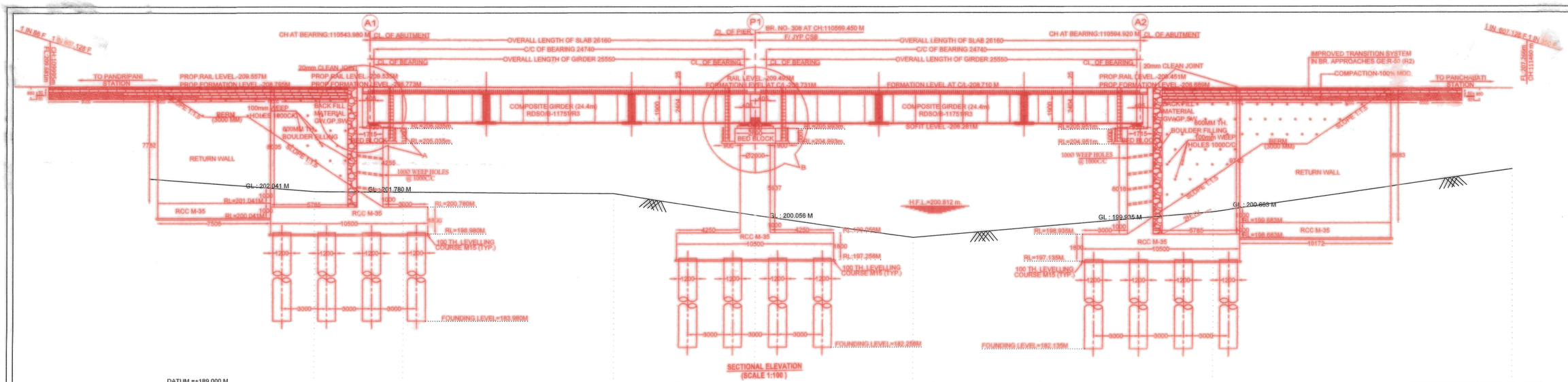
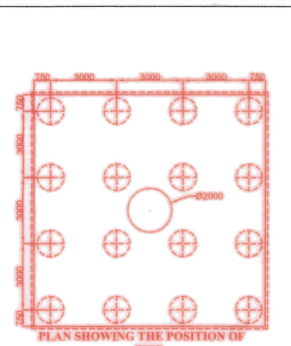



SECTIONAL ELEVATION
(SCALE 1:100 )

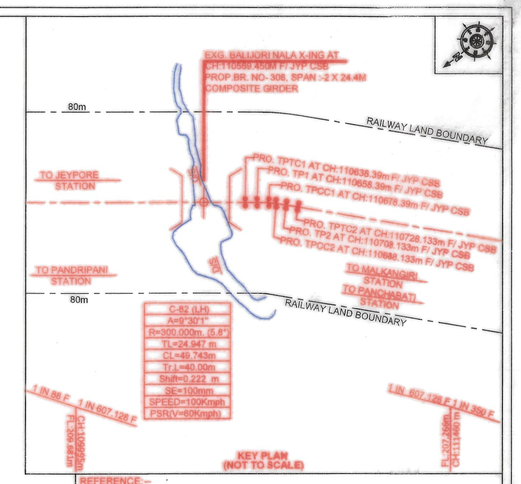
DATUM =+189.000 M

| CHAINAGE | 110540.00 | 110545.95 | 110550.00 | 110599.45 | 110599.00 | 110600.00 | 110620.00 |
|---|---|---|---|---|---|---|---|
| GROUND LEVEL | 201.819 | 201.774 | 201.669 | 200.189 | 198.727 | 200.423 | 203.295 |
| FORMATION LEVEL | 205.325 | 205.326 | 205.347 | 205.367 | 205.459 | 205.482 | 205.484 |
| FILLING HEIGHT | +3.506 | +3.594 | +3.688 | +5.189 | +6.682 | +5.029 | +2.259 |




PLAN SHOWING THE POSITION OF PIER
(SCALE 1:100)

| DETAILS OF | PROPOSED BRIDGE |
|---|---|
| 1. LODING STANDARD | 25T AXLE LOADING |
| 2. ALIGNMENT | STRIGHT |
| 3. GRADE | 1 IN 607.128 F |
| 4. SIZE OF BRIDGE | 2 X 24.40 m C.G |
| 5. DESIGN DISCHARGE | 352.30 Cumecs |
| 6. VERTICAL CLEARANCE | 5.070 m |
| 7. FREE BOARD | 7.400 m |
| 8. SCOUR DEPTH | 4.19 m |
| 9. FOUNDATION | PILE |



