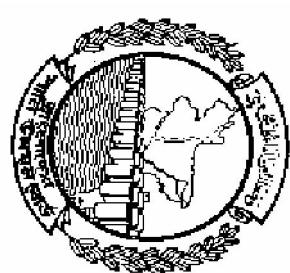


BANGLADESH WATER DEVELOPMENT BOARD



DRAINAGE IMPROVEMENT OF POLDER 1,2,6-8 AND 6-8(EXTENSION)

**DESIGN OF DRAINAGE CUM FLUSHING REGULATOR
2-VIENT(1.50mX1.80m) ON BAINBOSOT KHAL AT KM 13.00 IN POLDER NO-6-8(EXT) IN SATKHIRA
DISTRICT, UNDER SATKHIRA O&M DIVISION-2, BWDB, SATKHIRA.**

SATKHIRA O&M DIVISION-2, BWDB, SATKHIRA

**DESIGNED BY: DESIGN CIRCLE-8, BWDB, DHAKA.
JUNE, 2022**

BANGLADESH WATER DEVELOPMENT BOARD GROUNDWATER HYDROLOGY DIVISION-II FIELD BORE LOG										
PROJECT-Soil Boring for the construction of four Sluices at Bainbasat, Kulaura, Chumrikhali, and Khajurdanga under Satkira Sadar and Ashashun Upazila of Satkira O&M Division-2, BWDB, Satkira. LOCATION-Bainbasat site. CLIENT-XEN, Satkira O&M Division-2, BWDB, Satkira. DATE STARTED-27.11.2021 DRILLED BY GWHD-II										
No of Sample	Type of Sample	Scale	LITHOLOGICAL DESCRIPTION	DENSITY	COLOR	MOISTURE	DILATANCY	PENETRATION TEST	INDEX	REMARKS
D1 5				0 / 6 / 12 / 18 / 24 / 30 / 36 / 42 / 48 / 54 / 60 / 66 / 72 / 78 / 84 / 90 / 96 / 100	BLOWS ON SPOON	BLOWS ON CASING	NO OF BLOWS PER 1 FT PENET	Disturb		
D1 10				1 / 1 / 1 / 1						Undisturb
D2 15										
D3 20			Clay							
D4 25										
D5 30										
D6 35										
D7 40										
D8 45										
D9 50			Very Fine Sand Some Silt and Mica							
D10 55										
D11 60										
D12 65										
D13 70			Fine Sand Some Very Fine Sand and Mica							
D14										

M O I S T

Grey

Non-Plastic

0 1 1 1

6.50m Long
Sand Pile

M.D.=
Medium
Dense

EL (-1.875m PWD)

BH-1 3.288
BH-2 3.233
BH-3 4.530
BH-4 4.433
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BH-45

BANGLADESH WATER DEVELOPMENT BOARD
GROUNDWATER HYDROLOGY
GROUNDWATER HYDROLOGY DIVISION-II

FIELD BORE LOG

PROJECT-Soil Boring for the construction of four Sluices at Bainbasat.

SITE- Bainbasat Site.

Kulutia, Chumrikhali and Khajurdanga under Sakhira Sadar

and Ashtashuni Upazila of Sakhira O&M Division-2, BWDB, Sakhira.

LOCATION-Bainbasat Site.

P.S.-Ashasun

HOLE NO-04

DIST. Sakhira.

GROUND LEVEL (+)1.715 m.

CLINT-GEN Sakhira O&M Division-2, BWDB, Sakhira.

DATE STARTED-30.11.2021

DATE COMPLETED-30.11.2021

OF DATE-01.12.2021

TOTAL DEPTH-72 ft.

DRILLED BY GWHD-II

UNIT Rg-21

DATE STARTED-02.12.2021

DATE COMPLETED-02.12.2021

OF DATE-03.12.2021

TOTAL DEPTH-72 ft.

DRILLED BY GWHD-II

UNIT Rg-21

No of Sample	Type of Sample	Scale	LITHOLOGICAL DESCRIPTION	PHYSICAL		DISTURBED SAMPLES		PENETRATION TEST		INDEX	
				DENSITY	COLOR	MOISTURE	BLOWS ON SPOON	BLOWS ON CASING	NO OF BLOWS PER 1 FT PENET	REMARKS	
D1 5				0 / 6 / 12 / 18 / 24	0 / 6 / 12 / 18 / 24	0 / 6 / 12 / 18 / 24	10	20	30	L.BR.= LIGHT BROWN	Disturb Undisturb
D2 10				1 / 1 / 1 / 1	1 / 1 / 1 / 1	1 / 1 / 1 / 1	10	20	30	M.D.= MEDIUM	
D3 15			Clay	1 / 1 / 1 / 1	1 / 1 / 1 / 1	1 / 1 / 1 / 1	10	20	30	S.PL.= SEMI DENSE	
D4 20			Very Soft	1 / 1 / 1 / 1	1 / 1 / 1 / 1	1 / 1 / 1 / 1	10	20	30	M.S.T.= MEDIUM STIFF	
D5 25			Grey	0 / 1 / 1 / 1	0 / 1 / 1 / 1	0 / 1 / 1 / 1	10	20	30	D=2.775m PWD	
D6 30			Plastic	0 / 1 / 1 / 1	0 / 1 / 1 / 1	0 / 1 / 1 / 1	10	20	30	D=2.775m PWD	
D7 35			Very Soft	0 / 1 / 1 / 2	0 / 1 / 1 / 2	0 / 1 / 1 / 2	10	20	30	D=2.775m PWD	
D8 40			Grey	1 / 1 / 1 / 1	1 / 1 / 1 / 1	1 / 1 / 1 / 1	10	20	30	D=2.775m PWD	
D9 45			Dense	1 / 1 / 1 / 1	1 / 1 / 1 / 1	1 / 1 / 1 / 1	10	20	30	D=2.775m PWD	
D10 50			Non-Plastic	1 / 1 / 1 / 5	1 / 1 / 1 / 5	1 / 1 / 1 / 5	10	20	30	D=2.775m PWD	
D11 55			Grey	6 / 16 / 16 / 17	6 / 16 / 16 / 17	6 / 16 / 16 / 17	10	20	30	D=2.775m PWD	
D12 60			Dense	8 / 16 / 17 / 18	8 / 16 / 17 / 18	8 / 16 / 17 / 18	10	20	30	D=2.775m PWD	
D13 65			Non-Plastic	9 / 15 / 17 / 18	9 / 15 / 17 / 18	9 / 15 / 17 / 18	10	20	30	D=2.775m PWD	
D14 70			Grey	10 / 16 / 18 / 19	10 / 16 / 18 / 19	10 / 16 / 18 / 19	10	20	30	D=2.775m PWD	
			Very Fine Sand Some Silt and Mica	10 / 16 / 18 / 19	10 / 16 / 18 / 19	10 / 16 / 18 / 19	10	20	30	D=2.775m PWD	
			Dense	11 / 17 / 19 / 20	11 / 17 / 19 / 20	11 / 17 / 19 / 20	10	20	30	D=2.775m PWD	
			Non-Plastic	12 / 18 / 20 / 21	12 / 18 / 20 / 21	12 / 18 / 20 / 21	10	20	30	D=2.775m PWD	
			Very Fine Sand Little Fine and Mica	13 / 19 / 21 / 22	13 / 19 / 21 / 22	13 / 19 / 21 / 22	10	20	30	D=2.775m PWD	
			Dense	14 / 20 / 22 / 23	14 / 20 / 22 / 23	14 / 20 / 22 / 23	10	20	30	D=2.775m PWD	
			Non-Plastic	15 / 21 / 23 / 24	15 / 21 / 23 / 24	15 / 21 / 23 / 24	10	20	30	D=2.775m PWD	
			Grey	16 / 22 / 24 / 25	16 / 22 / 24 / 25	16 / 22 / 24 / 25	10	20	30	D=2.775m PWD	
			Dense	17 / 23 / 25 / 26	17 / 23 / 25 / 26	17 / 23 / 25 / 26	10	20	30	D=2.775m PWD	
			Non-Plastic	18 / 24 / 26 / 27	18 / 24 / 26 / 27	18 / 24 / 26 / 27	10	20	30	D=2.775m PWD	
			Grey	19 / 25 / 27 / 28	19 / 25 / 27 / 28	19 / 25 / 27 / 28	10	20	30	D=2.775m PWD	
			Dense	20 / 26 / 28 / 29	20 / 26 / 28 / 29	20 / 26 / 28 / 29	10	20	30	D=2.775m PWD	
			Non-Plastic	21 / 27 / 29 / 30	21 / 27 / 29 / 30	21 / 27 / 29 / 30	10	20	30	D=2.775m PWD	
			Grey	22 / 28 / 30 / 31	22 / 28 / 30 / 31	22 / 28 / 30 / 31	10	20	30	D=2.775m PWD	
			Dense	23 / 29 / 31 / 32	23 / 29 / 31 / 32	23 / 29 / 31 / 32	10	20	30	D=2.775m PWD	
			Non-Plastic	24 / 30 / 32 / 33	24 / 30 / 32 / 33	24 / 30 / 32 / 33	10	20	30	D=2.775m PWD	
			Grey	25 / 31 / 33 / 34	25 / 31 / 33 / 34	25 / 31 / 33 / 34	10	20	30	D=2.775m PWD	
			Dense	26 / 32 / 34 / 35	26 / 32 / 34 / 35	26 / 32 / 34 / 35	10	20	30	D=2.775m PWD	
			Non-Plastic	27 / 33 / 35 / 36	27 / 33 / 35 / 36	27 / 33 / 35 / 36	10	20	30	D=2.775m PWD	
			Grey	28 / 34 / 36 / 37	28 / 34 / 36 / 37	28 / 34 / 36 / 37	10	20	30	D=2.775m PWD	
			Dense	29 / 35 / 37 / 38	29 / 35 / 37 / 38	29 / 35 / 37 / 38	10	20	30	D=2.775m PWD	
			Non-Plastic	30 / 36 / 38 / 39	30 / 36 / 38 / 39	30 / 36 / 38 / 39	10	20	30	D=2.775m PWD	
			Grey	31 / 37 / 39 / 40	31 / 37 / 39 / 40	31 / 37 / 39 / 40	10	20	30	D=2.775m PWD	
			Dense	32 / 38 / 40 / 41	32 / 38 / 40 / 41	32 / 38 / 40 / 41	10	20	30	D=2.775m PWD	
			Non-Plastic	33 / 39 / 41 / 42	33 / 39 / 41 / 42	33 / 39 / 41 / 42	10	20	30	D=2.775m PWD	
			Grey	34 / 40 / 42 / 43	34 / 40 / 42 / 43	34 / 40 / 42 / 43	10	20	30	D=2.775m PWD	
			Dense	35 / 41 / 43 / 44	35 / 41 / 43 / 44	35 / 41 / 43 / 44	10	20	30	D=2.775m PWD	
			Non-Plastic	36 / 42 / 44 / 45	36 / 42 / 44 / 45	36 / 42 / 44 / 45	10	20	30	D=2.775m PWD	
			Grey	37 / 43 / 45 / 46	37 / 43 / 45 / 46	37 / 43 / 45 / 46	10	20	30	D=2.775m PWD	
			Dense	38 / 44 / 46 / 47	38 / 44 / 46 / 47	38 / 44 / 46 / 47	10	20	30	D=2.775m PWD	
			Non-Plastic	39 / 45 / 47 / 48	39 / 45 / 47 / 48	39 / 45 / 47 / 48	10	20	30	D=2.775m PWD	
			Grey	40 / 46 / 48 / 49	40 / 46 / 48 / 49	40 / 46 / 48 / 49	10	20	30	D=2.775m PWD	
			Dense	41 / 47 / 49 / 50	41 / 47 / 49 / 50	41 / 47 / 49 / 50	10	20	30	D=2.775m PWD	
			Non-Plastic	42 / 48 / 50 / 51	42 / 48 / 50 / 51	42 / 48 / 50 / 51	10	20	30	D=2.775m PWD	
			Grey	43 / 49 / 51 / 52	43 / 49 / 51 / 52	43 / 49 / 51 / 52	10	20	30	D=2.775m PWD	
			Dense	44 / 50 / 52 / 53	44 / 50 / 52 / 53	44 / 50 / 52 / 53	10	20	30	D=2.775m PWD	
			Non-Plastic	45 / 51 / 53 / 54	45 / 51 / 53 / 54	45 / 51 / 53 / 54	10	20	30	D=2.775m PWD	

