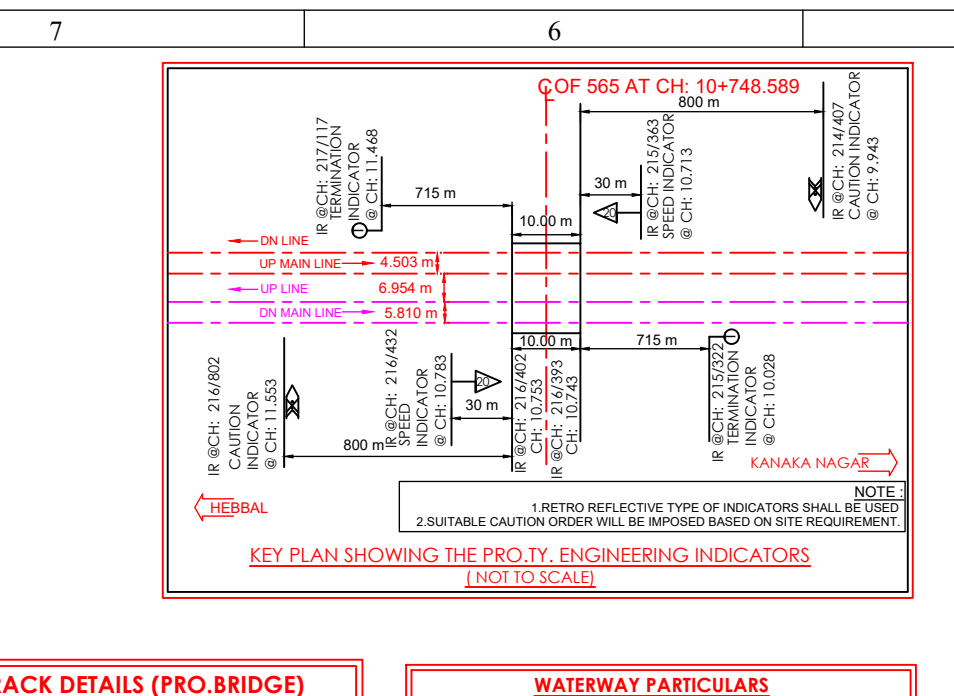
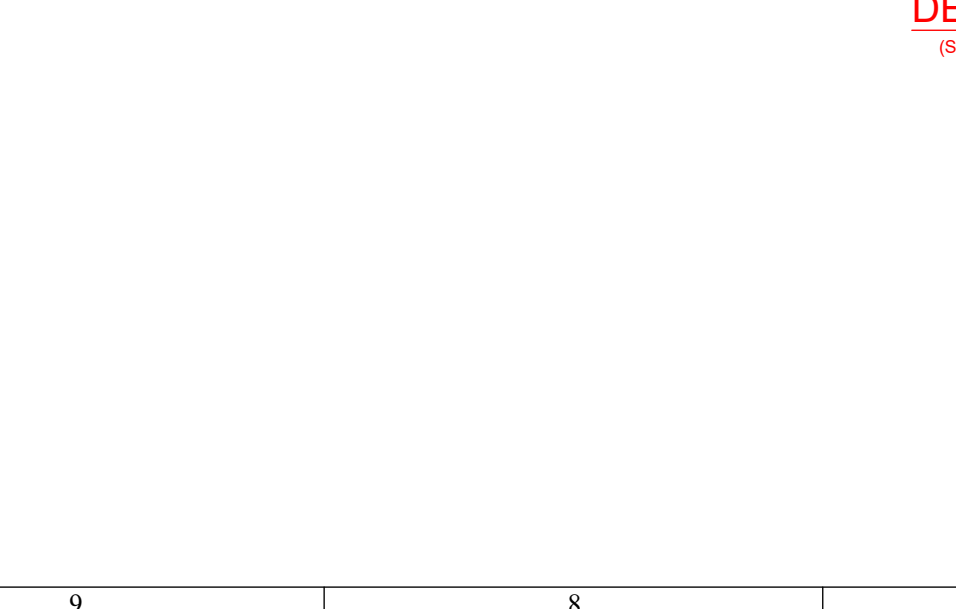
