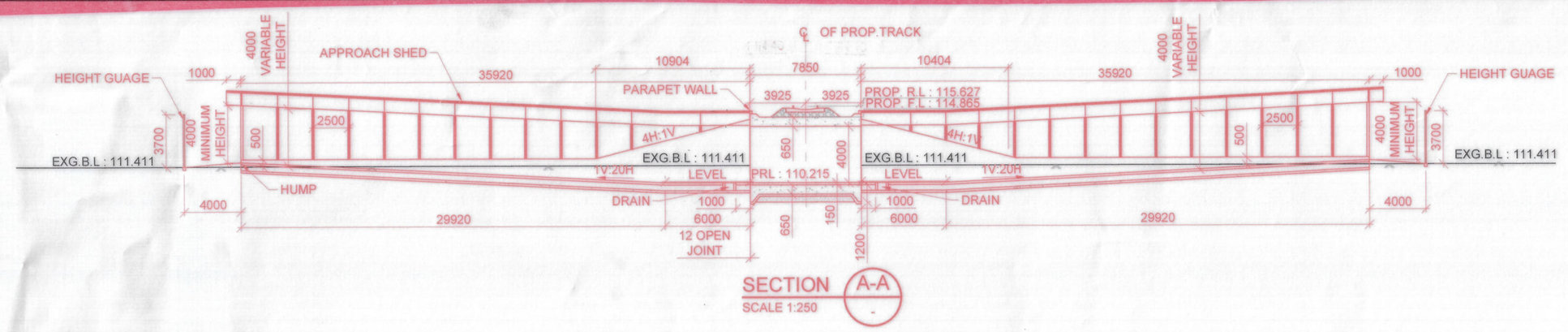
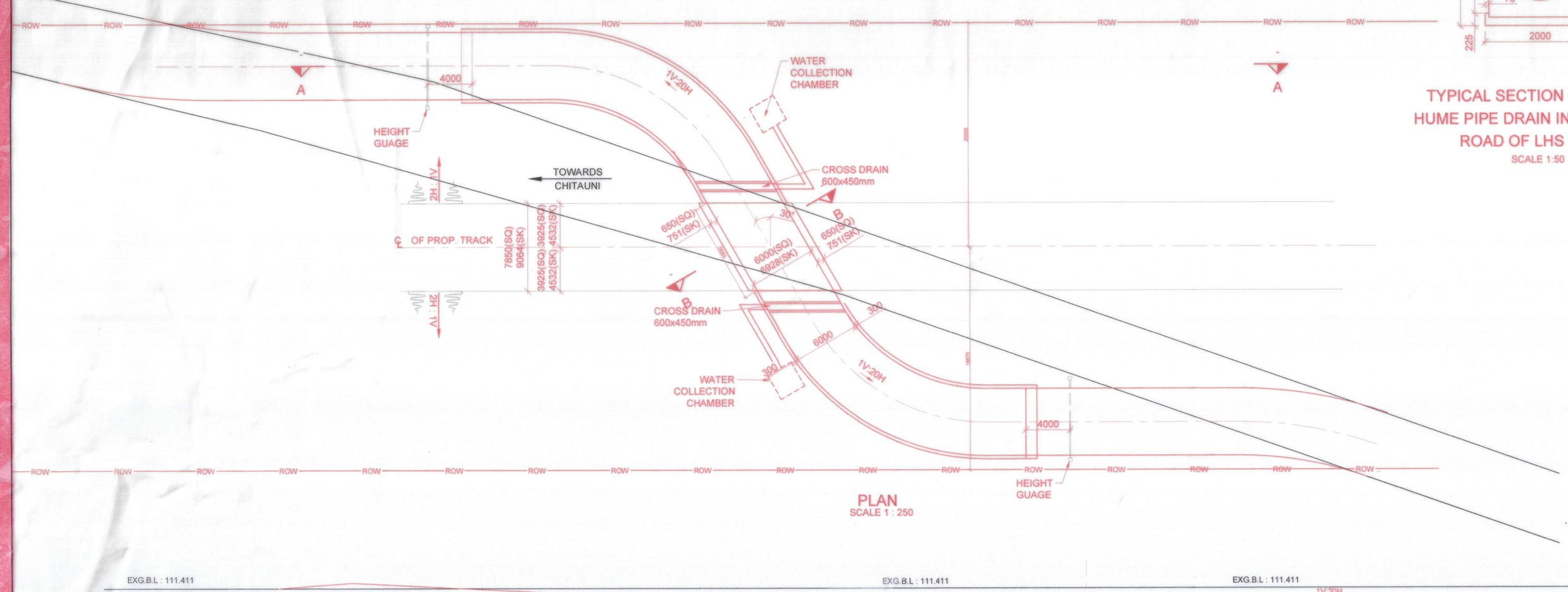
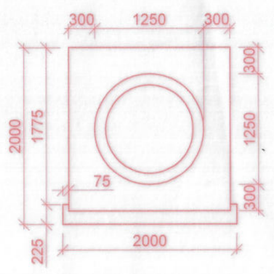
Signature Not Verified
Digitally signed by PANKAJ PANDEY
Date: 2025.12.12 11:29:57 IST
Location: NF Railways