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, $f_y \geq 400.00 \text{ N/mm}^2$.
5. CONCRETE FOR CC BLOCKS SHALL HAVE MINIMUM STRENGTH, $f_c \geq 10.50 \text{ N/mm}^2$ 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. THE SURFACE OF CONSTRUCTION JOINTS SHALL BE WASHED THOROUGHLY WITH WATER JET & SHALL BE CLEAN ENOUGH AFTER THAT, SURFACE SHALL BE DRY PRIOR TO PLACEMENT OF ADJOINING CONCRETE.
9. CONCRETE MIXTURE SHALL BE POURED AS QUICK AS POSSIBLE BUT NOT LATER THAN 45 MINUTES AFTER MIXING.
10. 75 mm LEAN CONCRETE AT BASE SHALL BE IN 1:3:6.
11. THE LEAN CONCRETE AT FOUNDATION OF THE PROPOSED REGULATOR SHALL BE PLACED AFTER PROPERLY PREPARING & COMPACTING EXCAVATED BASE.
12. 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
13. MINIMUM LAP LENGTH SHALL BE 40 TIMES THE BAR DIAMETER.
14. 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 THAN 1.30 TIMES MINIMUM LAP LENGTH.
15. REINFORCING BAR MUST BE SUPPORTED IN ITS PROPER POSITION BY USE OF MORTAR BLOCK, SUPPORTS OR BY OTHERS APPROVED MEANS.
16. SAND FILLING IN FOUNDATION SHOULD BE DONE WITH SAND OF F.M. ≥ 1.50 IN LAYERS OF 150 mm THICK LAYER BY LAYER AND COMPACTED TO ATTAIN MINIMUM 50% RELATIVE DENSITY.
17. UNLESS OTHERWISE SPECIFIED, BACK FILLING SHALL BE DONE WITH SAND (F.M. ≥ 0.80) FREE FROM VEGETABLE ROOTS AND ORGANIC MATTER, BACK FILLING FOR U-SHAPE WALL SHALL BE DONE SIMULTANEOUSLY ON BOTH WALLS.
18. DESIGN OF GATE AND HOISTING SYSTEM WILL BE PREPARED BY DESIGN CIRCLE-III, BWDB, DHAKA.
19. GATE TO BE OPERATED IN CONTROLLED WAY TO AVOID ANY SCOUR WHEN HEAD DIFFERENCE IS BEYOND 0.60m.
20. THE EMBEDDED PARTS OF GATE TO BE INSTALLED DURING CONSTRUCTION OF BARREL PART AND IT SHALL BE DONE IN ACCORDANCE WITH APPROVED MECHANICAL DRAWING.
21. THE GATE SHALL BE INSTALLED BEFORE THE OPERATION OF THE STRUCTURE.
22. ANY ERROR/OMISSION IF DETECTED SHALL BE REFERRED TO THE CONCERNED DESIGN OFFICE TAKING NECESSARY ACTION.
23. ALL BORE HOLES SHALL BE SEALED BEFORE CONSTRUCTION OF REGULATOR.

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, $f_y \geq 400.00 \text{ N/mm}^2$.
5. CONCRETE FOR CC BLOCKS SHALL HAVE MINIMUM STRENGTH, $f_c \geq 10.50 \text{ N/mm}^2$ 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. THE SURFACE OF CONSTRUCTION JOINTS SHALL BE WASHED THOROUGHLY WITH WATER JET & SHALL BE CLEAN ENOUGH AFTER THAT, SURFACE SHALL BE DRY PRIOR TO PLACEMENT OF ADJOINING CONCRETE.
9. CONCRETE MIXTURE SHALL BE POURED AS QUICK AS POSSIBLE BUT NOT LATER THAN 45 MINUTES AFTER MIXING.
10. 75 mm LEAN CONCRETE AT BASE SHALL BE IN 1:3:6.
11. THE LEAN CONCRETE AT FOUNDATION OF THE PROPOSED REGULATOR SHALL BE PLACED AFTER PROPERLY PREPARING & COMPACTING EXCAVATED BASE.
12. 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
13. MINIMUM LAP LENGTH SHALL BE 40 TIMES THE BAR DIAMETER.
14. 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 THAN 1.30 TIMES MINIMUM LAP LENGTH.
15. REINFORCING BAR MUST BE SUPPORTED IN ITS PROPER POSITION BY USE OF MORTAR BLOCK, SUPPORTS OR BY OTHERS APPROVED MEANS.
16. SAND FILLING IN FOUNDATION SHOULD BE DONE WITH SAND OF F.M. ≥ 1.50 IN LAYERS OF 150 mm THICK LAYER BY LAYER AND COMPACTED TO ATTAIN MINIMUM 50% RELATIVE DENSITY.
17. UNLESS OTHERWISE SPECIFIED, BACK FILLING SHALL BE DONE WITH SAND (F.M. ≥ 0.80) FREE FROM VEGETABLE ROOTS AND ORGANIC MATTER, BACK FILLING FOR U-SHAPE WALL SHALL BE DONE SIMULTANEOUSLY ON BOTH WALLS.
18. DESIGN OF GATE AND HOISTING SYSTEM WILL BE PREPARED BY DESIGN CIRCLE-III, BWDB, DHAKA.
19. GATE TO BE OPERATED IN CONTROLLED WAY TO AVOID ANY SCOUR WHEN HEAD DIFFERENCE IS BEYOND 0.60m.
20. THE EMBEDDED PARTS OF GATE TO BE INSTALLED DURING CONSTRUCTION OF BARREL PART AND IT SHALL BE DONE IN ACCORDANCE WITH APPROVED MECHANICAL DRAWING.
21. THE GATE SHALL BE INSTALLED BEFORE THE OPERATION OF THE STRUCTURE.
22. ANY ERROR/OMISSION IF DETECTED SHALL BE REFERRED TO THE CONCERNED DESIGN OFFICE TAKING NECESSARY ACTION.
23. 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: 761, DATE: 12-01-2022 AND ADDITIONAL DATA RECEIVED FROM EE, SATKHIRA O&M DIVISION-2 BWDB SATKHIRA THROUGH 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 US & DS 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	
DRAINAGE IMPROVEMENT OF POLDER 12.6-8 AND 6-(EXTENSION)	DESIGN OF DRAINAGE CUM FLOODING REGULATOR

2-VENTI(1.50mx1.80m) ON BANBOSOT KHAL AT KM.13.00 IN POLDER
NO-6-(EXT) IN SATKHIRA DISTRICT, UNDER SATKHIRA O&M DIVISION-2,
BWDB, SATKHIRA.

