP & DOWN LINE SHOWN ARE TENTATIVE AND WILL BE FINALISED BASED ON THE APPROVED DESIGN OF TUNNEL.
2. CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00m, WITH RESPECT TO UP MAIN LINE.

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/S*	
		AM/S&T	
REETU PATIAL *CDE /CIVIL*			
AMARNATH SINGH *CRE/S&T*		*AM/Civil/Plg.*	
STIPHEN SAHOO *SRE/Elect.*		*JGM/L&U*	

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

CLIENT:- HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

GC/HORC DRG. NO:- GC-HRIDC-C4-DRW-TTL-CLT-01012_A1

DRAWING NAME: CONCEPTUAL DRAWING FOR PORTAL-1 & ABUTMENT A2 OF PROPOSED HORC VIADUCT

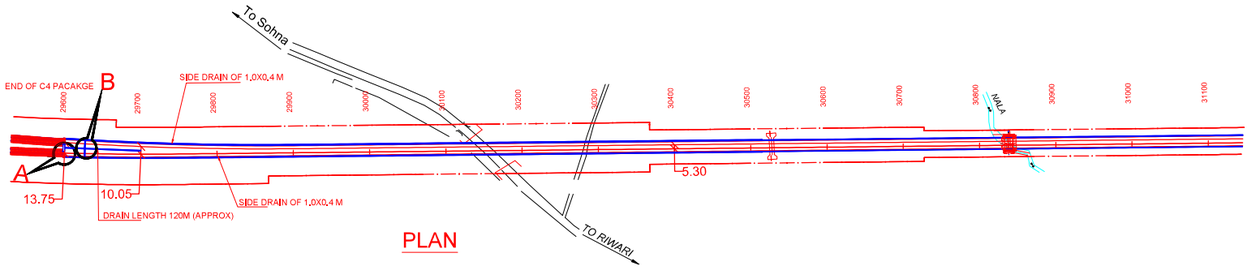
ISSUE DATE: 07.11.2022 | REVISED DATE: 09.01.2023
SCALE:- AS SHOWN
SMC DRG. NO:- SMC/HRIDC/TUN/CS- 7

CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company

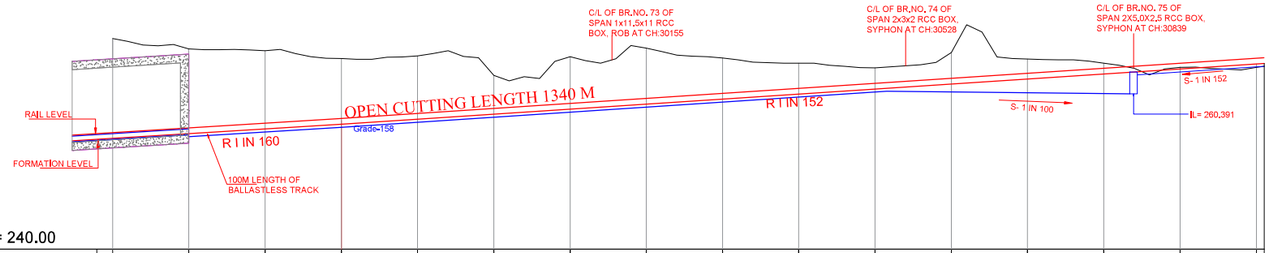
SIVENDRA KUMAR *TUNNEL DESIGNER* | B.R.SHARMA *Sr.CONSULTANT / TUNNEL* | A. A. SAMANT *PROJECT INCHARGE*

RELEASED FOR: PRELIMINARY FOR APPROVAL | ☑ TENDER | CONSTRUCTION

DETAILS OF SIDE DRAIN & PORTAL 2



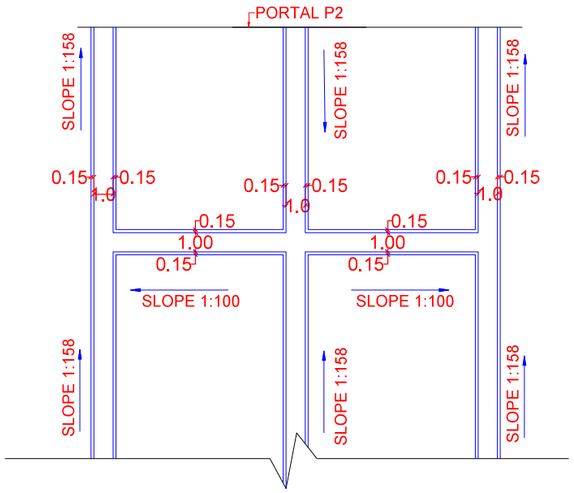
PLAN



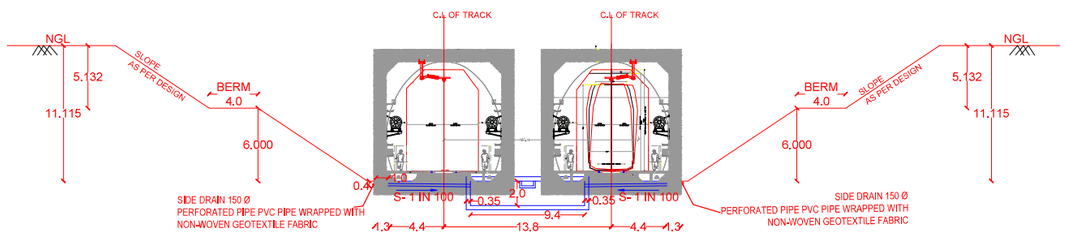
DATUM = 240.00

CHAINAGE	29500	29600	29700	29800	29900	30000	30100	30200	30300	30400	30500	30600	30700	30800	30900	31000
GROUND LEVEL	267.640	266.263	266.034	265.005	265.332	262.781	265.257	266.352	265.071	264.378	263.787	265.780	264.938	264.402	263.860	263.832
PROPOSED FORMATION LEVEL	254.530	255.155	255.780	256.405	257.063	257.721	258.379	259.037	259.695	260.353	261.010	261.668	262.326	262.984	263.642	264.300
BANKING (+ ve) CUTTING (- ve)	-13.110	-11.108	-10.254	-8.600	-8.269	-5.060	-6.878	-7.315	-5.376	-4.025	-2.777	-4.112	-2.612	-1.418	-0.218	0.468

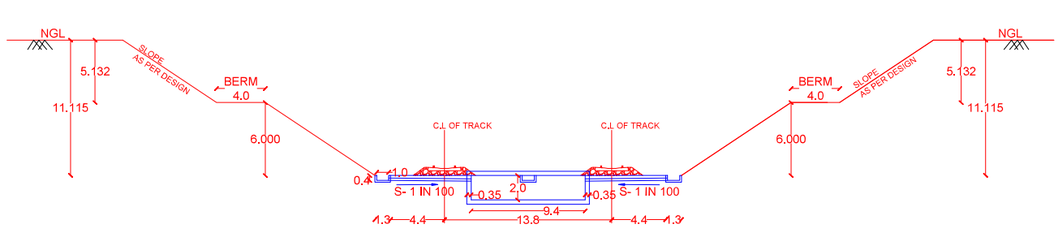
LONGITUDINAL SECTION



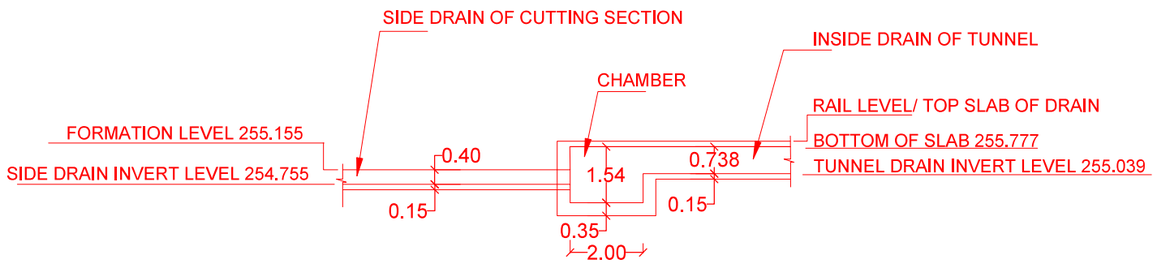
DETAILS OF 'B'



CROSS SECTION AT CUTTING AT PORTAL



CROSS SECTION AT CUTTING BEFORE PORTAL



DETAILS OF 'A'
DRAIN SLOPE AS PER FORMATION

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/S*	
		AM/S&T	
REETU PATIAL *CDE /CIVIL*			
AMARNATH SINGH *CRE/S&T*		*AM/Civil/Plg.*	
STIPHEN SAHOO *SRE/Elect.*		*JGM/L&U*	

PROJECT:- HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:- HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

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

GC/HORC ORG. NO:- GC-HRIDC-C4-DRW-TTL-CLT-01013_A1

DRAWING NAME: CONCEPTUAL DRAWING FOR PORTAL -2 & OPEN CUTTING AREA WITH 100M BALLASTLESS TRACK

ISSUE DATE: 07.11.2022 | REVISED DATE: 06.01.2023

SCALE:- AS SHOWN

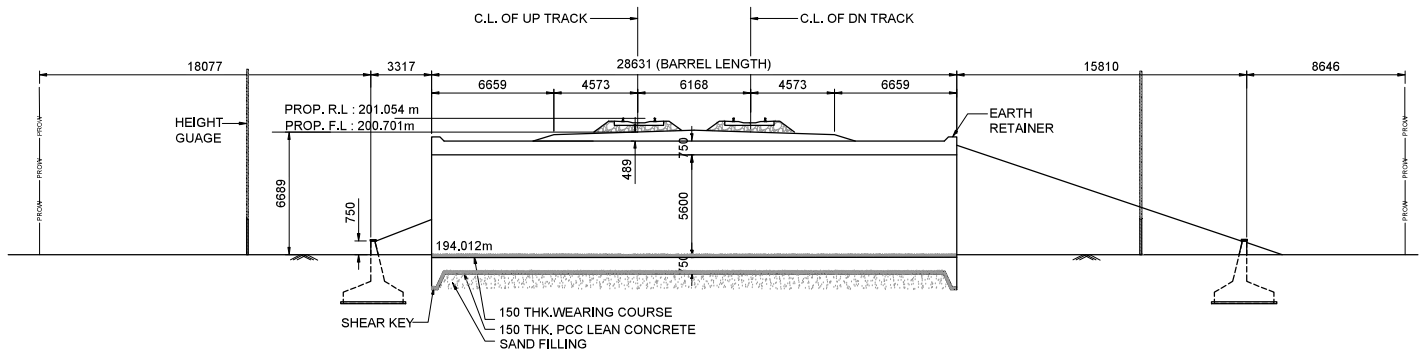
SMC ORG. NO:- SMC/HRIDC/TUNICS-7

CONSULTANT: S.M. CONSULTANTS An ISO 9001 Company

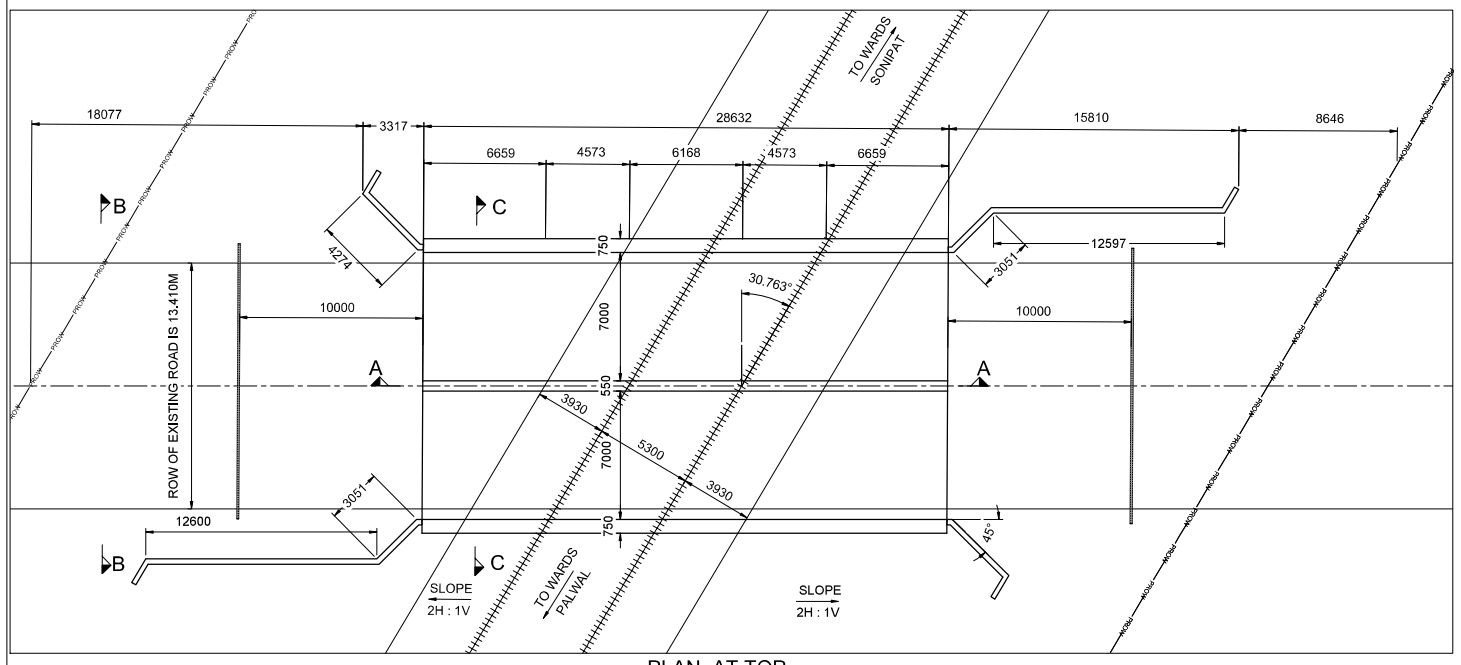
SIVENDRA KUMAR *TUNNEL DESIGNER* | B.R.SHARMA *Sr.CONSULTANT / TUNNEL* | A. A. SAMANT *PROJECT INCHARGE*

RELEASED FOR: ☐ PRELIMINARY FOR APPROVAL ☑ TENDER ☐ CONSTRUCTION

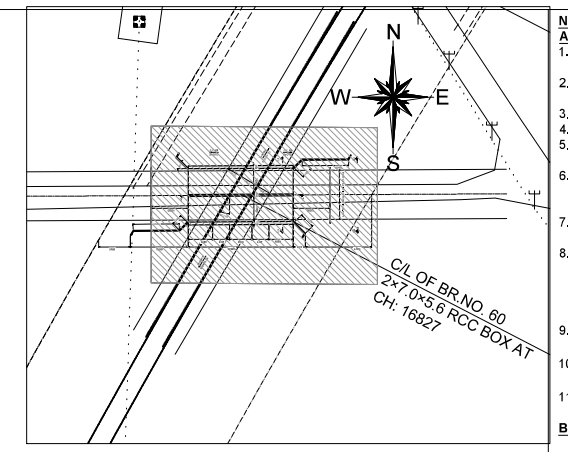
Minor Bridges



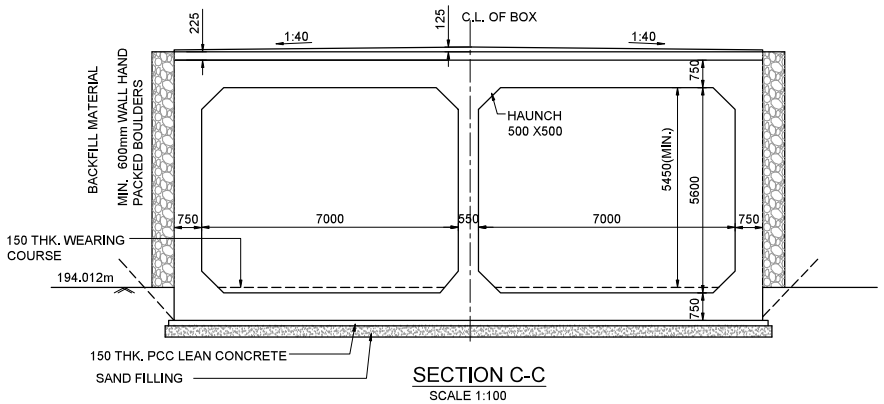
SECTIONAL ELEVATION AT A-A
SCALE 1:200



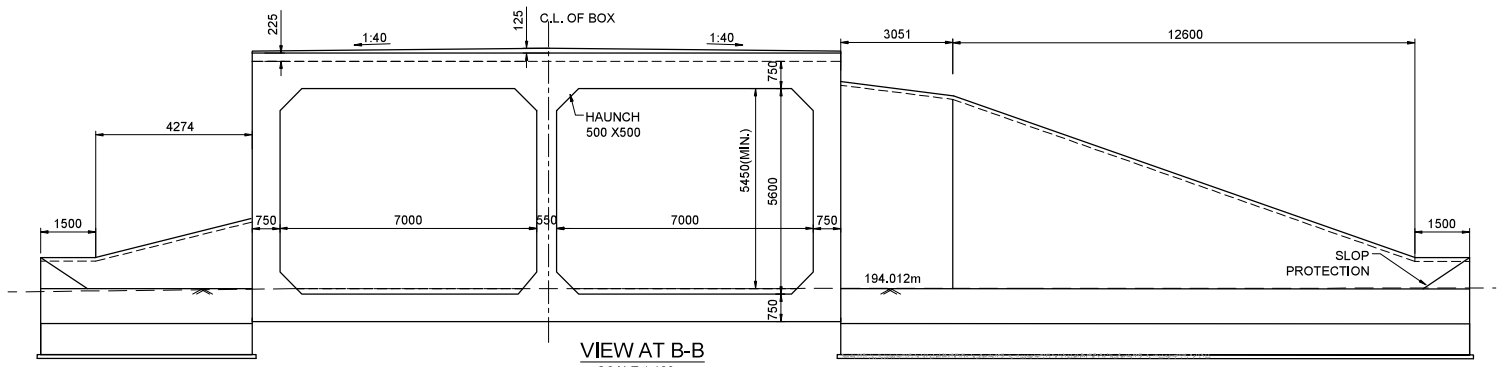
PLAN AT TOP
SCALE 1:200



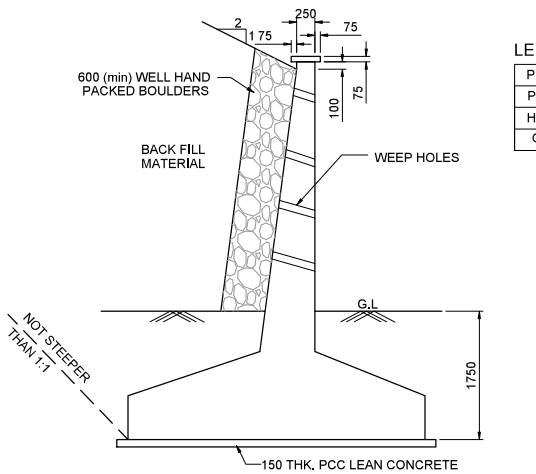
KEY PLAN
(NOT TO SCALE)



SECTION C-C
SCALE 1:100



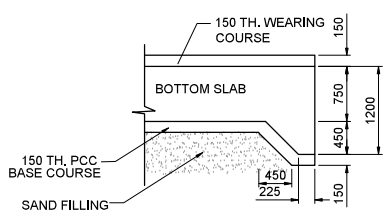
VIEW AT B-B
SCALE 1:100



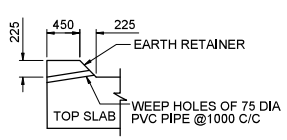
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

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



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

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

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST.
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFORMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 5000 (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE, GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE, DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

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

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.