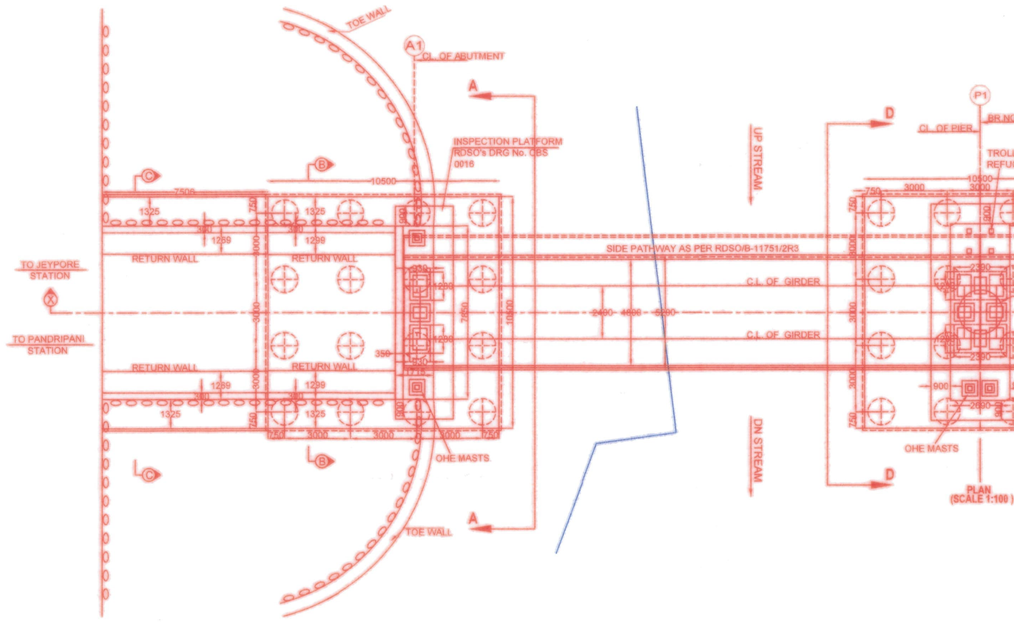

KEY PLAN
(NOT TO SCALE)

