

DETAILS OF PROPOSED BRIDGES

BR.NO.	CHAINAGE	TYPE	SPAN
10	CH:7556.156		
15	CH:13835.946		
22	CH:15123.909		
25	CH:16150.00		
28	CH:16708.055		
32	CH:17598.055		
34	CH:18286.452		
39	CH:19472.021		
44	CH:20525.687		
46	CH:20927.640		

SIGNATURE BLOCK

CE-C-I-CCG	
DYCE-C-CCG	
AXEN-C-CCG	
SSE-C-W-BVI	

DRG. NO.: DY.CE/C/CCG/ 1063 /D-VADHAVAN PORT

PINK BOOK ITEM NO. 31 OF PB 2024-25/NR

GENERAL ARRANGEMENT DRAWING

TITLE :	GENERAL ARRANGEMENT DRAWING
CONNECTING RAILWAY :	WESTERN RAILWAY
DIVISION :	MUMBAI
SECTION :	VR - ST SECTION

PROJECT : NEW DOUBLE LINE BETWEEN VADHAVAN PORT AND NEW PALGHAR STATION (22.23 KM)

TYPICAL GAD FOR PROP.CONSTRUCTION OF ROAD UNDER BRIDGE (RUB)
(SPAN 1 X 12.20 m PSC SLAB)
IN BETWEEN VPPL HOLDING YARD AND VAROR STATION.

