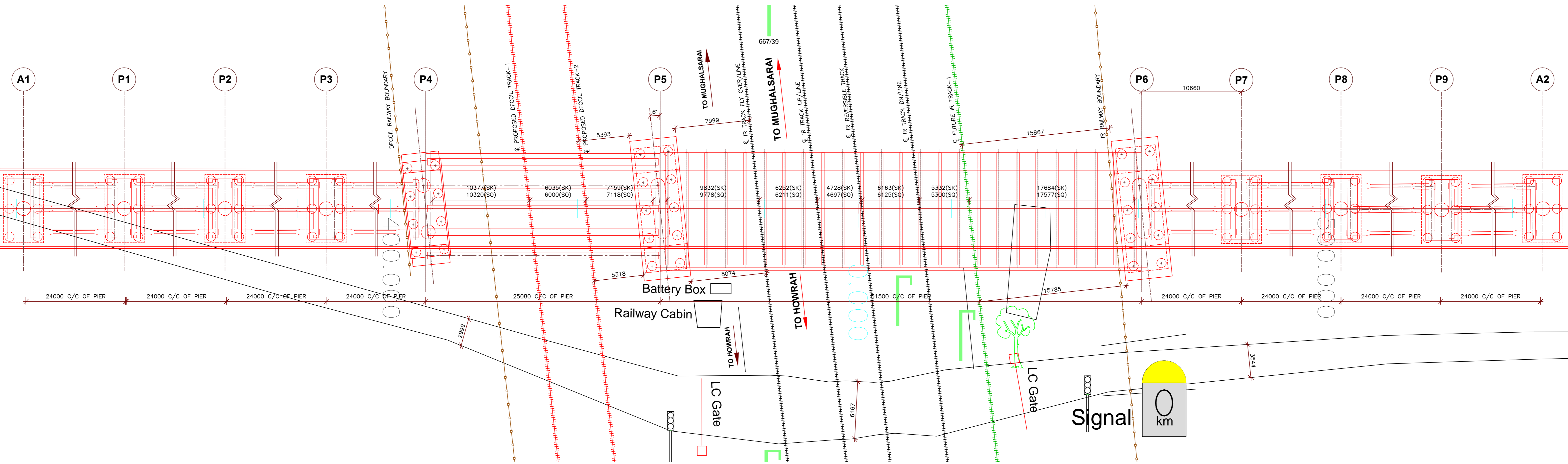
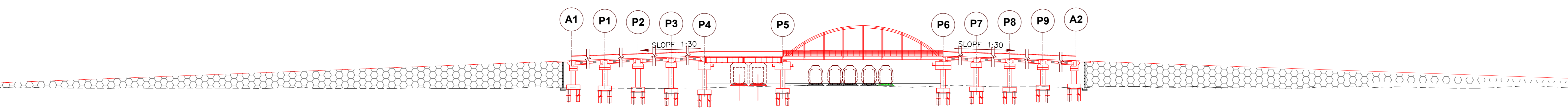


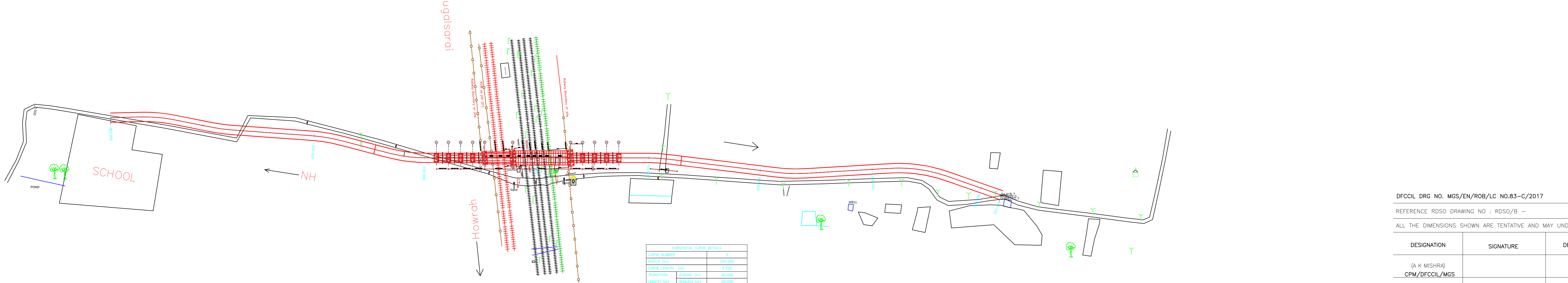
SECTIONAL ELEVATION (SECTION A-A) AS TO ROAD ALIGNMENT (SCALE 1:200)