NOTES

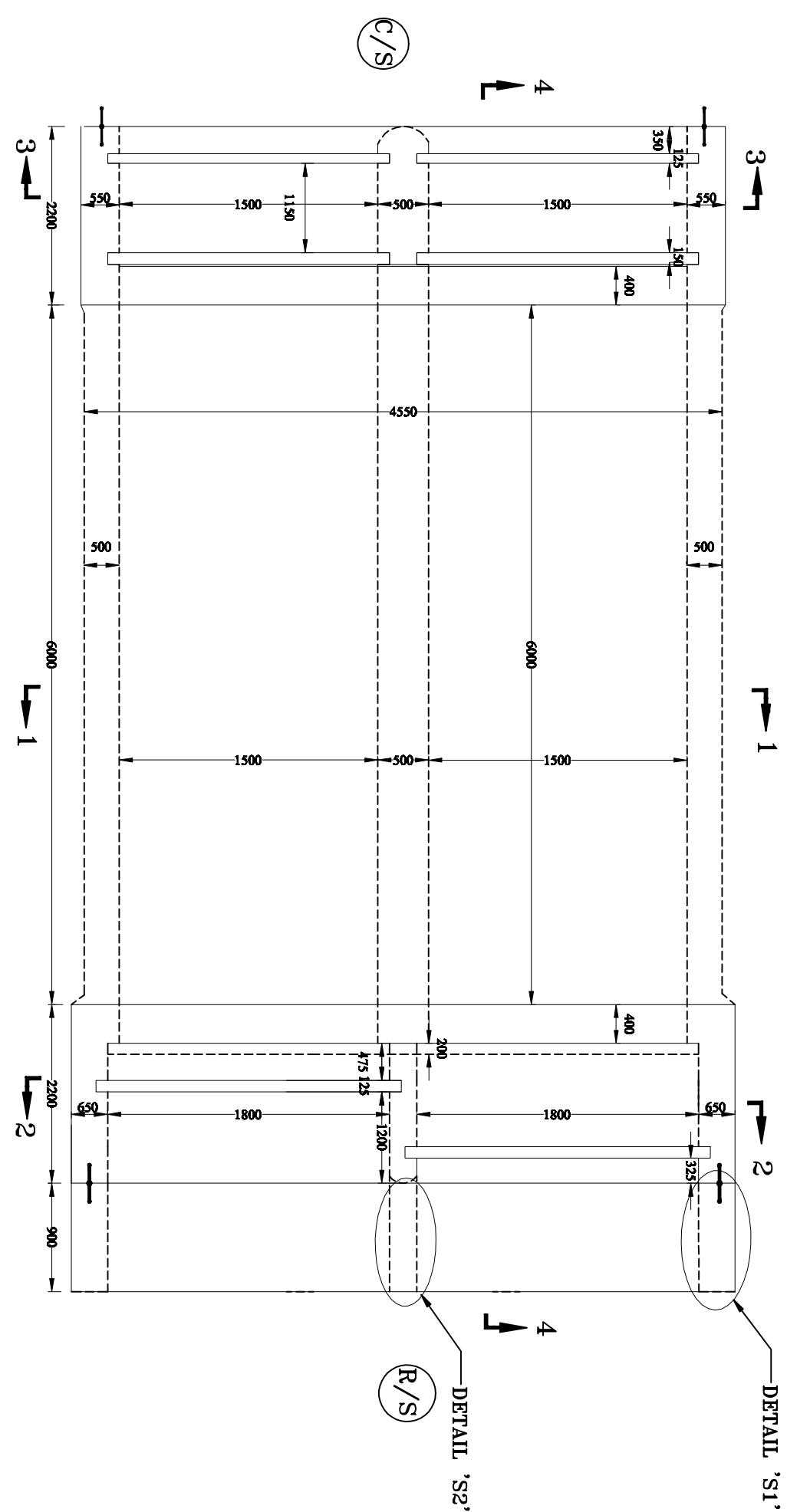
DESIGNED BY:	APPROVED BY:
(ZAYED BIN SAIF, AE)	
CHECKED & RECOMMENDED BY:	(MOHAMMAD SAIF UDDIN), SE

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

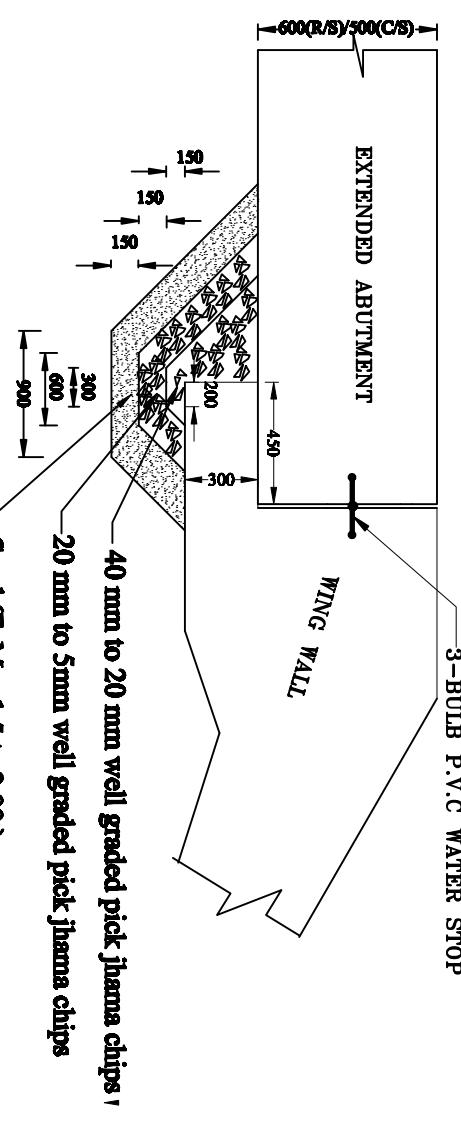


Scale : Not To Scale

JAKARIA PERVEZ, SEE (MOHAMMAD SAIF UDDIN), SEE DATE: DWD NO:DC 8 0000 05/31



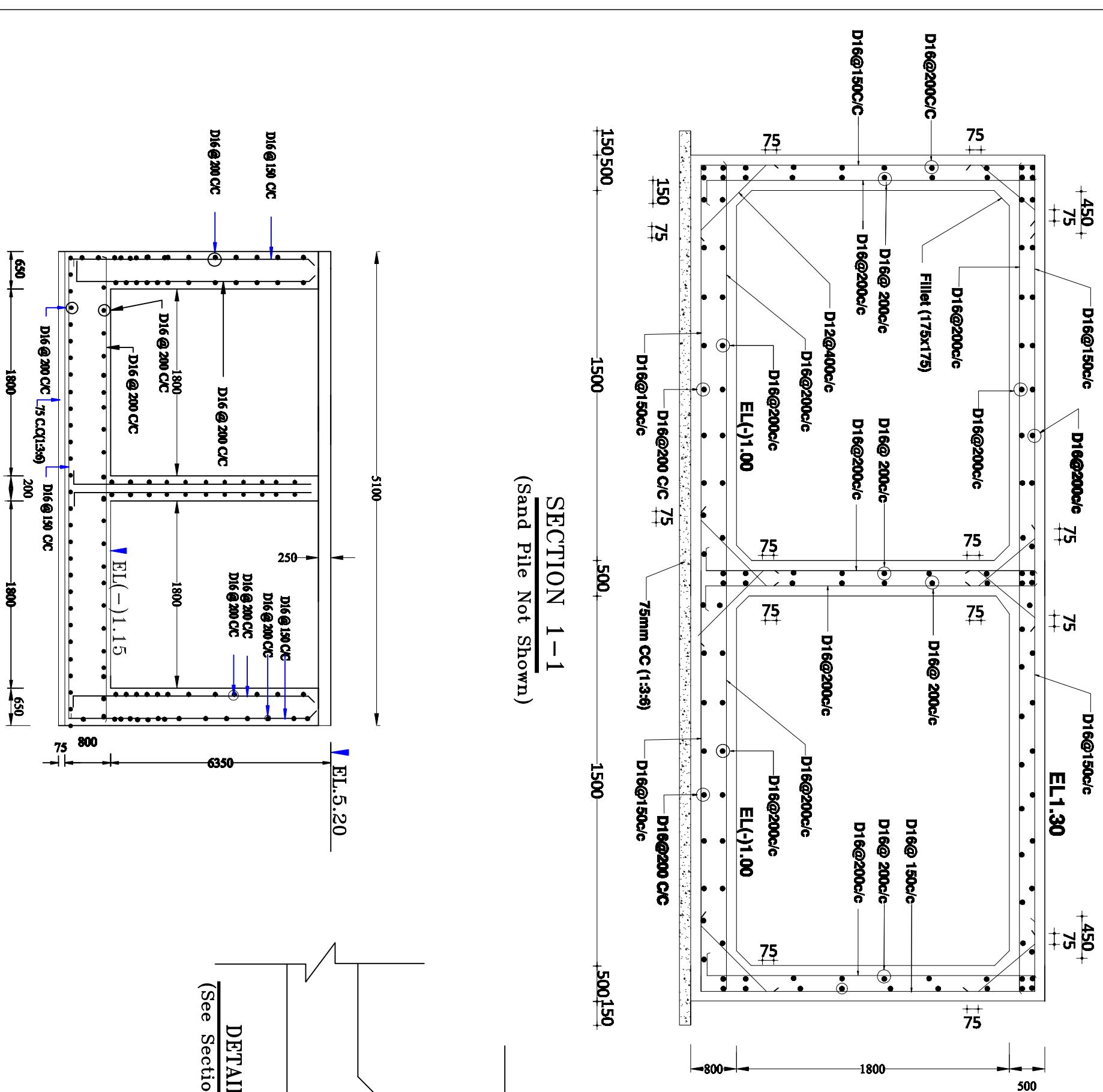
PLAN OF ABUTMENT AND PIER



EXPANSION JOINT DETAIL 'Y'(SEE PLAN)

(NOT TO SCALE)

Bangladesh Water Development Board	
Office of the Superintending Engineer	Design Circle-8
DRAINAGE IMPROVEMENT OF POLDER 1,2,6-8 AND 6-8(EXTENSION)	
DESIGN OF DRAINAGE CUM FLUSHING REGULATOR	
2-VENT(1.50x1.80m) ON BANBOSOT KHAL AT KM 13.00 IN POLDER	
NO-6-8(EXT) IN SATKHERA DISTRICT, UNDER SATKHERA O&M DIVISION-2,	
BWDB, SAKHERA.	
PLAN OF DRAINAGE CUM FLUSHING REGULATOR	
DESIGNED BY:	APPROVED BY:
ZAYED BIN SAIF, AE	
CHECKED & RECOMMENDED BY:	
JAKARIA PERVEZ, EE	MOHAMMAD SAIF UDDIN, SE
DATE:	DWG. NO.:DC-8-0000-07/21