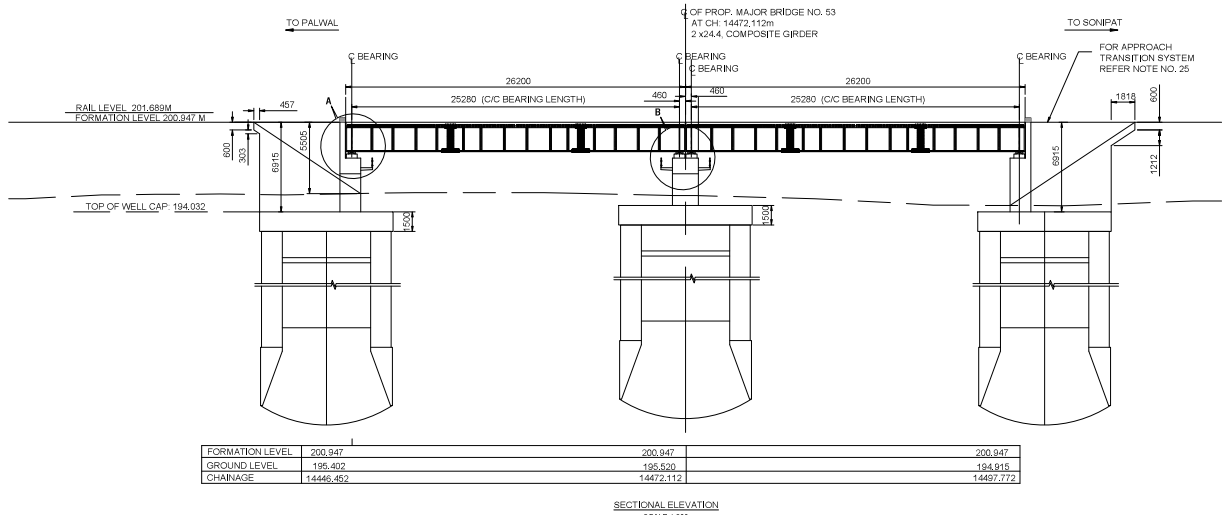
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 060
SPAN 2×7.0×5.6 RCC BOX AT CH: 16827

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-BRD-GAD-01060_A2	1 OF 1

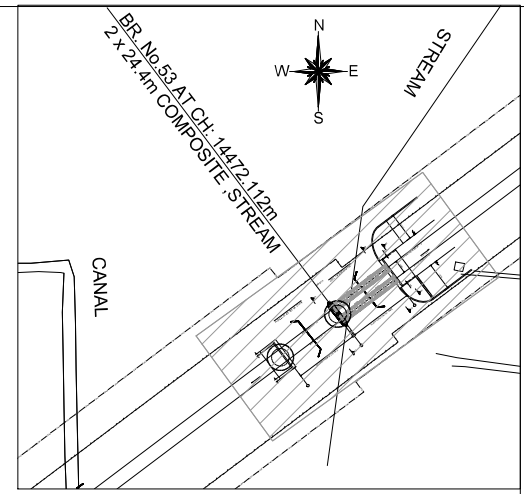
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	10-01-2023

Major Bridges



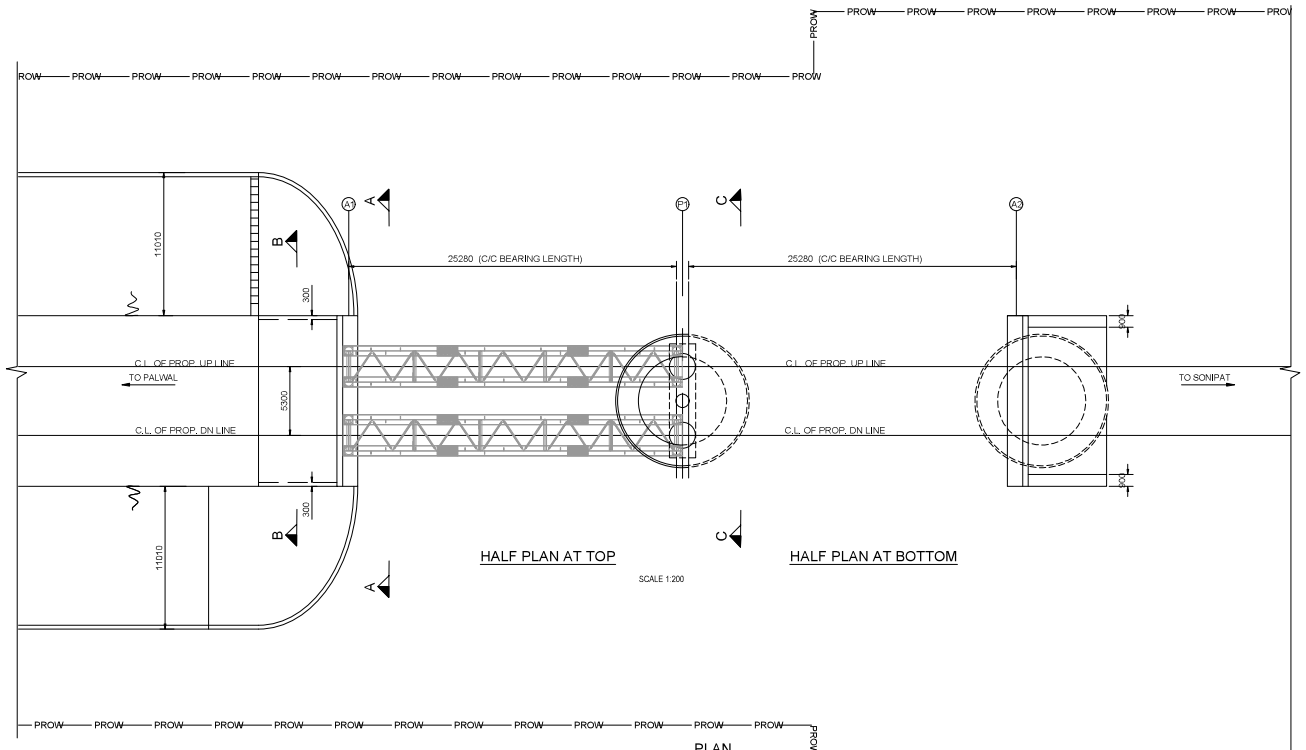
FORMATION LEVEL	200.947	200.947	200.947
GROUND LEVEL	195.402	195.520	194.915
CHAINAGE	14446.452	14472.112	14497.772

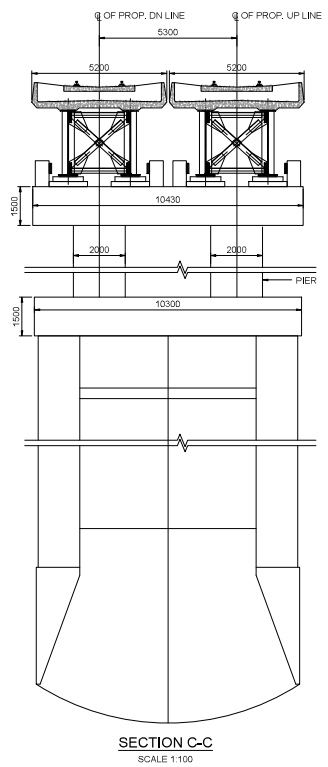
SECTIONAL ELEVATION
SCALE 1:200



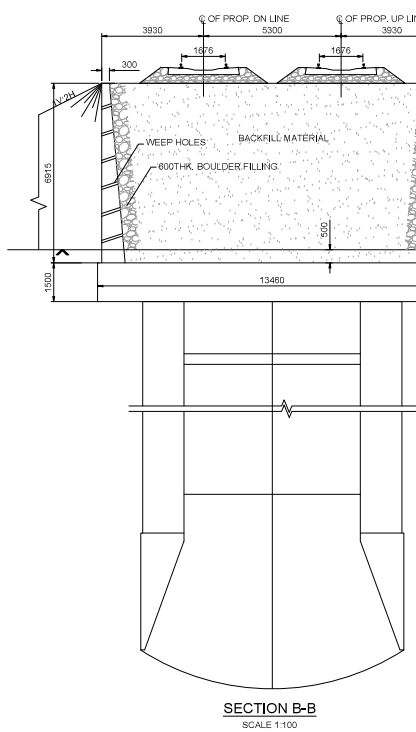
KEY PLAN
(NOT TO SCALE)

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.

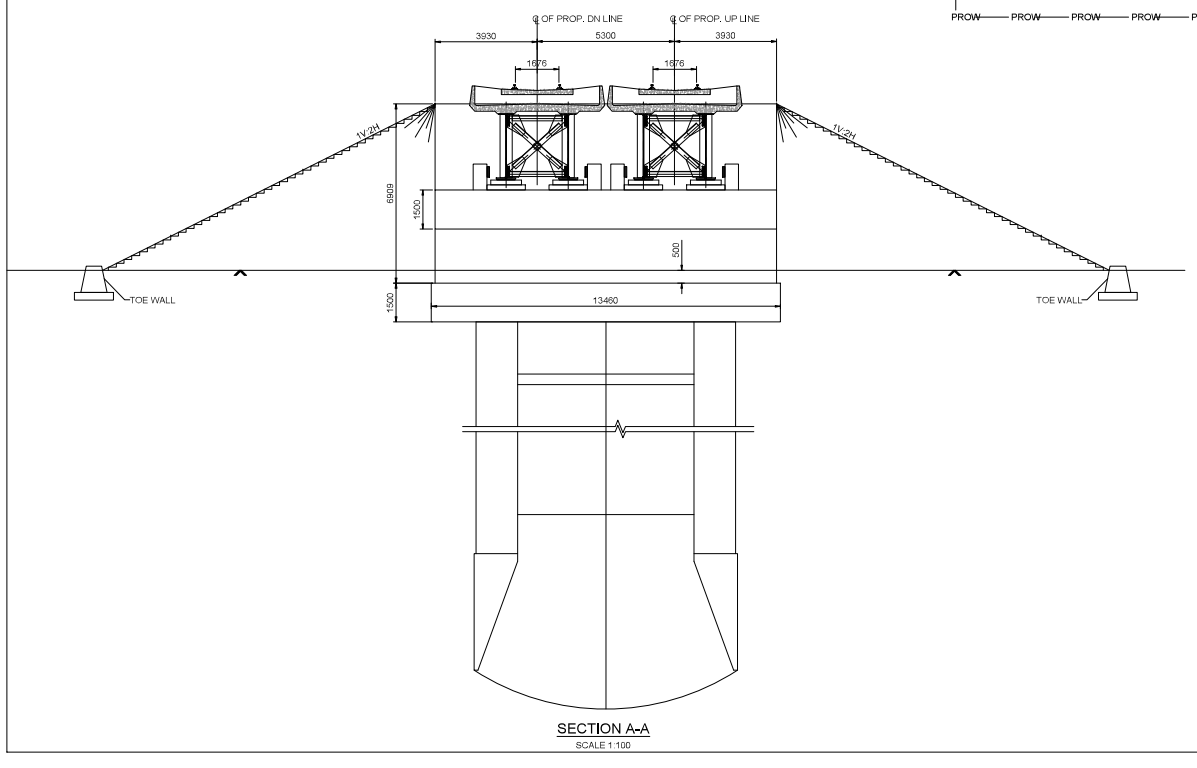




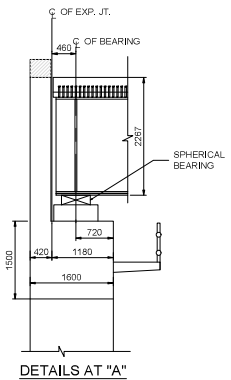
SECTION C-C
SCALE 1:100



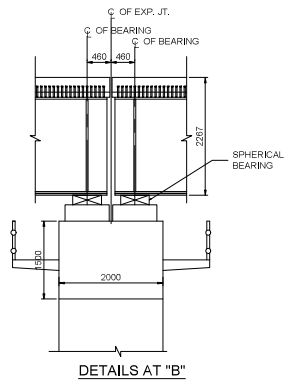
SECTION B-B
SCALE 1:100



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

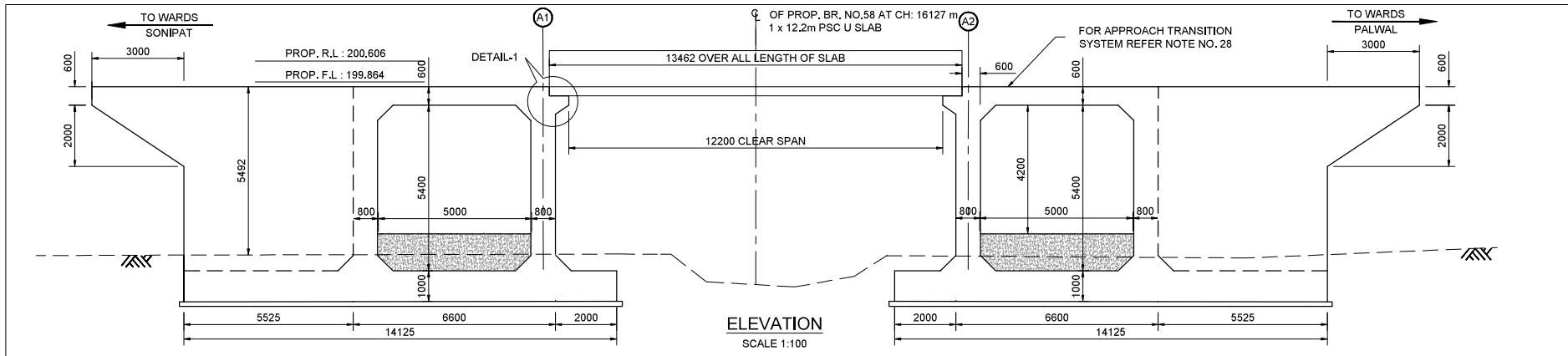
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

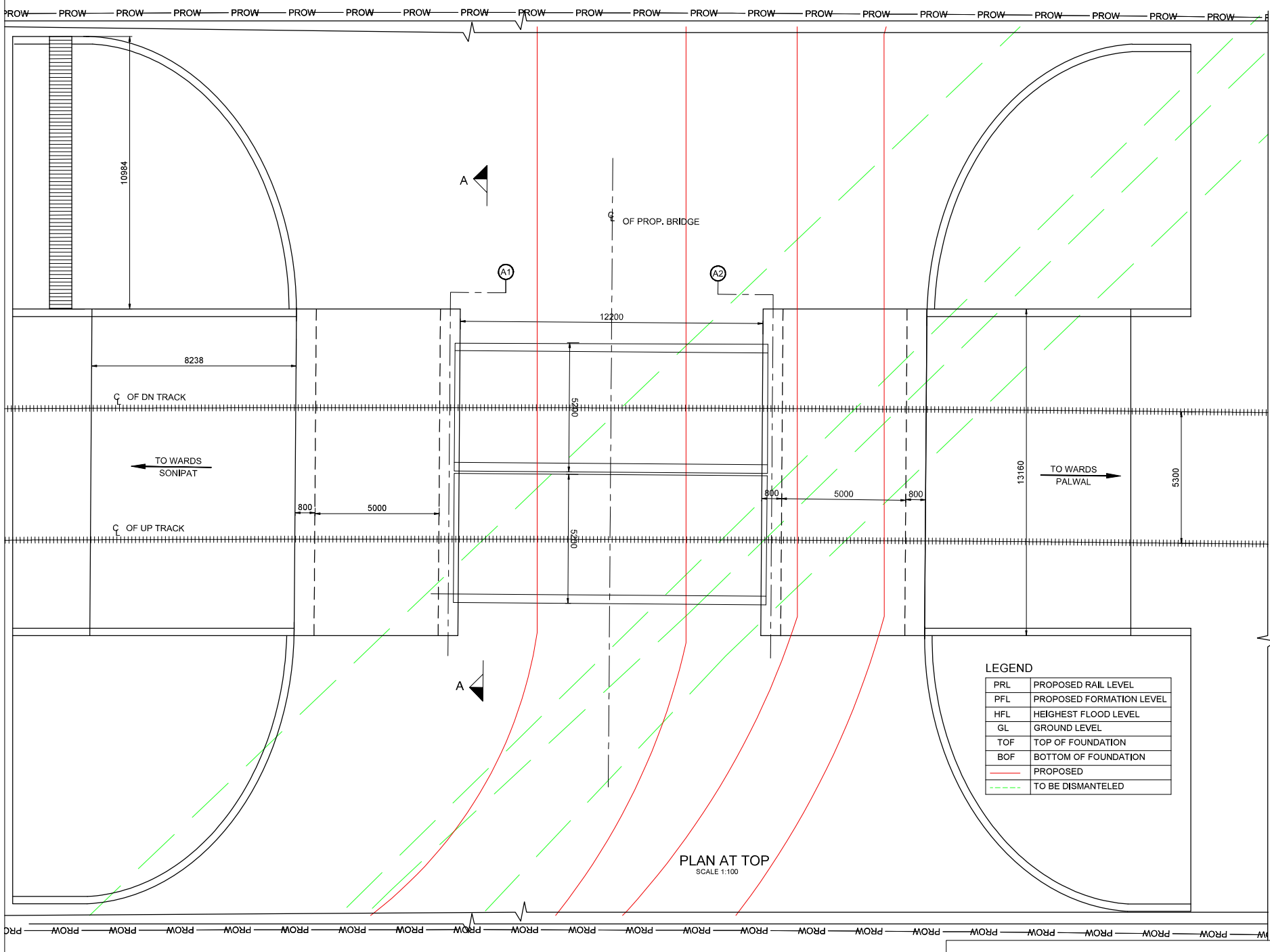
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR STREAM BRIDGE NO.53
2x24.4 CG AT CH: 14472.112m

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

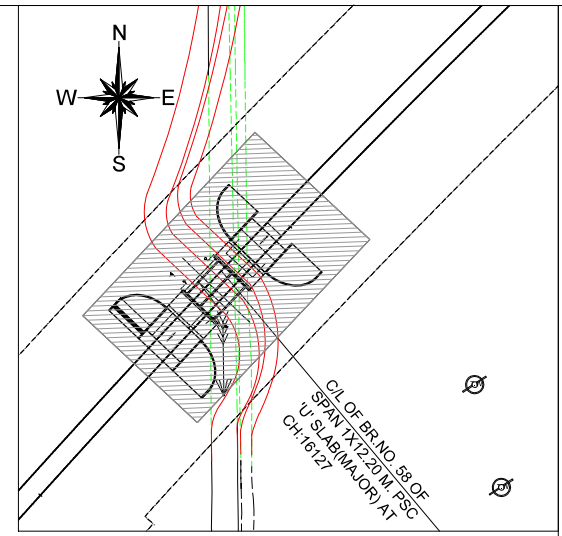
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	10-01-2023



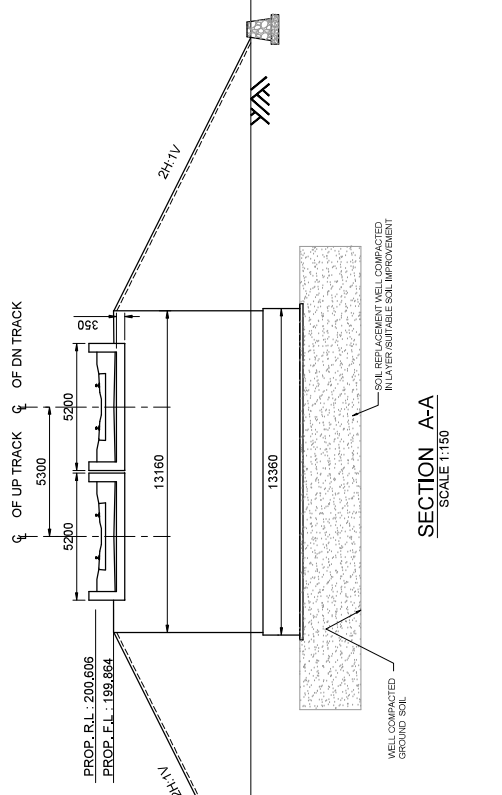
ELEVATION
SCALE 1:100



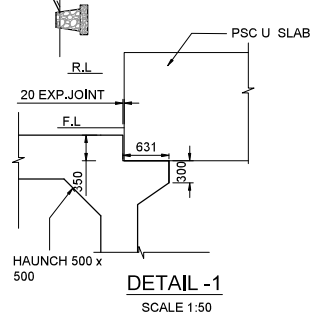
PLAN AT TOP
SCALE 1:100



KEY PLAN
(NOT TO SCALE)



SECTION A-A
SCALE 1:150

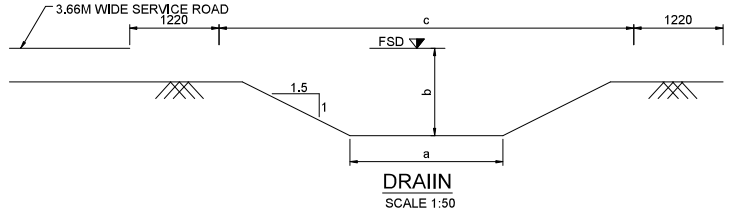


DETAIL -1
SCALE 1:50

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE & TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL WEARING COURSE(WC)----M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
8. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
9. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
10. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
11. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
12. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL/WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL/WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. 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.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. FOR TOE WALL DETAILS REFER SEPARATE SKETCH NO. GC-HRIDC-SK-GEN-014.
26. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. SUITABLE GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT & DESIGN REQUIREMENT AND CONFIRMED THROUGH FIELD TESTING.
27. SMOOTH TRANSITION SHALL BE PROVIDED BETWEEN THE EXISTING LINED CANAL/DRAIN AND THE BOX.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

HYDRAULIC DATA OF DISTRIBUTARY

1	NAME OF MINOR		INDRI DISTRIBUTARY
2	RD		2650/16127
3	FREE BOARD		0.45
4	DISCHARGE		45.02Cusec
5	BED WIDTH	a	2.088
6	F.S.D	b	1.19
7	SIDE SLOPE		1.5:1
8	TOP WIDTH	c	5.65
9	SHAPE		



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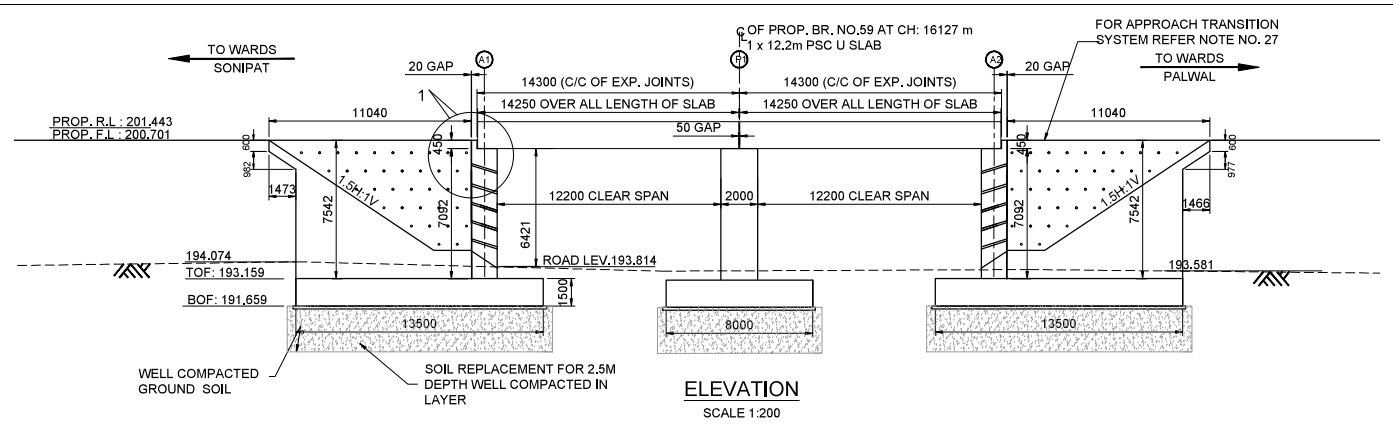
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

