

# BANGLADESH WATER DEVELOPMENT BOARD



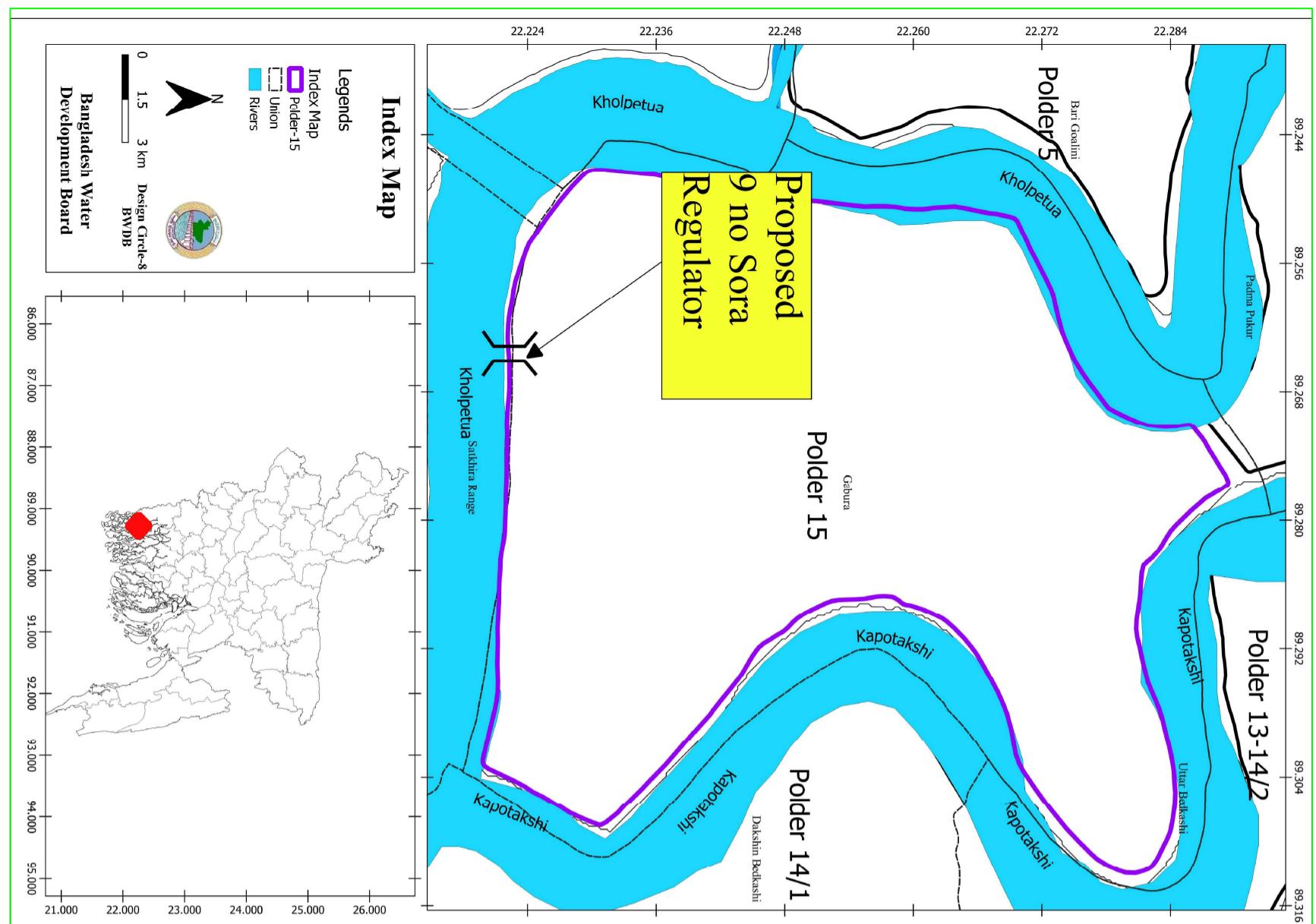
## "REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT"

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 2021-22.

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

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

October, 2022



**INDEX MAP**  
(Not to Scale)

<b>Bangladesh Water Development Board</b>	
Office of the Superintending Engineer	
Design Circle-8	
<b>"REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT"</b>	
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 1: AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2021-22.	
<b>DESIGNED BY:</b> (SAKIB BIN RAJU, AE)	<b>APPROVED BY:</b> (MOHAMMAD SAIF UDDIN, SE)
<b>INDEX MAP &amp; SITE MAP</b>	

**BANGLADESH WATER DEVELOPMENT BOARD**  
**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

CLIENT: XEN,O&M DIVISION-1, Satkhira

DATE STARTED: 29-05-2022

DRILLED BY: GWHD-2 UNIT: Rig-21

HOLE NO: H2 GROUND LEVEL: 3.24 m

WATER LEVEL: 1.37 m AT 7:00 HRS

TOTAL DEPTH: 72 ft OF DATE-

OF DATE-

TOTAL DEPTH: 72 ft

OF DATE-

TOTAL DEPTH: 72 ft

OF DATE-

PHYSICAL DISTURBED SAMPLES PENETRATION TEST INDEX

LITHOLOGICAL DESCRIPTION

DENSITY COLOR MOISTURE DILATANCY

BLows ON SPOON Casing NO OF BLows PER 1 FT PENETRATION

REMARKS

INDEX Disturb Undisturb

No of Sample Type of Sample Scale (ft)

0/6/12/18/24/30 0/12/20/30/40/50/60/70/80/90/100

V.S.=Very soft  
M.S.=Medium stiff  
W.G.=Whitish gray  
N.P.=Non-plastic  
S.P.=Semi-plastic

EL. (-)2.375m PWD

30.0m LONG CAST IN SITU PILE.									
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CLAY WITH TRACE SILT

SOIL SAMPLING

A) UNDISTURB

SAMPLE NOS. D1-D14

TYPE: Split Spill Spoon

HOW SAMPLED: WOODEN/BOX/JARS/CANS/BAGS

SIZE:

LENGTH USED:

CASING

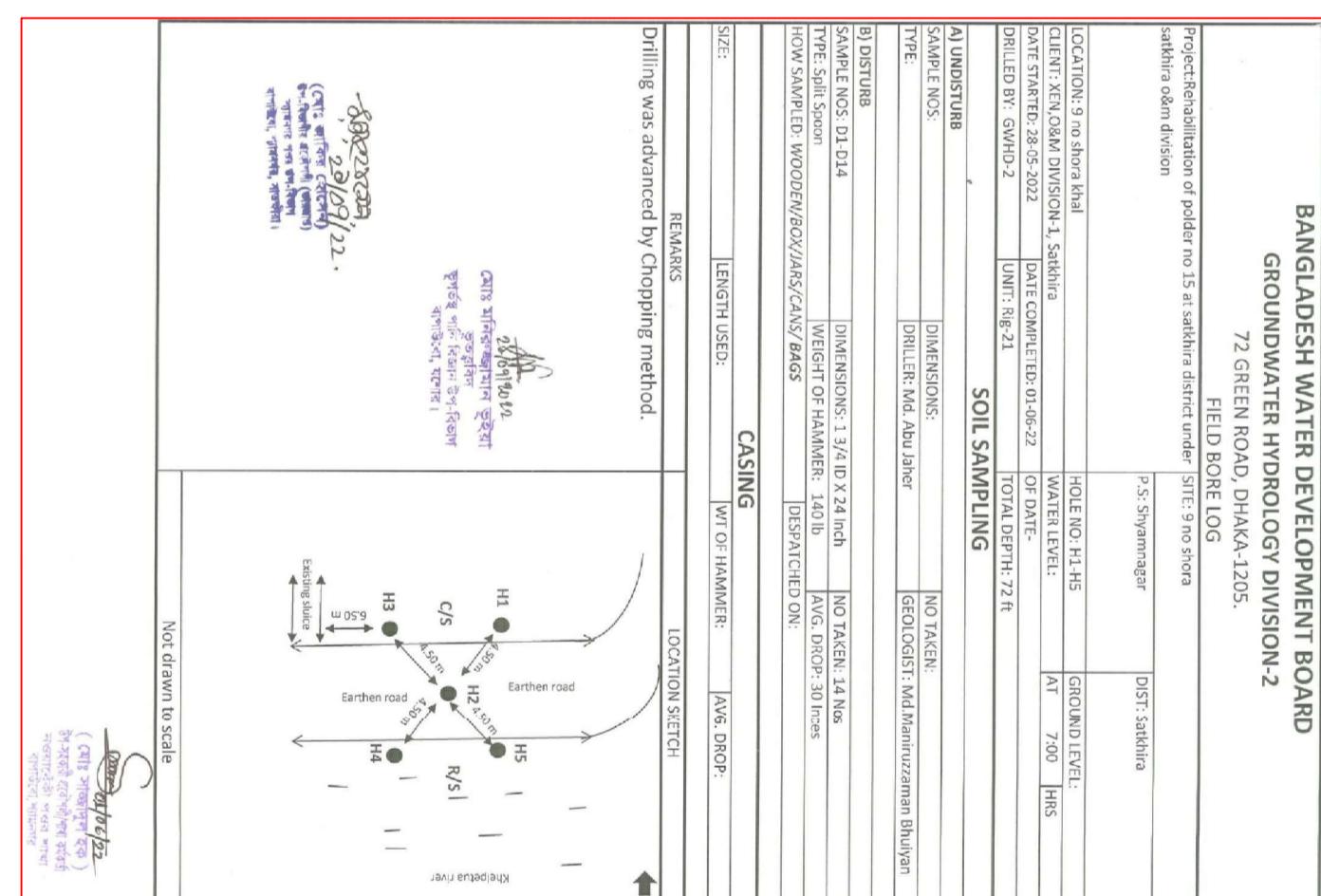
WT OF HAMMER:

AVG. DROP:

REMARKS

Drilling was advanced by Chopping method.

LOCATION SKETCH



Note: >5% = Dominant size, 50% = sand, 20% = silt, 10% = little, <10% = trace.

**BORE HOLE LOCATION**  
(Not to Scale)

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

( মোঃ সাতকিপুর রোড  
জি.সি.বি.পি. এন্ড কোম্পানি  
সরকারী পথ প্রকল্প  
বালগাঁও, গুগুলগাঁও, মুন্দুর  
গাঁওজুন্দুর, শাহজাহানপুর )

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.

**BORE LOG (BH-02)**

BORE LOG  
APPROVED BY:  
(SAKIB BIN RAFI), AE

DESIGNED BY:  
(CHEKED & RECOMMENDED BY:  
(MOHAMMAD SAIF UDDIN), SE

**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

CLIENT: XEN,O&M DIVISION-1, Satkhira

DATE STARTED: 28-05-2022

DRILLED BY: GWHD-2 UNIT: Rig-21

HOLE NO: H1-H5 GROUND LEVEL:

WATER LEVEL: AT 7:00 HRS

TOTAL DEPTH: 72 ft OF DATE-

TOTAL DEPTH: 72 ft

OF DATE-

TOTAL DEPTH: 72 ft

OF DATE-

TOTAL DEPTH: 72 ft

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POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA  
O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2021-22.

## **SPECIAL GEOTECHNICAL NOTES:**

1. PILE DESIGN IS CARRIED OUT ON THE BASIS OF BORE LOG UP TO 23m.

THIS DESIGN HAS BEEN DONE BASED ON SOME ASSUMPTIONS.

THE CONCERNED FIELD OFFICE MUST CARRY OUT REVISED BORING UP TO A DEPTH OF 40.0m AND SEND DATA TO THE CONCERNED DESIGN OFFICE FOR VERIFICATION OF PILE DESIGN.

2. IN ANY CASE CONSTRUCTION MUST NOT BEGIN BEFORE THE VERIFICATION OF FOUNDATION DESIGN.

## **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,  $f_c \geq 15.0 \text{ N/mm}^2$  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.

15. 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 ADDITIONAL DATA RECEIVED FROM EE, SATKHIRA O&M DIVISION-1 BWDB SATKHIRA TROUGH EMAIL ON 02-04-2022.

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 COALT TAR 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 2021-22.

**NOTES**

DESIGNED BY :

APPROVED BY :

(SAKIB BIN RAFFD, AE)

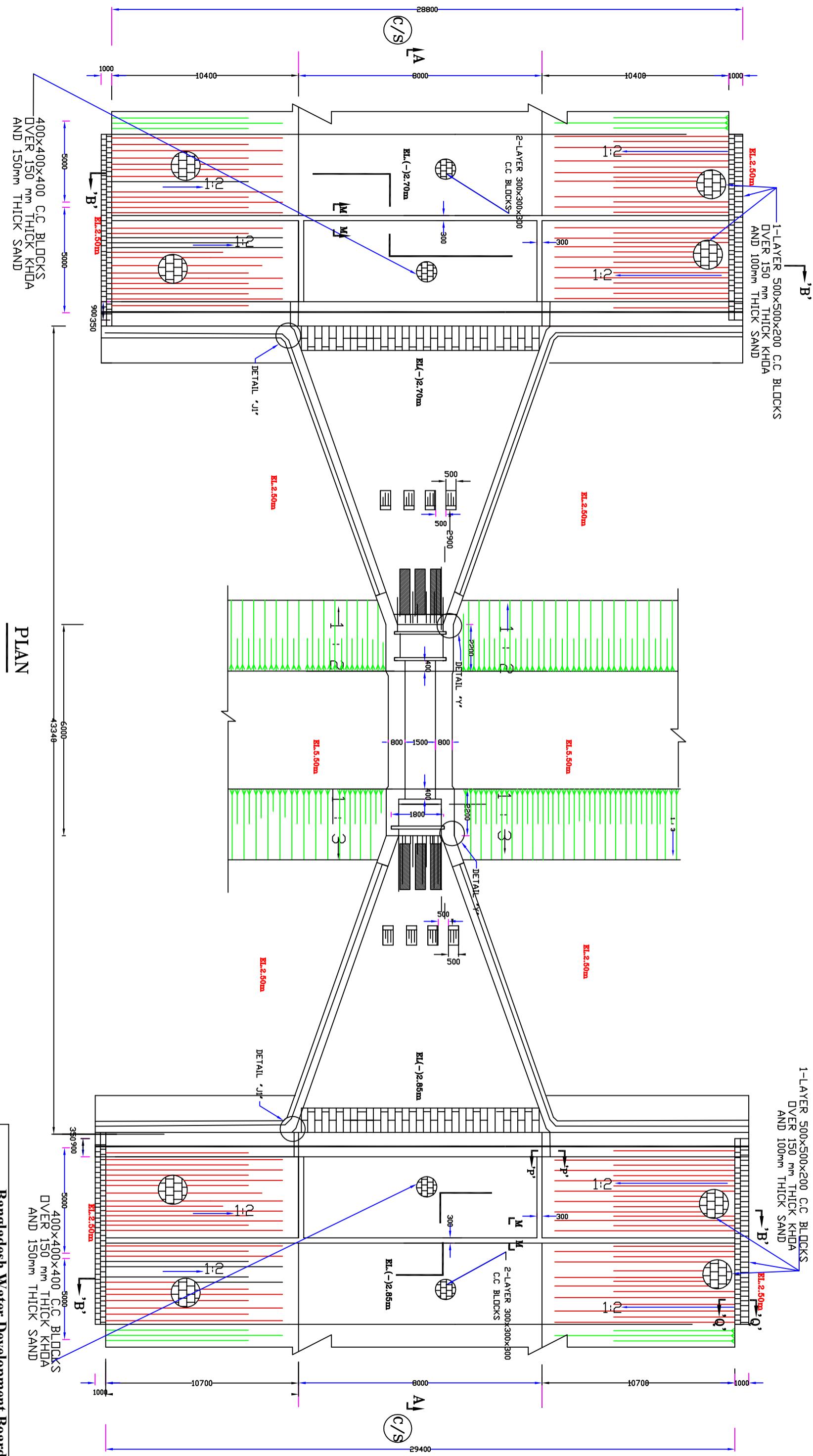
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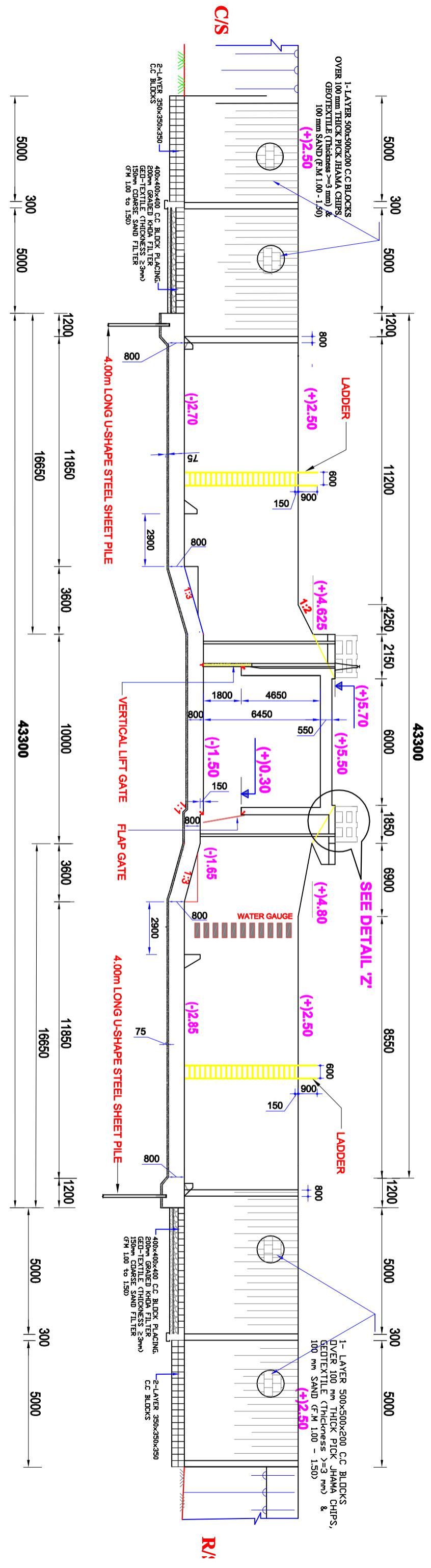
(JAKARIA PERVEZ, EE)

