Bangladesh Water Development Board

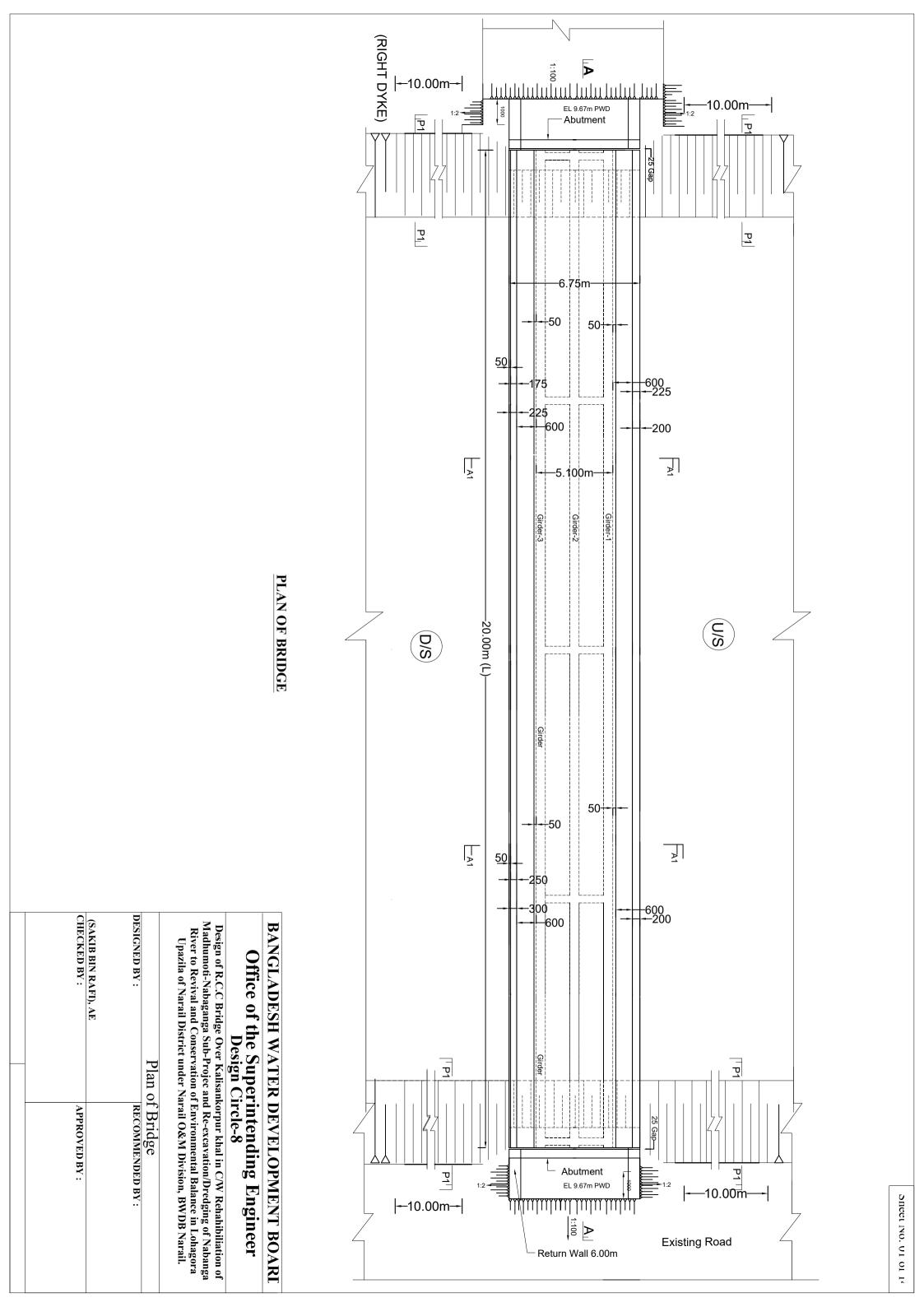


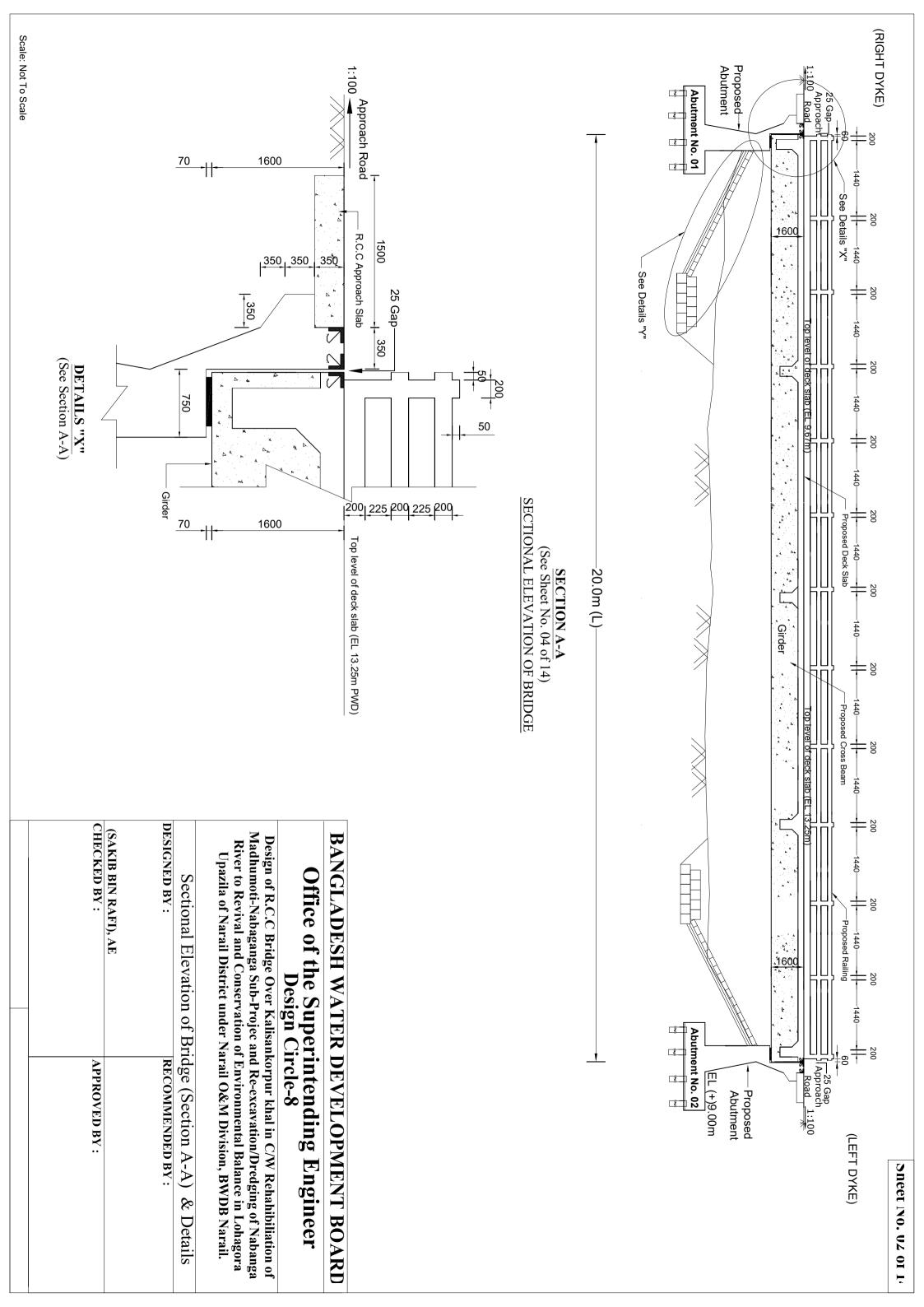
Design of R.C.C Bridge Over Kalisankorpur khal at chainage 5.060km in C/W Rehahibiliation of Madhumoti-Nabaganga Sub-Projec and Re-excavation/Dredging of Nabanga River to Revival and Conservation of Environmental Balance in Lohagora Upazila of Narail District under Narail O&M Division, BWDB Narail.

