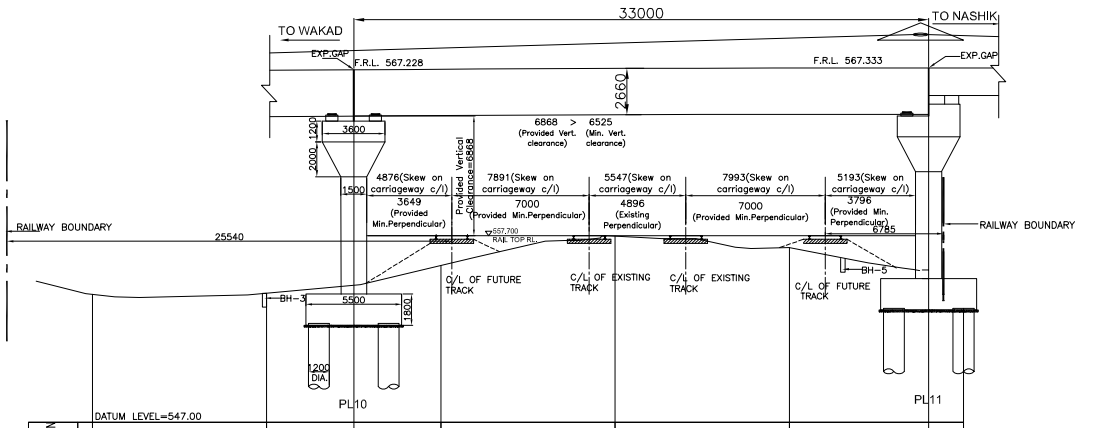
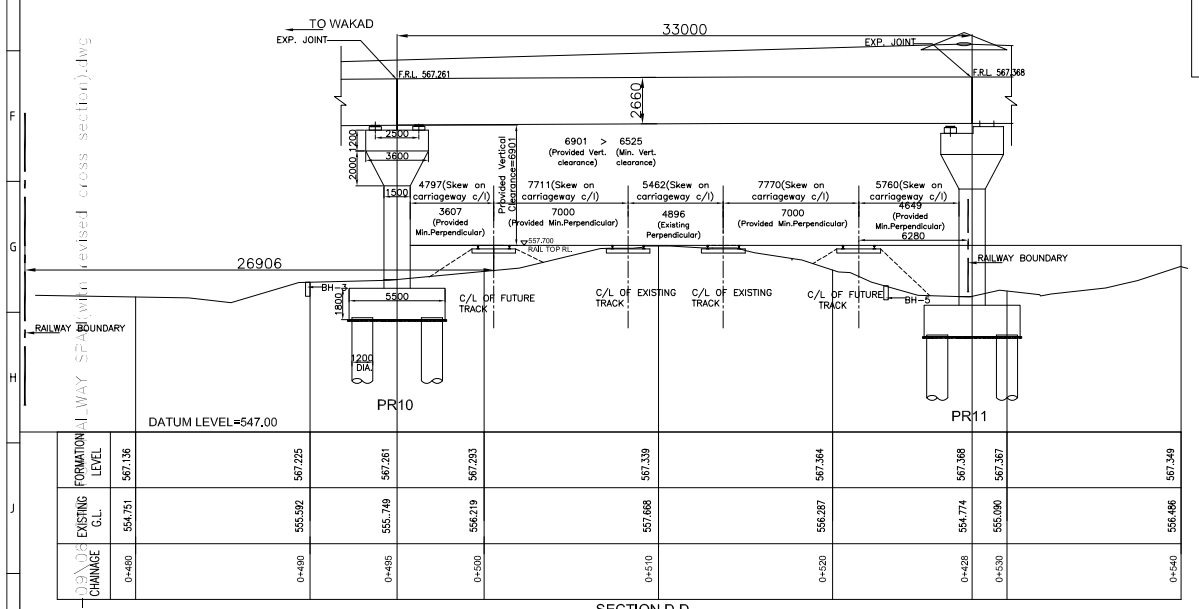
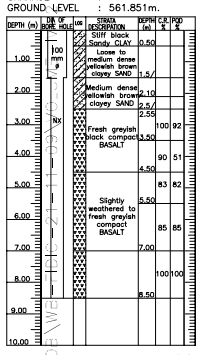