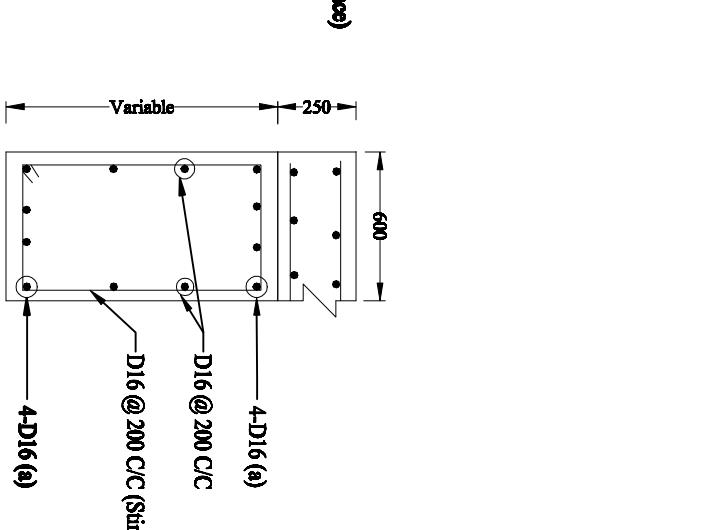
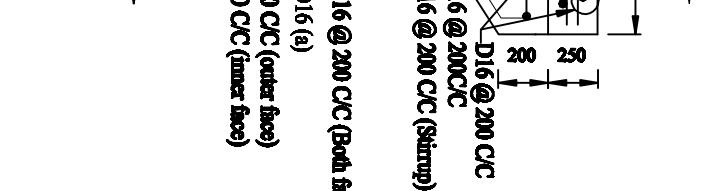
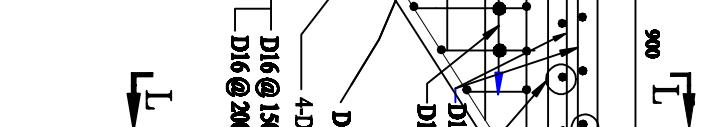
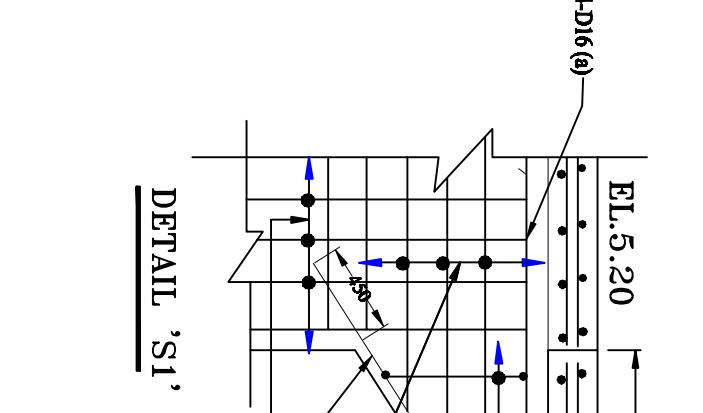
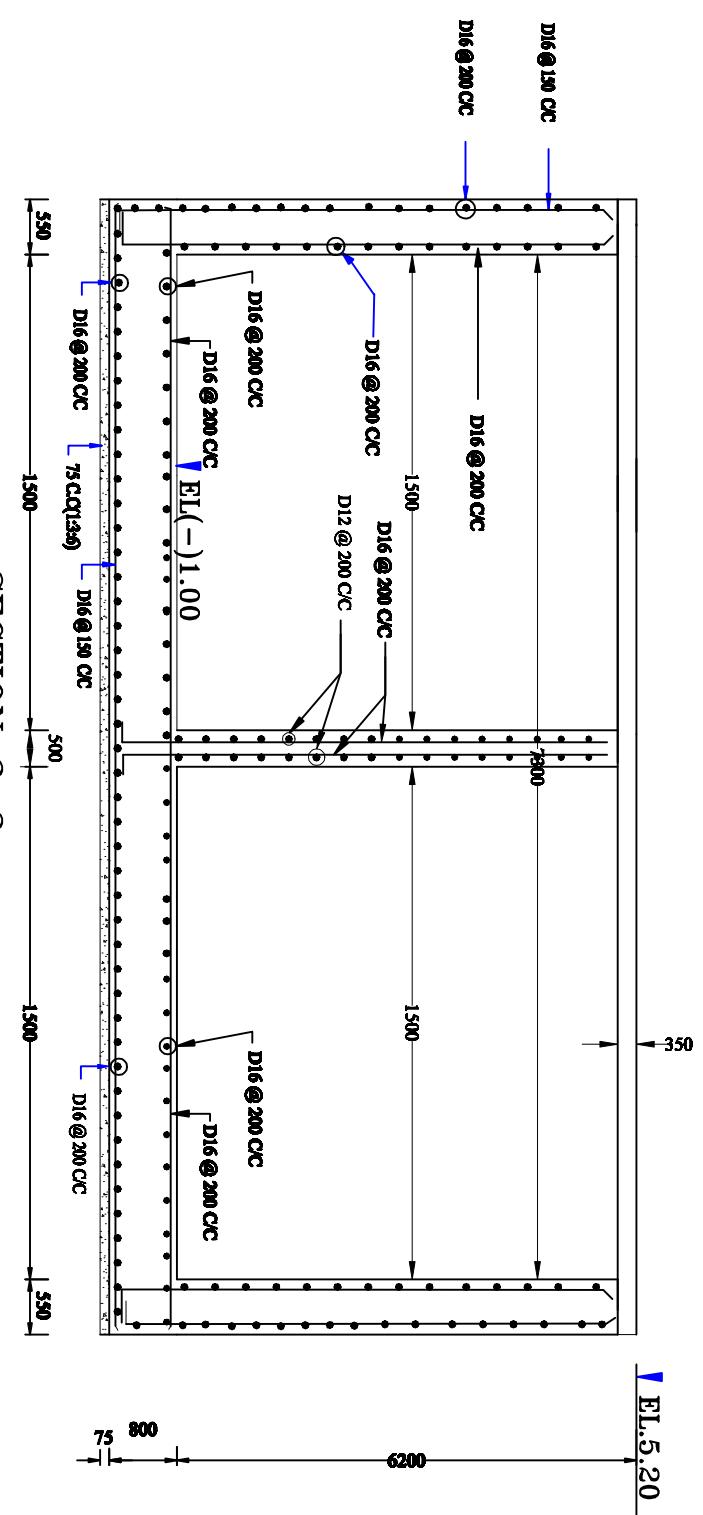


SECTION 1-1
(Sand Pile Not Shown)

DETAIL 'A'
(See Section A-A)

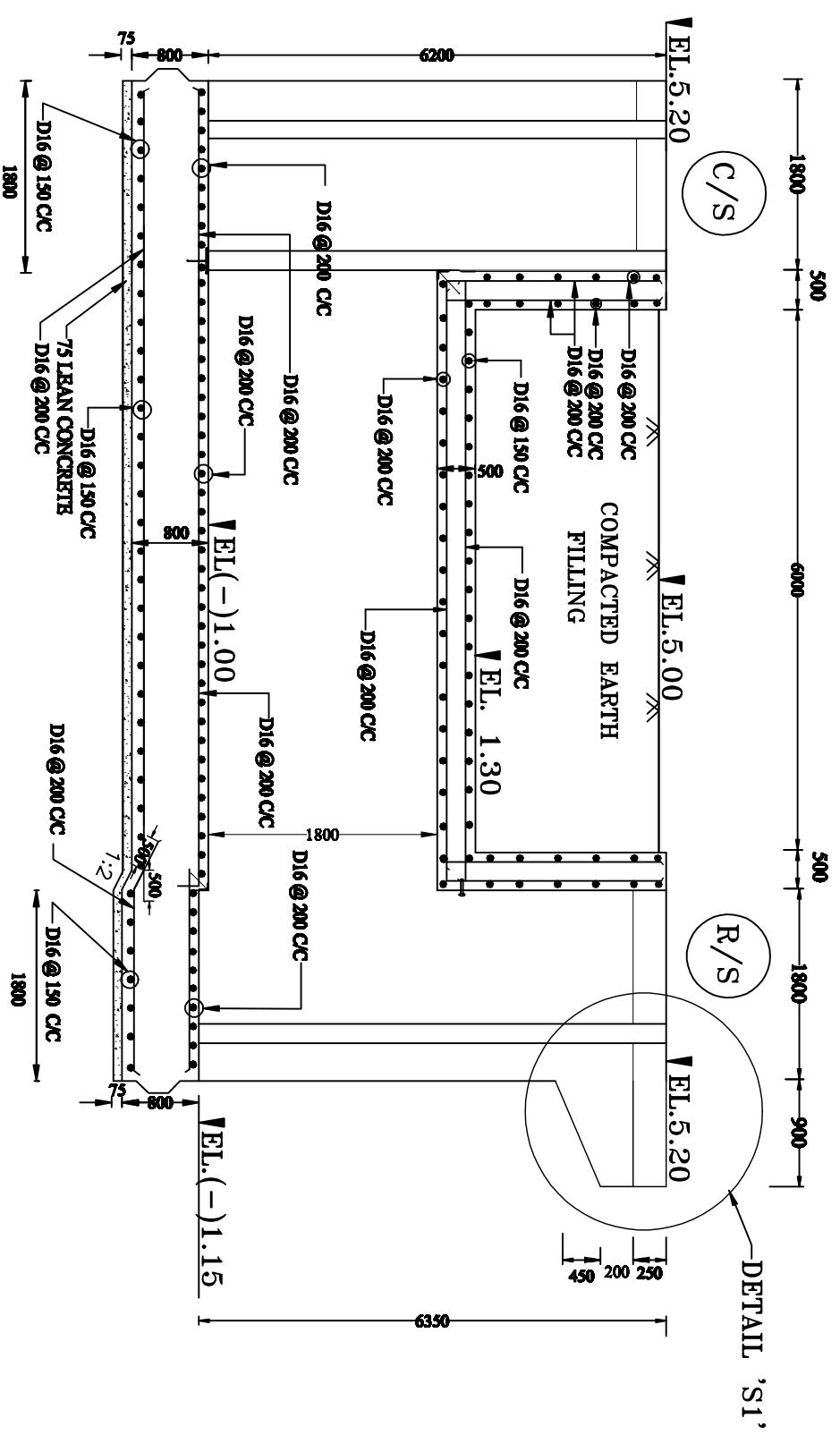
See Mechanical Drawing
(It is to be fixed before
Concrete Casting)