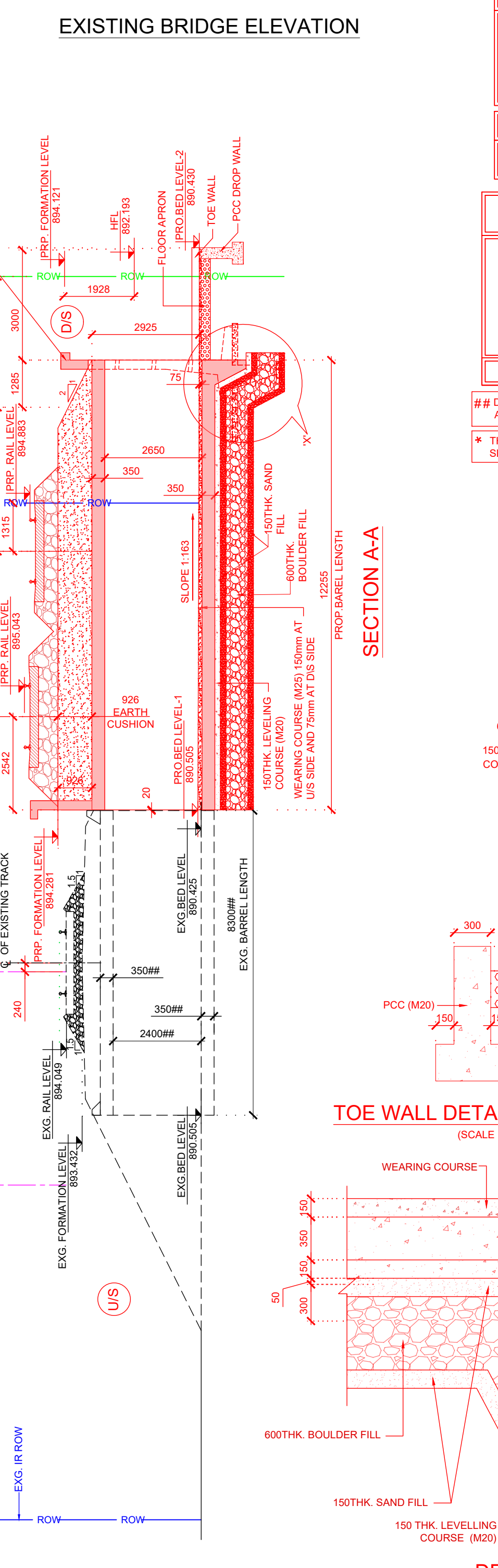
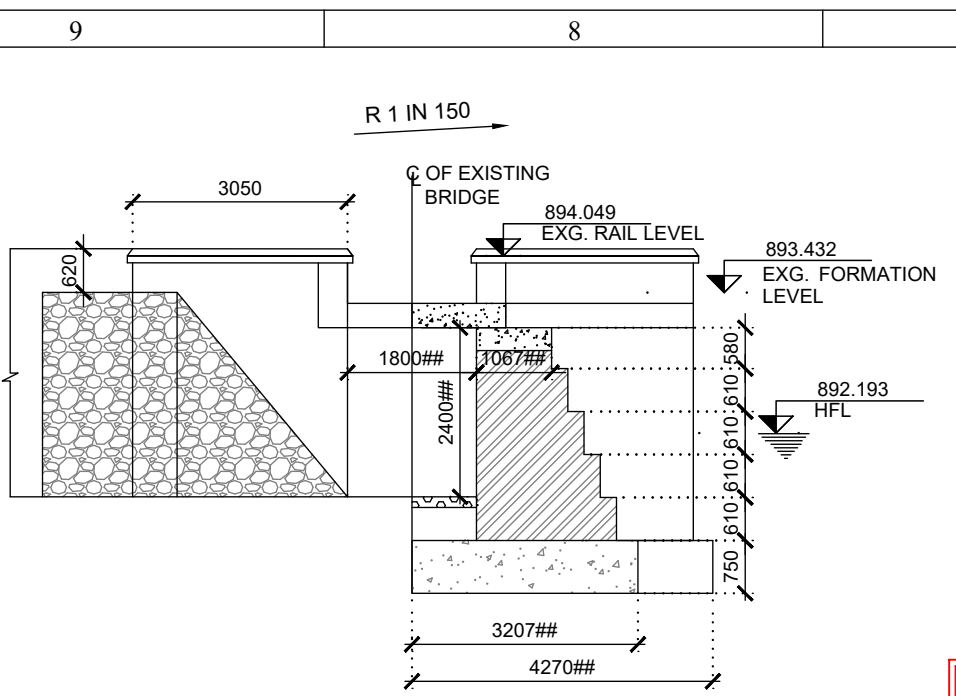