SECTION C-C
LONGITIUDINAL SECTION FOR ROB PORTION
(LEFT SIDE CARRIAGEWAY) (SCALE 1:150)

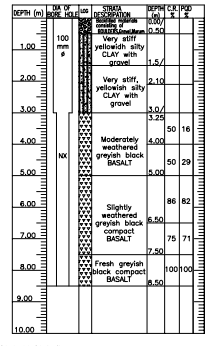


SECTION D-D
LONGITIUDINAL SECTION FOR ROB PORTION
(RIGHT SIDE CARRIAGEWAY) (SCALE 1:150)

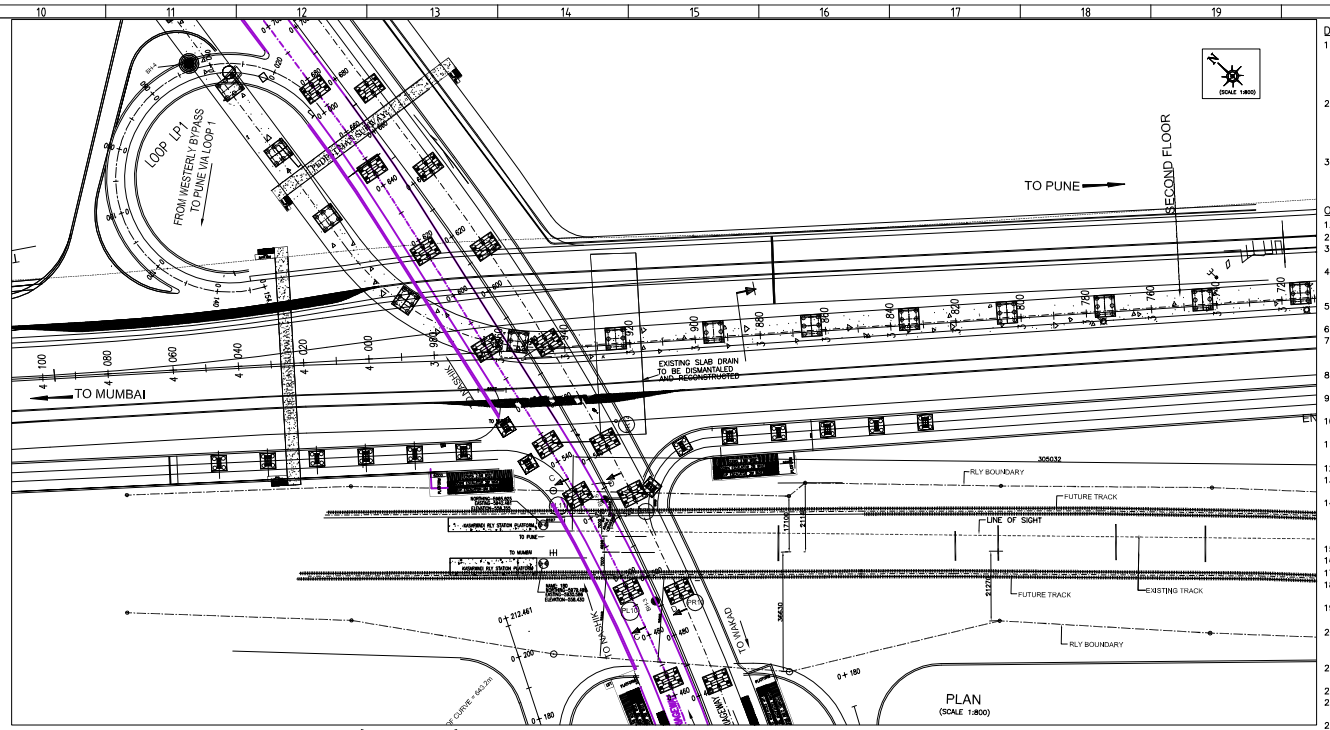
BORE HOLE NO. : BH-03 (P-10)
CHAINAGE : ---
GROUND LEVEL : 561.851m.

