

BANGLADESH WATER DEVELOPMENT BOARD



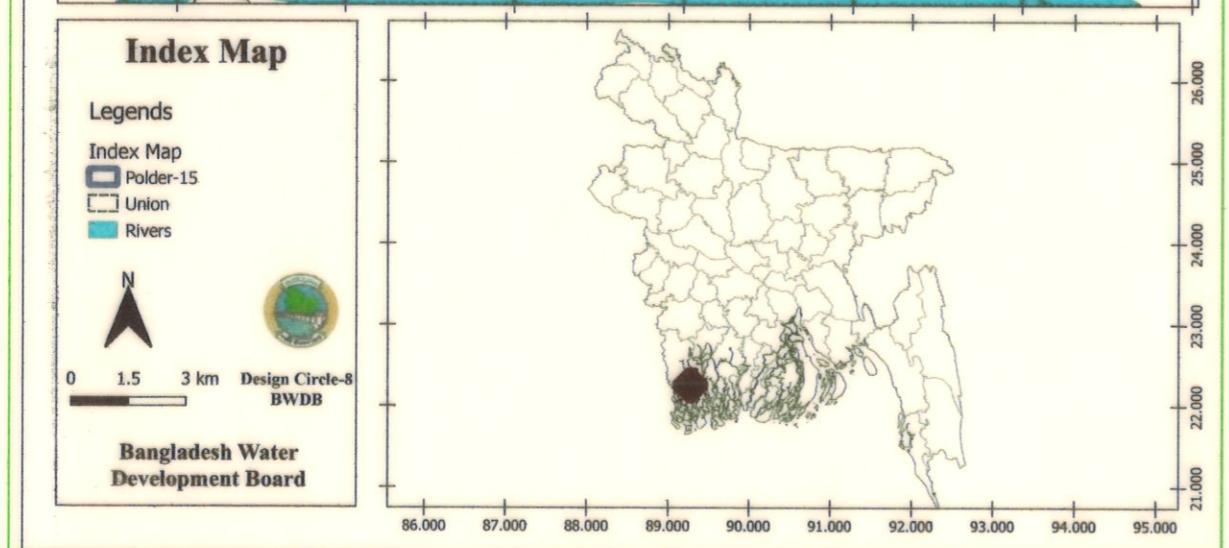
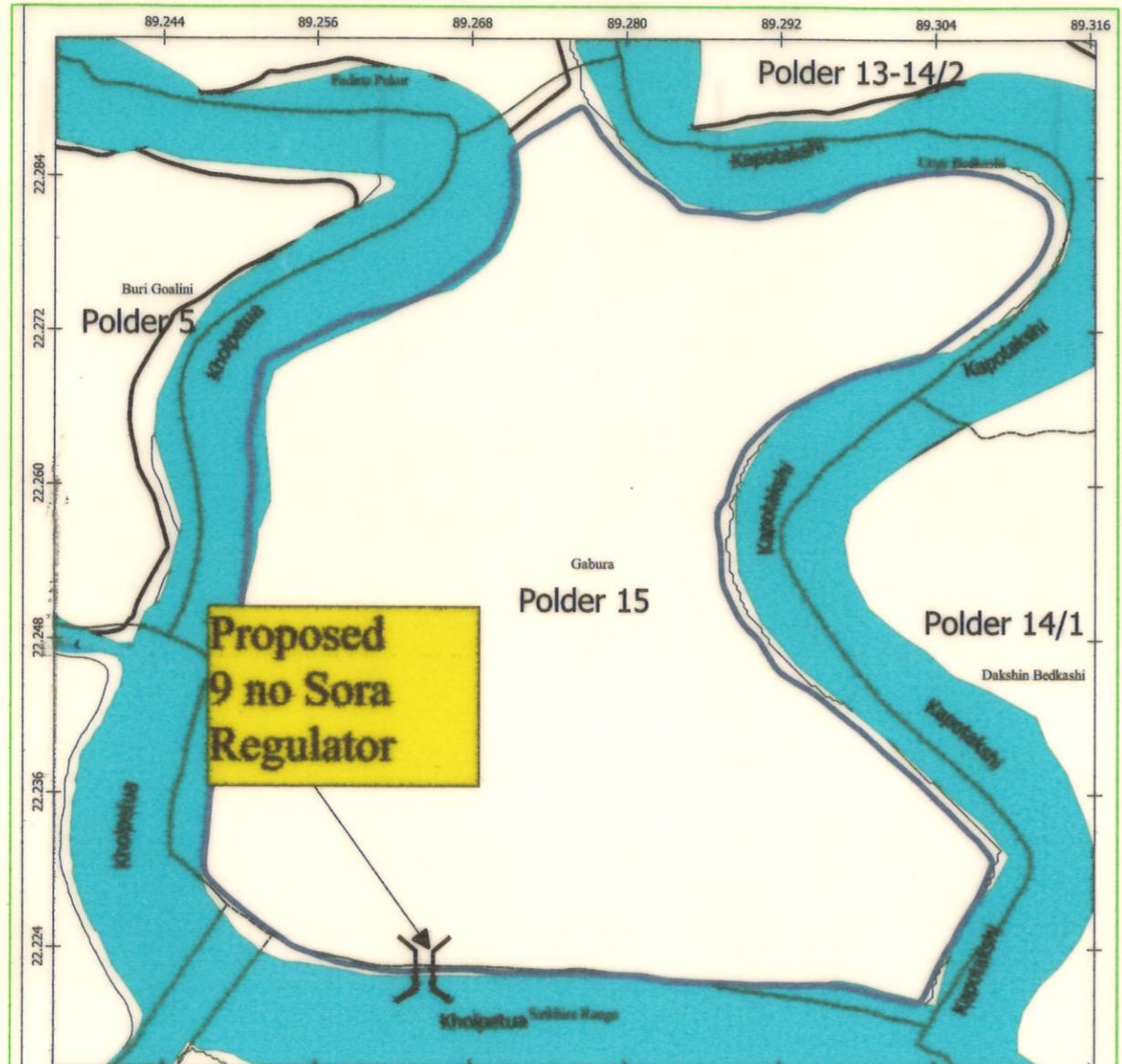
"REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT"

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15
UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M
DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24.

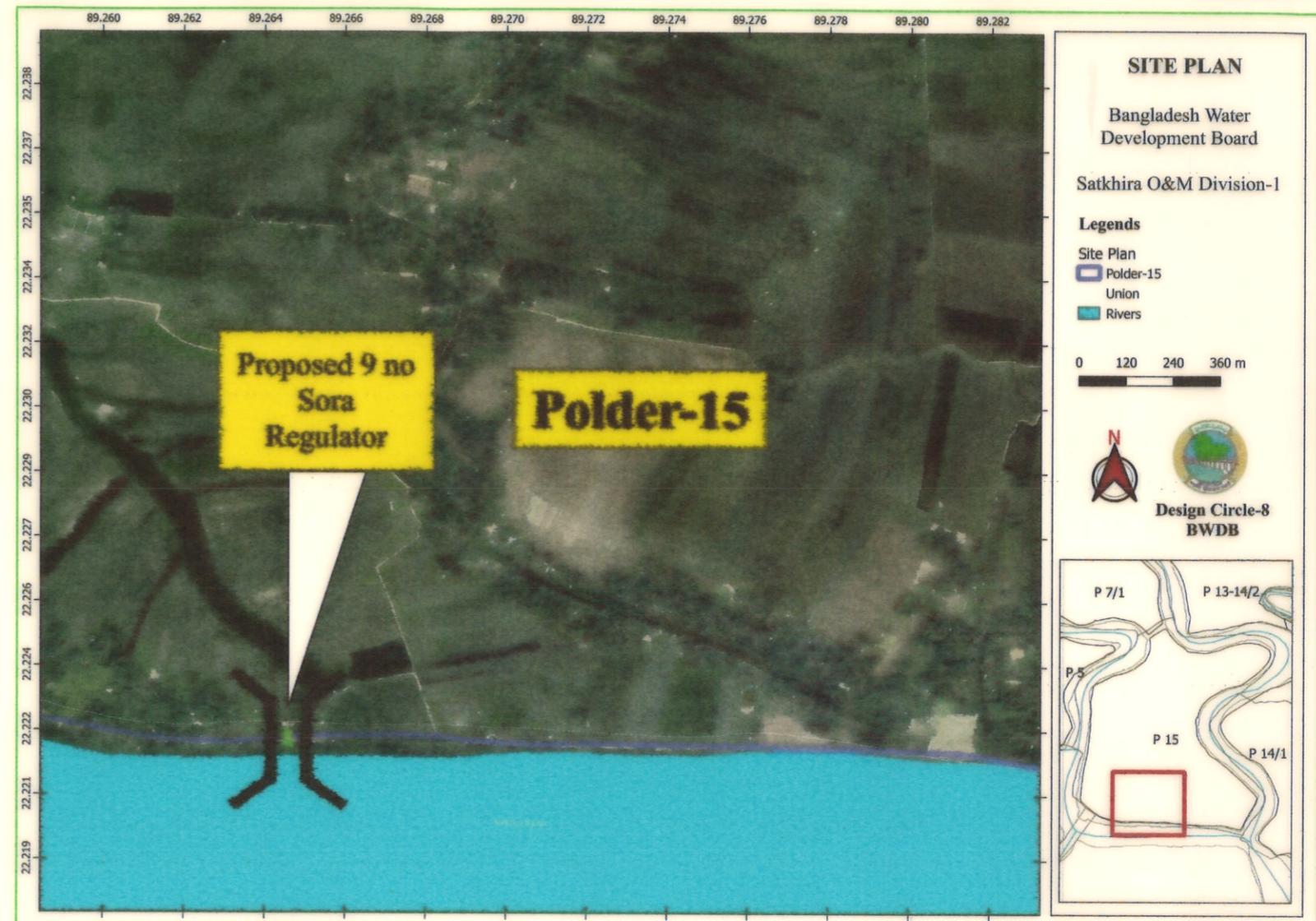
Satkhira O&M Division-1, BWDB, Satkhira.

Designed by: Design Circle-8, BWDB, Dhaka.

July, 2023



INDEX MAP
(Not to Scale)



SITE MAP
(Not to Scale)

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

"REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT"

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

INDEX MAP & SITE MAP

DESIGNED BY :

(SAKIB BIN RAFI), AE

APPROVED BY :

(MOHAMMAD SAIF UDDIN), SE

CHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

BANGLADESH WATER DEVELOPMENT BOARD GROUNDWATER HYDROLOGY GROUNDWATER HYDROLOGY DIVISION-2 FIELD BORE LOG									
Project: Rehabilitation of polder no 15 at satkhira district under satkhira o&m division					SITE: 9 no shora P.S: Shyamnagar DIST: Satkhira				
LOCATION: 9 no shora khal					HOLE NO: H4		GROUND LEVEL: 1.25 m		
CLIENT: XEN,O&M DIVISION-1, Satkhira		WATER LEVEL: .95 m		AT 7:00 HRS					
DATE STARTED: 01-06-2022		DATE COMPLETED: 01-06-22		OF DATE-					
DRILLED BY: GWHD-2		UNIT: Rig-21		TOTAL DEPTH: 72 ft					
LITHOLOGICAL DESCRIPTION	PHYSICAL		DISTURBED SAMPLES		PENETRATION TEST		INDEX		REMARKS
	DENSITY	COLOR	DILATANCY	BLOWS ON SPOON	BLOWS ON CASING	NO OF BLOWS PER 1 FT PENETRATION	BLOW	UNDISTURB	
			0 / 6 / 12 / 18 / 0 / 12 / 10 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100	6 / 12 / 18 / 24 / 12 / 24					
D1									
D2									
D3									
D4									
D5									
D6									
D7									
D8									
D9									
D10									
D11									
D12									
D13									
D14									
Note: >50% Dominant size, 50%-50% and, 20%-40% some, 10%-20% little, <10% trace.									
<p>SAKIB BIN RAFI 21/06/22</p> <p>(Signature)</p>									

BORE LOG (BH-04)

BANGLADESH WATER DEVELOPMENT BOARD GROUNDWATER HYDROLOGY DIVISION-2 72 GREEN ROAD, DHAKA-1205. FIELD BORE LOG									
Project: Rehabilitation of polder no 15 at satkhira district under satkhira o&m division					SITE: 9 no shora P.S: Shyamnagar DIST: Satkhira				
LOCATION: 9 no shora khal					HOLE NO: H1-H5		GROUND LEVEL:		
CLIENT: XEN,O&M DIVISION-1, Satkhira					WATER LEVEL: AT 7.00 HRS				
DATE STARTED: 28-05-2022		DATE COMPLETED: 01-06-22		OF DATE-					
DRILLED BY: GWHD-2		UNIT: Rig-21		TOTAL DEPTH: 72 ft					
SOIL SAMPLING									
A) UNDISTURB					SAMPLE NOS: DIMENSIONS: NO TAKEN				
					TYPE: DRILLER: Md. Abu Jaher GEOLOGIST: Md.Maniruzzaman Bhuiyan				
B) DISTURB					SAMPLE NOS: D1-D14 DIMENSIONS: 1 3/4 ID X 24 Inch NO TAKEN: 14 Nos				
					TYPE: Split Spoon WEIGHT OF HAMMER: 140 lb AVG. DROP: 30 Inches				
					HOW SAMPLED: WOODEN/BOX/JARS/CANS/BAGS DESPATCHED ON:				
CASING									
SIZE: LENGTH USED: WT OF HAMMER: AVG. DROP:									
REMARKS					LOCATION SKETCH				
Drilling was advanced by Chopping method.					<p>মোস মনিবুজ্জামান ভুইয়া পানি লিপান উৎকর্ষ বিকল কলাইবা, যশোর।</p> <p>23/06/2022 20/06/22 (স্কেচ আঁকা হোলের) ১- মিলেটি এস-এস (স্টেল) পানি লিপান উৎকর্ষ বিকল কলাইবা, যশোর, সাতক্ষীর।</p> <p>Not drawn to scale</p> <p>S 21/06/22 1. মোস মনিবুজ্জামান ভুইয়া পানি লিপান উৎকর্ষ বিকল কলাইবা, যশোর, সাতক্ষীর।</p>				

BORE HOLE LOCATION
(Not to Scale)

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

"REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT"

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2022-23

BORE LOG

DESIGNED BY: 	APPROVED BY:
(SAKIB BIN RAFI), AE	
CHECKED & RECOMMENDED BY: 	
(JAKARIA PERVEZ), EE	(MOHAMMAD SAIF UDDIN), SE
DATE: 18-07-2023 DWG. NO.: DC-8-0394-02/22	

GENERAL NOTES

1. THE SPECIFICATION OF MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD TECHNICAL SPECIFICATION OF BWDB, IN GENERAL.
2. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL ELEVATIONS ARE IN mPWD UNLESS OTHERWISE MENTIONED IN THE DRAWINGS.
3. COMPRESSIVE STRENGTH OF REINFORCED CEMENT CONCRETE SHALL HAVE MINIMUM 28 DAYS CYLINDER STRENGTH, $f_c \geq 25.00 \text{ N/mm}^2$ (ITEM CODE: 28-230-10) AND SHALL BE CHECKED BY COLLECTING SAMPLES AND TESTING DURING CONSTRUCTION.
4. REINFORCING BAR SHALL BE DEFORMED MILD STEEL HAVING YIELD STRENGTH, $f_y \geq 400.00 \text{ N/mm}^2$. (ITEM CODE-76-120-10), (MADE FROM BILLET) IN R.C.C. WORK.
5. CONCRETE FOR CC BLOCKS SHALL HAVE MINIMUM STRENGTH, $f_c \geq 12.0 \text{ N/mm}^2$ AT 28 DAYS.
6. CURING OF CONCRETE SHALL BE CONTINUED FOR MINIMUM 21 DAYS AFTER CASTING.
7. CONCRETE SHALL BE POURED IN DRY BED CONDITION.
8. CONCRETE MIXTURE SHALL BE POURED AS QUICK AS POSSIBLE BUT NOT LATER THAN 45 MINUTES AFTER MIXING.
9. 75 mm LEAN CONCRETE AT BASE SHALL BE IN 1:3:6.
10. THE LEAN CONCRETE AT FOUNDATION OF THE PROPOSED REGULATOR SHALL BE PLACED AFTER PROPERLY PREPARING & COMPACTING EXCAVATED BASE.
11. CLEAR COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:
 - a) Operating deck & Railing : 25mm
 - b) Concrete adjacent to earth at foundation: 75mm
 - c) Concrete adjacent to earth: 75mm
 - d) Concrete exposed to weather and water or others: 75mm
 - e) Beam: 40mm
12. MINIMUM LAP LENGTH SHALL BE 40 TIMES THE BAR DIAMETER.
13. LAP SHALL BE STAGGERED SO THAT NOT MORE THAN 50% OF BARS ARE LAPPED IN ANY ONE CROSS SECTION. WHERE BARS MUST LAPPED IN ONE CROSS SECTION, THEN LAP LENGTH SHALL NOT BE LESS THEN 1.30 TIMES MINIMUM LAP LENGTH.
14. REINFORCING BAR MUST BE SUPPORTED IN ITS PROPER POSITION BY USE OF MORTAR BLOCK, SUPPORTS OR BY OTHERS APPROVED MEANS.
15. SAND FILLING IN FOUNDATION SHOULD BE DONE WITH SAND OF $F.M \geq 1.50$ IN LAYERS OF 150 mm THICK LAYER BY LAYER AND COMPACTED TO ATTAIN MINIMUM 50% RELATIVE DENSITY.
16. UNLESS OTHERWISE SPECIFIED, BACK FILLING SHALL BE DONE WITH SAND ($F.M \geq 0.80$) FREE FROM VEGETABLE ROOTS AND ORGANIC MATTER, BACK FILLING FOR U-SHAPED WALL SHALL BE DONE SIMULTANEOUSLY ON BOTH WALLS.
17. DESIGN OF GATE AND HOISTING SYSTEM WILL BE PREPARED BY DESIGN CIRCLE-III, BWDB, DHAKA.
18. GATE TO BE OPERATED IN CONTROLLED WAY TO AVOID ANY SCOUR WHEN HEAD DIFFERENCE IS BEYOND 0.60m.
19. THE EMBEDDED PARTS OF GATE TO BE INSTALLED DURING CONSTRUCTION OF BARREL PART AND IT SHALL BE DONE IN ACCORDANCE WITH APPROVED MECHANICAL DRAWING.
20. THE GATE SHALL BE INSTALLED BEFORE THE OPERATION OF THE STRUCTURE.
21. ANY ERROR/OMISSION IF DETECTED SHALL BE REFERRED TO THE CONCERNED DESIGN OFFICE TAKING NECESSARY ACTION.
22. ALL BORE HOLES SHALL BE SEALED BEFORE CONSTRUCTION OF REGULATOR.

SPECIAL NOTES:

1. THIS DRAWING IS PREPARED AS PER PROPOSAL AND DESIGN DATA SUBMITTED BY SE, KHULNA O&M CIRCLE, BWDB, KHULNA VIDE HIS OFFICE MEMO NO: 1/d-3-644, DATE: 01-12-2021 AND DRAFT DESIGN WAS SENT ON 19-10-2022.
2. THE WORK SHALL BE EXECUTED WITH PRIOR ADMINISTRATIVE AND FINANCIAL APPROVAL FROM THE COMPETENT AUTHORITY & WITHIN THE DPP / BUDGET PROVISION .
3. EXISTING KHAL/LINK KHAL AT THE U/S & D/S OF THIS PROPOSED REGULATOR TO BE RE-EXCAVATED UPTO THE REQUIRED LENGTH AND LEVEL IF NECESSARY.

NOTES FOR SHEET PILES:

1. HOT ROLLED U-SHAPE STEEL SHEET PILE SHALL BE USED. COLD ROLLED SHEET PILE SHALL NEVER BE USED.
2. COATING SHALL BE PROVIDED OVER SHEET PILE IN THE FOLLOWING WAY :-
 - i) CLEAN THE SHEET PILE SURFACE PREFERABLY WITH SAND BLASTING.
 - ii) PROVIDE 1 (ONE) COAT OF ZINK PHOSPHATE AS PRIMARY COAT,
 - iii) PROVIDE 2 (TWO) COAT OF COALTAR EPOXY COAT OVER PRIMARY COAT.
3. THICKNESS OF SHEET PILE SHALL BE 10.50mm ($\pm 0.50\text{mm}$) (ITEMCODE: 44-240-10).
4. CONCERNED EXECUTIVE ENGINEER MUST ENSURE SHEET PILE INTERLOCKING, LENGTH, & DRIVING.
5. TOP LEVEL OF EVERY CONNECTED SHEET PILES MUST HAVE SAME LEVEL.

NOTES FOR EMBEDDED PARTS, GROOVE AND GATE:

1. ALL EMBEDDED PARTS OF GROOVE AND OTHERS WILL BE STAINLESS STEEL (SUS-304)
2. ALL PARTS OF MECHANICAL GATE WILL BE STAINLESS STEEL (SUS-304).