HFL	FREE BOARD (mm)	BED LEVEL-1	BED LEVEL-2
892.193	1928	890.505	890.430

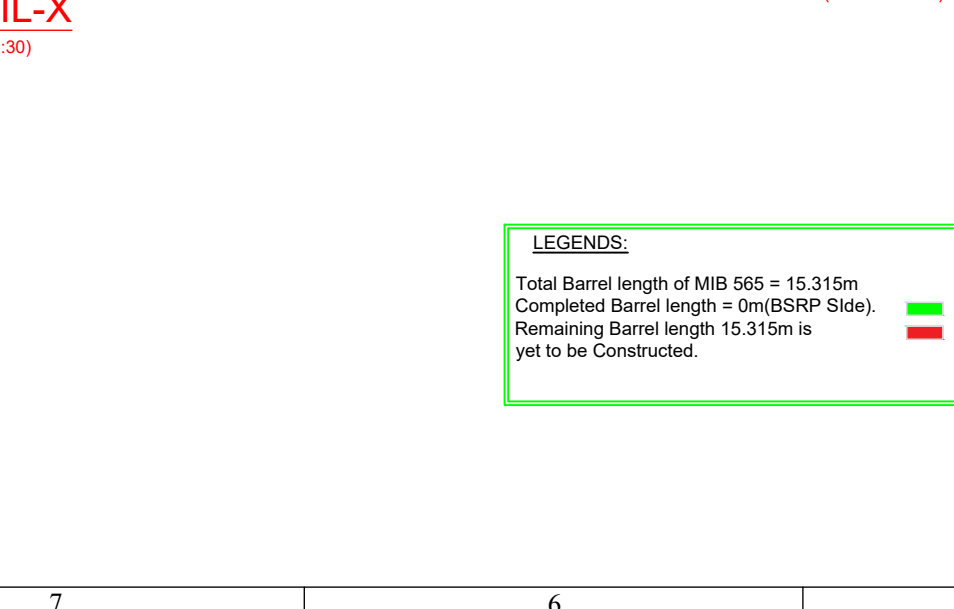