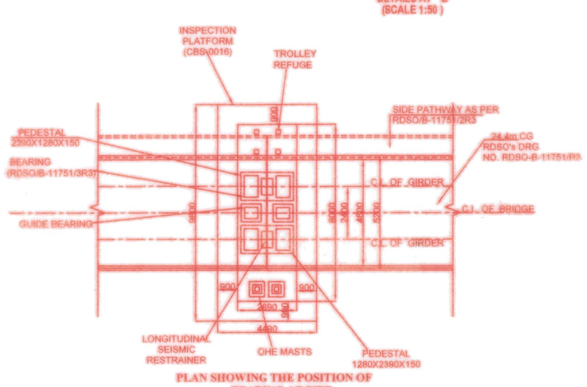
REFERENCE:-

1. FOR GAD DETAILS OF GIRDER REFER RDSO DRG. NO. -
   i) RDSO/B-11751/R3.

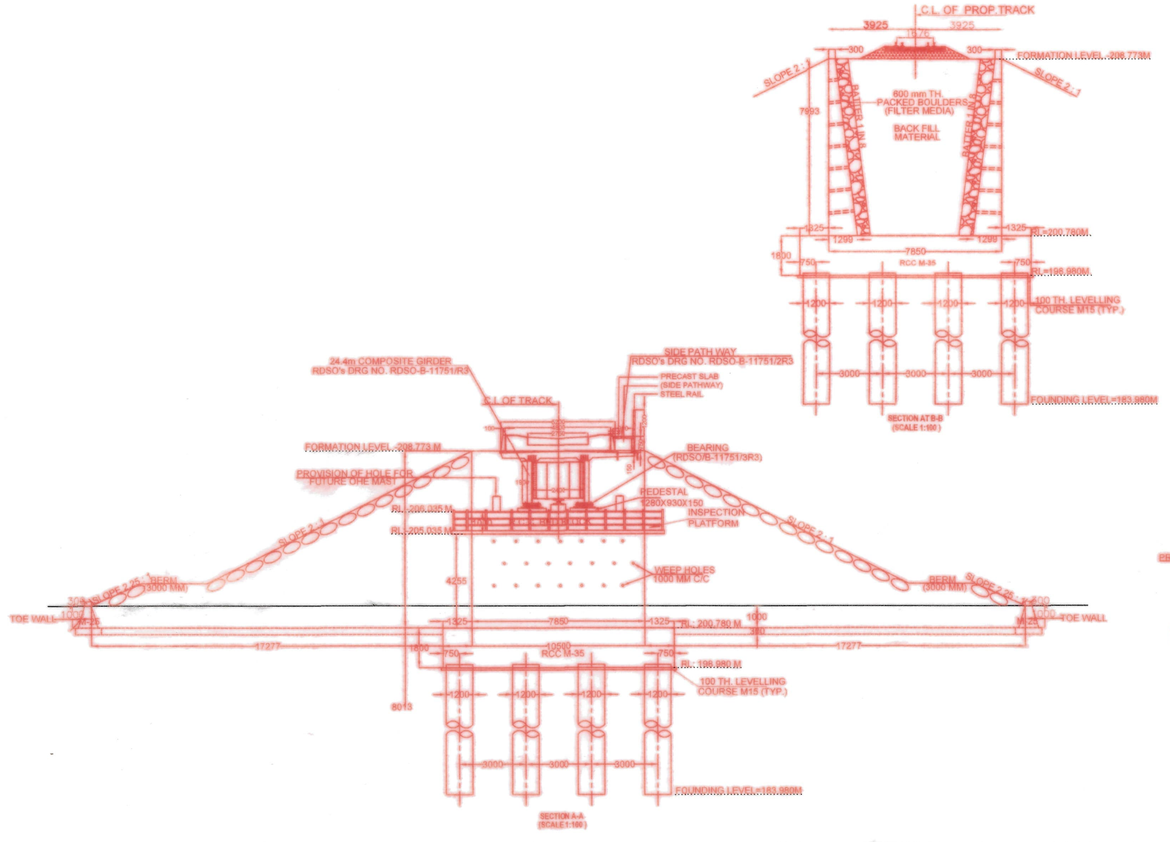
NOTES:-

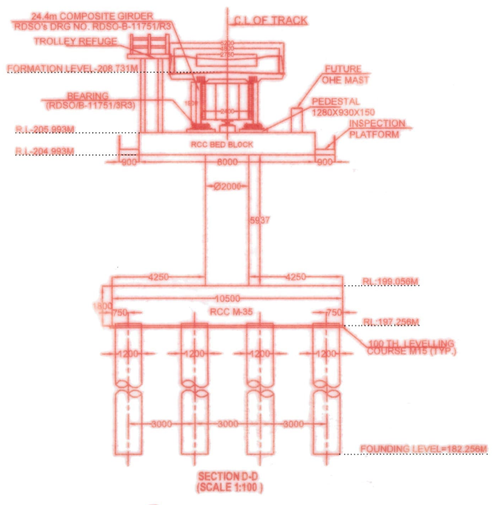
1. ALL DIMENSIONS ARE IN MILLIMETER & LEVELS ARE IN METER EXCEPT OTHERWISE STATED.
2. CHAINAGE SHOWN IN METER.
3. LOADING STANDARD-25 TON STANDARD 2008 AXLE LOADING.
4. EXPOSURE CONDITION IS SEVERE.
5. DESIGN CRITERIA :-
   i) I.R.S. CONCRETE BRIDGE CODE WITH LATEST CORRECTION SLIP.
   ii) I.R.S. BRIDGE SUB-STRUCTURE & FOUNDATION CODE
   iii) I.R.S. BRIDGE RULES
   iv)IS 456 : PLAIN AND REINFORCED CONCRETE
   v)IS1893 CODE FOR EARTHQUAKE RESISTANT DESIGN OF RAILWAY BRIDGE 2020 .
6. CEMENT SHALL CONFORM TO CLAUSE 4.1 & AGGREGATE SHALL CONFORM TO CLAUSE 4.2 OF IRS CONCRETE BRIDGE CODE 2014.
7. CONCRETE GRADE :-
   i) ABUTMENTS : R.C.C. M-35
   ii) PILE : R.C.C. M-35
   iii) LEVELING COURSE : C. C. M-20
   iv) TOE WALL : C. C. M-20
   v) RED BLOCK : R.C.C. M-35
   vi) DIRT WALL : R.C.C. M-35
8. REINFORCEMENT SHALL BE HYSD / TMT BAR OF GRADE Fe 500D CONFORMING TO IS: 1786-2008.
9. FOR REINFORCEMENT MINIMUM CLEAR COVER 50 mm. SHOULD BE PROVIDED.
10. ANGLE OF REPOSE OF BACKFILL SHALL NOT BE LESS THAN 35°.
11. THE BANK OF THE APPROACHES OF THE BRIDGE MAY BE PROTECTED UP TO 50 m. FROM THE FACE OF THE ABUTMENT.
12. THE BRIDGE IS LOCATED IN SEISMIC ZONE-II.
13. LADDER SHALL BE PROVIDED OVER BED BLOCK FOR FACILITY OF INSPECTION.
14. DEFLECTION/ LOAD TEST OF THE SUPER STRUCTURE SHOULD BE ENSURED. IN TERMS OF CODAL PROVISION.
15. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED & RECONCILED AT SITE BEFORE EXECUTION OF WORK.
16. BACK FILLING WITH GRANULAR MATERIALS ON THE EARTH FACES OF ABUTMENT/ RETURN WALL SHOULD CONFORM CL 7.5 OF I.R.S BRIDGE SUB STRUCTURE AND FOUNDATION CODE.
17. LAPPING OF BARS SHOULD BE MINIMIZED & ALL STAGGERED WHEREVER NECESSARY THE NUMBER & LOCATION OF LAP IS TO BE DECIDED AT SITE.
18. DEFLECTION TEST OF WELDED GIRDER AND RADIOGRAPHY TEST OF WELD SPECIFIED IN THE DRAWING IN TERMS OF POLICY CIRCULAR NO.7 SHOULD BE ENSURED
