

LEVEL TABLE							
LOCATION	F.R.L.	TOP OF PIER CAP	BOTTOM OF PIER CAP	BED LEVEL	TOP OF PILE CAP	BOTTOM OF PILE CAP	PILE TERMINATION
P1	21.605	19.030	17.280	13.446	12.946	10.946	-14.054
P2	21.605	19.030	17.280	13.686	13.186	11.186	-13.814


A) STRUCTURAL AND OTHER DATA		
A) SPAN ARRANGEMENT		3 SPAN OF 25m
B) SUB STRUCTURE		PILE, FILE CAP, PIER, CAP, RCC ABUTMENT, RETAINING WALL
C) BEARING / SUPPORT		ELASTOMERIC BEARING
D) SUPER STRUCTURE		PSC I-BEAM
E) WEARING COAT		100mm THICK
F) EXPANSION JOINT		STRIP SEAL TYPE EXPANSION JOINT
G) WATER SPOUTS		AT 5m C/C
H) FRAILINGS		RCC CRASH BARRIER
B) HYDRAULIC DATA		
A) CATCHMENT AREA		35.50 KM ²
B) DISCHARGE		514.100 CUM/SEC
C) FVEL		15.00m/s
D) AFFLUX		0.040m
E) AFTF		10.040m
F) RUDDISTY CO-EFFICIENT		0.033
G) OBSTRUCTED VELOCITY		3.09m/s

ROAD AUTHORITY :

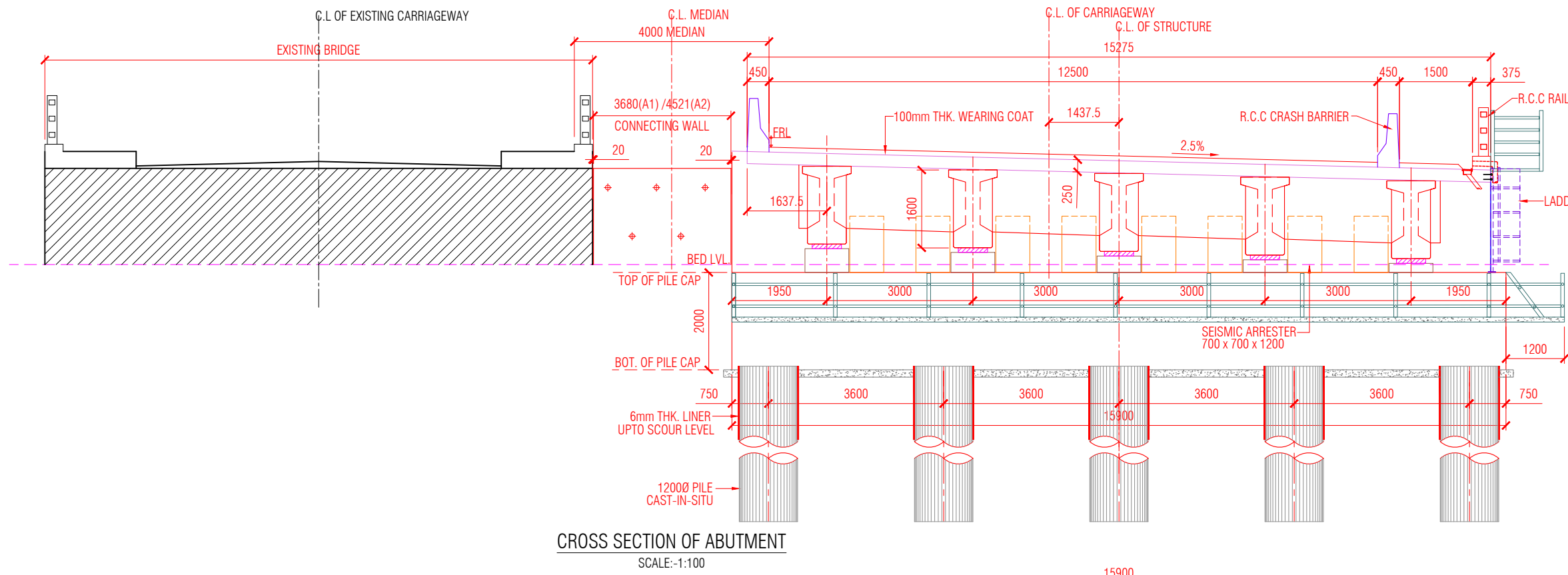
CONSULTANT

DY. EXECUTIVE ENGINEER,
CITY (R&B) SUB DIVISION
BHARUCH

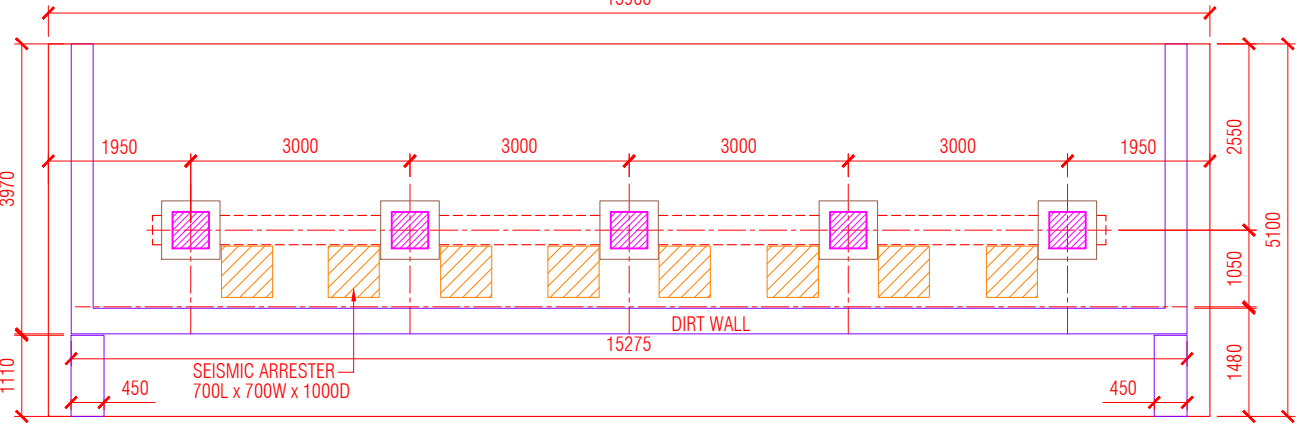
EXECUTIVE ENGINEER
BHARUCH (R&B) DIVISION
BHARUCH