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

NOTES

DESIGNED BY :

(SAKIB BIN RAFI), AE

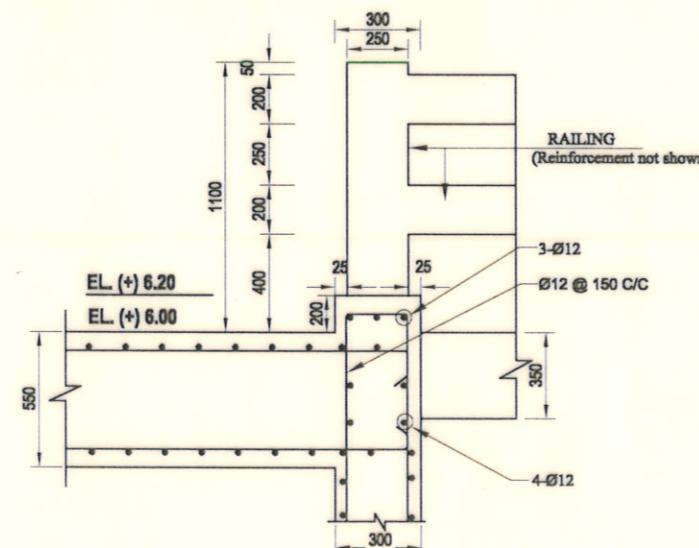
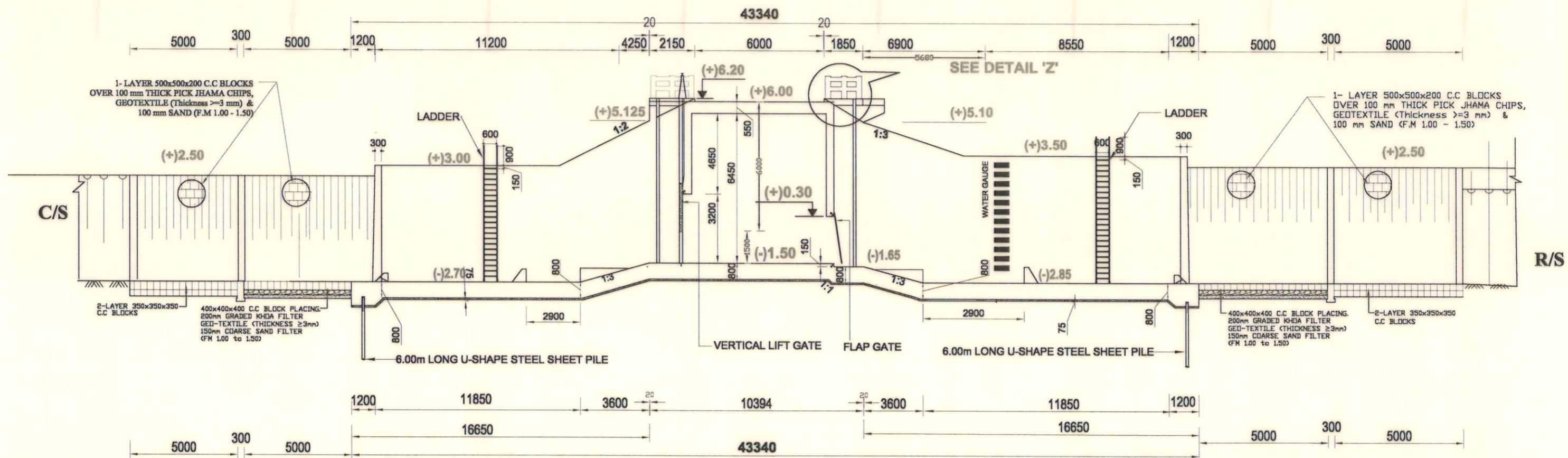
CHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

APPROVED BY :

(MOHAMMAD SAIF UDDIN), SE

DATE:18-07-2023 DWG. NO.:DC-8-0394-03/22



Scale : Not To Scale

Bangladesh Water Development BoardOffice of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA
KHAL IN POLDER NO-15 UNDER "REHABILITATION OF POLDER 15 AT
SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB,
SATKHIRA DURING THE YEAR 2023-24

SECTIONAL ELEVATION & DETAIL

DESIGNED BY :

(SAKIB BIN RAFI), AE

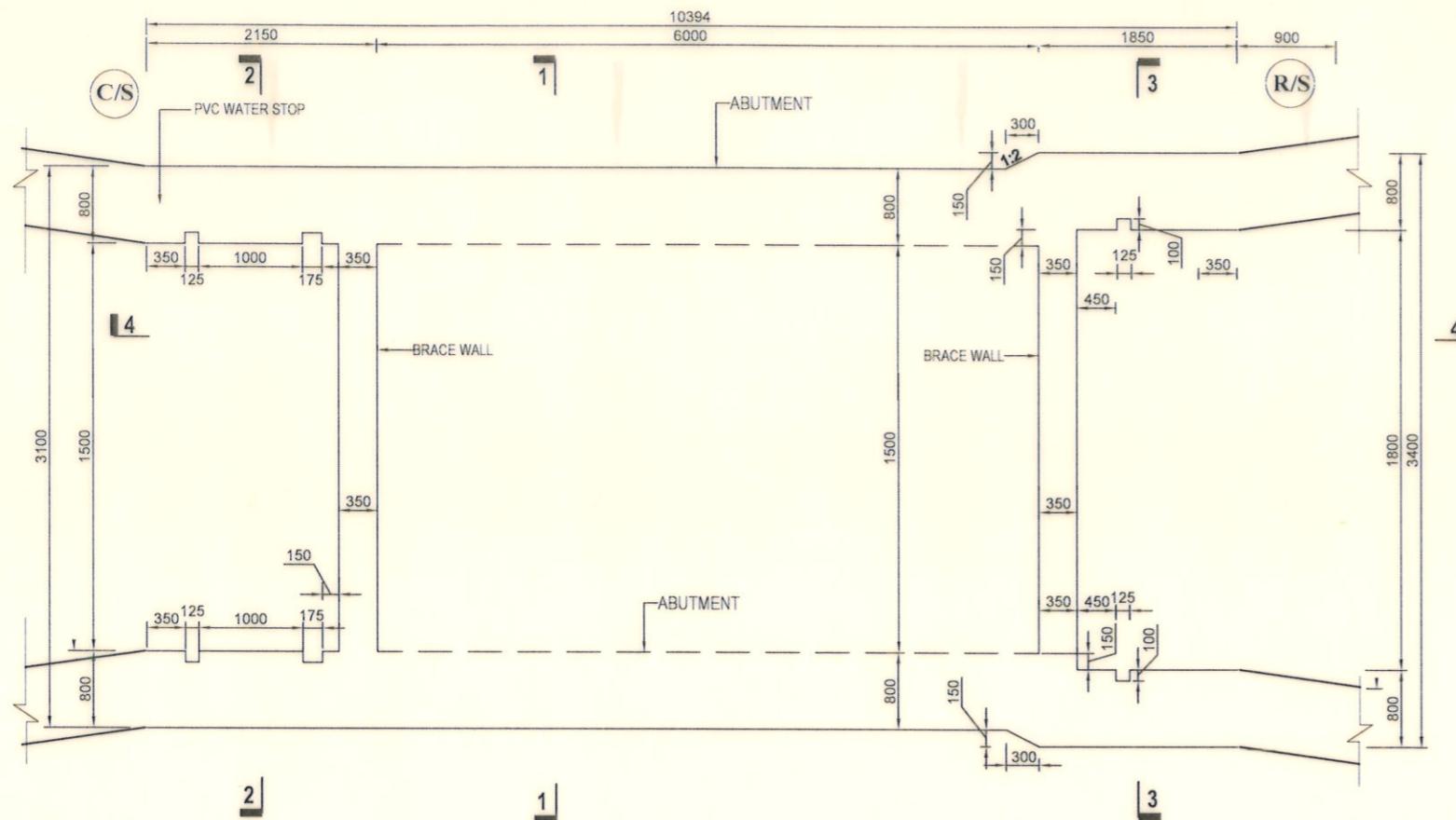
APPROVED BY :

CHECKED & RECOMMENDED BY :

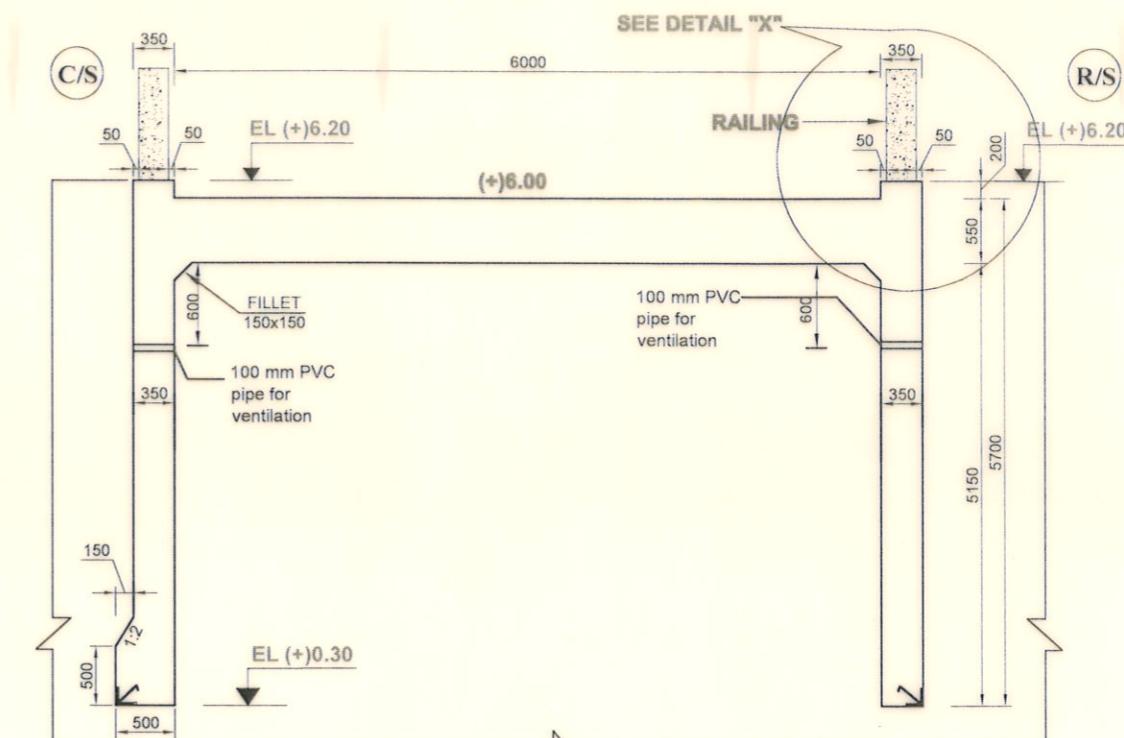
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(MOHAMMAD SAIF UDDIN), SE

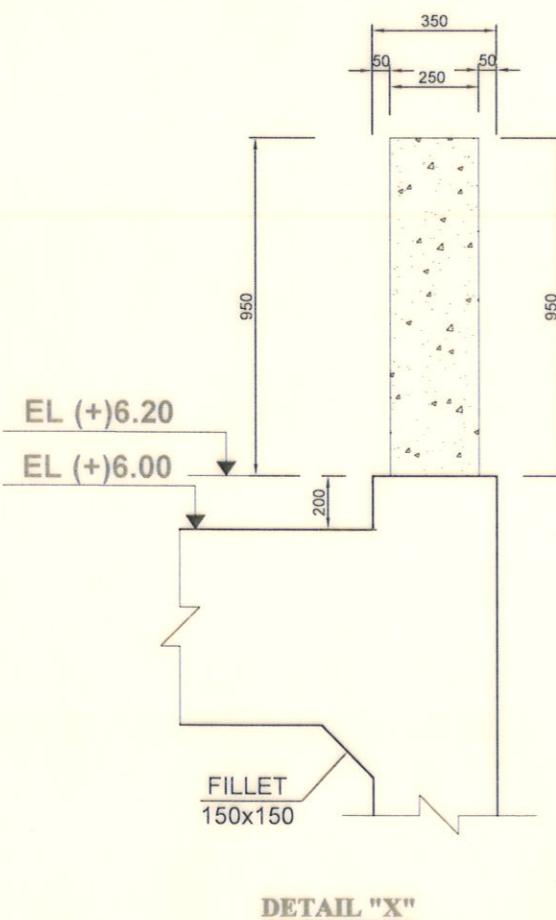
DATE:18-07-2023 DWG. NO.:DC-8-0394-05/22



CONCRETE OUTLINE OF SIDEWALL & BRACE WALL



CONCRETE OUTLINE OF BRACE WALL & BOX TOP SLAB



DETAIL "X"

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF PODER-15 AT SATKHIRA DISTRICT

**DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO
SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER
15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M
DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24.**

CONCRETE OUTLINE OF PIER SIDEWALL, HEADWALL & BOX

DESIGNED BY :

APPROVED BY :

-P.D.


(SAKIB BIN RAFI), AE

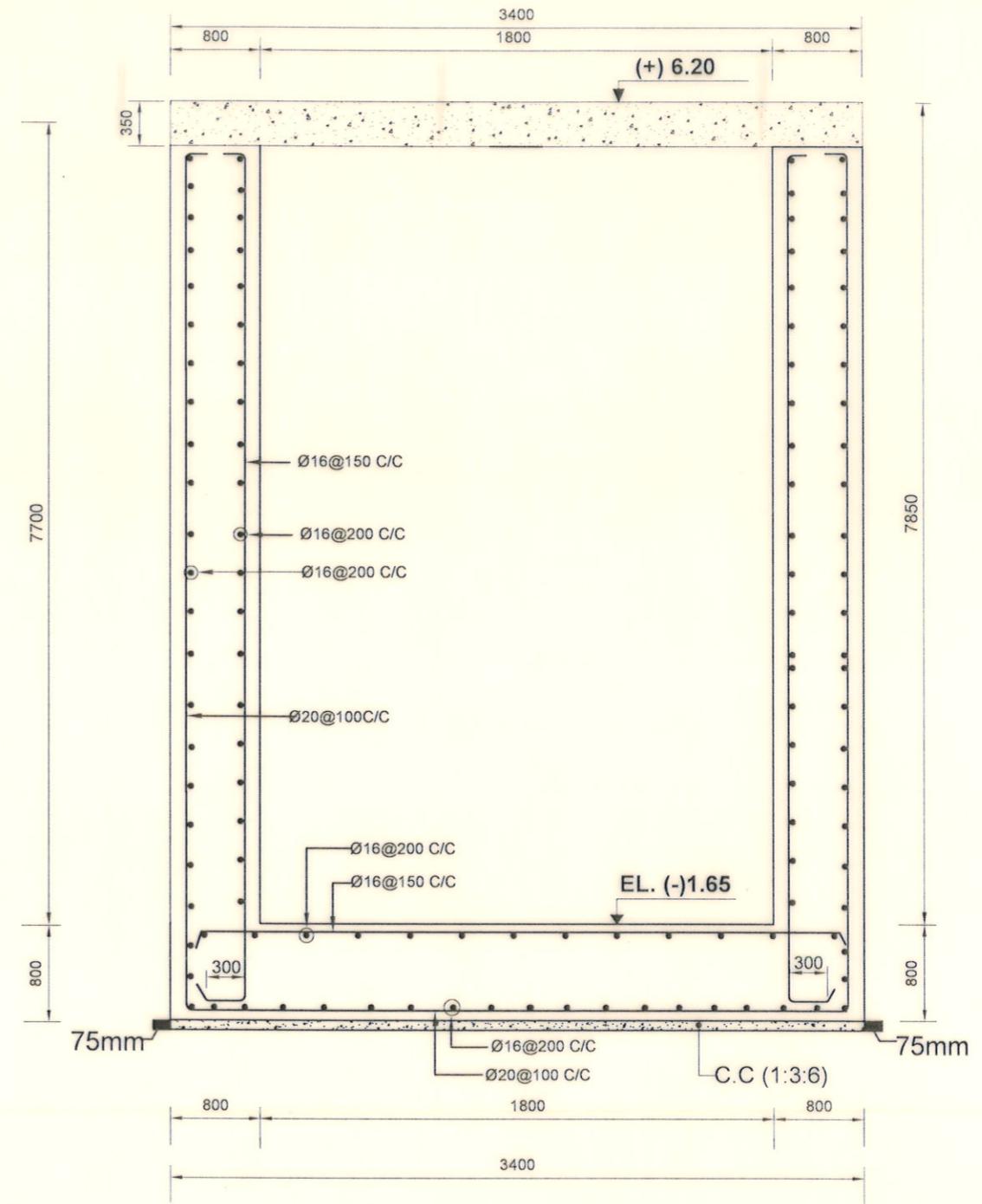
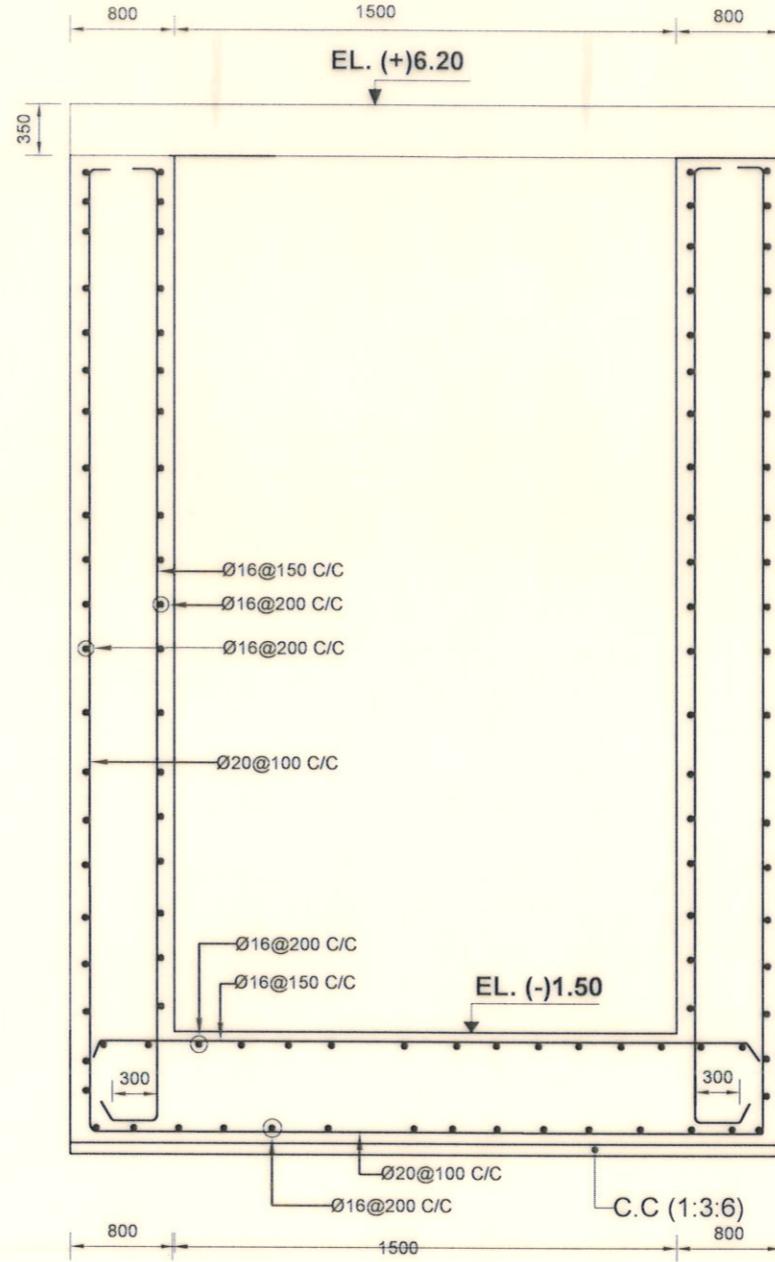
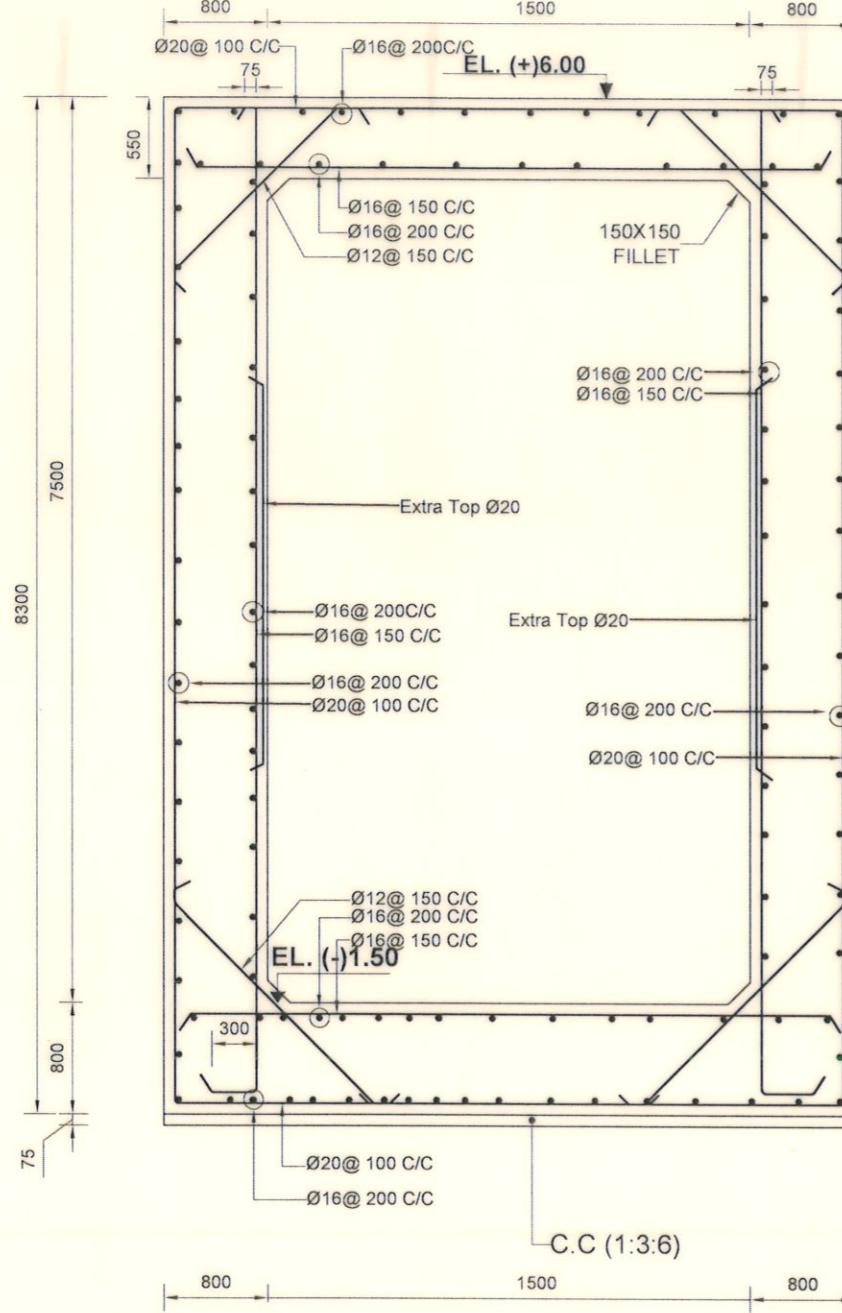
Gussell
187123

CHECKED & RECOMMENDED BY :

JAKARIA PEDNEKAR, E.E.