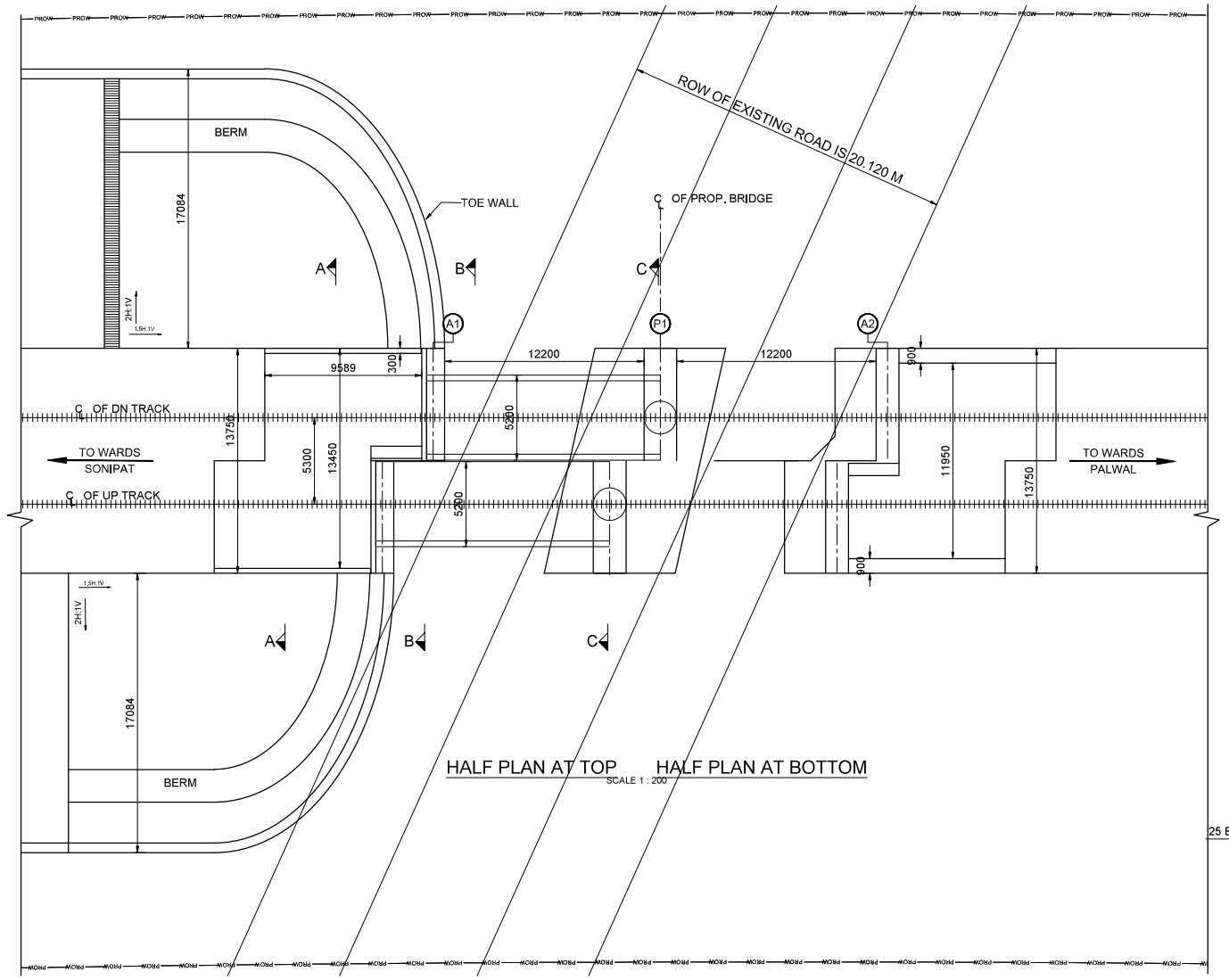
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR CANAL BR.NO. 058
1 x 5 x 5.4m + 1 x 12.2m + 1 x 5 x 5.4m PSC U SLAB CH: 16127

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-BRD-GAD-01058_A2	1 OF 1

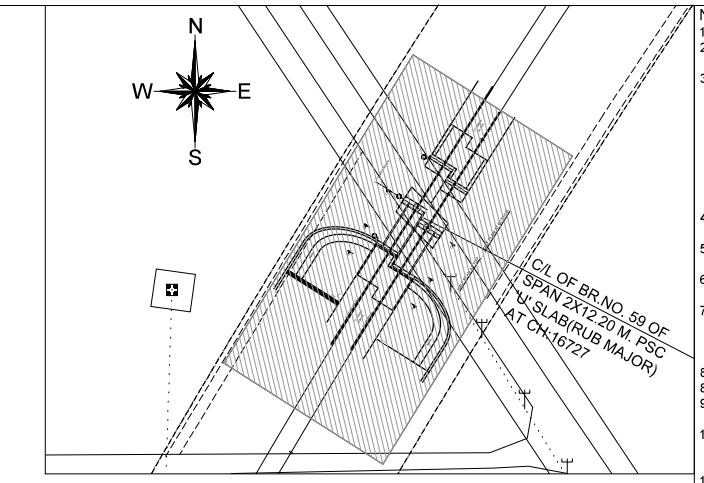
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	10-01-2023



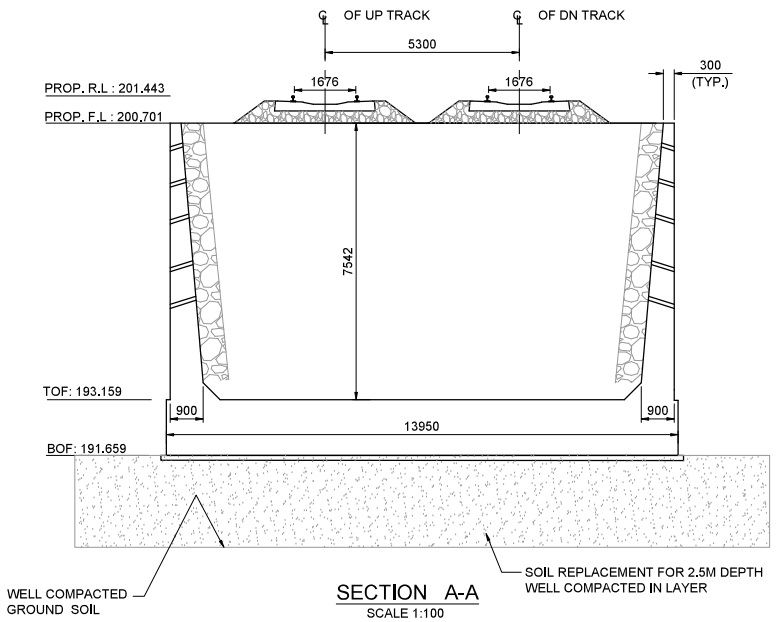
ELEVATION
SCALE 1:200



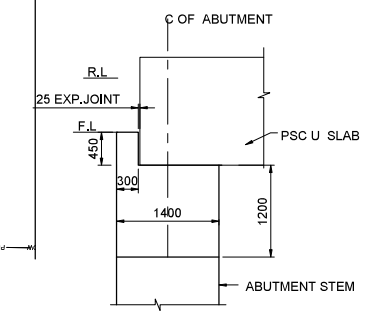
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



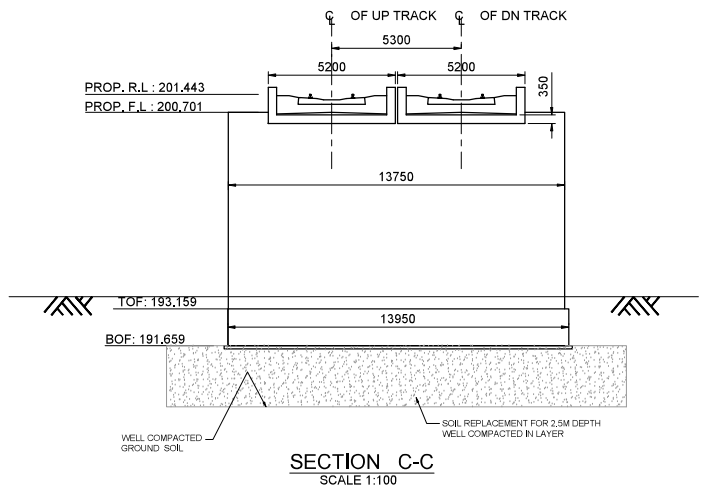
KEY PLAN
(NOT TO SCALE)



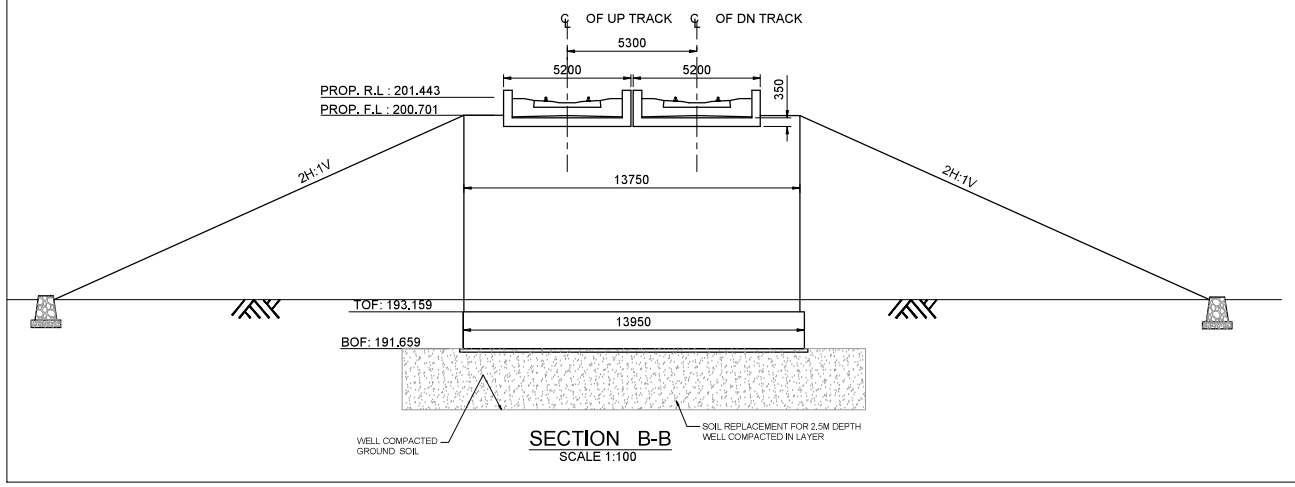
SECTION A-A
SCALE 1:100



DETAIL -1
SCALE 1:50



SECTION C-C
SCALE 1:100



SECTION B-B
SCALE 1:100

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
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7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
8. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
9. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
10. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
11. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
12. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL/WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL/WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
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17. 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.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. FOR TOE WALL DETAILS REFER SEPARATE SKETCH NO. GC-HRIDC-SK-GEN-014.
26. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
27. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES), FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION

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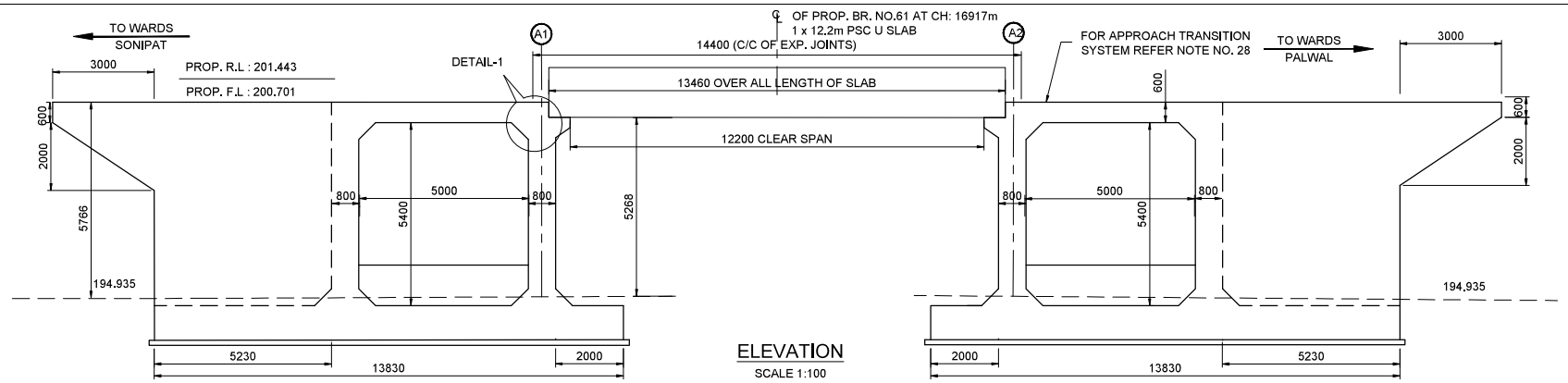
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

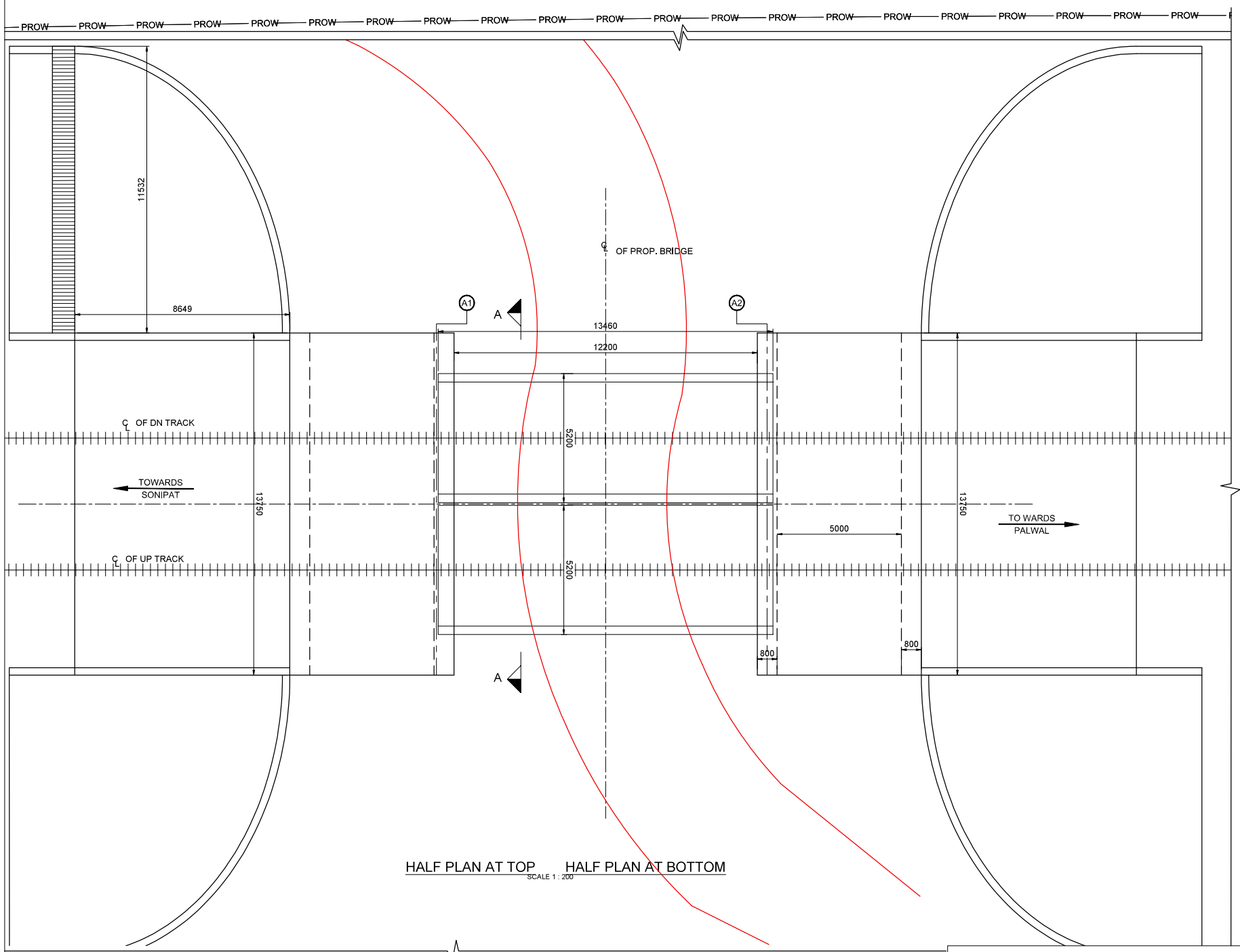
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 059
2 x 12.2m PSC U SLAB CH: 16727

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-BRD-GAD-01059_A2	1 OF 1

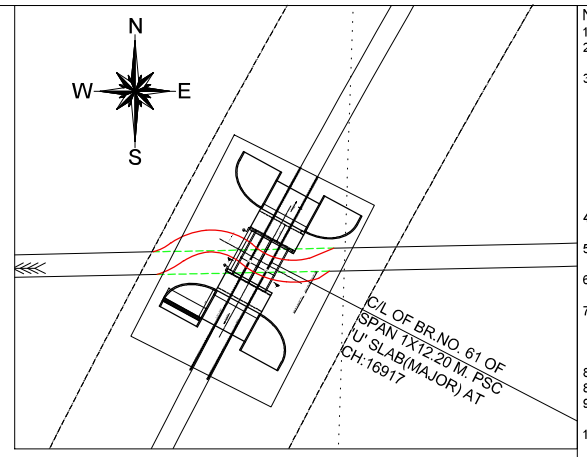
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	10-01-2023



ELEVATION
SCALE 1:100



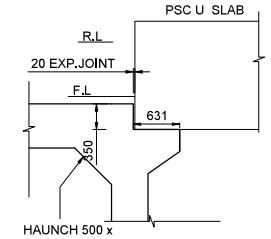
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



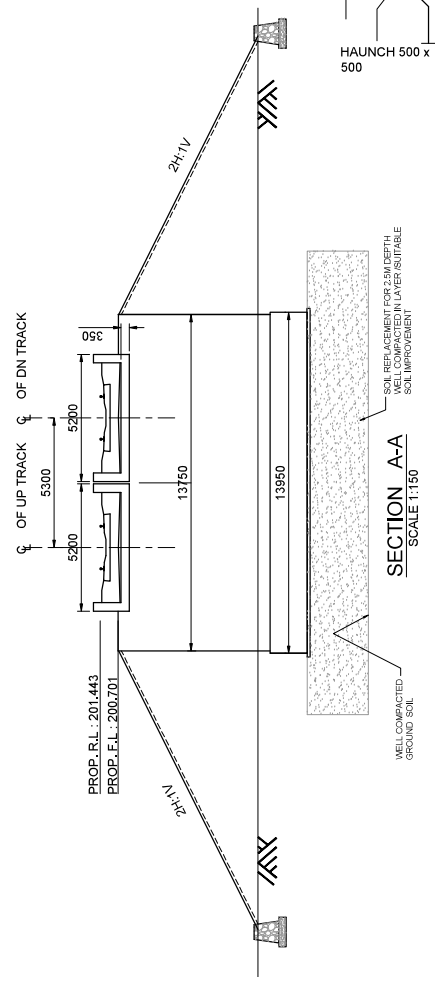
KEY PLAN
(NOT TO SCALE)

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION
———	PROPOSED
- - - -	TO BE DISMANTELED



DETAIL -1
SCALE 1:50



SECTION A-A
SCALE 1:150

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
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   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD) & SUB STRUCTURE-32.5T- 2008 LOADING.
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   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
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8. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
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14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL/WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL/WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
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20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
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23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
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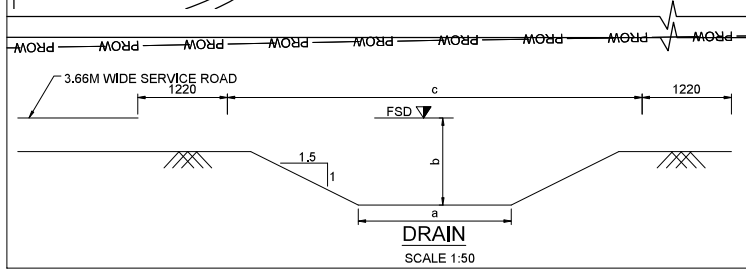
27. SMOOTH TRANSITION SHALL BE PROVIDED BETWEEN THE EXISTING LINED CANAL/DRAIN AND THE BOX.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.



DRAIN
SCALE 1:50

HYDRAULIC DATA OF DRAIN

1	NAME OF MINOR		BHIRAOTI MINOR
2	RD		6050/16917
3	FREE BOARD		0.45
4	DISCHARGE		45.02Cusec
5	BED WIDTH	a	2.088
6	F.S.D	b	1.19
7	SIDE SLOPE		1.5:1
8	TOP WIDTH	c	5.65
9	SHAPE		

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.

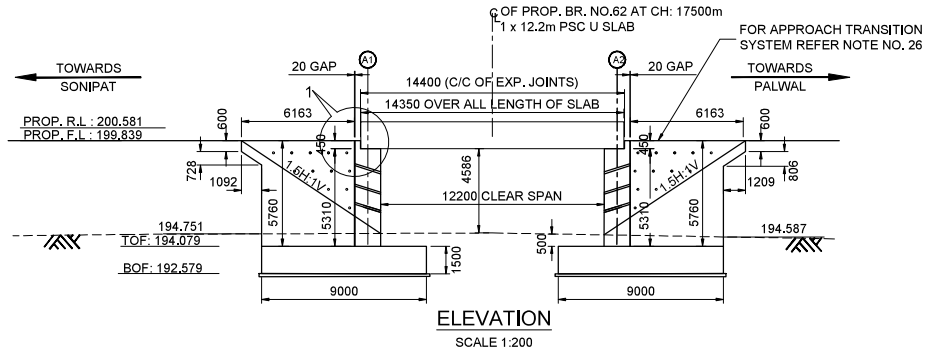
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED CANAL BR. NO. 061
1x5.4+1x12.2+1x5.5.4m PSC U SLAB CH: 16917

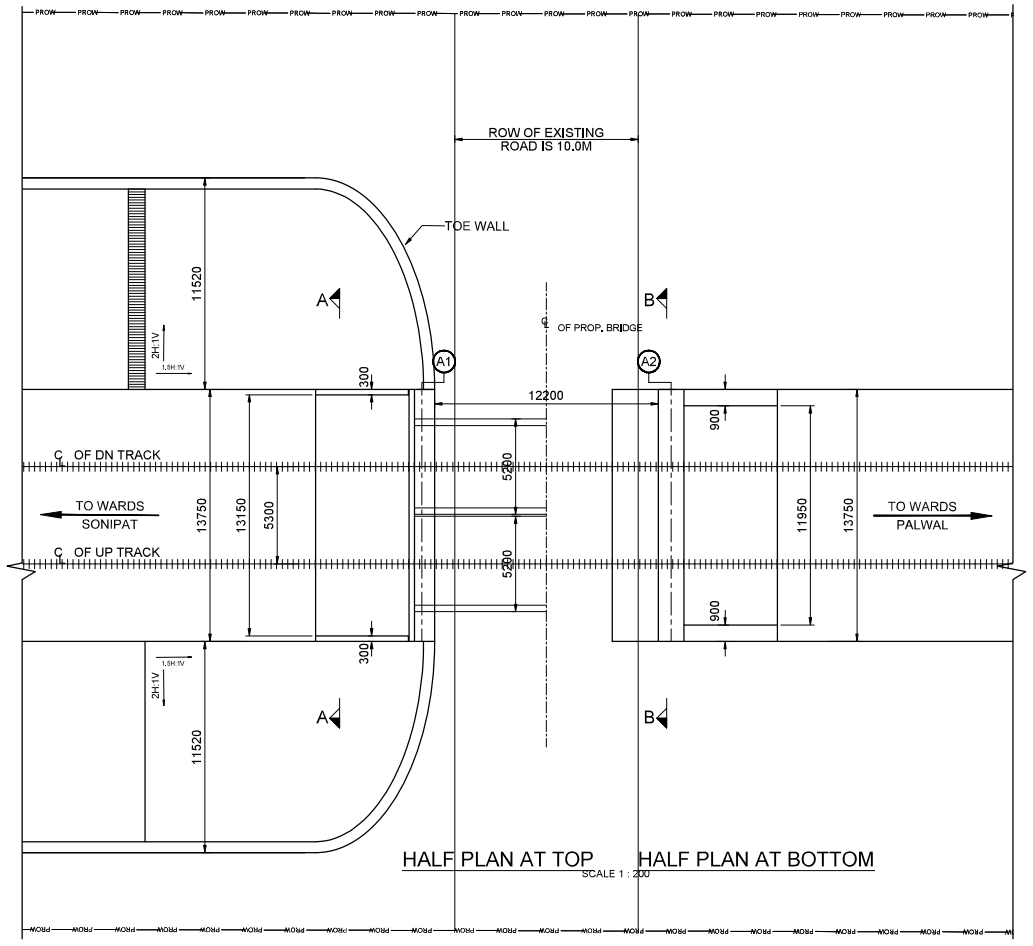
DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-BRD-GAD-01061_A2	1 OF 1