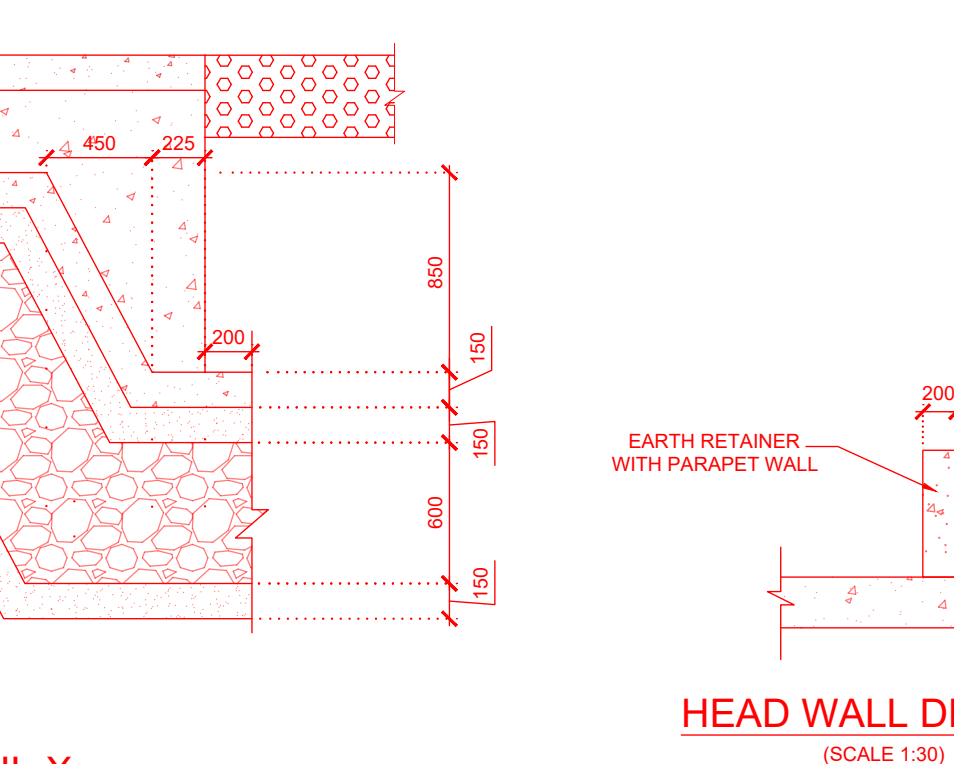
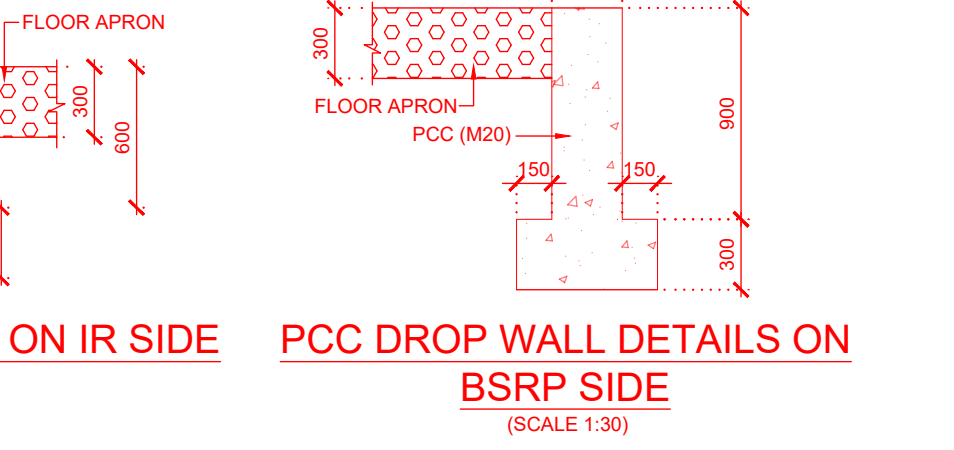
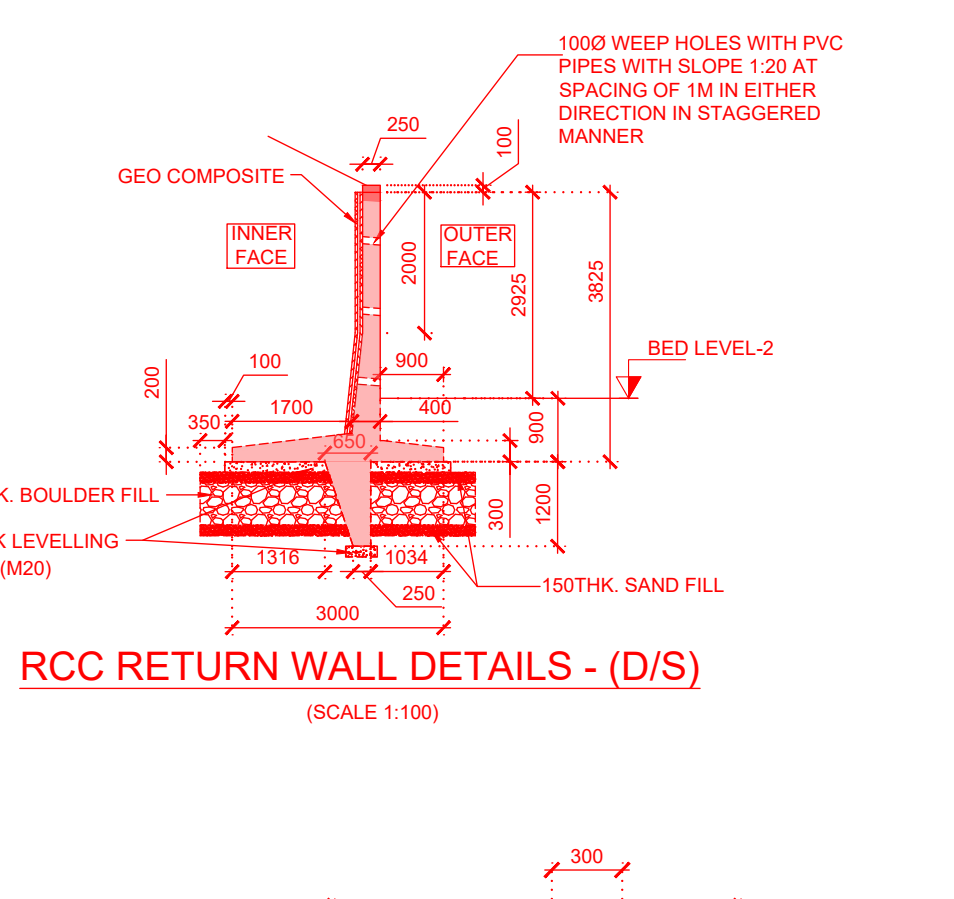