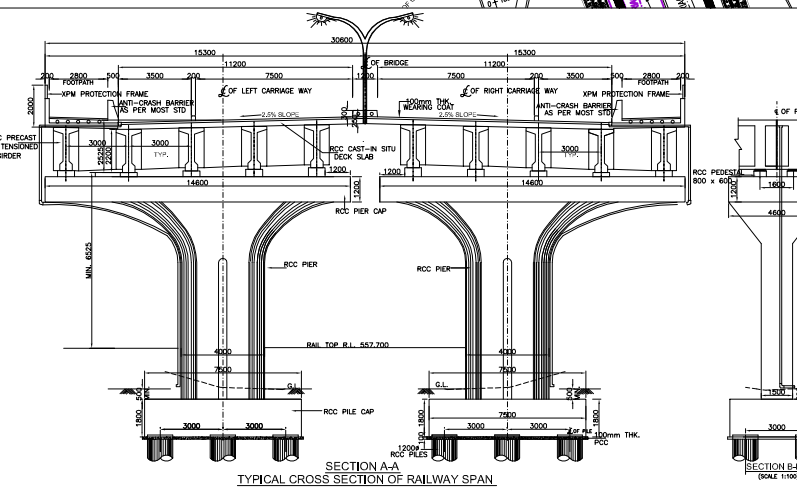


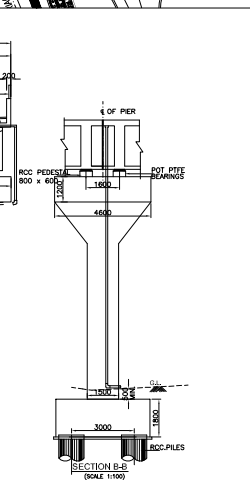
BORE HOLE NO. : BH-05 (P-11)
CHAINAGE : ---
GROUND LEVEL : 562.350m.

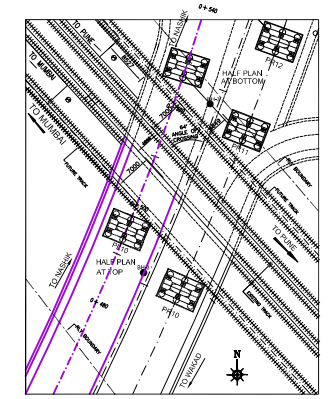


DETAILS OF BORE HOLES

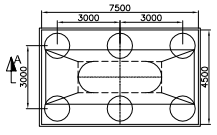




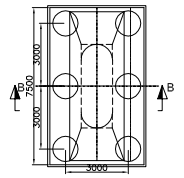




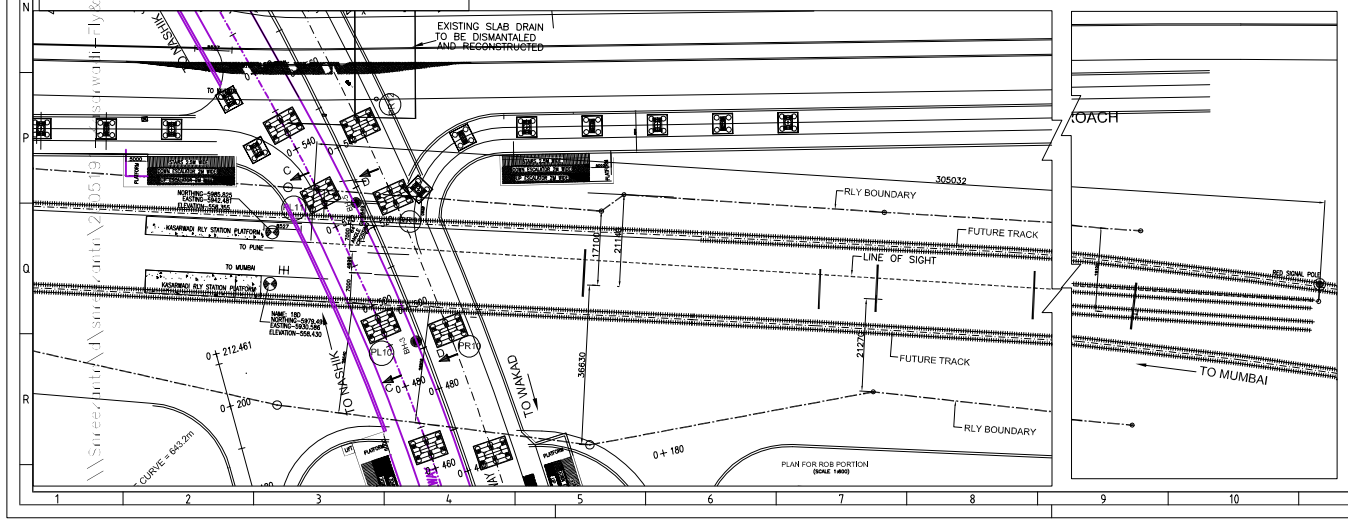
PLAN FOR HALF TOPAND HALF BOTTOM
(SCALE 1:500)