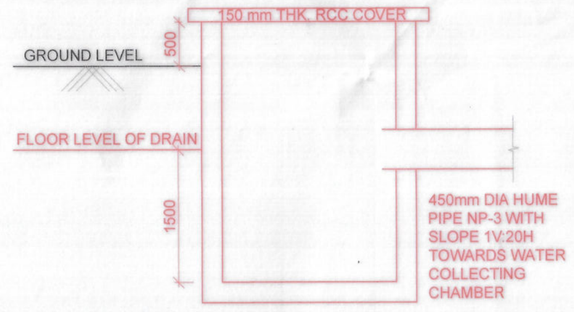
SECTION A-A
SCALE 1:250



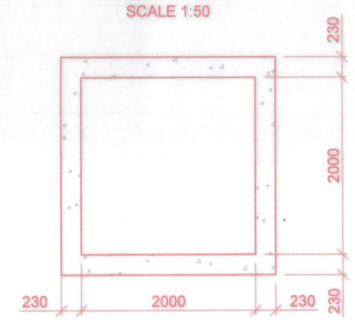
PLAN
SCALE 1 : 250



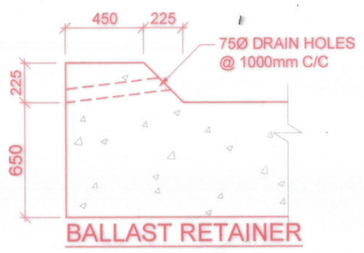
TYPICAL SECTION OF CROSS HUME PIPE DRAIN IN APPROACH ROAD OF LHS WORK
SCALE 1:50