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



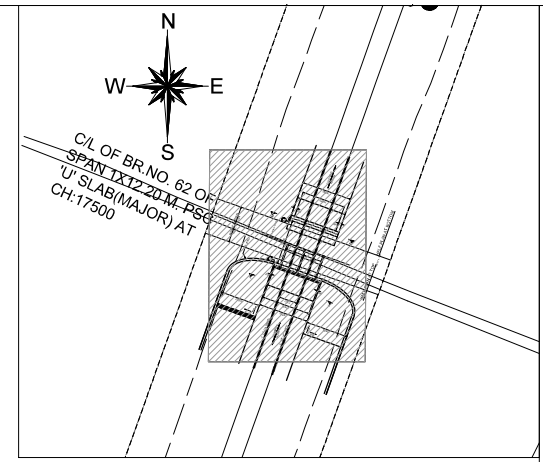
ELEVATION

SCALE 1:200



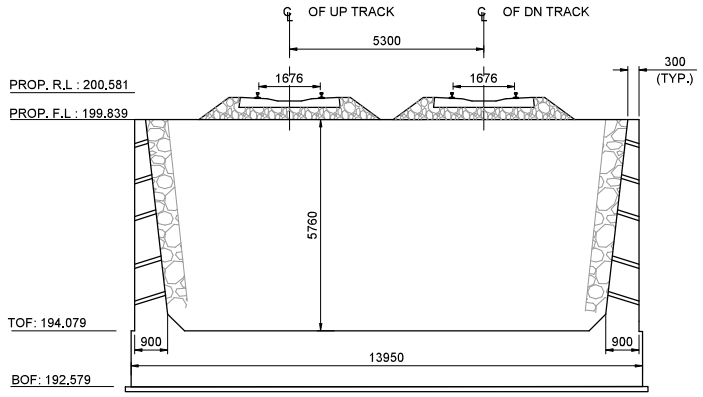
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



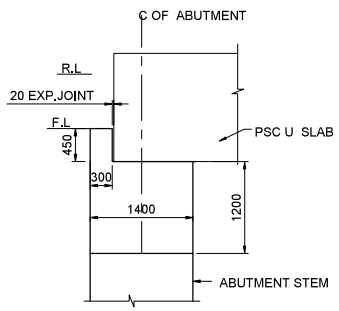
KEY PLAN

(NOT TO SCALE)



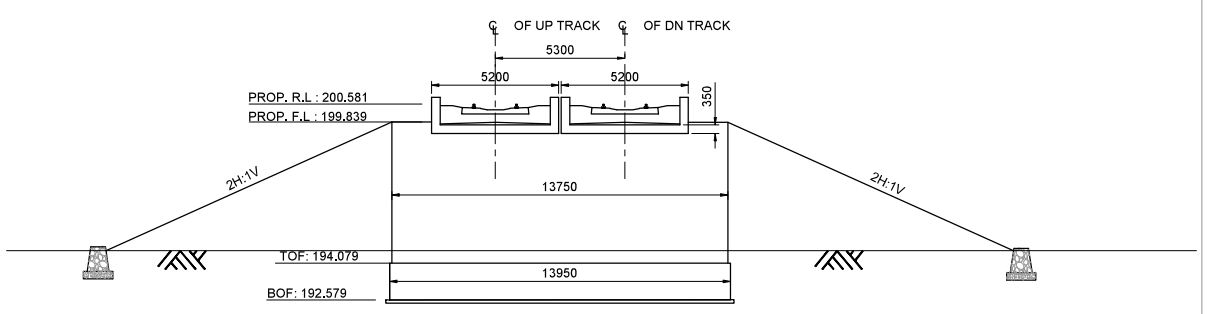
SECTION A-A

SCALE 1:100



DETAIL -1

SCALE 1:50



SECTION B-B

SCALE 1:100

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE & TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
8. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
9. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
10. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
11. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
12. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL/WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL/WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464KG/SQM. CONFORMING TO IS-3117.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. FOR TOE WALL DETAILS REFER SEPARATE SKETCH NO. GC-HRIDC-SK-GEN-014.
26. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
TOF	TOP OF FOUNDATION
BOF	BOTTOM OF FOUNDATION

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

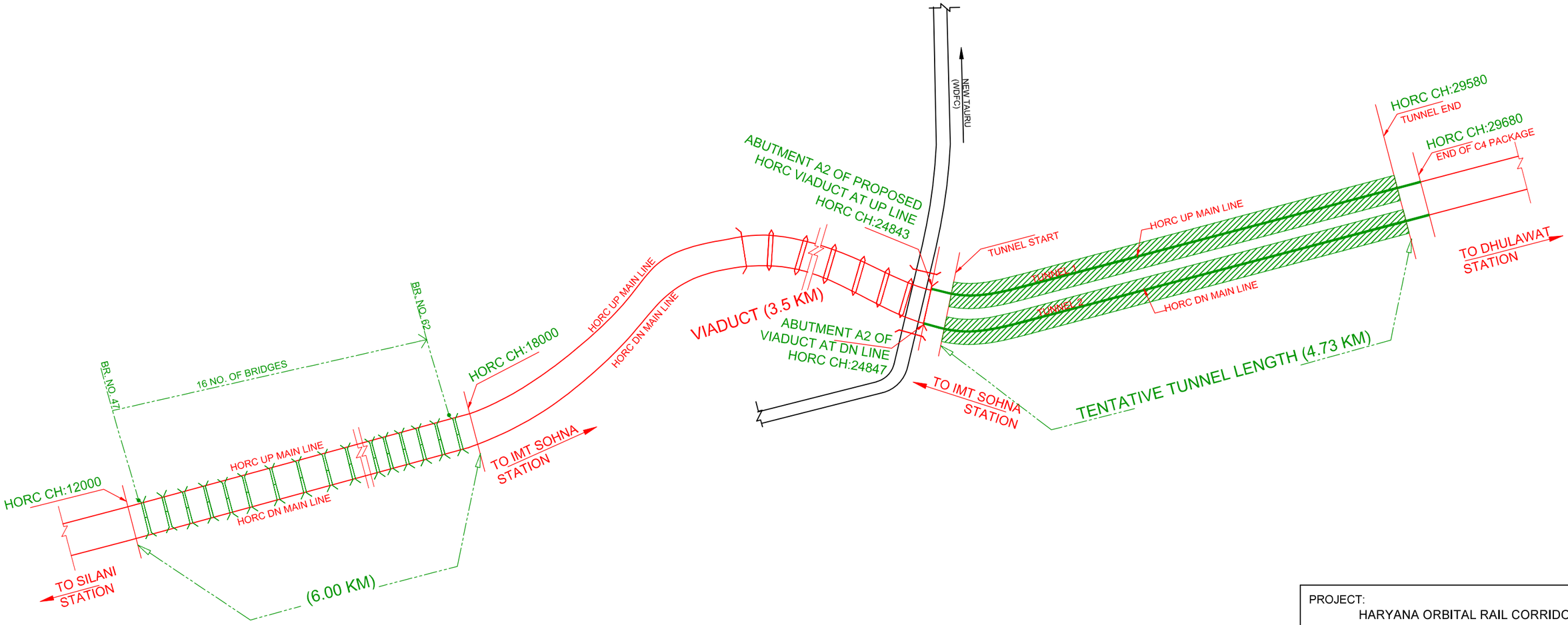
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 062
1 x 12.2m PSC U SLAB CH: 17500

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-BRD-GAD-01062_A2	1 OF 1

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

Miscellaneous Drawings (Conceptual Plans)



NOTES:

- JURISDICTION OF C4 PACKAGE SHOWN IN GREEN COLOUR.
- CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00m, WITH RESPECT TO UP MAIN LINE.

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.

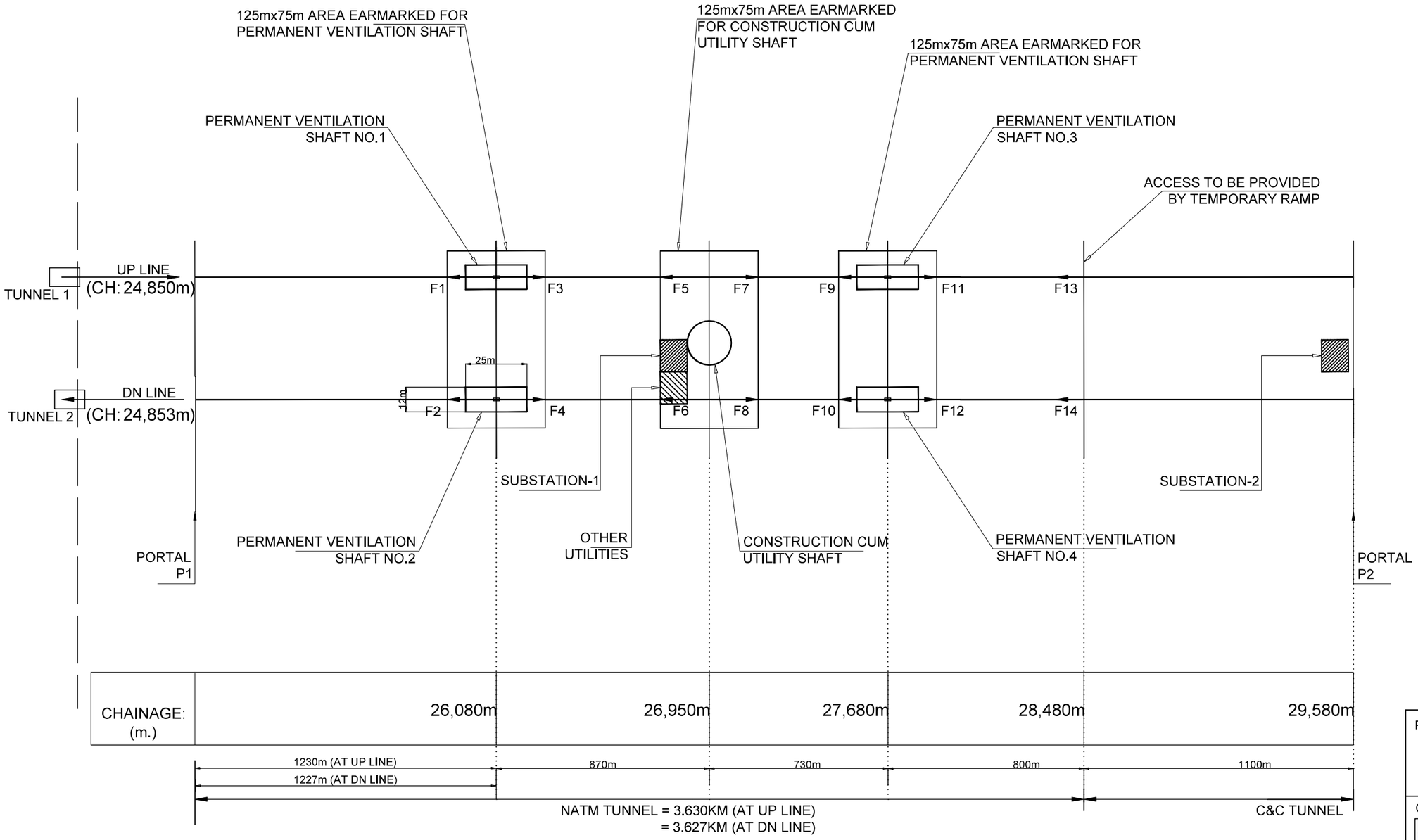
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- **JURISDICTIONAL SKETCH OF C-4 PACKAGE**

SKETCH NO.	SHEET NO.
GC-HRIDC-C4-SK-CIVIL-001_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	09.01.2023



NOTES:

- F1 - F14 ARE THE WORKING FACES OF NATM TUNNEL.
- CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00m, WITH RESPECT TO UP MAIN LINE.

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.

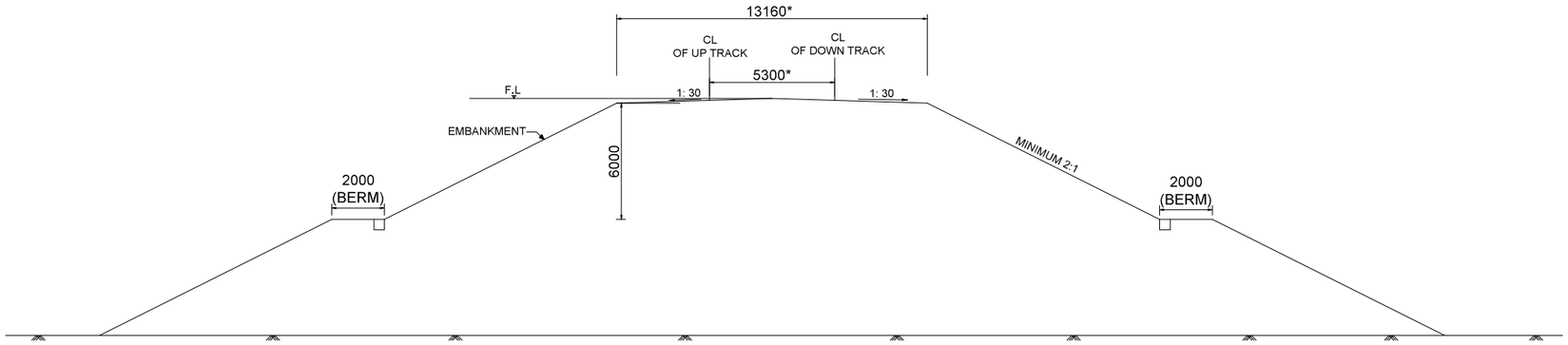
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

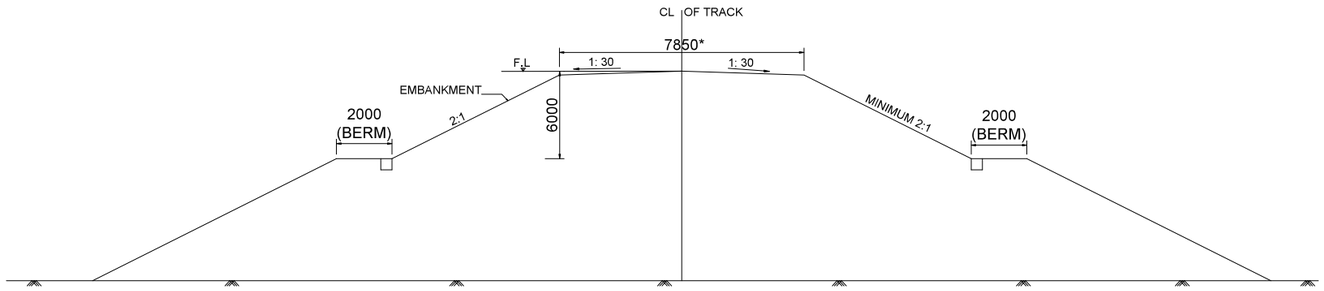
TITLE:- **SCHEMATIC DIAGRAM OF HORC TUNNEL**

SKETCH NO.	SHEET NO.
GC-HRIDC-C4-SK-TUNNEL-001_A1	

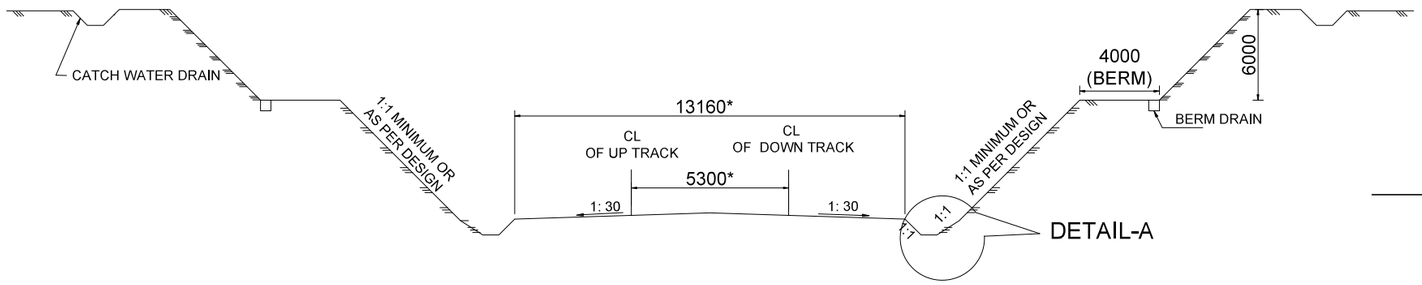
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	09.01.2023



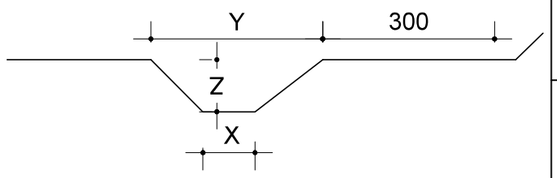
TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR DOUBLE TRACK)



TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR SINGLE TRACK)



TYPICAL CROSS-SECTION OF CUTTING
(FOR DOUBLE TRACK)



DETAIL-A

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. DEPTH OF BALLAST CUSHION SHOULD BE PROVIDED AS PER PARA 212(2) OF IRPWM.
4. CROSS SLOPE OF 1IN 30 SHALL BE PROVIDED.
5. MINIMUM FORMATION WIDTH OF 13160 MM SHALL BE ENSURED FOR NEW WORKS IN BOTH EMBANKMENT AND IN CUTTING (EXCLUDING SIDE DRAIN)
6. * FORMATION WIDTH SHALL BE INCREASED BASED ON CURVE & SUPER ELEVATION AS PER IRSOD.
7. X, Y, Z DIMENSIONS SHALL BE AS PER DESIGN.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

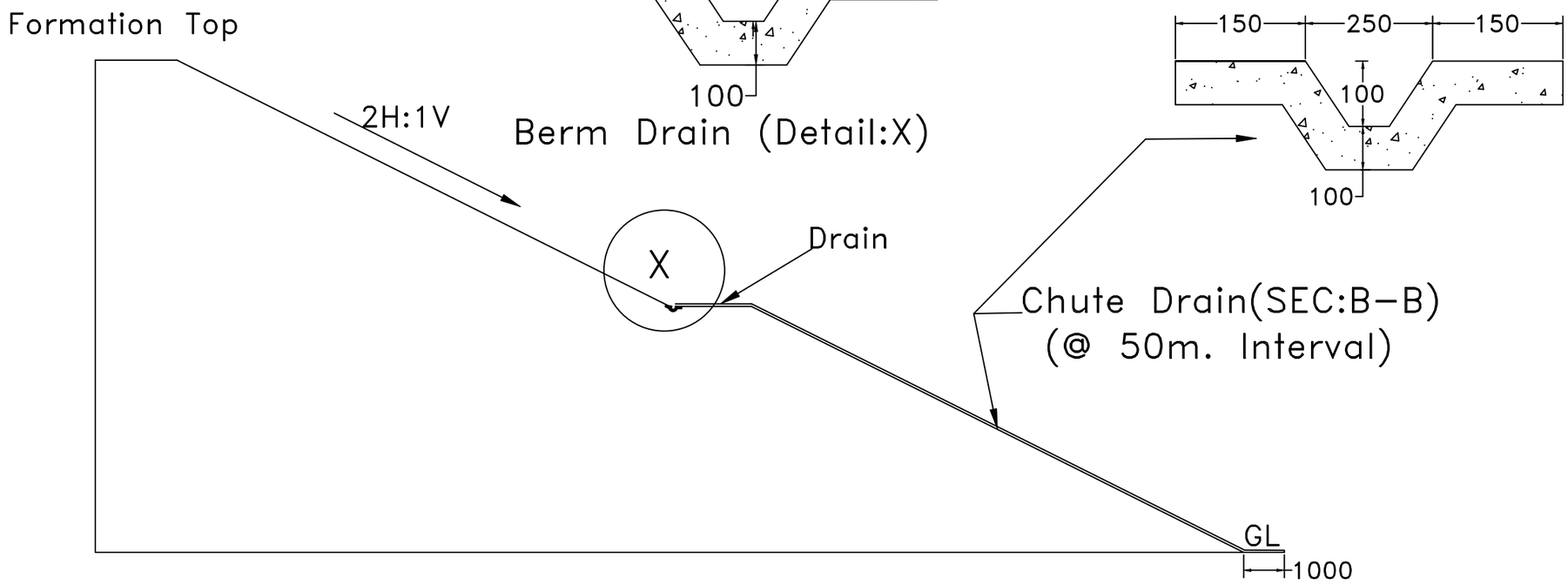
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
TYPICAL EMBANKMENT/CUTTING PROFILE

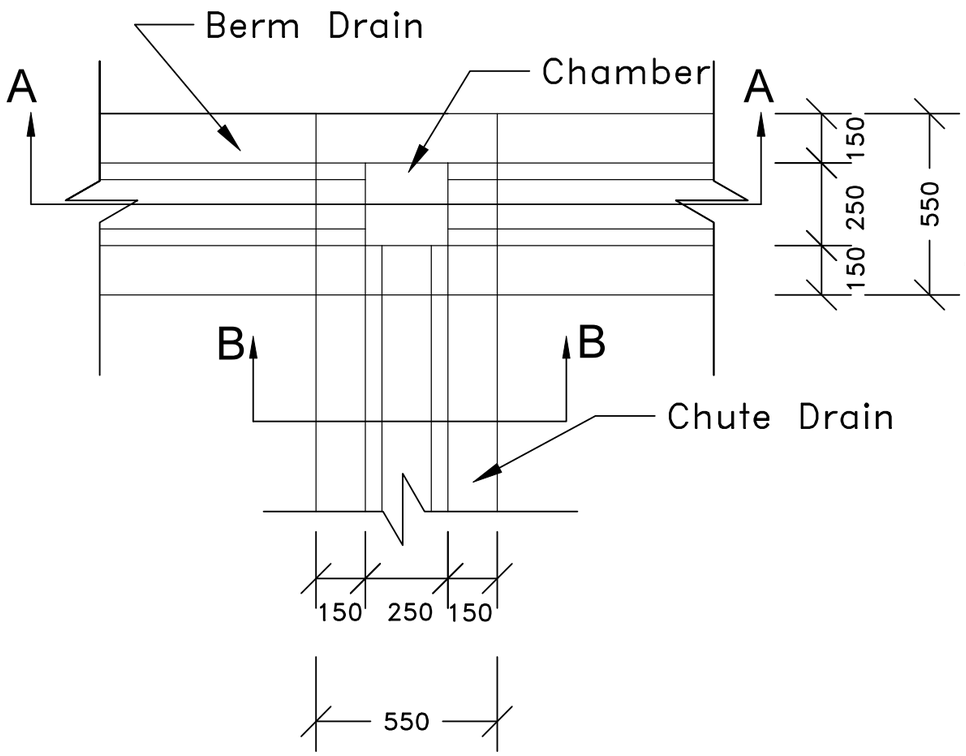
DRG. NO.	GC-HRIDC-SK-GEN-001_A2	SHEET NO.