GENERAL INFORMATION SECTION

DATE:18-07-2023 DWG. NO :DC-8-0394-06/22

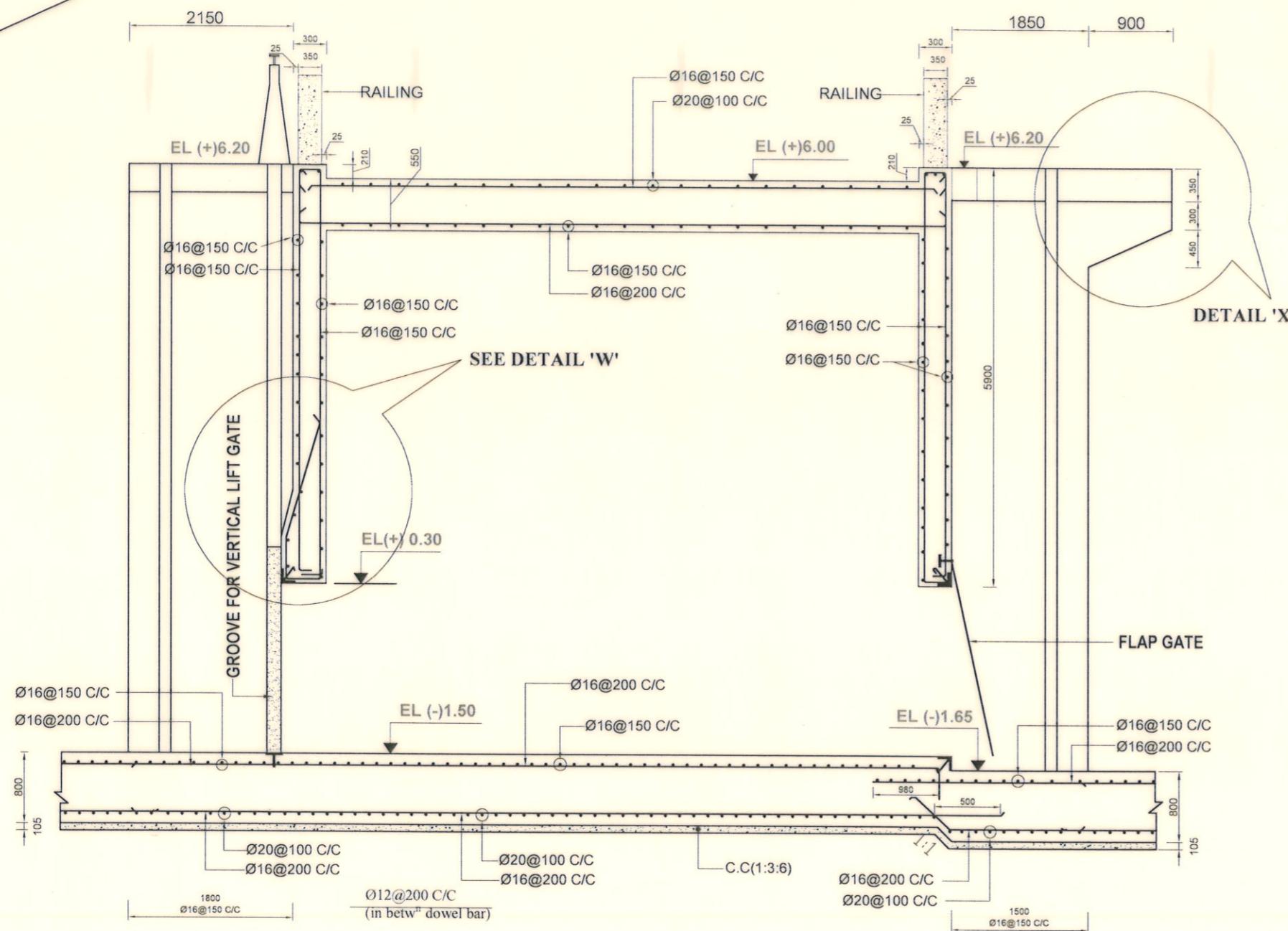


Bangladesh Water Development Board
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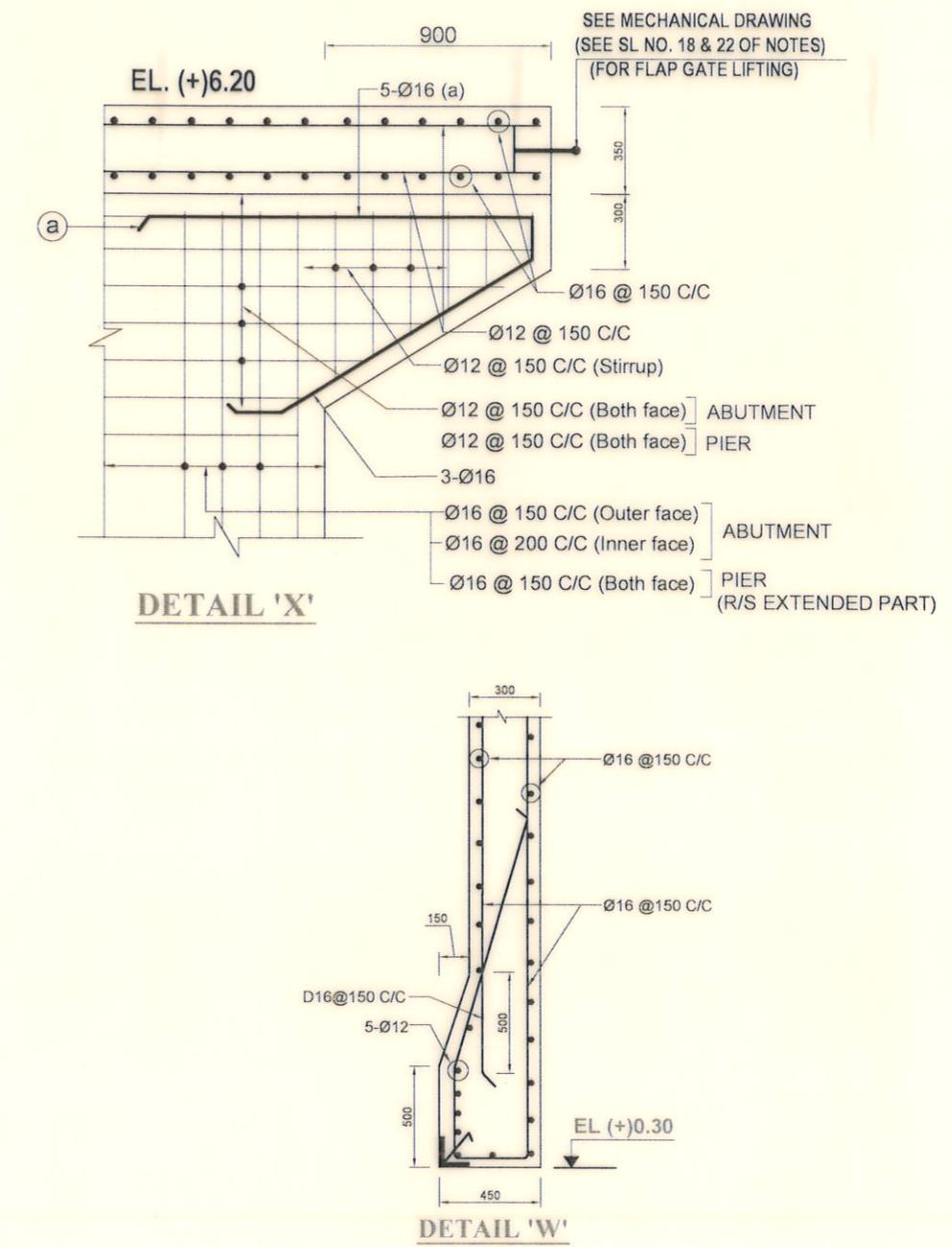
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT
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KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT
SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB,
SATKHIRA DURING THE YEAR 2023-24

REINFORCEMENT DETAILS OF ABUTMENT & BARREL

DESIGNED BY :	APPROVED BY :
(SAKIB BIN RAFI), AE	(MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY :	
(JAKARIA PERVEZ), EE	
DATE:18-07-2023 DWG. NO.:DC-8-0394-07/22	



SECTION 4-4
LONGITUDINAL SECTION OF BARREL FLOOR WITH BRACE WALL REINFORCEMENT
(FOUNDATION TREATMENT SHOWN IN SHEET NO 21, 22 & 23 of 22)
(SEE SHEET NO 08 of 22)



Bangladesh Water Development Board
Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA
KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT
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SATKHIRA DURING THE YEAR 2023-24.

SECTIONAL ELEVATION & DETAIL

DESIGNED BY :

2

~~2011~~

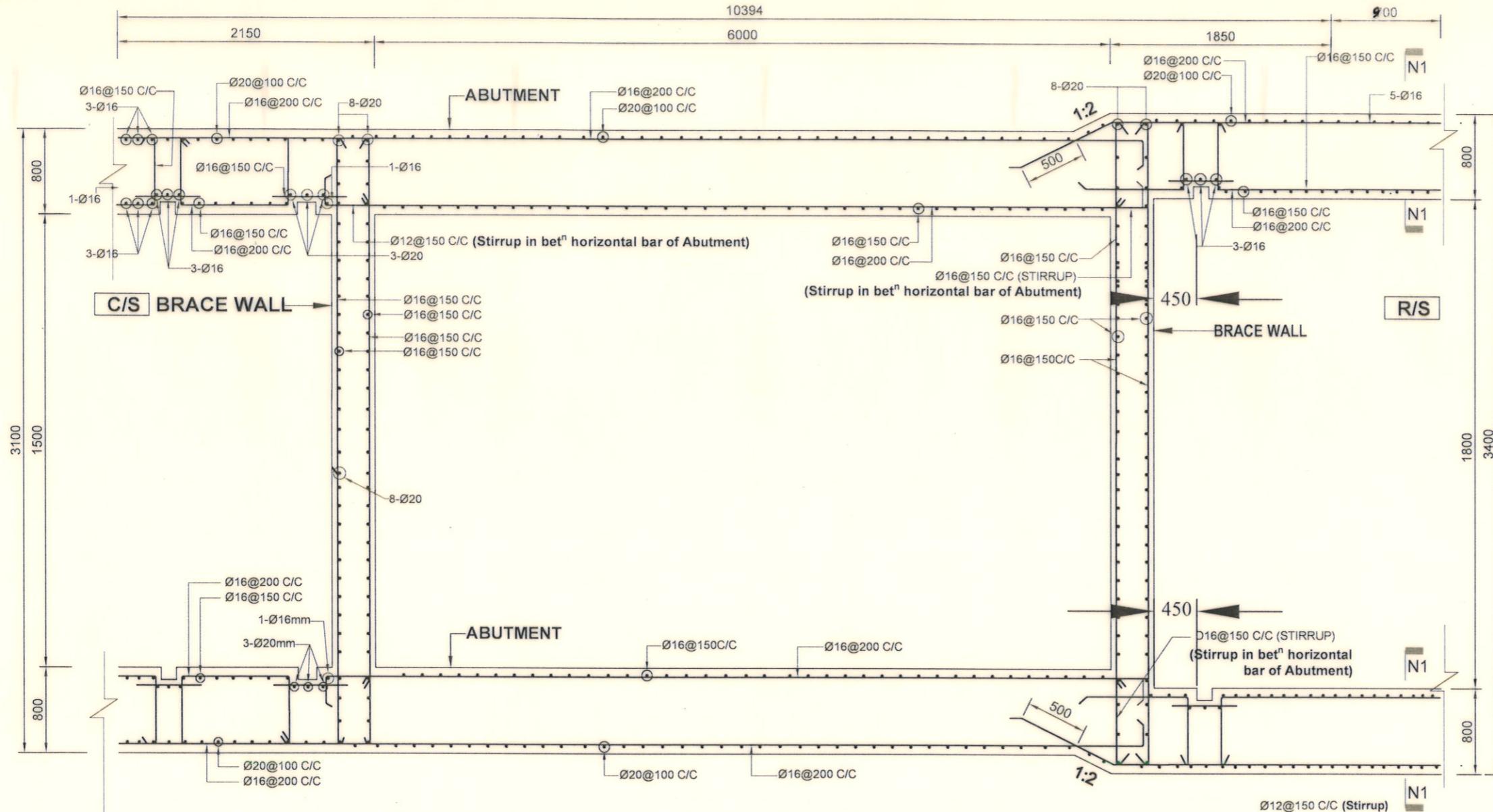
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APPROVED BY :

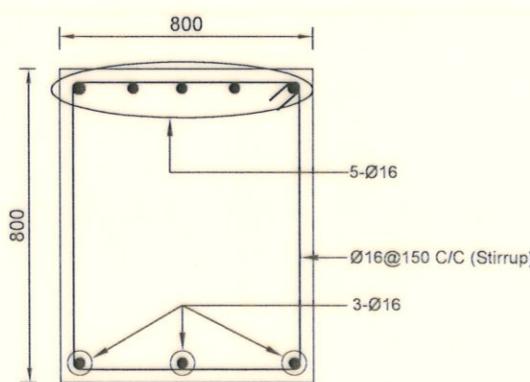
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12/71 23