ELEVATION
SCALE 1:50



PLAN
DETAILS OF WATER COLLECTION CHAMBER
SCALE 1:50



BALLAST RETAINER
SCALE 1:25

AUTHORITY OF WORK
PINK BOOK– 2024–25
PAGE NO.–4:2:1
ITEM NO. – 23

LEGEND

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

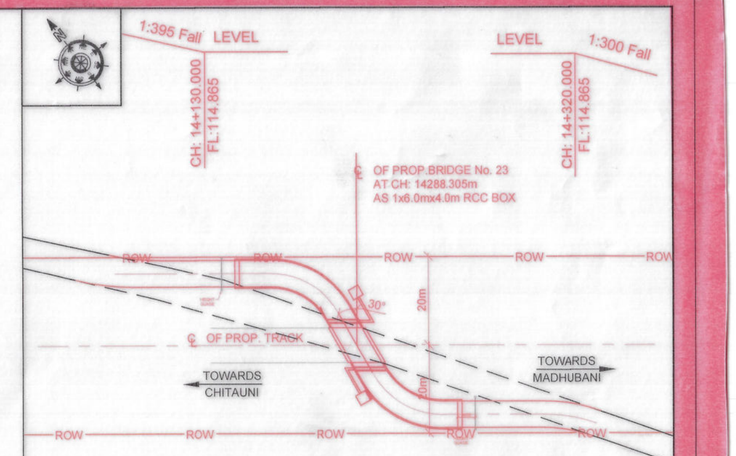
CONSTRUCTION DEPTH

1) RAIL (60kg)	172 mm
2) RUBBER PAD	10 mm
3) WIDER PSC SLEEPER HEIGHT AT RAIL SEAT	230 mm
4) MINIMUM BALLAST THK.	350 mm
TOTAL	762 mm

COLOR CODE LEGEND

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

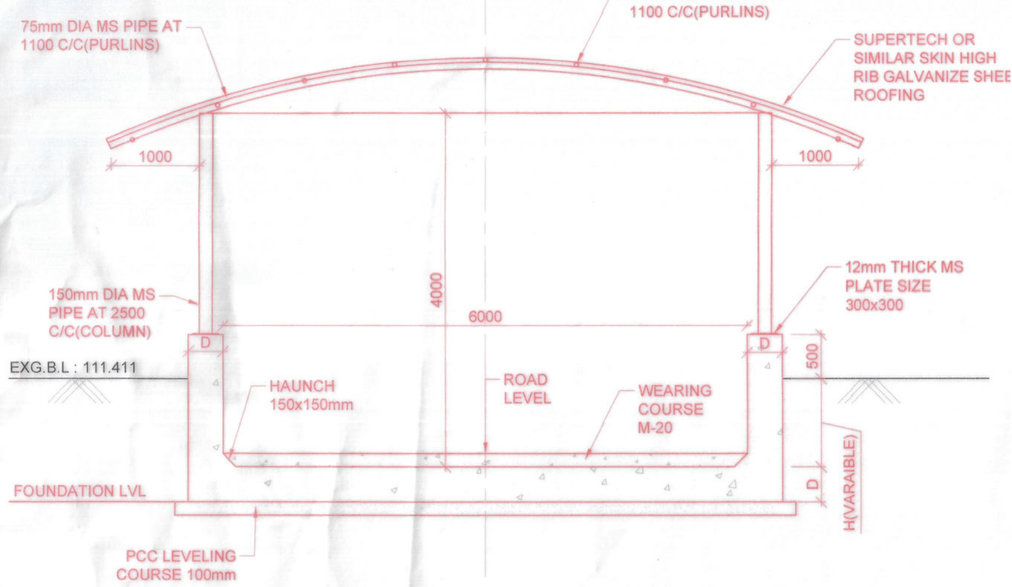
H	D
1-2m	300
2-3m	300
3-4m	300
4-5m	400
5-6m	400