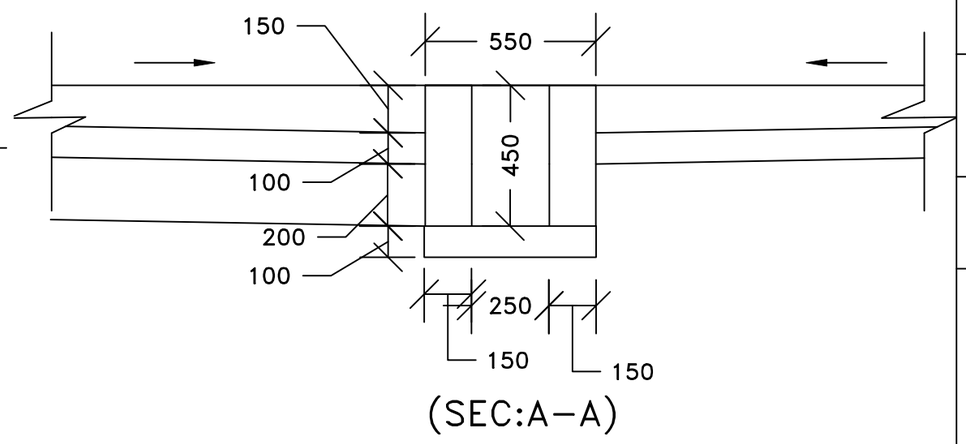
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	09.01.2023

Berm Drain (Detail:X)



Chute Drain(SEC:B–B)
(@ 50m. Interval)





(SEC:A–A)

Note:-
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. ALL CAST IN-SITU CONCRETE SHALL BE M25.
4. IN CASE OF PRECAST RCC DRAINS GRADE OF CONCRETE SHALL BE AS PER DESIGN.

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

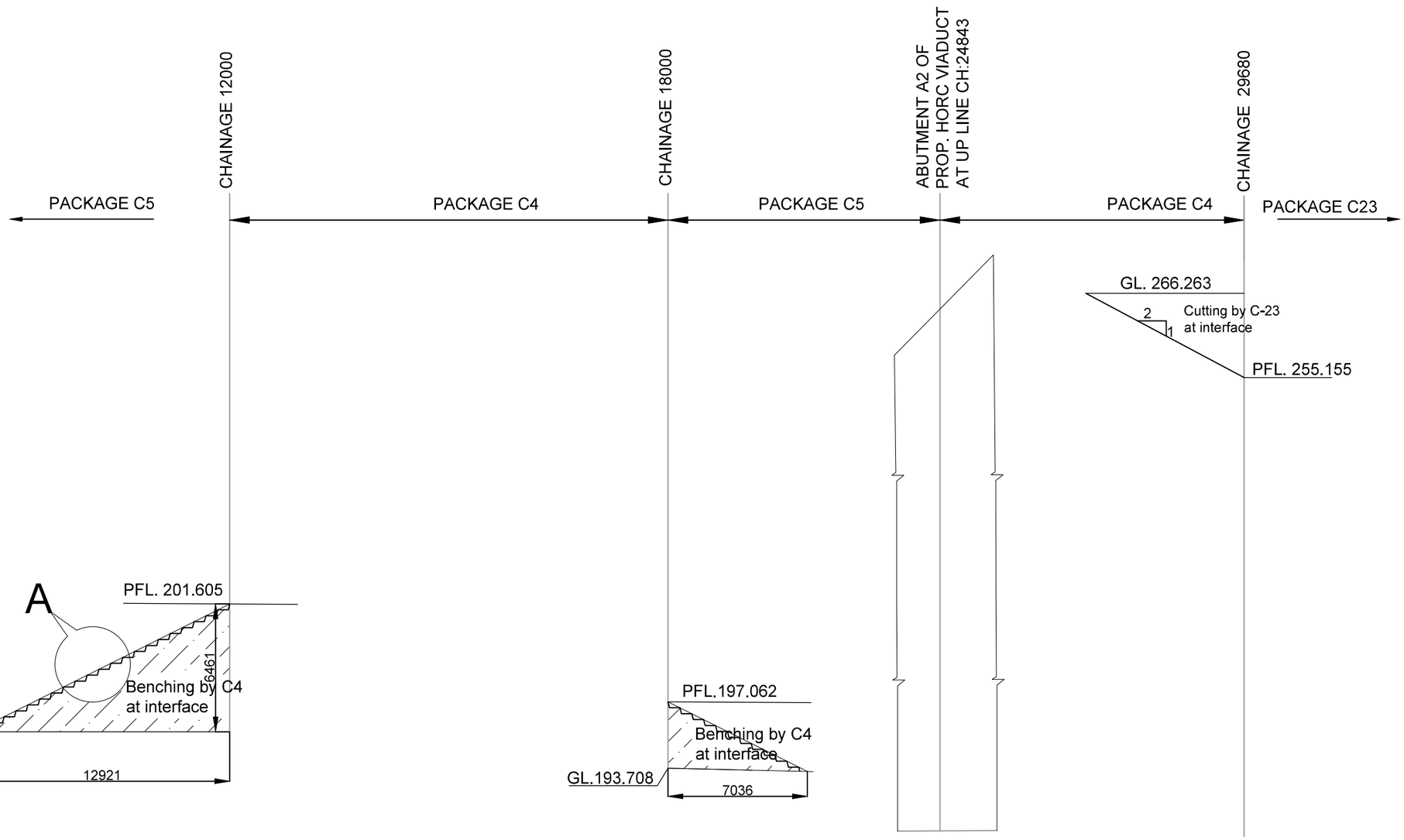
TITLE:- CONCEPTUAL PLAN
DRAINS FOR EMBANKMENT

SKETCH NO.	SHEET NO.
GC-HRIDC-SK-GEN-008_A2	

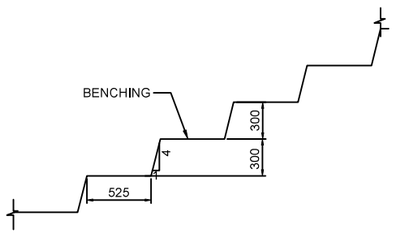
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07-11-2022	09.01.2023

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METER.
2. CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00m, WITH RESPECT TO UP MAIN LINE.
3. FOR OTHER DETAILS REFER RDSO SPECIFICATION NO. RDSO/2020/GE:IRS-004 SEPTEMBER 2020 "COMPREHENSIVE GUIDELINES AND SPECIFICATIONS FOR RAILWAY FORMATION".



SECTIONAL ELEVATION



DETAIL -A

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.

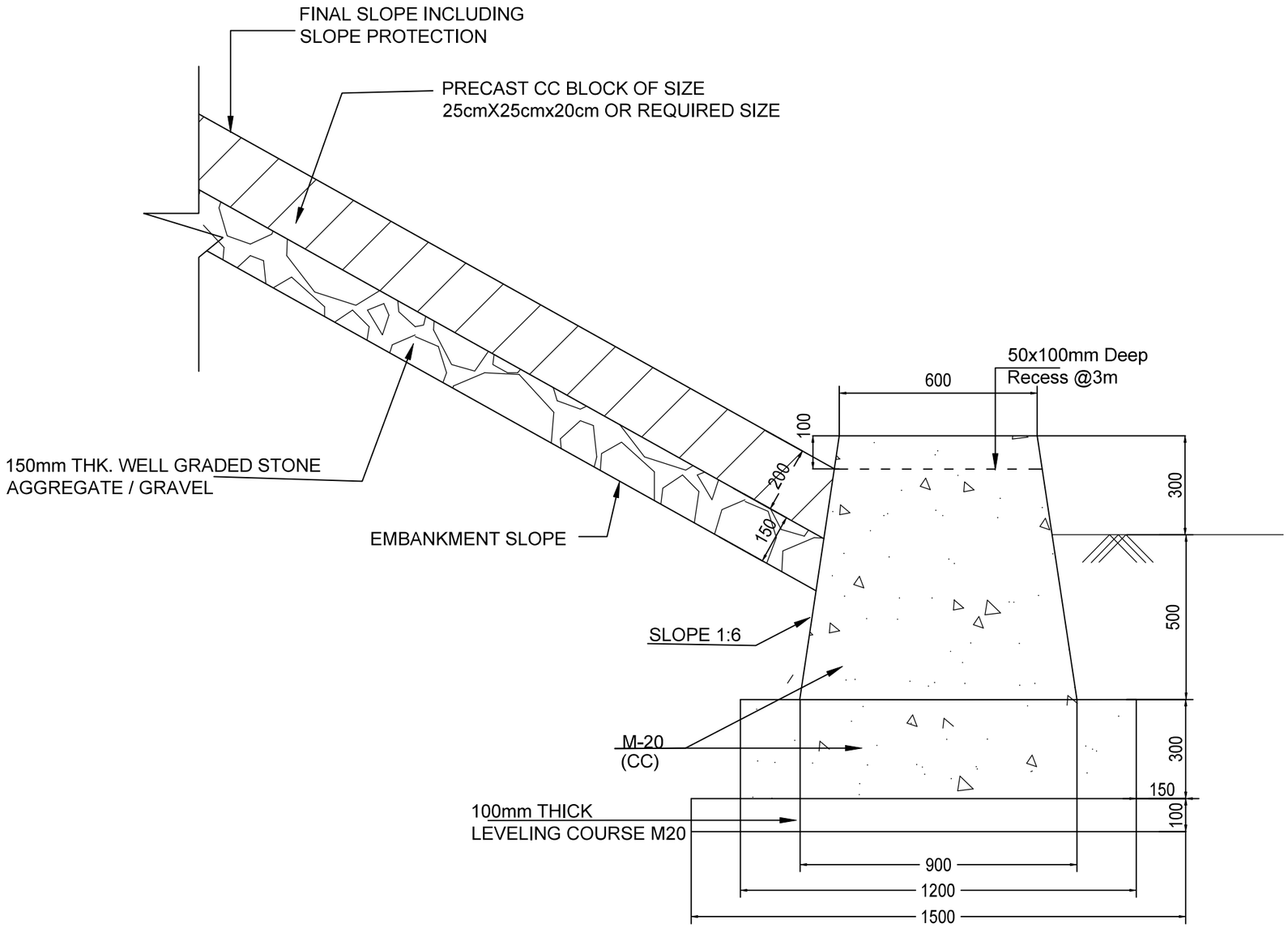
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:-
CONCEPTUAL PLAN
INTERFACING LOCATION BANK BENCHING

SKETCH NO.	SHEET NO.
GC-HRIDC-C4-SK-012_A2	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	21.11.2022	10.01.2023



TOE WALL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. M-20 GRADE CONCRETE SHALL BE USED FOR TOE WALL.
4. 25MM EXPANSION GAP SHALL BE PROVIDED AT 30m (MAX.) OF LENGTH OF WALL.

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

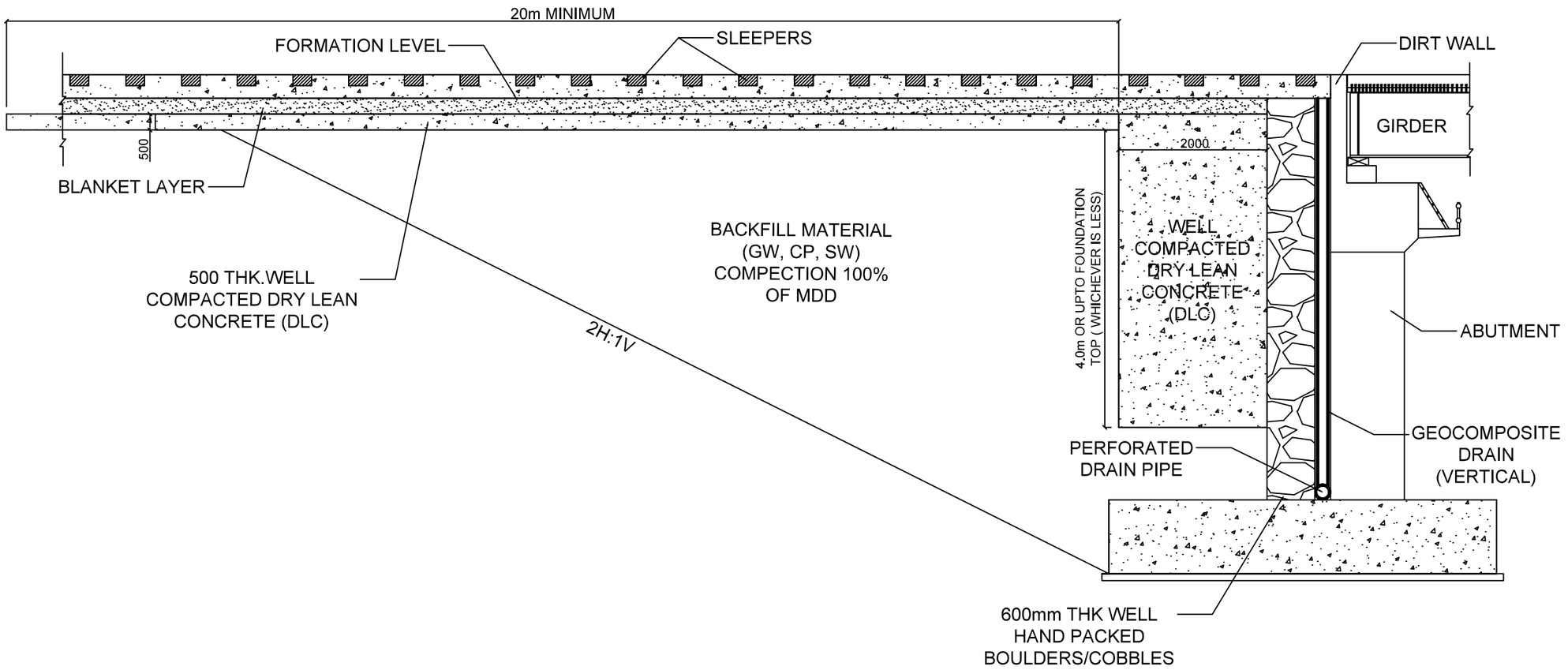
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

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

TITLE:- CONCEPTUAL PLAN
CC TOE WALL

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-014_A2	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	28.12.2022	09.01.2023



TRANSITION SYSTEM ON APPROACHES OF MAJOR BRIDGES

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
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. GEO-COMPOSITE 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.
6. THIS DRAWING SHALL BE USED FOR MAJOR BRIDGE APPROACHES (DEFINITION OF MAJOR BRIDGE SHALL BE AS PER IRBM).

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.

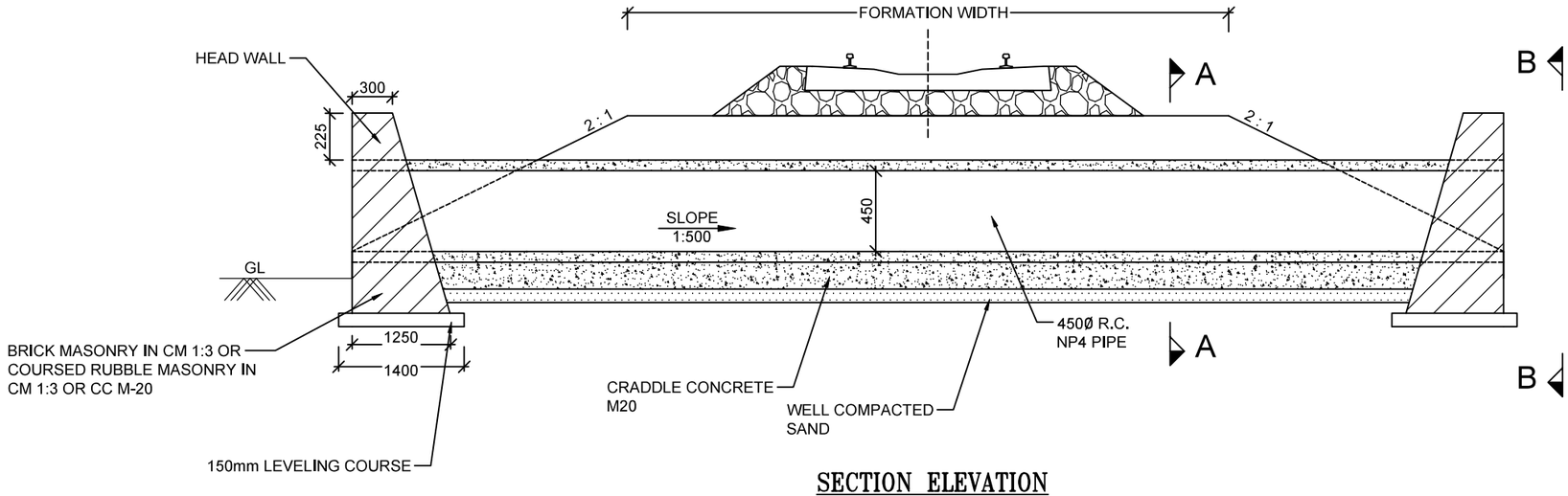
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

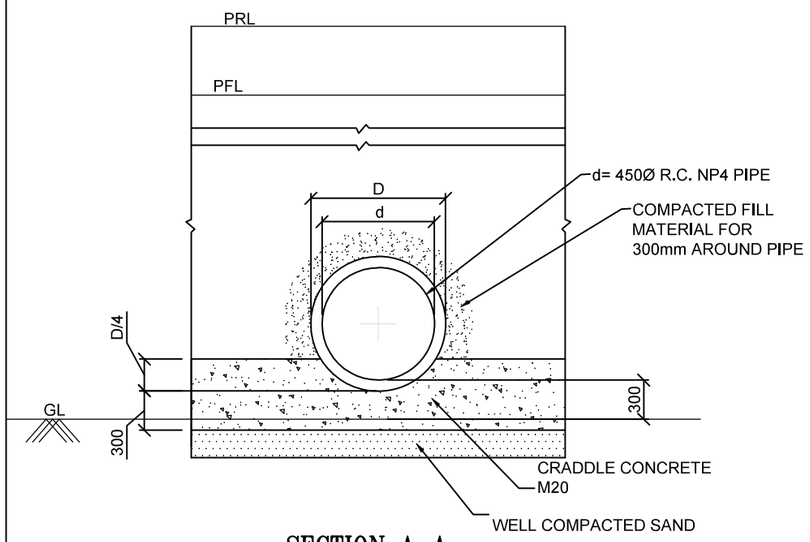
TITLE:-
CONCEPTUAL PLAN FOR
TRANSITION SYSTEM OF MAJOR BRIDGE APPROACHES

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-019_A1	1 OF 1

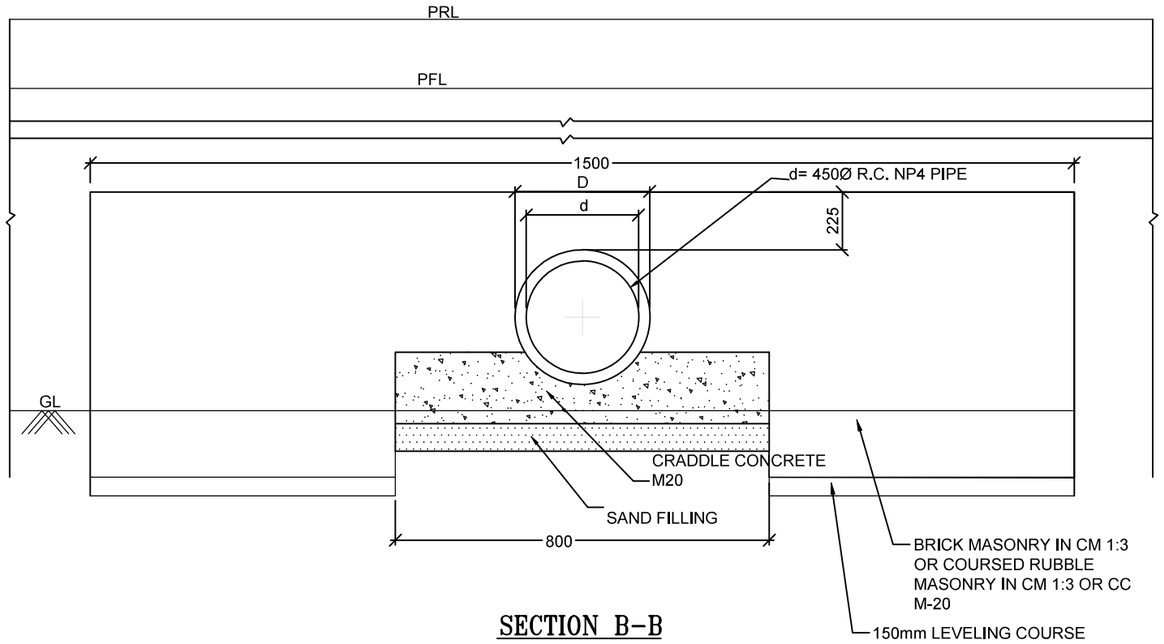
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	28.12.2022	09.01.2023



SECTION ELEVATION



SECTION A-A



SECTION B-B

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. LOOSE/UNSUITABLE SOIL BELOW CULVERTS SHALL BE REPLACED WITH SUITABLE GRANULAR MATERIAL.
4. LONGITUDINAL SLOPE OF PIPE SHALL BE MINIMUM 1 IN 500.
5. BEDDING CONDITION BELOW NP-04 PIPE SHALL BE AS PER IS:783.