RAIL LOADING STANDARD : 25 T AXLE LOADING IRS (2008) FOR SUPER STRUCTURE & 32.5 T DFCC LOADING FOR SUB STRUCTURE

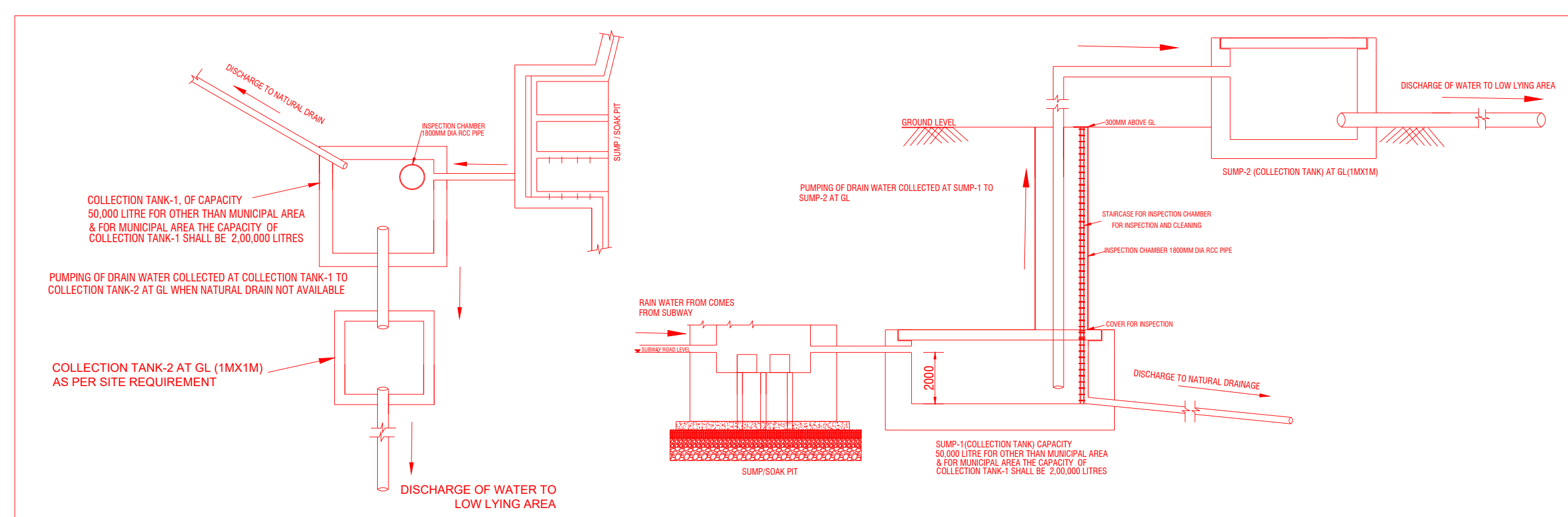
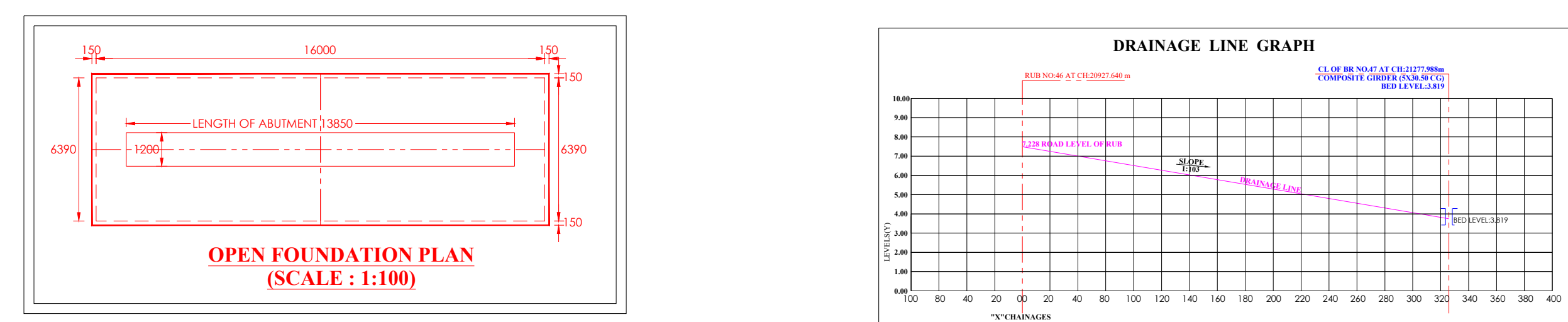
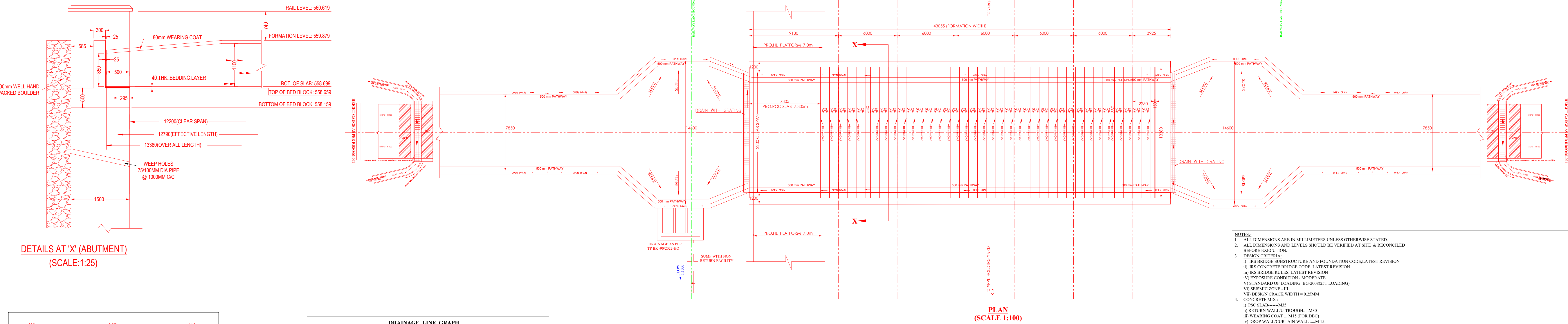
CONSULTANT :	SATRA Services and Solutions Private Limited (401), Capital Park,Image Garden Lane,H-Tech City, Madhapur, Hyderabad, Telangana - 500081, India. Ph:(0)-91 4027840040, e-mail:info@satragroup.in
--------------	--

SHEET NO : SHEET 1

SCALE : 1:160 (UNLESS OTHERWISE SPECIFIED)

SHEET SIZE : A0 (1189 X 841)