HALF BOTTOM & HALF TOP PLAN (SCALE 1:200)



EXISTING LEVEL	PROPOSED LEVEL	HORIZONTAL	VERTICAL	CHAINAGE
76.436	86.507	121.000 L=121.000	Slope	-340.000
76.525	76.187	121.000 L=121.000	Slope	-320.000
76.423	76.853	121.000 L=121.000	Slope	-300.000
76.424	79.520	121.000 L=121.000	Slope	-280.000
76.388	80.187	121.000 L=121.000	Slope	-260.000
76.142	80.853	121.000 L=121.000	Slope	-240.000
76.156	81.520	121.000 L=121.000	Slope	-220.000
76.166	82.187	121.000 L=121.000	Slope	-200.000
76.321	82.853	121.000 L=121.000	Slope	-180.000
76.100	83.520	121.000 L=121.000	Slope	-160.000
76.215	84.187	121.000 L=121.000	Slope	-140.000
76.100	84.853	121.000 L=121.000	Slope	-120.000
76.453	85.520	121.000 L=121.000	Slope	-40.000
77.392	86.520	121.000 L=121.000	Slope	0.000
76.487	86.520	121.000 L=121.000	Slope	20.000
76.658	86.145	121.000 L=121.000	Slope	60.000
76.572	85.520	121.000 L=121.000	Slope	80.000
76.333	84.853	121.000 L=121.000	Slope	100.000
76.395	84.187	121.000 L=121.000	Slope	120.000
76.170	83.520	121.000 L=121.000	Slope	140.000
76.589	82.853	121.000 L=121.000	Slope	160.000
76.524	82.187	121.000 L=121.000	Slope	180.000
76.139	81.520	121.000 L=121.000	Slope	200.000
76.829	80.853	121.000 L=121.000	Slope	220.000
76.238	80.187	121.000 L=121.000	Slope	240.000
76.749	79.520	121.000 L=121.000	Slope	260.000
76.286	78.853	121.000 L=121.000	Slope	280.000
76.249	78.187	121.000 L=121.000	Slope	300.000
76.385	77.528	121.000 L=121.000	Slope	320.000



- SANCTION OF CRS TO BE TAKEN PRIOR TO EXECUTION OF WORK**
1. LAUNCHING SCHEME OF THE ROW STRING ORDER WILL BE SUBMITTED SEPARATELY.
 2. MAINTENANCE AGREEMENT TO BE EXECUTED BEFORE EXECUTION OF WORK.
 3. NO WORK WITHIN RAILWAY BOUNDARY TO BE DONE WITHOUT PRESENCE OF RAIL REPRESENTATIVE.
 4. ORDERS OVER ROB PROPER TO BE FABRICATED PREFERABLY BY RDSO APPROVED FIRMS.
 5. SEE SEPARATE DRAWING FOR FOUNDATION, SUB STRUCTURE & OTHER STRUCTURAL DETAILS.
 6. APPROVAL FOR CONSTRUCTION OF ROB ON FILE WITH RDSO. FOUNDATION HAS BEEN OBTAINED CAD/CON/SOUTH SIDE NOTE NO. - ECR/CE/CON/S/ROB DATED 22.03.2017.
 7. SUITABLE RE WALL / RE TURN WALL WILL BE PROVIDED AS PER DESIGN WHERE EVER REQUIRED.