19. ALL WORKS WILL BE DONE AS PER RELEVANT CODE PERTAINING TO WORK.
20. DIMENSIONS SHOWN IN THIS DRAWING ARE TENTATIVE AND MAY VARY AS PER DETAIL STRUCTURAL DRAWING FOR FINAL DIMENSIONS.
21. SLOPE IN FRONT OF THE ABUTMENT SHOULD BE WELL PROTECTED BY MEANS OF SUITABLE PITCHING AND LAUNCHING APRONS TO PROTECT AGAINST SCOUR.
22. CONCRETE SHALL BE VIBRATED BY APPROVED POWER DRIVEN MECHANICAL VIBRATOR.
23. ENGINEER IN CHARGE AT SITE SHALL CHECK RAIL LEVEL, FORMATION LEVEL, BED LEVEL AND CENTER LINE OF TRACK AS PER APPROVED L-SECTION BEFORE EXECUTION OF WORK.
24. PERMEABILITY TEST SHOULD BE CARRIED OUT IN TERMS OF PROVISION OF PARA 5.4.2.2 OF IRS CONCRETE BRIDGE CODE.
25. C/C DISTANCE OF ABUTMENT TO ABUTMENT SHOULD BE CHECKED BEFORE EXECUTION.
26. QUALITY ASSURANCE PLAN (QAP) FOR PROPOSED WORKS SHOULD BE SUBMITTED
27. ALL STRUCTURAL STEEL SHALL BE ALUMINIUM METALIZED BEFORE LAUNCHING.
28. PATHWAY (AS PER RDSO) TO BE PROVIDED THROUGHOUT THE LENGTH OF THE BRIDGE AS SHOWN IN THE DRAWING.
29. ONE MUST SHALL BE PROVIDED ON RETURN WALL AT ABUTMENT (A1,A2) SIDE .
30. DURING CASTING OF PILE CONCRETING SHOULD BE DONE MINIMUM 1M. ABOVE THE CUT OFF LEVEL & THE CONCRETE UP TO CUT - OFF LEVEL SHOULD BE STAMPED-OFF WITH IN 12 HOURS.
31. LOAD OF ROUTING TEST PILE SHOULD BE 1.5 TIMES OF DESIGN LOAD AS PER CLAUSE 5.1.5 IS : 2911 PART 4-1985.
32. THE PILE CONCRETE SHALL PROJECT 150mm. INSIDE THE PILE CAP CONCRETE.
33. THE PILE REINFORCEMENT WILL HAVE ADEQUATE ANCHORAGE LENGTH MINIMUM 1050mm. INSIDE THE PILE CAP TO DEVELOP MONOLITHIC ACTION.
34. LOAD TEST ON PILE SHOULD BE CARRIED OUT AS PER IS:2911 (PT-4) 1985, AS DIRECTED BY ENGINEER AT SITE, THE TOP OF PILE CAP SHALL BE NORMALLY KEPT NEAR NORMAL GROUND LEVEL.
35. INTEGRITY & DURABILITY TEST ARE TO BE CARRIED OUT AS PER IS: 1489-2001 & CL. 8.4.2 OF IRS CBC RESPECTIVELY.
36. THE IMPROVED TRANSITION SYSTEM ON BRIDGE APPROACH ARE PROVIDED AS PER DRG. No.GE-R-50(R2).
37. RULLING GRADIENT OF 1 IN 80 (C) FOR THE SECTION.
38. THIS DRAWING IS BASED ON APPROVED DETAILED PLAN AND SECTION:- CE:/ CON / I / VSKP / JEYPORE-MALKANGIRI / 16 OF 18.