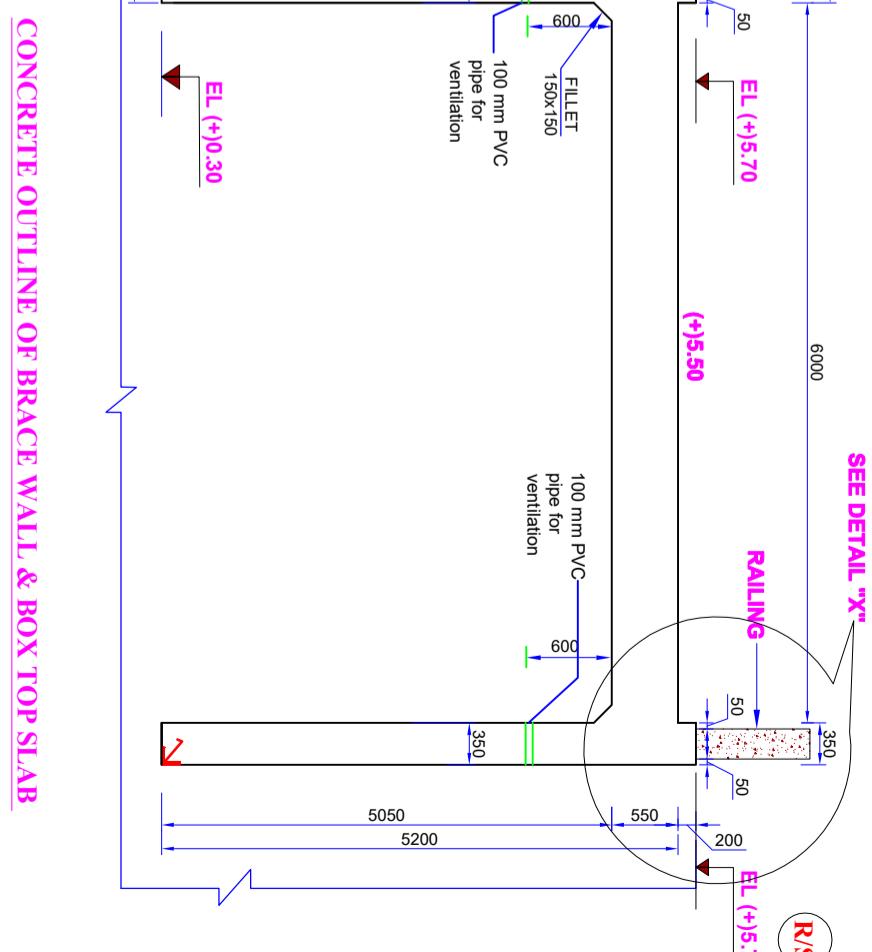
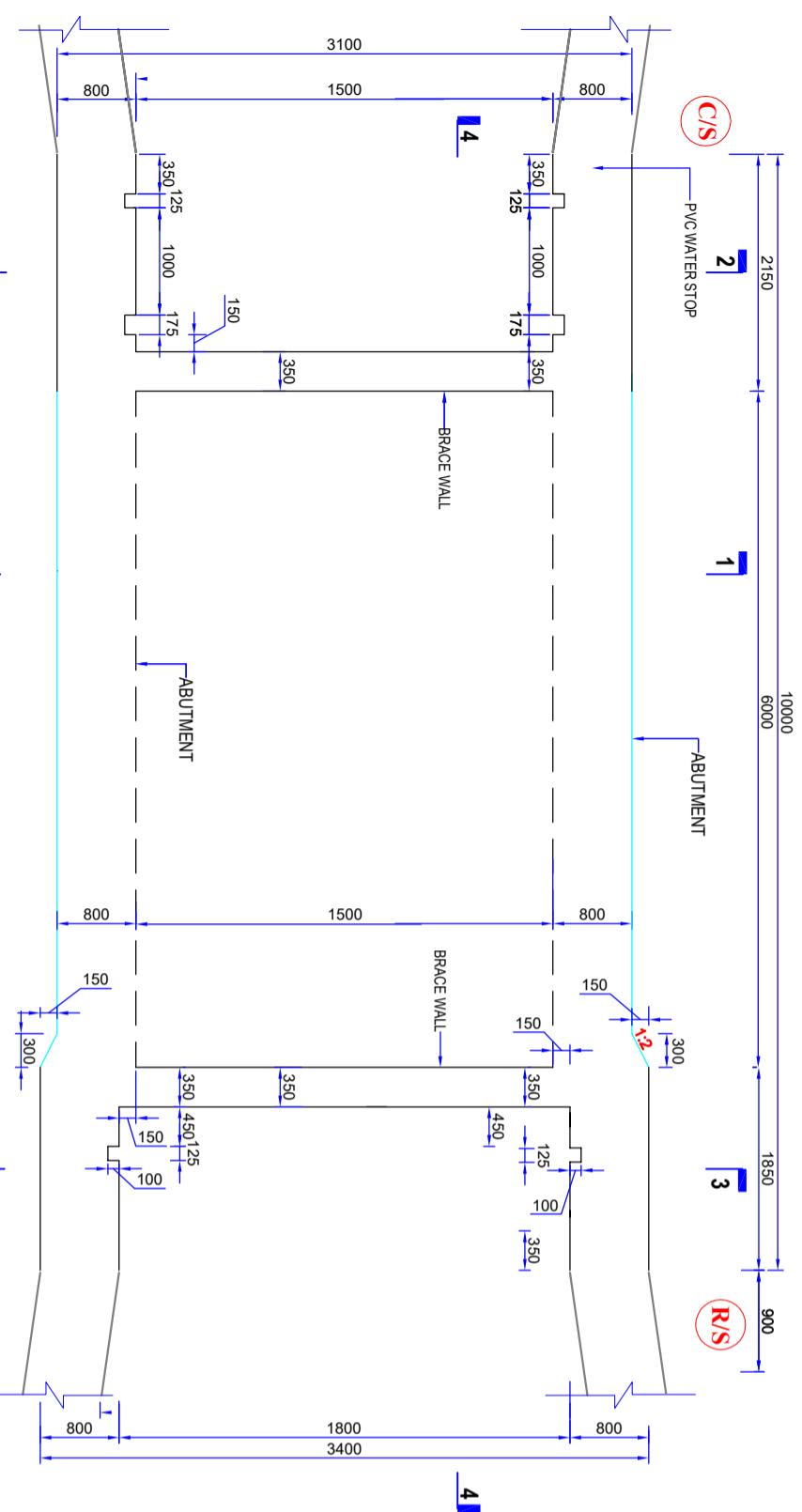
(MOHAMMAD SAIF UDDIN ),SE

**DATE:**

**DWG. NO.:DC-8-0000-04/21**

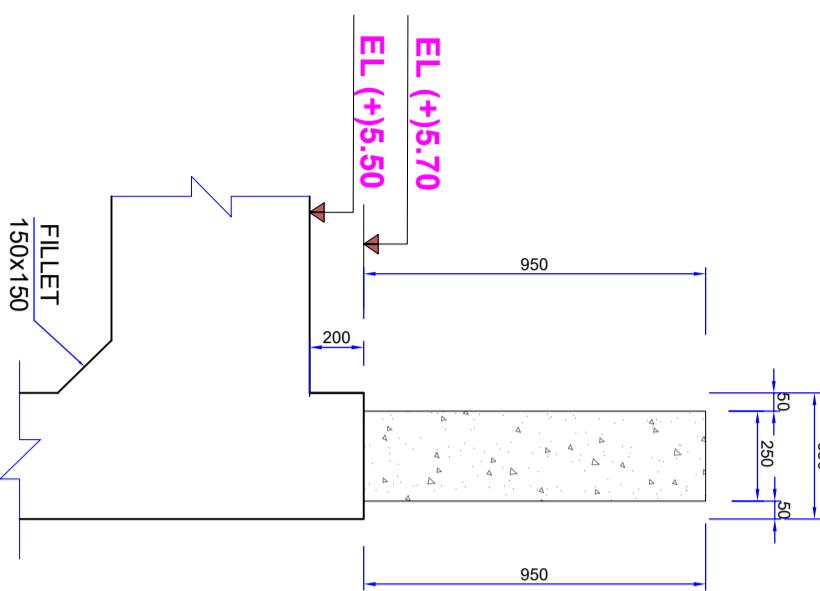






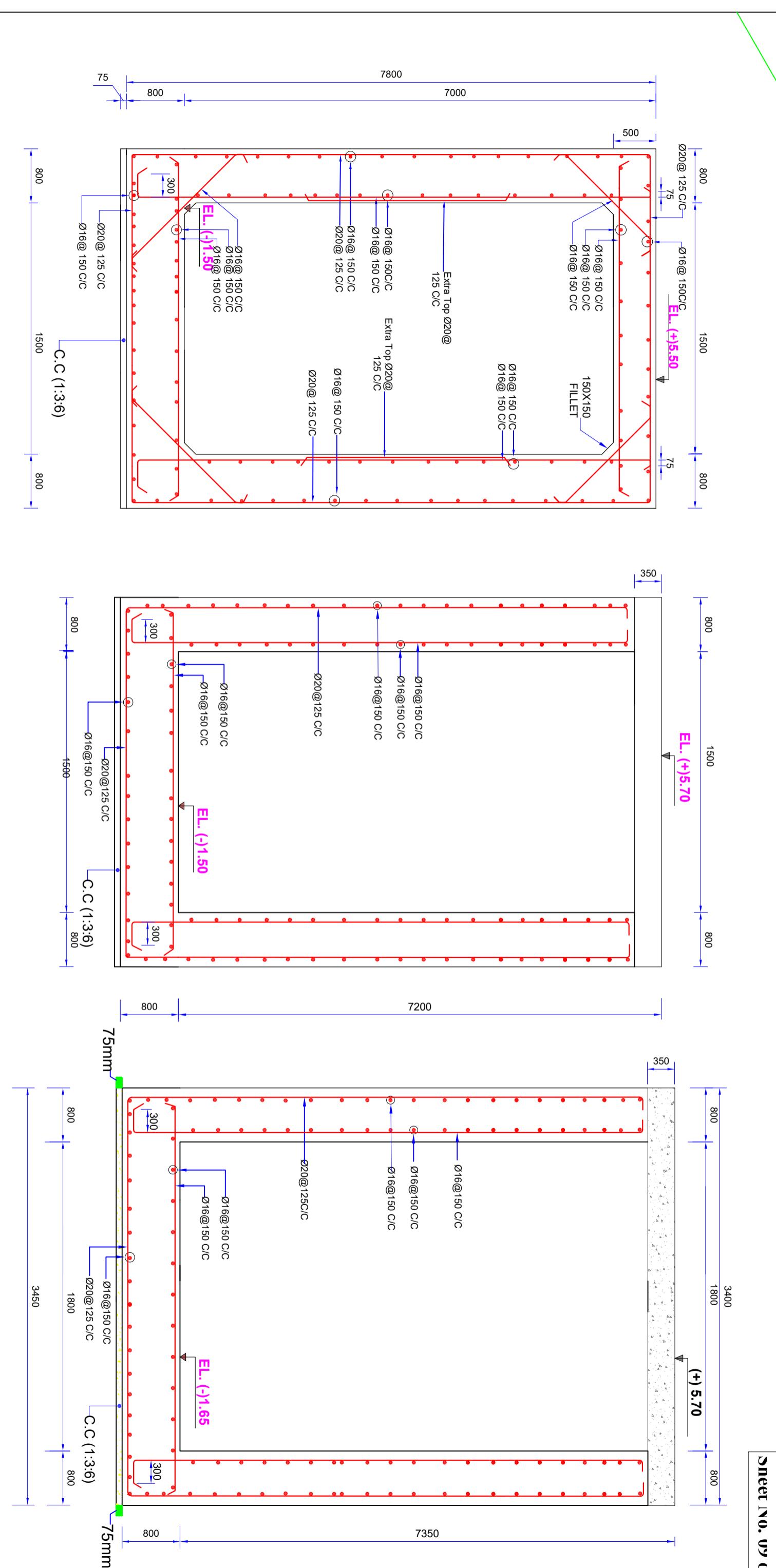
CONCRETE OUTLINE OF SIDEWALL & BRACE WALL

CONCRETE OUTLINE OF BRACE WALL & BOX TOP SLAB



DETAIL "X"

<b>Bangladesh Water Development Board</b> 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.	
CONCRETE OUTLINE OF PIER SIDEWALL, HEADWALL & BOX	APPROVED BY:
DESIGNED BY :	(SAKIB BIN RAFI, AE)
CHECKED & RECOMMENDED BY :	(MOHAMMAD SAIF UDDIN), SE
DATE:00-00-2022	DWG. NO.:DC-8-0000-08/25



SHEET NO. 09 01 Z.

## **REINFORCEMENT DETAILS OF BARREL (SECTION H)**

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**EXTENDED PART(RS) SECTION 33**  
(FOUNDATION TREATMENT SHOWN IN SHEET NO 21, 22 & 23 OF 25)  
(SEE SHEET NO 08 OF 25)

# Bangladesh Water Development Board

**REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT**

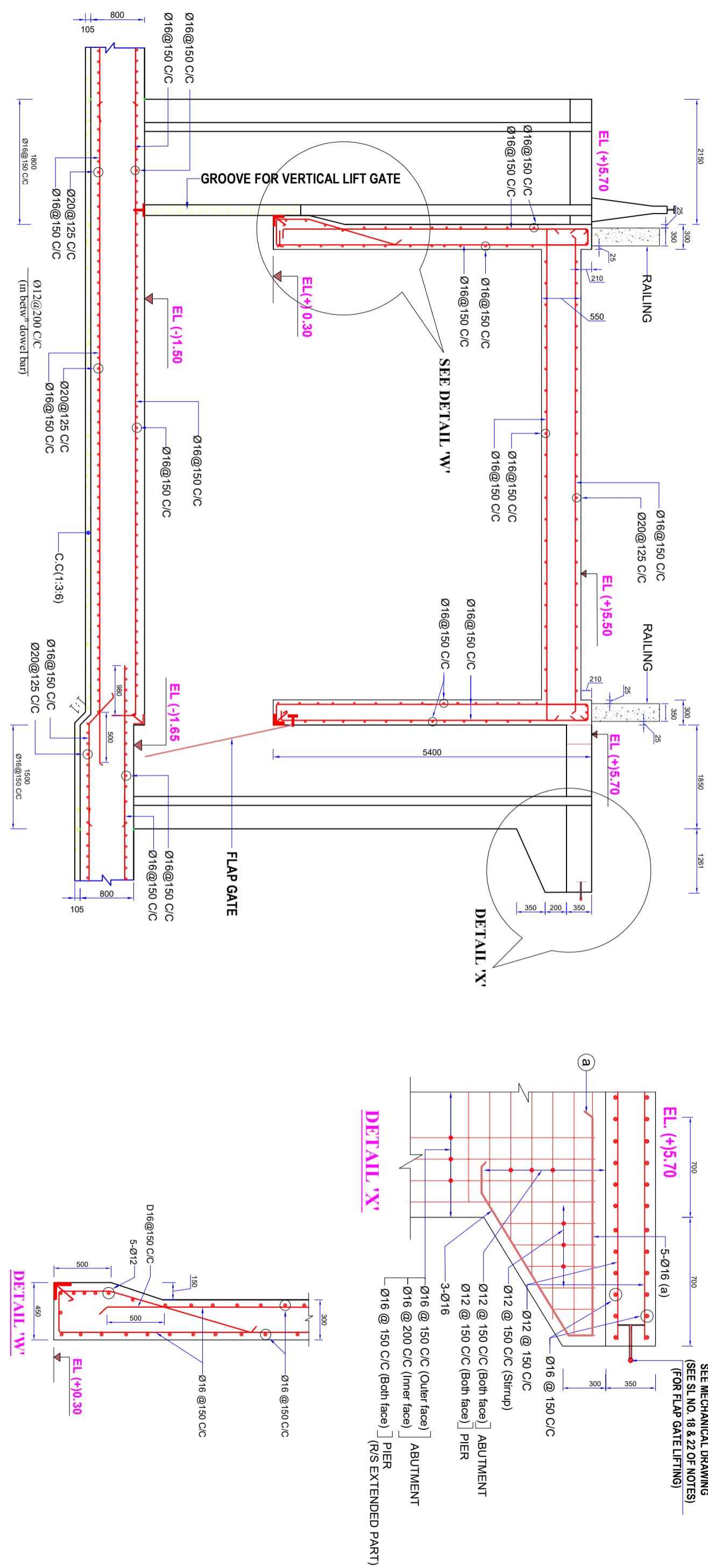
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DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA  
KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT  
SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB,  
SATKHIRA DURING THE YEAR 2021-22.