TRACK DETAILS (PRO. BRIDGE)	
LOADING	25 T-AXLE LOAD
ALIGNMENT	2008-STD
GRADE	LEVEL
RAIL LEVEL	895.043 M
FORMATION LEVEL	894.281 M

LOADING STANDARD	
A) PRO BRIDGE 25-T-AXLE LOAD 2008 STD	
B) EXG BRIDGE MBG OF 1987	

DEPTH OF CONSTRUCTION FOR 1 x 2 x 2.65 m RCC BOX	
RAIL 60 kg	172 mm
GR PAD	6 mm
PSC SLEEPER	210 mm
BALLAST CUSHION	350 mm
EARTH CUSHION	926 mm
TOP SLAB	350 mm
TOTAL	1864 mm

# DETAILS OF EXISTING STRUCTURE SHOWN ARE AS PER JSVR	
* THE GAP TO BE FILLED WITH SUITABLE SEALANT MATERIAL	



BRIDGE DETAILS		
DESCRIPTION	EXISTING IR BRIDGE : 565	PROPOSED BSRP BRIDGE : 565
CHAINAGE AT CENTER OF BRIDGE (km)	216/397.047	10+748.589
RAIL LEVEL AT CENTER OF BRIDGE (m)	894.049	895.043
FORMATION LEVEL AT CENTER OF BRIDGE (m)	893.432	894.281
DIMENSIONS (Nos x SPAN(m) x HEIGHT(m))	1 x 1.8 x 2.48#	1 x 2 x 2.65m
STRUCTURE CONFIGURATION	SLAB BRIDGE	RCC BOX

LEGENDS:	
COLOUR CODE BLACK	EXISTING WORKS
COLOUR CODE RED	PROPOSED RLY WORKS
COLOUR CODE YELLOW	TO BE DISMANTLED

TRACK DETAILS (EXG. BRIDGE)		
LOADING	MBG-1987	
ALIGNMENT	CURVE	
GRADE	LEVEL	
RAIL LEVEL	894.049 M	
FORMATION LEVEL	893.432 M	

BASE PRESSURE AT FOUNDATION LEVEL		
STRUCTURE	MAX	MIN
RCC BOX (KN/M <sup>2</sup> )	134.76	-
RETURN WALL (KN/M <sup>2</sup> )	108.69	-

