

Bangladesh Water Development Board



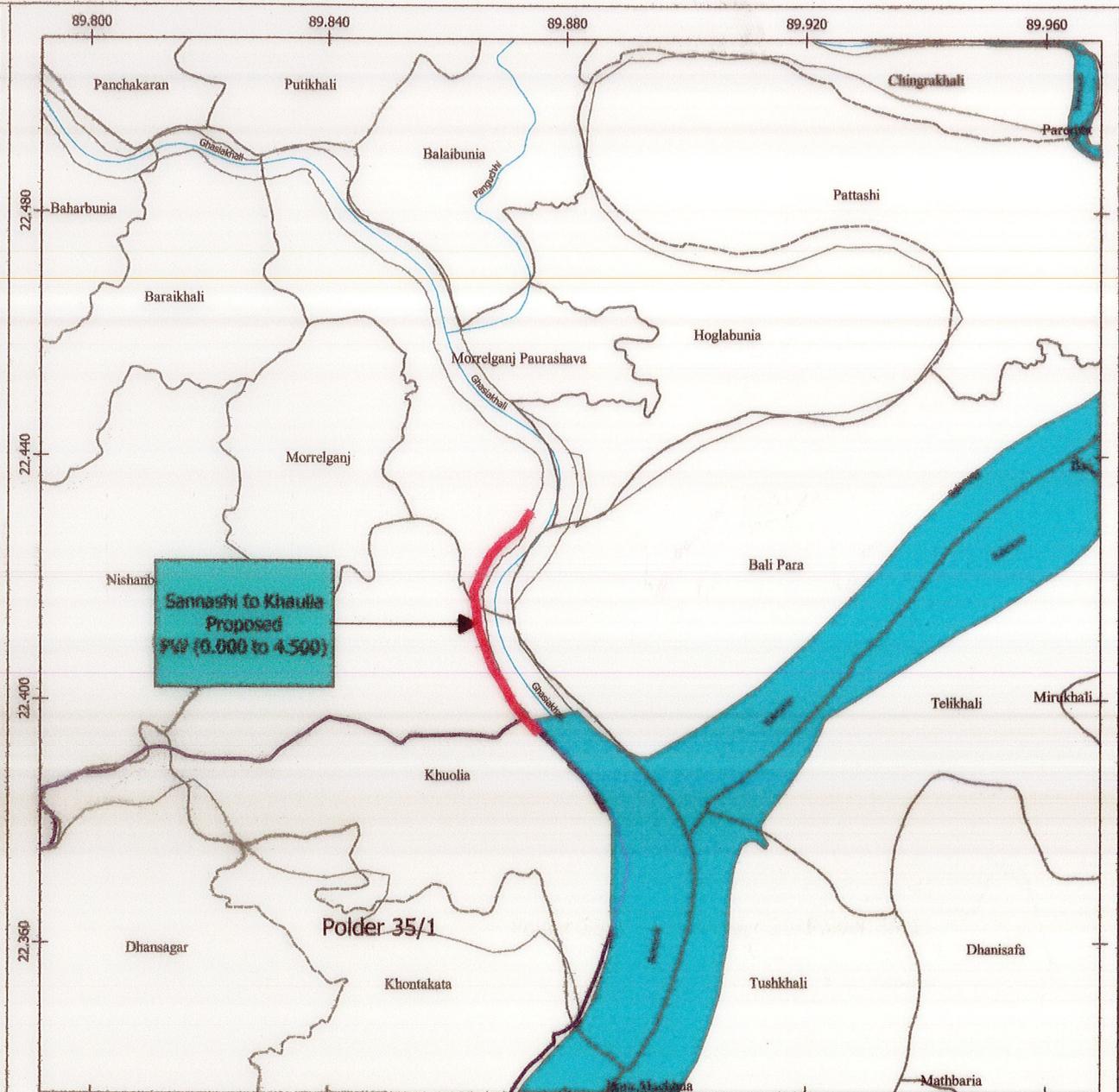
Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in
Bagerhat District and Re-excavation/Dredging of Bishkhali river

Design of Protective Work along the Right Bank of Panguchi
River From Sannashi to Khawlia From km 0.000 to km 4.500 =
4.500 km