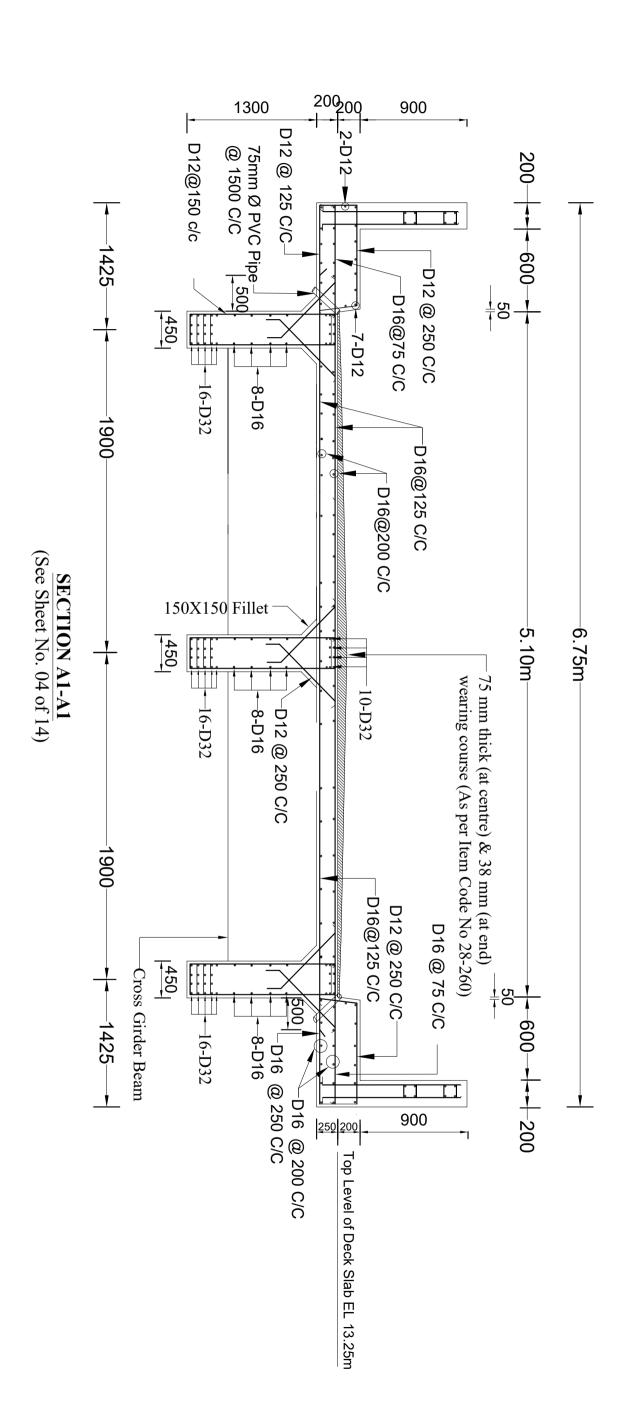
Narail O&M Division, BWDB Narail.