CLIENT:- EXECUTIVE ENGINEER, DISTRICT (R&B) DIVISION, BHARUCH	
NAME OF WORK:- CONSULTANCY SERVICES FOR FEASIBILITY STUDY AND PREPARATION OF DETAILED PROJECT REPORT, LAND ACQUISITION, FOREST CLEARANCE, UTILITY SHIFTING AND FLY OVER BRIDGES FOR SIX LANNING OF ANKLESHWAR RAJIPIALA ROAD KM 0/0 TO 62/450 UNDER HIGH-SPEED CORRIDOR PROJECT DIST. BHARUCH AND NARMADA	
TITLE:- GENERAL ARRANGEMENT DRAWING OF MAJOR BRIDGE SPAN: 3 X 25.0m	
LOCATION:- ANKLESHWAR-RAJIPIALA ROAD	
 <p>CONSULTANT :- GEO DESIGNS & RESEARCH (P) LTD.</p>	<p>B/10, KRISHNA INDUSTRIAL ESTATE, OPP. B.I.D.C. GORWA ESTATE, VADODARA - 390 016 TELEFAX : 91-265-229022,2283081 E-MAIL : design@geoeng@geogroup.in Web Site : www.geogroup.in</p>

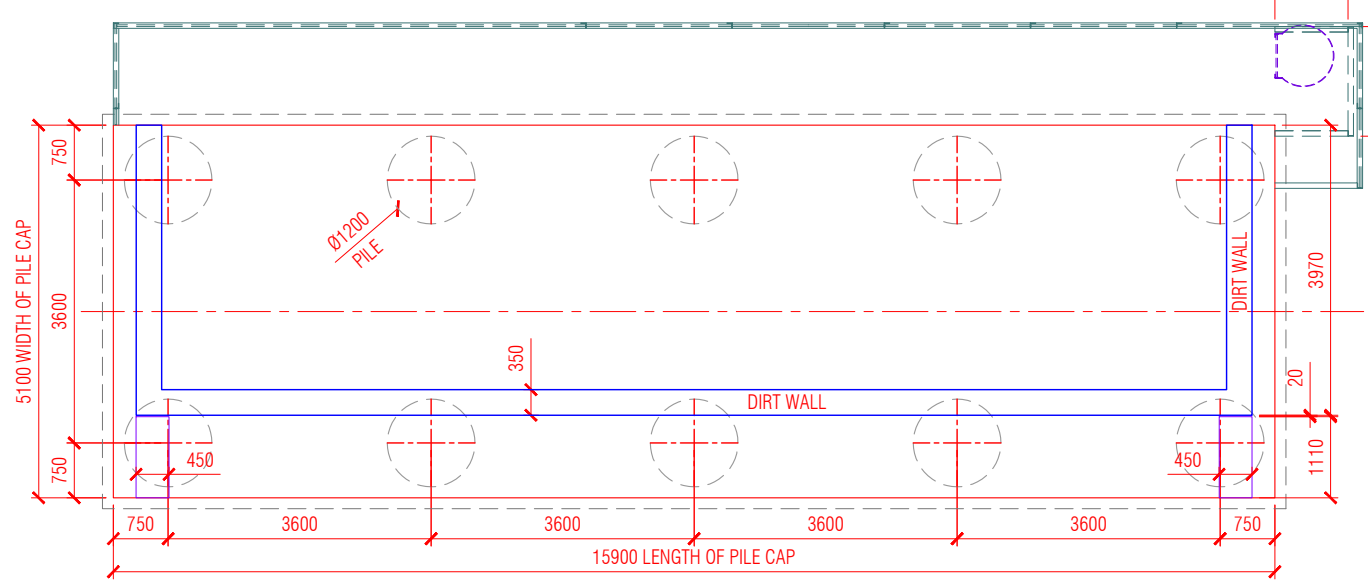
PREPARED BY	IKHLAK MAFAT (CAD ENGINEER)	DRG NO.	GDR / ANK-RAJ / 6 + 785 / 01	Rev.
DESIGNED BY	FAKHRUDDIN DHILAWALA (Sr.ENGINEER)	DATE	24/03/2026	R0
CHECKED BY	MEHUL PATEL (DESIGN DIRECTOR)	JOB NO.	2025_26_013	