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

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

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

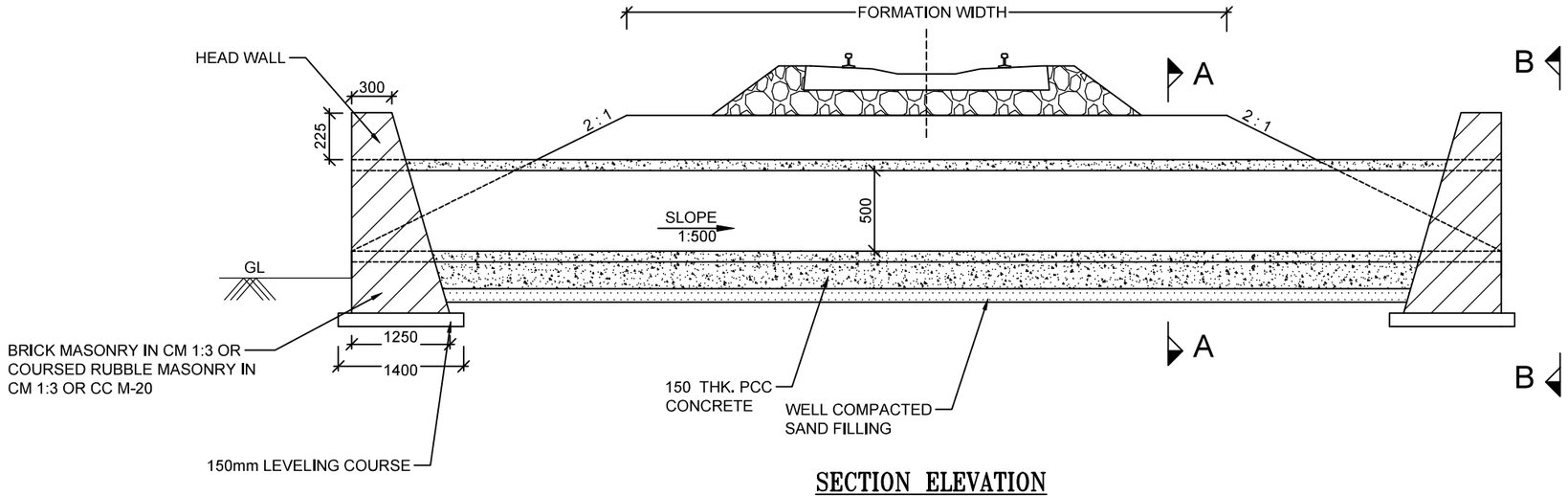
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

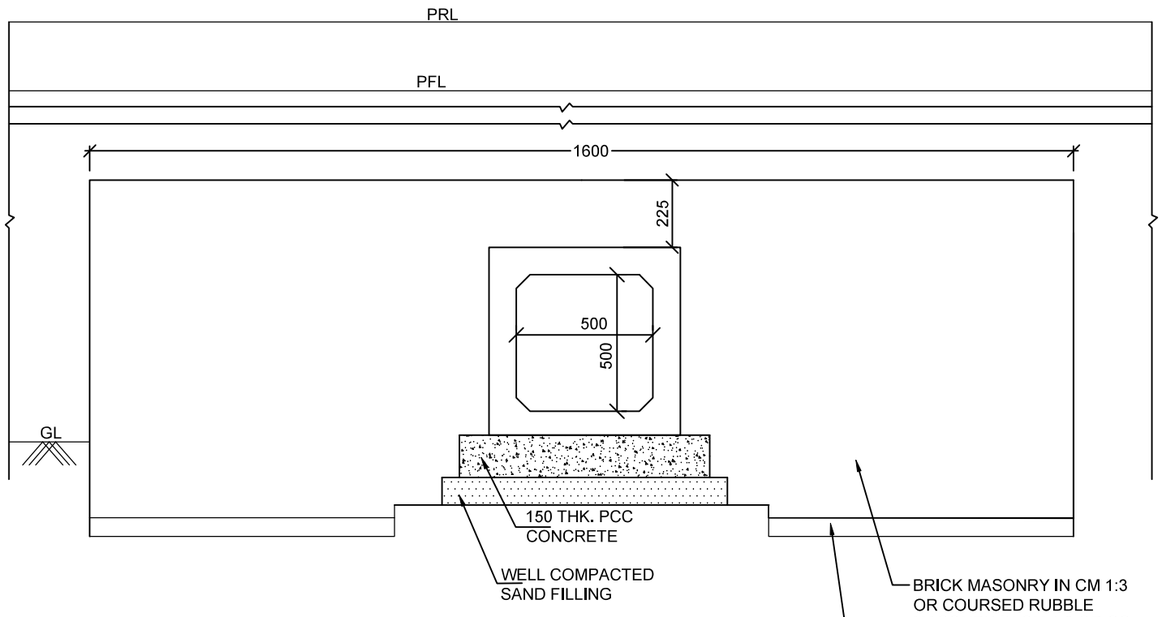
TITLE:- CONCEPTUAL SKETCH FOR NP4 PIPE OF 450mm DIA

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-028_A1	1 OF 1

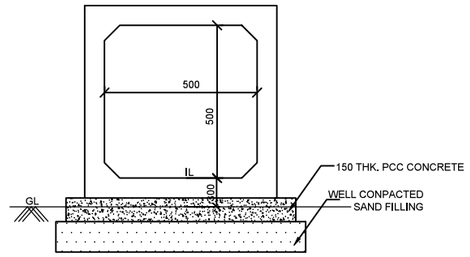
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	28.12.2022	10.01.2023



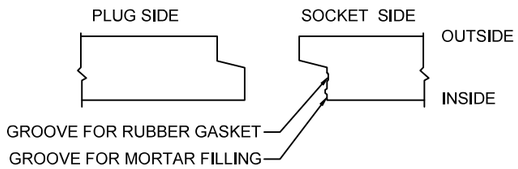
SECTION ELEVATION



SECTION B-B



SECTION A-A



- PLUG & SOCKET JOINTS
- SEALING MATERIAL - RUBBER GASKET

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. LOOSE/UNSUITABLE SOIL BELOW CULVERTS SHALL BE REPLACED WITH SUITABLE GRANULAR MATERIAL.
4. STRUCTURE IS TO BE DESIGNED FOR 32.5T LOADING AND AVAILABLE FILL AS APPLICABLE.
5. PRECAST BOX SEGMENTS SHALL BE OF MINIMUM 2m LENGTH, JOINED TOGETHER WITH PLUG & SOCKET JOINTS OVER THE BARREL LENGTH.
6. INVERT LEVEL (IL) OF BOX SHALL BE 300mm ABOVE THE GROUND LEVEL.
7. 150mm THICK PCC SHALL BE DONE OVER THE WELL COMPACTED SAND FILLING OR WELL COMPACTED GROUND.

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.

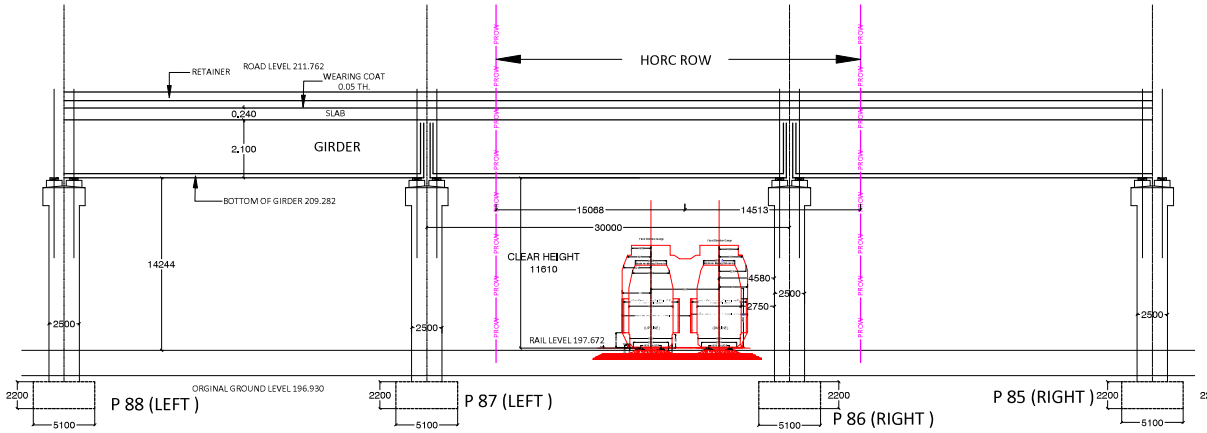
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

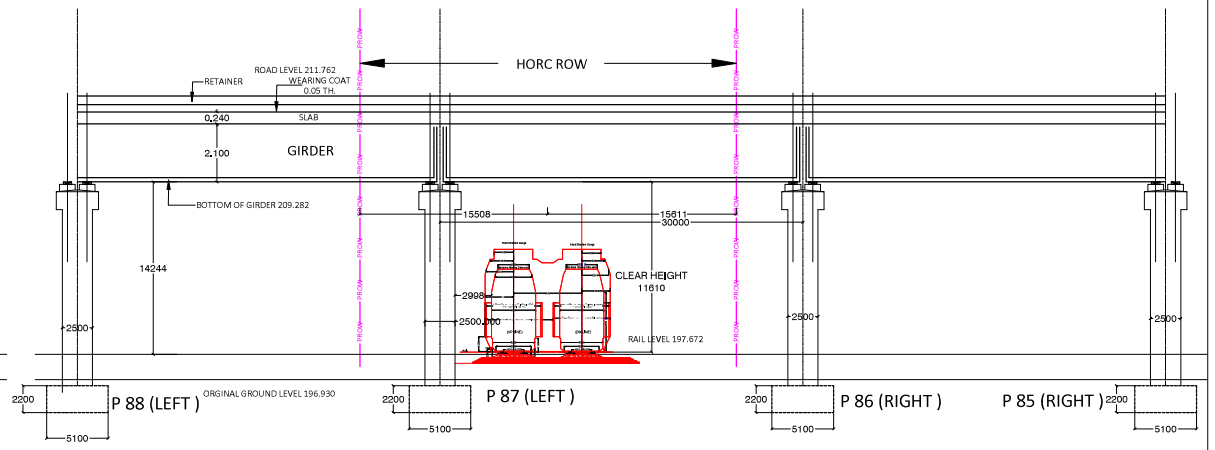
TITLE:-
CONCEPTUAL SKETCH FOR
BOX CULVERT 500 X 500 MM SIZE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-029_A1	1 OF 1

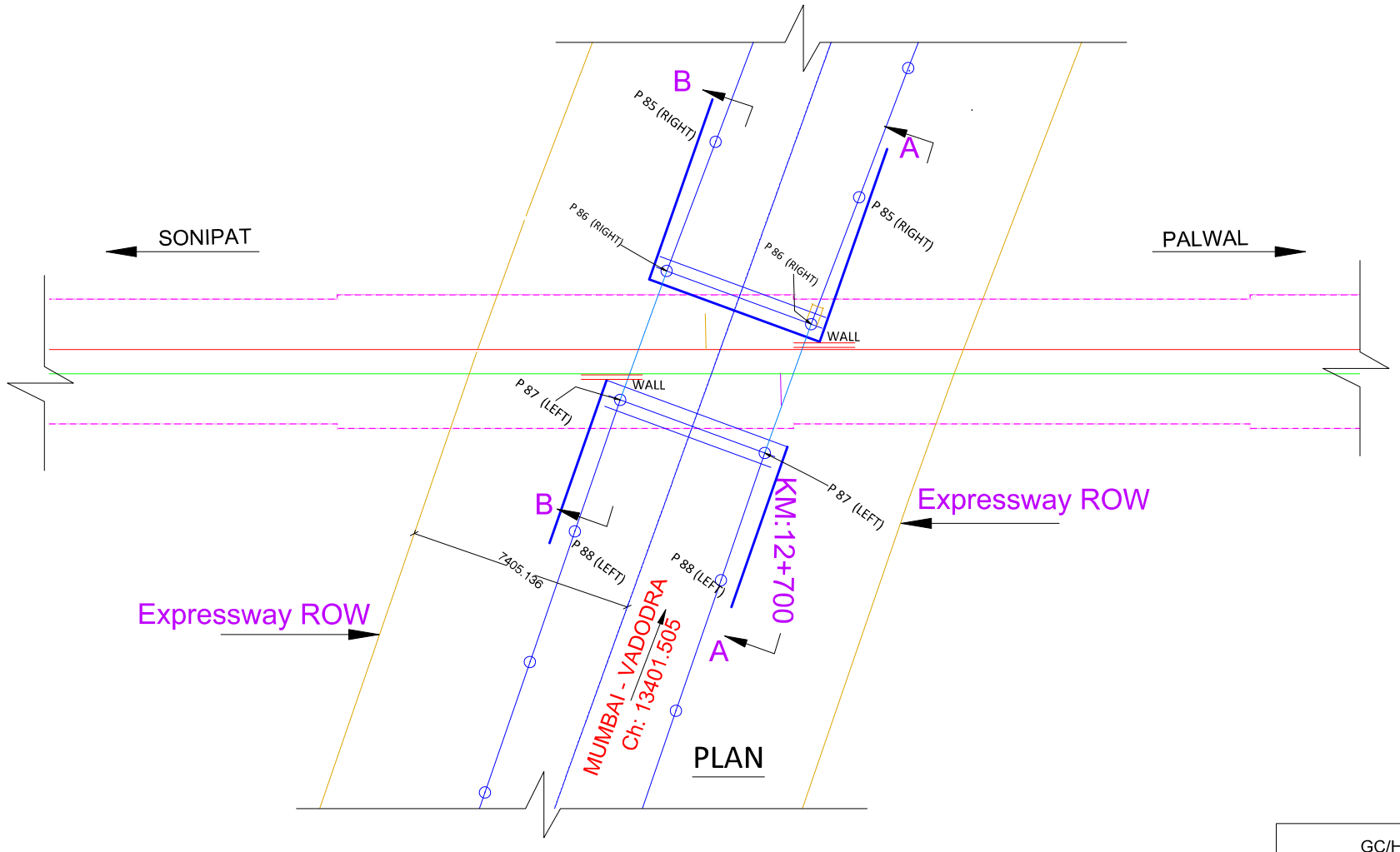
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	28.12.2022	10.01.2023



ELEVATION- AT A-A



ELEVATION- AT B-B



CHAINAGE HORC	13401.505
TOP OF ROAD	211.762
BOTTOM OF EXISTING GIRDER	209.282
HORC RAIL LEVEL	197.672
AVAILABLE VERTICAL CLEARANCE	11.61
BOTTOM OF GIRDER TO RAIL LEVEL	11.610
REQUIRED VERTICAL CLEARANCE	8.50

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER.
2. FOR HORC RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION .
3. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL, FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
4. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTION TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
5. STRUCTURAL ARRANGEMENT UNDER THE PROPOSED TRACK SHALL BE ON PLANNED AND DESIGNED TO AVOID LOAD TRASNFER TO ANY OF THE STRUCTURE OF ELEVATED ROAD CUM ROB OF DELHI- VADODARA EXPRESSWAY.
6. ADEQUATE PRECAUTION SHALL BE TAKEN TO AVOID ANY KIND OF DAMAGE TO THE EXISTING STRUCTURE.
7. CONTRACTOR SHALL PLANT TREES EQUAL TO NUMBER OF TREES AFFECTED DURING CONSTRUCTION.
8. CONTRACTOR SHALL RESTORE THE DRAIN AFFECTED DUE TO LAYING OF RAIL CROSSING BY PROVIDING PROPER OUTLET AT NEAREST CROSS DRAINAGE STRUCTURE TO THE SATISFACTION OF NHAI.

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.

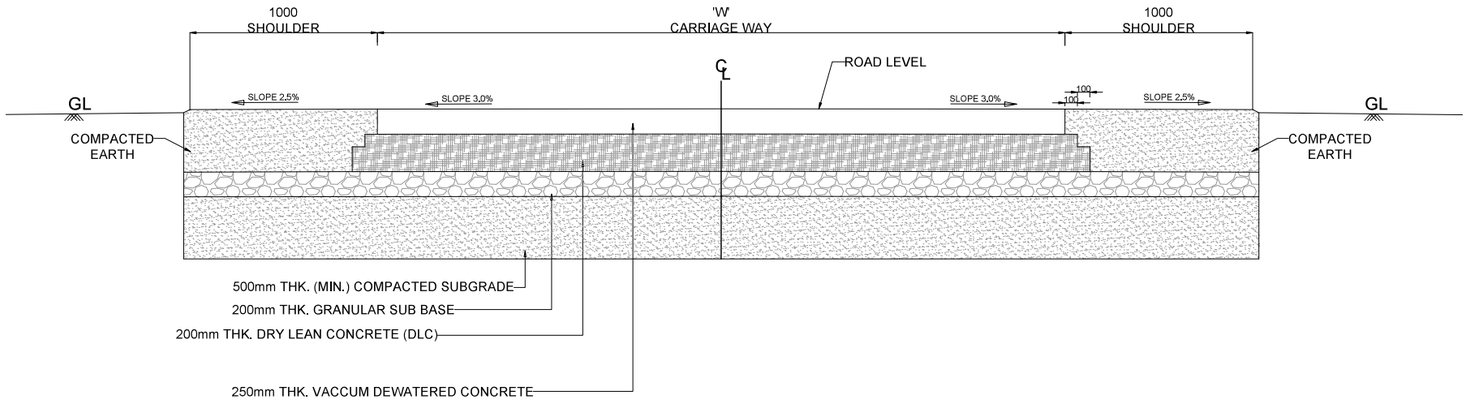
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

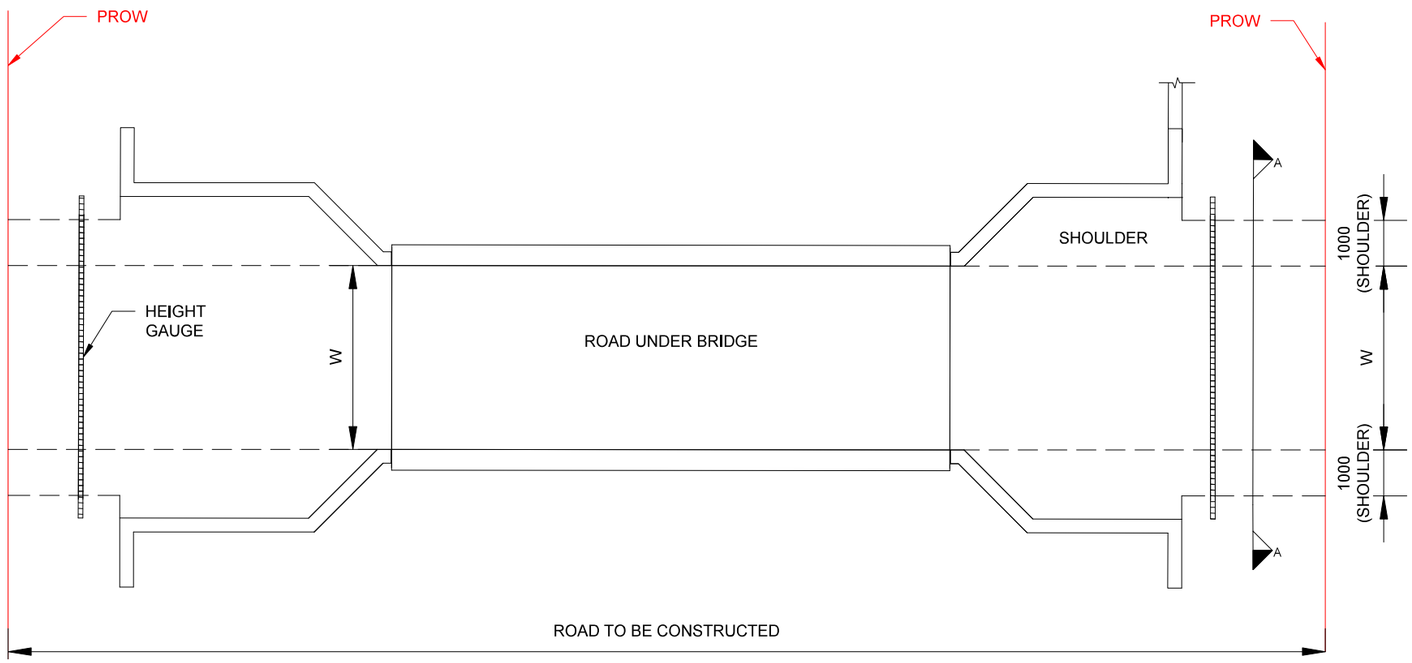
TITLE:-
CONCEPTUAL GENERAL ARRANGEMENT DRAWING
CROSSING OF HORC RAIL LINE BELOW VADODARA EXPRESSWAY

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-030_A0	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



TYPICAL CROSS-SECTION OF 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. ROAD SHALL BE CONSTRUCTED UPTO ROW OF RUB

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.

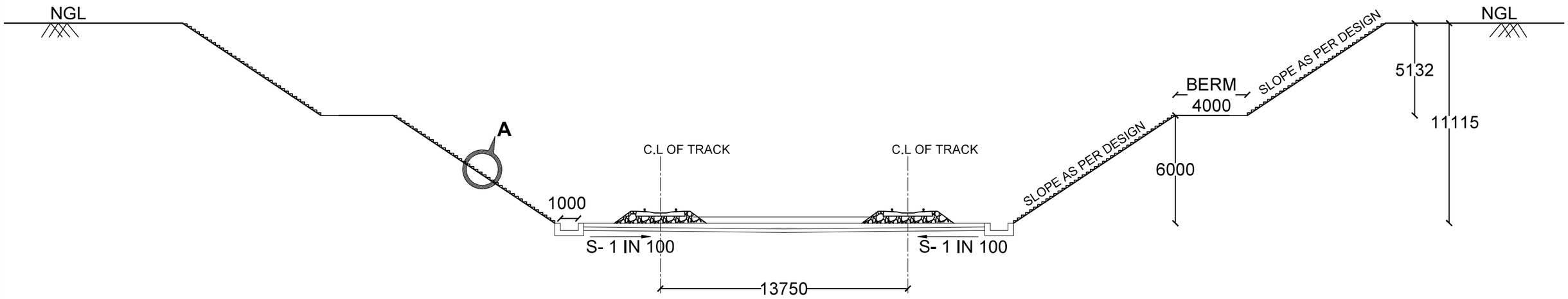
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

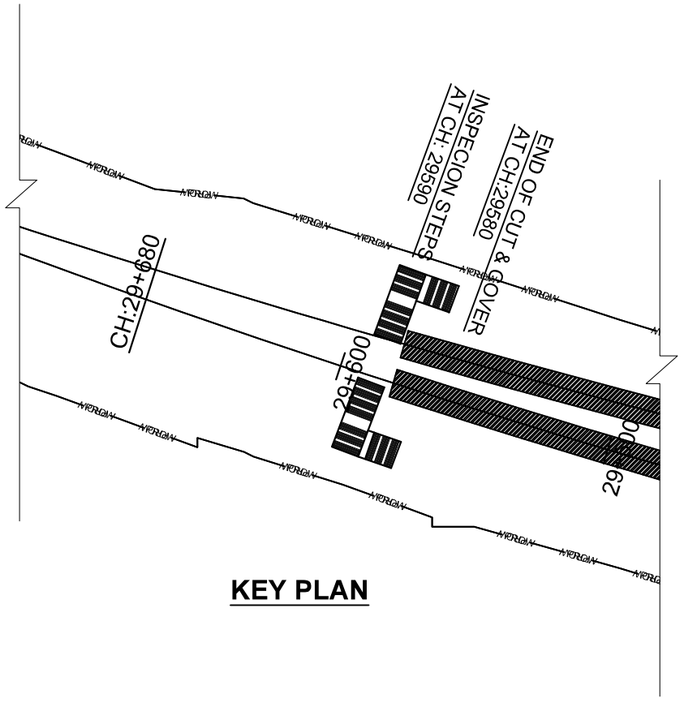
TITLE:- TYPICAL SKETCH FOR APPROACH ROAD OF RUBs

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-031_A0	1 OF 1

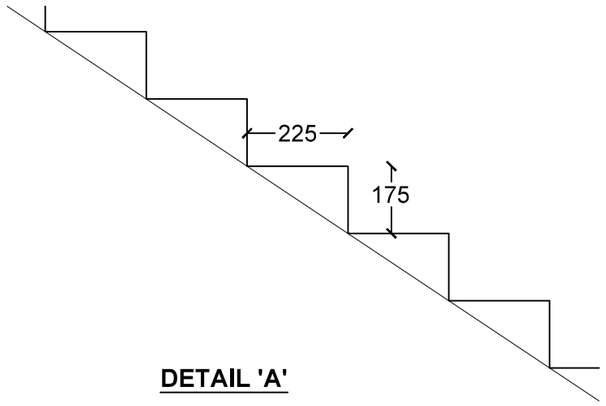
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11.01.2023	



CROSS SECTION NEAR
END OF CUT & COVER CH: 29590



KEY PLAN



DETAIL 'A'

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00m, WITH RESPECT TO UP MAIN LINE.