Design Circle-8, BWDB, Dhaka

November, 2020



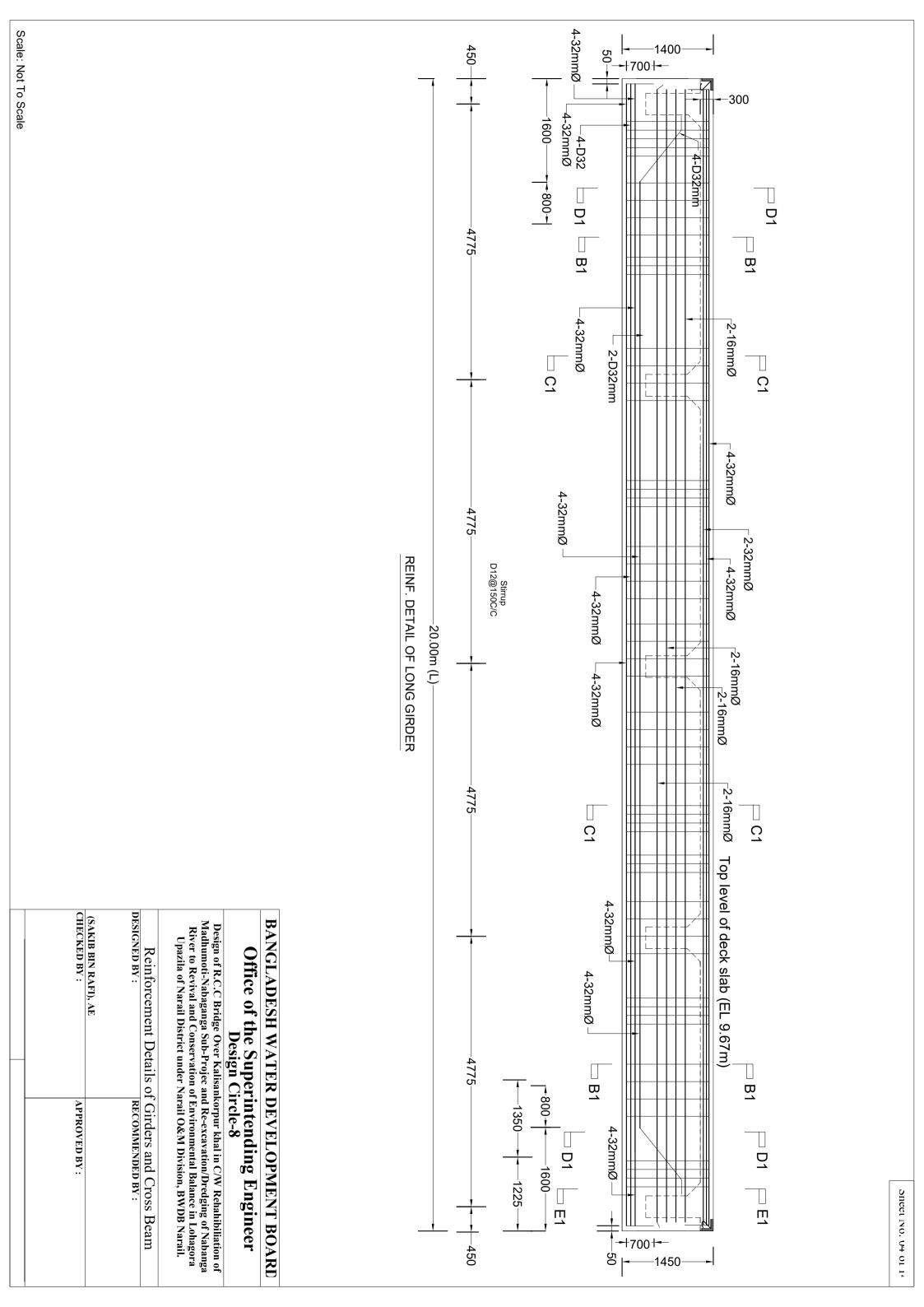


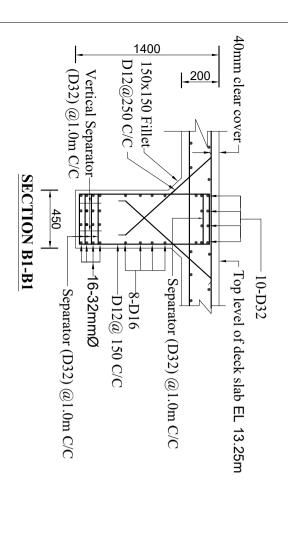


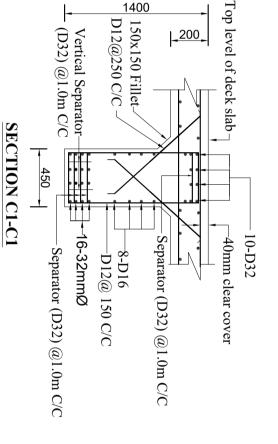
BANGLADESH WATER DEVELOPMENT BOARL

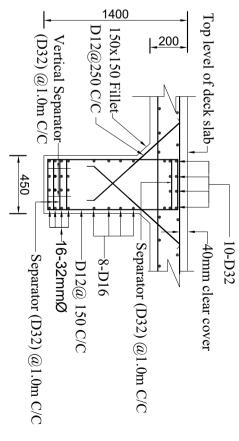
Office of the Superintending Engineer Design Circle-8

СНЕ	(SA	DES	
CHECKED BY:	(SAKIB BIN RAFI), AE	DESIGNED BY:	Reinforcement Details
APPROVED BY:		RECOMMENDED BY:	Reinforcement Details of Girder and Deck Slab