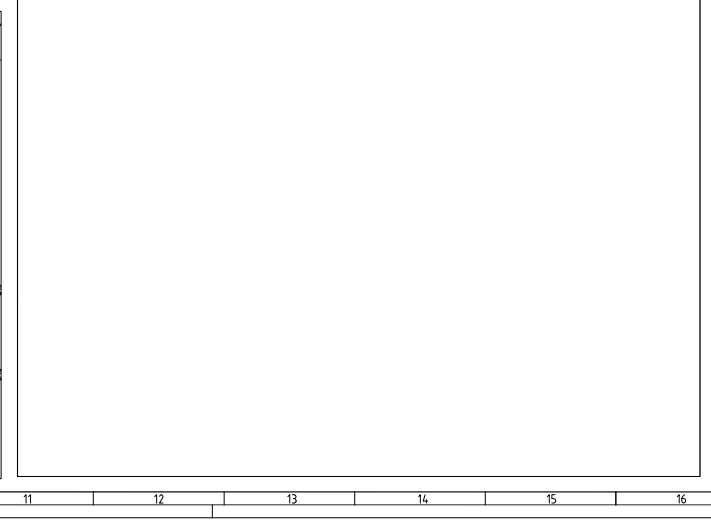


PLAN
DETAILS OF CARRIAGEWAY IN ROB PORTION
(SCALE 1:125)



PLAN OF FOUNDATION





DESIGN NOTES:

1. THE DESIGN IS BASED ON FOLLOWING CODES:
   IRC:6 –2000
   IRC:18–2000
   IRC:78–2000
   IRC:21–2000
2. CONCRETE GRADES SHALL BE AS FOLLOWS
   PIER– M35
   BED BLOCKS AND DIRT WALL:–M35
   P.S.C. GIRDER AND DECK SLAB–M45 & ABOVE.
   LEVELING COURSE–M20
3. TBM ON PUNE BOUND PLAT FORM AT KM 180/4 NAME: 18 C,
   NORTHING= 5985.825,EASTING= 5942.481,ELEVATION= 558.355m.
   TBM ON MUMBAI BOUND PLAT FORM AT KM 180/4 NAME: 18D,
   NORTHING= 5979.499,EASTING= 5930.586,ELEVETION= 558.430m