DETAIL 'I'
(See Section A-A)



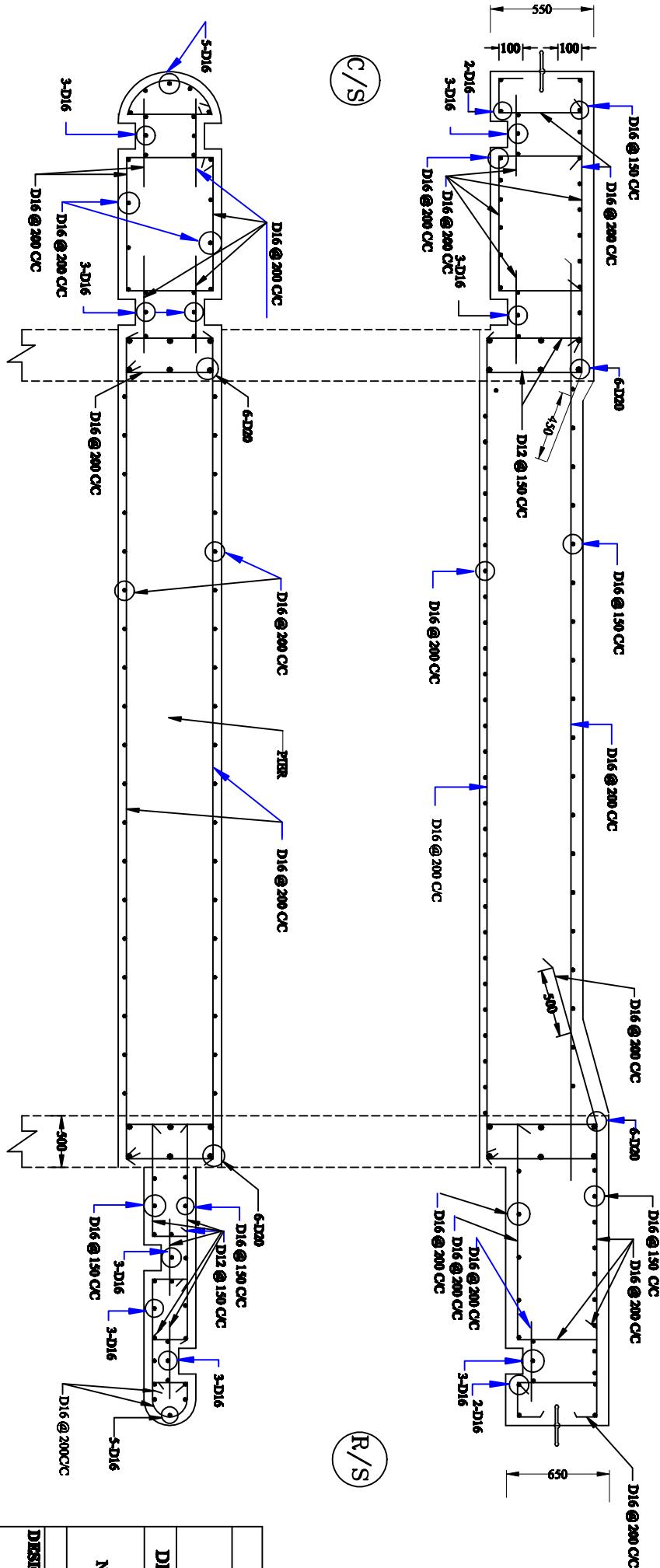
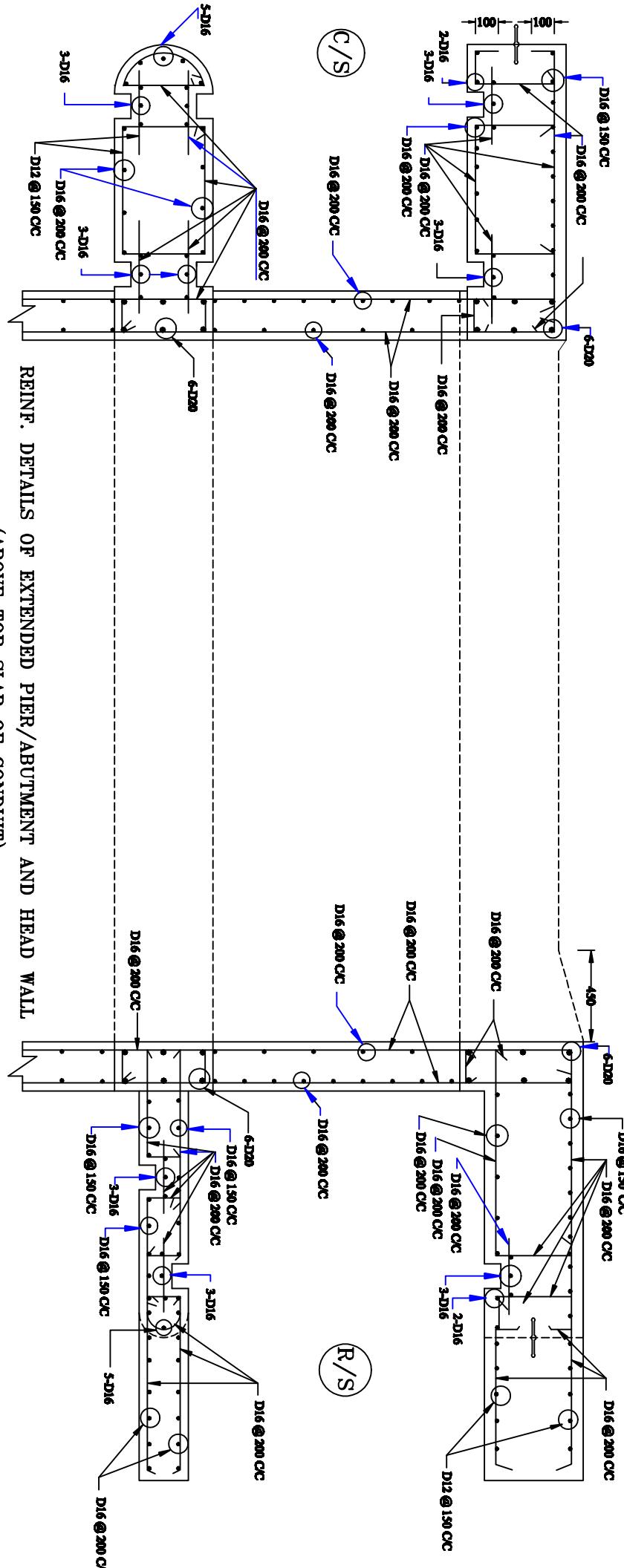
SECTION 3-3
(Sand Pile Not Shown)

SECTION L-L



SECTION 4-4
(Sand Pile Not Shown)

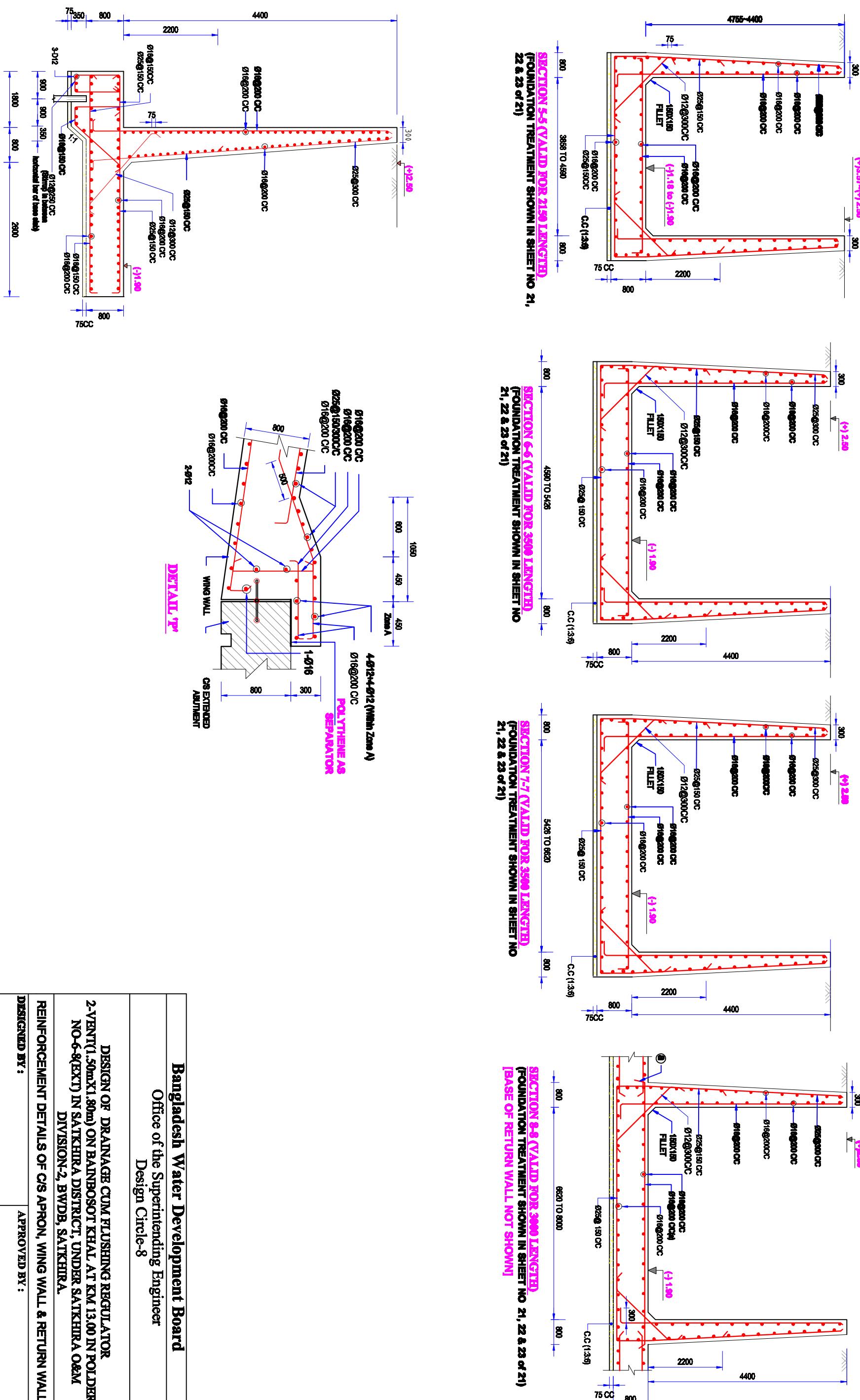
Bangladesh Water Development Board	
Office of the Superintending Engineer	
Design Circle-8	
DRAINAGE IMPROVEMENT OF POLDER 1,2,6-8 AND 6-8(EXTNS	
DESIGN OF DRAINAGE CUM FLUSHING REGULATOR	
2-VENT(1.50mX1.80m) ON BAINBOSOT KHAL AT KM 13.00 IN POLDER	
NO-6-8(EXT) IN SATKHIRA DISTRICT, UNDER SATKHARA O&M DIVISION	
BWDE, SATKHARA.	
REINFORCEMENT DETAILS OF ABUTMENT & BARREL	
DESIGNED BY:	APPROVED BY:
ZAYED BIN SAID, AE	(MOHAMMAD SAIF UDDIN, SI)
DATE:	DWG. NO.:DC-8-0000-09/21
(NOT TO SCALE)	