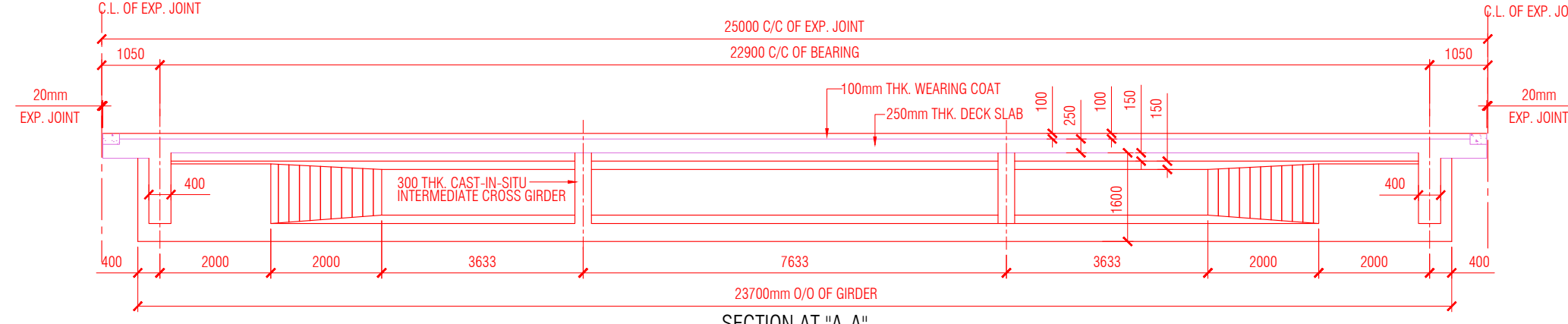
CROSS SECTION OF ABUTMENT
SCALE: 1:100



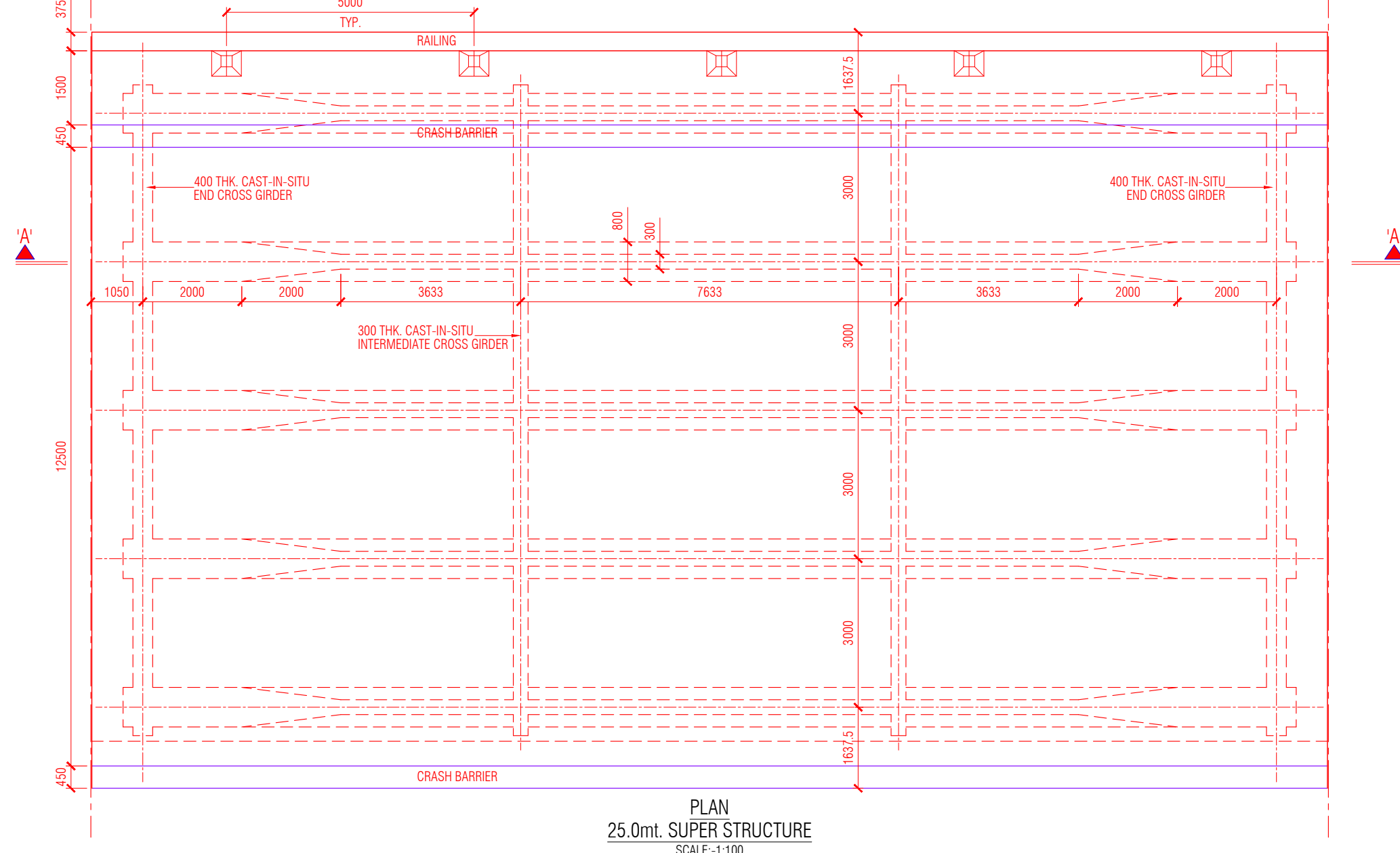
PLAN OF ABUTMENT CAP
SCALE: 1:100



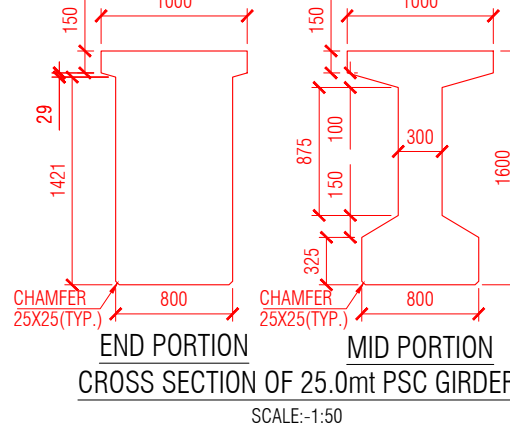
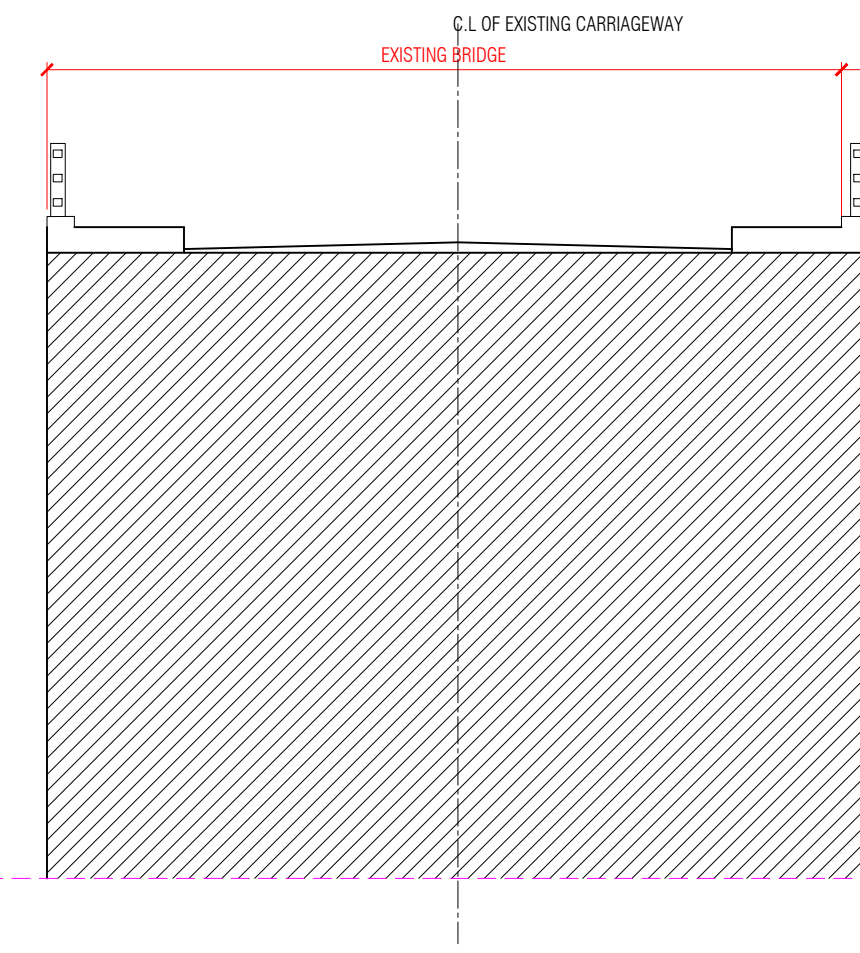
PLAN OF PILE CAP
SCALE: 1:100