ISSUE DATE : 10.04.2026



Height of embankment	Level of ground water table with respect to ground level			
	Low	Annual Rainfall <400mm	Annual Rainfall >400mm	High
Track on embankment and Road level inside the RCC box higher than the ground level	Minor works as per site requirement to be decided by Engineer in charge	Minor works as per site requirement to be decided by Engineer in charge	Minor works as per site requirement to be decided by Engineer in charge	Proper side drains and cross drains as per site requirement
Track on embankment and Road level inside the RCC box lower than the ground level	Sump+Open drains/closed drains in combination of both	Cover over the approaches +Sump+Open drains/closed drains in combination of both (Pumping arrangement as standby)	Lining of the subways+Cover over the approaches +Sump+Pumping arrangement +Surface drainage and suitable cross drainage wherever required	Lining of the subways+Cover over the approaches +Sump+Pumping arrangement +Surface drainage and suitable cross drainage wherever required
	SCHMATIC ARRANGEMENT SHOWN IN GROUP-I	SCHMATIC ARRANGEMENT SHOWN IN GROUP-II	SCHMATIC ARRANGEMENT SHOWN IN GROUP-III	SCHMATIC ARRANGEMENT SHOWN IN GROUP-IV

TYPE OF RAIL:	60KG/90UTS
TYPE OF SLEEPERS:	PSC-40KG
TYPE OF RAIL FITTINGS:	ELASTIC
ALIGNMENT OF TRACK:	STRAIGHT
BALLAST CUSHION:	CLEAN 150 TOTAL-250

REFERENCE DRAWINGS	
DETAILS OF PSC SLAB	RD50/B-10271 (ALT-1)
DETAILS OF DRAINAGE	AS PER DESIGN
DETAILS OF RETAIN WALLS	AS PER DESIGN