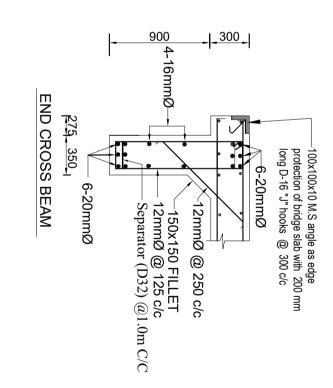


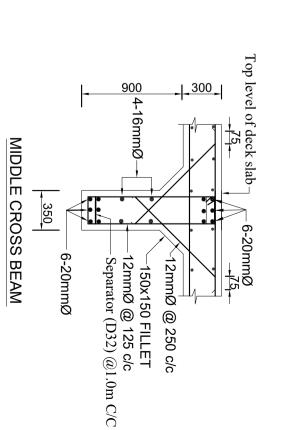




SECTION

D1-D1





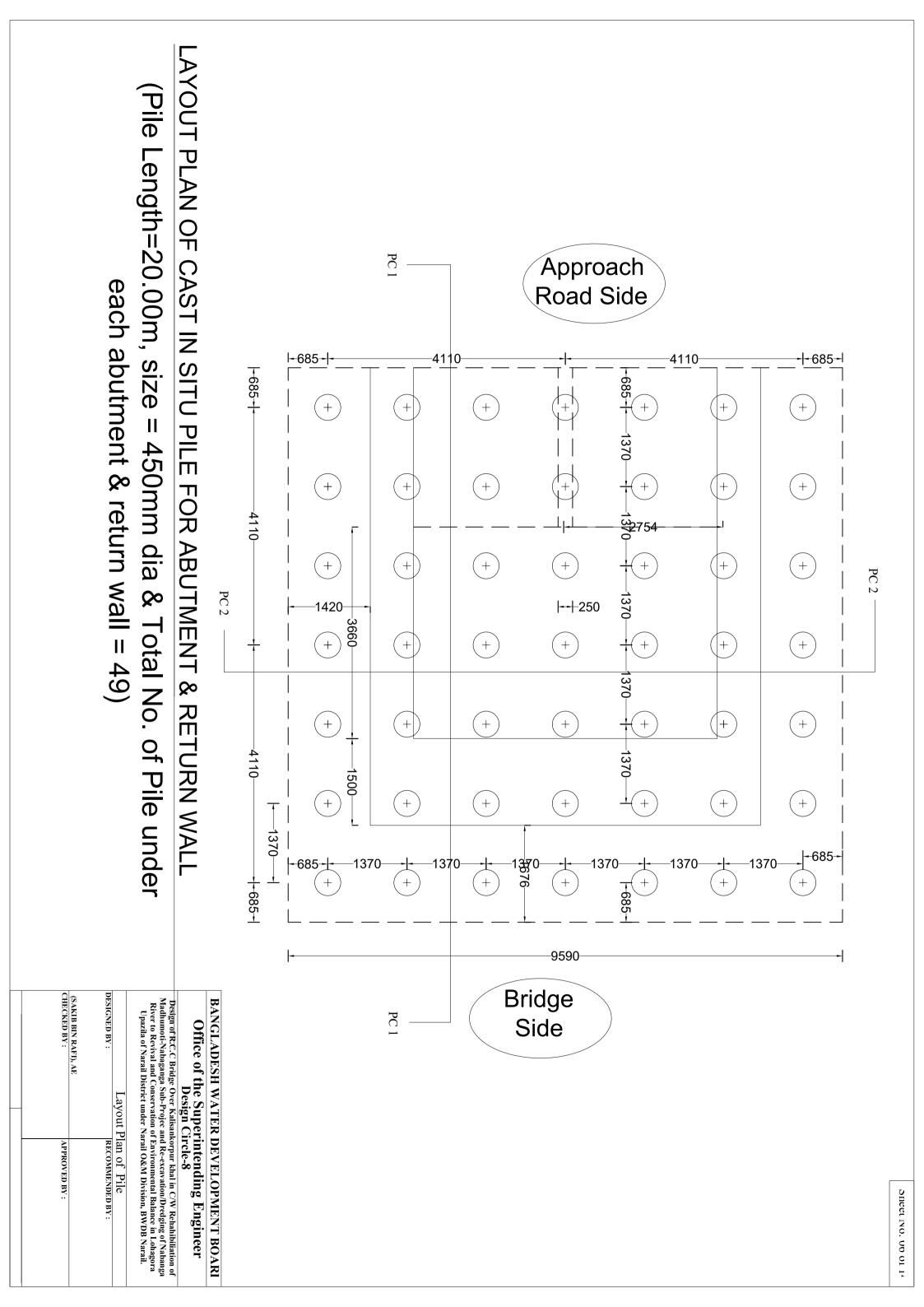
STIRRUPS DETAILS:

Tie/ stirrups	Bar hook
Tie/ stirrups of tr	Bar Form and Bend
135	Bend Angle (degree)
r = 1.25db	Band Radius (r)
6mm to 12mm	Used Bar

BANGLADESH WATER DEVELOPMENT BOARD

Office of the Superintending Engineer Design Circle-8

Ω	() DI	
CHECKED BY:	DESIGNED BY: (SAKIB BIN RAFI), AE	Reinforcement Details of
APPROVED BY:	RECOMMENDED BY:	Reinforcement Details of Girders and Cross Beam