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.

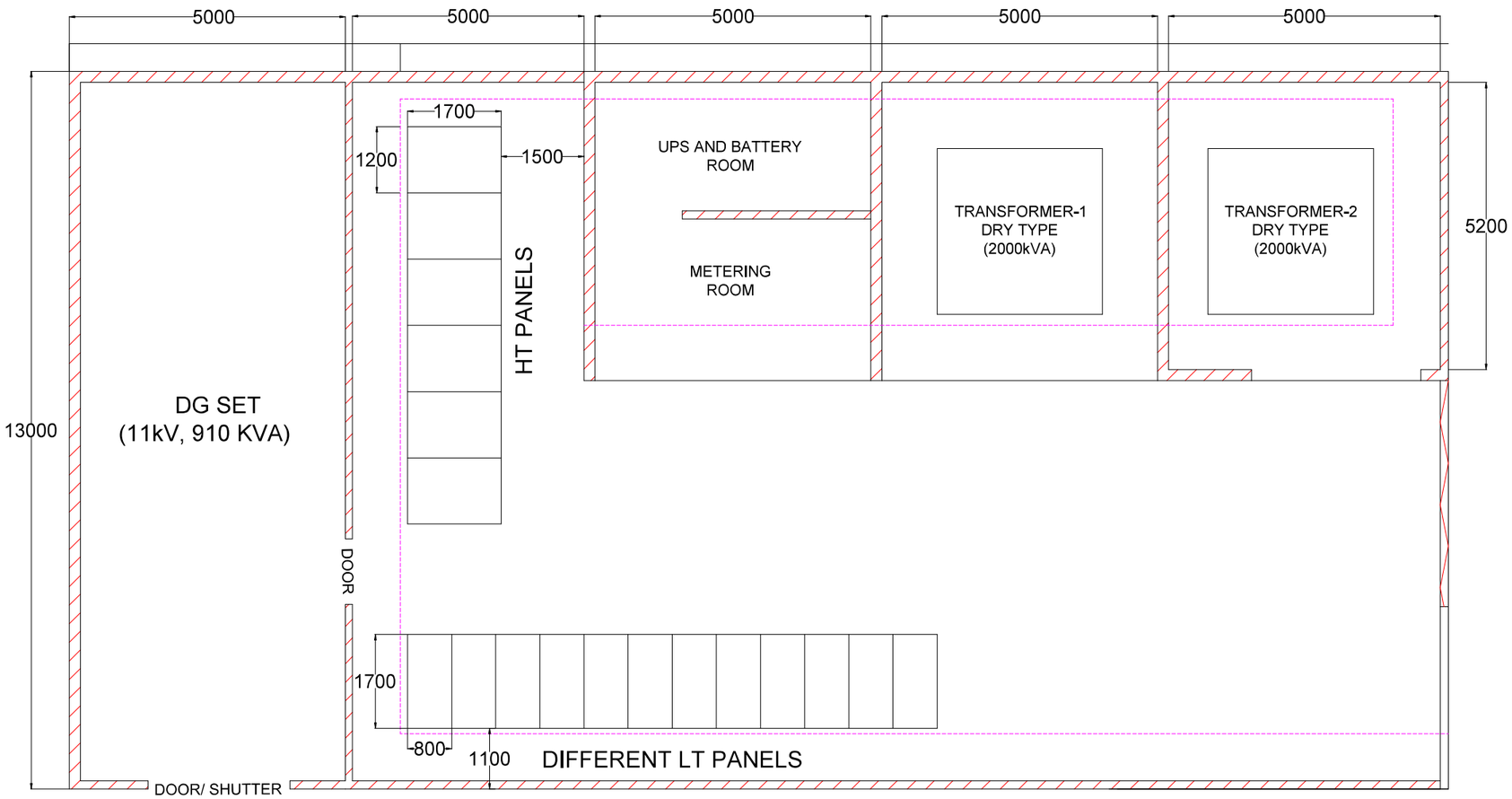
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE: **Conceptual sketch for details of inspection steps from cutting in formation to ground**

SKETCH NO.	SHEET NO.
GC-HRIDC-C4-SK-TUNNEL-002_A0	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	09.01.2023	

General Electrical Services Drawings



NOTES:

1. SUBSTATION TO BE PROVIDED WITH VENTILATION SYSTEM TO CATER LOAD OF EQUIPMENTS.
2. BAFFLE WALL HEIGHT SHALL COVER TOP OF THE TRANSFORMER LEVEL.
3. THE CABLE LAYING ARRANGEMENT INSIDE THE TRENCHES SHALL BE LAID AS PER SITE CONDITION.
4. THE BENDING RADIUS OF HT/LT CABLES SHALL CONFIRM TO IS-STANDARDS.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TENDER SPECIFICATION

INDICATIVE LAYOUT PLAN OF SUB-STATION (SS1) NEAR CONSTRUCTION CUM UTILITY SHAFT OF TUNNEL 11/0.443kV(25M X 13M) FOR REFERENCE PURPOSE ONLY

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
A,S. JANGHU CRE/Elect.		MENDLEEF KATIYAR AM/Elect.	
STIPHEN SAHOO ARE/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

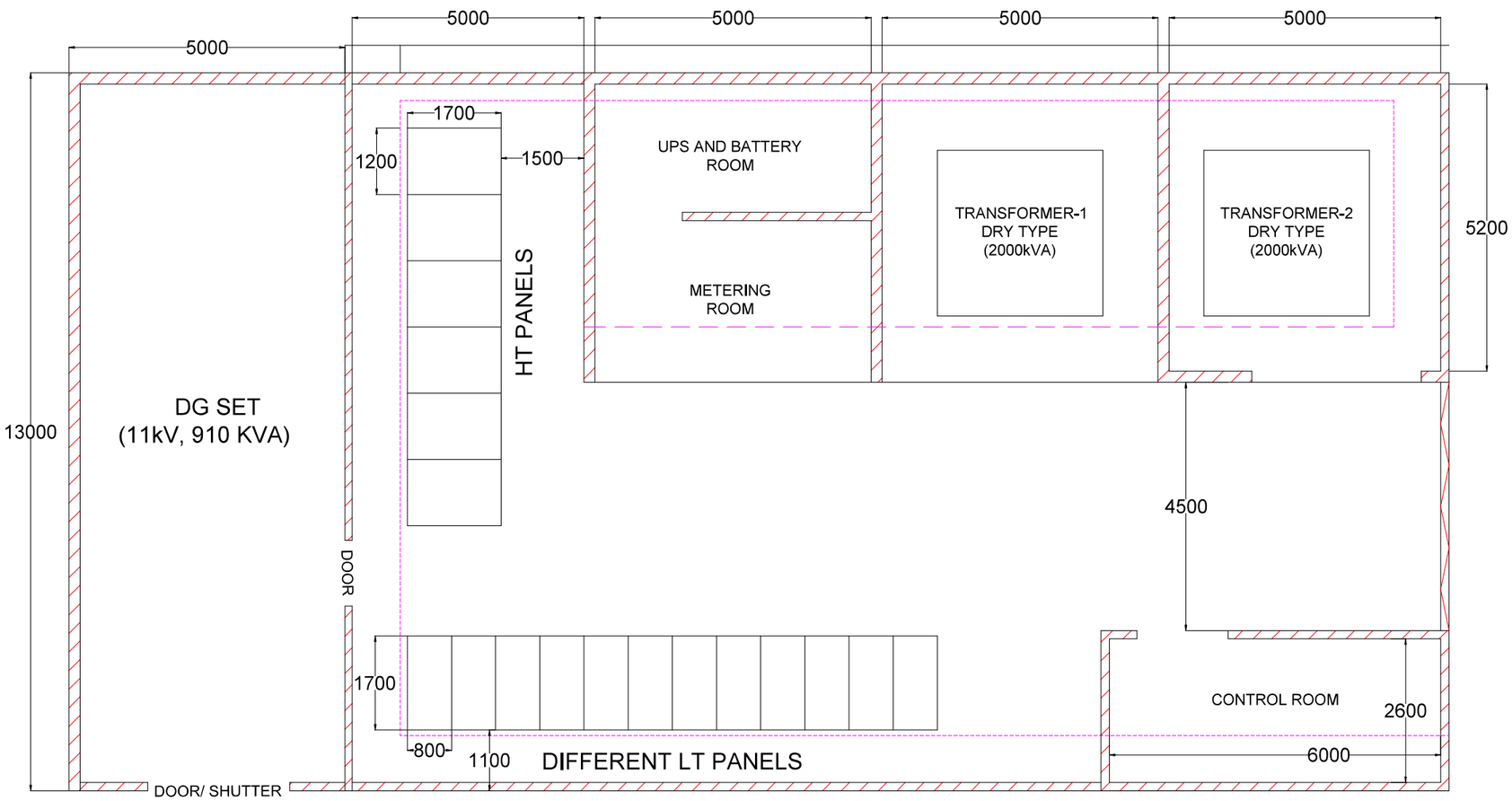
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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 LAYOUT PLAN OF SUB-STATION 11/0.433kV NEAR UTILITY SHAFT

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-TTL-ELE-001_A2	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07.11.2022	09.01.2023



NOTES:

1. SUBSTATION TO BE PROVIDED WITH VENTILATION SYSTEM TO CATER LOAD OF EQUIPMENTS.
2. BAFFLE WALL HEIGHT SHALL COVER TOP OF THE TRANSFORMER LEVEL.
3. THE CABLE LAYING ARRANGEMENT INSIDE THE TRENCHES SHALL BE LAID AS PER SITE CONDITION.
4. THE BENDING RADIUS OF HT/LT CABLES SHALL CONFIRM TO IS-STANDARDS.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TENDER SPECIFICATION

INDICATIVE LAYOUT PLAN OF SUB-STATION (SS2) NEAR SONIPAT END PORTAL OF TUNNEL 11/0.443kV (25M X 13M) FOR REFERENCE PURPOSE ONLY

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
A.S. JANGHU CRE/Elect.		MENDLEEF KATIYAR AM/Elect.	
STIPHEN SAHOO ARE/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.

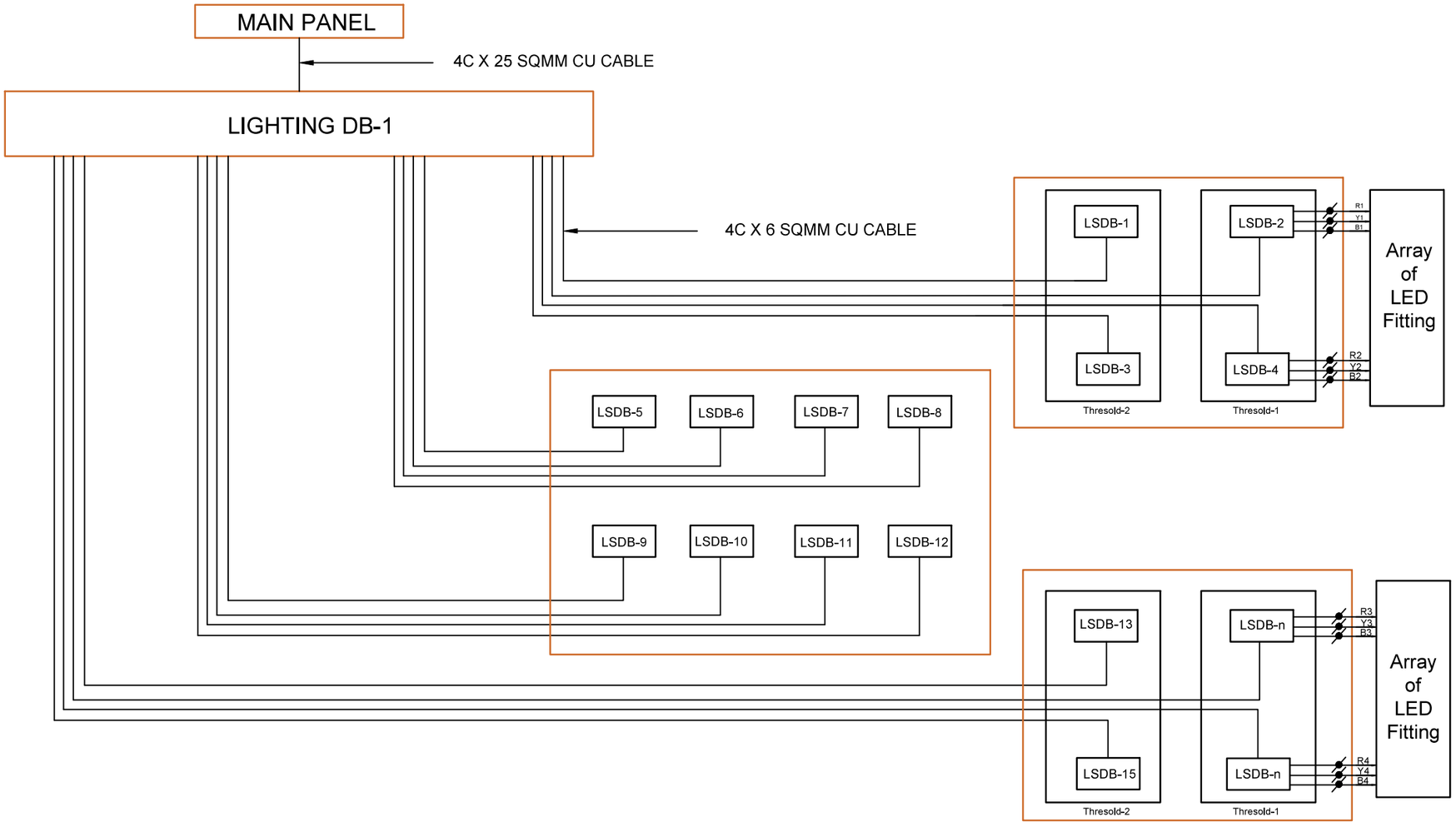
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

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

TITLE:- INDICATIVE LAYOUT PLAN OF SUB-STATION 11/0.433kV

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-TTL-ELE-002_A2	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07.11.2022	09.01.2023



POWER SUPPLY FOR LIGHTING ARRANGEMENT AT TUNNEL-1 & TUNNEL-2

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
A.S. JANGHU CRE/Elect.		MENDLEEF KATIYAR AM/Elect.	
STIPHEN SAHOO ARE/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

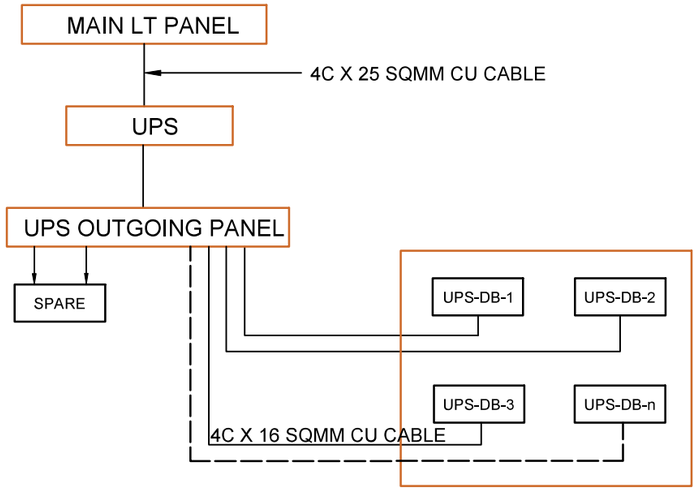
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

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

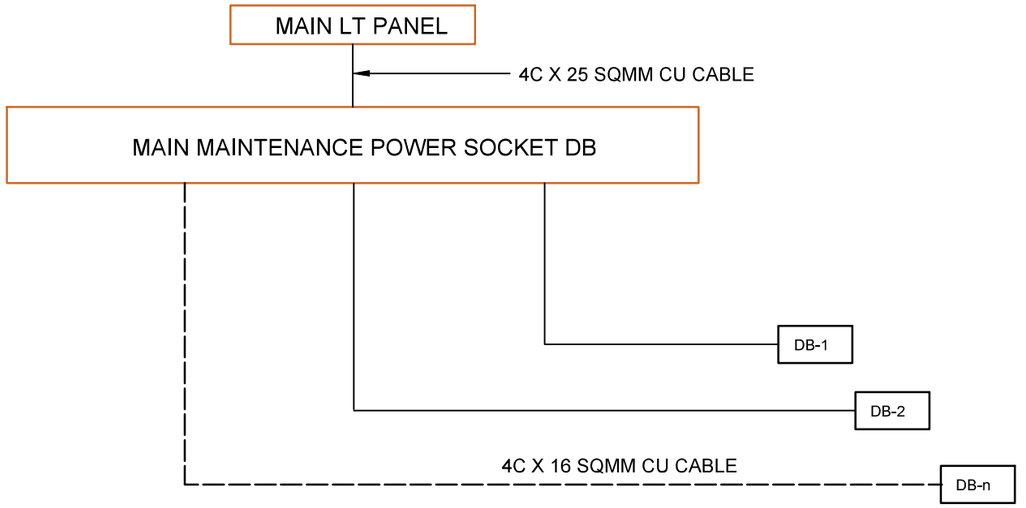
TITLE:- POWER SUPPLY FOR LIGHTING ARRANGEMENT (INDICATIVE)

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-TTL-ELE-003_A2	1 OF 1

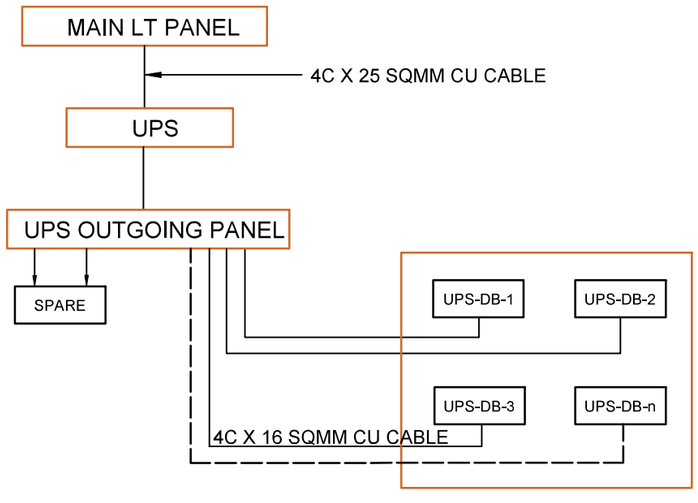
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07.11.2022	09.01.2023



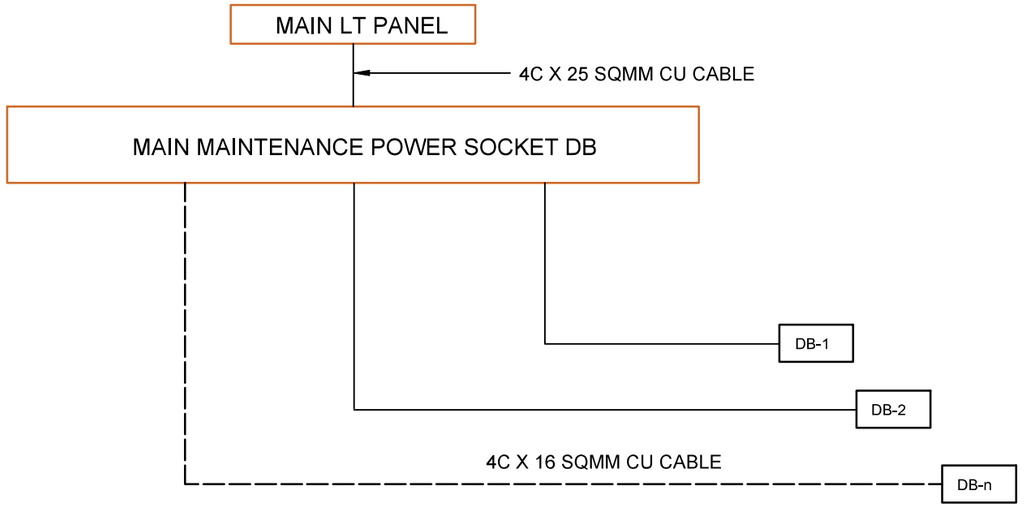
POWER SUPPLY ARRANGEMENT FOR UPS SUPPLY AT SS-1 IN BOTH TUNNELS



MAINTENANCE POWER SOCKET (1&3 PHASE) DB DIAGRAM AT TUNNEL -1



POWER SUPPLY ARRANGEMENT OF UPS MAIN PANEL AT SS-2 IN BOTH TUNNELS



MAINTENANCE POWER SOCKET (1&3 PHASE) DB DIAGRAM AT TUNNEL -2

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
A.S. JANGHU CRE/Elect.		MENDLEEF KATIYAR AM/Elect.	
STIPHEN SAHOO ARE/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.