- NOTES:**
1. ALL DIMENSION ARE IN MM AND LEVELS ARE IN METERS UNLESS SPECIFIED OTHERWISE.
 2. DIMENSION ARE NOT TO BE SCALED. ALL DIMENSIONS SHOULD BE FOLLOWED AS SHOWN.
 3. ALL THE DIMENSIONS SHOWN SHOULD BE VERIFIED AS TAKING UP DESIGN WORK.
 4. MAXIMUM SAFE BEARING CAPACITY AT THE FOUNDATION LEVEL CONSIDERED AS PER GEOTECH REPORT. IF IT IS LESS THAN THE BASE PRESSURE, THE FOUNDATION HAS TO BE REDESIGNED.
 5. DRAINAGE ARRANGEMENT SHALL BE PROVIDED AS PER MONTH SPECIFICATION DESIGN CONSULTANT'S SUBMIT SEPARATE SHEET OF DRAINAGE SPOUTS AS PER LATEST MORTH STANDARD.
 6. EXPOSURE CONDITION OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER IS 21-2000/IS:456. ALL SPECIFICATION LAD DOWN IN IRC CODE/IS:456 CODE FOR RELIABILITY CONDITION SHALL BE FOLLOWED.
 7. FOR DETAILS OF SUBSTRUCTURE AND FOUNDATION REFER SEPARATE DRAWING DULY APPR BY RAILWAY.
 8. WORK SHOULD BE CARRIED OUT UNDER THE SUPERVISION OF RAILWAY ENGINEERS WITHIN RAILWAY LAND LIMIT.
 9. SANCTION OF CRS SHOULD BE OBTAINED PRIOR TO EXECUTION OF PROPOSED WORK.
 10. TYPE OF BEARING - POT FOUNDATION.
 11. SUITABLE UTILITY DUCTS IF REQUIRED SHOULD BE PROVIDED BELOW FOOTPATH SLAB WITH APPROVAL OF ENGINEER IN CHARGE.
 12. DESIGN SHALL BE AS PER LATEST RELEVANT CODE OF IRC INCLUDING SP-33 AND OTHER CODES APPROVED BY R.S.T.
 13. STATE GOVT./PRIVATE AUTHORITIES SHOULD BE ENSURE DURING EXECUTION OF WORK SAFETY RUNNING RAIL TRAFFIC SHOULD NOT BE AFFECTED.
 14. TEMPORARY BEARING ARRANGEMENT SHALL BE PROVIDED BEFORE TAKING UP THE EXECUTION OF WORK WITH THE APPROVAL OF ENGINEER IN CHARGE.
 15. TEMPORARY BEARING ARRANGEMENT SHALL BE DONE AS PER G.R.15.09 (D) & R.15.09 (2) GR.15.09(2)B & R.15.09(2)C WHICH EVER IS APPLICABLE IF REQUIRED.
 16. LOADING STANDARD OF ROB AS PER IRC-811-2015 SHALL BE FOLLOWED.
 17. FULL FLEGGED LOAD TEST OF SUPER STRUCTURE SHOULD BE DONE AS PER IRC-SP-5 TO ENHANCE QUALITY WORK.
 18. CONCRETE DESIGN MIX: R/C DECK SLAB: M40, PIER/PIER CAP, FILE/PILE CAP: M35, CRASH BARRIER: M40, PEDESTAL: M40.
 19. LEVELING COURSE: 1:15.
 20. MANNED LEVEL CROSSING NO 50/C EXIST AT THIS LOCATION.
 21. L.C. SHALL BE CLOSED SIMULTANEOUSLY WITH COMMISSIONING OF ROB AND NOC IN THIS R/W HAS BEEN ISSUED BY STATE GOVT. WIDE LETTER NO. 1588/23-1-2015/2123/2015, DATED 29.02.16.
 22. TNU OF C. IS 58128 OF YEAR OCT-2015.
 23. TEMPORARY DIVERSION OF ROAD TRAFFIC DURING CONSTRUCTION OF ROB/R/S WILL BE THE DIVERSION ROAD. AUTHORITY WILL ENSURE DIVERSION OF EXISTING ROAD TRAFFIC THROUGH PROPOSED DIVERSION BEFORE EXECUTION.
 24. REINFORCEMENT OF ROAD TRAFFIC DURING CONSTRUCTION OF ROB/R/S SHALL BE AS PER 1786.
 25. PROVISION OF CLAMPS IN THE SUPERSTRUCTURE FOR THE SUPPORTING THE AC TRACTION WIRE BE MADE IN ACCORDANCE WITH CONCERN AUTHORITIES BASED ON TYPICAL DRAWING.
 26. ALL R.C.C./M.C.C./P.C.C. WORK SHOULD CONFORM TO RELEVANT S/IRC CODES & SPECIFICATION.
 27. FABRICATION, WORKMANSHIP, INCEPTION & TESTING, PROTECTION AGAINST CORROSION RELEVANT PROVISION OF IRC-24-2001 SHALL BE FOLLOWED.
 28. THE DEPTH OF FOUNDATION SHOWN IN THIS DRAWING IS TENTATIVE & SHOULD BE DECIDE COMPETENT AUTHORITIES AS PER ACTUAL SOIL PROPERTIES AND DESIGN CALCULATION.
 29. REPRESENTATIVE OF TELECOM & SIGNAL DEPARTMENTS SHOULD BE MADE AVAILABLE FOR COMMENCEMENT OF PROPOSED WORK - IN THE VICINITY OF SIGNAL & TELECOM CABLE.
 30. TEMPORARY ARRANGEMENT DRAWING OR METHODOLOGY TO LAUNCHING OF GRIDERS OVER RA TRACK SHOULD BE GOT APPROVED FROM RAILWAY AUTHORITY BEFORE START THE WORK.
 31. DIMENSION GIVEN IN THIS DRAWING MUST BE RECONCILED AT SITE BEFORE START OF WORK.