DESIGNED BY :

**(SAKIB BIN RAFI), AE**  
**CHECKED & RECOMMENDED BY**

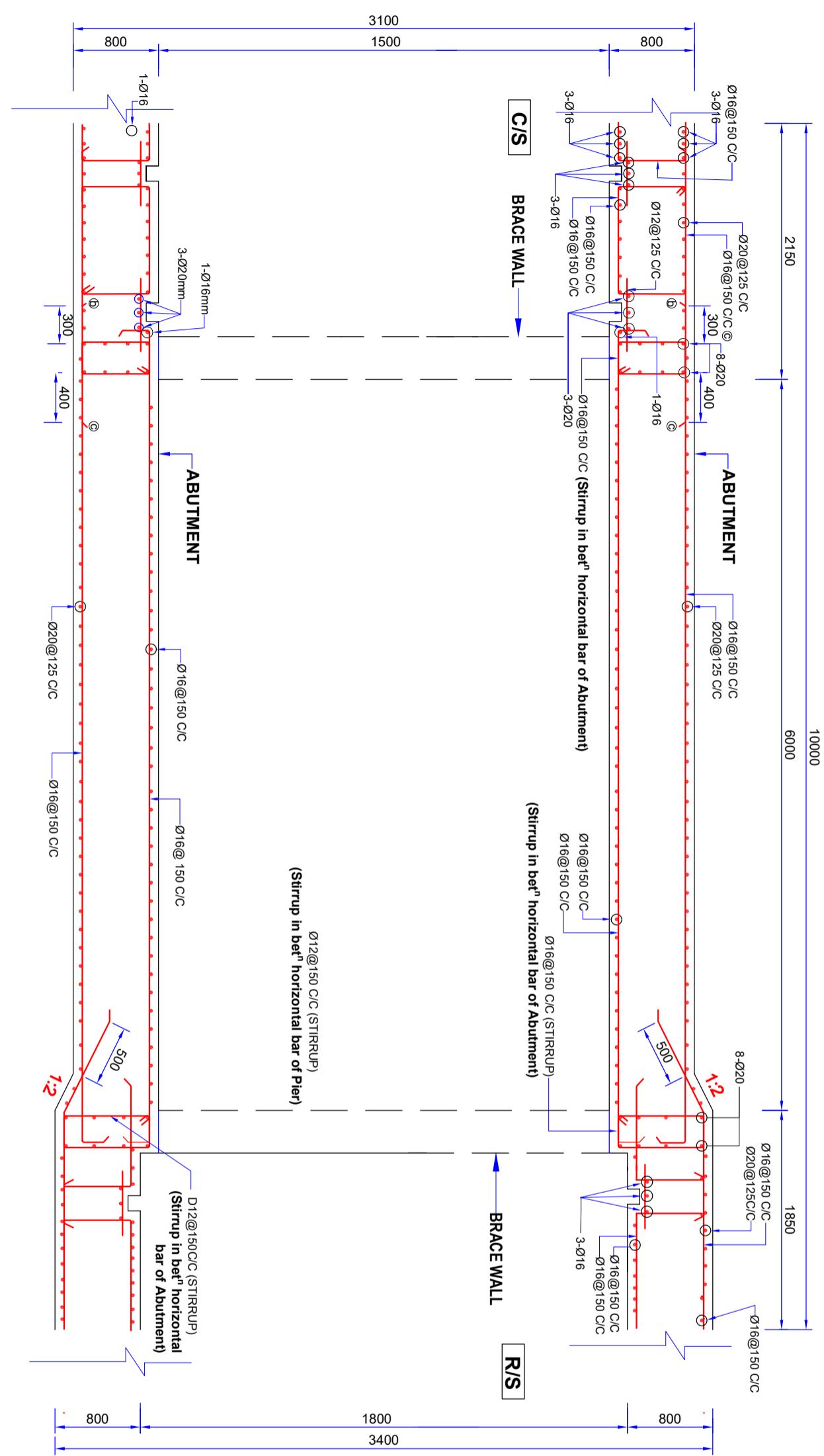
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SECTION 4-4  
ION OF BARREL FLOOR WITH BRACE WALL REINFORCEMENT

**LONGITUDINAL SECTION OF BARREL FLOOR WITH BRACE WALL REINFORCEMENT  
(FOUNDATION TREATMENT SHOWN IN SHEET NO 21, 22 & 23 OF 25)**  
**(SEE SHEET NO 08 OF 25)**

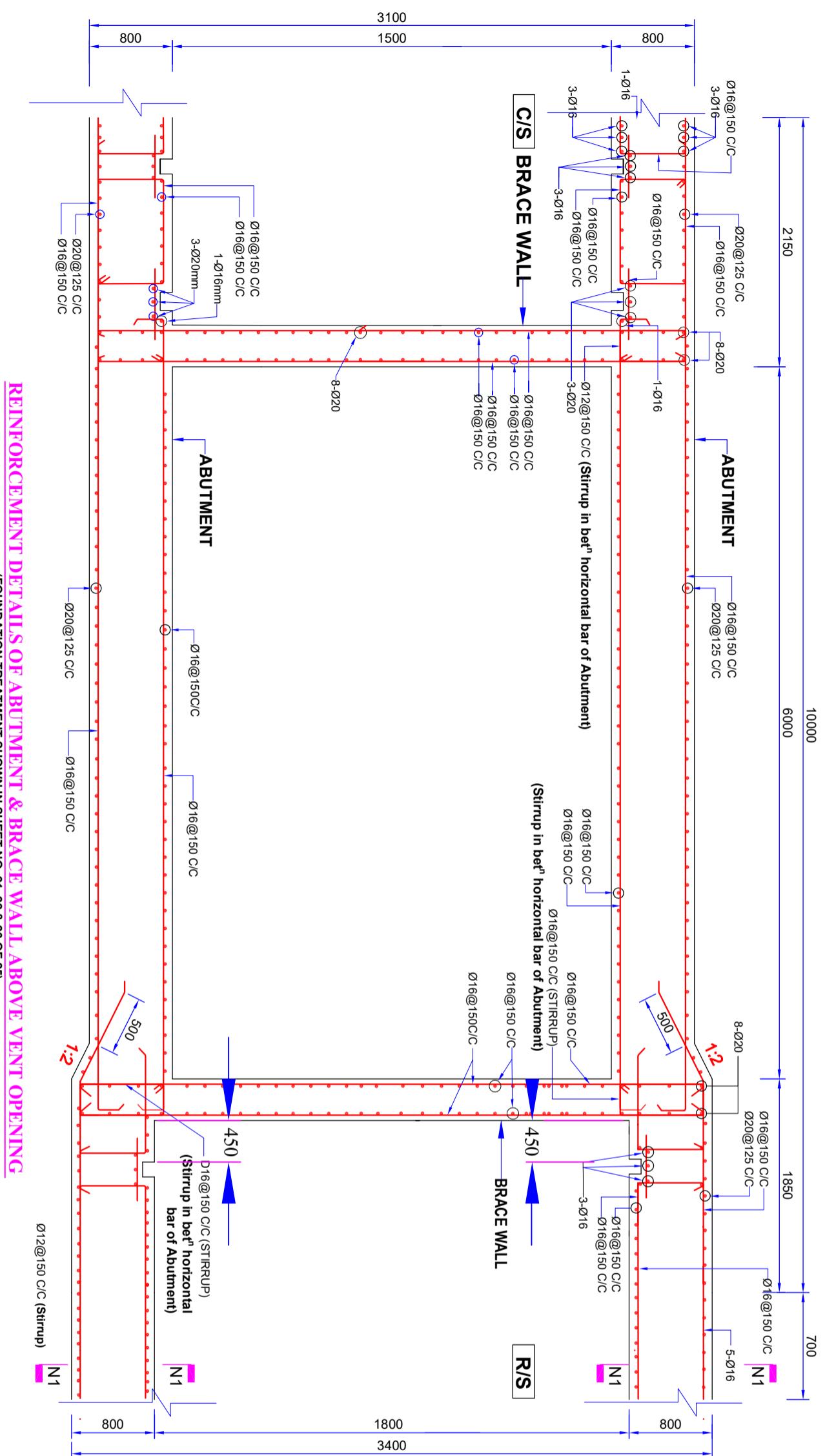
<b>Bangladesh Water Development Board</b> <b>Office of the Superintending Engineer</b> <b>Design Circle-8</b>	
<b>REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT</b>	
<p>DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9 NO SORA      KHAL IN POLDER NO-15 UNDER " REHABILITATION OF POLDER 15 AT      SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&amp;M DIVISION-1, BWDB,      SATKHIRA DURING THE YEAR 2021-22.</p>	
<b>SECTIONAL ELEVATION &amp; DETAIL</b>	
<b>DESIGNED BY :</b>	<b>APPROVED BY :</b>
<u>(SAKIB BIN RAFI), AE</u>	<u>(MOHAMMAD SAIF UDDIN ), SE</u>
<b>CHECKED &amp; RECOMMENDED BY :</b>	
<u>(JAKARIA PERVEZ), EE</u>	
<b>DATE:</b>	<b>DWG. NO.:DC-8-0000-06/21</b>



### REINFORCEMENT DETAILS OF ABUTMENT & ACROSS THE CENTER LINE OF VENT OPENING

(FOUNDATION TREATMENT SHOWN IN SHEET NO 21, 22 & 23 OF 25)

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 1: AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&M DIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2021-22.	
REINFORCEMENT DETAILS OF ABUTMENT & PIER ACROSS THE CENTER LINE OF VENT OPENING	
DESIGNED BY :	APPROVED BY :
(SAKIB BIN RAFI), AE	
CHECKED & RECOMMENDED BY :	
(JAKARIA PERVEZ), EE	(MOHAMMAD SAIF UDDIN), SE
DATE:00-00-2022	DWG. NO.:DC-8-0000-12/25



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## **SECTION N1-N1**

**REINFORCEMENT DETAILS OF ABUTMENT & BRACE WALL ABOVE VENT OPENING  
(FOUNDATION TREATMENT SHOWN IN SHEET NO 21, 22 & 23 OF 25)**

**Bangladesh Water Development Board**

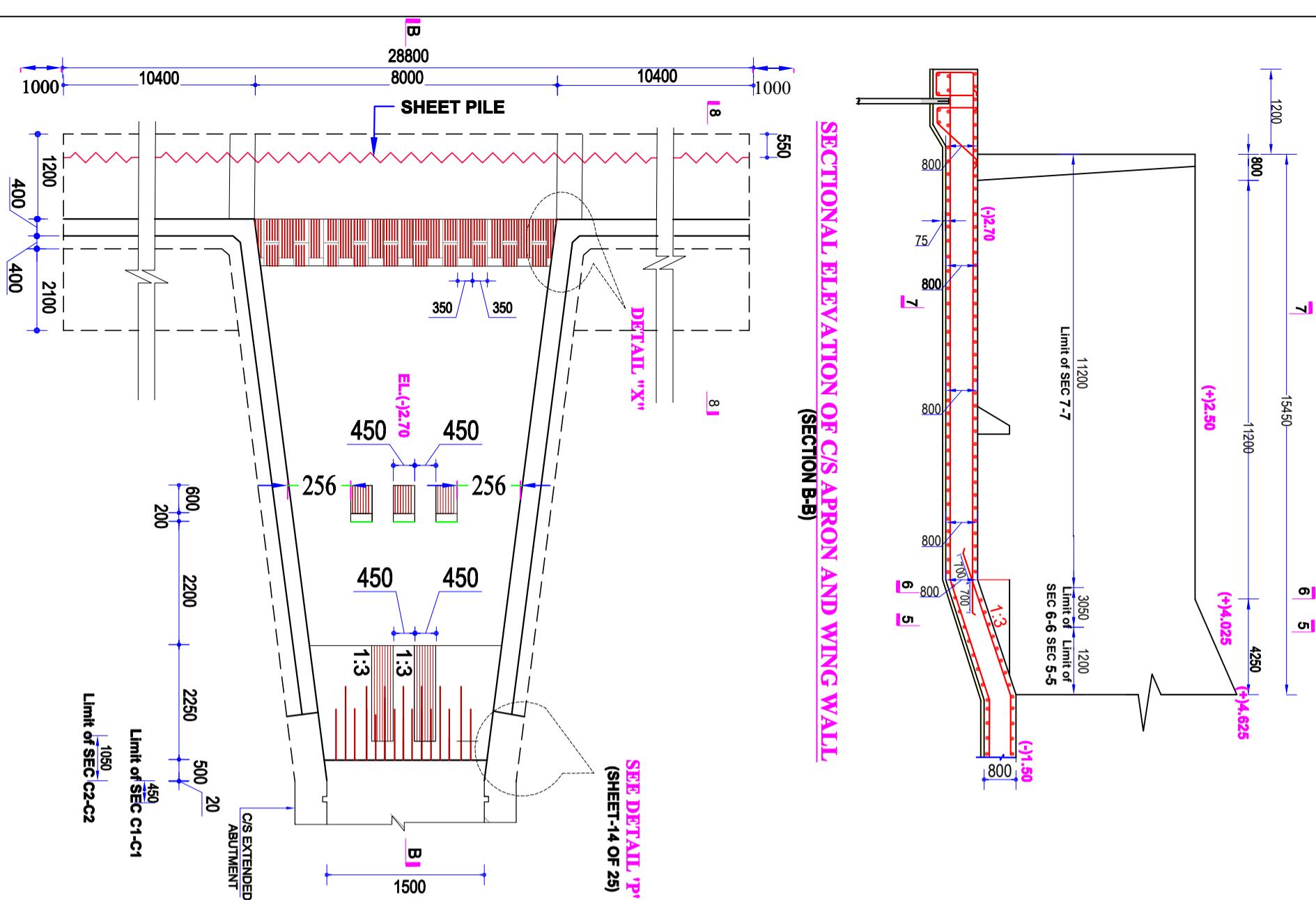
Office of the Superintending Engineer  
Design Circle-8

**REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT**

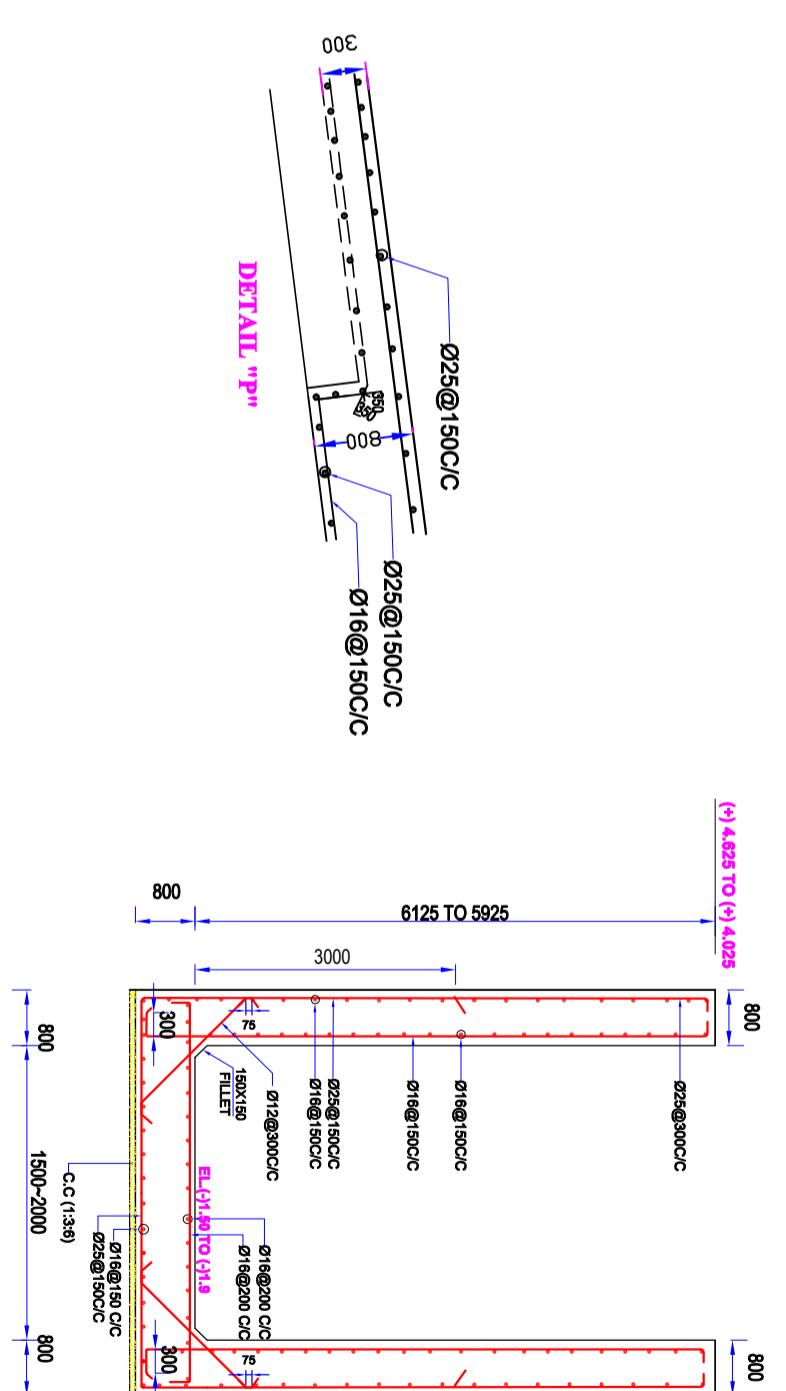
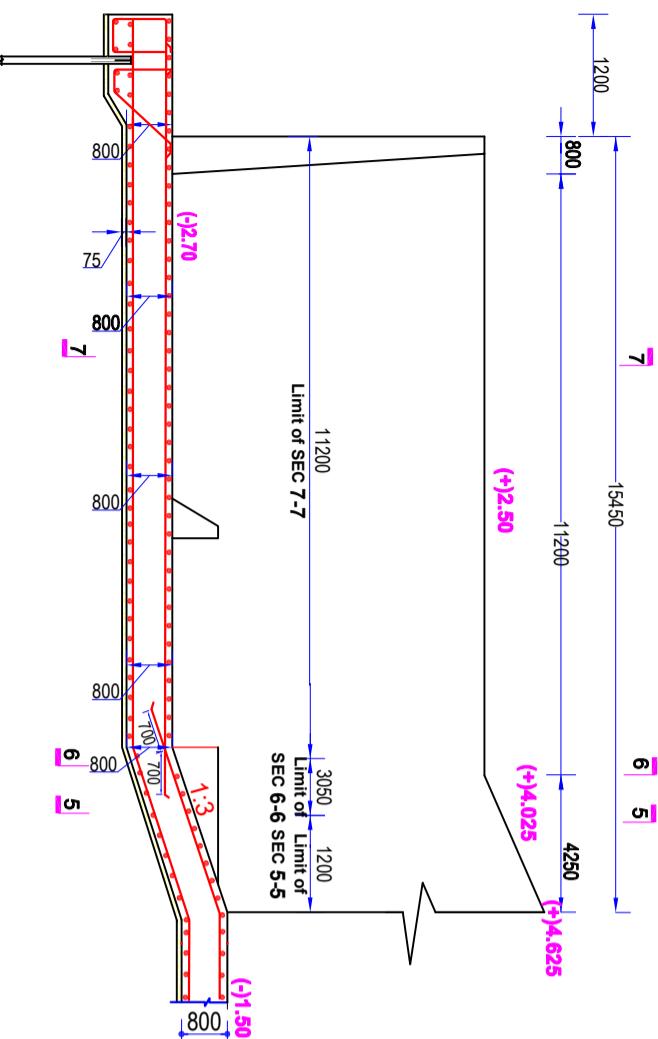
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REINFORCEMENT DETAILS OF ABUTMENT, PIER & BRACE WALL ABOVE

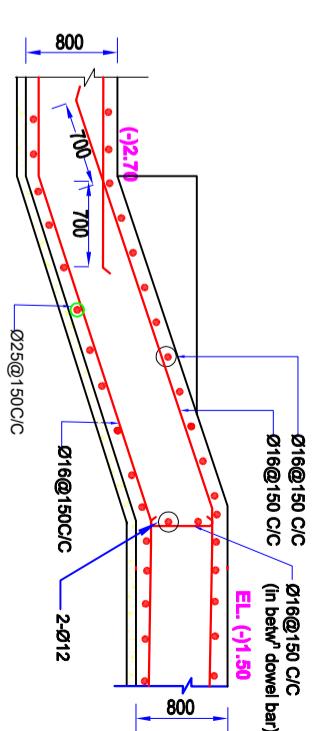
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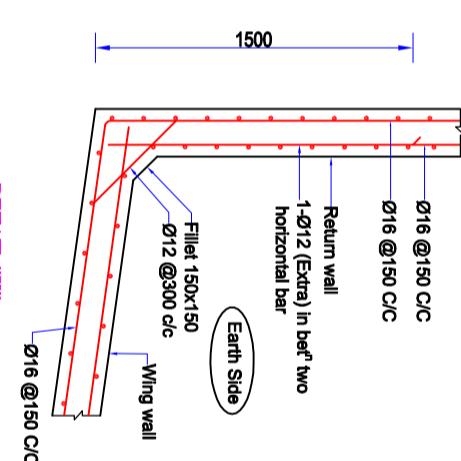
**SECTIONAL ELEVATION OF C/S APRON AND WING WALL  
(SECTION B-B)**



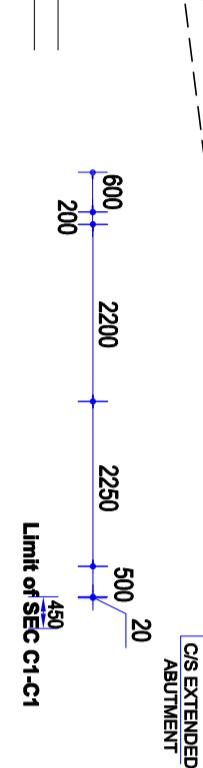
**SECTION 5-5 (VALID FOR 1200 LENGTH IN WING WALL PORTION)**



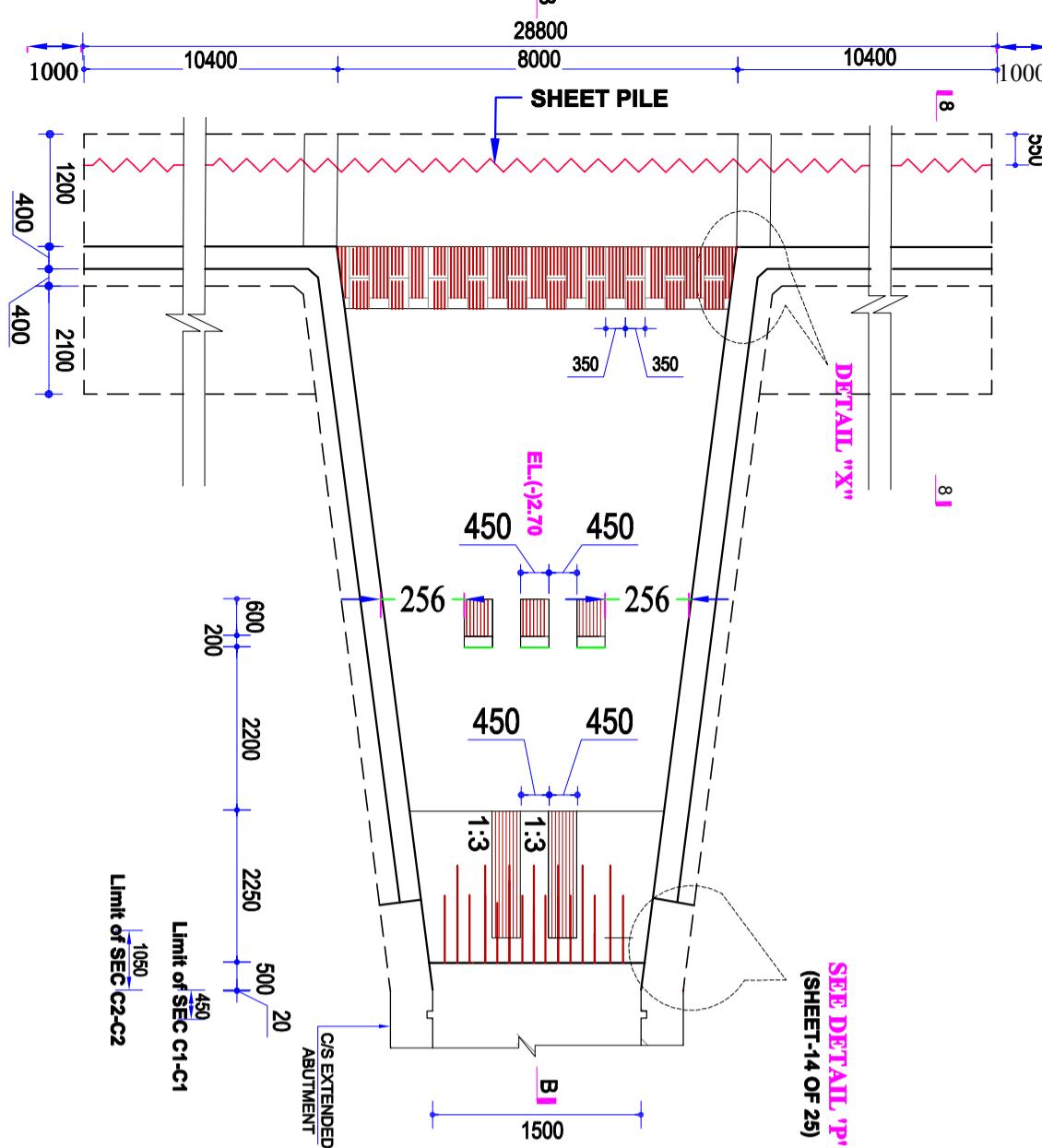
DETAIL



## SHOWING FILLET BAIT

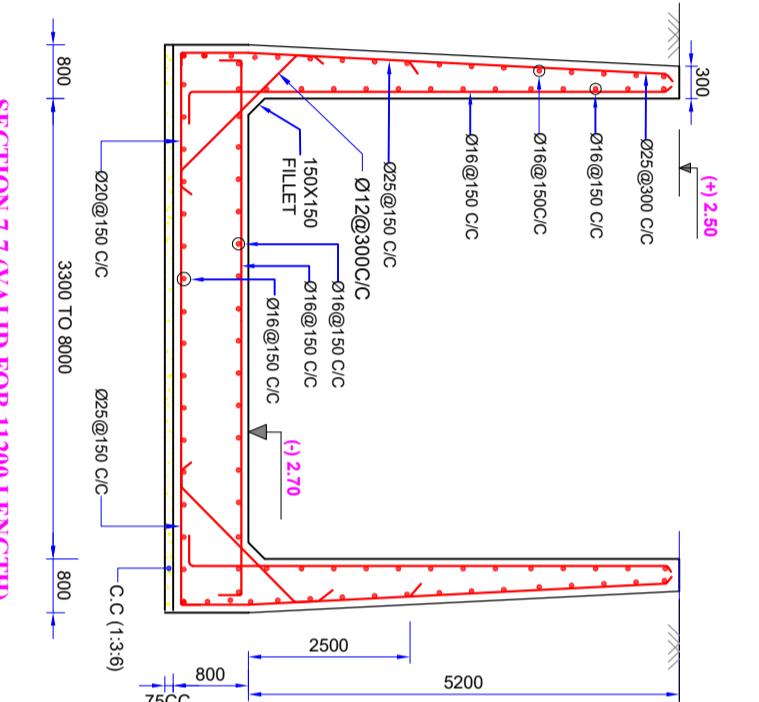
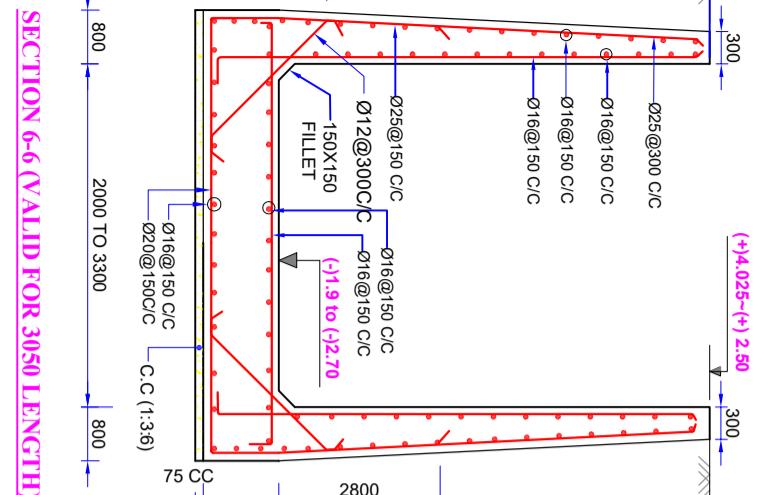
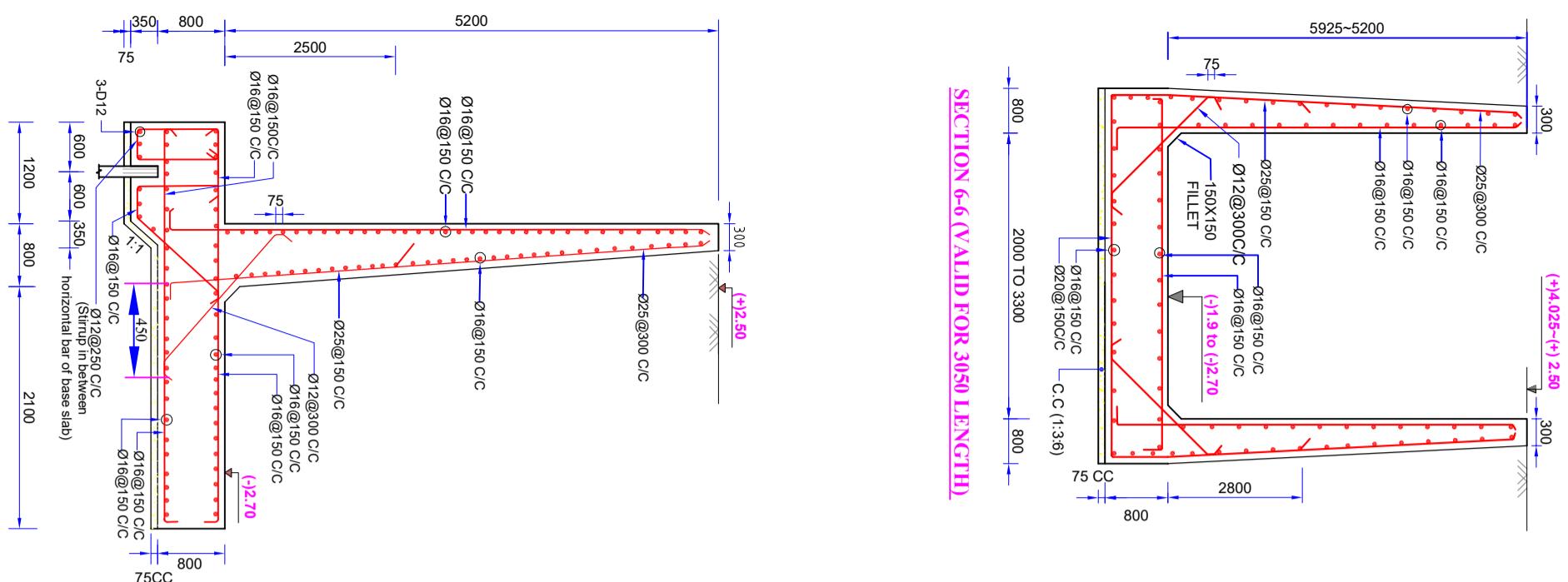


SEE DETAILED  
(SHEET-14 OF 25)



**PLAN OF C/S APRON & RETURN WALL  
(CUT-OFF WALL NOT SHOWN)**

<b>Bangladesh Water Development Board</b>	
Office of the Superintending Engineer	
Design Circle-8	
<b>REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT</b>	
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.	
<b>REINFORCEMENT DETAILS OF C/S APRON AND WING WALL</b>	
DESIGNED BY :	APPROVED BY :
(SAKIB BIN RAFI), AE	
CHECKED & RECOMMENDED BY :	
(JAKARIA PERVEZ), EE	(MOHAMMAD SAIF UDDIN), SE
<b>DATE:00-00-2022</b>	<b>DWG. NO.:DC-8-0000-13/25</b>