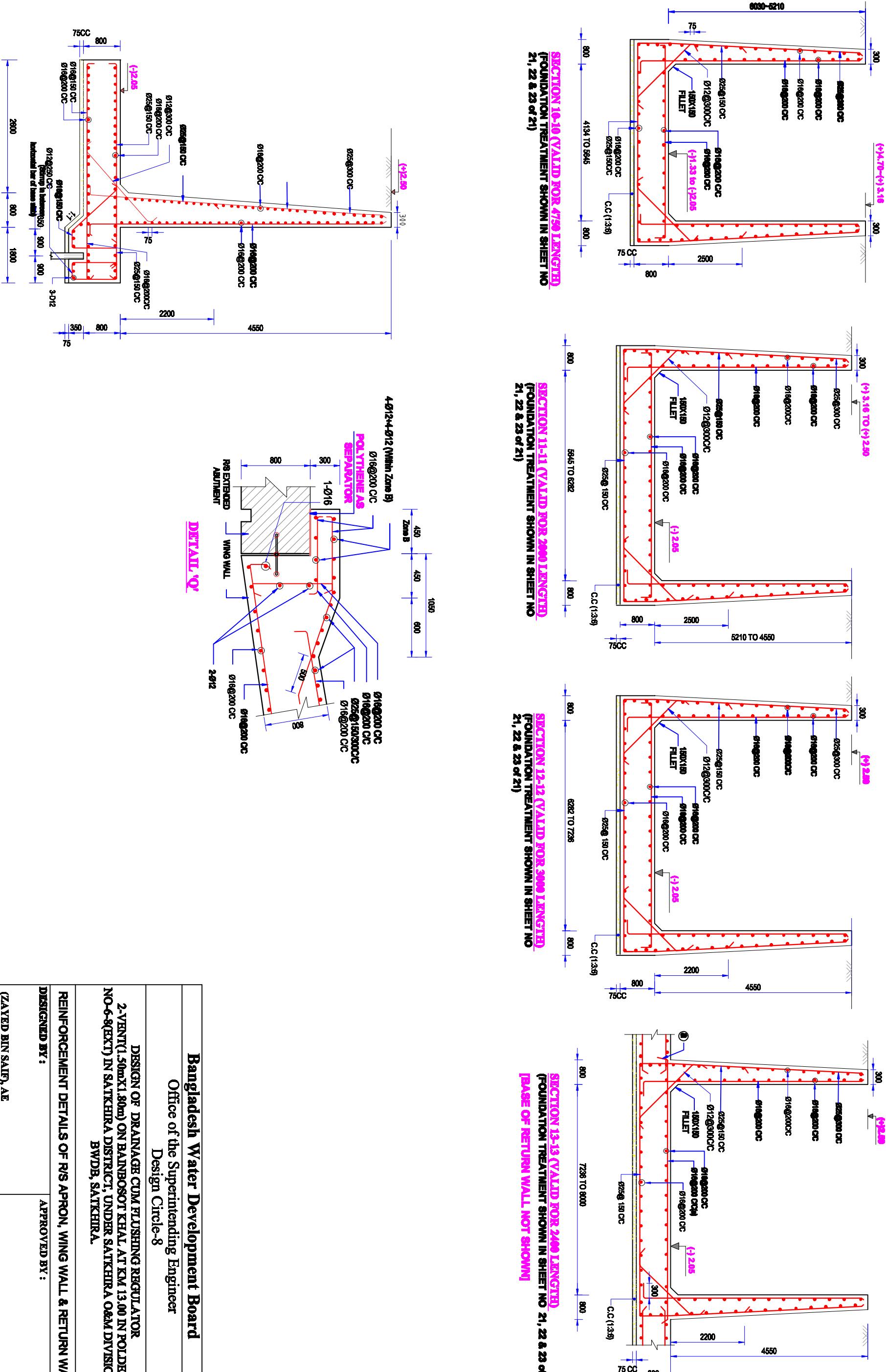


REINF. DETAILS OF EXTENDED PIER/ABUTMENT AND HEAD WALL
(BELOW TOP SLAB OF CONDUIT)

(NOT TO SCALE)

DESIGNED BY:	APPROVED BY:
(ZAYED BIN SAIF, AE)	
CHECKED & RECOMMENDED BY:	
(JAKARIA PERVIZ, EE)	(MOHAMMAD SAIF UDDIN, SE)
DATE:	DWG. NO.:DC-8-0000-10/21





Bangladesh Water Development Board

Office of the Superintending Engineer

Design Circle-8

DESIGN OF DRAINAGE CUM FLUSHING REGULATOR
2-VENT(1.50mX1.80m) ON BAINBOSOT KHAL AT KM 13.00 IN POLDER
NO-6-S(EXT) IN SATKHIRA DISTRICT, UNDER SATKHIRA O&M DIVISION-2,
BWDB, SATKHIRA.

REINFORCEMENT DETAILS OF R/S APRON, WING WALL & RETURN WALL

DESIGNED BY :	APPROVED BY :
ZAYED BIN SAIF, AE	
CHICKED & RECOMMENDED BY :	MOHAMMAD SAIF UDDIN, SE
DATE:	DWG. NO.:DC-8-0000-14/21

Sheet No 15 of 21

Sheet No 15 of 21

REINF. DETAILS OF C/S CHUTE BLOCK

REINF. DETAILS OF R/S CHUTE BLOCK

REINF. DETAILS OF R/S BAFFLE BLOCK

REINF. DETAILS OF C/S BAFFLE BLOCK

LAYOUT PLAN OF SHEET PILE

PART PLAN OF END SILL
(For both R/S & C/S)

SECTION 12-12

SECTION 13-13

Bangladesh Water Development Board

Office of the Superintending Engineer
Design Circle-8

DRAINAGE IMPROVEMENT OF POLDER 1,2,6-8 AND 6-8(EXTENSION)

DESIGN OF DRAINAGE CUM FLUSHING REGULATOR
2-VENTI(1.50mX1.80m) ON BAINESBOT KHAL AT KM 13.00 IN POLDER
NO-6-(NEXT) IN SATKHIRA DISTRICT, UNDER SATKHIRA O&M DIVISION-2,
BWDB, SATKHIRA.

DETAILS 'P'

20 mm THICK HESSIAN CLOTH IMPREGNATED WITH BITUMEN

1-D16 (Welded with each Sheet Pile after Sheet Pile driving)

Sheet Pile Details "P"

75

400

D12 @ 125 c/c

3-D12

SHEET PILE

450

450

DETAILS 'P'

20 mm thick hessian cloth impregnated with bitumen

1-D16 (Welded with each Sheet Pile, it shall be done after Sheet Pile driving)

Sheet pile

150

250

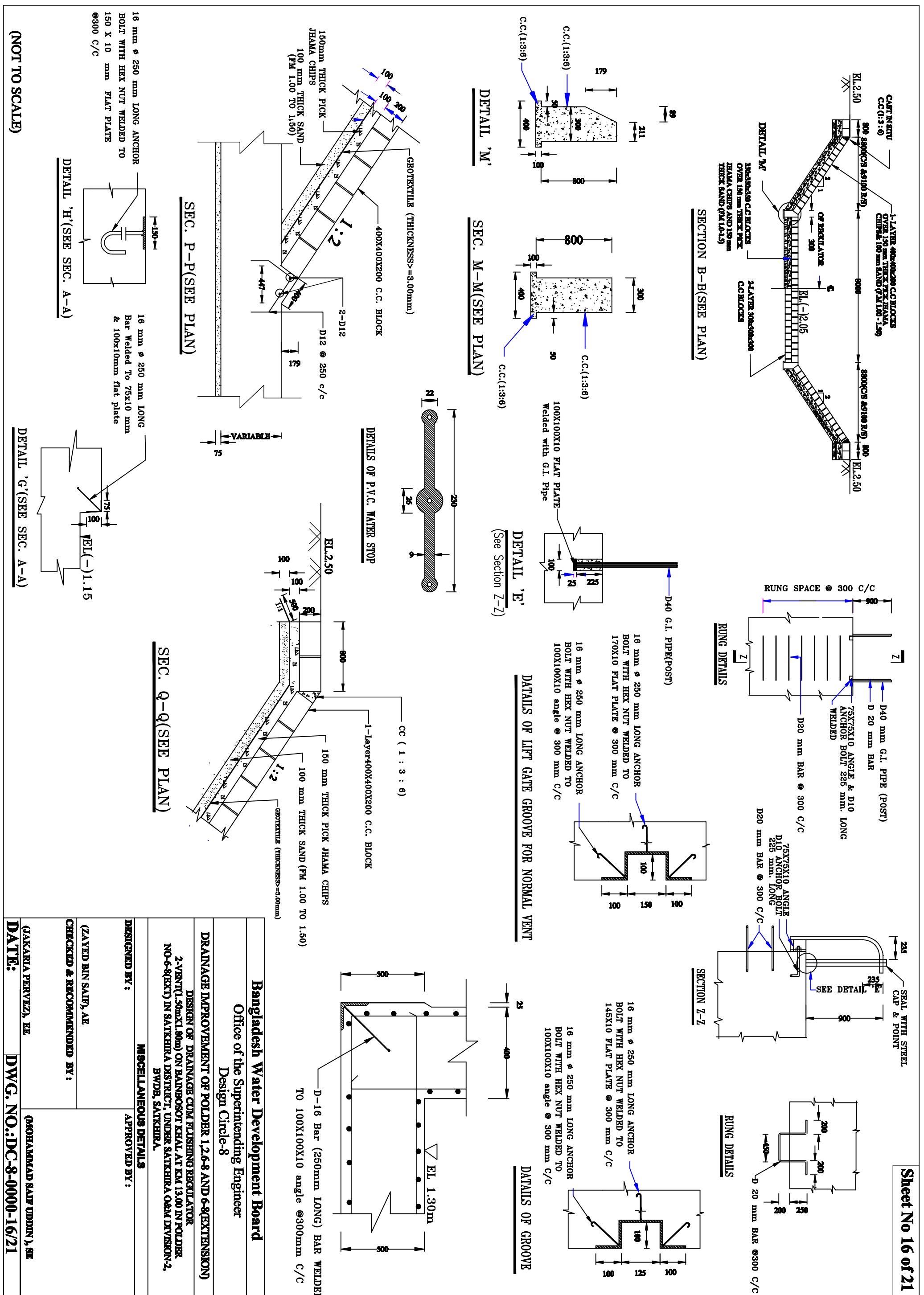
DETAILS OF SHEET PILE CAP
(Under Aprons)