OTHER NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS NOTED OTHERWISE.
2. NO DIMENSIONS SHALL BE SCALED FROM THIS DRG. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. VERTICAL & HORIZONTAL CLEARANCE SHOWN FROM THE RAILWAY TRACK IS OBLIGATORY AND SHOULD NOT BE REDUCED.
4. THE DESIGN OF THE ROB SHALL CONFIRM TO THE LATEST IRC 6 –2000 STANDARD. DESIGN LOADING :– CARRIAGE WAY – 70R PER TWO LANES OR CLASS A ONE LANE OR THREE LANES OF CLASS A WHICHEVER PRODUCE MAXIMUM EFFECT.
5. ACTUAL LOCATION OF R.O.B. SHALL BE DECIDED BY ENGINEER–IN–CHARGE IN CONSULTATION WITH ROAD AUTHORITIES AT THE TIME OF ITS CONSTRUCTION.
6. DEPTH OF FOUNDATION MAY BE ALTERED BY ENGINEER–IN–CHARGE TO SUIT THE SOIL STRATA MET WITH AT SITE.
7. SHAPES & SIZE OF P.S.C. GIRDERS, P.T.F.E. BEARINGS, BEARING PEDESTALS, R.C.C. COLUMN CAP, COLUMNS, FOUNDATIONS SHOWN IN THIS DRG. ARE TENTAITVE AND ARE SUBJECTED TO CHANGE IN FINAL EXECUTION DRG. & DESIGN.
8. DRAWING AND DESIGN OF APPROACH SPANS AND APPROACHES SHALL BE DECIDED BY SPONSORING AUTHORITY AS PER CLAUSE 217–3 OF I.R.C. CODE.
9. IN CASE BLASTING IS TO BE CARRIED OUT IN THE VICINITY OF RAILWAY LINE, NECESSARY PRECAUTIONS AND TRAFFIC BLOCK SHALL BE OBTAINED AS PER PARA 1006 OF I.R.W. MANUAL.
10. WEARING COAT OF THICKNESS 100 M.M. SHALL BE PROVIDED BY ROAD AUTHORITY AND SHALL CONSIST 50 mm DBM 50 mm BC.
11. NO PLASTERING AND REPAIR WORK,OVER THE CONCRETE SHALL BE PERMITTED. ANY BAD WORK WILL QUALIFY SUMMARILY.
12. GUARD RAILS TO BE PROVIDED AS PER RLY'S STANDARD DRAWING.
13. ADDITIONAL LOAD TRANSFERRING FROM FUTURE TRACKS SHALL BE CONSIDERED WHILE DESIGNING PILECAP OF FOUNDATION.
14. SITE OFFICE FOR RAILWAY ENGINEER WELL FURNISHED WITH PROPER EXECUTIVE TABLE,CHAIR,SOFA DULY EQUIPPED WITH TELEPHONIC COMMUNICATION AIR CONDITIONER ATTACHED TOILET ETC.COMPLETE AS DESIRED BY RAILWAY ENGINEER,AT THE BRIDGE SITE AT THE NEAR BY LOCATION DECIDED BY THE RAILWAY SHALL BE PROVIDED BY ROAD SPONSORING AUTHORITY AND MAINTAINED DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT.
15. STRIP SEAL TYPE EXPANSION JOINT SHALL BE PROVIDED.
16. VERTICAL CLEARANCE FROM THE HIGHEST RAIL LEVEL TO BOTTOM OF GIRDER SHALL NOT BE LESS THAN 6.525M.
17. CONTROLLED CEMENT CONCRETE SHALL BE AS PER RAILWAY'S SPECIFICATION ISSUED AS ON DEC. 2000.
18. A SEPARATE LAUNCHING SCHEME HAS TO BE SUBMITTED WHICH WILL BE APPROVED BY C.B.E. BEFORE COMMENCEMENT OF LAUNCHING.