KEY PLAN
NOT TO SCALE

NOTES:-
1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED.
2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS (GRADE Fe 415) CONFORMING TO IS: 1786.
4. MINIMUM LAP LENGTH REQUIREMENT FOR M-35 SHALL BE AS PER IS 456: 2000
5. THE BRIDGE IS LOCATED IN SEISMIC ZONE IV.
6. ENSURE PROPER COMPACTION OF SOIL BEHIND RETAINING WALLS.
7. BEHIND RCC BOX WELL HAND PACKED BOULDERS/COBBLES TO A THICKNESS NOT LESS THAN 600MM WITH SMALLER SIZE TOWARD, SHELL BE PROVIDED AS PER DRAWING & AS PER CLAUSE 7.5 OF IRC GUIDELINES FOR STRUCTURE AND FOUNDATION CODE.
8. MAXIMUM DESIGN PRESSURE ON FOUNDATION CONCRETE SHALL BE 22.0 T/M².
9. FOR REINFORCEMENT DETAIL OF RCC BOX SEE DRAWING NUMBER RS/D/B-10162R AND RS/D/B-10162/1/R.
10. RCC BOX WITH KEY CONSTRUCTION SHALL BE AS PER DRAWING NUMBERS RS/D/B-10162R AND RS/D/B-10162/1/R.
11. EPOXY GROUTING WITH GI SHEET ON BOTTOM OF JOINTS TO BE PROVIDED TO PREVENT ANY LEAKAGES AT JOINT.
12. SUITABLE GRANULAR MATERIALS TO BE PROVIDED BELOW RCC BOX TO IMPROVE BEARING CAPACITY OF SOIL, IF REQUIRED.
13. FOR RCC WORK DESIGN MIXED M35 WILL BE USED EXPECT UNLESS OTHERWISE SPECIFIED.
14. WATERPROOFING COMPOUND MIX WITH CONCRETE FOR WATERPROOFING.
15. ON BOTH APPROACHES SHED WILL BE AS PER APPROVED CBE DRAWING NO.B/LHS/PBE-SZP/117/06-19.
16. BEHIND RCC BOX WELL HAND PACKED BOULDERS/COBBLES TO A THICKNESS NOT LESS THEN 600MM WITH SMALLER SIZE TOWARDS BACK FILL, SHALL BE PROVIDED AS PER DRAWING & AS PER CLAUSE 7.5 OF IRC BRIDGE SUB STRUCTURE & FOUNDATION CODE.
17. TOP OF RETAINING WALL SHALL BE KEPT MINIMUM 500 MM ABOVE THE EXISTING GROUND LEVEL AT ALL LOCATIONS IN APPROACH.
18. BEFORE EXECUTION OF WORK FEASIBILITY WILL BE CHECKED BY SITE ENGINEER.
19. LAYOUT SHOULD BE CHECKED BY AXEN/XEN/CON & ALL REFERENCE, PILLARS & LINE SHOULD BE KEPT INTACT TILL THE ENTIRE WORK IS COMPLETED.
20. HEIGHT GAUGE, SPEED BREAKER WARNING BOARD ETC SHOULD BE PROVIDED ON BOTH END OF THE SUBWAY.
21. RCC WATER COLLECTION CHAMBER FOR THE RAINWATER, INFILTRATING INTO THE APPROACH ROAD AND LHS SHOULD BE CAST MONOLITHICALLY WITH RCC FLOOR AND WALL SO THAT NO INGRESS OF GROUND WATER IN IT.
22. TYPICAL PLAN FOR HUME PIPE CULVERT HAS BEEN SHOWN IN THE DRAWING FOR CONSTRUCTION AT APPROACHES IF REQUIRED.
23. AS THE GROUND WATER LEVEL IS HIGH ALL THE NECESSARY PRECAUTIONS TO BE TAKEN TO PROTECT THE LHS FROM WATER LOGGING ETC.
24. RECOMMENDATION GIVEN IN RLY BD'S LETTER NO. 2017/CE-IV/LHS/88DT 22/04/2020 SHOULD BE FOLLOWED AS PER SITE CONDITION.
25. LAND WILL BE ACQUIRED AS PER SITE CONDITION.
26. U-TYPE RETURN WALL AS PER APPROVED CBE DRG. NO. B/LHS/PBE-SZP/117/06-19.
27. TYPE OF ROAD IS VILLAGE ROAD.
28. SHARP CURVE IN THE APPROACH ROAD TO BE AVOIDED.
29. HEIGHT GAUGE AS PER RDSO DRG. RDSO/M-0001.
30. SOIL BEARING CAPACITY AFTER STRENGTHENING OF SOIL AND CONFIRMED BY PLATE LOAD TEST SHOULD BE MENTION IN COMPLETION PLAN.
31. HUMP AND STEEL GRATING DRAIN COVER AS PER DRAWING NO. B-10159.