 32. PRECAUTIONARY MEASURES FOR CONSTRUCTION OF ROB ON DEPOSIT WORK/COST SHARING WITH STATE GOVT. AND PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY LETTER NO. 97/EE-1/ROB/5808/01/11-11-11 DATED -18.07.2009, 27.10.2009, 15.02.2011 SHOULD BE STRICTLY FOLLOWED.
 33. NO CONSTRUCTION JOINT SHALL NORMALLY ALLOWED IN CONCRETE WORKS WITHOUT SE PRECAUTIONS AS PER THE RELEVANT BRIDGE CODES AND SUITABLE PROTECTION PAINTING APPROVED MAKE SHOULD BE USED TO PAINT THE UNDERSIDE OF CONCRETE RO GIRDERS ALONG ENGLISH LONG LIFE.
 34. CONTROLLED CONCRETE WITH MESH BATCHING SHALL BE USED.
 35. GUARD RAIL SHOULD BE PROVIDED IN THE TRACK NEAR TO THE ISOLATED PILLAR OF ROB CONSTRUCTION JOINT SHALL BE ALLOWED IN PSC OR RCC SLAB OR GIRDER AND CURING OF CONCRETE AND MASONRY WORKS AS PER THE RELEVANT CODES OF PRACTICE SHALL BE EN BEFORE USE.
 36. INSPECTION LADDER/STEPS SHOULD BE PROVIDED TO ENSURE PROPER INSPECTION/ACCESS OF ROB.
 37. STRUCTURAL STEEL SHALL CONFORM TO IS:2062 (GRADE - B).
 38. STRIP SEAL TYPE EXPANSION JOINTS SHALL BE PROVIDED AS PER LATEST MOST RECENT CONTRACTOR SHOULD FURNISH DESIGN DRAWING OF EXPANSION JOINTS FROM FIRMS APPROVE MOST AT VARIOUS RELEVANT AMBIENT TEMPERATURE TO SUIT SITE CONDITIONS WITH THE APPR OF ENGINEER IN CHARGE.
 39. TO PROTECT THE CONCRETE FROM DAMAGE DUE TO SMOKE OF LOCOMOTIVES, 4.00M WIDE WITH POLY-SULPHIDE PAINT PREFERABLE IN BLACK COLOUR SHALL BE PROVIDED IN THE STATE OF THE DECK OVER RUNNING TRACKS.
 40. STANDARD MAINTENANCE AGREEMENT SHOULD BE EXECUTED WITH RAILWAY AND STATE AUTHORITIES FOR CONSTRUCTION OF ROB/R/S IN RAILWAY PORTION.
 41. ROAD AUTHORITY SHOULD ENSURE THAT BEFORE LAYING OF ANY NEW WEARING COAT IN FL EXISTING WEARING COAT SHOULD BE COMPLETELY REMOVED.
 42. NO WORK SHOULD BE TAKEN UP IN HAND TILL PROOF CHECKED DESIGN AND DRAWING V RAILWAY PORTION AREA APPROVED BY RAILWAY.
 43. ALL STEEL STRUCTURES SHOULD HAVE ANTI - CORROSION PROTECTION OF LONG DURABILITY.
 44. FOR DETAILS OF SUPER STRUCTURE OF 18.00M SPAN REFER RDSO DRC. NO. RD-800/8-117 AND FOR 10M RAILWAY SPAN OF ROW STRING ORDER REFER RDSO DRC. NO. B-10411/R. AND CHANGE IN THE GAD FOR RAILWAY PORTION SHOULD BE DONE WITH PRIOR APPROVAL RAILWAY.
 45. CLEAR COVER TO OUTER MOST STEEL SHALL BE AS UNDER
A. FOR SUPER STRUCTURE - 50MM
B. FOR FOUNDATION - 75MM
C. FOR ABUTMENT, DIRT WALL AND RETURN WALL - 50MM
 46. BACK FILLING BEHIND ABUTMENTS SHALL CONSISTS OF SELECTED EARTH CONFORM TO PROPERTIES GAD, D-3 & D-2 & = 1:1.50
 47. FOR JACKING UP THE ORDER FOR ANY HANDLING REQUIREMENTS IN FUTURE, SUCH AS REPLACEMENT OF BEARING OR ANY OTHER WORK REQUIRED, SUITABLE FEATURING SHALL PROVIDED TO ENABLE JACKING.
 48. THE DIMENSION OF GRIDERS SHOWN IN THE GAD ARE SUBJECT TO CHANGES AS PER REQUIREMENT AND WILL BE DONE WITH PRIOR APPROVAL OF RAILWAY.
 49. DIMENSIONS MAY GET CHANGED AFTER ITS DETAILED DESIGN.
 50. DIMENSIONS AS PER DATA GIVEN IN SECTION BETWEEN PROPOSED DFC TRACK FROM LINE AND ITS PROPOSED LEVEL HAVE BEEN SHOWN IN THE DRAWING.
 51. PROVISION OF EXPANSION JOINT SHOULD BE BETWEEN THE ORDER.
 52. VERTICAL CLEARANCE WILL TAKE FROM HIGHEST RAIL LEVEL.
 53. ORDER SHALL BE METALLISED AS PER IRSB1-2001.
 54. VERTICAL CURVE WILL BE PROVIDED WHEREVER THERE IS CHANGE IN GRADIENT IN APPROACH PER IRC SP-23.
 55. SAFE BEARING CAPACITY AT 2.0M DEPTH 13.00 T/M².
 56. RESTRAINER ON BOTH SIDE OF OUTERMOST GIRDER ON PIER CAP & ABUTMENT CAP WILL PROVIDED.
 57. DRAWING FOR SHIFTING OF LC WILL BE GOT APPROVED FROM COMPETENT AUTHORITY BEFORE START OF WORK.
 58. S&T CABLE SHOULD BE SHIFTED BEFORE UNDER TAKING DIGGING OR TRENCHING NEAR IR TRACK BY S&T CONSTRUCTION.