19. CASTING OF PSC GIRDERS IN SITU SHALL NOT BE PERMITTED OVER RUNNING LINE. THOSE WILL BE PRECAST OUTSIDE AND LAUNCHED UNDER TRAFFIC/POWER BLOCK.
20. EXECUTION OF ANY WORK WITHIN RLY BOUNDARY FOR CONSTRUCTION OF ROB SHALL BE DONE ONLY IN PRESENCE OF RAILWAY'S AUTHORISED REPRESENTATIVE TO ENSURE THE SAFETY OF RUNNING TRAINS.NO HEAVY MACHINARY WILL WORK ALONG THE TRACK WITHOUT PRESENCE OF ANY RAILWAY AUTHORITY.
21. ANTI–CRASH BARRIER TO BE PROVIDED AS PER APPROVED DRAWING OF M.O.R.T&H STANDARD AND SHALL BE CAST IN SITU.
22. POT P.T.F.E. BEARING SHALL BE PROVIDED UNDER PSC GIRDERS.
23. IN ORDER TO OFFER ADEQUATE RESISTANCE AGAINST CORROSION, ALL REINFORCEMENT BARS SHALL BE PROVIDED WITH EPOXY COATING AS ENVIRONMENT CONDITION AT LOCATION OF PROPOSED ROB IS MODERATE.
24. FOR GENERAL ARRANGEMENT OF ENTIRE BRIDGE REFER DRAWING NO. 2005191/GAD–01,FOR RAMP 1 ,RAMP 2 & LOOP1 REFER DRAWING NO.2005191/RAMP GAD–02.
25. ALL TECHNICAL RECORD THAT IS CUBE STRENGTH REGISTER, PRESTRESSING DETAILS ETC. SHALL BE HANDED OVER TO RAILWAY ENGINEER WHENEVER REQUIRED.
26. ALL TECHNICAL RECORDS i.e. CUBE STRENGTH REGISTER,PRESTRESSING DETAILS etc. SHOULD BE HANDED OVER TO RAILWAY ENGINEER.COMPLETION DRAWING OF R.O.B DULY APPROVED BY ROAD AUTHORITY SHALL BE HANDED OVER TO RAILWAY ENGINEER–IN–CHARGE.
27. CONCRETE USED FOR CONSTRUCTION SHALL BE READY MIXED CONCRETE (R M C) OR CONCRETE MIXED FROM BATCHING PLANT.
28. X.P.M. PROTECTION FRAMES SHALL BE PROVIDED FOR ELECTRIFIED SECTION AND FIXED WITH PARAPET OF R.O.B OVER EACH LINE ON BOTH SIDES OF ROB.
29. BINDING WIRES USED FOR REINFORCEMENT AND COVER BLOCKS SHALL BE G.I. WIRE.
30. COLD ROLLED COLD ANNEALED (CRCA) MILD STEEL SHEATHING SHALL BE PROVIDED FOR PRESTRESSING CABLES.
31. WHILE CARRYING OUT EXCAVATION WORK FOR FOUNDATION, SHORING HAS TO BE DONE TO PROTECT SLIPPING OF SOIL. NECESSARY SPEED RESTRICTION WILL BE IMPOSED BY RAILWAY IF ANY EXCAVATION IS DONE BY THE SIDE OF RLY TRACK.
32. STRUCTURAL DRAWINGS/ DESIGN SHALL BE PROOF CHECKED BY RAILWAY APPROVED DESIGNERS FOR FINAL APPROVAL OF RLY ENGINEER AT CBE'S OFFICE.
33. BEFORE OPENING OF THE ROB FOR ROAD TRAFFIC, APPROVAL OF RLY ENGINEER INCHARGE IS TO BE OBTAINED.
34. APPROVAL OF GAD SHALL BE OBTAINED IN TRACING PAPER FROM PUNE.DIVISIONAL OFFICE & FURTHER FROM CBE'S OFFICE AT C.RLY HEAD QUARTERS.
35. TWO FUTURE TRACKS SHOWN IN THE GAD.
36. WHILE INVITING TENDERS THE SPECIFICATIONS ENCLOSED SHALL FORM PART OF CONTRACT FOR CONSTRUCTION OF BRIDGE OVER RAILWAY SPAN.