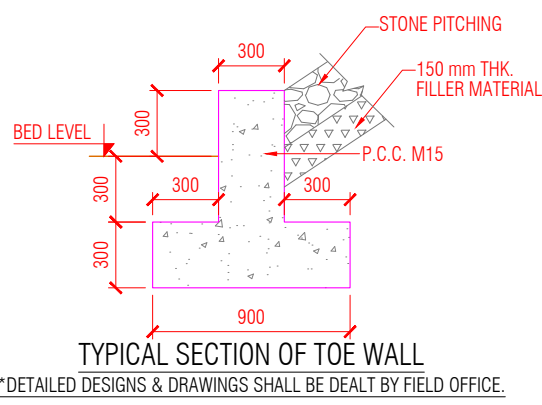
SECTION AT "A-A"
SCALE: 1:100



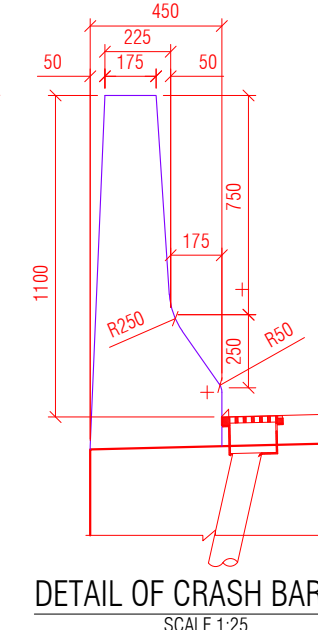
PLAN
25.0m SUPER STRUCTURE
SCALE: 1:100



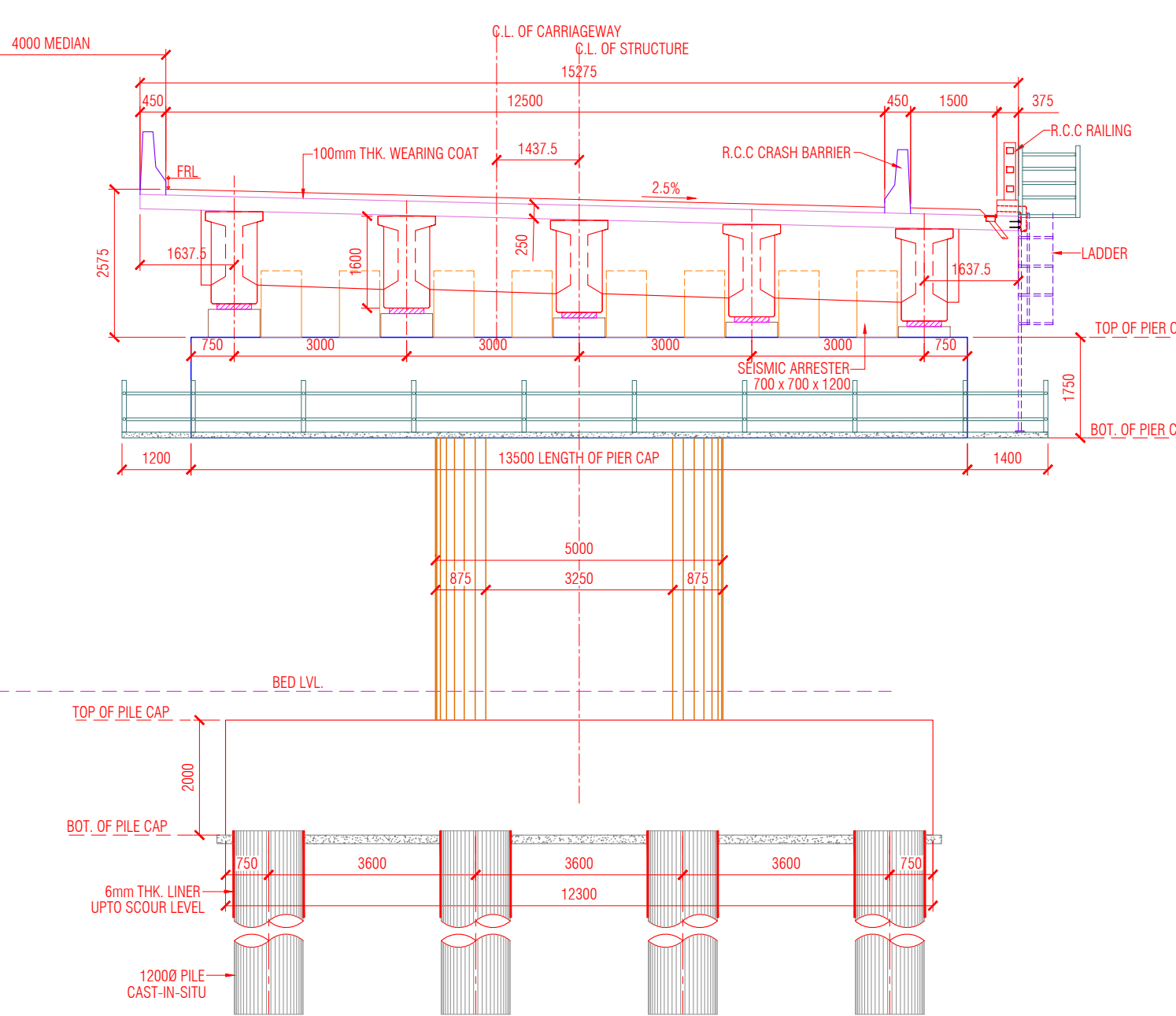
CROSS SECTION OF 25.0m PSC GIRDER
SCALE: 1:50