- OPERATION SCHEDULE FOR RAILWAY SPAN:**
1. TRACK SHALL BE PROTECTED SUITABLY DURING THE CONSTRUCTION OF BRIDGE/ROB FOR SAFE OF RUNNING TRAIN.
 2. ADEQUATE MEASURES SHALL BE TAKEN AT SITE TO ENSURE SAFETY FOR WORKING MEMBER MATERIALS, EQUIPMENTS, TRAFFIC ETC.
 3. FOR SHIFTING OF THE MASTS AND SIGNALING EQUIPMENTS, DIVISION MAY BE CONSULTED AS F EXTANT RULES.
 4. FOR LAUNCHING OF GRIDERS OVER RAILWAY TRACK, SUITABLE BLOCK WILL BE TAKEN W ADVANCE INTIMATION.
 5. DETAILED STRUCTURE DRAWINGS OF THE ROB SHALL BE APPROVED BY COMPETENT AUTHORITY.
 6. LAUNCHING SCHEME SHALL BE APPROVED BY CBE/C.R./H/P BEFORE EXECUTION OF WORK.
 7. DRAWING APPROVAL SHALL BE SUBMITTED TO APPROVAL OF ALIGNMENT AND LEVELS BY STA. 200.
- CONSTRUCTION SEQUENCE-**
- (i) CONSTRUCTION OF SUITABLE FOUNDATION FOR PIERS.
 - (ii) CONSTRUCTION OF PIERS, ABUTMENT, PIER CAP AND ABUTMENT CAP.
 - (iii) CONSTRUCTION OF ROOF PEDESTALS.
 - (iv) FABRICATION OF STEEL GRIDERS, CROSS GRIDERS AND DIAPHRAGMS ETC.
 - (v) POSITIONING OF GRIDERS FOR LIFTING AND PLACEMENT OF GRIDERS WITH RAILWAY TRAP BLOCK IMPOSED AND LAUNCHING OF GRIDERS.
 - (vi) CASTING OF R/C DECK SLAB WITH SHUTTERING SUPPORTED ON GRIDERS.
 - (vii) REMOVAL OF SHORING AND SHUTTERING OF DECK SLAB.
 - (viii) COMPLETION OF ANCHORAGE WORKS LIKE CRASH BARRIER, RAILING, WEARING COUR EXPANSION JOINT ETC.
9. ALL SAFETY RULES SHALL BE FOLLOWED DURING EXECUTION OF WORK.
10. RAILWAY AUTHORITIES SHALL BE INFORMED BEFORE STARTING ANY WORK. INSTRUCTIONS GVN RAILWAY AUTHORITIES TIME TO TIME DURING EXECUTION SHALL BE FOLLOWED.