37. FOR QUALITY AUDIT AN INDEPENDENT 3rd PARTY SHALL BE ENGAGED, WITH PRIOR APPROVAL OF CBE RAILWAYS WHO SHALL SUBMIT PERIODIC REPORTS TO CBE FOR MONITORING.
38. EXISTING RAIL LEVEL 557.70M HAS ONLY BEEN CONSIDERED FOR ALL PURPOSE IN PREPARING GAD.
39. SKEW ANGLE IS 62 DEGREES.
40. IN CASE OF OPEN FOUNDATION ANCHOR RODS 32mm DIA HYSD (TREATED WITH ANTI CORROSIVE TREATMENT) AT A SPACING OF 1m C/C,DUELY STAGGERED, SHALL BE PROVIDED FOR ALL FOUNDATIONS.THESE ANCHOR RODS SHALL BE ANCHORED INTO FOUNDING STRATA UPTO A DEPTH OF 1.25m AND EPOXY GROUTED.
41. IT IS TO CERTIFY THAT CONSTRUCTION OF SUBWAY OR LIGHT FOOT OVER BRIDGE IS NOT NECESSARY.IT IS FURTHER TO CERTIFY THAT THERE IS NO EXISTING LEVEL CROSSING.
42. EXPOSURE CONDITIONS:– MODERATE.
43. IF REQUIRED O.H.E. MODIFICATION FOR WHICH SEPARATE DRAWING WILL BE SUBMITTED.
44. ONE ROAD INSPECTION VEHICLE (CAR/JEEP)FOR THE INSPECTION PURPOSE FOR RAILWAY ENGINEER SHALL BE PROVIDED BY ROAD SPONSORING AUTHORITY FOR THE ENTIRE PERIOD OF CONSTRUCTION OF R.O.B.THE COST OF PROVIDING SUCH VEHICLE,ITS MAINTENANCE AND FUEL ETC. COMPLETE SHALL BE BORN BY ROAD SPONSORING AUTHORITY.
45. SEPARATE SKETCH AND ESTIMATE WILL BE SUBMITTED FOR SHIFTING OF TELECOM CABLE.
46. IN ORDER TO OFFER ADEQUATE RESISTANCE AGAINST CORROSSION.THE REINFORCEMENT BARS SHALL BE PROVIDED WITH SUITABLE PROTECTIVE COATING DEPENDING UPON THE ENVIRONMENTAL CONDITIONS AS PER PARA 7.1.5 OF CONCRETE BRIDGE CODE CORRECTION SLIP NO.1 DATED 26–04–2000.
47. GIRDER SHOULD BE DESIGNED KEEP IN MIND STABILITY DURING LAUNCHING.
48. AS FAR AS POSSIBLE IN DESIGN OF PSC GIRDER BOTTOM FLANGE SHOULD BE NARROW/LESSER IN WIDTH THAN TOP FLANGE.
49. DIAPHRAGM SHOULD BE PROVIDED IN SUPERSTRUCTURE TO CONNECT THE GIRDER AS PER CBC CL 16.9.7.2. TILL DIAPHRAGMS ARE CASTED STEEL BRACKETS AT END OF GIRDER SHOULD BE PROVIDED AND WILL NOT BE REMOVED TILL END DIAPHRAGMS ARE CASTED.DRAWING FOR STEEL BRACKETS SHALL BE SUBMITTED SEPARATELY.
50. THE MODEL SHOULD BE TESTED BEFORE USING AT THE TIME OF LAUNCHING OF THE GIRDER/REPLACMENT OF BEARINGS.
51. STOPPERS SHOULD BE PROVIDED AT THE TOP OF PIER TO PREVENT POSSIBILITY OF TOPPLING OF GIRDER WHILE LAUNCHING OF GIRDER.
52. MINIMUM GRIP LENGTH IN ROCK SHOULD BE KEPT 1.5m AS PER BRIDGE MANUAL (PARA 403).
53. IF THE LAUNCHING IS DONE BY CRANE,THE CAPACITY/ BOOM LENGTH OF THE CRANE WILL BE APPROVED BY THE RAILWAY ENGINEER AND ADDITIONAL STAND BY CRANE WILL HAVE TO BE PROVIDED IN CASE OF FAILURE OF WORKING CRANE.