(JAKARIA PERVEZ), EE

(MOHAMMAD SAIF UDDIN), SE

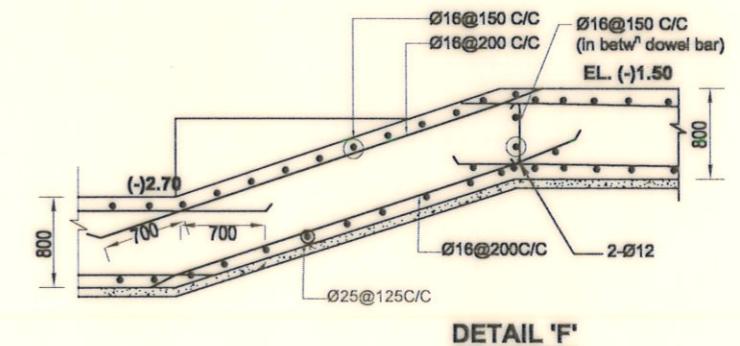
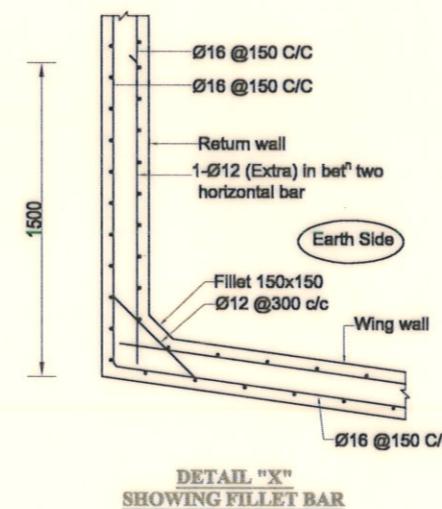
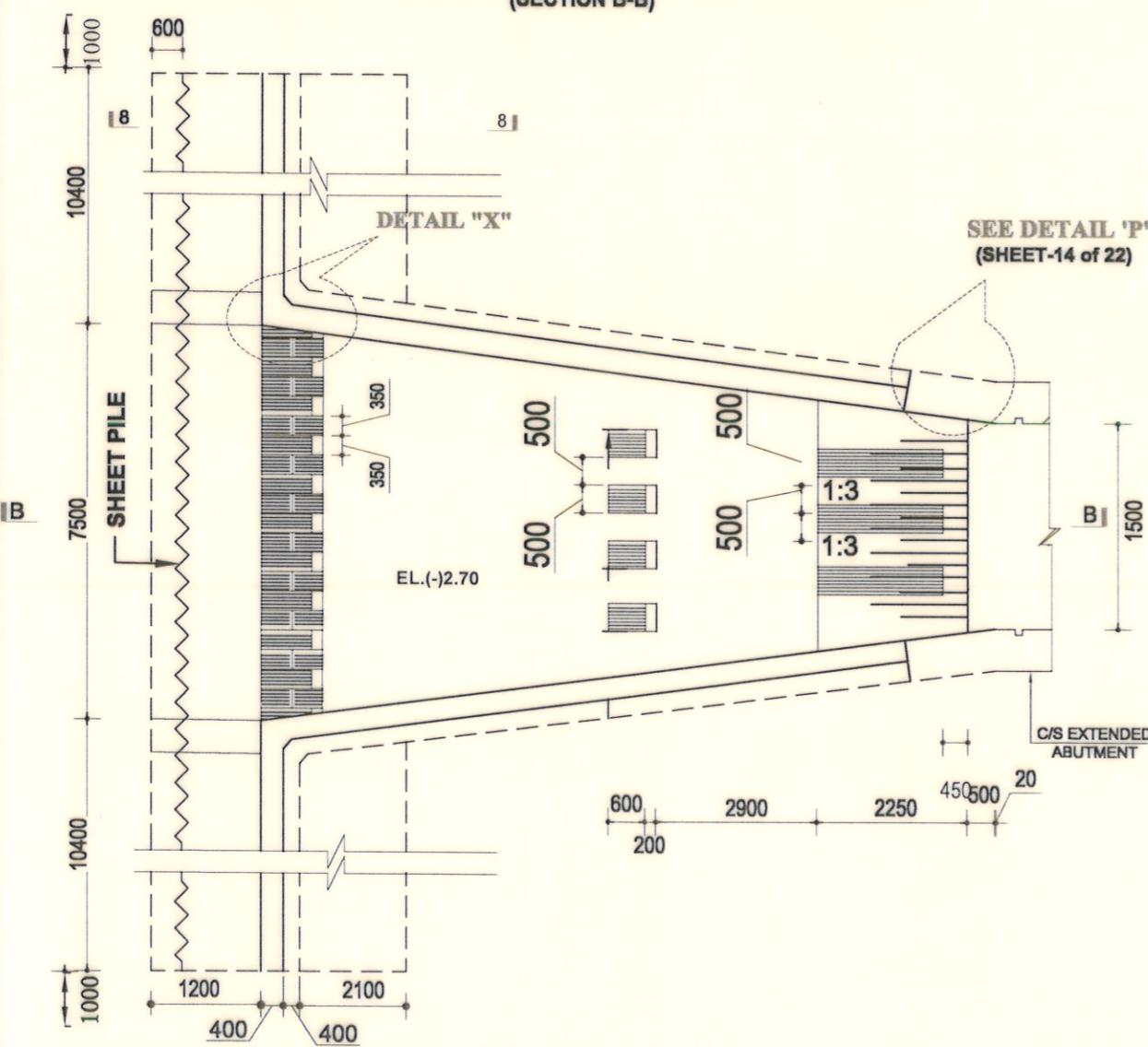
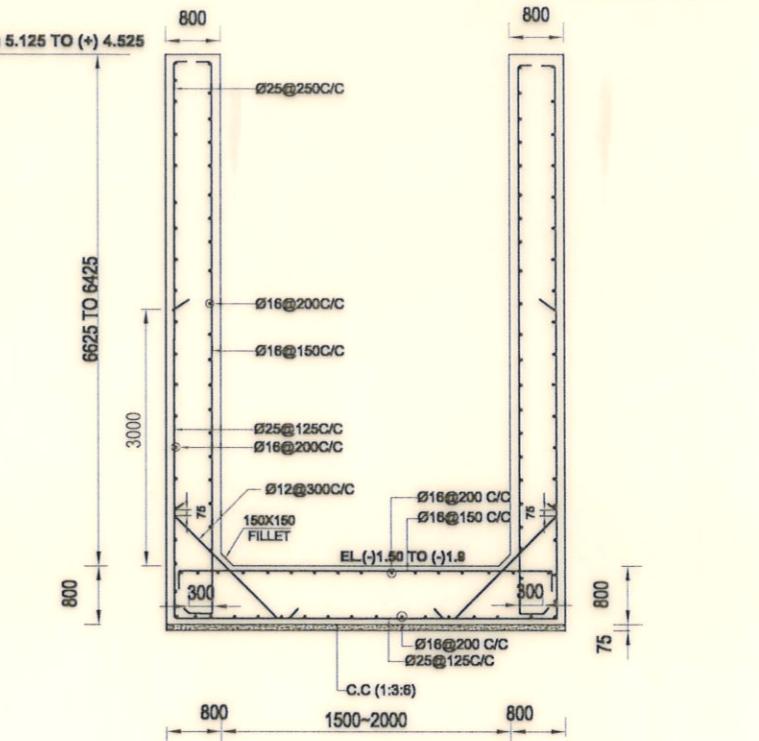
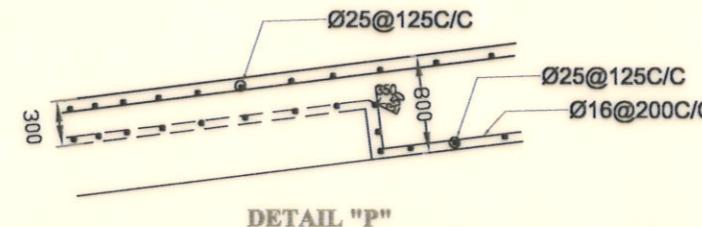
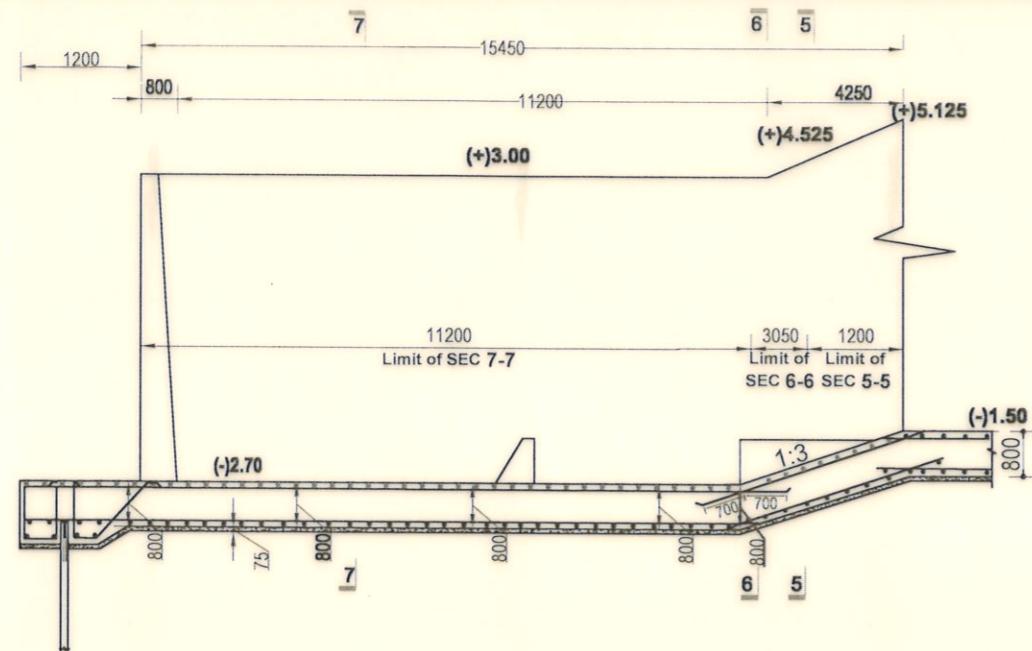


REINFORCEMENT DETAILS OF ABUTMENT & BRACE WALL ABOVE VENT OPENING
(FOUNDATION TREATMENT SHOWN IN SHEET NO 21, 22 & 23 of 22)

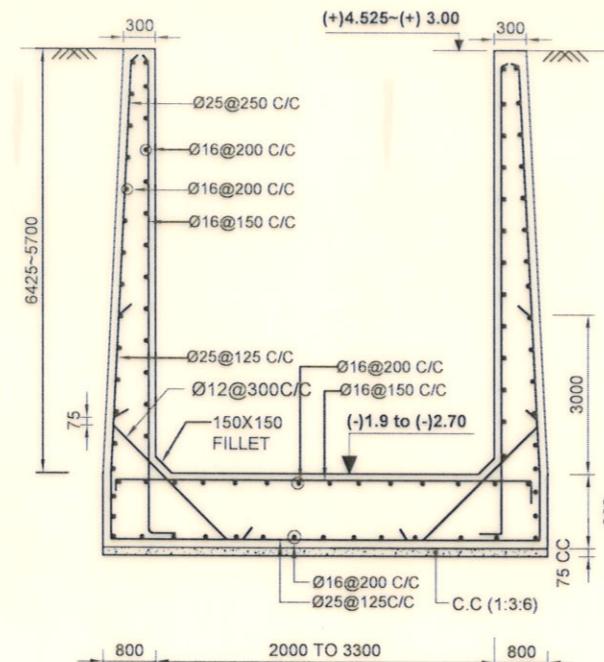


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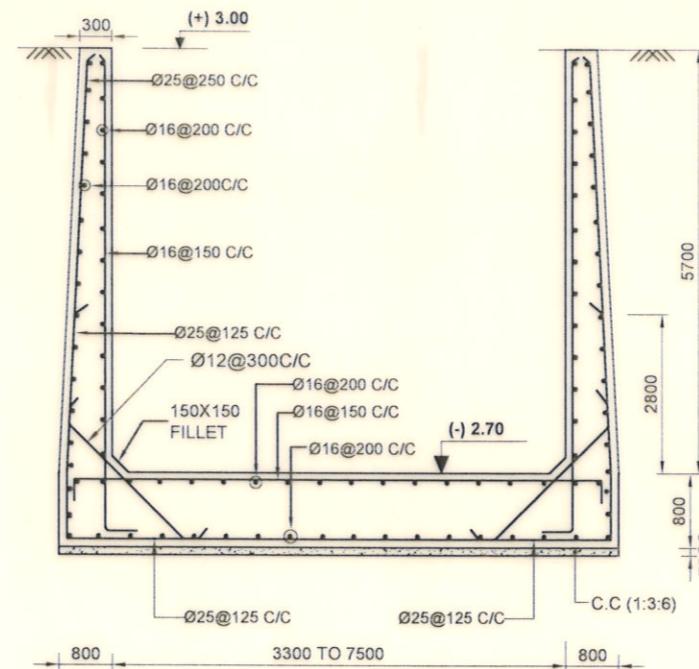
Bangladesh Water Development Board	
Office of the Superintending Engineer Design Circle-8	
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT	
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24	
REINFORCEMENT DETAILS OF ABUTMENT, PIER & BRACE WALL ABOVE VENT OPENING	
DESIGNED BY : (SAKIB BIN RAFI), AE	APPROVED BY : (MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY : (JAKARIA PERVEZ), EE	
DATE:18-07-2023 DWG. NO.:DC-8-0394-09/22	



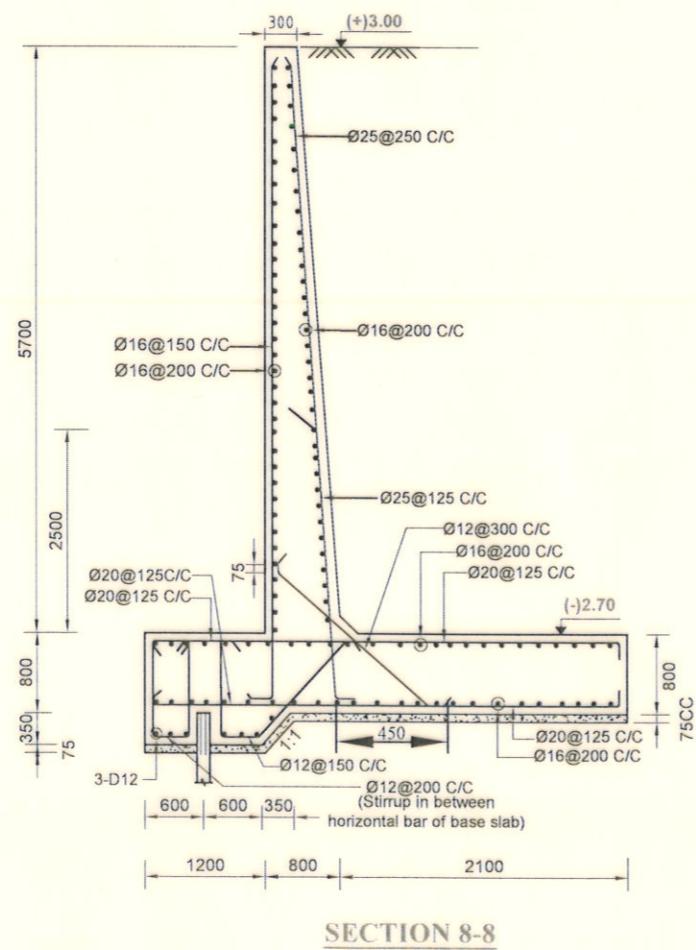
Bangladesh Water Development Board Office of the Superintending Engineer Design Circle-8	
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT	
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REINFORCEMENT DETAILS OF C/S APRON AND WING WALL DESIGNED BY : (SAKIB BIN RAFI), AE	APPROVED BY : (MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY : (JAKARIA PERVEZ), EE	DATE: 18-07-2023 DWG. NO.: DC-8-0394-10/22



SECTION 6-6 (VALID FOR 3050 LENGTH)



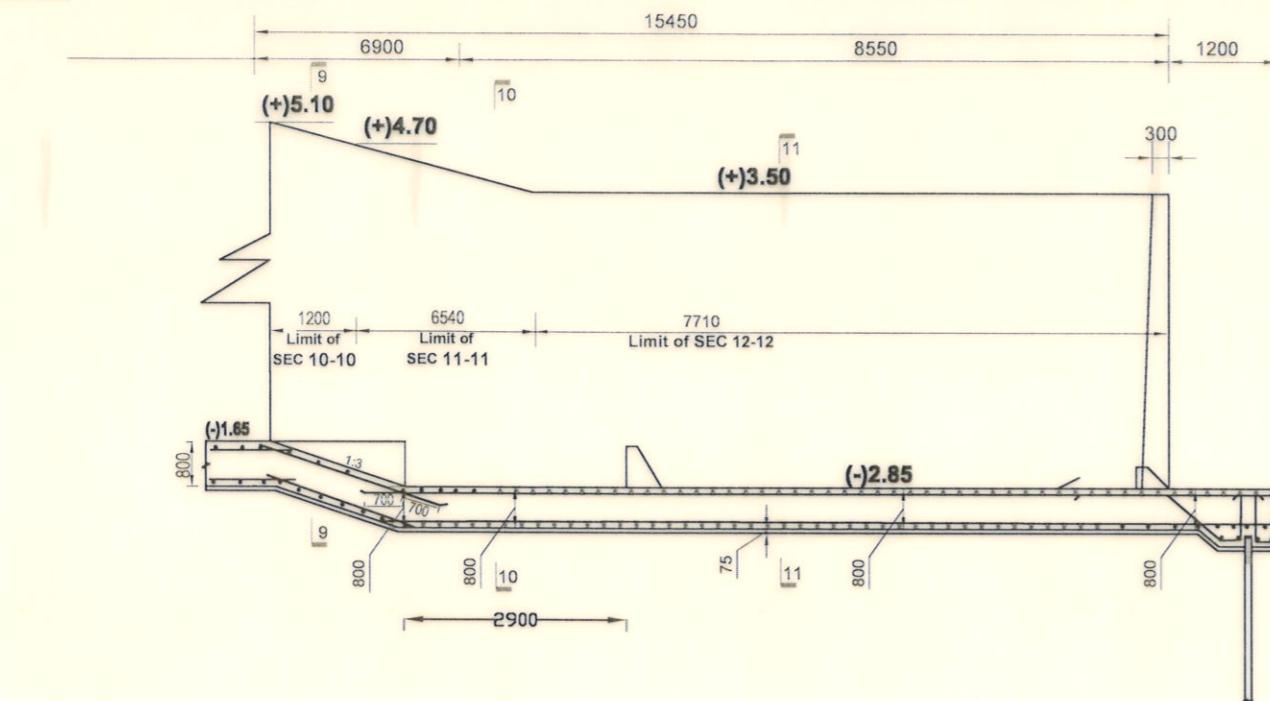
SECTION 7-7 (VALID FOR 11200 LENGTH)



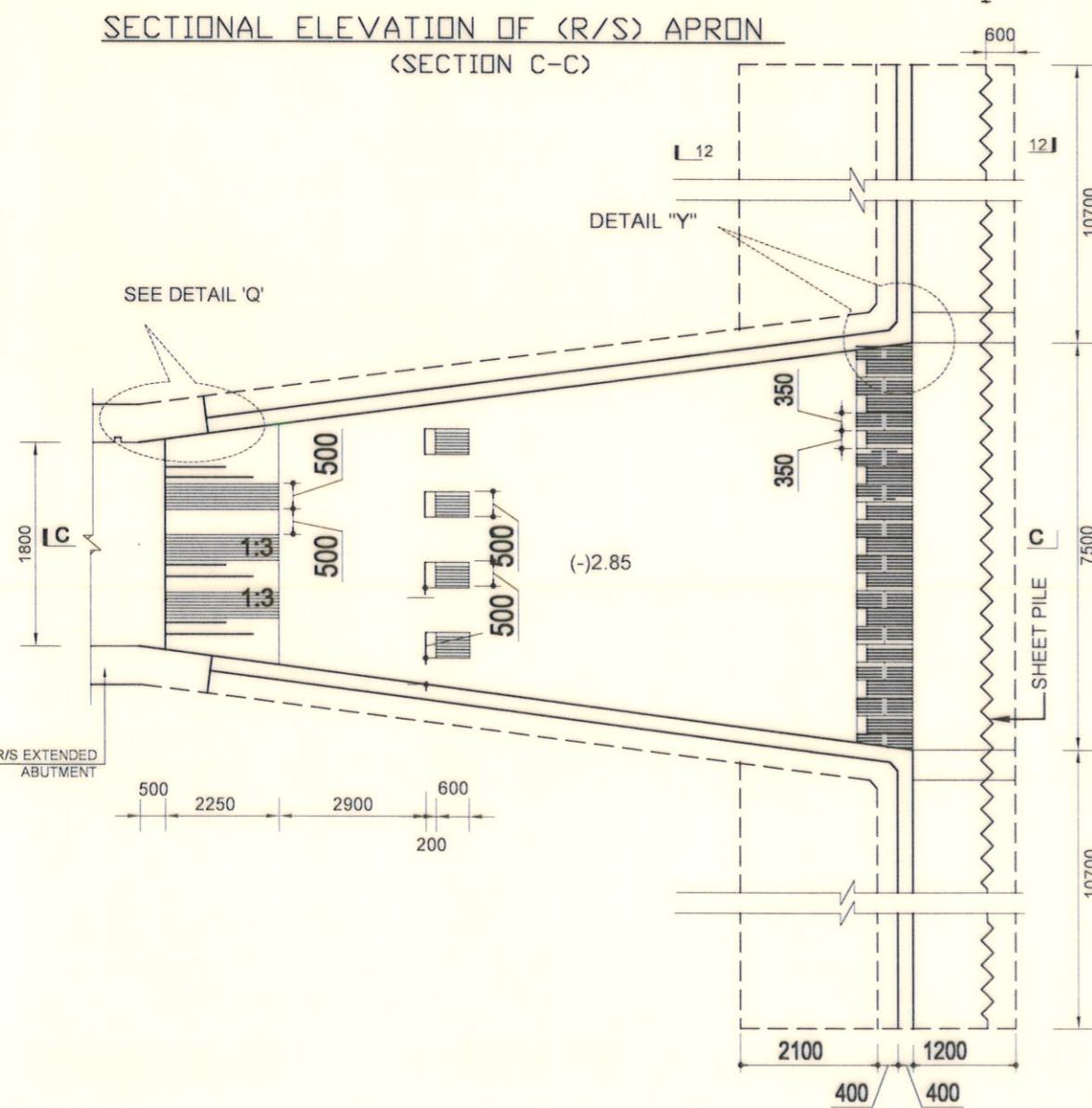
SECTION 8-8

Scale : Not To Scale

Bangladesh Water Development Board Office of the Superintending Engineer Design Circle-8	
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT	
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DESIGNED BY :	APPROVED BY :
 (SAKIB BIN RAFI), AE	 (MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY :	
 (JAKARIA PERVEZ), EE	
DATE:18-07-2023 DWG. NO.: DC-8-0394-11/22	

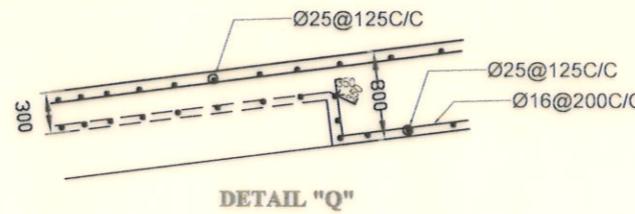


SECTIONAL ELEVATION OF (R/S) APRON
(SECTION C-C)

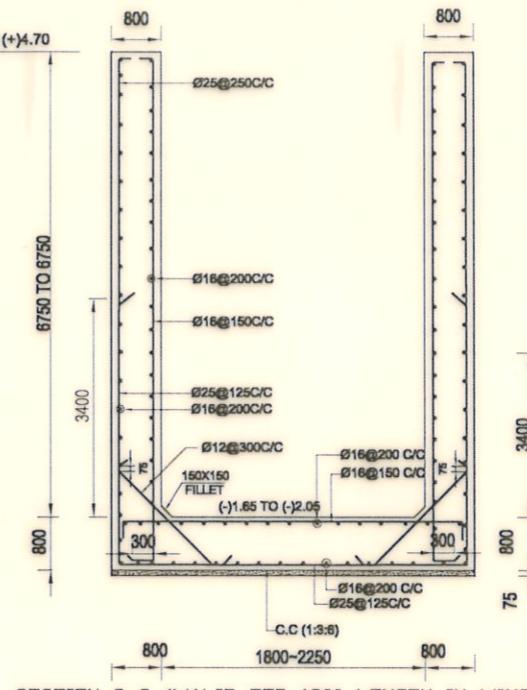


PLAN OF R/S APRON & RETURN WALL

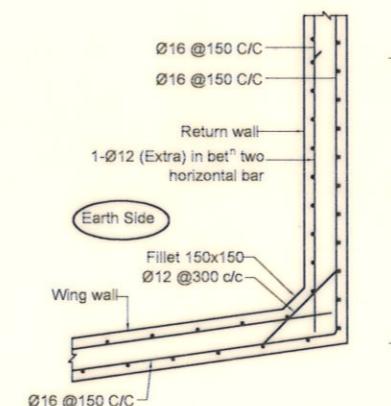
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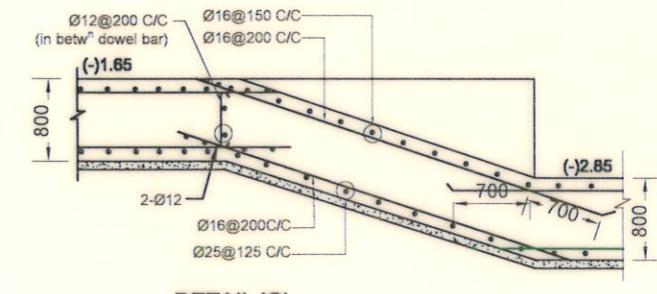
DETAIL "Q"