- NOTES:
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
 - ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE & RECONCILED BEFORE EXECUTION.
 - DESIGN CRITERIA:
 - (i) BRIDGE SUBSTRUCTURE AND FOUNDATION CODE:LATEST REVISION
 - (ii) CONCRETE BRIDGE CODE, LATEST REVISION
 - (iii) BRIDGE RULES, LATEST REVISION
 - (iv) EXPOSURE CONDITION - MODERATE
 - (v) STANDARD OF LOADING - BG-200K(25T LOADING)
 - (vi) DESIGN ZONE - III
 - (vii) DESIGN CRACK WIDTH = 0.25MM
 - CONCRETE MIX:
 - (i) PSC SLAB—M35
 - (ii) RETURN WALL AS TROUGH—M30
 - (iii) WEARING COAT—M15 (FOR DRC)
 - (iv) DROP WALL CURTAIN WALL—M15
 - MIX DESIGN SHALL BE APPROVED BY ENGINEER-IN-CHARGE.
 - FOR DETAIL OF PRECAST SLAB UNITS REFER DRAWING NO. RD50/B-1071(ALT-1).
 - BED SLOPE 1 IN 100 SHOULD BE PROVIDED TOWARDS EITHER SIDES ON WHICH DRAINAGE OF STORM WATER IS FEASIBLE.
 - TEMPORARY ENGINEERING INDICATOR WILL BE PROVIDED AS PER 1.49.1(a) of C&P.
 - TEMPORARY SPEED RESTRICTION BOARD AND CAUTION INDICATOR BOARD WILL BE PROVIDED.
 - HEIGHT GAUGE SHALL BE PROVIDED AT EITHER END OF SUB WAY AT SUITABLE DISTANCE BASED ON ROAD ORG.NO REDUCTION.
 - PROVIDE INFORMATION WILL BE GIVEN TO SSE (SUTILE) FOR THE PROTECTION OF THE CABLES.
 - 10MM DIA. OF A.C. PIPE AS WEEP HOLES TO BE PROVIDED IN WING WALLS.
 - SUITABLE DRAINAGE ARRANGEMENT PROVIDED WHICH HAS BEEN CHECKED BY FIELD ENGINEERS AND FEASIBLE AT SITE.
 - PROVIDE SHORING HEIGHT OF MINIMUM 200 MM AND ALSO KEEP READY ADDITIONAL 500 BAGS FILLED UP WITH SAND FOR PROVIDING SHORING TO AVOID THE ROLLING DOWN OF FORMATION SOIL.
 - SIDE SLOPE ALONG APPROACH ROAD TO BE PROTECTED BY STONE PITCHING / TURFING IF REQUIRED ACCORDING TO SOIL STRATA.
 - SR. DESIGNER TO ENSURE THAT THE APPROVAL OF CONCERN ROAD AUTHORITY SHOULD BE OBTAINED ON GAD BEFORE COMMENCING OF THE WORK.
 - ROAD TRAFFIC SHOULD BE DIVERTED SUITABLY AT SUITABLE LOCATION IN CONSULTATION WITH ROAD AUTHORITY.
 - FOR TEMPORARY INVERSION REFER SEPARATE DRAWING.
 - SAFETY OF THE TRACK SHALL BE ENSURED BY SR. DESIGNER FOR ALL THE TIME WHILE EXECUTION OF THE WORK.
 - FOR DETAILS OF ABUTMENT WALL AS PER DESIGN.
 - SR. DESIGNER TO ENSURE THAT THE SOIL CONSISTENCY HAS BEEN ASCERTAINED BEFORE TAKING THE WORK IN HAND AND EXECUTION DONE EITHER WITH ADEQUATE SLOTT OR WITH SLOPE PROTECTION MEASURE IN PLACE.
 - P.C. PLANTION SHALL BE OBTAINED FOR THE PROPOSED WORK.
 - ROAD ELEMENTS SHOULD BE PLANNED IN ACCORDANCE WITH IRC CODE AS FAR AS POSSIBLE.
 - SPEED RESTRICTION BOARD SHALL BE PROVIDED ON ROAD PERMITTED IN IRC CODES.
 - CONCERNED SR. DESIGNER IS FULLY RESPONSIBLE FOR PLANNING & DESIGNING, ONE OR MORE SUITABLE DRAINAGE ARRANGEMENTS SUCH AS CONNECTING TO NEARBY LOW LYING AREA, BRIDGE, SOAK PIT, RECHARGE BORE WELL, SUMP WITH WITHOUT PUMPING ARRANGEMENT, PROVIDING COVERING SHED ETC.
 - PRIOR COMMENCING THE WORK, FEASIBILITY OF DRAINAGE ARRANGEMENT SHOULD BE ENSURED BY CONCERNED SR.DESIGNEDY CE IN TERMS OF RAILWAY BOARD S LETTER NO.2017CE-IVRUB/88 DATED 22.04.2020.
 - ACTUAL DEPTH OF FOUNDATION SHALL BE DECIDED BY ENGINEER-IN-CHARGE TO SUIT THE SOIL STRATA MET WITH AT THE SITE. ENGINEER-IN-CHARGE SHOULD ENSURE THAT SBC OF SOIL AT FOUNDING LEVEL IS MORE THAN BEARING PRESSURE AT THAT LEVEL.