SPECIAL NOTES:–

1. FOR SHIFTING OF RAILWAY'S 110 KV SEI TRANSMISSION LINE, RAILWAY HEADQUARTER'S CLEARANCE IS REQUIRED. THE ESTIMATE FOR ELECTRICAL TRACTION PORTION WORK WILL BE SUBMITTED TO RAILWAY HEADQUARTER'S FOR APPROVAL.(i.e. MANDATORY)
2. ACQUISITION OF THE LAND, AT THE POINTS INDICATED IN THE DRAWING, HAS TO BE DONE BY PCMC FOR THE ERECTION OF PROPOSED TOWERS. AFTER GETTING THE CLEARANCE REGARDING THE AVAILABILITY OF THE LAND THEN ONLY THE WORK CAN BE PROCESSED AHEAD.
3. NECESSARY PERMISSION FOR SHIFTING OF CONDUCTORS AND WORKING FROM OTHER AGENCIES AND PRIVATE BODIES IN THAT AREA ARE REQUIRED FROM PCMC.
4. AFTER GETTING CLEAR PERMISSION FOR ERECTION AND MAINTENANCE OF 110 Kv RAILWAY TRANSMISSION LINE FROM DEFENCE (TOWER NO. 112 /1, 112 /2) THE WORK WILL BE ALLOWED IN RAILWAY PORTION.
5. THE LETTER NO. FOR APPROVAL OF R.O.B DRAWING FROM CENTRAL RAILWAY IS N & W. 641.BR.502 DATED:11–07–08.

R6	21–11–08	REQUIREMENT OF VERTICAL CLEARANCE CHANGED TO 6.525m			
R5	12–09–08	REQUIREMENT OF VERTICAL CLEARANCE CHANGED TO 6.525m			
R4	22–04–08	LOCATION OF HT LINE SHIFTING DETAILS OF BORE HORE, PLAN TOP & BOTTOM, RLY. ROW MARING			
R3	28–12–07	LOCATION OF STAIR–2 IS CHANGED			
R2	22–12–07	REQUIREMENT OF VERTICAL CLEARANCE CHANGED TO 8050mm			
R1	17–10–07	MODIFIED AS PER SITE VISIT OF DY. CHIEF ENGINEER RAILWAYS ON 27–09–07			
MKD	ISSUED	DESCRIPTION	DEALT	CHECKED	APPROVED

REVISIONS

NOTICE:
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PIMPRI CHINCHWAD MUNICIPAL CORPORATION PIMPRI PUNE – 411 018.	
sd/–	sd/–
EXECUTIVE ENGINEER (PROJECTS)	CITY ENGINEER

DIVISIONAL OFFICERS APPROVAL						
sd/–	sd/–	sd/–	sd/–	sd/–	sd/–	sd/–
DEN (N), PA	Sr.DEN(HQ)/(ROB)/PA	Sr. DEN(CO)/PA	Sr. DSTE/PA	SR. DEE(TR)/PA	SR. DOM/PA	DRM (PA)

APPROVAL OF OTHER HODS			ORG.CHECKED BY	HEAD QUARTERS APPROVAL			
			sd/– JD (R.O.B) HQ				
			sd/– SE DRAWING(R.O.B)				
sd/–	sd/–	sd/–	sd/– SE (DESIGN) HQ	sd/–	sd/–	sd/–	sd/–
C.E.E.	C.S.T.E.	C.O.M.		SEN. (DESIGN) HQ.	DY. C.E. (BR–II) HQ.	DY. C.E. (BR–I)	CHIEF BRIDGE ENGINEER

NAME OF WORK:	CONSTRUCTION OF INTERCHANGE AND ROB AT NASHIK HIGHWAY JUNCTION AT KM–180/4–5 NEAR KASARWADI RAILWAY STATION ON PUNE LONAVLA SECTION INCLUDING BRIDGE ON RIVER PAWANA
PURPOSE	FOR TENDER PURPOSE
STATUS	APPROVAL
ISSUED	28/12/2007
DATE:	28/12/2007
	LONAVALA PUNE SECTION CENTRAL RAILWAY.
SCALE :–	AS SHOWN
TITLE OF DRAWING.	GENERAL ARRANGEMENT FOR RAILWAY SPAN, ELEVATION AND SECTION
	CENTRAL RAILWAY PUNE DIVISION
CENTRAL RAILWAY DRG. NO–	
C.E.S. DRAWING NO: 2005191/GAD–006/RW–R6	DATE: 22–04–2008

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