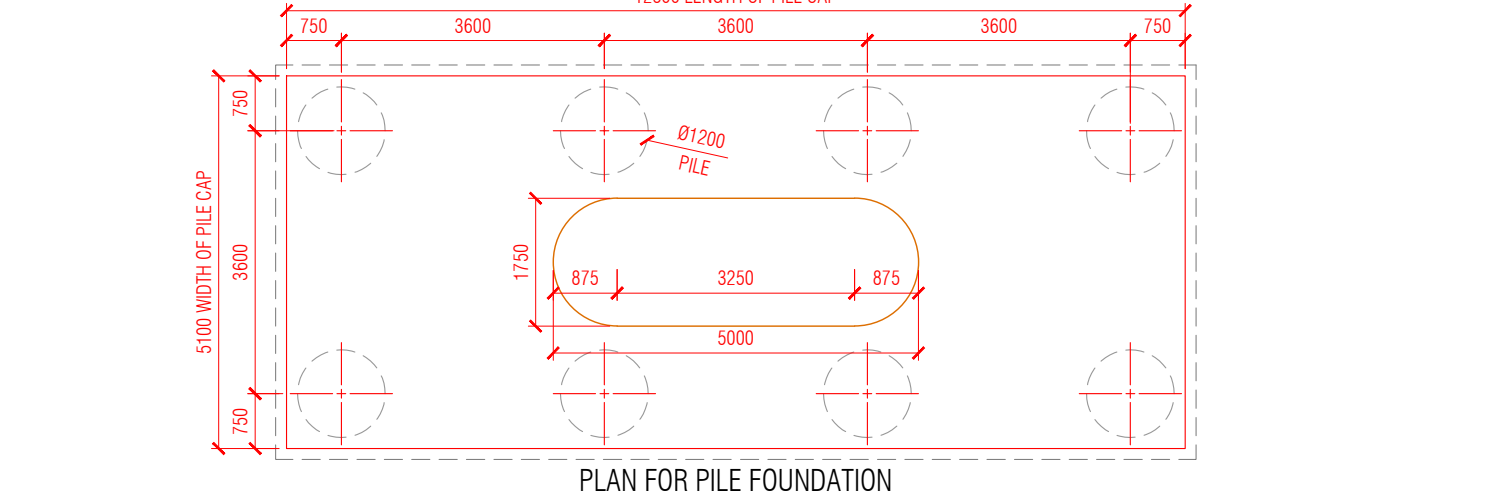
TYPICAL SECTION OF TOE WALL
*DETAILED DESIGNS & DRAWINGS SHALL BE DEALT BY FIELD OFFICE.