SECTION 9-9 (VALID FOR 1200 LENGTH IN WING WALL PORTION)



DETAIL "Y"
SHOWING FILLET BAI



DETAIL 'C

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

**DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA
KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT
SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1,
BWDB, SATKHIRA DURING THE YEAR 2023-24**

REINFORCEMENT DETAILS OF R/S APRON AND WING WALL

DESIGNED BY :

APPROVED BY :

(SAKIB BIN RAFI), AE

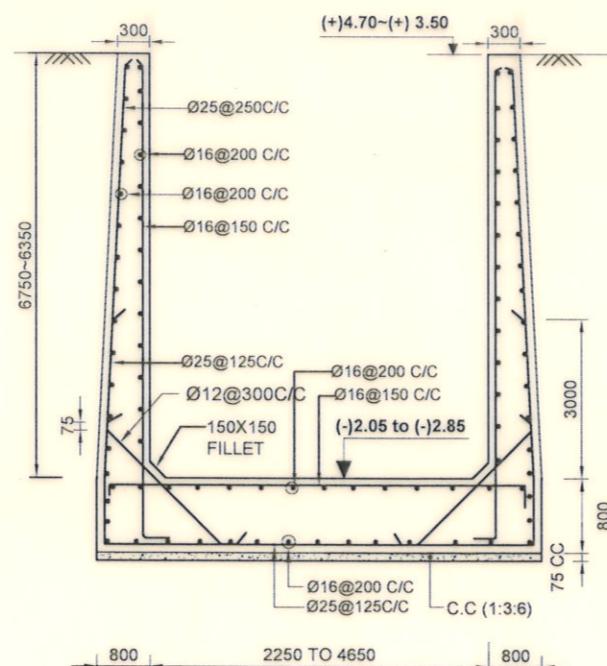
CHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

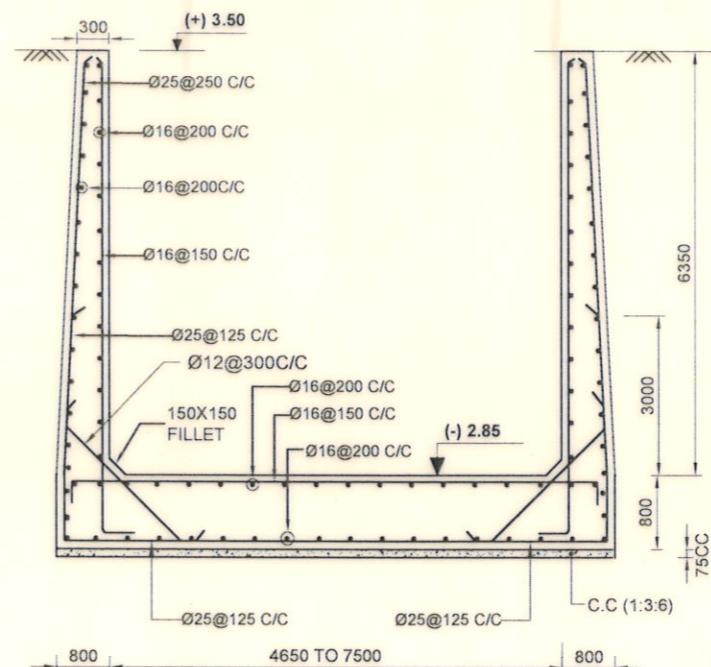

18/7/23

(MOHAMMAD SAIF UDDIN), SE

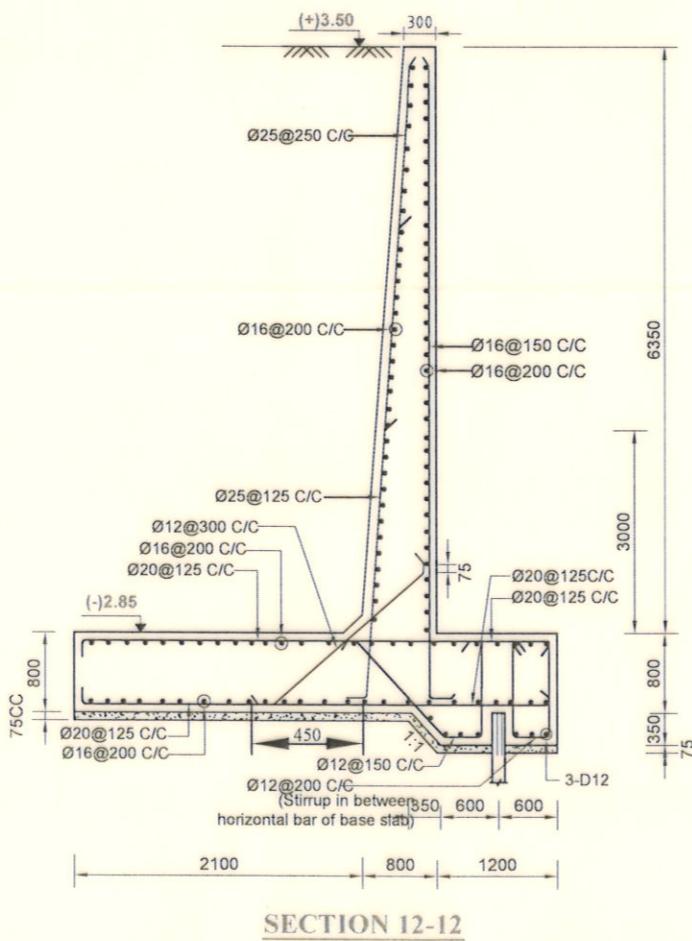
DATE:18-07-2023 DWG. NO.:DC-8-0394-12/22



SECTION 10-10 (VALID FOR 6540 LENGTH)

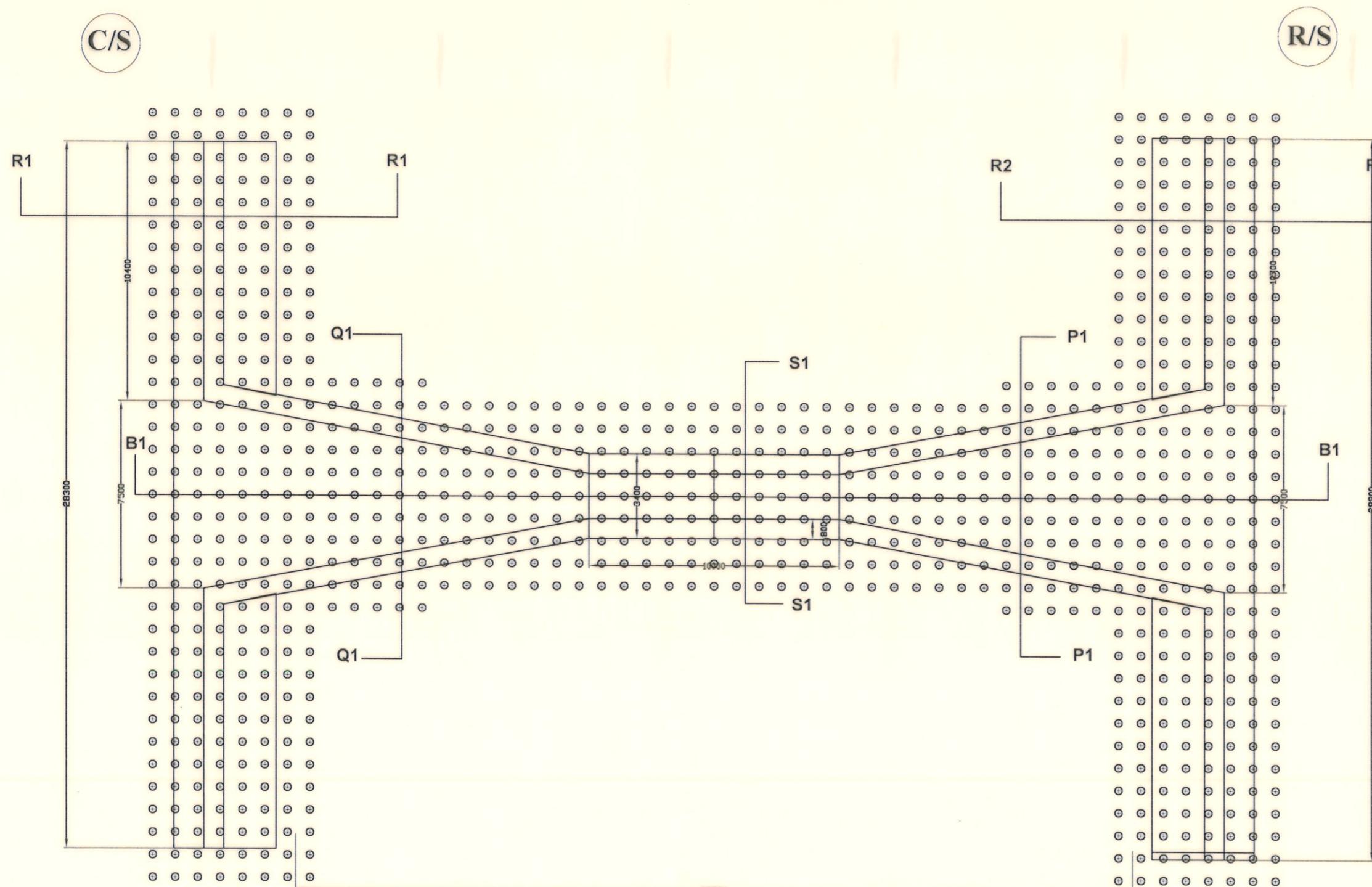


SECTION 11-11 (VALID FOR 7710 LENGTH)



SECTION 12-12

Bangladesh Water Development Board	
Office of the Superintending Engineer Design Circle-8	
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT	
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24.	
REINFORCEMENT DETAILS OF R/S APRON, WING WALL & RETURN WALL	
DESIGNED BY : (SAKIB BIN RAFI), AE	APPROVED BY : (MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY : (JAKARIA PERVEZ), EE	
DATE:18-07-2023 DWG. NO.:DC-8-0394-13/22	



NO. OF
SAND PILE
 $35 \times 8 = 280$

NO. OF
SAND PILE
 $11 \times 5 \times 2 + 25 \times 9 = 335$

NO. OF
SAND PILE
 $35 \times 8 = 280$

**TOTAL NO. OF
CAST IN SITU PILE**
 $280 + 335 + 280 = 895$

NOTE FOR SAND PILE:

1. SAND PILE OF 10.00m LENGTH WITH 300mm CASING DIA. AS SPECIFIED IN THE DRAWING SHALL HAVE TO BE CONSTRUCTED AS PER STANDARD DISPLACEMENT METHOD.
2. SAND TO BE USED IN PILING SHALL BE FREE FROM ALL ORGANIC AND FOREIGN MATERIALS AND SHALL HAVE FM ≥ 2.00 .
3. DIAMETER LENGTH CONTINUITY OF PILE SHALL HAVE TO BE CHECKED BY MEASURING SAND FORCE VOLUME FOR EACH EXECUTED PILE. THE SAND FORCE VOLUME PER METER AND PER PILE SHALL NOT BE LESS THAN 0.25 CUBIC METER AND 2.50 CUBIC METER RESPECTIVELY (ITEM CODE: 44-400-40).
4. AFTER EXECUTION OF ALL SAND PILE, SPT VALUES SHALL HAVE TO BE DETERMINED BY THE FIELD TESTS. SPT VALUES ATTAINED AT 1.50 METER INTERVALS SHALL BE DETERMINED.
5. AFTER PILING SPT VALUE IN BETWEEN SAND PILES AT FOUNDATION LEVEL SHALL BE MINIMUM 12 TO 14 .
6. ALL THE RECORDS OF SAND PILLING SHALL BE MAINTAINED IN DETAILS WITH CONSTANT SUPERVISION AND IT SHOULD BE SENT TO THE DESIGN OFFICE.

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2021-22

PLAN OF PILE

DESIGNED BY :

(SAKIB BIN RAFI), AE

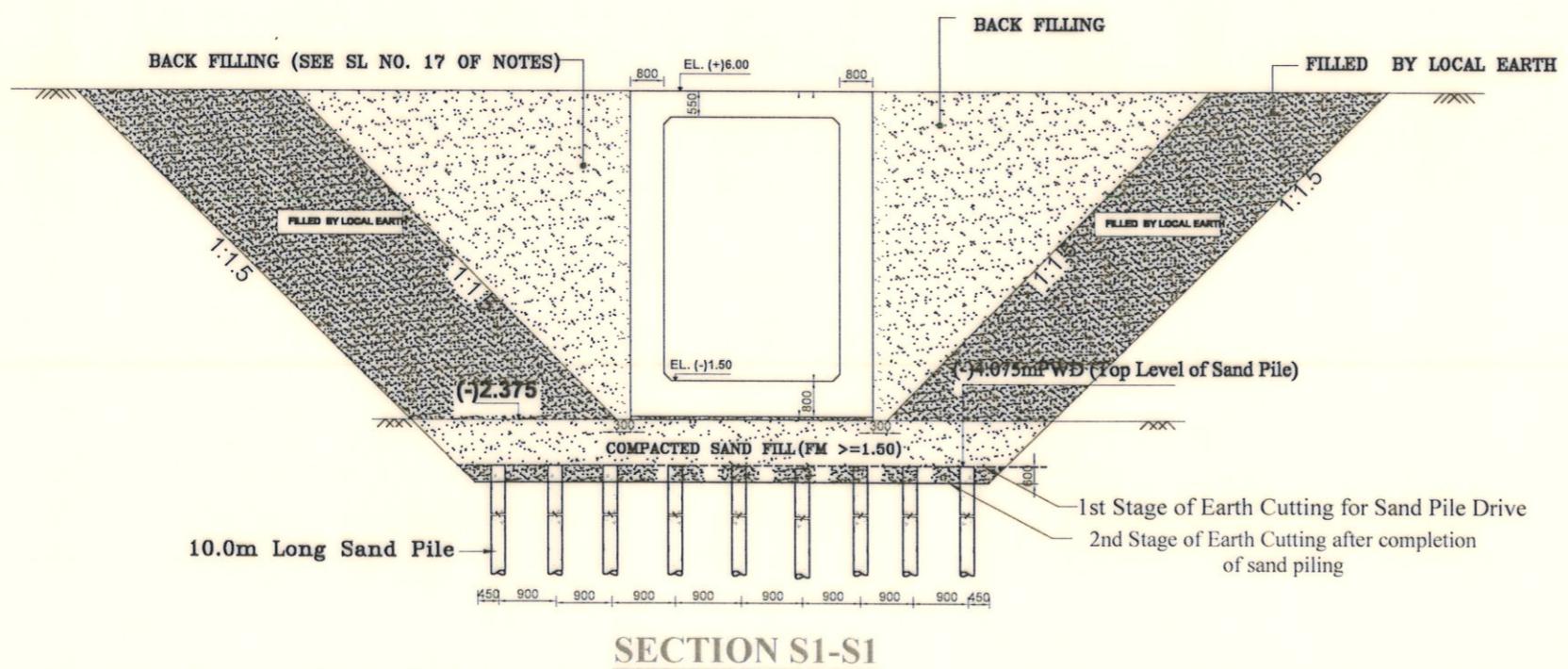
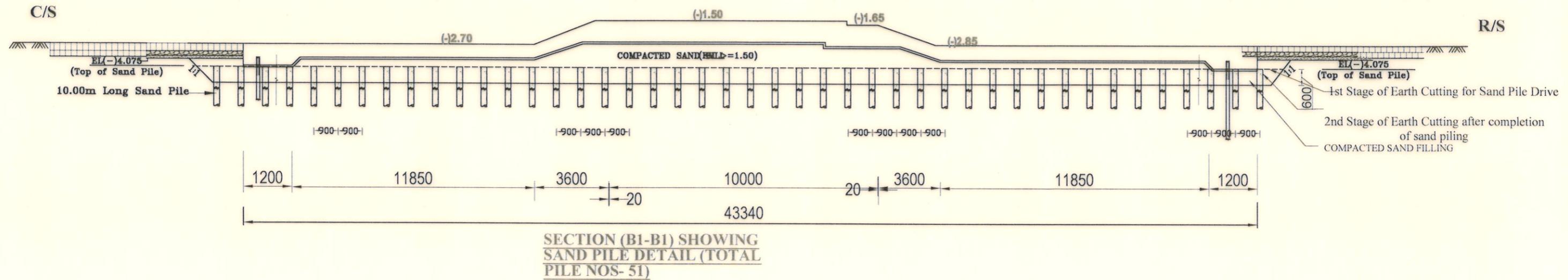
CHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

APPROVED BY :