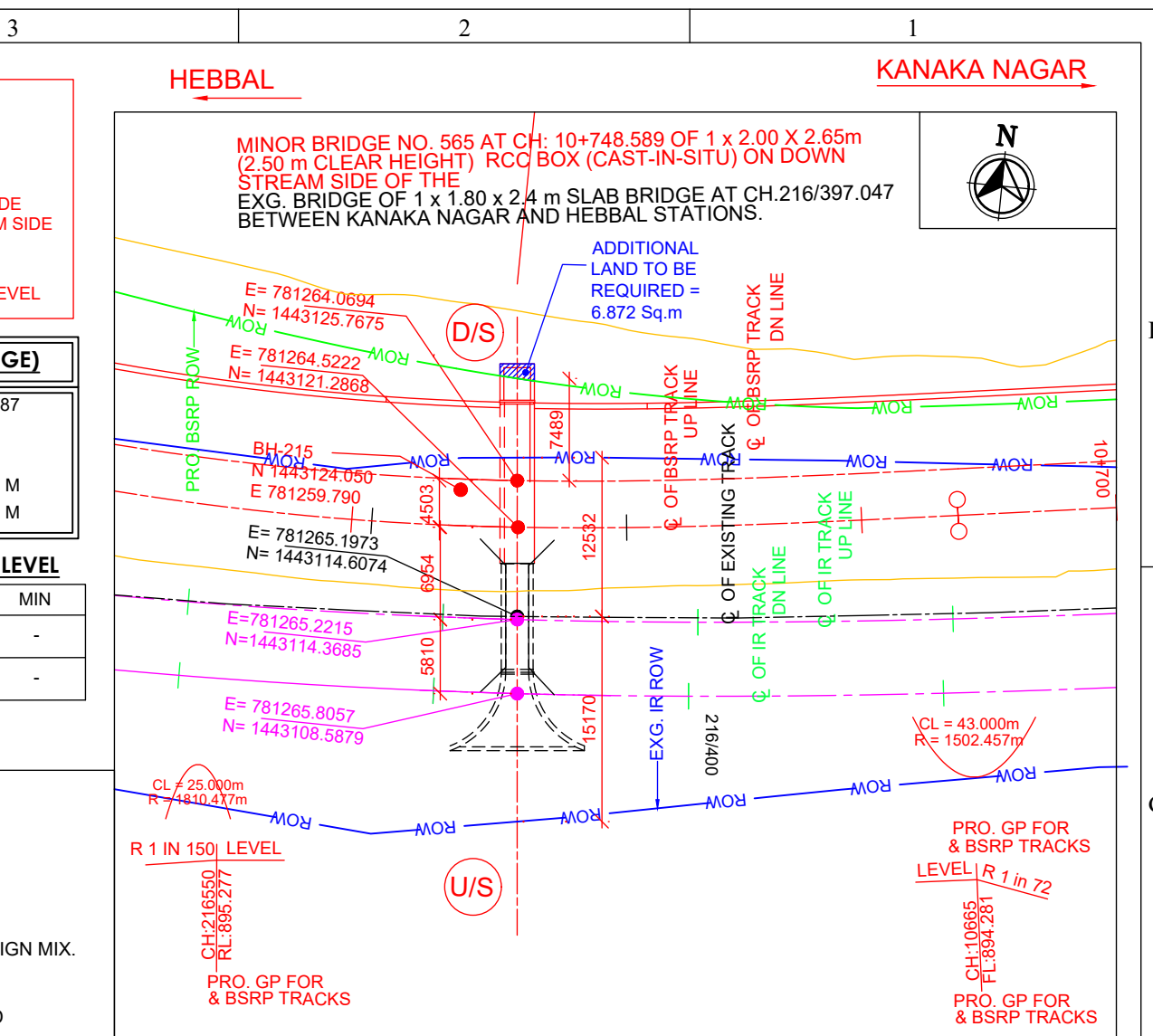
- SPECIFICATION:**
- ALL WORKS ARE TO BE CARRIED OUT AS PER THE FOLLOWING:
    - INDIAN RAILWAY UNIFIED STANDARD SPECIFICATIONS FOR WORKS AND MATERIALS 2019.
    - IRS CONCRETE BRIDGE CODE 2014(REPRINT) & RELEVANT I.S SPECIFICATIONS.
    - IRS BRIDGE SUB- STRUCTURE CODE 2019(3) REVISED).
    - IRS BRIDGE RULES 2014(REPRINT).
  - RETURN WALL/RETAINING WALL - REINFORCED CEMENT CONCRETE OF GRADE M35 WITH DESIGN MIX.
  - PITCHING - DRY STONE PITCHING 230MM THICK OVER 150MM THICK SAND MIXED WITH STONE CHIPS (AS PER PARA 205 OF INDIAN RAILWAY BRIDGE MANUAL ANNEXURE 23).
  - RCC BOX- REINFORCED CEMENT CONCRETE M35 GRADE USING 20MM MAXIMUM SIZE GRADED HARD STONE AGGREGATE OF APPROVED QUALITY.
  - LEVELLING COURSE - 150 MM THICK M20 DESIGN MIX.
  - WEEP HOLES - WEAP HOLES TO BE PROVIDED AS PARA 7.6 OF SUB STRUCTURE CODE & WEAP HOLES SHALL BE OF 100 DIA AC PIPES STAGGERED AT 1000 C/C ABOVE LOW WATER LEVEL IN BOTH WING WALL/RETAINING WALL & EARTH RETAINER OF BOX.
  - LOADING STANDARD - 25 T - 2008 AXLE LOAD.
  - TOE WALL - GRADE M25 WITH DESIGN MIX.
  - GRADE OF STEEL FOR RCC IS TMT-500D CONFORMING TO IS 1786-2008.
  - MASS CONCRETE TO BE OF M25 WITH 20MM GRADED STONE AGGREGATE FOR WEARING COURSE.
  - CONCRETE SHALL BE MECHANICALLY MIXED,VIBRATED & THOROUGHLY CURED.
  - BAR BENDING SHALL CONFORM TO IS 2502.
  - FLOORING - ROUGH STONE FLOORING 300MM THICK GROUTED WITH CM:1.3.
  - DROP WALL / CURTAIN WALL - GRADE M25 WITH DESIGN MIX.
  - WHEREVER SBC IS LESS THAN THE REQUIREMENT AS PER RD50 DRAWING IMPROVE THE SBC OF SOIL TWO LAYERS OF 150MM SAND & BOULDER FILLING OF 600MM THICKNESS EACH TO BE LAID & COMPACTED BEFORE LEVELLING COURSE FOR RCC BOX. RETURN WALL FOUNDATION & APRON FLOORING 16. COPINGS- CC M25 GRAD USING 20MM MAX SIZE GRADED HARD STONE AGGREGATE OD APP QUALITY.
  - GROUND IMPROVED SOIL SHALL BE OF SOIL QUALITY CLASS S02 AND S03 AS PER RD50 GUIDELINES.
  - FOR RETAINING STRUCTURE, SEPARATE DRAWING WILL BE SUBMITTED.
  - SHORING ARRANGEMENTS AS PER DESIGN.
  - GIR DOCUMENT NO.
  - FOR BOX :DQC-BSRP-CR2-AG-DGN-GS-20-1145
  - FOR RETURN WALL : DQC-BSRP-CR2-AG-DGN-GBRW-20-1145