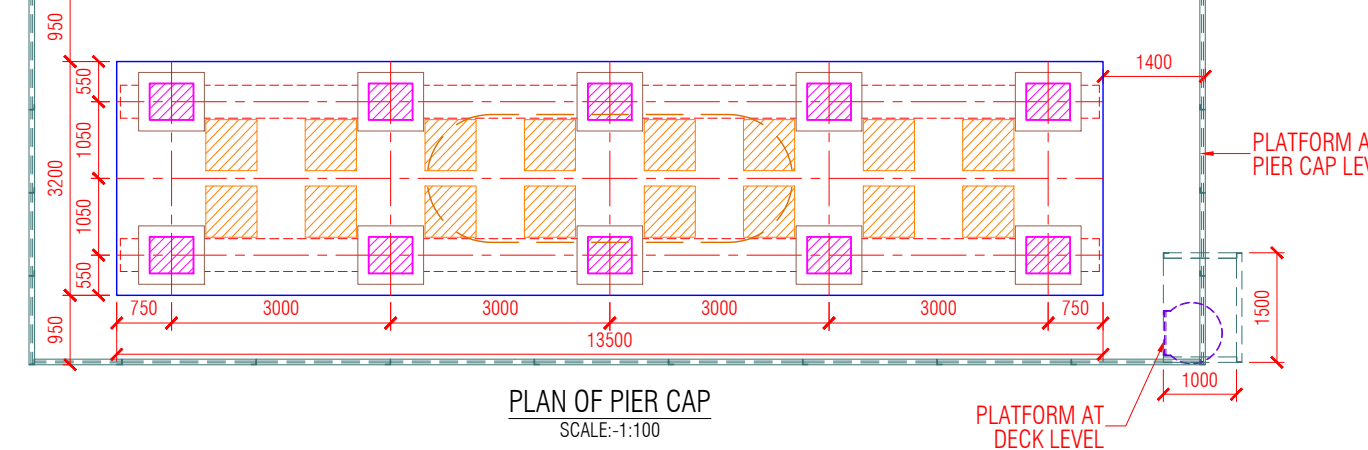
DETAIL OF CRASH BARRIER
SCALE: 1:25



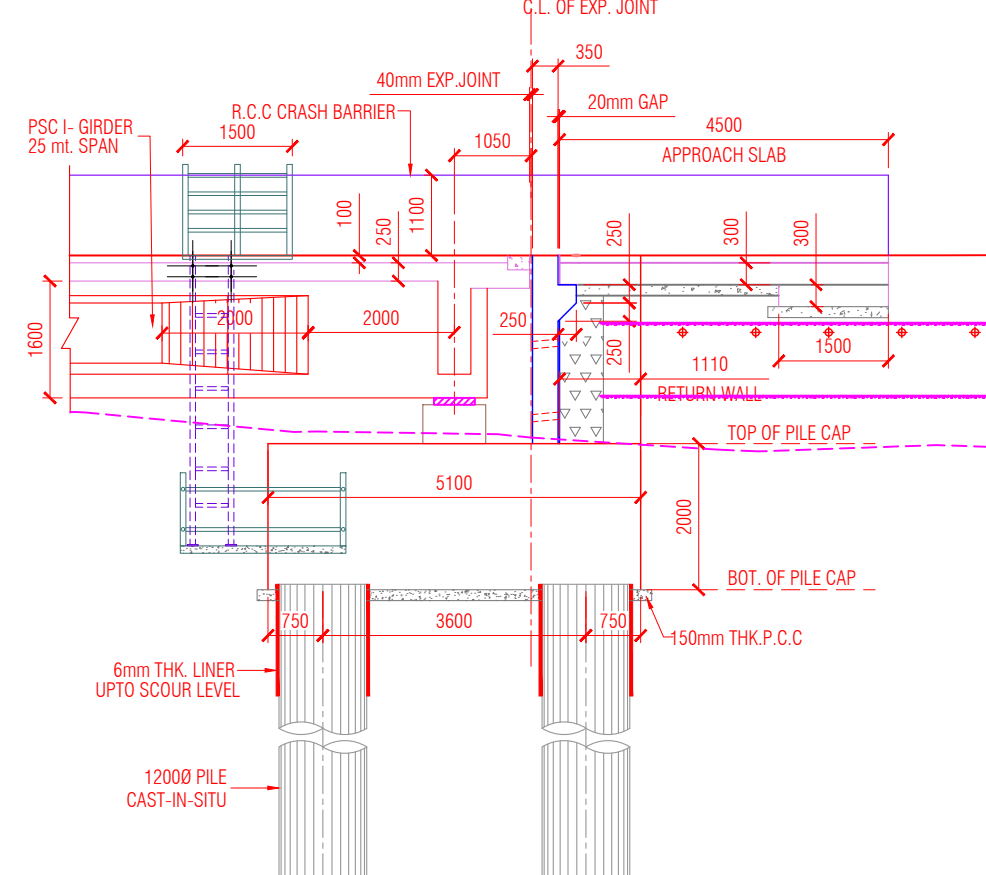
CROSS SECTION OF PIER
SCALE: 1:100



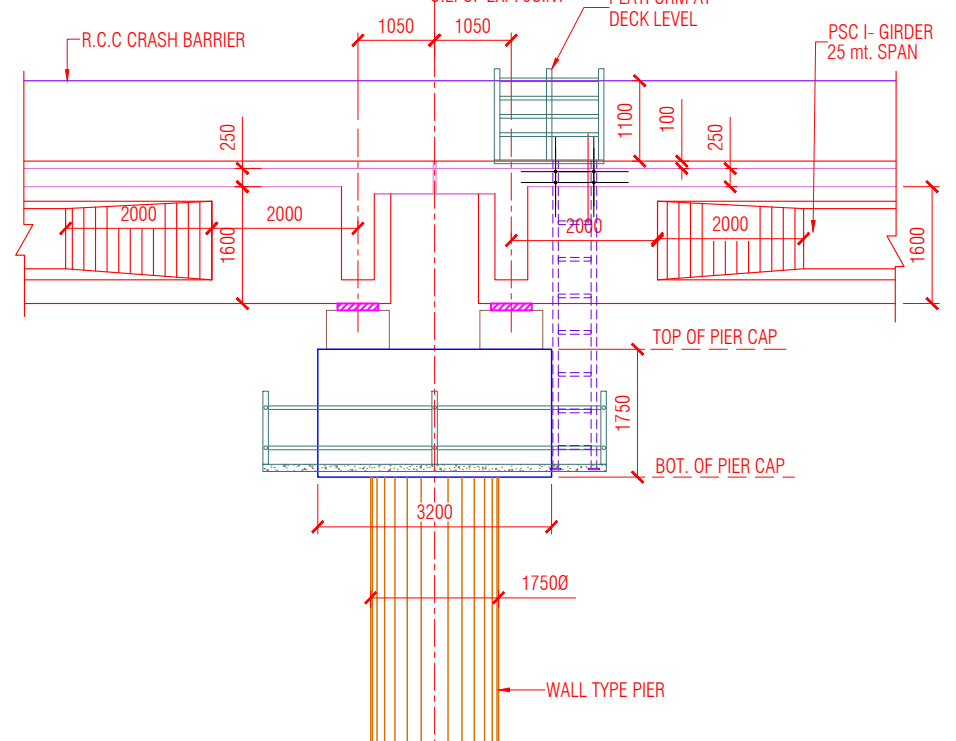
PLAN FOR PILE FOUNDATION
SCALE: 1:100



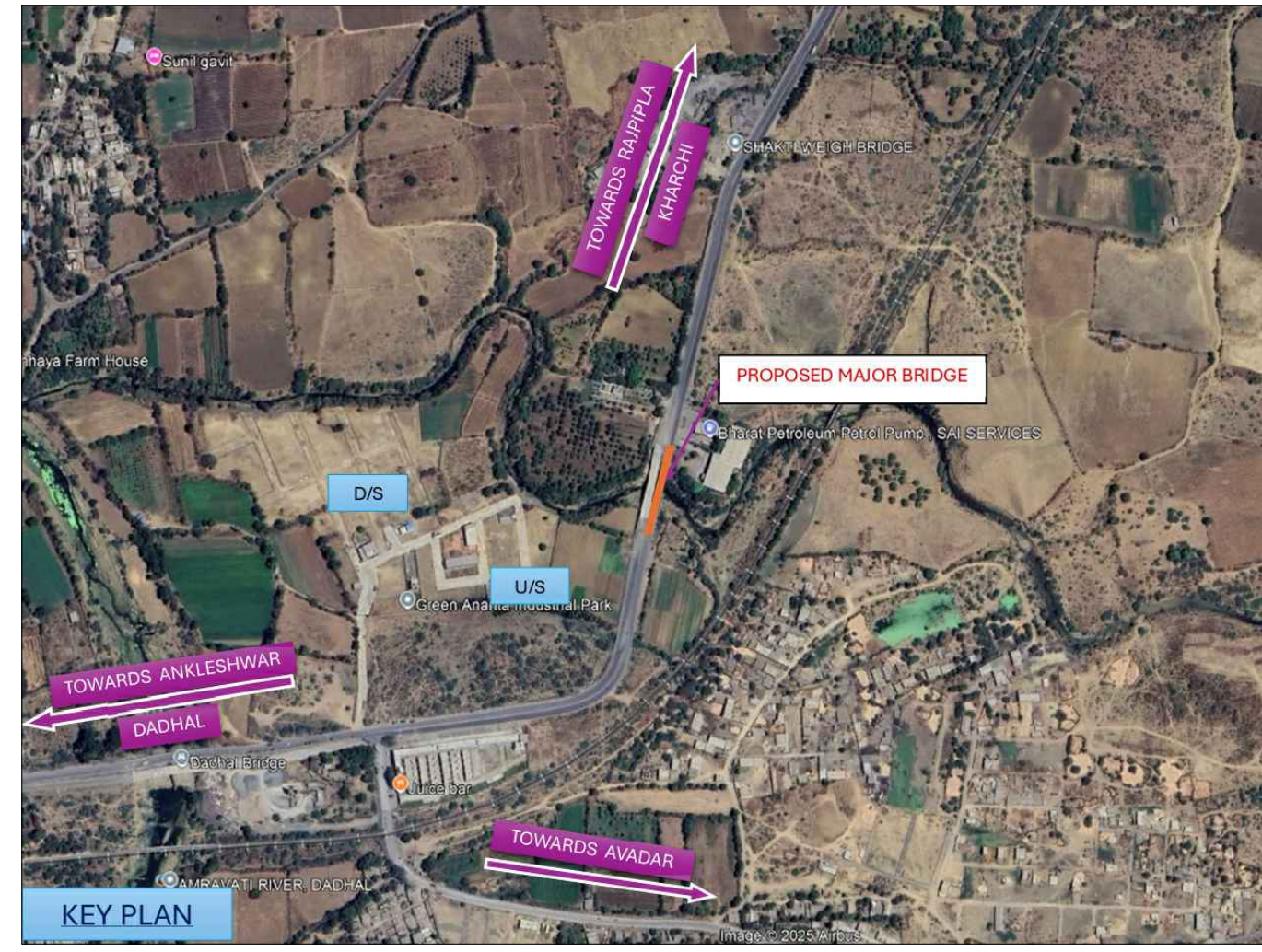
PLAN OF PIER CAP
SCALE: 1:100



ELEVATION OF ABUTMENT "A1 & A2"
SCALE: 1:100



ELEVATION OF PIER
SCALE: 1:100



KEY PLAN

- NOTES:-
- GENERAL:
 - ALL DIMENSIONS ARE IN MILLIMETER & LEVELS ARE IN METER UNLESS OTHERWISE SPECIFIED.
 - WRITTEN DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING.
 - DESIGN CRITERIA:
 - THE DESIGN IS ACCORDING TO THE FOLLOWING CODES:
 - IRC: 78-2024
 - IRC: 6-2017
 - IRC: 112-2020
 - IRC: 83-2015 (PART-II)
 - IRC: SP-114-2018
 - THE DESIGN ARE APPLICABLE FOR "SEVERE" EXPOSURE CONDITIONS & SEISMIC ZONE III.
 - THE STRUCTURE DESIGN FOR:
 - FOR THREE LANE + FOOTPATH
 - THREE LANE OF CLASS A + FOOTPATH
 - ONE LANE OF 70R + ONE LANE OF CLASS A + FOOTPATH
 - FOR FOUR LANE WITHOUT FOOTPATH
 - FOUR LANE OF CLASS A
 - TWO LANE OF CLASS 70R
 - ONE LANE OF 70R + TWO LANE OF CLASS A
 - WIND LOAD DETAILS CONSIDERED IN DESIGN:
 - BASIC WIND SPEED - 39 m/s
 - TYPE OF TERRAIN - PLAIN TERRAIN
 - CONCRETE:
 - TO IMPROVE WORKABILITY OF CONCRETE, ADMIXTURE CONCRETE FORMING TO IS:8025 AND IS:9103 MAY BE PERMITTED SUBJECTED TO SATISFACTORY PROVEN USE, ADMIXTURES GENERATING HYDROGEN, NITROGEN ETC. SHOULD NOT BE USED.
 - REINFORCEMENT:
 - F550D (FUSION BONDED EPOXY COATED STEEL SHALL BE USED) CONFIRMING TO IS:1786-2008 SPECIFICATION
 - WATER:
 - WATER TO BE USED IN CONCRETING AND CURING SHALL CONFORM TO CLAUSE 18.4.5 OF IRC 112-2020.
 - BEARING:
 - ELASTOMERIC BEARING SHALL BE PROVIDED.
 - EXPANSION JOINT:
 - STRIP SEAL TYPE EXPANSION JOINT SHALL BE USED. THE EXPANSION JOINTS MUST BE ROBUST, DURABLE, WATER TIGHT AND REPLACEABLE. IT MUST BE PROVIDED OVER THE FULL WIDTH OF SUPER STRUCTURE INCLUDING KERB AND FOOTPATH FOLLOWING THE PROFILE OF THE SAME. (WHERE RELEVANT) EXPANSION JOINTS SHALL BE OBTAINED ONLY FROM APPROVED MANUFACTURES AND BE OF PROVED TYPE. DETAILS OF EXPANSION JOINT MAY BE GOT APPROVED BEFORE COMMENCEMENT OF CONSTRUCTION. SITE FABRICATED EXPANSION JOINTS SHALL BE PROHIBITED.