**SECTION 6-6 (VALID FOR 3050 LENGTH)****SECTION 7-7 (VALID FOR 11200 LENGTH)**

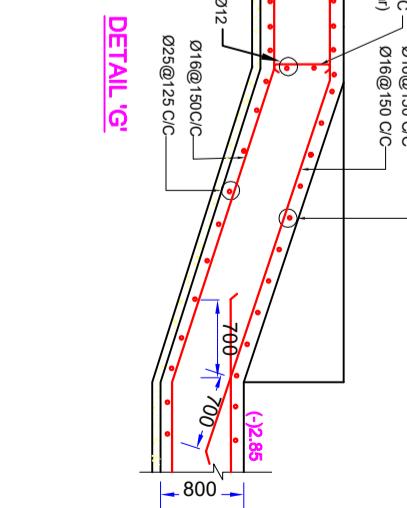
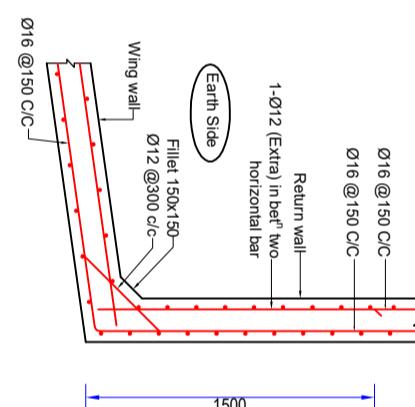
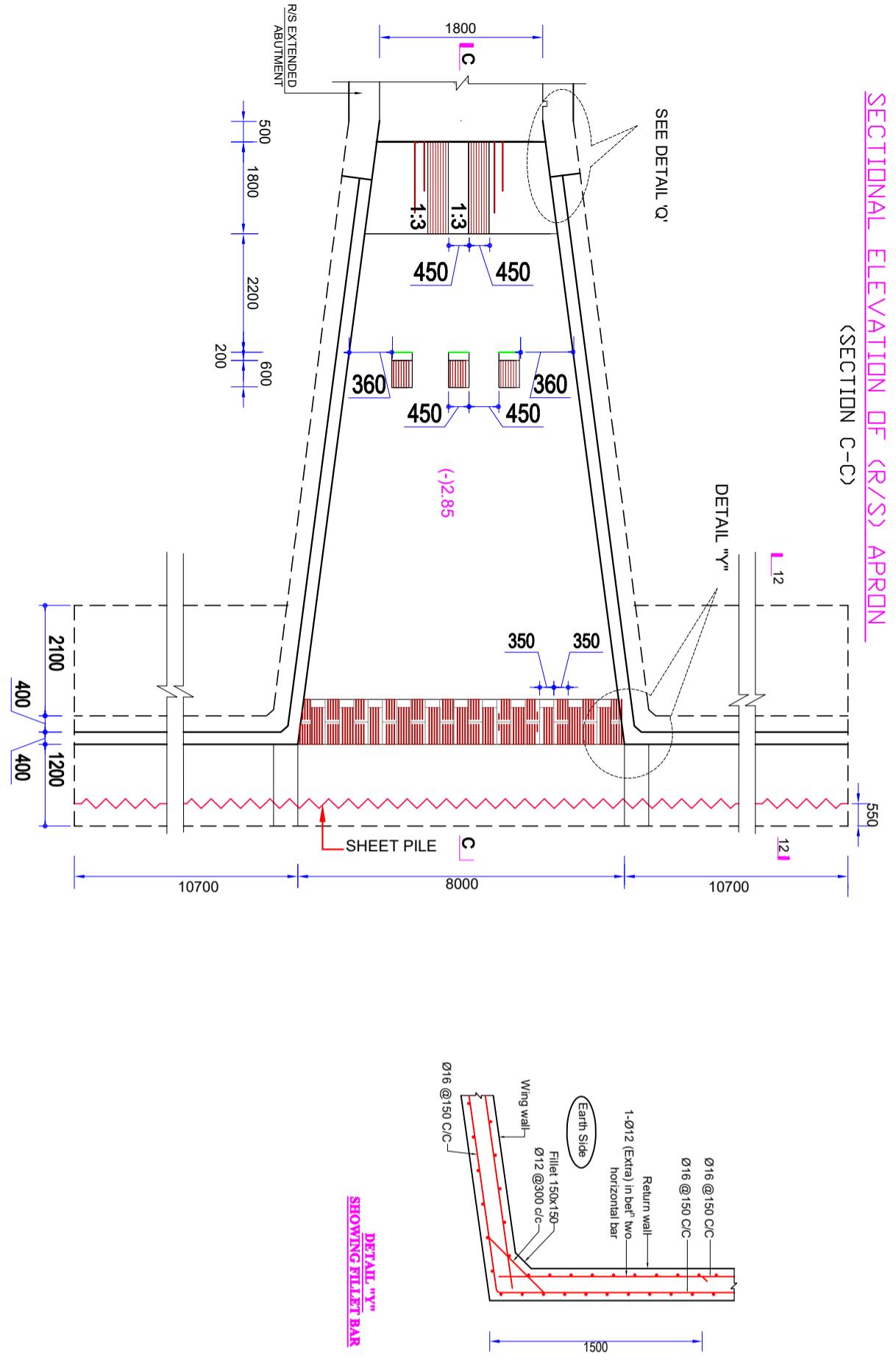
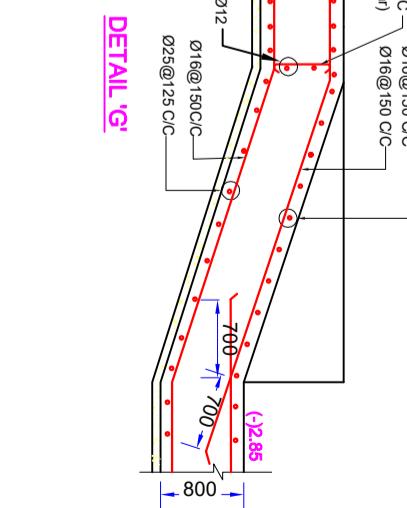
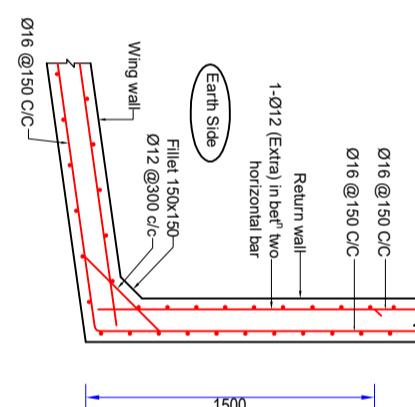
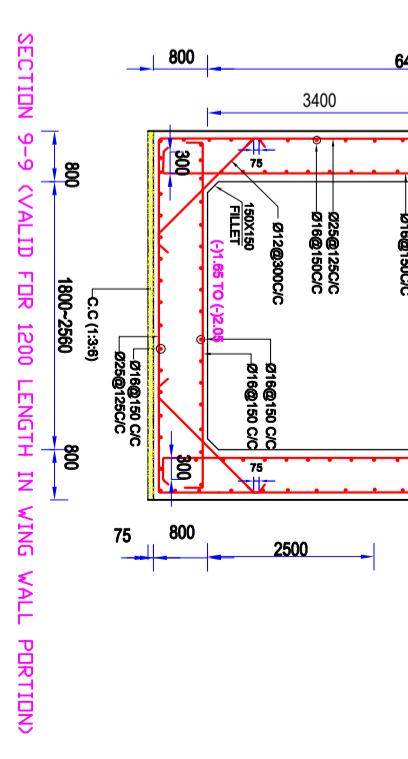
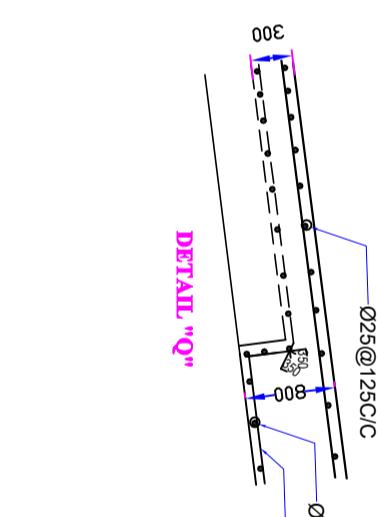
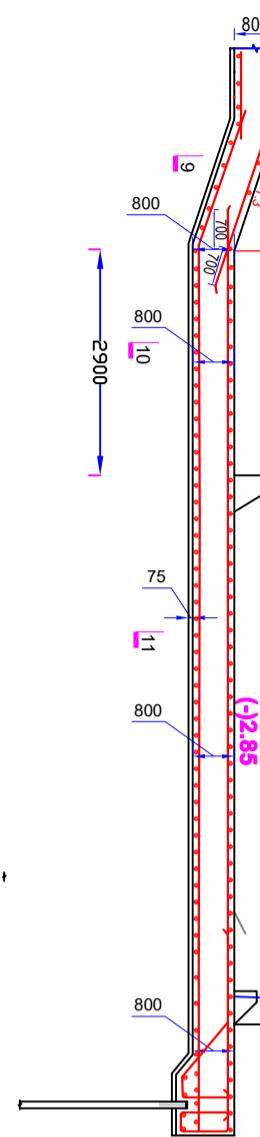
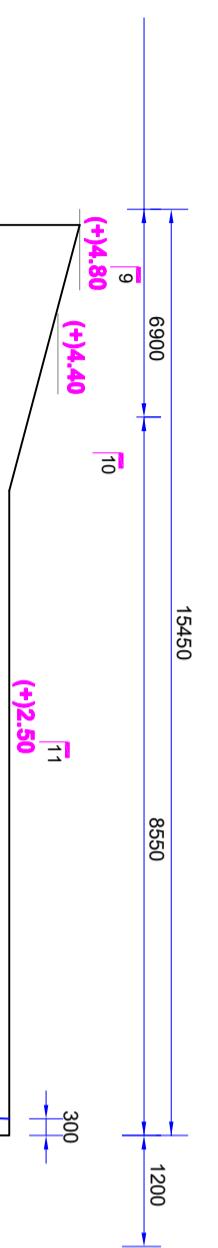
Scale : Not To Scale

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

**DATE:00-00-2022 DWG. NO.: DC-8-0000-14/25**

(+4.80) to (+4.40)  
(+2.50)

(+2.50)



## 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.

REINFORCEMENT DETAILS OF R/S APRON AND WING WALL

DESIGNED BY:

APPROVED BY:

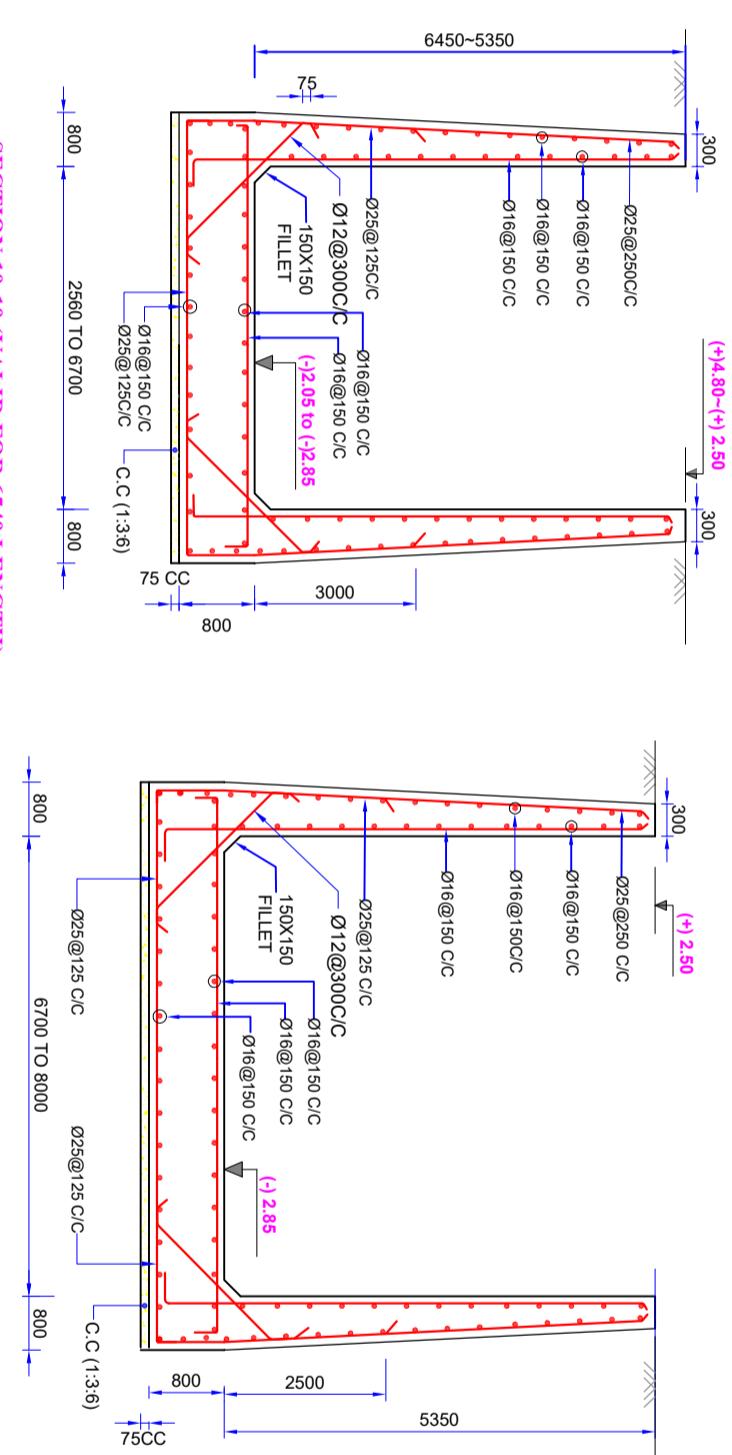
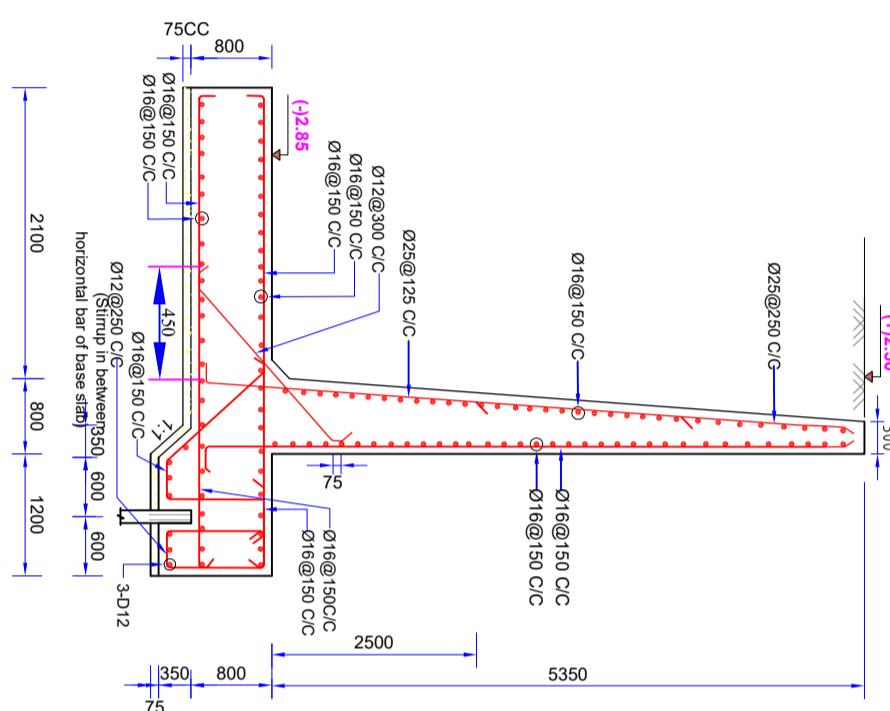
(SAKIB BIN RAFI), AE

CHECKED &amp; RECOMMENDED BY:

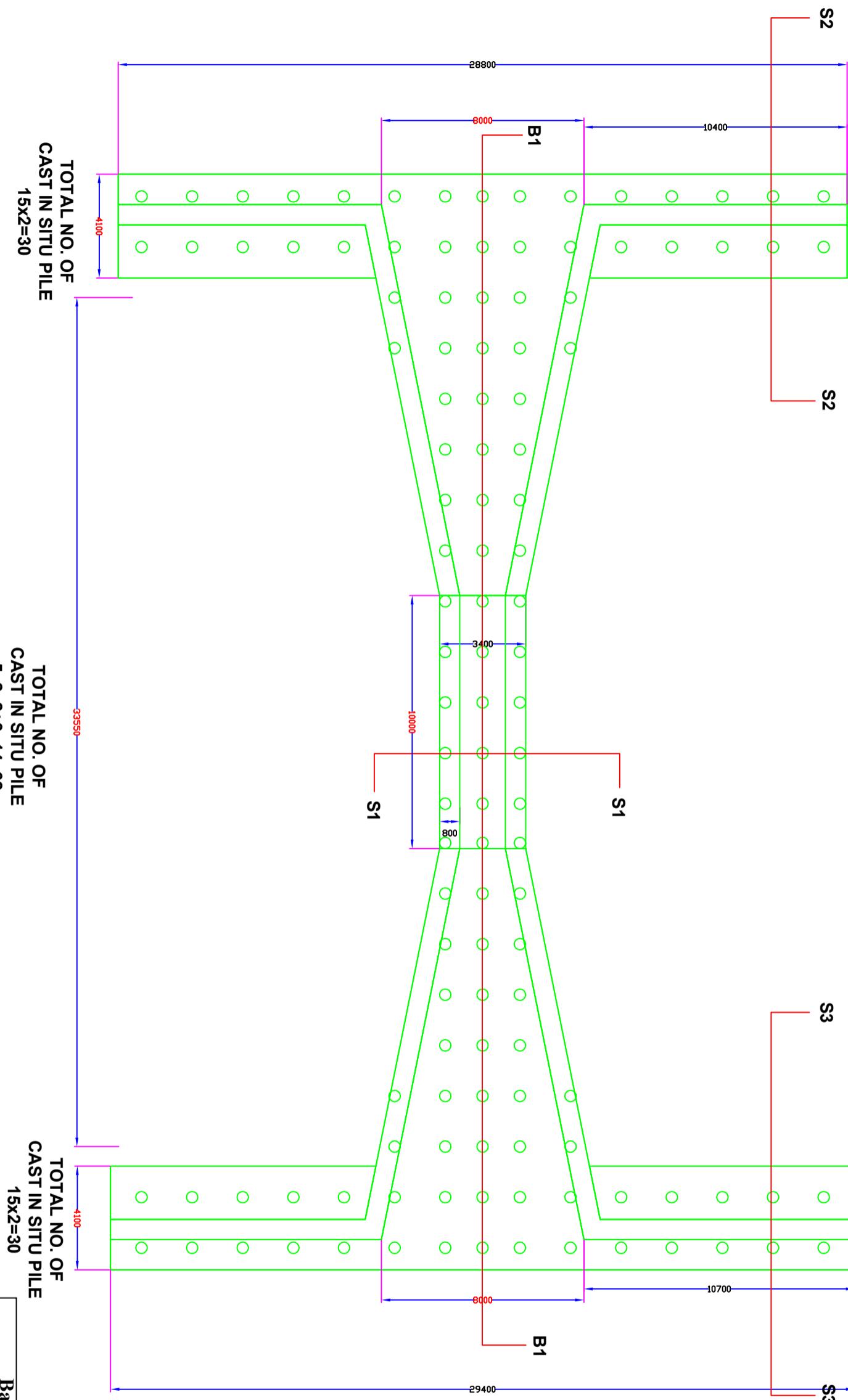
(JAKARIA PERVEZ), EE

DRAWN BY:

Scale : Not To Scale

**SECTION 10-10 (VALID FOR 6540 LENGTH)****SECTION 11-11 (VALID FOR 7710 LENGTH)****SECTION 12-12**

DESIGNED BY :	APPROVED BY :
(SAKIB BIN RAFI), AE	
CHECKED & RECOMMENDED BY:	
JAKARIA PERVEZ), EE	(MOHAMMAD SAIF UDDIN), SE
DATE:00-00-2022	DWG. NO.:DC-8-0000-16/25



**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 N  
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 :

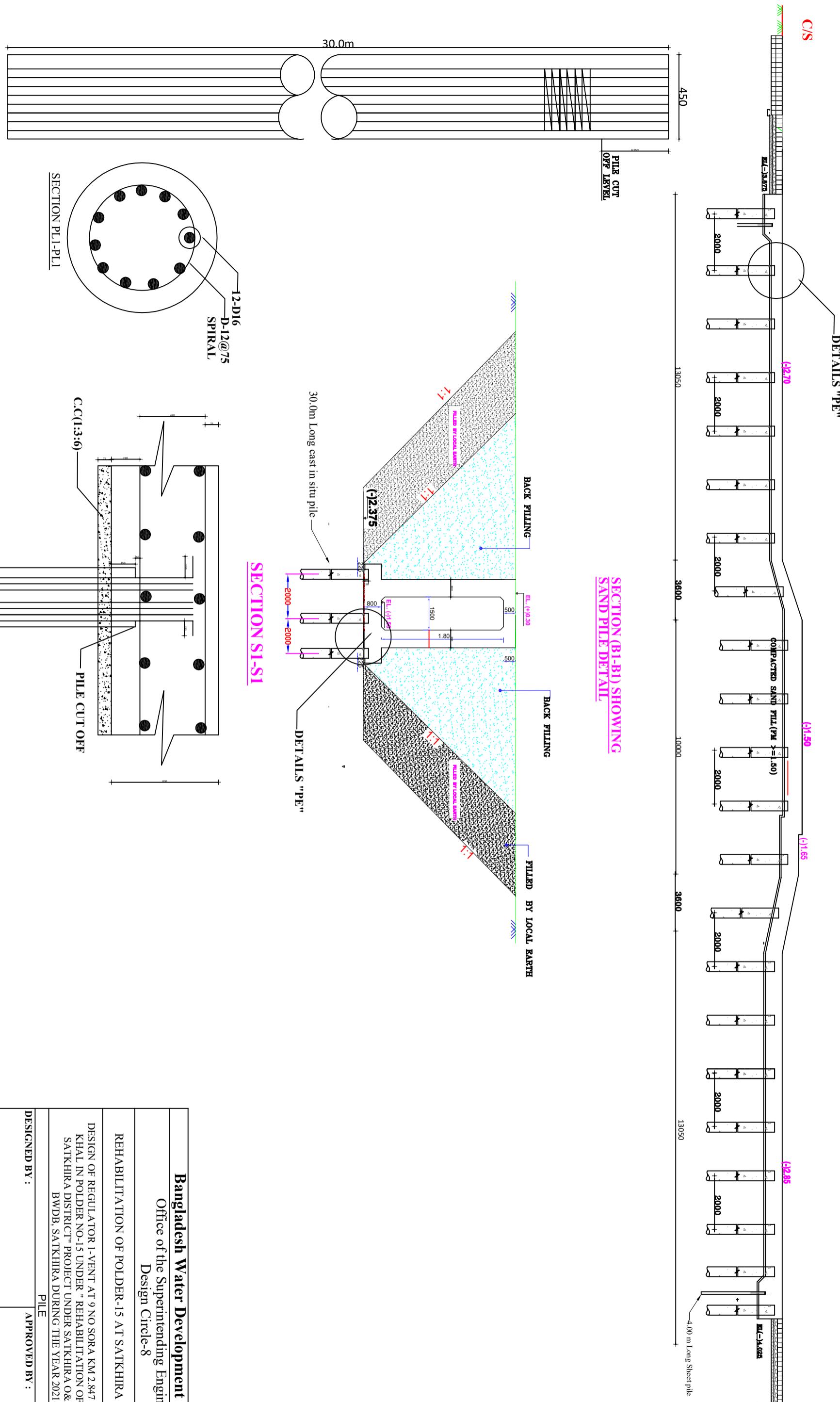
(JAKARIA PERVEZ), EE

APPROVED BY :

(MOHAMMAD SAIF UDDIN), SE

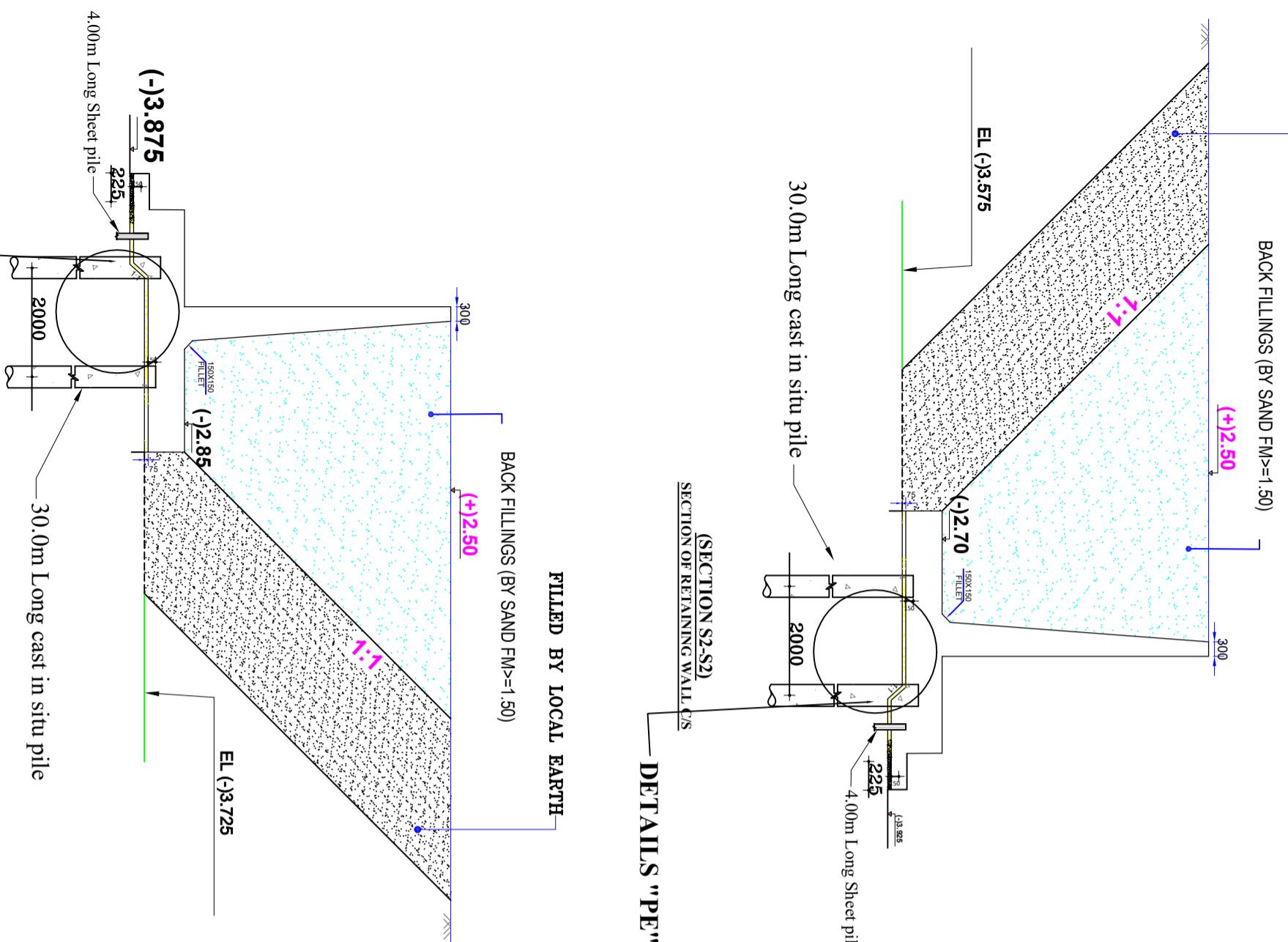
DATE:

DWG. NO.:DC-8-000-05/21



## CAST IN SITU REINF. DETAIL

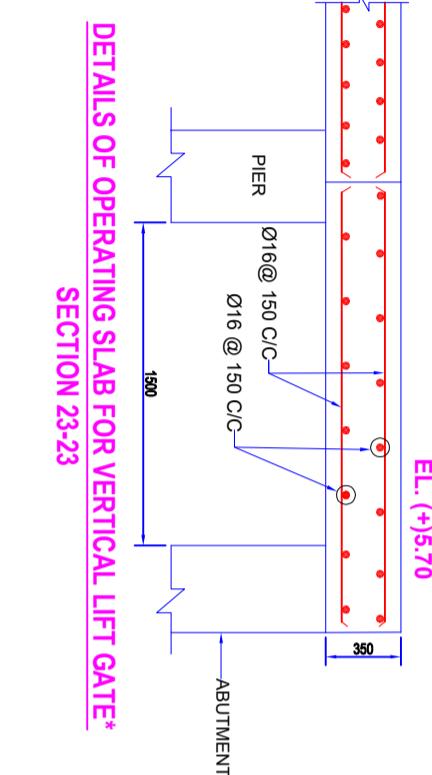
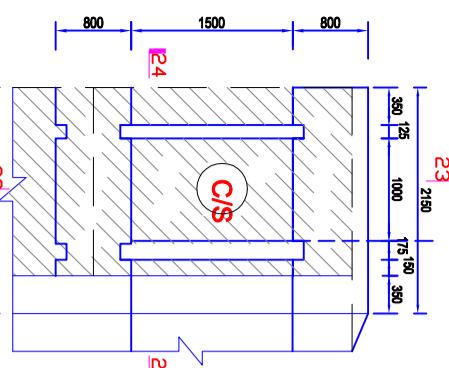
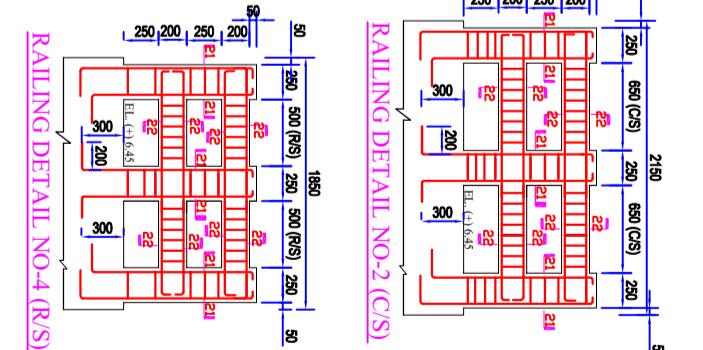
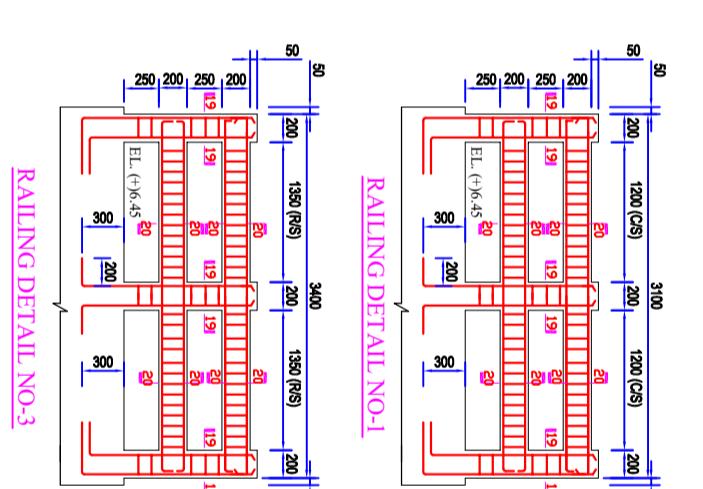
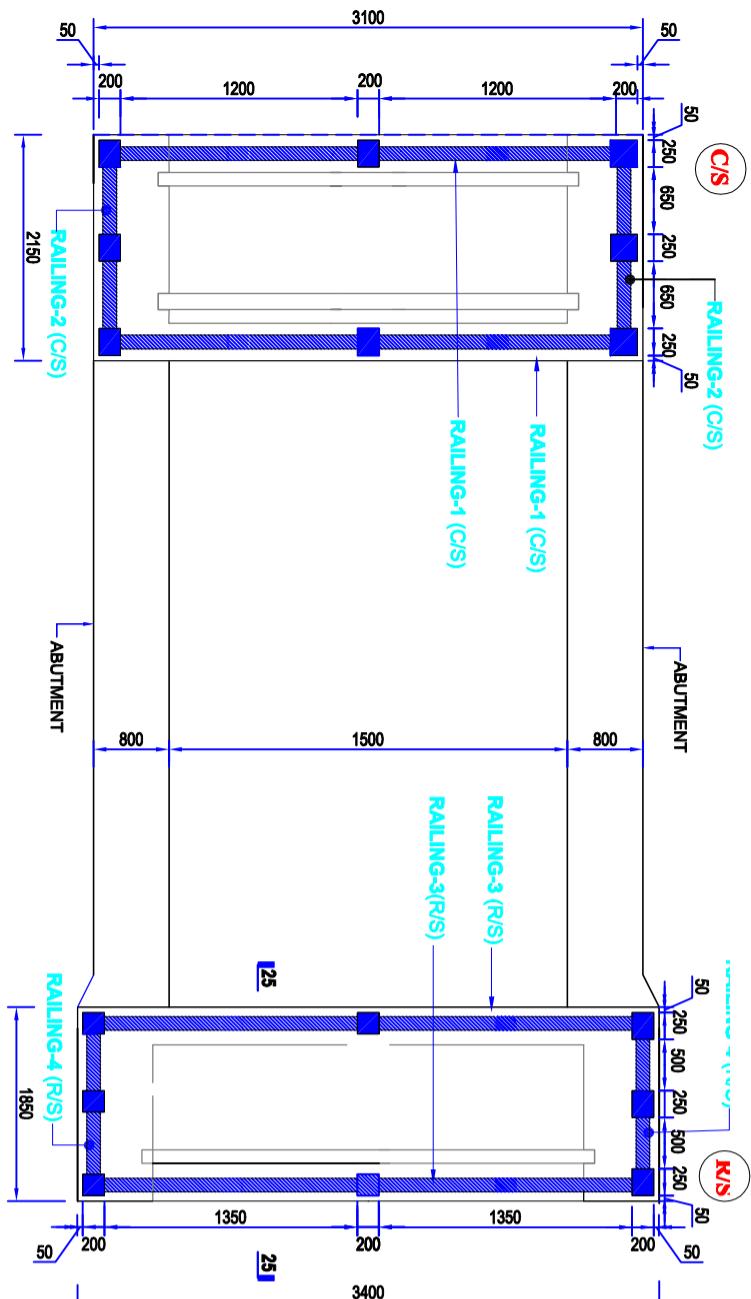
Scale : Not To Scale

**NOTE FOR PILE:**

1. CONCRETE FOR PILE SHALL BE WITH 20mm DOWN GRADED SHINGLES AND HAVE THE LEANEST MIX OF 1:1.5:13 HAVING MINIMUM CYLINDER STRENGTH OF 22.0 N/mm $^2$  AT 25 DAYS.
2. CLEAR COVER FOR PILE=75mm.
3. CASTING OF PILE SHALL BE CARRIED ON AS A CONTINUOUS OPERATION UNTIL THE ENTIRE PILE CASTING IS COMPLETED BEGINNING FROM THE BOTTOM TO TOP.
4. ALL PILES SHALL BE CONSTRUCTED USING A TEMPORARY CASING UNLESS OTHERWISE APPROVED BY THE ENGINEER IN-CHARGE.
5. ALL PILES SHALL BE CONSTRUCTED VERTICAL UNLESS SPECIFIED OTHERWISE. A TOLERANCE OF 50mm MAY BE ALLOWED IN THE FINAL LOCATION OF PILE.
6. THE SURFACE WATER SHALL NOT BE ALLOWED TO ENTER THE HOLE IF GROUND WATER IS BOTTOM OF THE GOLE TO DISPLACE WATER. THE TREMIE DISCHARGE SHALL BE KEPT WELL AND INTO THE CONCRETE AND CAREFULLY WITHDRAWN AS THE CONCRETE IS PLACED.
7. THE CASING WILL BE WITHDRAWN SMOOTHLY AND BOTTOM SHALL BE MAINTAINED AT A MINIMUM OF 150mm BELOW THE TOP OF CONCRETE.
8. THE LOAD TEST SHOULD CARRIED OUT 28 DAYS AFTER COMPLETION OF CONCRETE OPERATION;
9. NO PILE SHALL BE BORED WITHIN 3000mm DISTANCE BEFORE 24 HOURS OF CASTING OF A PARTICULAR PILE HAS ELAPSED.
10. STATIC LOAD TEST FOR 400KN TEST LOAD FOR BARREL SHALL BE PERFORMED FOR 1 PILE AND TEST RESULT SHOULD BE SENT TO CONCERNED DESIGN OFFICE(DESIGN CIRCLE-8).
11. NO SERVICE PILE SHALL BE CONSTRUCTED UNTIL AND UNLESS LOAD TEST IS PERFORMED AND TEST RESULT IS OBTAINED.