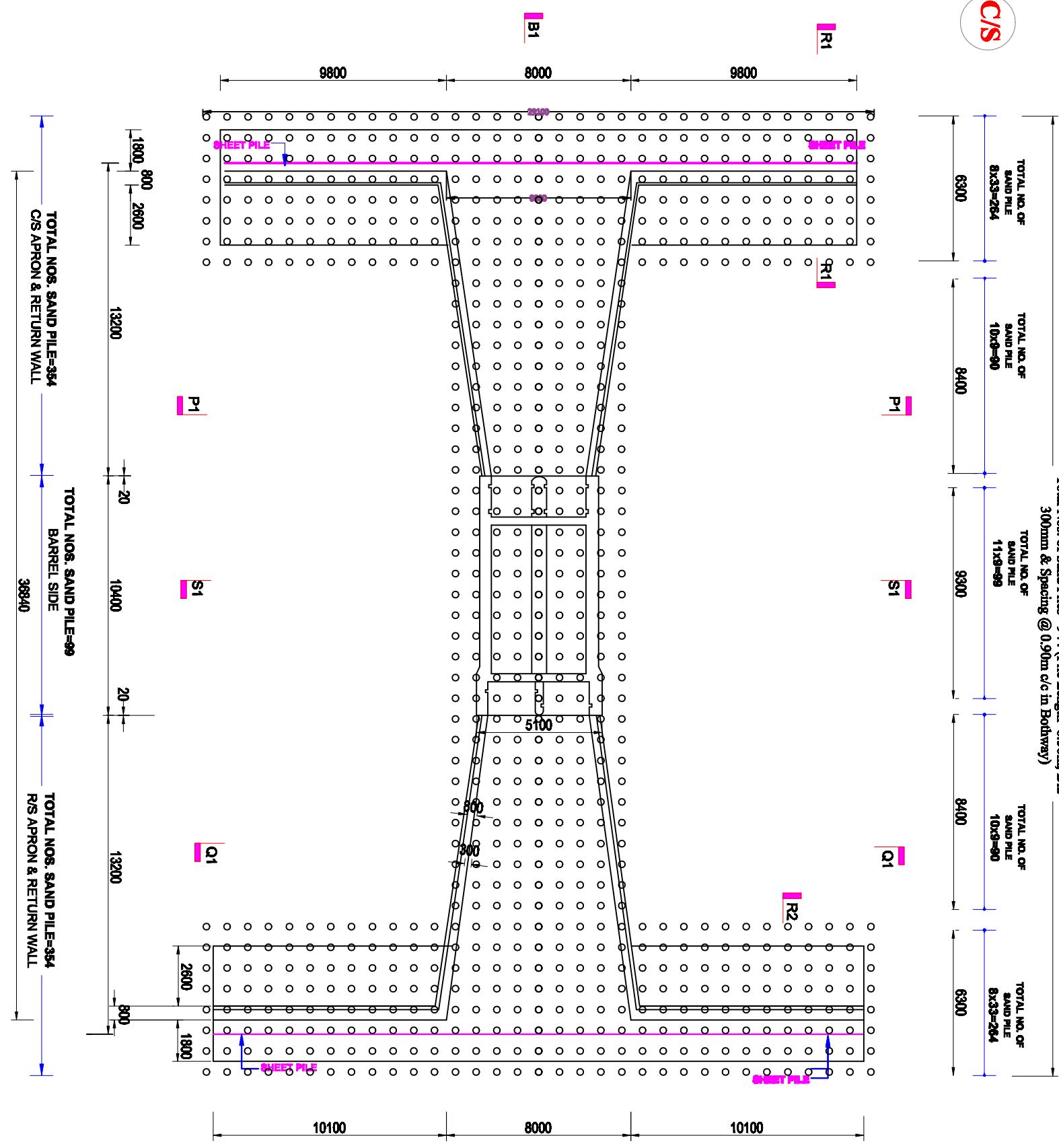
DETAILS OF CONSTRUCTION JOINT (FOR SLAB)

DETAILS OF CONSTRUCTION JOINT (FOR WALL)

NOT TO SCALE

(JAKARIA PERVEZ), EE	DATE: 20/06/2016	APPROVED BY:
(ZAEED BIN SAIF, AE)		
CHECKED & RECOMMENDED BY:		





NOTE FOR SAND PILE:

1. SAND PILE OF 6.50m 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 FINE 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 1.05 CUBIC METER RESPECTIVELY (ITEM CODE: 44-401-10).
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 PILING SHALL BE MAINTAINED IN DETAILS WITH CONSTANT SUPERVISION AND IT SHOULD BE SENT TO THE DESIGN OFFICE.

SAND PILE LAYOUT PLAN

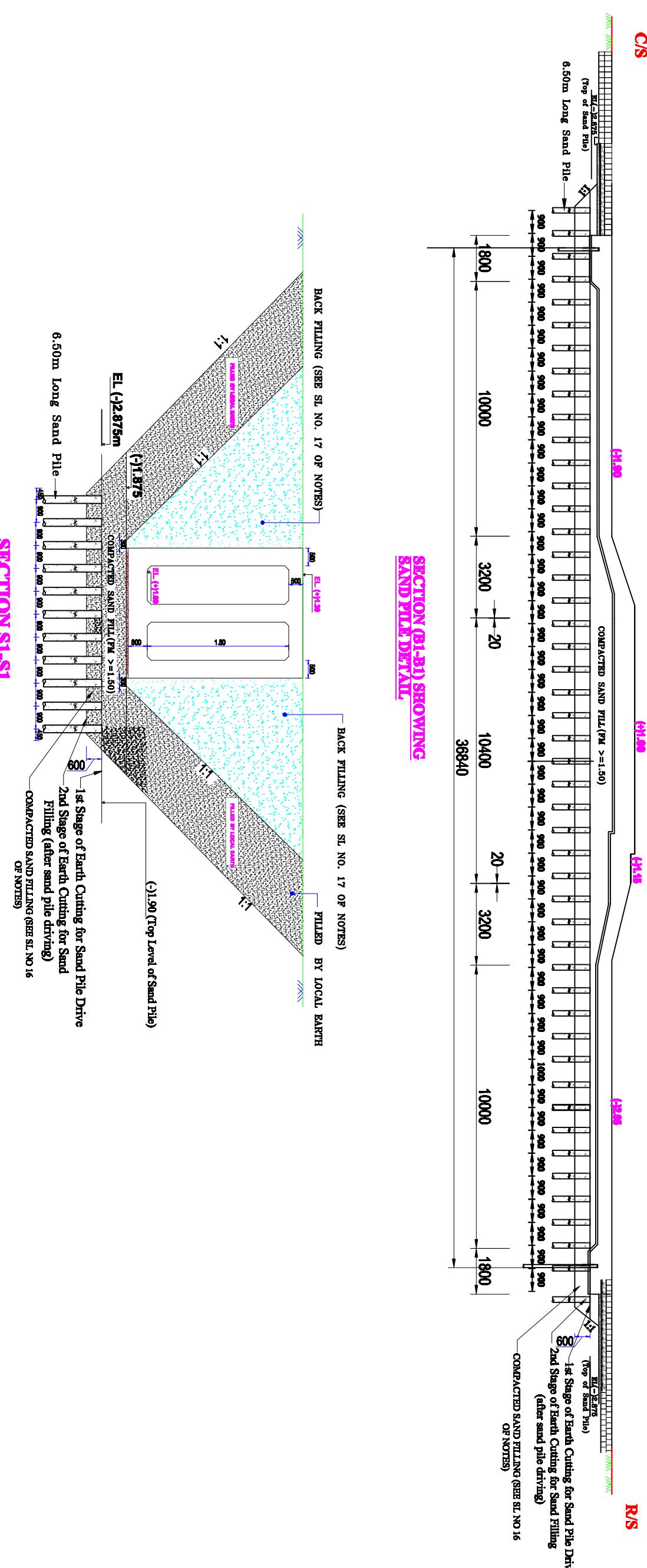
Bangladesh Water Development Board
Office of the Superintending Engineer
Design Circle-8

DESIGN OF DRAINAGE CUM FLUSHING REGULATOR 2-VENT(1.50mx1.80m)
ON BAINBOSOT KHAL AT KM 13.00 IN POLDER NO-6-8(EXT) IN SATKHIRA DISTRICT,
T, UNDER SATKHIRA O&M DIVISION-2, BWDR, SATKHIRA.