(MOHAMMAD SAIF UDDIN), SE

DATE:18-07-2023 DWG. NO.:DC-8-0394-14/22



Scale : Not To Scale

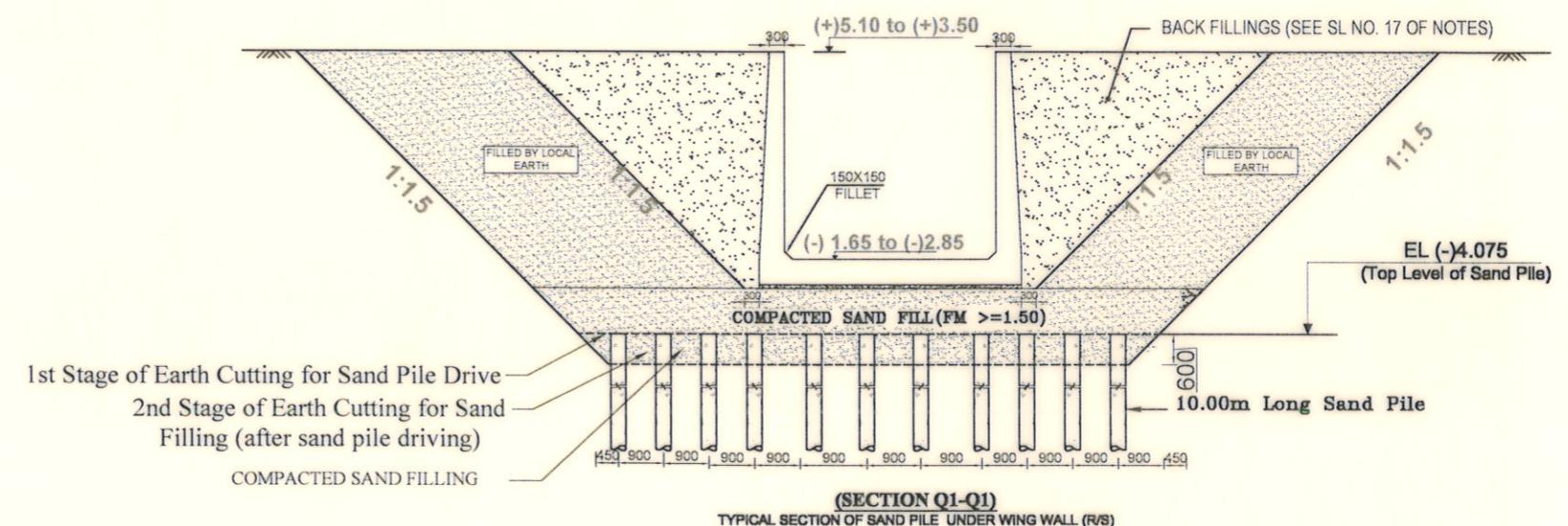
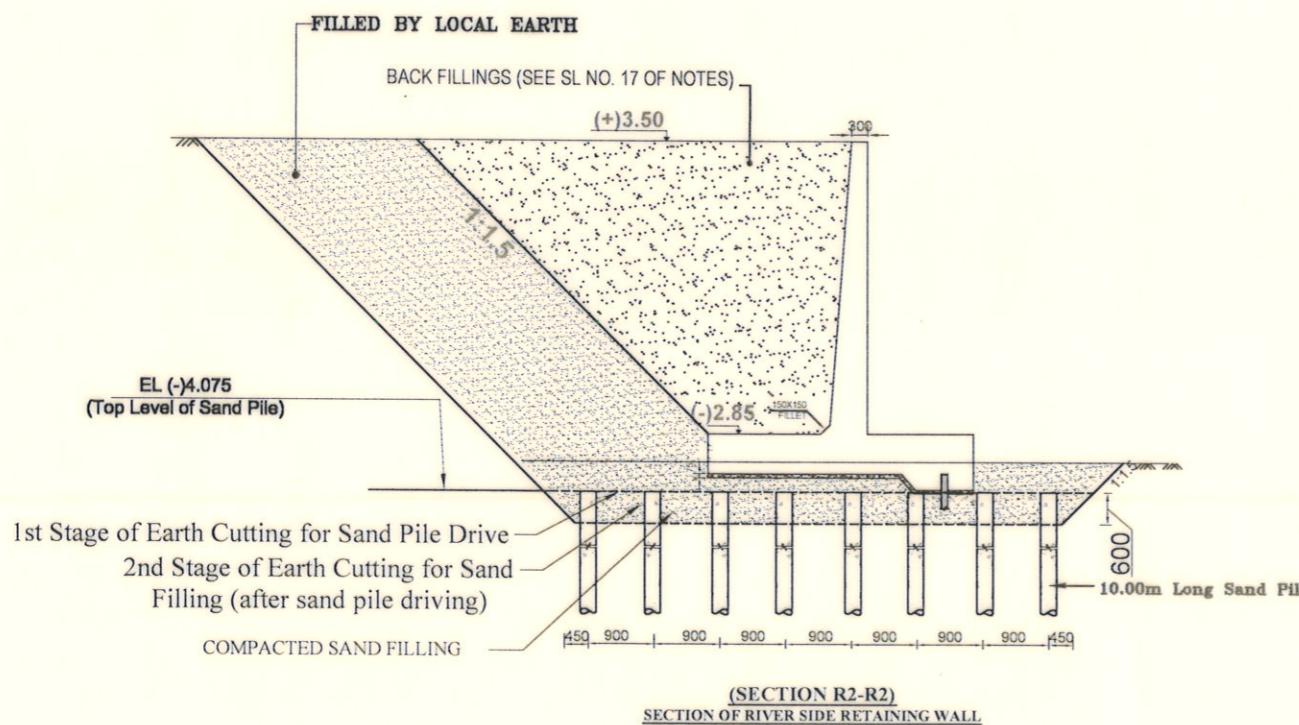
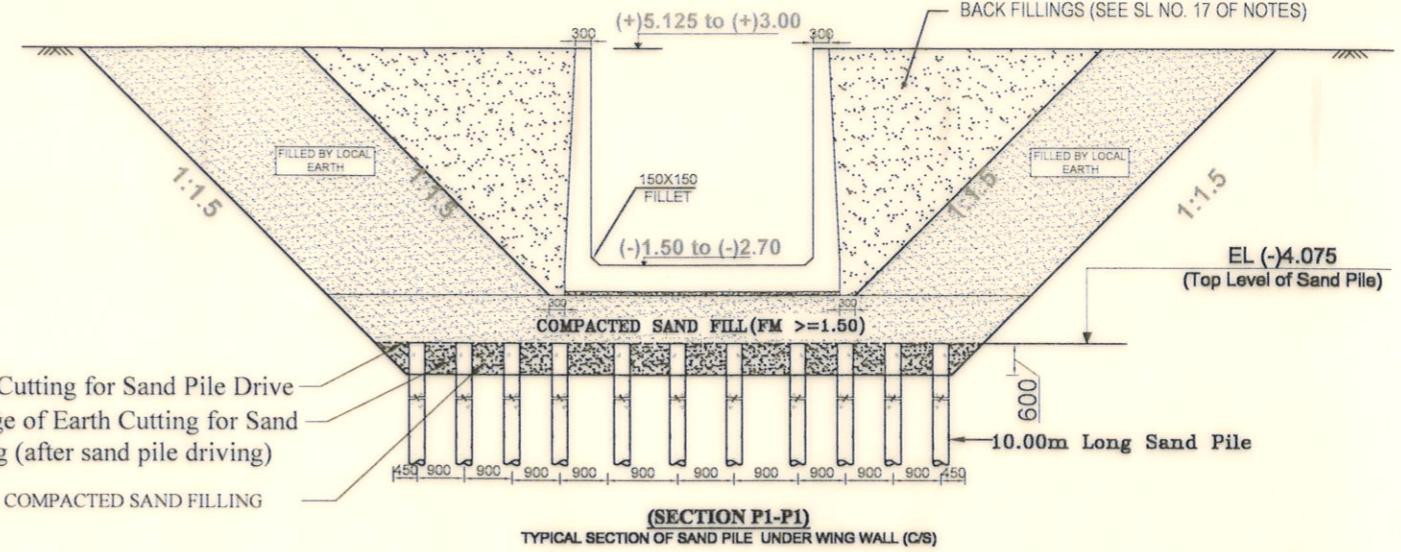
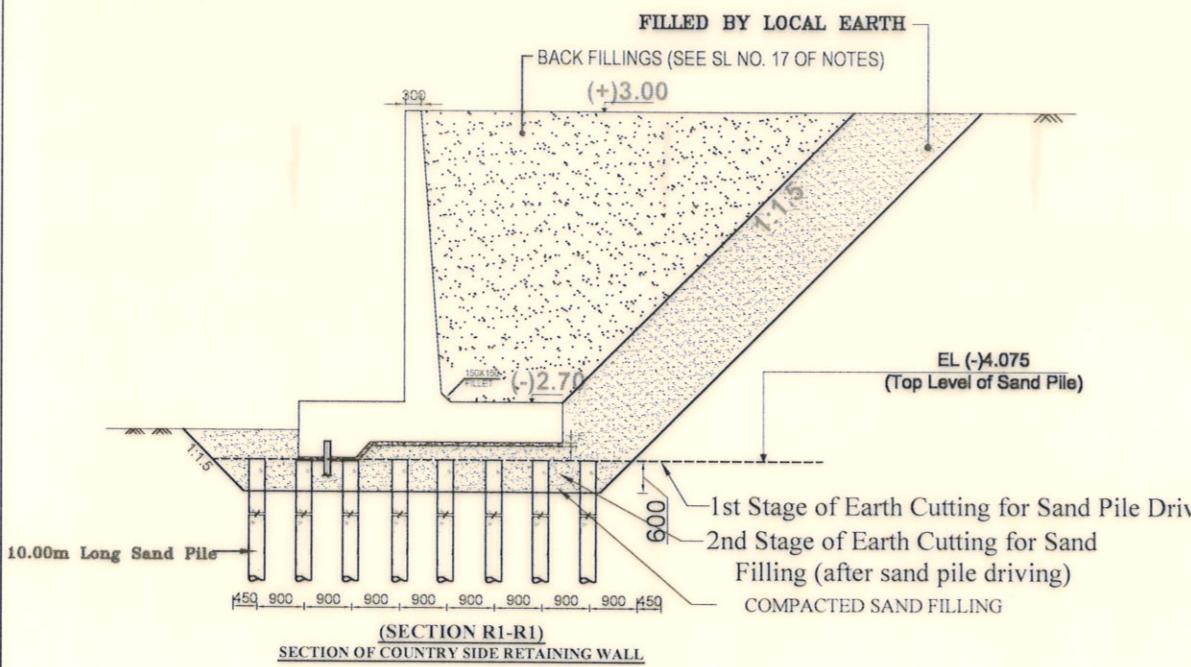
Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

**DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA
KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT
SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1,
BWDB, SATKHIRA DURING THE YEAR 2023-24.**

SAND PILE DETAILS	
SIGNED BY :	APPROVED BY :
 AKIB BIN RAFI), AE	 MOHAMMAD SAIF UDDIN) , SE
CHECKED & RECOMMENDED BY :	
 SAKARIA PERVEZ), EE	
DATE:18-07-2023	DWG. NO.:DC-8-0394-15/22



Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

SAND PILE DETAILS

DESIGNED BY :

(SAKIB BIN RAFI), AE

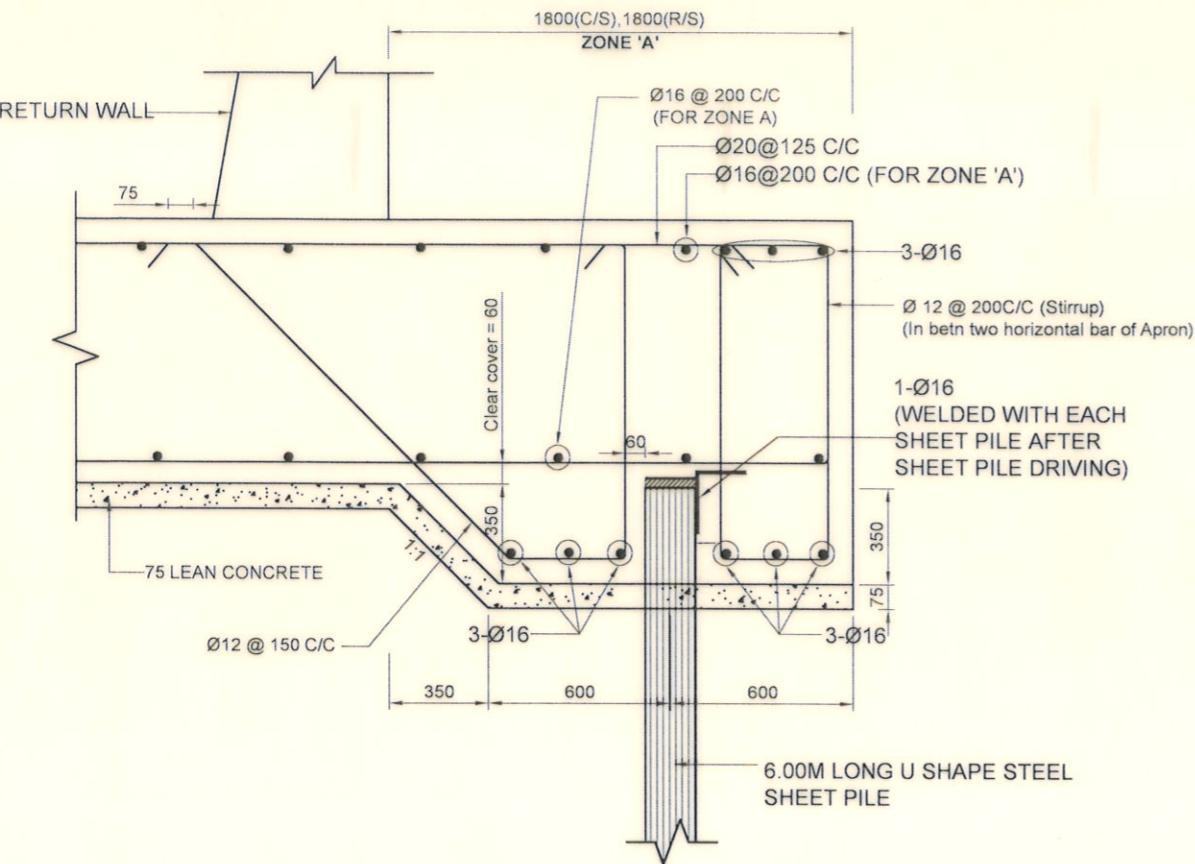
CHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

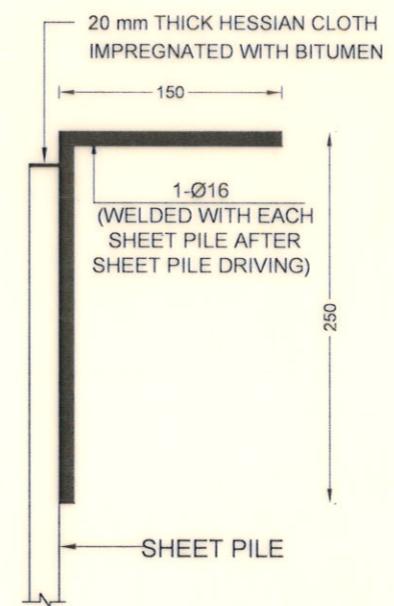
APPROVED BY :

(MOHAMMAD SAIF UDDIN), SE

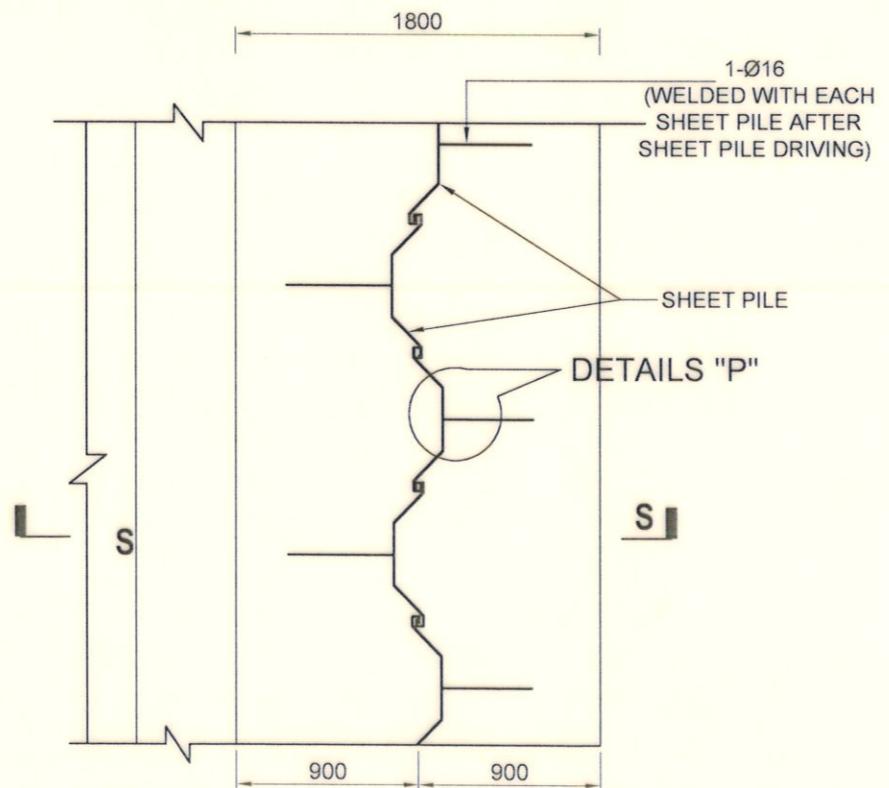
DATE:18-07-2023 DWG. NO.:DC-8-0394-16/22



**DETAILS OF SHEET PILE CAP
(UNDER APRON)
(SECTION S-S)**

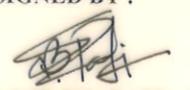
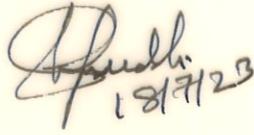
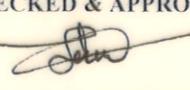


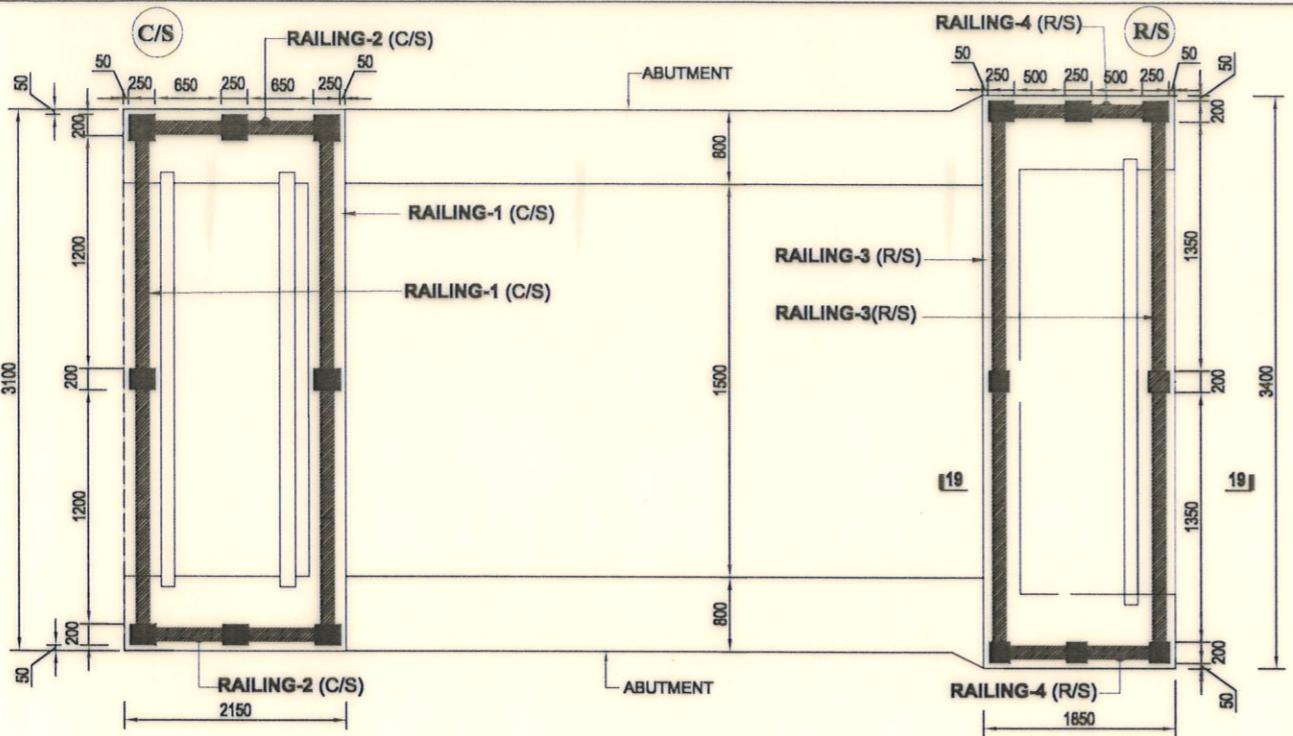
DETAILS 'P'



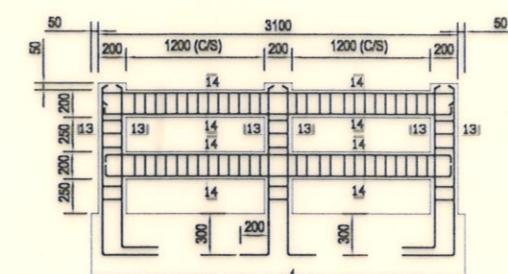
LAYOUT PLAN OF SHEET PILE

Scale : Not To Scale

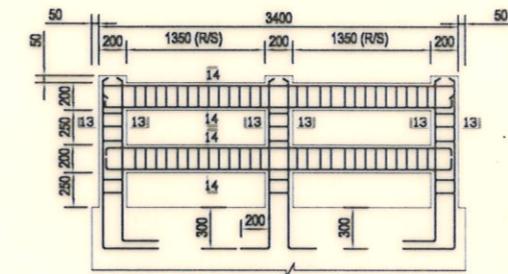
Bangladesh Water Development Board	
Office of the Superintending Engineer	Design Circle-8
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT	
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023	
DESIGNED BY :	APPROVED BY :
 (SAKIB BIN RAFI), AE	 (MOHAMMAD SAIF UDDIN), SE
CHECKED & APPROVED BY :	
 (JAKARIA PERVEZ), EE	
DATE:18-07-2023 DWG. NO.:DC-8-0394-17/22	



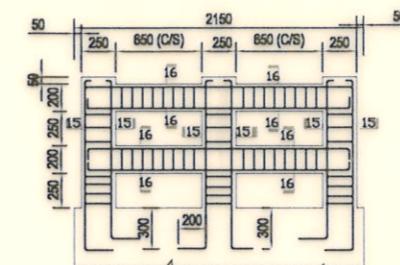
PLAN OF RAILING



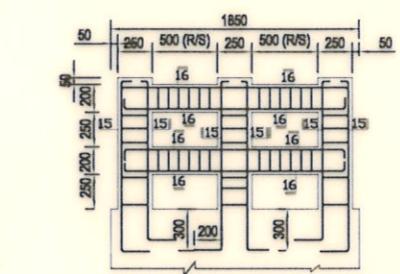
RAILING DETAIL NO-1



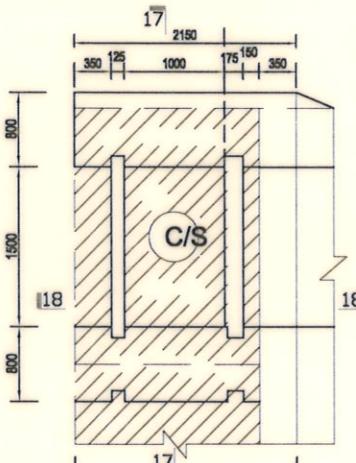
RAILING DETAIL NO-3



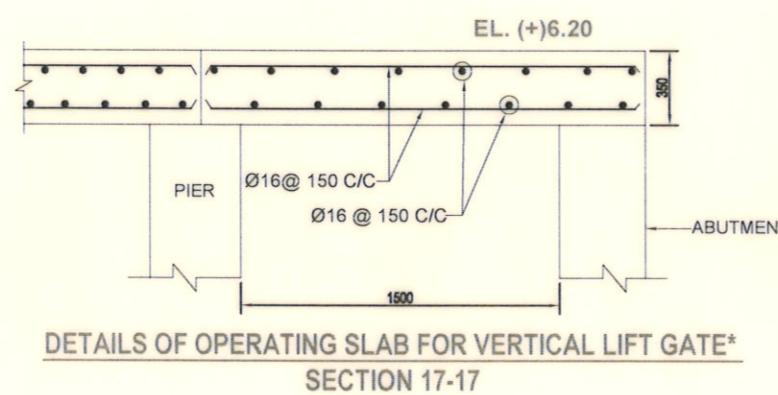
RAILING DETAIL NO-2 (C/S)