 - WORKMANSHIP DETAILING:
 - FOR ENSURING PROPER COVER OF CONCRETE TO REINFORCEMENT SPECIALLY MADE POLYMER COVER BLOCKS SHALL ONLY BE USED.
- | NO | DESCRIPTION | GRADE OF CONCRETE | GRADE OF STEEL |
|----|---------------------------|-------------------|----------------------------|
| 01 | PSC I-GIRDER | M45 | |
| 02 | DECK SLAB | M45 | |
| 03 | PILE | M35 | |
| 04 | PILE CAP | M35 | |
| 05 | PIER | M35 | |
| 06 | PIER CAP | M35 | F550D |
| 07 | SEISMIC ARRESTER PEDESTAL | M40 | CONFIRMING TO IS:1786-2008 |
| 08 | LEVELLING COURSE | M15 | |
| 09 | RCC CRASH BARRIER | M40 | |
| 10 | APPROACH SLAB | M35 | |
| 11 | WEARING COAT | M40 | |
- BENDING OF REINFORCEMENT BARS SHALL BE AS PER IS:2502.
 - PROPER COMPACTION OF CONCRETE SHALL BE ENSURED BY USE OF FORM AND/OR NEEDLE VIBRATORS. USE OF FULL WIDTH ACCEDED VIBRATORS FOR COMPACTION OF CONCRETE IN DECK SLAB SHALL BE ENSURED.
 - SHUTTERING PLATES SHALL SUITABLY BE STIFFED TO ENABLE THE COMPACTION BY FORM VIBRATORS.
 - SHARP EDGES OF CONCRETE SHALL BE CHAMFERED.
 - BACKFILL MATERIAL BEHIND END WALL SHALL BE SELECTED SOIL HAVING PROPERTIES AS C=0kg/Sq cm, $\theta \geq 30^\circ$. DENSITY OF EARTH FILL $\gamma = 18kN/m^3$ TO $20kN/m^3$. IT SHALL BE CONFIRM WITH IRC-78-2024.
 - SPECIFICATIONS:
 - THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH MORTH (5TH REV.) SPECIFICATION FOR ROAD & BRIDGE WORKS.
 - DRAINAGE SPOUT:
 - THE SPOUT SHALL OF 100mm DIA. @5.0m C/C AND MADE UP OF CORROSION RESISTANT MATERIAL.
 - DRAINAGE SPOUTS AS PER MORTH STANDARD DRG NO. SD/303.
 - IF ANY DISCREPANCY IS FOUND BETWEEN BORE HOLE DATA OF SOIL INVESTIGATION REPORT AND SITE SAME SHALL BE IMMEDIATELY REPORTED TO ENGINEER-IN-CHARGE.
 - BED LEVEL SHOULD BE CHECKED WITH GAD BEFORE EXECUTION AT SITE. IF ANY DISCREPANCY FOUND, IMMEDIATELY BROUGHT IT TO THE NOTICE OF DESIGN ENGINEER FOR NECESSARY MODIFICATION IN THE DRAWING.