- REFERENCE:**
- RCC BOX (CAST-IN-SITU) - DRG NO. RD50B-10155 & 10155/2
  - BOX DESIGN DOCUMENT NO. DQC-BSRP-CR2-AG-DGN-BR-20-1548
  - SUBSTRUCTURE BOX - 022077-BSRP-CR2-C-NB-0-20-1154
  - RETURN WALL - 022077-BSRP-CR2-AG-DGN-RW-0-20-1145
  - WEAP HOLES AS PER PARA 7.6 OF SUB-STRUCTURE CODE
  - CURTAIN WALL AND TOE WALL AS PER DESIGN
  - BACKFILL MATERIALS BEHIND RCC BOX TO PROVIDE AS PER PARA 7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE
  - SHORING ARRANGEMENTS AS PER DESIGN.
  - GIR DOCUMENT NO.
  - FOR BOX :DQC-BSRP-CR2-AG-DGN-GS-20-1145
  - FOR RETURN WALL : DQC-BSRP-CR2-AG-DGN-GBRW-20-1145
- MODUS OPERANDI :**
- IMPOSE 20KM/PH SPEED RESTRICTIONS DURING EXCAVATION WORKS,IF REQUIRED AS PER SITE CONDITION.
  - DIVERT OR RESTRICT THE WATER FLOW BY PROVIDING BUND/TEMPORARY PIPES ON UPSTREAM SIDE OF THE BRIDGE.
  - PORTION OF RETURN WALL TOE WALL, PITCHING TO BE DISMANTLED TO ACCOMMODATE RCC BOX WITH SUITABLE SHORING CONDITION AS PER SITE CONDITION.
  - EARTH WORK EXCAVATION TO BE DONE FOR PROPOSED BARREL LENGTH WITH 350MM BASE COURSE FILL BENEATH THE BOX BOTTOM RAFT.
  - RETURNS & BRIDGE PROTECTION WORKS TO BE DONE ON IR SIDE.

STRATA DESCRIPTION	DEPTH IN METERS	REMARKS
		SLOW COUNTS (IN-VALUE)
		SAC (IN-VALUE)
GROUND LEVEL: 892.351	0.00	
PROP. BED LEVEL 890.505/890.430	1.00	400 (BOX)
PROP. BOX FOUNDATION LEVEL 890.005	2.00	N=5 (2/2/3) 245.73 (RW)
RETURN WALL FOUNDATION LEVEL 889.530	3.00	N=13 (4/6/7)
	4.00	N=9 (3/4/5)
	4.50	
	5.00	N=23 (7/10/13)
	6.00	
	7.00	
	7.50	
	8.00	
	8.50	
	9.00	
VERY DENSE SILTY SAND (SM)		
END OF BOREHOLE AT 9.00M		