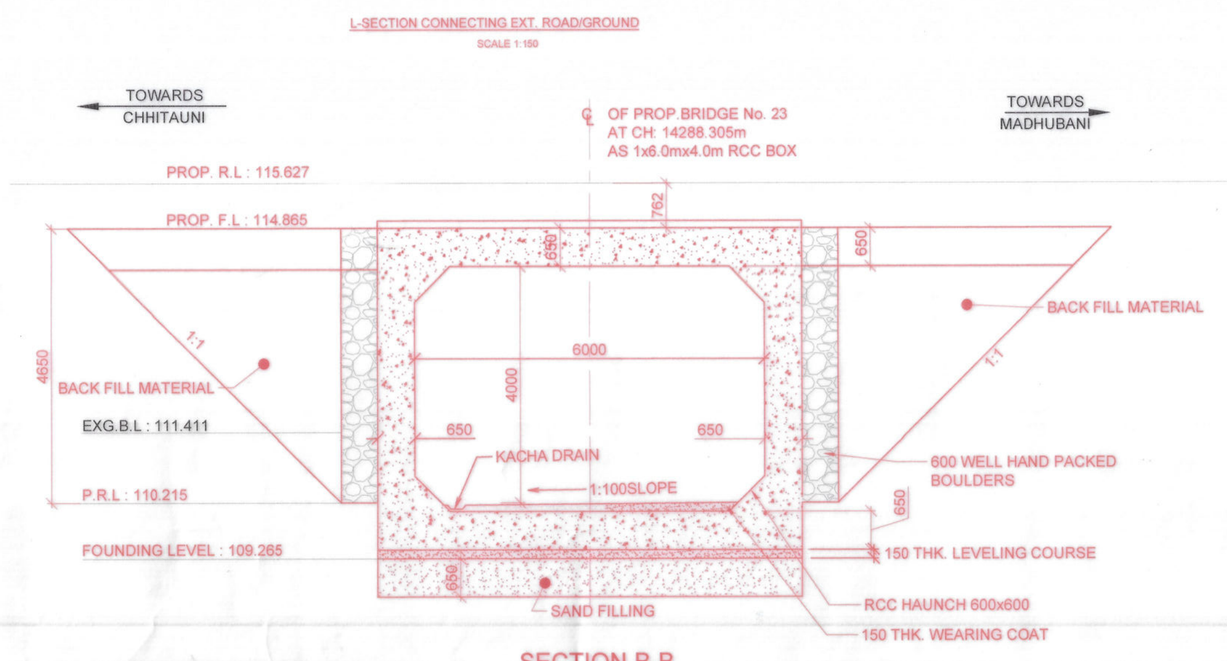
	4000		29920					6000	12	7850	12	6000						29920			4000	
PRO. ROAD LEVEL (M)	111.411	111.711	111.458	111.196	110.946	110.696	110.446	110.215	111.411	110.215	110.215	110.215	110.215	110.446	110.696	110.946	111.196	111.458	111.711	111.411		
GROUND LEVEL (M)	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411	111.411		
CHAINAGE (M)	43.617	39.617	35.000	30.000	25.000	20.000	15.000	9.937	3.925	0.000	3.925	10.387	15.000	20.000	25.000	30.000	35.000	39.617	43.617			