 - EARTH FILL BEHIND ABUTMENT AND EXCAVATED PART OF EMANKMENT FOR BEARING SUPPORT SHALL BE DONE WITH GRANULAR MATERIAL/ QUARRY DUST.
 - EXECUTIVE IN CHARGE SHOULD ENSURE THAT THE SAFE BEARING CAPACITY AT FOUNDING LEVEL SITE IS MORE THAN THE MAXIMUM FOUNDATION PRESSURE SHOWN IN STRUCTURAL DESIGN DRAWING BEFORE STARTING THE WORK.
 - (a) PRIOR COMMENCING THE WORK ENGINEER-IN-CHARGE SITE ENGINEER TO ENSURE THAT THE SBC OF SOIL IS HIGHER THAN THE ACTUAL FOUNDATION PRESSURE MENTIONED IN DETAILED DRAWING.
 - (b) ANY DISCREPANCY REGARDING DIMENSION AND FEASIBILITY OF THE PROPOSAL BROUGHT TO THE NOTICE OF HQ OFFICE, PRIOR COMMENCING THE WORK.
 - (c) PRIOR COMMENCING THE WORK, SR. DESIGNER TO ENSURE THE DRAINAGE ARRANGEMENT IS FEASIBLE AND SUIT AT SITE.
 - (d) PRIOR COMMENCING THE WORK, SR. DESIGNER SITE ENGINEER IN CHARGE MUST CHECK THE BORE LOG DETAILS AND SHOULD MATCH THE SOIL PRESENT AT THE SITE WITH THE INFORMATION OF THE SOIL PROVIDED IN BORE LOG DETAILS IN GAD.
 - (e) PRIOR COMMENCING THE WORK SR. DESIGNER WILL BE FULLY RESPONSIBLE FOR PLANNING AND DESIGNING OF DRAINAGE ARRANGEMENTS AND ENSURING THAT DRAIN WATER/KAN WATER IN SUBWAY WILL BE DRAINED OUT TOWARDS LOW LYING AREA, BRIDGE, SOAK PIT, RECHARGE WELL, SUMP OR ANY OTHER SUITABLE LOCATION WITH PUMP OR ANY OTHER SUITABLE METHOD AND ENSURE THAT THERE SHOULD BE NO WATER LOGGING IN THE SUBWAY.
 - (f) PRIOR COMMENCING THE WORK SR. DESIGNER SITE ENGINEER IN CHARGE MUST ENSURE THAT PROVISION OF ROOF COVERING FOR APPROACHES SHOULD BE MADE AS PER TABLE NO.46 OF RAILWAY BOARD LETTER NO.2017CE-IVRUB/88 DATED 22.04.2020. (ROOF COVERING IS NOT REQUIRED AS PER TABLE-4)
 - (g) PRIOR COMMENCING THE WORK SR. DESIGNER SITE ENGINEER IN CHARGE MUST ENSURE THAT THE SIGNATURE OF ROAD AUTHORITY HAS BEEN OBTAINED ON GAD.
 - (h) REINFORCEMENT IS TO BE CHECKED BY SECTIONAL ADEN BEFORE CONCRETE TO ENSURE THAT THE ARRANGEMENT OF BARS IS AS PER STRUCTURAL DESIGNING.
 - (i) IF SUFFICIENT TIME LAPS AFTER RECEIPT OF REINFORCEMENT THEN SUITABLE ANTI CORROSION TREATMENT TO BE APPLIED.
 - (j) NO CONCRETING TO BE DONE WITHOUT ADDN CERTIFICATE.
 - (k) THE SHUTTER FORM WORK SHALL BE DESIGNED AND CONSTRUCTED SO AS TO REMAIN SUFFICIENTLY RIGID DURING PLACING AND COMPACTION OF CONCRETE AND SHALL BE SUCH AS TO PREVENT LOSS OF SLURRY FROM THE CONCRETE FOR THE DETAILED REGARDING DESIGN, DETAILING ETC. REFERENCE MAY BE MADE TO EACH PART, THE TOLERANCE ON THE SHAPES, LINES AND DIMENSIONS SHOWN IN THE DRAWING SHALL BE WITHIN THE LIMIT GIVEN BELOW.
 - DEVIATION FROM SPECIFIED : ±12MM DIMENSION OF CROSS SECTION OF COLUMN AND BEAMS : ±6MM
 - *AS FAR AS POSSIBLE COLD JOINT IS TO BE AVOIDED HOWEVER IF COLD JOINT IS COMING WHILE CASTING UP BIGGER STRUCTURE, NECESSARY STEPS AS PER IS 4564 CLAUSE 13.13 SHOULD BE TAKEN AND BEFORE INTRODUCING FRESH CONCRETE OVERSET CONCRETE, CHEMICAL BONDING AGENT AS APPROVED BY ENGINEER IN CHARGE SHOULD BE APPLIED.
 - SHAPE AND DIMENSIONS SHOWN ARE TENTATIVE AND ARE SUBJECT TO CHANGES IN FINAL DESIGN AND DRAWING.
 - STEAMING STEEL MARK HAVING GRADE : S6 350/39 : AS PER DESIGNER APPROVAL SHOULD BE USED CONFORMING IS 1665 : 2017 WITH LATEST AMENDMENT.