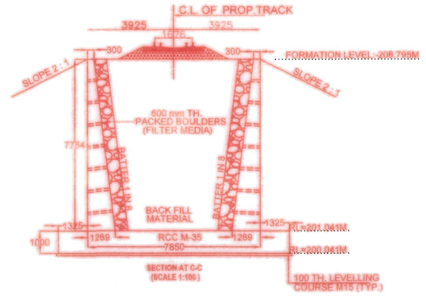



PLAN SHOWING THE POSITION OF BEARING AT PIER
(SCALE 1:100)

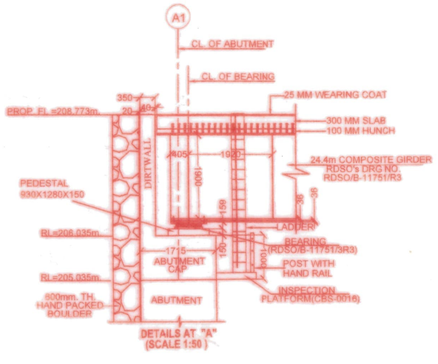


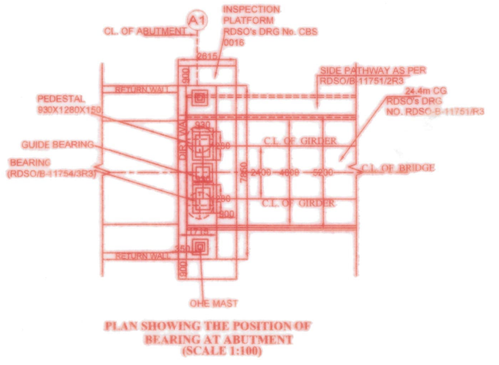










PLAN SHOWING THE POSITION OF BEARING AT ABUTMENT
(SCALE 1:100)

ABUTMENT - A1
GL = 201.780 M

| BH-15 | | | | |
|---|---|---|---|---|
| DEPTH | TYPE | | SPTN | SBC(T/M²) |
| 0.00 | | | | |
| 1.00 | | | | |
| 1.50 | SM | | 12 | 6.88 |
| 2.50 | | | | |
| 3.00 | | | 24 | 14.56 |
| 4.00 | SP | | | |
| 4.50 | | | 13 | 8.32 |
| 5.50 | | | - | |
| 6.00 | | | 19 | 12.80 |
| 7.00 | | | - | |
| 7.50 | | | R | |
| 8.50 | | | - | |
| 9.00 | | | 34 | 25.17 |
| 10.00 | | | - | |
| 10.50 | | | 40 | 30.95 |
| 11.50 | | | - | |
| 12.00 | SM | | R | |
| 13.00 | | | - | |
| 13.50 | | | 50 | 42.02 |
| 14.50 | | | - | |
| 15.00 | | | R | |
| 16.00 | | | - | |
| 16.50 | | | R | |
| 17.50 | | | - | |
| 18.00 | | | R | |
| 19.00 | | | - | |
| 19.50 | SM | | R | |
| 20.50 | | | - | |
| 21.00 | | | R | |
| 22.00 | | | - | |
| 22.50 | | | R | |
| 23.50 | | | - | |
| 24.00 | | | R | |
| 24.50 | | | - | |
| 25.00 | | | - | |
| 25.50 | | | R | |
| 26.50 | | | - | |