TYPICAL DETAIL OF "U" SHAPE RCC APPROACHES
SCALE 1:50

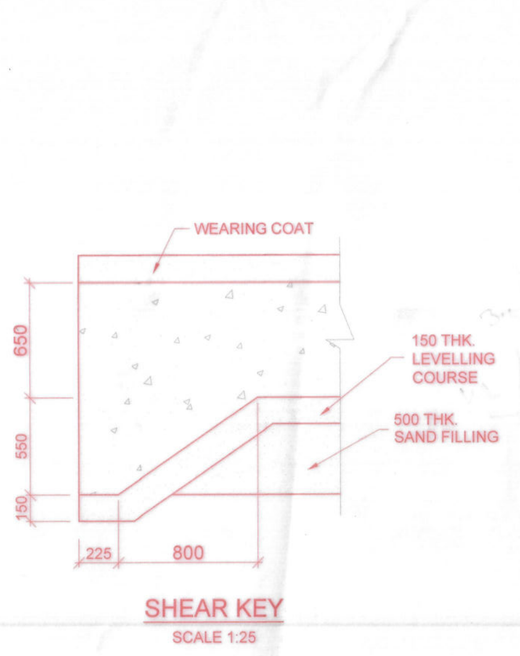
S.NO.	BR.NO.	CHAINAGE	SIZE OF STRUCTURE (M)XHT.(M)	SKEW ANGLE DEGREE	R.L RAIL LEVEL	F.L FORMATION LEVEL	G.L GROUNDLEVEL /EXISTING ROAD LEVEL	P.R.L PROP. ROAD LEVEL	F.L FOUNDING LEVEL
1	23	14288.305	1X5.5X4.0	30°	115.627	114.865	111.411	110.215	109.265

L-SECTION CONNECTING EXT. ROAD/GROUND
SCALE 1:100



GROUND WATER LEVEL:- 106.705

SECTION B-B
SCALE 1:75



SHEAR KEY
SCALE 1:25

BOREHOLE PROFILE
SECTION: CHITAUNI TO MADHUBANI
Bore Hole Terminated at : 10.45M.

DEPTH (M)		SPT N-VALUE	DESCRIPTION OF SOIL	IS CLASSIFICATION	
0.00	0.50	--	ML	MEDIUM DENSE LITE BROWN, SANDY SILT (SP)	RL=110.215
0.50	0.95	15			
1.50	1.95	15			FL=109.265
2.50	2.80	15	CL	STIFF, LITE BROWN, LOW PLASTICITY CLAY (CL)	SBC=36.29 t/m² > 22.0 t/m² (safe)
3.00	3.45	15	SP	MEDIUM DENSE LITE GRAY POORLY GRADED SAND (SP)	
4.50	4.95	17			
6.00	6.45	17			
7.50	7.95	19			
9.00	9.45	19			
10.00	10.45	20			

BRIDGE NO.: 23
BOREHOLE NO.: 01

LOADING STANDARD
25T-AXLE LOAD-2008

		CE / CON / I/GKP	(SANJAY KANOJIA)
DY. CE / CON /BSB	(PANKAJ PANDEY)	DY. CE / CON. / P&D	(SHAILENDRA SINGH)
XEN / CON / GKP.	(S.K.SINGH)	XEN / C / DESIGN	(R.K.SINGH)
		CONST. & HQ. OFFICER'S SIGNATURE	

CLIENT : NORTH EASTERN RAILWAY

PROJECT : CHITAUNI-TAMKUHI ROAD NEW LINE PART-1

TITLE : GENERAL ARRANGEMENT DRAWING FOR PROPOSED BR. NO. 23 (1X6.00MX4.0M) (RUB) KM 14/2-3

BETWEEN STATION :-CHITAUNI-MADHUBANI | KM : 14/2-3 CH:- 14288.305M

TYPE OF MAP : GENERAL ARRANGEMENT DRAWING

FILE NO. AAA/2644/STR/BR.NO. 23/GAD/001

CONSULTANT: aarvee associates architects engineers & consultants pvt. ltd.

CE/CON./ Plan No. B/RUB/CTE-TOI/12/16 2025 | SCALE - AS SHOWN

Date: 23/06/2025 | SHEET :

FOR EPC TENDER ONLY

(G.K.MISHRA) SSE/W/CON/GKP	RANJEET KUMAR SINGH (R.K.SINGH) SSE/DRG./CON/CPR	JE/DES/CON/GKP	(BILAL AHMAD) SSE/DESI/CON/GKP	DRAWN	CHK. BY