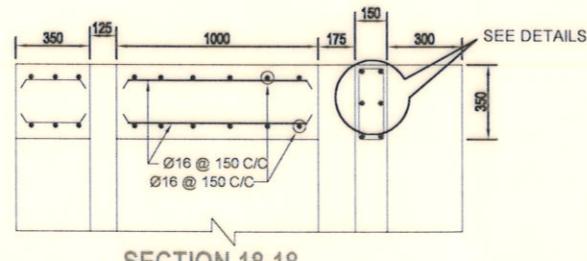
RAILING DETAIL NO-4 (R/S)



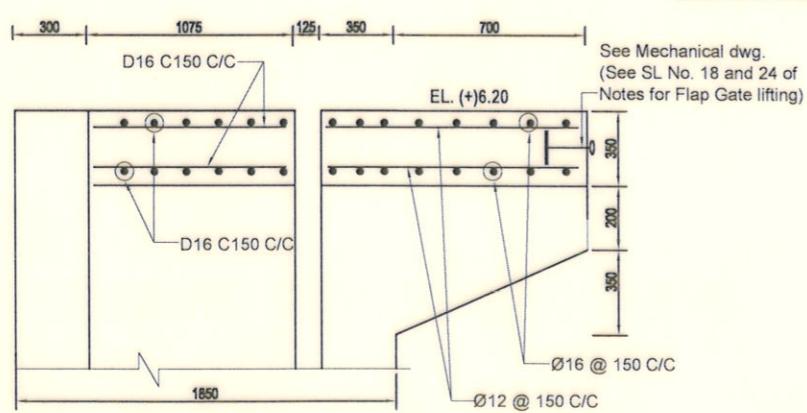
PLAN OF OPERATING SLAB FOR VERTICAL LIFT GATE



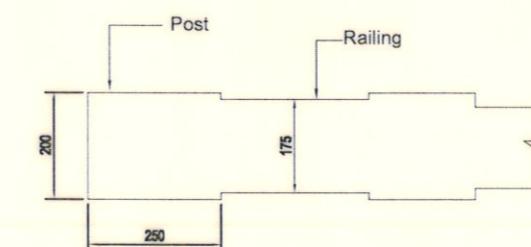
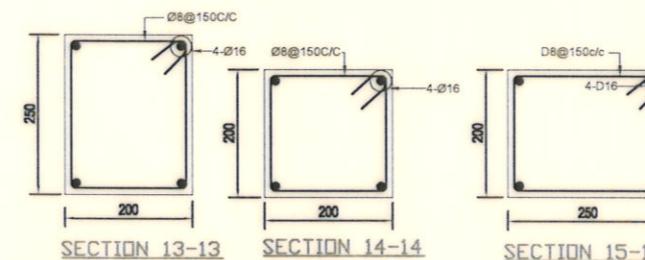
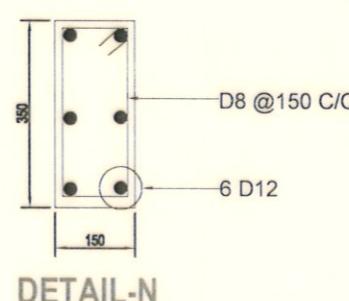
SECTION 17-17



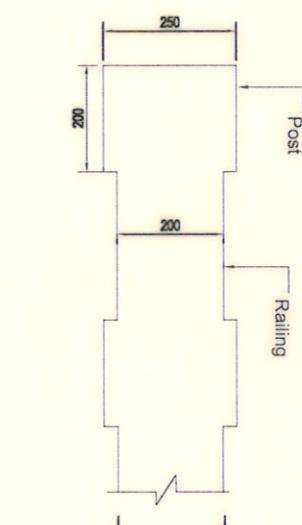
SECTION 18-18

SECTION
19-19 (RAILING NOT
SHOWN)

Scale : Not To Scale

RAILING LAYOUT
(FOR RAILING 2&4)

DETAIL-N

RAILING LAYOUT
(FOR RAILING 1&3)**Bangladesh Water Development Board**Office of the Superintending Engineer
Design Circle-8**REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT**

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

RAILING REINFORCEMENT DETAILDESIGNED BY :

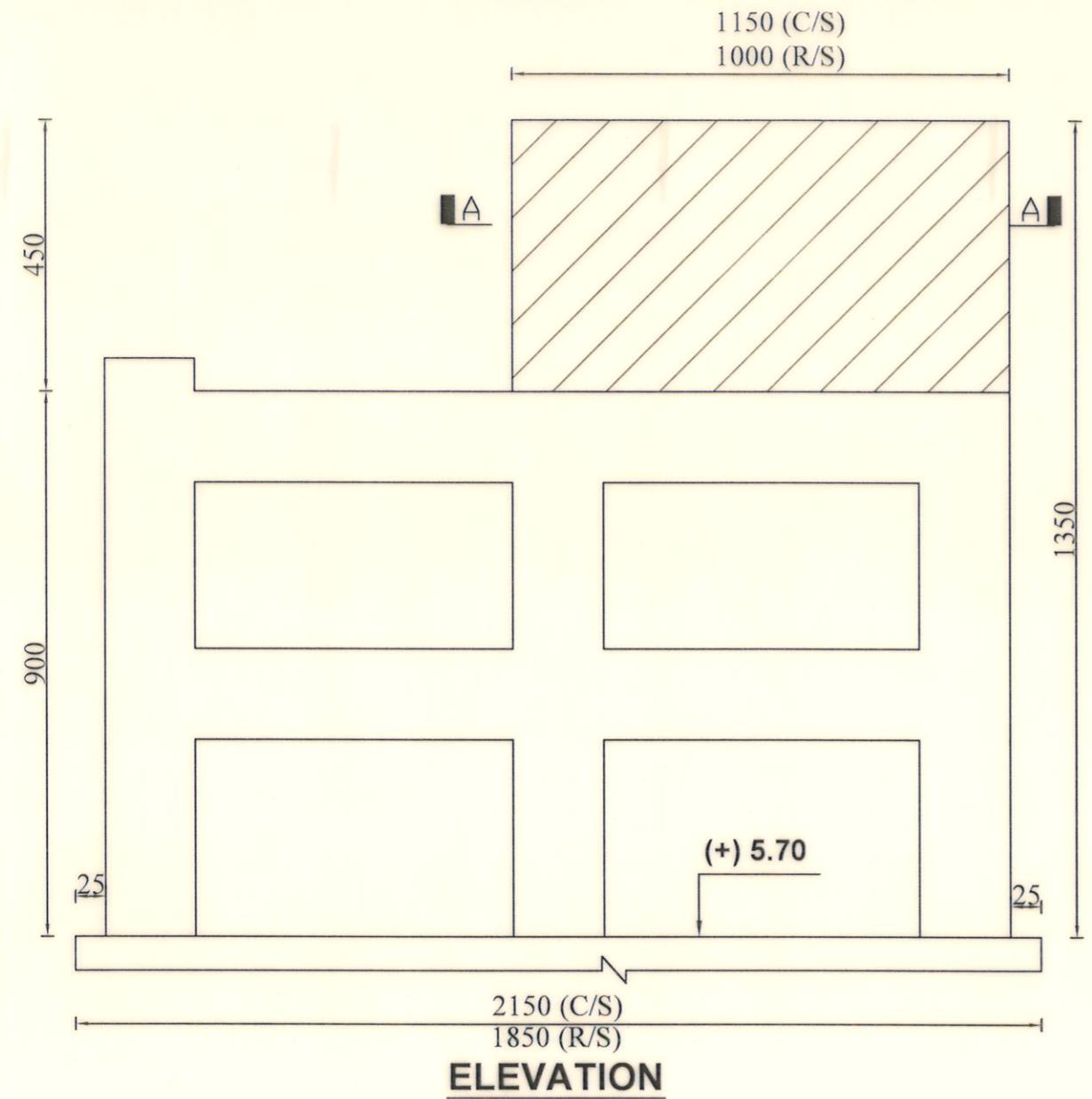
(SAKIB BIN RAFI), AE

APPROVED BY :

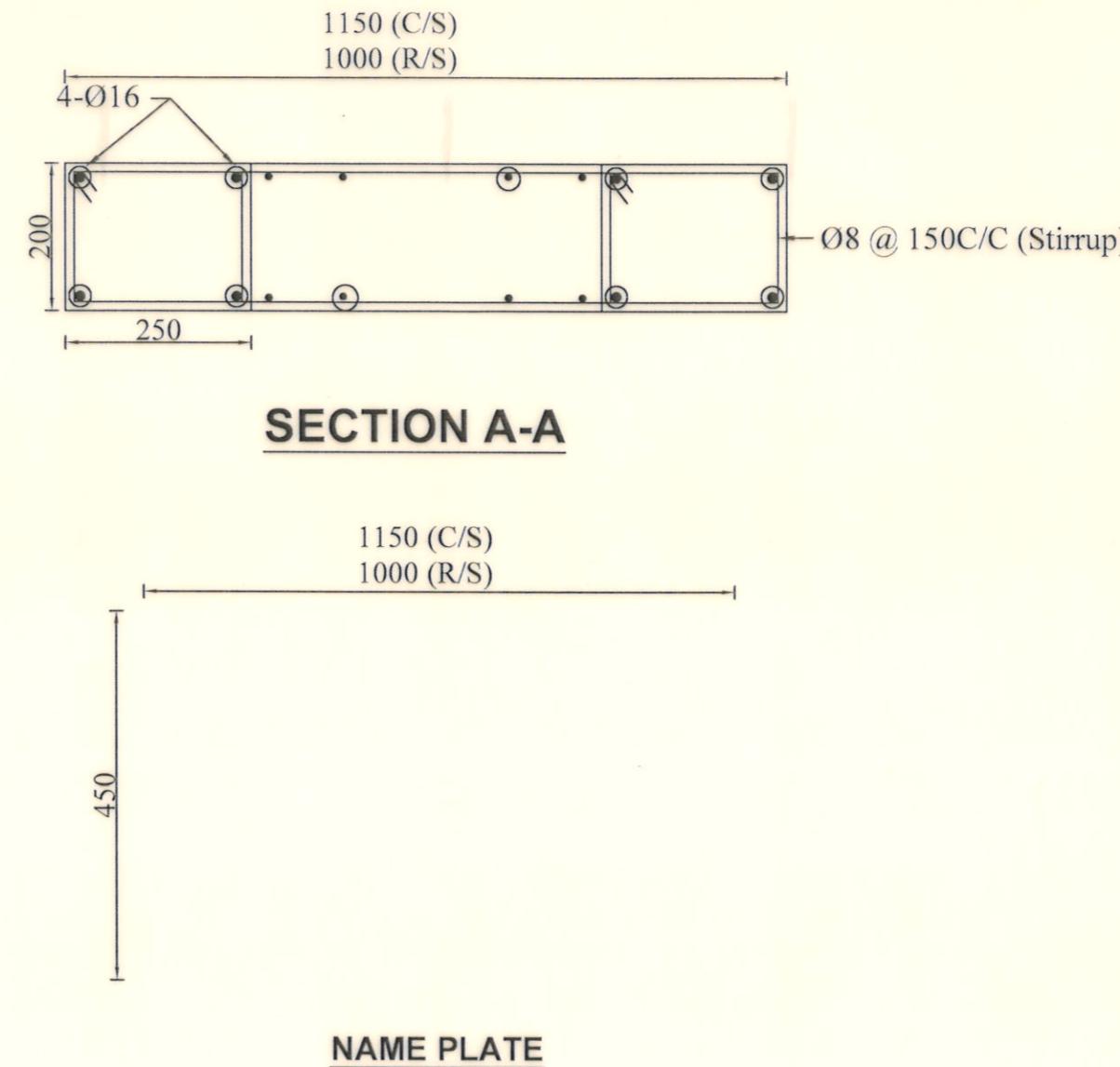
MOHAMMAD SAIF UDDIN, SECHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

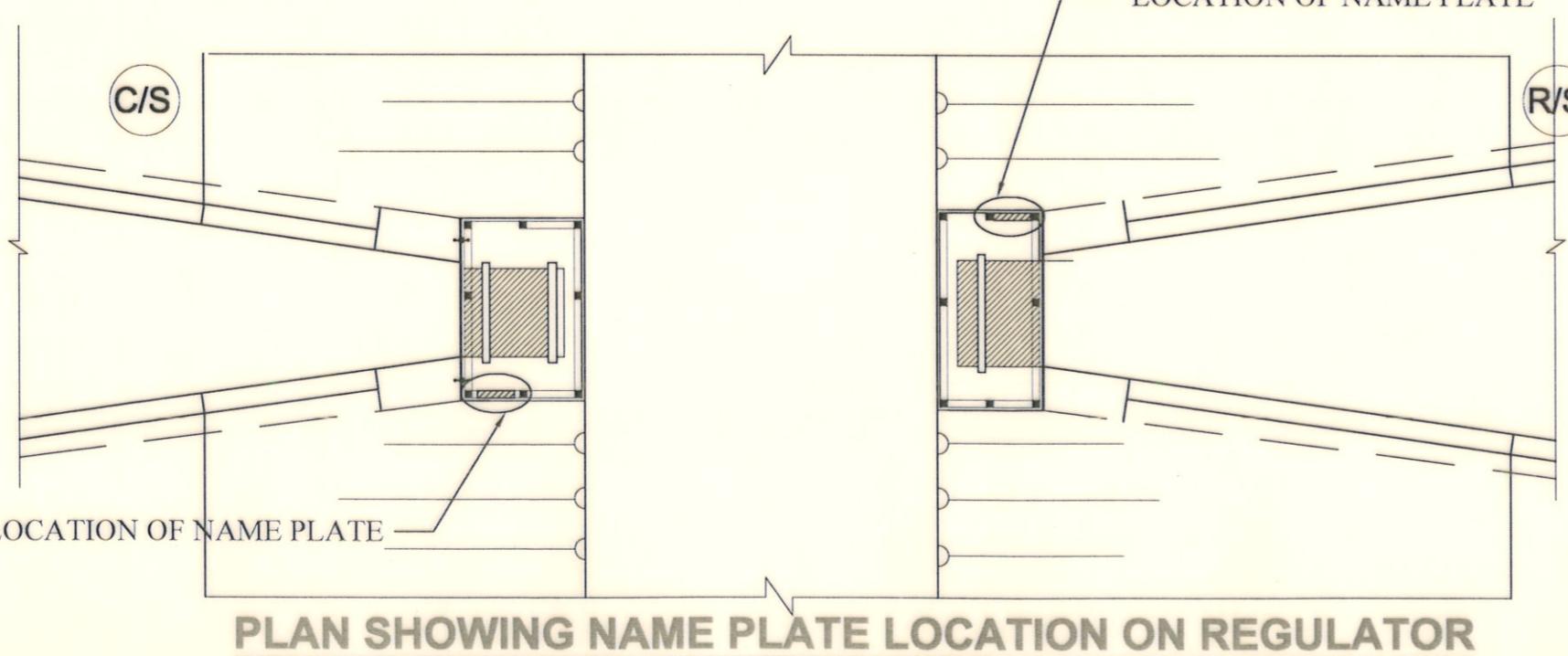
DATE:18-07-2023 DWG. NO.:DC-8-0394-18/22



ELEVATION



SECTION A-A



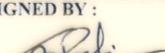
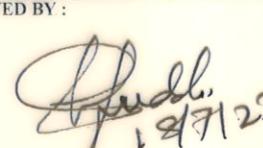
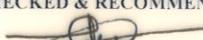
PLAN SHOWING NAME PLATE LOCATION ON REGULATOR

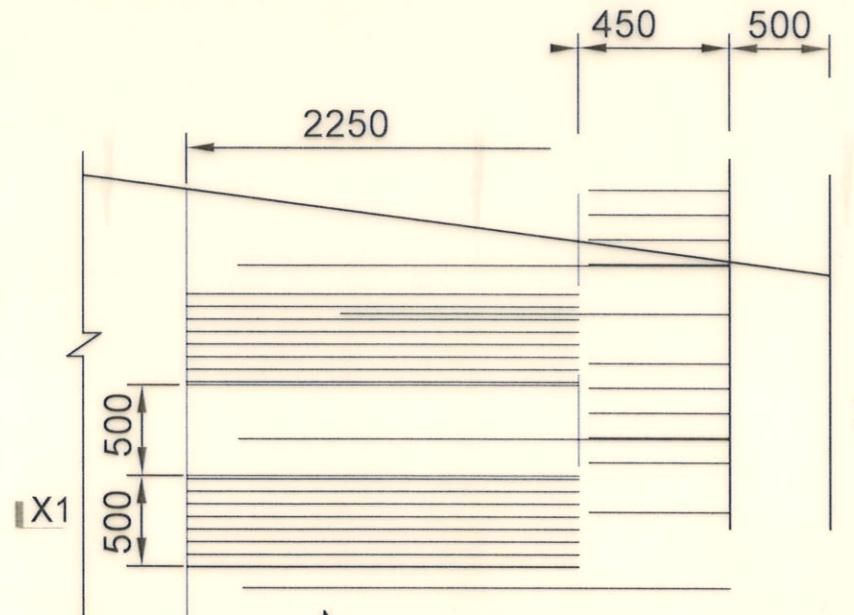
Bangladesh Water Development Board
Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

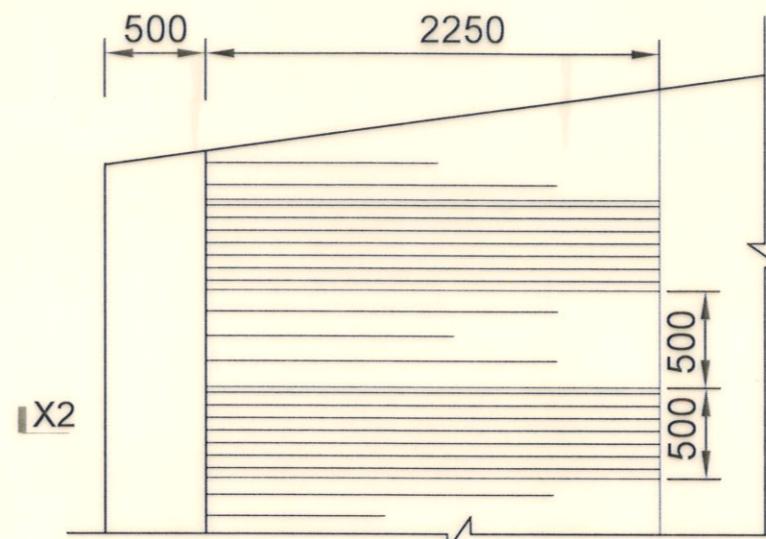
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO
 SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF
 POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA
 O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

PLAN, ELEVATION & DETAILS OF NAME PLATE

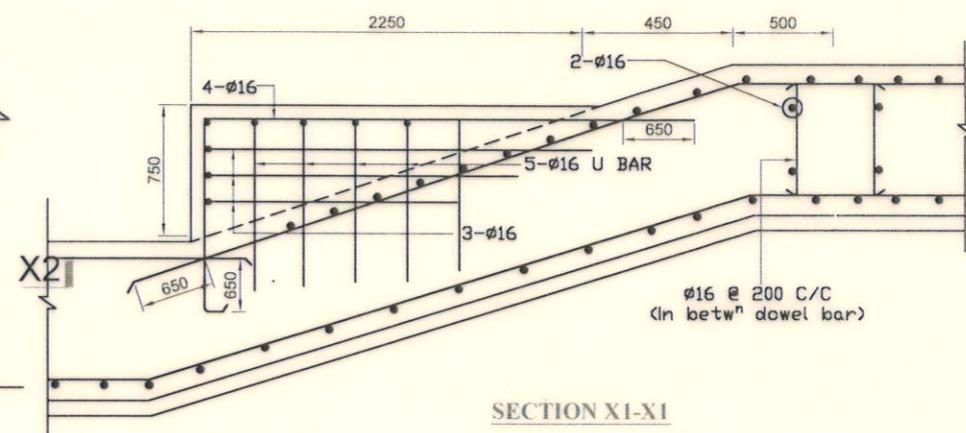
DESIGNED BY :  (SAKIB BIN RAFI), AE	APPROVED BY :  (MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY :  (JAKARIA PERVEZ),EE	
DATE:18-07-2023 DWG. NO.:DC-8-0394-19/22	