EAST CENTRAL RAILWAY
PROPOSED TWO LANE RO
SPAN 1x24.00+1x48.00 M FOR OBLIGATORY SPAN
IN LIEU OF L-XING NO 81, IN BETWEEN KM 667/37-
(SKEW ANGLE 6°) (TVU-6615, DT.11/2012)
ON MUGHALSARAI - GAYA SECTION
GENERAL ARRANGEMENT DRAWING

DRG. NO.	RITES/RV/RECZ/DFC/ROB. 81/GA.
SH. NO.	1 OF 2
DATE	SEPTEMBER, 2017
REV.	NO

SCALE: 100 0 100 200 300cm
200 0 200 400 600cm

(SUNEL KUMAR)	(MD. NONAM)	(RETU PATHAL)	(D.S. NEG)	(A.K. MATH)
DRW	MANAGER/D	DESIGNER/D	CHK	APPR
RITES LTD.				
CBE				
DY CE/BR/HUP				
XEN/BR/H				
HQ ECR HUP				

DFCCIL DRG. NO. MGS/EN/ROB/LC NO.83-C/2017	Sr. DOM/MGS
REFERENCE RDSO DRAWING NO. : RDSO/B -	Sr. DEN/DRD/MGS
ALL THE DIMENSIONS SHOWN ARE TENTATIVE AND MAY UNDERGO CHANGES DURING FINAL DESIGN.	Sr. DEN-1/MGS
DESIGNATION	Sr. DSTE/MGS
(S. K. MISHRA)	Sr. DEE/TRD/MGS
CPM/ENGS/DFCCIL	Sr. DEE/G/MGS
DFCCIL/MGS	
STATE GOVT. U.P.	
MGS DIVISION	