DESIGNED BY: **SAND PILE LAYOUT PLAN**

APPROVED BY:

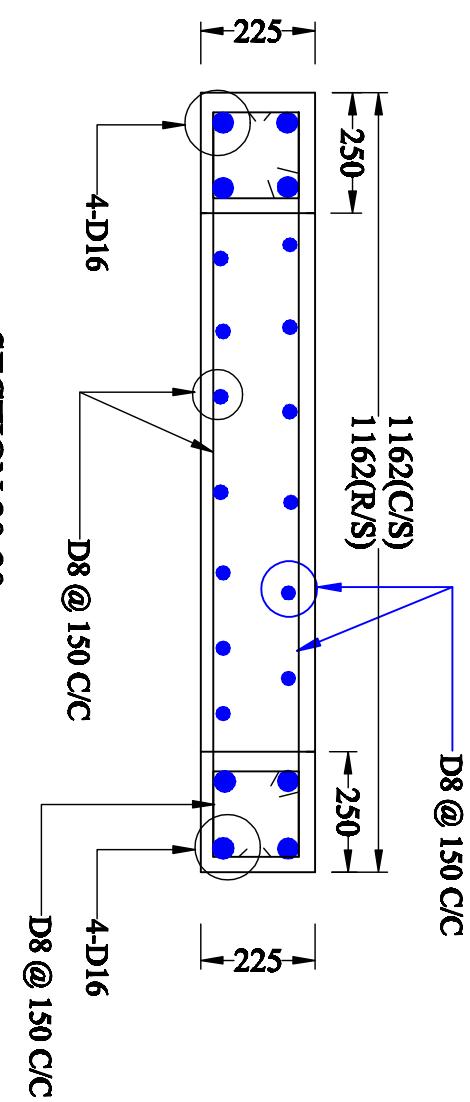
(ZAYED BIN SAIF, AE)	(MOHAMMAD SAIF UDDIN), SE
CHECKED & RECOMMENDED BY:	
DATE: DWG. NO.:DC-8-0000-18/21	



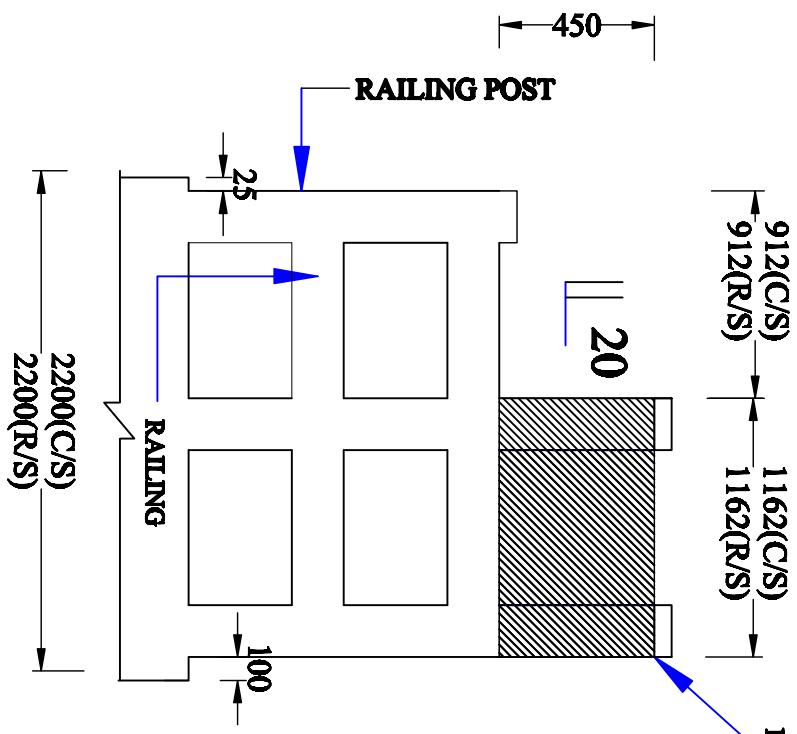
SECTION S-S

Bangladesh Water Development Board Office of the Superintending Engineer Design Circle-8	
DESIGN OF DRAINAGE CUM FLUSHING REGULATOR 2-VENTI(1.50mX1.80m) ON BAINBOSI KHAL AT KM 13.00 IN POLDER NO-6-(EXT) IN SATKHIRA DISTRICT, UNDER SATKHIRA OEM DIVISION-2, BWDB, SATKHIRA.	
SAND PILE DETAILS OF LONGITUDINAL PROFILE & BOX DESIGNED BY: (ZAYED BIN SAIFI, AE)	APPROVED BY: (MOHAMMAD SAIF UDDIN, SE)
CHECKED & RECOMMENDED BY: (JAKARIA PERVEZEE)	
DATE: DWG. NO.:DC-8-0000-19/21	

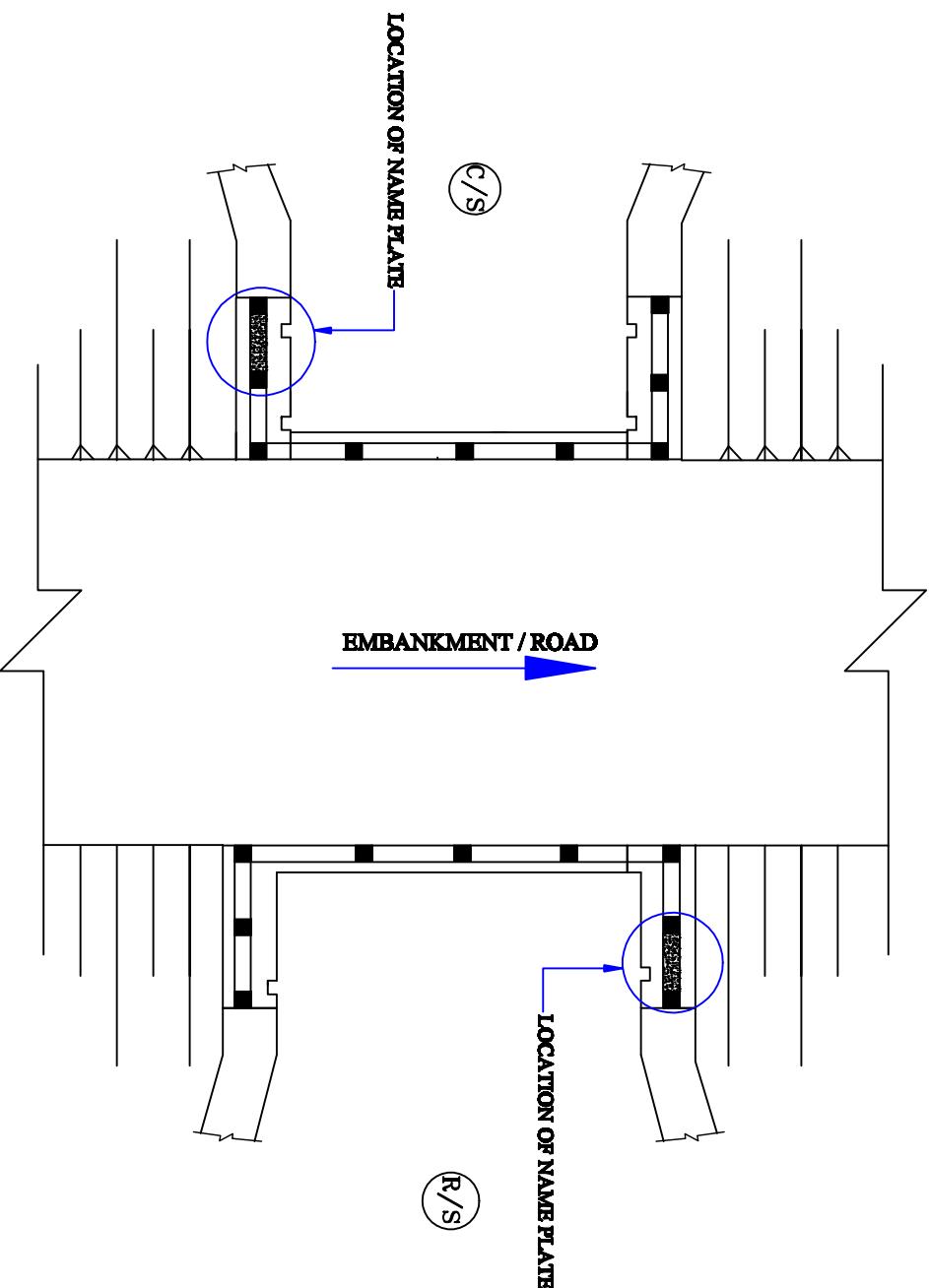
- NOTES**
1. THE NAME PLATE SHALL BE PLACED AT THE LEFT SIDE OF BOTH APPROACHES.
 2. THE SIZE OF LETTER SHOULD BE 30 mm TO 40 mm & IT SHOULD BE ENGRAVED IN THE PLATE.
 3. THE COLOR OF THE LETTER SHOULD BE WHITE ON MEDIUM BLUE SURFACE.
 4. THE NAME PLATE SHOULD BE CAST MONOLITHICALLY WITH THE POST AND THE WRITINGS SHOULD BE WRITTEN ON THE PLATE AFTER PLASTERING.



SECTION 20-20



ELEVATION

**PLAN SHOWING NAME PLATE LOCATION ON REGULATOR**

(NOT TO SCALE)

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

DRAINAGE IMPROVEMENT OF POLDER 1,2,6-8 AND 6-8(EXTENSION)
DESIGN OF DRAINAGE CUM FLUSHING REGULATOR
2-VENT(1.50mX1.80m) ON BAINBOSOT KHAL AT KM 13.00 IN POLDER
NO-6-(EXT) IN SATKHIRA DISTRICT, UNDER SATKHIRA O&M DIVISION-2,
BWDB, SATKHIRA.

DESIGNED BY: APPROVED BY:
ZAYED BIN SAIF, AE

CHECKED & RECOMMENDED BY: APPROVED BY:
MOHAMMAD SAIF UDDIN, SE

DATE: DWG. NO.:DC-8-0000-21/21

DATE: DWG. NO.:DC-8-0000-21/21