SM- POORLY GRADED MEDIUM DENSE SILTY SAND
SP- POORLY GRADED MEDIUM DENSE SAND
CALCULATED SBC VALUE OF SOIL AS PER REPORT IS 12.50 t/m²

PIER - 1
GL = 200.056 M

| BH-16 | | | | |
|---|---|---|---|---|
| DEPTH | TYPE | | SPTN | SBC(T/M²) |
| 0.00 | | | | |
| 1.00 | | | | |
| 1.50 | SM | | R | |
| 2.50 | | | | |
| 3.00 | SM-SP | | R | |
| 4.00 | | | - | |
| 4.50 | | | R | |
| 5.50 | | | - | |
| 6.00 | | | R | |
| 7.00 | | | - | |
| 7.50 | | | R | |
| 8.50 | | | - | |
| 9.00 | | | R | |
| 10.00 | | | - | |
| 10.50 | | | R | |
| 11.50 | | | - | |
| 12.00 | SM | | R | |
| 13.00 | | | - | |
| 13.50 | | | R | |
| 14.50 | | | - | |
| 15.00 | | | R | |
| 16.00 | | | - | |
| 16.50 | | | R | |
| 17.50 | | | - | |
| 18.00 | | | R | |
| 19.00 | | | - | |
| 19.50 | | | R | |
| 20.50 | SM | | - | |
| 21.00 | | | R | |
| 22.00 | | | - | |
| 22.50 | | | R | |
| 23.50 | | | - | |
| 24.00 | | | R | |
| 24.50 | | | - | |
| 25.00 | | | - | |
| 25.50 | | | R | |
| 26.50 | | | - | |

SM- POORLY GRADED MEDIUM DENSE SILTY SAND
(SM-SP)- POORLY GRADED DENSE SAND WITH SILTY
CALCULATED SBC VALUE OF SOIL AS PER REPORT IS 15.00 t/m²

LEGEND:

PROP. BRIDGE SHOWN THUS: ——————

RAILWAY BOUNDARY SHOWN THUS: — — — — —

| | | |
|---|---|---|
| (A.GOURI SANKAR RAO) CE / C-II / VSKP E.Co.Railway | (B.B MOHARANA) DY.CE/CON/KRPU E.Co.Railway | (SANYASI NAIDU) SSE/DRG/CON/VSKP E.Co.Railway |

DRG.NO. CE/CON/I/VSKP/JEYPORE-MALKANGIRI/NEWBG/308/2024

STANDARD OF LOADING ; RAILWAY LOADING (25T-2008)

EAST COAST RAILWAY
(CONSTRUCTION)

DIVISION: WALTAIR

BR.NO-308 | PROP.BRIDGE: 2x24.40m COMPOSITE GIRDER | LOCATION: CH:110569.450M

PROPOSED BRIDGE NO-308(CH:110569.450M) BETWEEN PANDRIPANI-PANCHABATI
IN WALTAIR DIVISION OF EAST COAST RAILWAY

CONSULTANTS:
M/s SATRA SERVICES AND SOLUTIONS PVT. LTD.
Corporate Office : 401, Capital Park, Image Garden Lane, Hi-Tech City, Madhapur, Hyderabad, Telangana - 500 081, India.

Prepared By:
M/s ODRA ASSOCIATES PVT. LTD
Corporate Office : Plot No. 5841, Chakratirthi, Near Mangala Mandir, Post - Mancheswar, Mancheswar Road, Bhubaneswar, Khurda, Odisha, India - 751010
Email :odraassociates@gmail.com / info@odraassociates.com
Ph: 09439068176/0674-2952715

SHEET NO : | SHEET SIZE : 1300 X 600
SCALE : AS SHOWN | REVISION : R 0 | ISSUE DATE :
☐ TENDER ☐ PRELIMINARY ☐ INFORMATION ☑ APPROVAL ☐ CONSTRUCTION

| | | |
|---|---|---|
| SAIRANJAN PANDA PROJECT INCHARGE | JEEVAN NANDA CHECKED BY | RACHITA MOHANTY DRAWN BY |

Signature Not Verified
Digitally signed by CHOUDHURY BIBHUDATTA SAHOO
Date: 03.03.2025 11:47:41
Reason: I am Checking Author
Location: West Delhi