 - FRI. & CHANGES WILL BE SUBJECTED TO CORRESPONDING CHANGES IN APPROVED PLAN & PROFILE DRAWING.
 - IF ANY DISCREPANCY FOUND IN GAD & AT SITE CONDITION THE CONTRACTOR CLIENT SHALL MUST INFORM TO DESIGN CONSULTANT BEFORE EXECUTION OF WORK.
 - SIZE OF PIER, ABUTMENT, PIER CAP, BEARING SHOWN IN THIS DRG. ARE TENTATIVE. AND ARE SUBJECTED TO CHANGE IN FINAL DESIGN & DRAWING AS PER REQUIREMENT.
 - WEEP HOLES SHALL BE 100mm Ø P.C. @1000mm C/C IN STAGGERED FASHION.
 - SOIL ENGINEERING WAS CARRIED OUT AND SOIL INVESTIGATION REPORT WAS SUBMITTED TO EXECUTIVE ENGINEER, RAJPIPLA (R&B) DIVISION, RAJPIPLA. VIDE REPORT NO.: 6924/1/20004.
 - LOAD BEARING CAPACITY OF PILE FOR DIA 1.2m & AT 40 (4.8m) SOCKETING IS 435.4MT
 - ADMINISTRATIVE APPROVAL FOR PROPOSED WORK WAS GIVEN BY GSE VIDE THEIR LETTER NO.: GEO GRID SHALL BE PROVIDED BEHIND APPROACH SLAB AS PER GR OF NO. PRCH/102020/1293/C DATED: 17/02/2021.

CLIENT:- EXECUTIVE ENGINEER, DISTRICT (R&B) DIVISION, BHARUCH

NAME OF WORK:-
CONSULTANCY SERVICES FOR FEASIBILITY STUDY AND PREPARATION OF DETAILED PROJECT REPORT, LAND ACQUISITION, FOREST CLEARANCE, UTILITY SHIFTING AND FLY OVER BRIDGES FOR SIX LANNING OF ANKLESHWAR RAJPIPLA ROAD KM 0/0 TO 62/450 UNDER HIGH-SPEED CORRIDOR PROJECT DIST. BHARUCH AND NARMADA.

TITLE:- GENERAL ARRANGEMENT DRAWING OF MAJOR BRIDGE
SPAN: 3 x 25.0m

LOCATION:- ANKLESHWAR-RAJPIPLA ROAD

CONSULTANT :-
GEO DESIGNS & RESEARCH (P) LTD.
B/10, KRISHNA INDUSTRIAL ESTATE, OPP. B.I.D.C. GORWA ESTATE, VADODARA - 390 016
TELEFAX : 91-265-2290222,2283081
E-MAIL : designbridgeeng@geogroup.in
Web Site : www.geogroup.in

PREPARED BY	IKHLAK MAFAT (CAD ENGINEER)	DRG NO	GDR / ANK-RAJ / 6+785 / 02	Rev.
DESIGNED BY	FAKHRUDDIN DHIJAWALA (Sr.ENGINEER)	DATE	24/03/2026	
CHECKED BY	MEHUL PATEL (DESIGN DIRECTOR)	JOB NO	2025_26_013	R0

ROAD AUTHORITY :

CONSULTANT	DY. EXECUTIVE ENGINEER, CITY (R&B) SUB DIVISION BHARUCH	EXECUTIVE ENGINEER BHARUCH (R&B) DIVISION BHARUCH
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