**BOREHOLE ID-565 (BH-215)**

GOOD FOR CONSTRUCTION	
GC/K-RIDE	K-RIDE
FOR GC	FOR K-RIDE



- KEY PLAN NOTE:-**
- PROPOSALS ARE SHOWN IN RED.
  - RAILWAY BOUNDARY DISTANCE ARE WITH RESPECT TO CENTRE LINE OF EXG.TRACK.
  - TRACK IS STRAIGHT ON BRIDGE LOCATION.
- NOTES:**
- ALL LEVELS ARE W.R.T TO MSL.
  - ALL DIMENSIONS ARE IN MILLIMETERS, REDUCED LEVELS ARE IN METRES AND CHAINAGE ARE IN KILOMETERS, UNLESS STATED OTHERWISE.
  - DO NOT SCALE THE DRAWING.FOLLOW FIGURED DIMENSIONS ONLY.
  - THE TYPE,DESIGN & DEPTH OF FOUNDATION SHOWN IN GAD ARE INDICATIVE ONLY. THE ACTUAL TYPE & DEPTH OF FOUNDATION WILL BE DECIDED BY THE ENGINEER-IN-CHARGE AS PER ACTUAL SOIL ENCOUNTERED AT SITE DURING EXECUTION.
  - SAFE BEARING CAPACITY OF SOIL OF BELOW SOIL IMPROVEMENT 400 KN/M<sup>2</sup>
  - LENGTH OF PITCHING FOR APPROCHES SHALL BE DECIDED BY THE ENGINEER-IN-CHARGE OF THE WORK TO SUIT SITE CONDITIONS.
  - PRO BRIDGE WITH UP & DN LINE IS ON THE UP STREAM SIDE OF THE EXISTING BRIDGE.
  - FOR DETAILS OF OLD BRIDGE (EXG.) AS PER THE SITE DETAILS PROVIDED.
  - DISMANTLING OF EXISTING PROTECTIVE/PITCHING SHOULD BE DONE AS PER SITE CONDITION.
  - A) ON THE TOP SURFACE OF CONCRETE AT THE END OF EACH DAYS WORK DEPRESSION IN ZIG-ZAG PATTERN TO BE FORMED BY EMBEDDING WOODEN SCANTLINGS OR SLEEPERS TO FORM KEY FOR ADEQUATE BOND FOR THE NEXT DAYS CONCRETING.
  - B) ON THE NEXT WORKING DAY ALL THE LAFTAGE SHALL BE REMOVED BY SCRUBBING THE SURFACE WITH WIRE BRUSH WITHOUT DISLOGGING THE PARTICLES OF AGGREGATE.THE SURFACE SHALL BE THOROUGHLY WETTED & CAN BE COATED WITH NEAT CEMENT GROUT BEFORE FIRST LAYER OF CONCRETE IS LAID.
  - THE BOULDER FILLING SHALL CONSISTS OF WELL HAND PACKED BOULDERS & COBBLES TO THICKNESS NOT LESS THAN 600 mm BEHIND THE BOULDER FILLING. BACKFILLING MATERIALS SHALL CONSIST OF GRANULAR MATERIALS OF GW. GP, SW CORRECT AS PER IS 1498 - 1970.
  - EXPOSURE CONDITION IS MODERATE.
  - CONTROLLED CONCRETE AS PER DESIGN MIX TO BE USED AND MIXED BY WEIGH BATCHING.
  - DISMANTLING ELEMENTS ARE SHOWN IN DOTTED LINE.
  - WHILE EXECUTION OF PRO. BRIDGE, EXISTING FLOOR PROTECTIVE WORKS MAY GET DAMAGED SO TO PROTECT THE EXG BRIDGE FROM SCOURING EFFECT FLOORING PROTECTIVE WORKS WILL BE PROVIDED.
  - SUITABLE SPEED RESTRICTIONS MAY BE IMPOSED BASED ON SITE CONDITIONS WHENEVER WHEREVER IF IS REQUIRED TO ENSURE SAFETY OF RUNNING LINE.
  - SUITABLE PROTECTIVE MEASURES SHOULD BE PUT IN PLACE WHILE CARRYING OUT THE WORK IN CONSULTATION WITH KRIDE & GENERAL CONSULTANT.THIS SHALL INCLUDE NECESSARY SHORING ARRANGEMENTS TO BE PROVIDED FOR THE PROTECTION OF EXG. TRACK & FORMATION.
  - INSTRUCTIONS CONVEYED VIDE PCE'S CIRCULAR NO 01.2015, DATED: 09.03.2015 REGARDING 'WORK DISCIPLINE AT SITE' AND AS PER PCE CIRCULAR NO.01/2021 DATED: 22.06.2021 REGARDING 'ENSURING QUALITY OF WORK AND MAINTAINING SITE RECORDS IN WORKS CONTRACTS' TO BE STRICTLY FOLLOWED.
  - 20MM THK THERMOCL SHEETS TO BE PROVIDED BETWEEN FACE WALL OF EXG.BRIDGE & PRO.RCC BOX & IF REQUIRED DOVEL BARS TO BE FIXED.
  - ENGINEER-IN-CHARGE SHALL ENSURE THAT LEVEL OF FOUNDATION OF DROP WALL, CURTAIN WALL AND RETURN WALL SHALL BE SUFFICIENTLY LOWER LEVEL THAN THE REQUIRED CALCULATED SCOUR LEVEL.
  - THIS DRAWING IS PREPARED BASED ON RD50 STANDARD DRG. NO. RD50B/10155 & 10155/2, AS PER BOX SIZE 1x2.0x3.0 m

GENERAL CONSULTANTS:			
EGIS-AECOM-WSP			
EMPLOYER :			
RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED			
GENERAL ARRANGEMENT DRAWING			
BENGALURU SUBURBAN RAILWAY PROJECT(BSRP) BETWEEN STATIONS BENNIGANAHALLI AND CHIKKABANAVARA			
MINOR BRIDGE NO. 565 AT CH: 10+748.589 OF 1 x 2.00 X 2.65m (2.50 m CLEAR HEIGHT) RCC BOX (CAST-IN-SITU) ON DOWN STREAM SIDE OF THE EXG. BRIDGE OF 1 x 1.80 x 2.4 m SLAB BRIDGE AT CH.216/397.047 BETWEEN KANAKA NAGAR AND HEBBAL STATIONS.			
KRIDE.DRG.NO:			
HQ.DRG.NO:			
SCALE (UNLESS SPECIFIED OTHERWISE)	DRAWING NO. : 022077-BSRP-CR2-C-NB-0-30-1153	REVISION 2	DWG STATUS C
PRELIMINARY DWG (P), DEFINITIVE DWG (D), CONSTRUCTION DWG (C), AS BUILT DWG (B), SHOP DWG (S), MANUFACTURED DWG (M)		SHEET SIZE - A1	