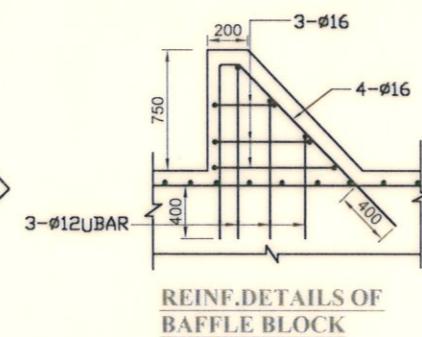
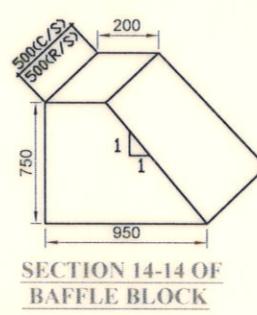
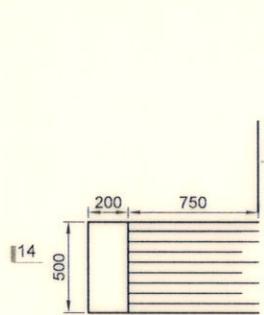
PLAN OF CHUTE BLOCK (C/S)



PLAN OF CHUTE BLOCK (R/S)



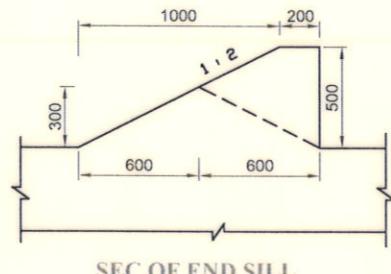
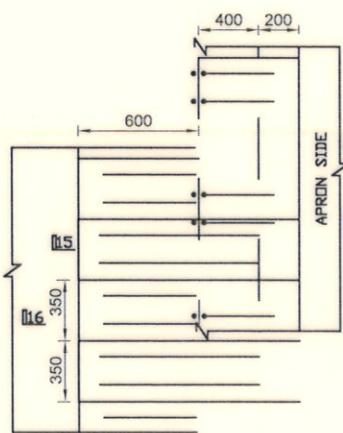
SECTION X1-X1



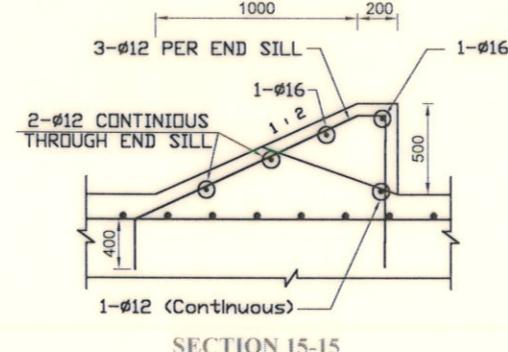
PLAN OF BAFFLE BLOCK

BAFFLE BLOCK DETAILS

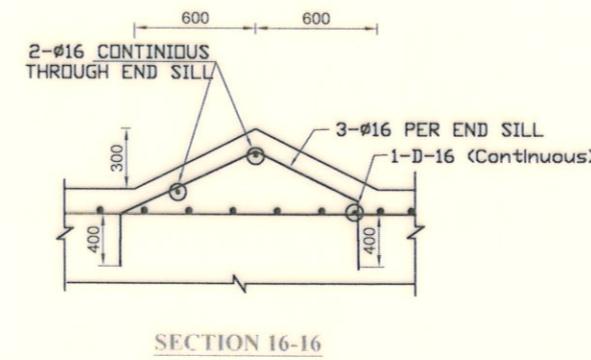
(Concrete Outline & Reinforcement)



PART PLAN OF END SILL



SECTION 15-15



SECTION 16-16

Bangladesh Water Development BoardOffice of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

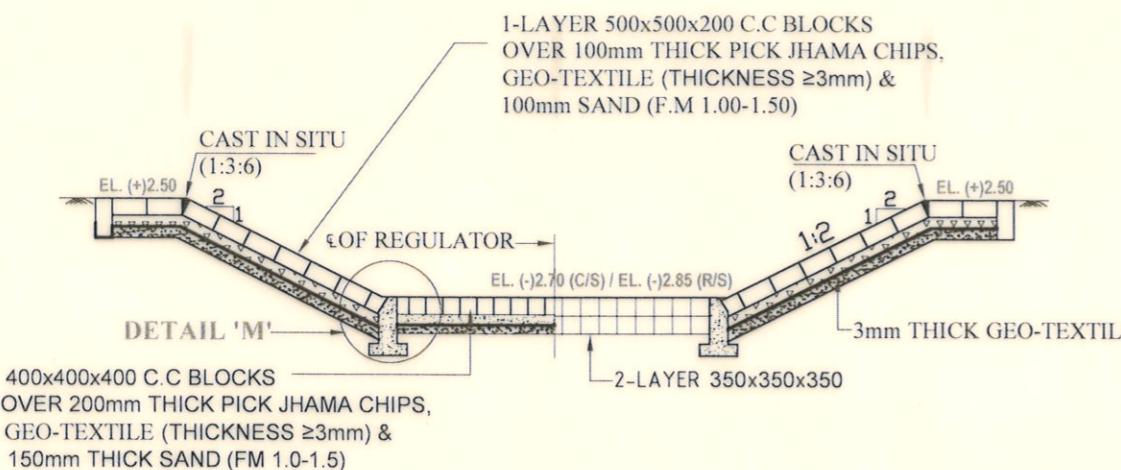
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

CHUTE , ENDSILL & BAFFLE REINFORCEMENT DETAILS

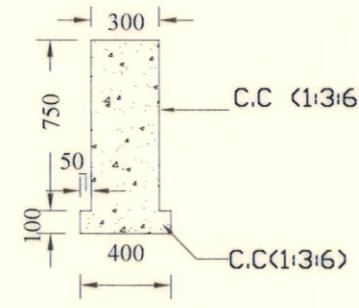
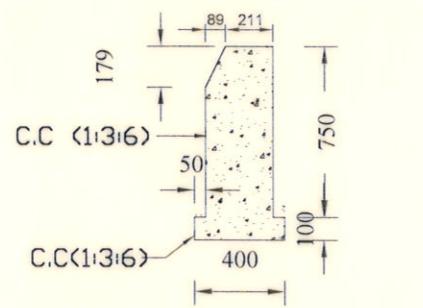
DESIGNED BY :	APPROVED BY :
(SAKIB BIN RAFI), AE	(MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY :	
(JAKARIA PERVEZ),EE	(MOHAMMAD SAIF UDDIN), SE

DATE:18-07-2023 DWG. NO.:DC-8-0394-20/22

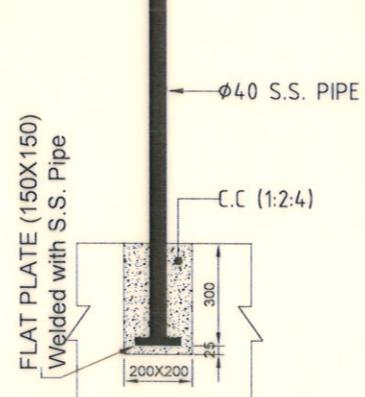
1000 10400 (C/S) 7500 (C/S) 10400 (C/S) 1000
10700 (R/S) 7500(R/S) 10700 (R/S)



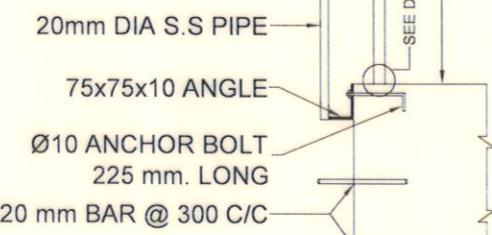
SECTION R-R (SEE PLAN)



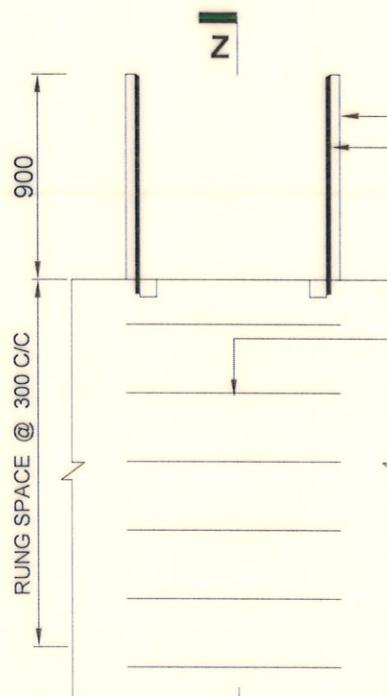
DETAIL 'M'

SECTION M-M
(SEE PLAN)DETAIL 'E'
(See Section Z-Z)

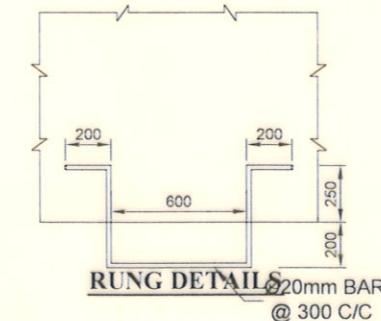
20mm DIA S.S PIPE



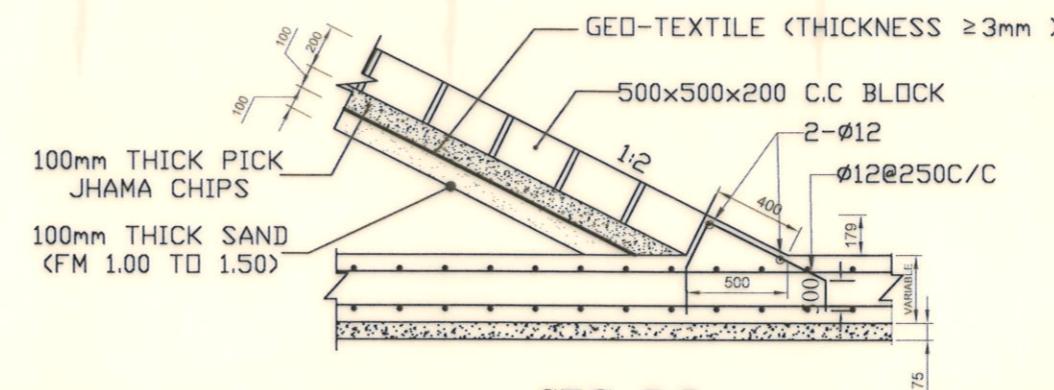
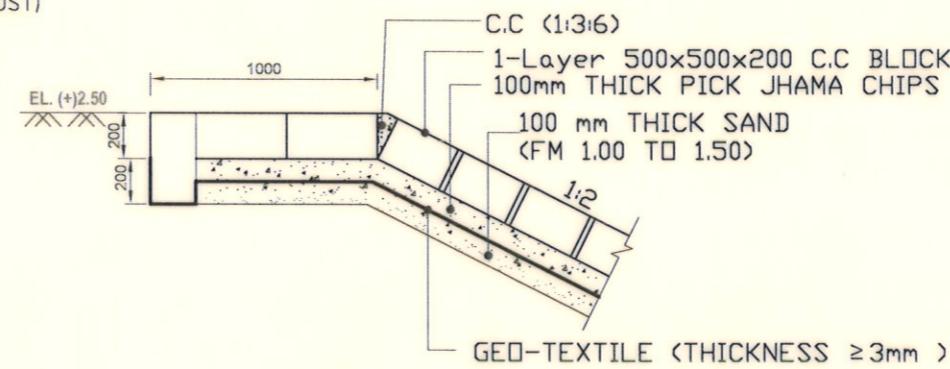
SECTION Z-Z



RUNG DETAILS



Scale : Not To Scale

SEC. P-P
(SEE PLAN)SEC. Q-Q
(SEE PLAN)**Bangladesh Water Development Board**

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA KHAL IN POLDER NO-15 UNDER "REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24

DETAIL OF PROTECTIVE WORKS & OTHERS

DESIGNED BY :

(SAKIB BIN RAFI), AE

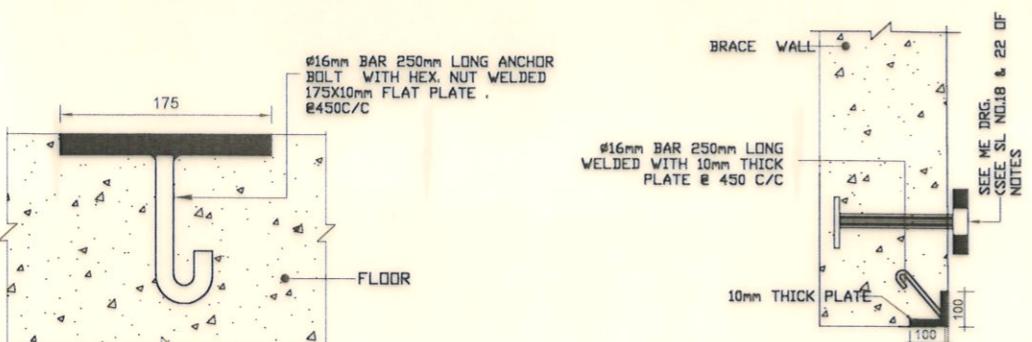
APPROVED BY :

(MOHAMMAD SAIF UDDIN), SE

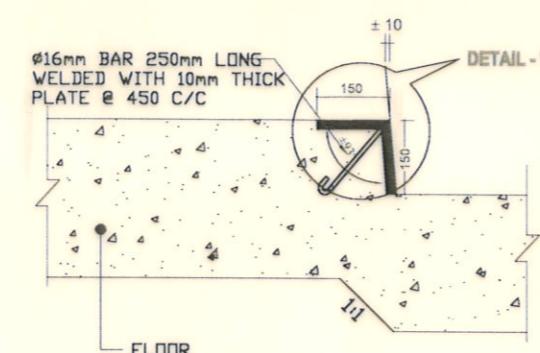
CHECKED & RECOMMENDED BY :

(JAKARIA PERVEZ), EE

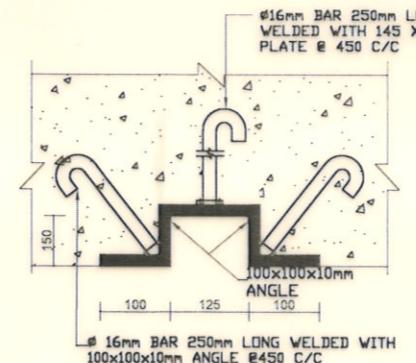
DATE:18-07-2023 DWG. NO.:DC-8-0394-21/22



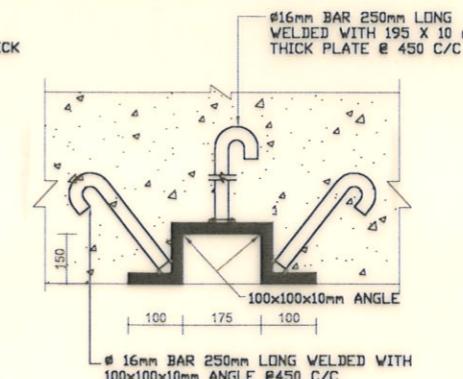
SEC.OF DETAIL -B



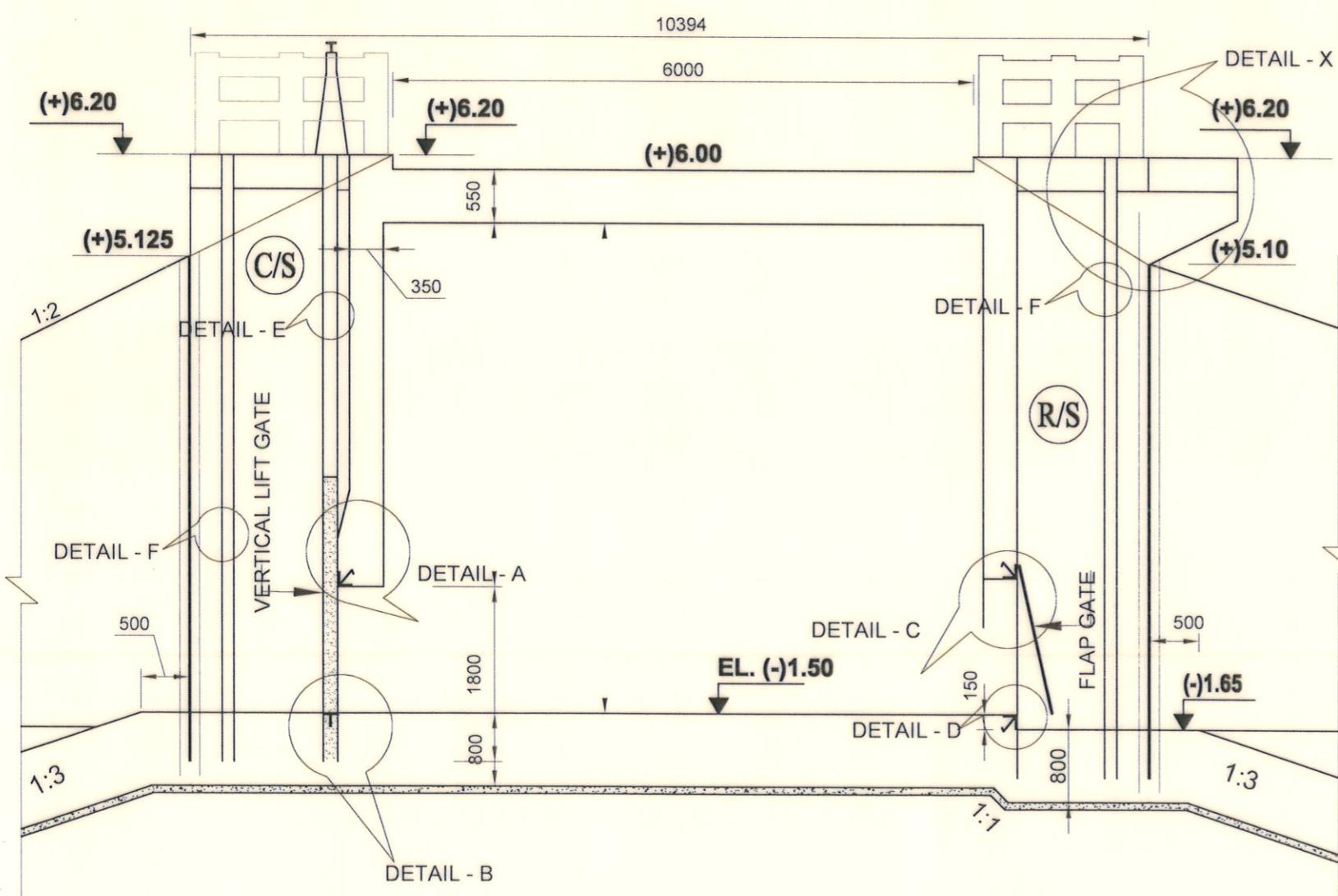
SEC. OF DETAIL - C



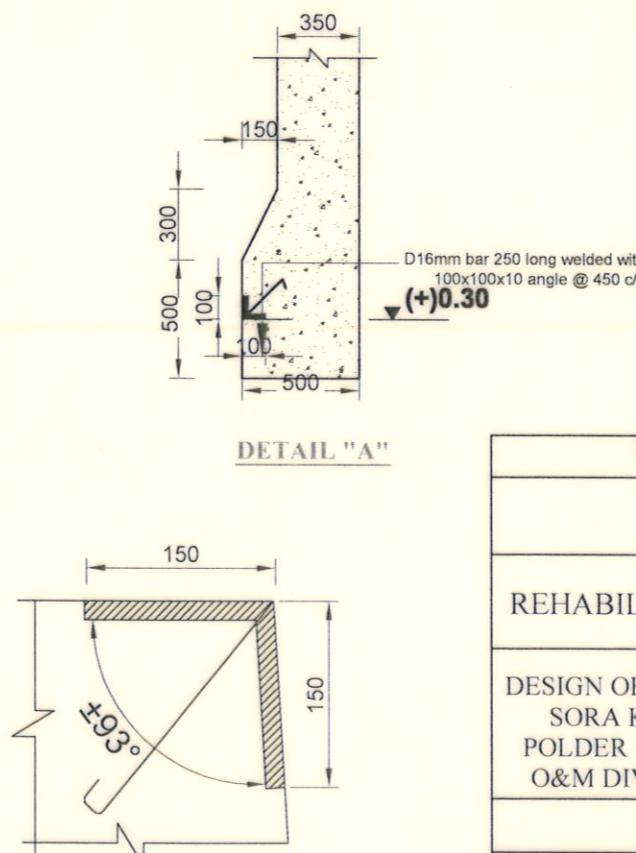
SEC. OF DETAIL - D



SEC OF DETAIL - E



SECTION OF CENTRAL PART SHOWING EMBEDDED PARTS



SEC.OF DETAIL -P
(Showing only Flat plate)

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

**DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO
SORA KHAL IN POLDER NO-15 UNDER " REHABILITATION OF
POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA
O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2023-24.**

MISCELLANEOUS METAL DETAIL

DESIGNED BY :

[Signature]

[Signature]
GAIL KINNAER, AE

APPROVED BY :

R. H. D.

Scale : Not To Scale

DATE:18-07-2023 DWG. NO.:DC-8-0394-22/22