BANGLADESH WATER DEVELOPMENT BOARL

Office of the Superintending Engineer Design Circle-8

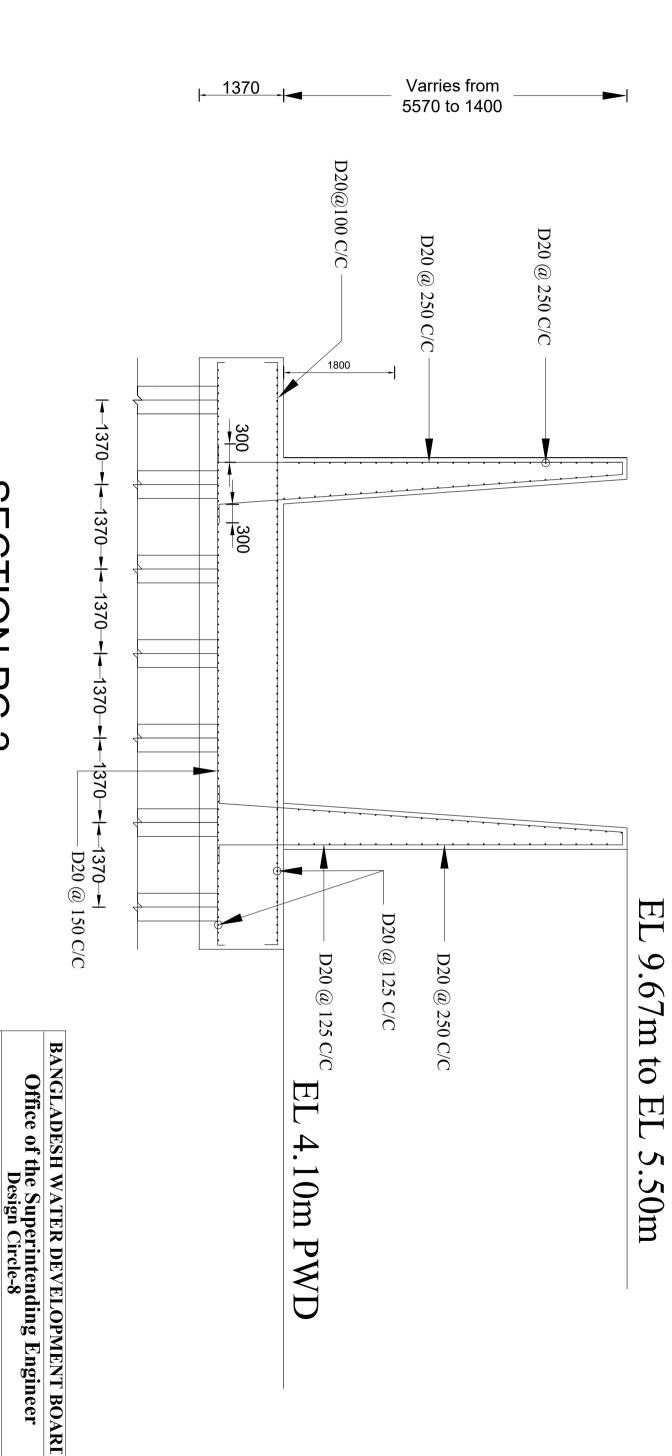
Design of R.C.C Bridge Over Kalisankorpur khal in CW Rehahibiliation of Madhumoti-Nabaganga Sub-Projec and Re-excavation/Dredging of Nabanga River to Revival and Conservation of Environmental Balance in Lohagora Upazila of Narail District under Narail O&M Division, BWDB Narail. Reinforcement Details of Abutment, Wing Wall & Return Wall ESIGNED BY: | RECOMMENDED BY:

APPROVED BY:

Sheet INO. O/ OI I'

1500

-D16@175 c/c



SECTION PC 2

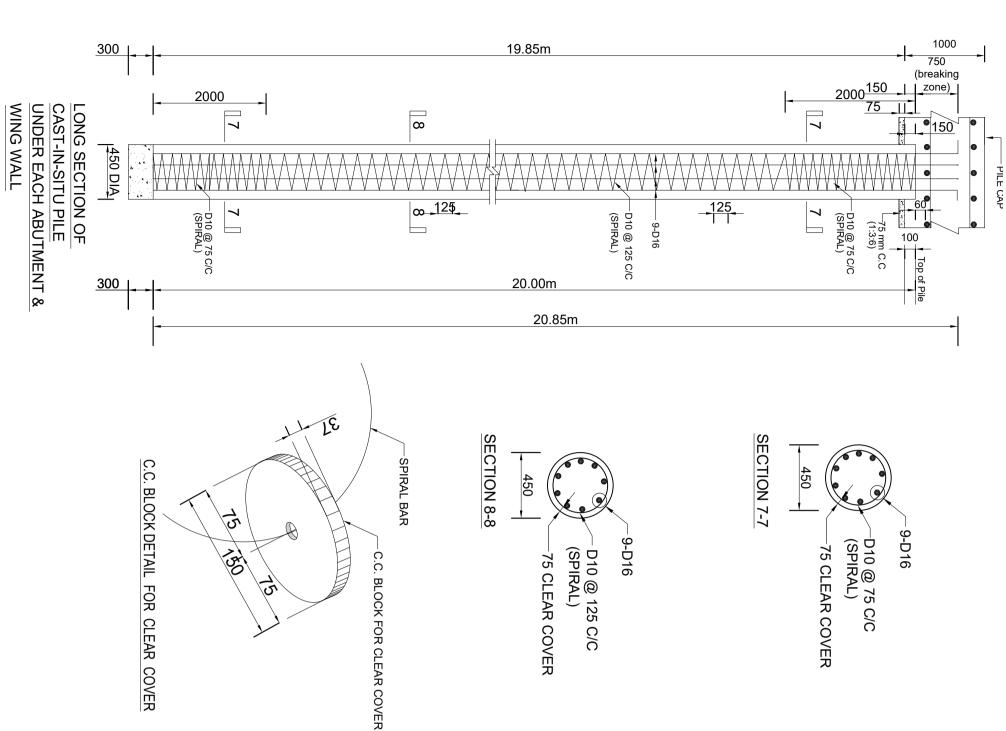
CHECKED BY:

APPROVED BY:

DESIGNED BY:

Details of Return Wall

RECOMMENDED BY:



Sneet INO. UY OI 14

NOTE FOR PILES ONLY:

- 1. ULTIMATE COMPRESSIVE STRENGHT OF CONCRETE, f 'c= 22 N/ sq. mm.
- 2. SUGGESTIVE MIXING RATIO SHALL BE 1:1.5:3 WITH SHINGLES (ITEM CODENO. 44-120-20).
- 3. ALL REINFORCEMENT FOR PILES SHALL BE DEFORMED BAR OF 400 N/ sq. mm
- 4. THE MINIMUM LENGTH FOR BREAKING PILE HEAD IS 750 mm.
- 5. PILE HEAD SHALL BE BROKEN CAREFULLY SO THAT NO FRACTURE CAN BE DEVELOPED AT MAIN PORTION OF PILE. PILE HEAD BROKEN PERIOD AFTER 28 DAYS FROM CASTING.
- CLEAR COVER TO STEEL REINFORCEMENT FOR PILE SHALL BE 75 mm.
- 7. ALL PILES SHALL BE CONSTRUCTED VERTICAL.
- 8. SPOT WELDING AT CONTACT POINT OF THE SPIRAL BI ITEM CODE NO. 44-150. NDERS MUST BE DONE AS PER
- LAPPING LENGTH OF VERTICAL REINFORCEMENT SHALL BE 40 TIMES THE BAR DIAMETERS FOR WELDING
- $10.\ \mathsf{DURING}\ \mathsf{CASTING}\ \mathsf{OF}\ \mathsf{CONCRETE},\ \mathsf{TRIMEE}\ \mathsf{PIPE}\ \mathsf{SHOULD}\ \mathsf{BE}\ \mathsf{AT}\ \mathsf{LEAST}\ 0.6\ \mathsf{m}\ \mathsf{WITHIN}\ \mathsf{THE}\ \mathsf{CONCRETE}.$ THE LENGTH OF TRIMEE PIPE SHOULD BE SAME AS LENGTH OF BORING PIPE.
- 11. NO PILE SHALL BE BORED WITHIN 3000 mm C/C DISTANCE BEFORE 24 HOURS OF CASTING OF A PARTICULAR PILE.
- 12. CONCERNED EXECUTIVE ENGINEER, SUB-DIVISIONAL ENGINEER AND OTHER CONCERNED OFFICERS WORKS ARE CARRIED OUT AS PER SPECIFICATION INCLUDING DIAMETER AND LENGTH OF PILES SHALL STRICTLY SUPERVISE THE CAST-IN-SITU PILE C ONSTRUCTION AND ENSURE THAT THE
- 13. STATIC LOAD TEST UPTO 450 KN OF TEST LOAD FOR ABUTMENT PORTION SHALL BE PERFORMED TO THE DESIGN CIRCLE. FOR AT LEAST 1 (ONE) PILE IN EACH ABUTMENT AND TEST RESULT SHALL BE SENT
- 14. STILL PICTURES OF LOAD TEST APPARTUS AND EACH GAUGE READING WITH DATE TIME STAMP AS WELL AS VIDEO OF ACTUAL LOADING SEQUENCE WITH TIME STAMP SHALL BE SENT TO THE DESIGN CIRCLE.
- 15. REINFORCING BAR SHALL BE SUPPORTED IN ITS PROPER POSITION BY USE OF MORTER BLOCKS, SUPPORTS OR BY OTHER APPROVED MEANS
- 16. THE TOP LEVEL OF PILE HEAD SHOULD BE PROJECTE! 150MM AND ALL DAMAGED PILE MATERIAL ARE TO BE REMOVED. D INTO THE PILE CAP NOT LESS THAN
- 17. AFTER BREAKING OF PILE HEADS, EXPOSED REINFORCEMENT SHALL BE PROVIDED INTO THE PILE CAP
- 18. THE CONCRETE SHALL BE PLACED BY 200 mm DIA TREMIE PIPE FROM THE BOTTOM OF THE HOLE TO DISPLACE WATER. THE TREMIE DISCHARGE SHALL CAREFULLY WITHDRAWN AS THE CONCRETE IS PLACE BE KEPT WELL INTO THE CONCRETE AND