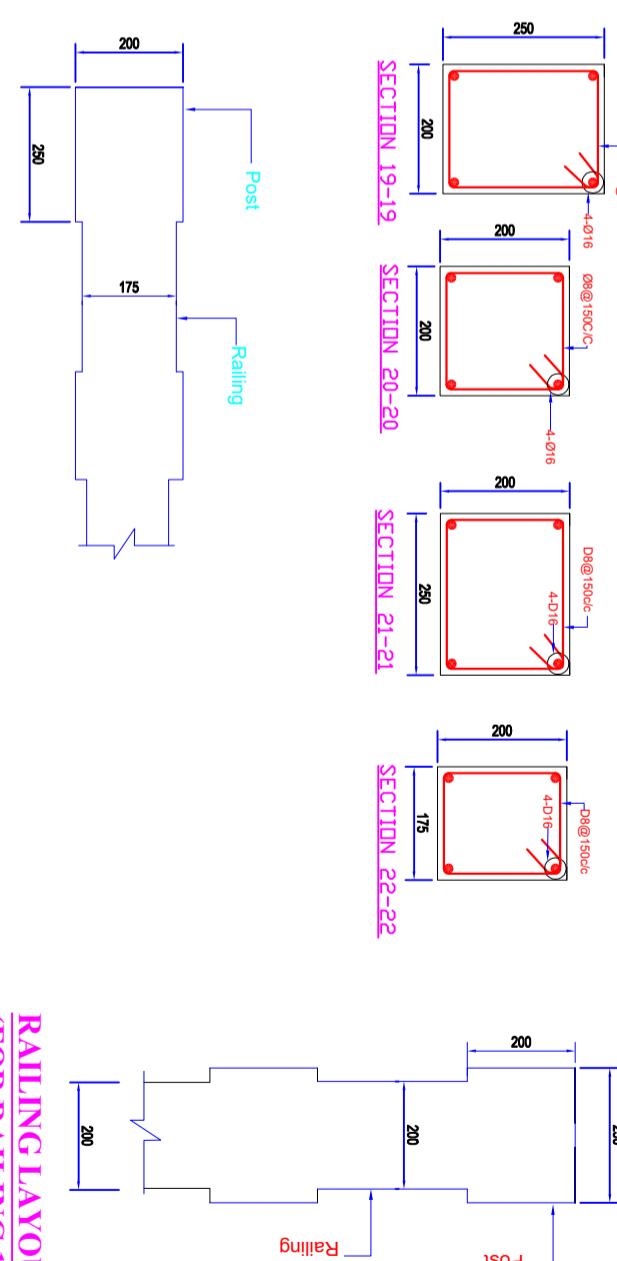
<b>Bangladesh Water Development Board</b>	
Office of the Superintending Engineer	
Design Circle-8	
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT	
DESIGN OF REGULATOR 1-VENT AT 9 NO SORA KM 2.847 OVER 9N SORA KHAL IN POLDER NO-15 UNDER "REHABILITATION OF POLDER 15 AT SATKHIRA DISTRICT" PROJECT UNDER SATKHIRA O&MDIVISION-1, BWDB, SATKHIRA DURING THE YEAR 2021-22.	
NOTES FOR PILE	
DESIGNED BY:	APPROVED BY:
(SAKIB BIN RAFI), AE	
CHECKED & RECOMMENDED BY:	
(JAKARIA PERVEZ), EE	(MOHAMMAD SAIF UDDIN), SE
DATE:	DWG. NO.:DC-8-0000-05/21

**DETAILS "PE"****(SECTION S3-S3)  
SECTION OF RETAINING WALLS****NOTES**BACK FILLING SHALL BE DONE  
BY SAND OF FM $\geq$ 1.50.



SECTION 23-23

SECTION 23-23



**RAILING LAYOUT  
(FOR RAILING 2&4)**

**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 N  
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.

**RAILING REINFORCEMENT DETAIL**

DESIGNED BY :

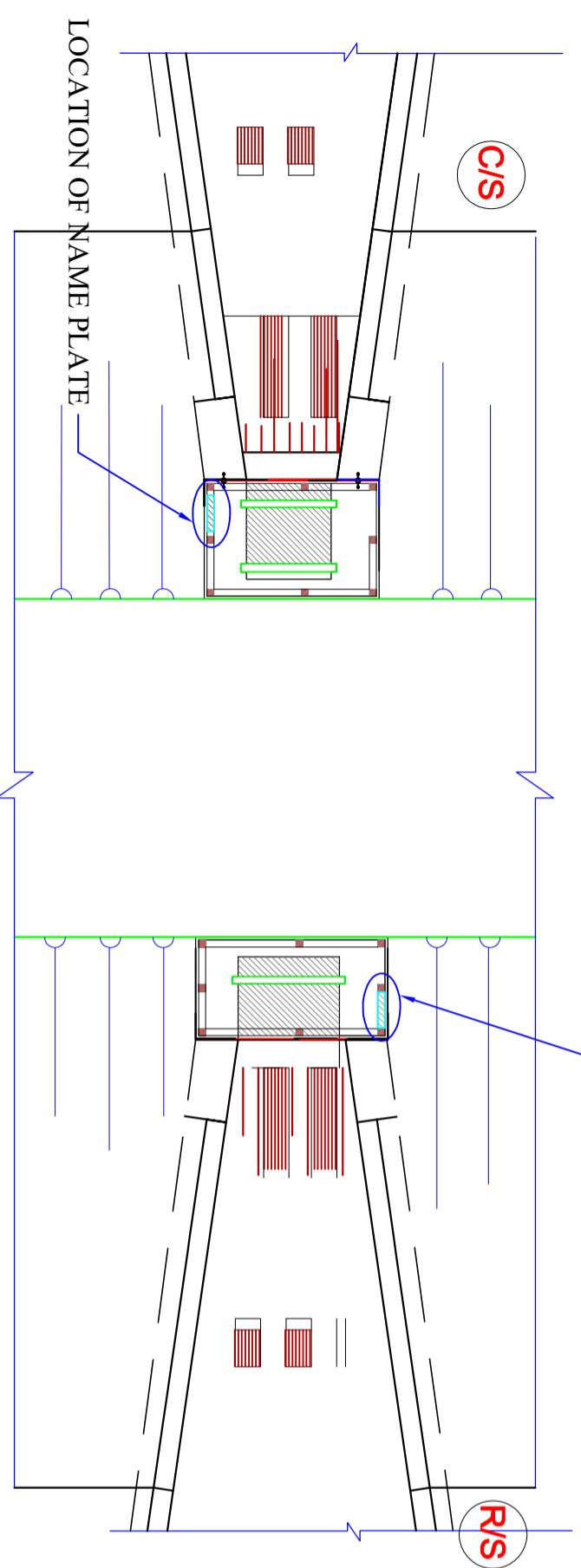
(SAKIB BIN RAFI, AE)

CHECKED &amp; RECOMMENDED BY :

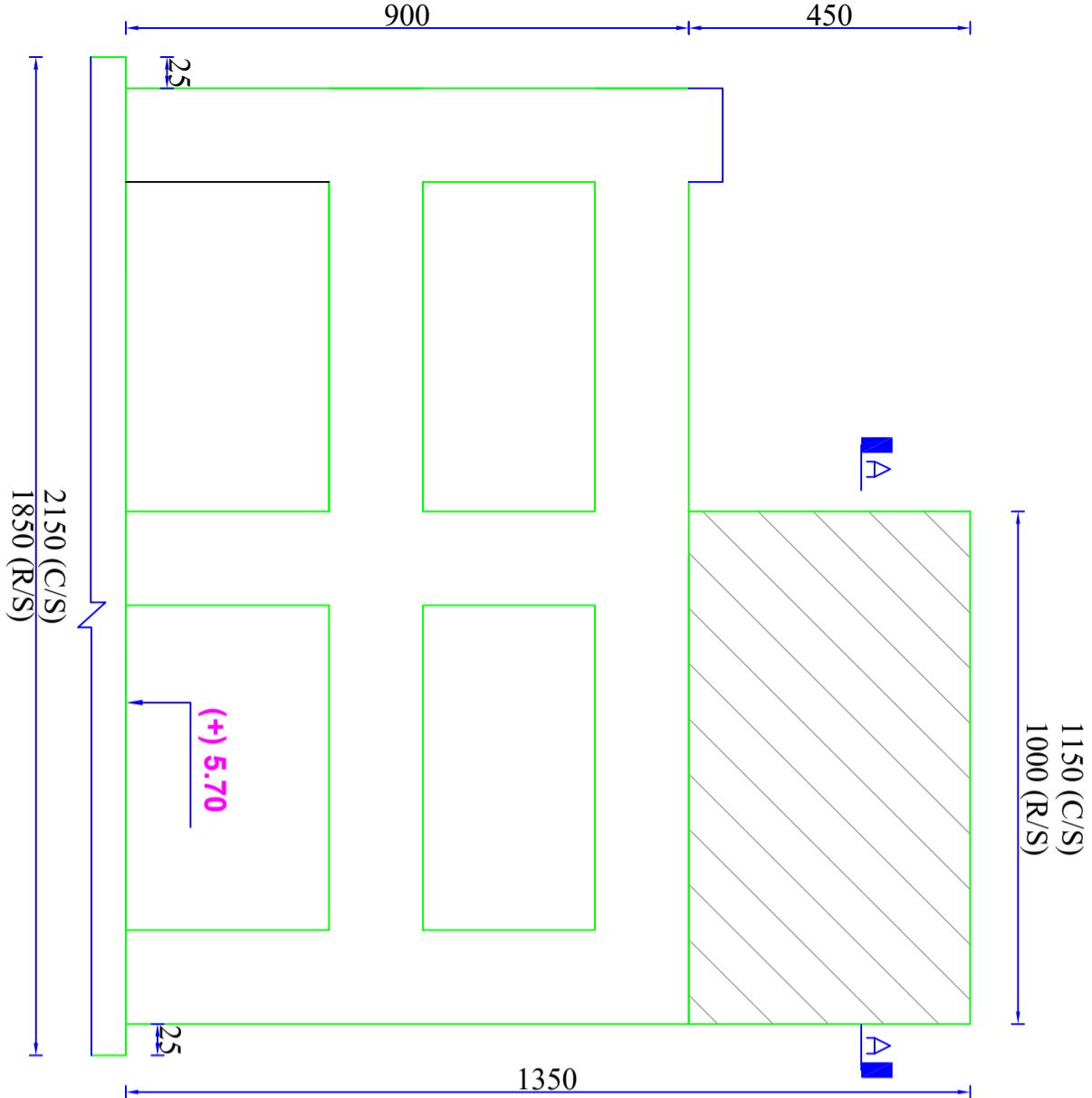
JAKARIA PERVEZ, EE

APPROVED BY :

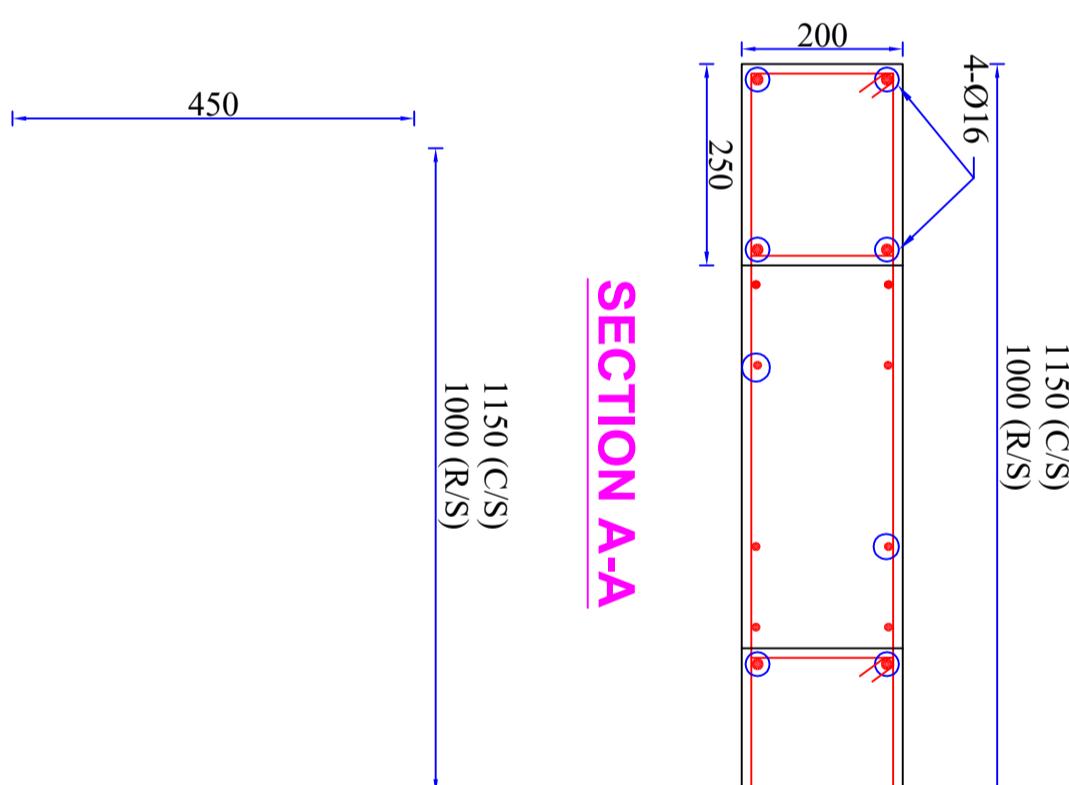
(MOHAMMAD SAIF UDDIN, SE)



### ELEVATION



### NAME PLATE



### SECTION A-A

## PLAN SHOWING NAME PLATE LOCATION ON REGULATOR

DESIGNED BY:

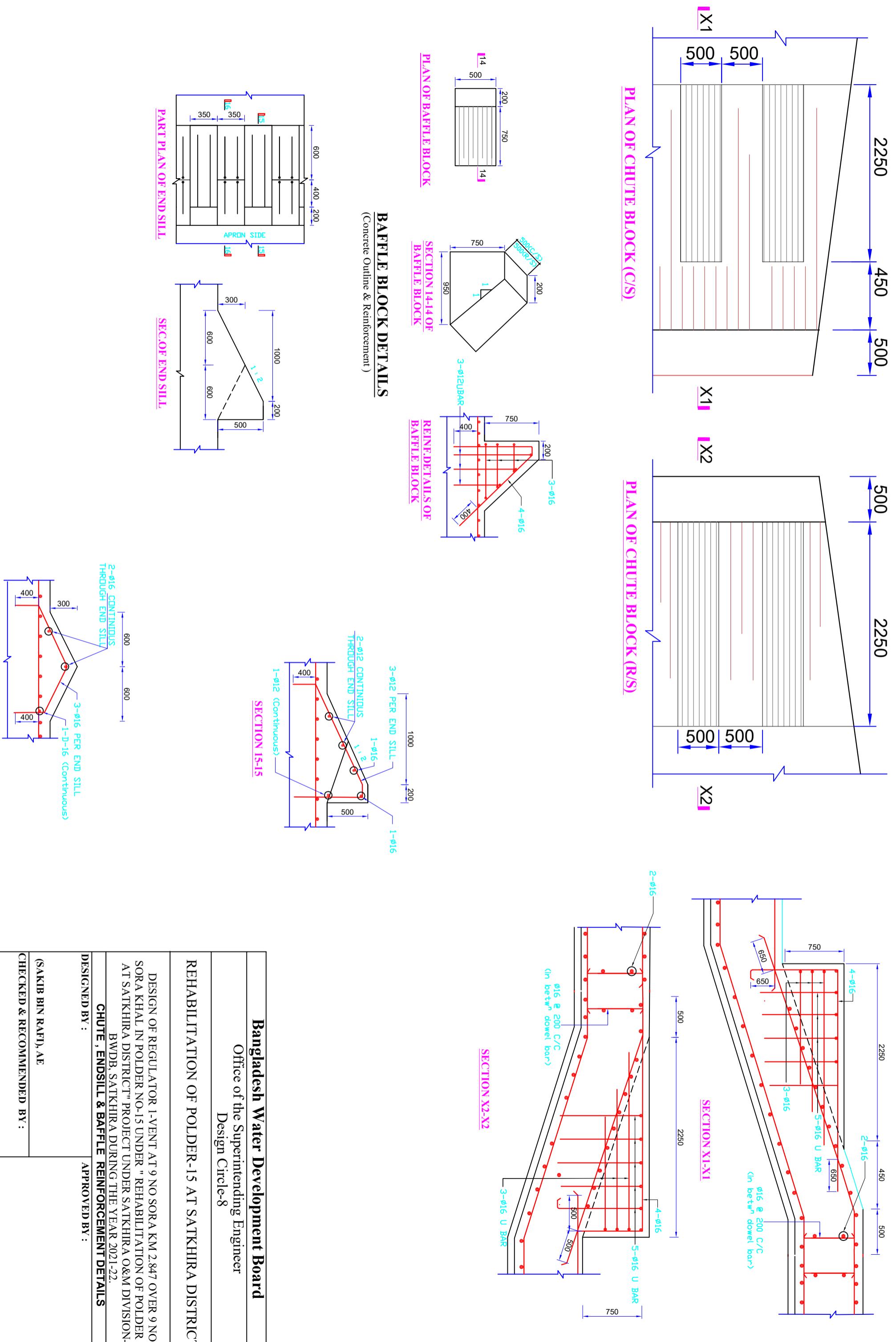
(SAKIB BIN RAHMAN, AE)

CHECKED & RECOMMENDED BY:

(JAKARIA PERVEZ, EE)

APPROVED BY:  
DATE:00-00-2022 DWG. NO.:DC-8-0000-25/25

(MOHAMMAD SAIF UDDIN, SE)



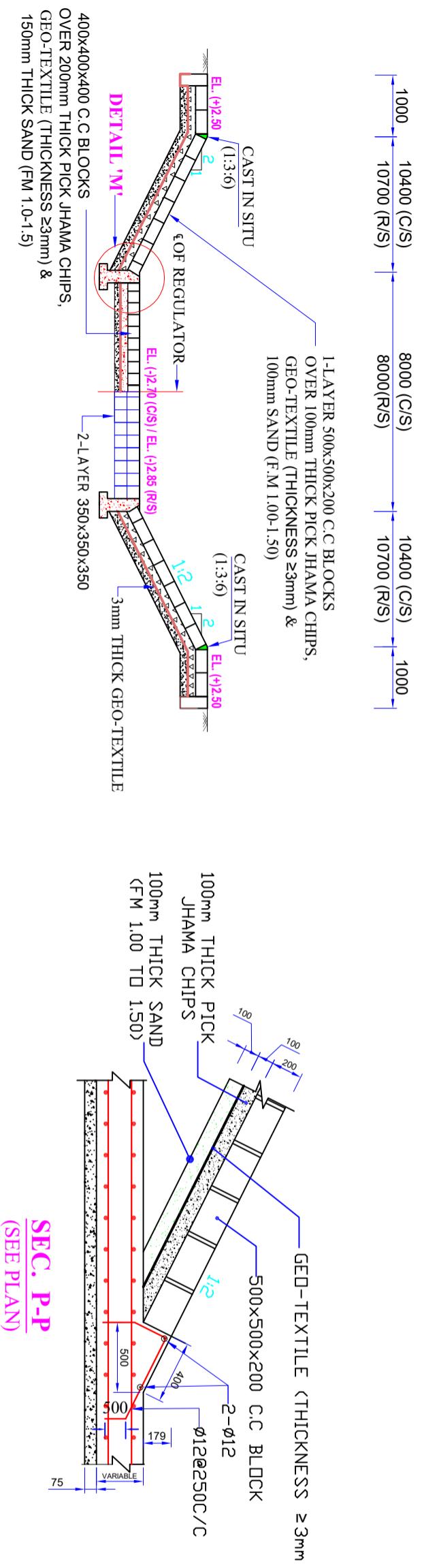
DESIGNED BY :	APPROVED BY :
(SAKIB BIN RAFI), AE	
CHECKED & RECOMMENDED BY:	(MOHAMMAD SAIF UDDIN), SE

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.

**CHUTE , ENDSILL & BAFFLE REINFORCEMENT DETAILS**

**Bangladesh Water Development Board**  
Office of the Superintending Engineer  
Design Circle-8  
REHABILITATION OF POLDER-15 AT SATKHIRA DISTRICT

**DATE:16-11-2020 DWG. NO.:DC-8-0009-17/25**



## SECTION K-K (SEE PLAN)

SEC. P-1  
(SEE PLAN)

The figure shows a technical drawing of a concrete foundation. The overall width is 750 mm, and the thickness is 400 mm. A stepped base has a top width of 100 mm and a height of 50 mm. Reinforcement bars, labeled C.C <math>1:36</math>, are shown at the top and bottom of the foundation. At the top, there are two vertical bars with a total width of 179 mm, and a horizontal bar spanning the width of the foundation. At the bottom, there are four vertical bars with a total width of 211 mm, and a horizontal bar spanning the width of the foundation. A yellow shaded area indicates the concrete mix.

**SECTION M-M**  
(SEE PLAN)

The drawing shows a rectangular concrete beam cross-section. The overall width is 750 mm, and the overall height is 400 mm. A central vertical cutout (groove) has a width of 100 mm and a depth of 50 mm. Reinforcement bars are indicated by four '4' labels at the top and bottom edges of the beam. A dimension line indicates a distance of 300 mm from the center of the groove to the right edge of the beam. A label 'C.C 1:3:6' is located at the bottom right. Blue arrows indicate the dimensions: 100, 50, 400, 750, and 300.

**Architectural Section Drawing:**

The drawing shows a cross-section of a building's foundation. The foundation consists of a stepped concrete wall with dimensions of 200 mm thick at the top and bottom, and 100 mm thick in the middle. The total height of the foundation is 1000 mm. The top surface is at elevation EL. (+2.50). The bottom surface is at elevation EL. (-0.50). A vertical column of text on the right indicates a 1-Layer C.C. (Concrete Cover) of 1:3:6, a 100mm THICKNESS, and a CFM of 1.00. A blue line labeled "GEO-TEXTIL" runs through the center of the foundation. Several yellow dashed circles are placed along this line, indicating the locations of rebar cages. The drawing also shows internal structural details like beams and columns.

SEC. Q-Q  
(SEE PLAN)

DETAILS

DETAILED

(SEE PLAN)

**Ø40mm S.S. PIPE (POST)**

20mm DIA S.S PIPE

Ø10 ANCHOR BOLT  
225 mm. LONG

REHA

**Bangladesh Water Development Board**

Office of the Superintendent Linguist  
Design Circle-8

## BILITATION 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,**

**DETAIL OF PROTECTIVE WORKS & OTHER**

APPROVED BY

(SAKIB BIN RAFI), AE

IN RAFI, AE

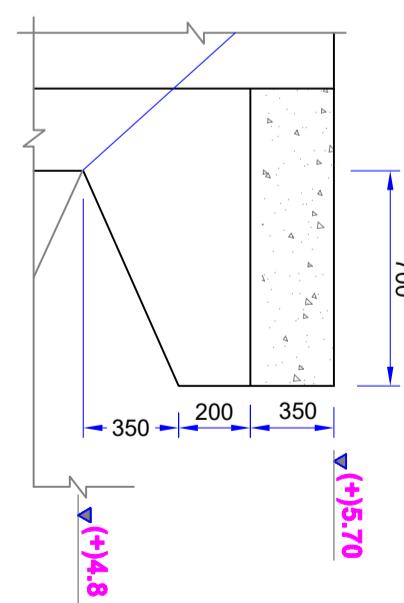
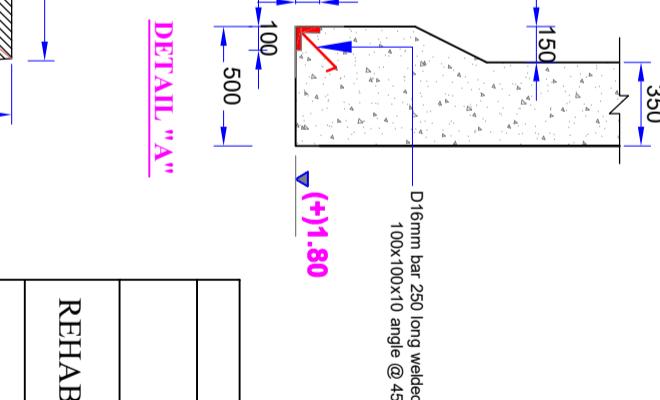
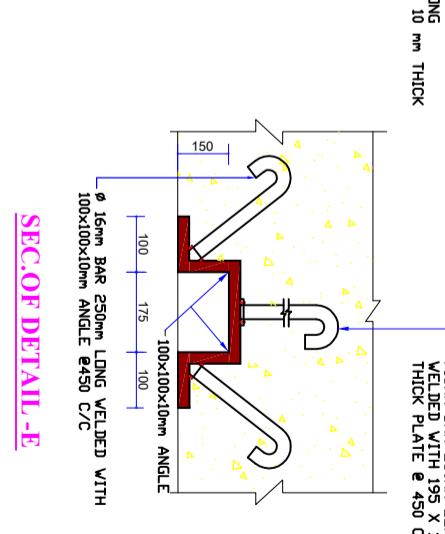
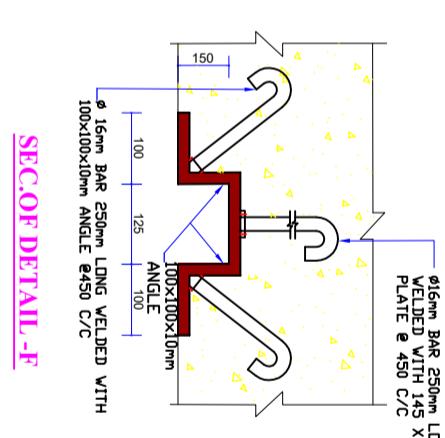
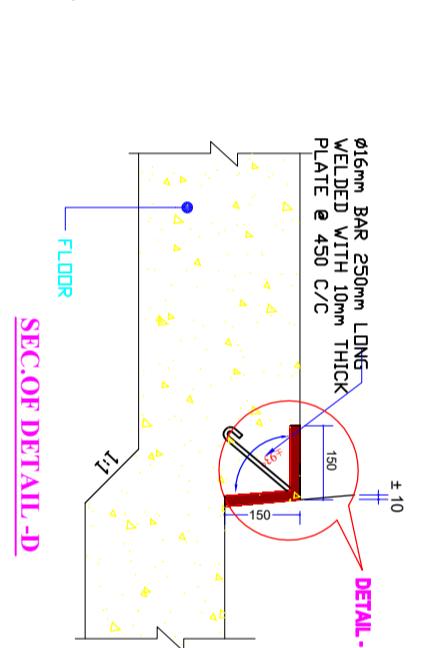
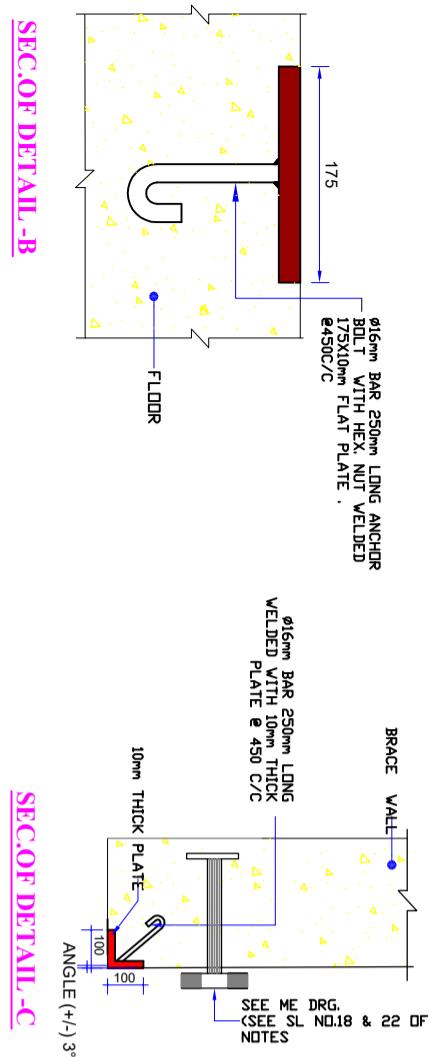
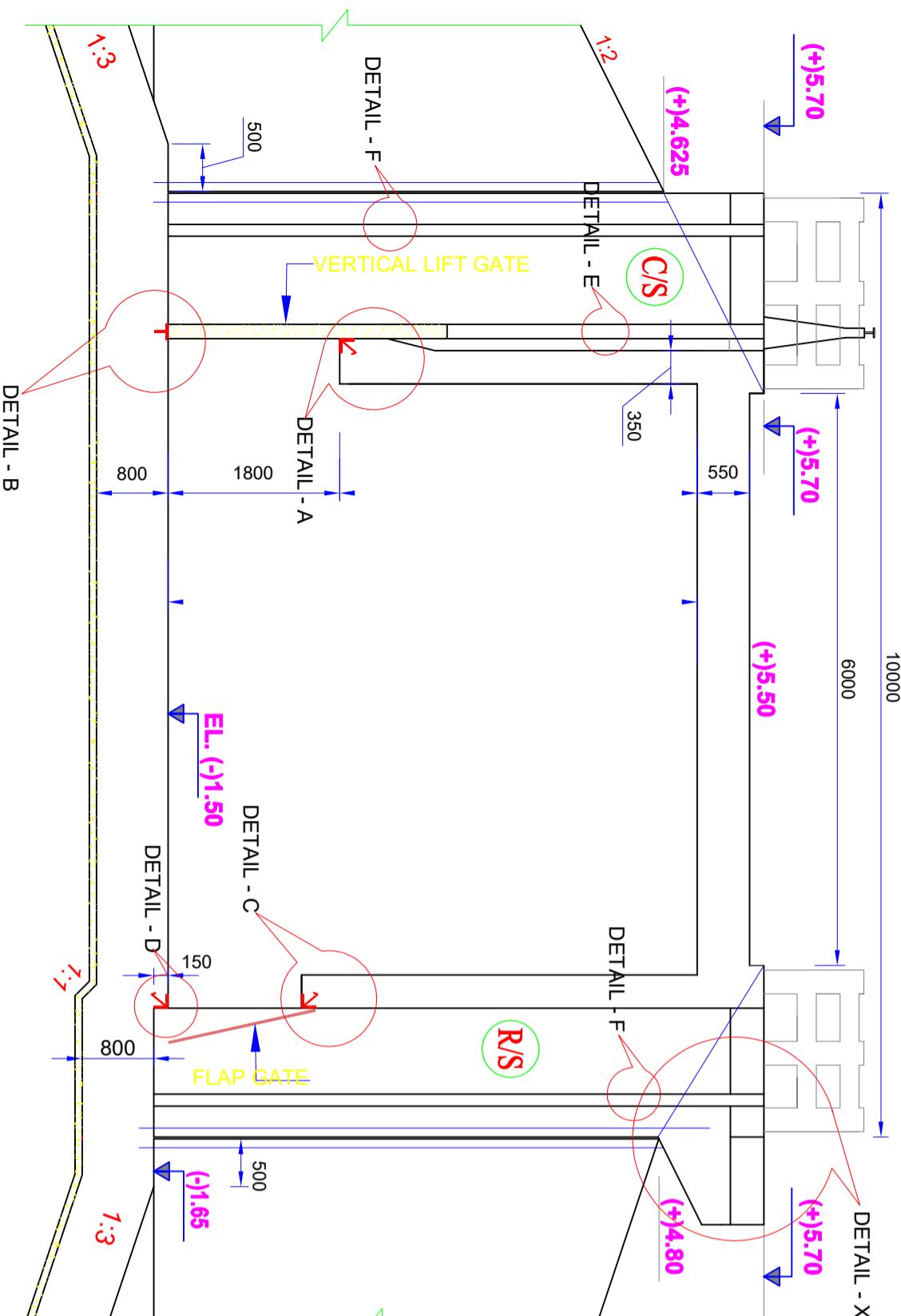
(SAND BIN KARL), AE  
CHECKED & RECOMMENDED BY

**IN KATH, AL**

## RUNG DETAILS

## RUNG DETAILS

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 NC  
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.

**MISCELLANEOUS METAL DETAIL**

DESIGNED BY :

APPROVED BY :

(SAKIB BIN RAFI), AE

CHECKED &amp; RECOMMENDED BY :