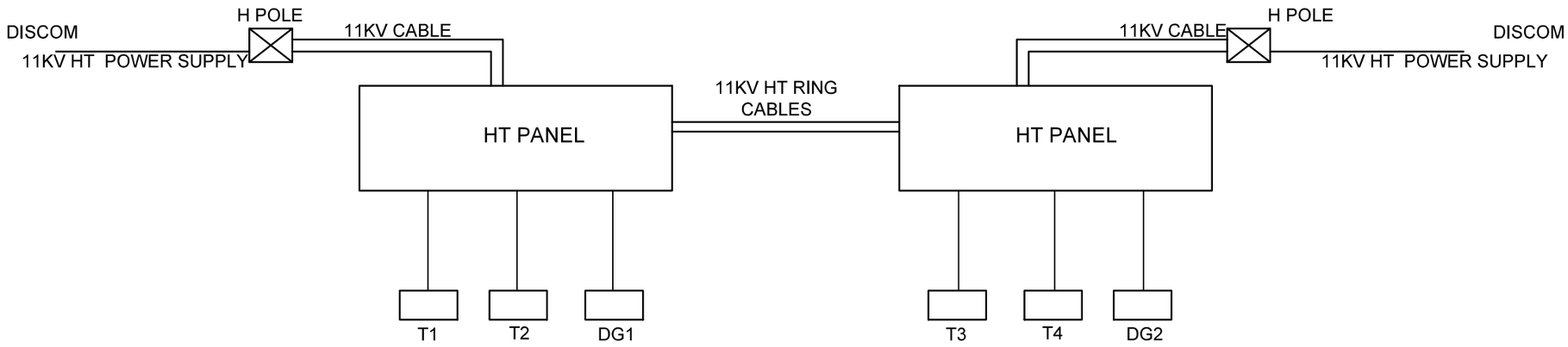
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- POWER SUPPLY ARRANGEMENT FOR EMERGENCY AND MAINTENANCE POWER SOCKET DIAGRAM (INDICATIVE)

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-TTL-ELE-004_A2	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	07.11.2022	09.01.2023

SINGLE LINE DIAGRAM OF HT POWER SUPPLY SYSTEM IN TUNNEL



NOTES:

1. 11 kV POWER SUPPLY FROM DISCOM MAY BE BY OVERHEAD LINE OR CABLE.
2. CABLE BENDING RADIUS TO BE MAINTAINED AS PER IS-STANDARDS.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TENDER SPECIFICATION

GC/HORC		HRIDC	
NAME / DEGINATION	SIGN	NAME / DEGINATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
A.S. JANGHU CRE/Elect.		MENDLEEF KATIYAR AM/Elect.	
STIPHEN SAHOO ARE/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

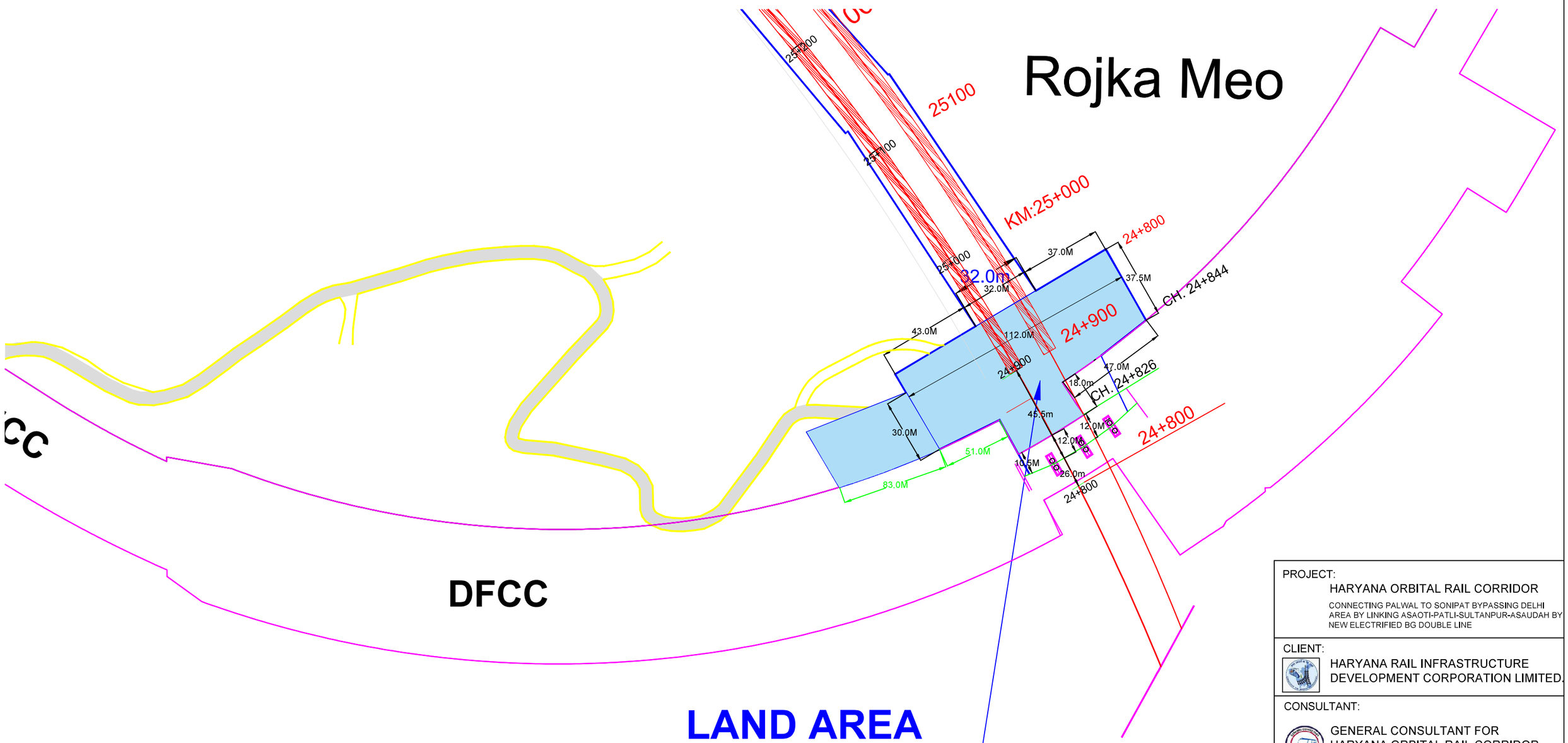
TITLE:-
SINGLE LINE DIAGRAM OF HT SYSTEM IN TUNNEL (INDICATIVE)

DRG. NO.	SHEET NO.
GC-HRIDC-C4-DRW-TTL-ELE-005_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	09.01.2023	

Land Area for Tunnel

Land Area Taken for Execution of Tunnel & Shafts



LAND AREA NEAR PORTAL - 1

LEGEND:

LAND WILL BE HANDED OVER IN D+7 DAYS

D- COMMENCEMENT DATE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		SHIV OM DWIVEDI CPM/HRIDC	
		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:
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CONSULTANT:
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RITES Limited in consortium with SMEC International Pty. Ltd.

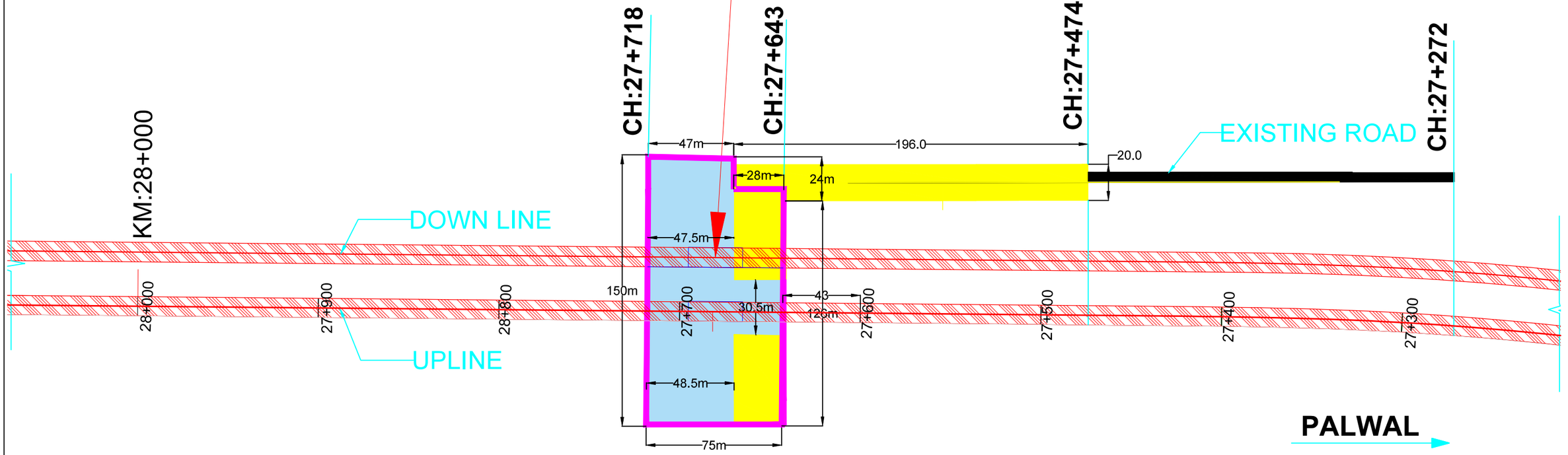
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
LAND AREA NEAR PORTAL-1

SKETCH NO.	SHEET NO.
HRIDC-C4-SK-LANDPLAN-001_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	03.01.2023	10.01.2023

PERMANENT VENTILATION
SHAFT 3 & 4
CH. 27+680 M



PALWAL

SONIPAT

LEGEND:

LAND WILL BE HANDED OVER IN D+7 DAYS

LAND WILL BE HANDED OVER IN D+90 DAYS

D- COMMENCEMENT DATE

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

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
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CLIENT:
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CONSULTANT:
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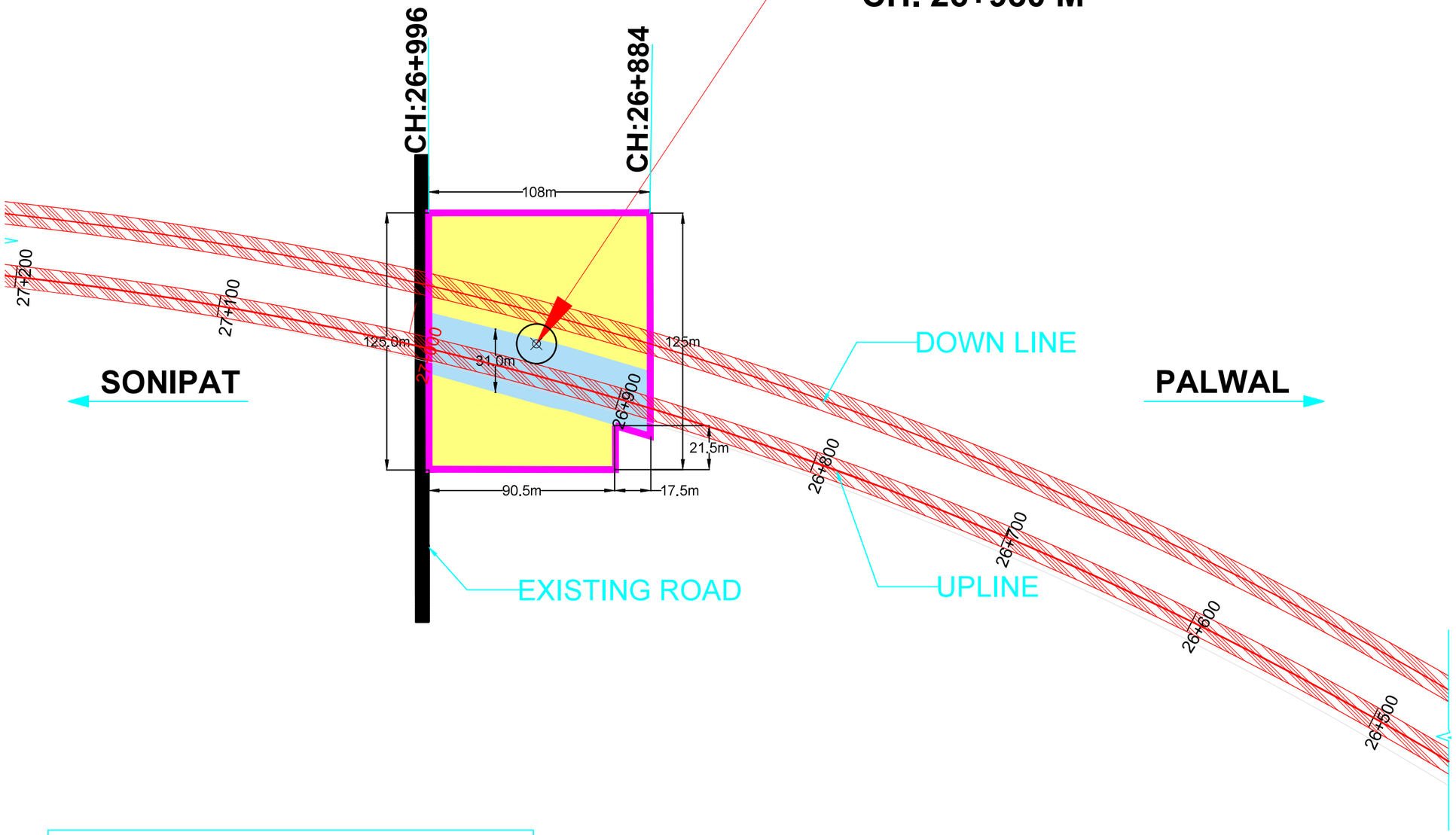
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
LAND AREA NEAR PERMANENT VENTILATION SHAFT 1 & 2

SKETCH NO.	SHEET NO.
HRIDC-C4-SK-LANDPLAN-002_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	03.01.2023	10.01.2023

CONSTRUCTION CUM UTILITY SHAFT CH. 26+950 M



LEGEND:

LAND WILL BE HANDED OVER IN D+7 DAYS

LAND WILL BE HANDED OVER IN D+90 DAYS

D- COMMENCEMENT DATE

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

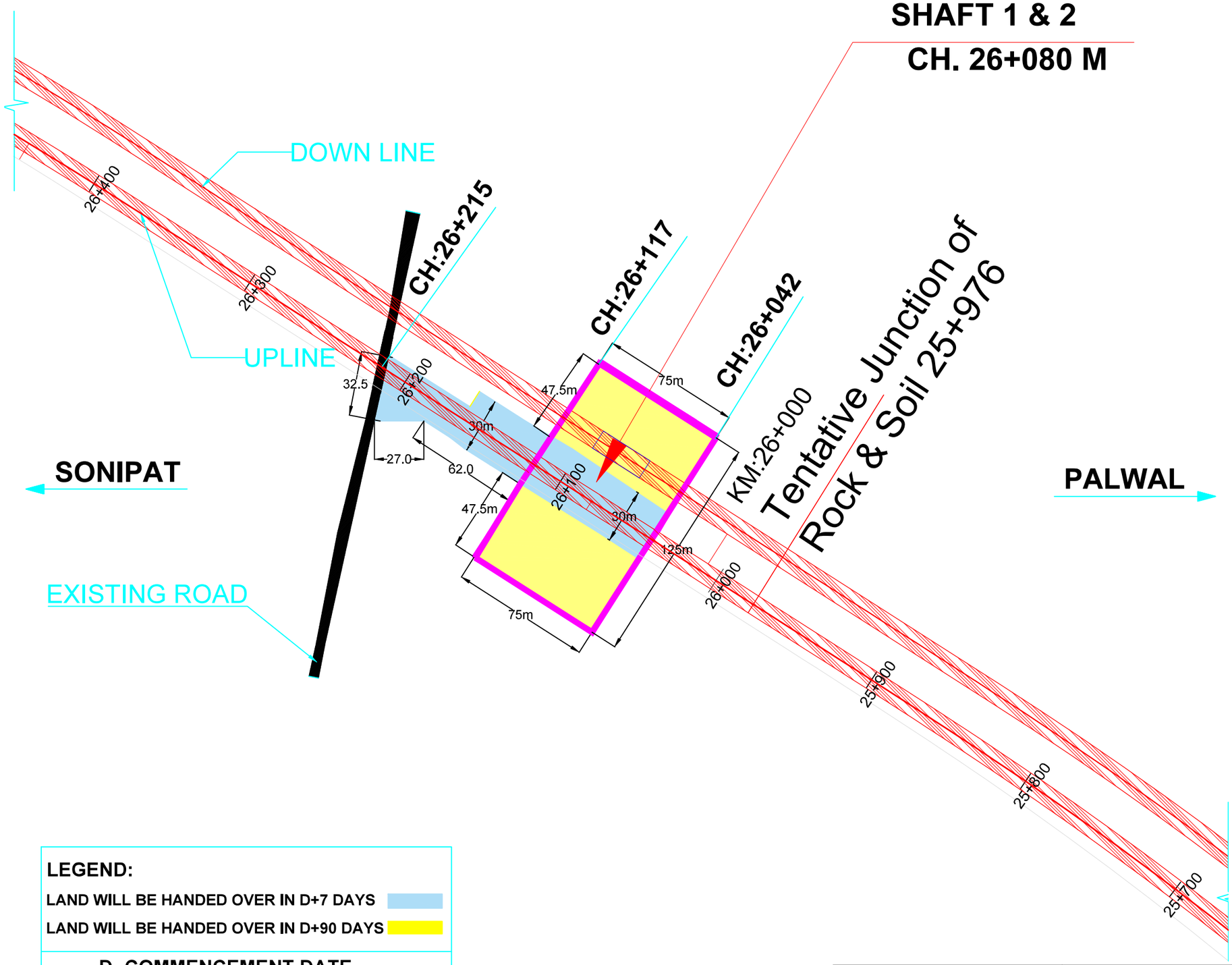
LAND AREA NEAR CONSTRUCTION CUM UTILITY SHAFT

SKETCH NO.	SHEET NO.
HRIDC-C4-SK-LANDPLAN-003_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	03.01.2023	10.01.2023

PERMANENT VENTILATION SHAFT 1 & 2

CH. 26+080 M



LEGEND:

LAND WILL BE HANDED OVER IN D+7 DAYS

LAND WILL BE HANDED OVER IN D+90 DAYS

D- COMMENCEMENT DATE

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

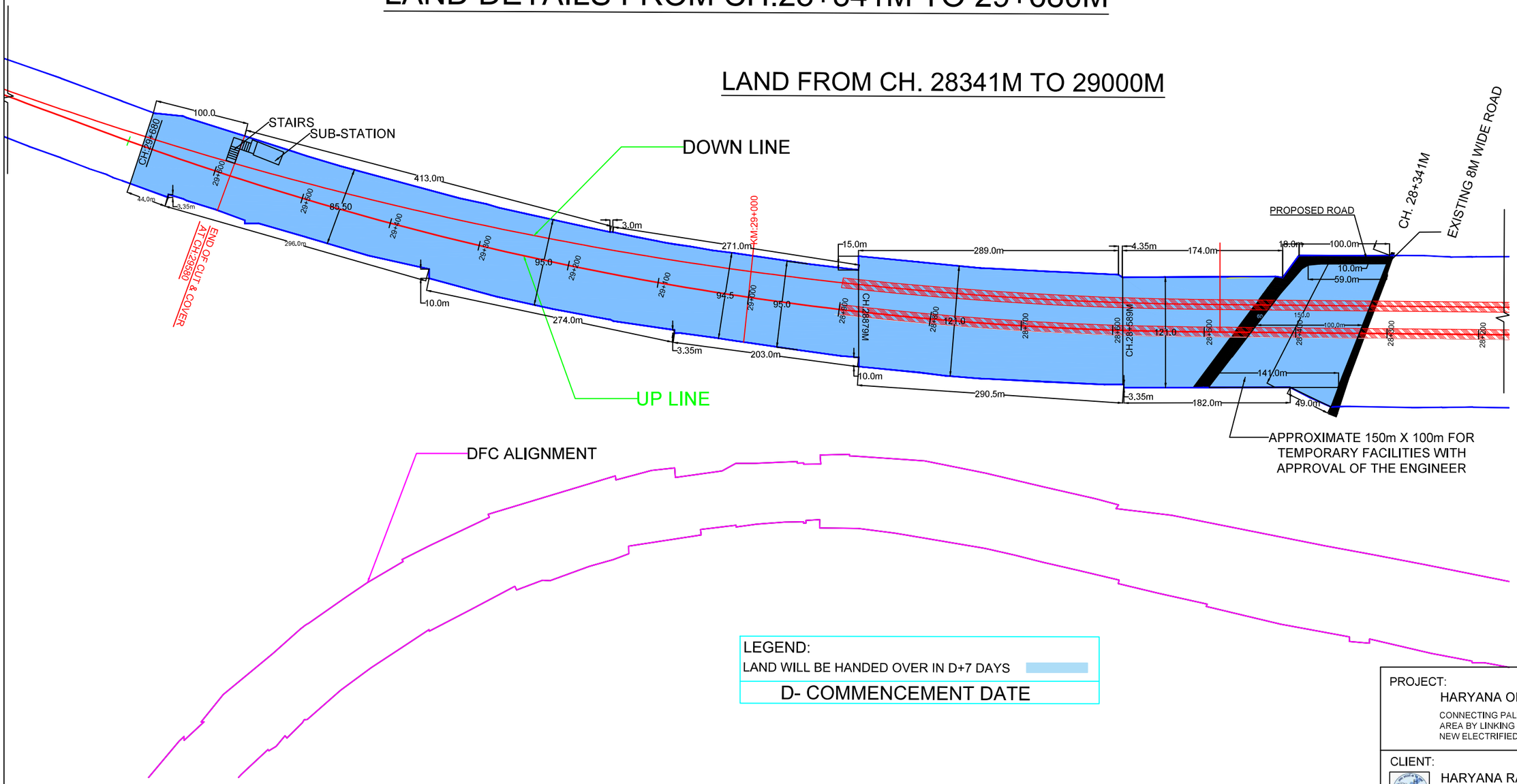
TITLE:-
LAND AREA NEAR PERMANENT VENTILATION SHAFT 3 & 4

SKETCH NO.	SHEET NO.
HRIDC-C4-SK-LANDPLAN-004_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	03.01.2023	10.01.2023

LAND DETAILS FROM CH.28+341M TO 29+680M

LAND FROM CH. 28341M TO 29000M



LEGEND:

LAND WILL BE HANDED OVER IN D+7 DAYS

D- COMMENCEMENT DATE

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

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

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

TITLE:-

LAND DETAILS FROM CH: 28341m TO 29680m

SKETCH NO.	SHEET NO.
HRIDC-C4-SK-LANDPLAN-005_A1	

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	03.01.2023	10.01.2023