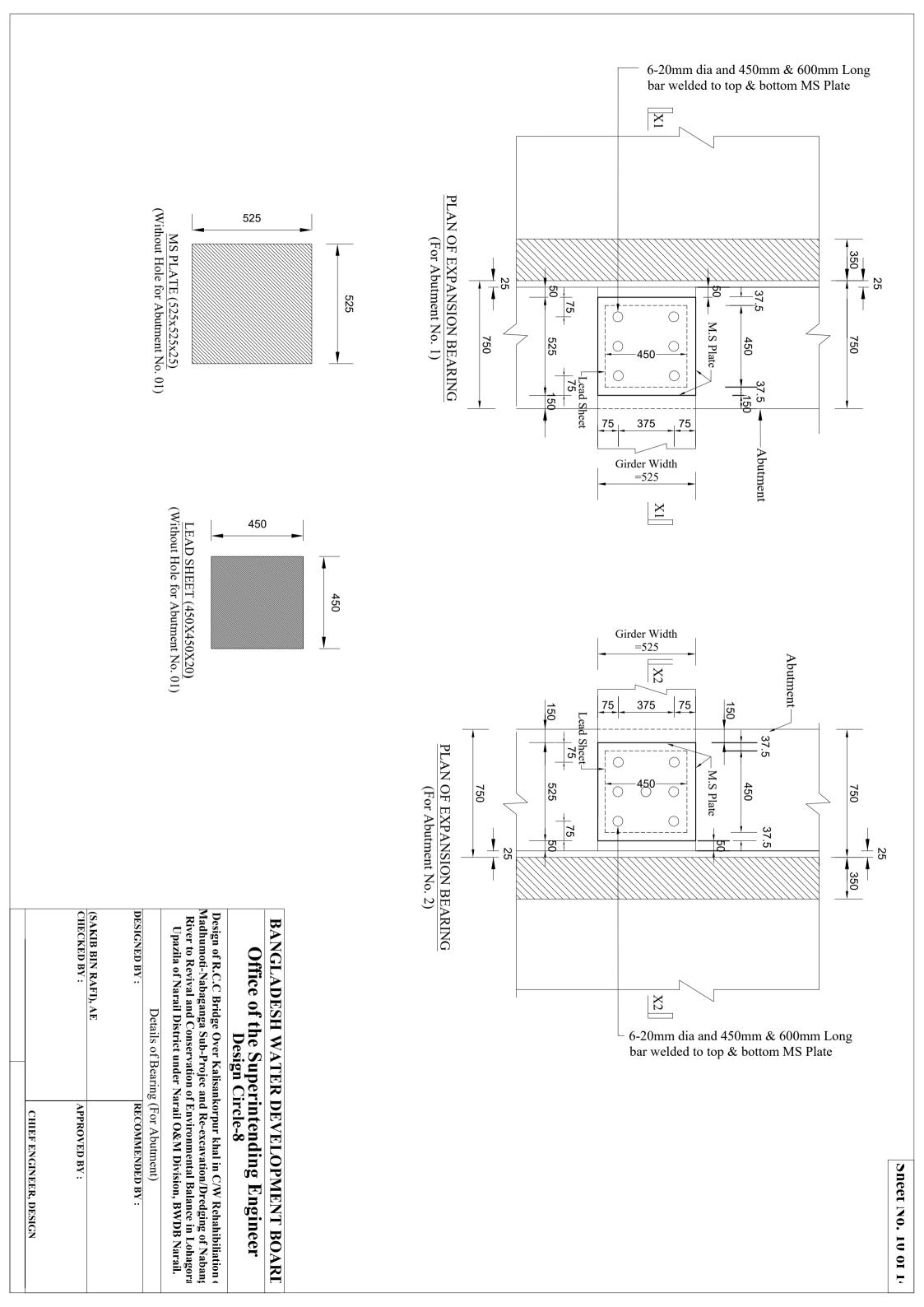
BANGLADESH WATER DEVELOPMENT BOARL

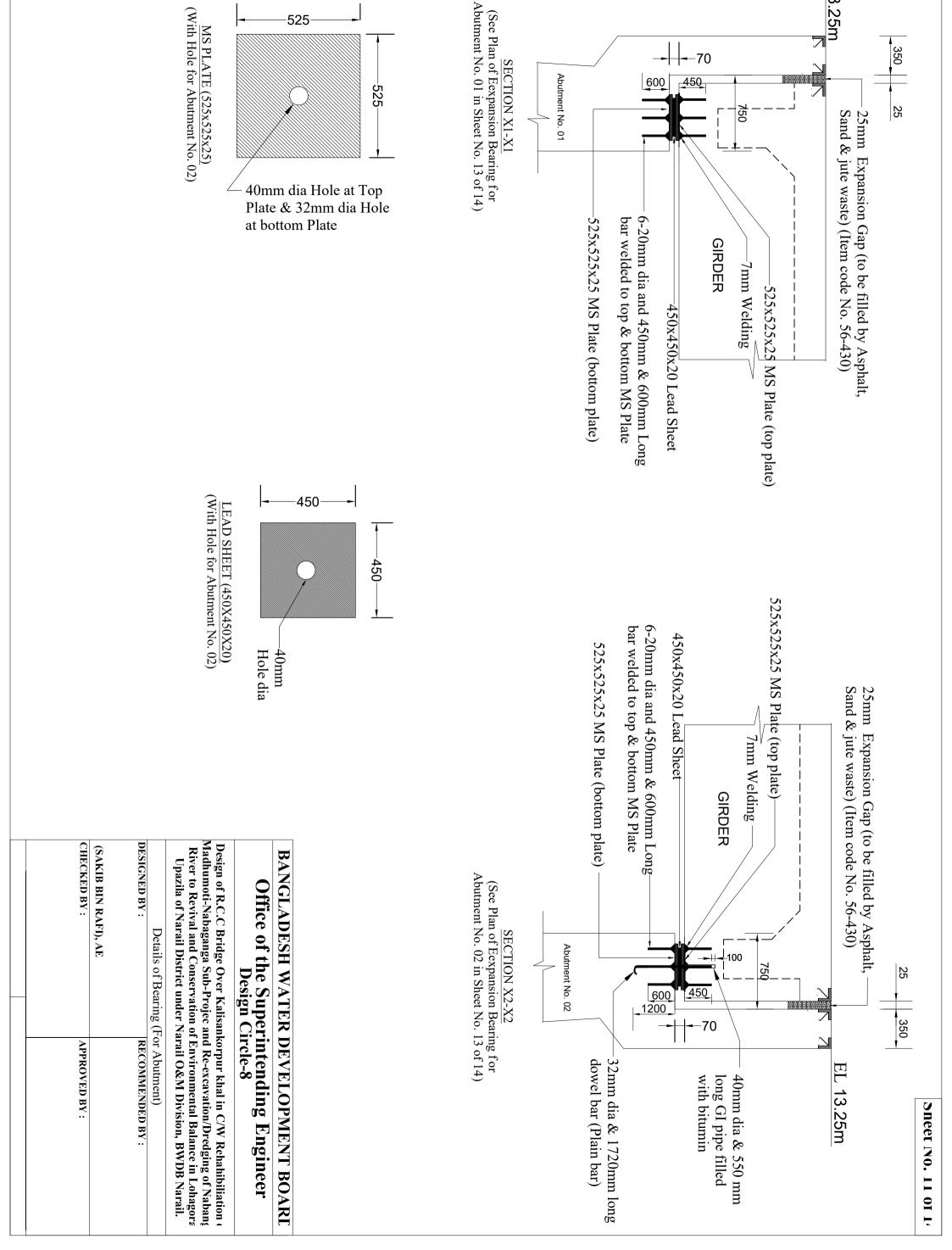
Office of the Superintending Engineer **Design Circle-8**

Madhumoti-Na Design of R.C. River to Revival and Conservation of Environmental Balance in Lohagora Upazila of Narail District under Narail O&M Division, BWDB Narail. abaganga Sub-Projec and Re-excavation/Dredging of Nabans C Bridge Over Kalisankorpur khal in C/W Rehahibiliation

Details of Cast-in-situ Piles with reinforcement & Notes for Piles With reinforcement	h reinforcement & Notes for Pil
DESIGNED BY:	RECOMMENDED BY:
CHECKED BY:	APPROVED BY:

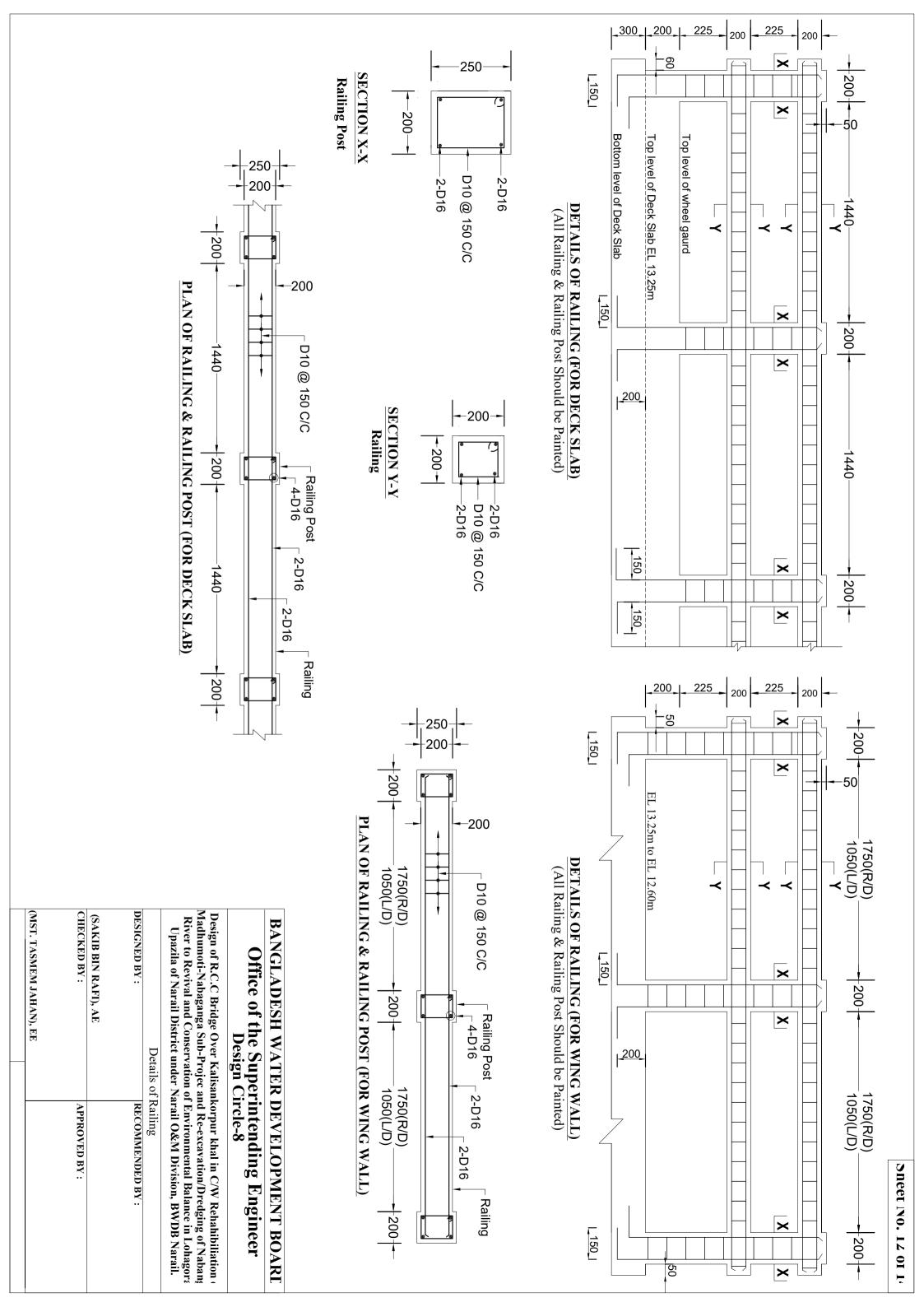
Scale: Not To Scale





EL 13.25m

--70



SECTION P-P
(Typical Section of Protective Work, See Plan of Bridge in Sheet No. 04 of 14)

Cast in situ C.C (1:3:6)

1-Layer 400X400X200 C.C Block to be placed over pick jhama chips.

150mm thick pick Jhama Chips (40mm to 20mm well graded at top & 20mm to 5mm well graded at bottom).

EL 11.00m

E

100 mm thick sand (FM 1.00 to 1.50)

2-Layer C.C Blocks(400 × 400 × 400)

(6 Nos Blocks in Bottom Layer & 5 Nos. Blocks in Upper Layer as Shown)

EL 7.50m

EL 7.50m

(Typical Section of Protective Work along Abutment in Section A-A, See Sheet No. 05 of 14)

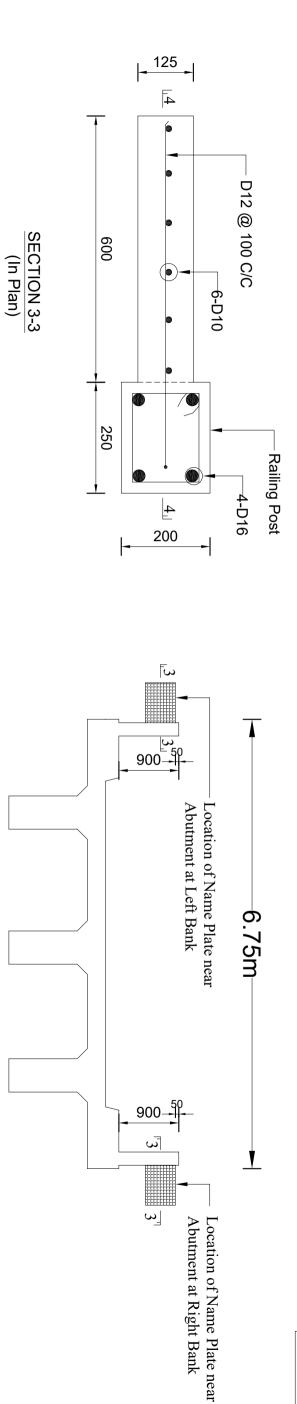
Sneet No. 13 of 1'

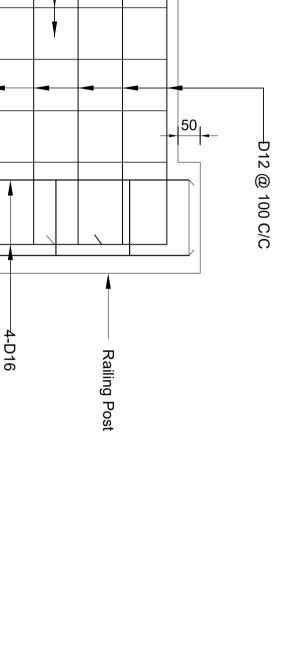
BANGLADESH WATER DEVELOPMENT BOARD

Office of the Superintending Engineer Design Circle-5

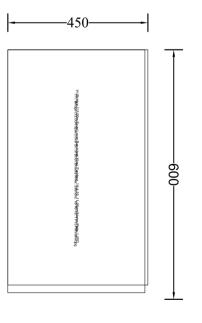
Details of Protective Work	ctive Work
DESIGNED BY :	RECOMMENDED BY:
(SAKIB BIN RAFI), AE	
CHECKED BY:	APPROVED BY:







450



SECTIONAL ELEVATION FOR NAME PLATE

TYPICAL NAME PLATE

BANGLADESH WATER DEVELOPMENT BOARL Office of the Superintending Engineer

Design of R.C.C Bridge Over Kalisankorpur khal in C/W Rehahibiliation of Madhumoti-Nabaganga Sub-Projec and Re-excavation/Dredging of Nabanga River to Revival and Conservation of Environmental Balance in Lohagora Upazila of Narail District under Narail O&M Division, BWDB Narail.

Details of Name Plate	me Plate
DESIGNED BY:	RECOMMENDED BY:
CHECKED BY:	APPROVED BY:

SECTION 4-4

250

600

-D10 @ 150 C/C

6-D10