Bagerhat O&M Division

Designed by:Design Circle-8,BWDB,Dhaka

January,2023



SITE PLAN

Bangladesh Water
Development Board

Bagerhat O&M Division

Legends

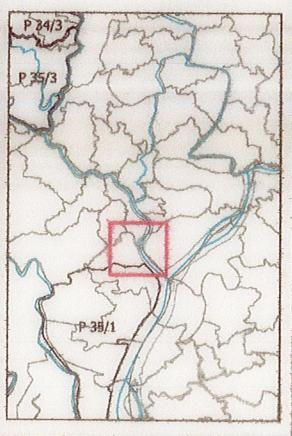
Site Plan

Sannashi to Khaulia Proposed
PW(0.000 to 4.500)
Union

0 10.5 21 31.5 42 km



Design Circle-8
BWDR



Index Map

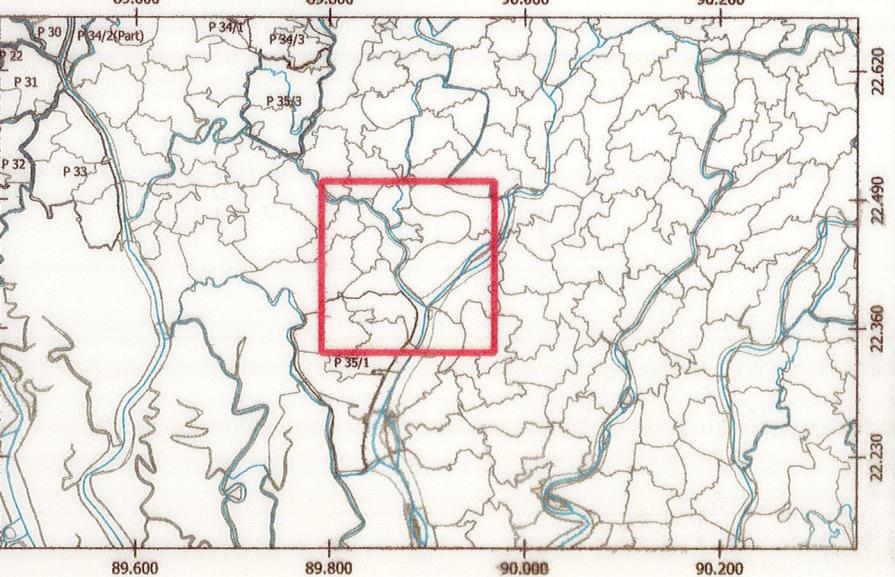
Index Map

Sannashi to Khaulia. Proposed PW (0,000 to 4,500)



1.5 3 km Design Circle
RWDR

**Bangladesh Water
Development Board**



Bangladesh Water Development Board

Office of The Superintending Engineer Design Circle-8

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Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km

INDEX MAP & SITE MAP

DESIGNED BY:

(JAKARIA PERVEZ) E.E.

RECOMMENDED BY:

(MOHAMMAD SAIE UDDIN) SE

CHECKED BY:

(JAKARIA PERVEZ) FF

APPROVED BY:
DR. S. A. M. D.
20.07.2023
(MD. ENAYET ULLAH) OF DESIGN

DATE:10-01-2023

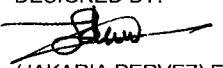
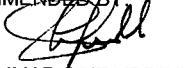
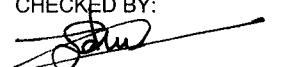
Drawing No:DC-8-0332-01/17

1. THIS DRAWING HAS BEEN PREPARED BASED ON DATA SENT BY THE SUPERINTENDING ENGINEER, KHULNA O & M CIRCLE, BWDB, KHULNA VIDE MEMO NO: 293, DATED-24/08/2022.
2. FOR ANY ERROR, OMISSION OR CONFUSION PLEASE REFER TO THIS OFFICE AS QUICK AS POSSIBLE FOR NECESSARY ACTION.
3. THE WORK SHALL BE EXECUTED WITH PRIOR FINANCIAL & ADMINISTRATIVE APPROVAL AND TECHNICAL SANCTION FROM THE COMPETENT AUTHORITY.
4. ALL DIMENSIONS ARE IN MILLIMETRE (mm) AND ALL ELEVATIONS ARE IN METRE (PWD) UNLESS OTHERWISE MENTIONED IN THE DRAWING.
5. THE MATERIAL & WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF BWDB MANUAL.
6. NECESSARY LAND SHALL BE ARRANGED BEFORE EXECUTION OF WORK.
7. THE GEO-TEXTILE FILTER HAVE THICKNESS OF 3.00 mm.
8. GEO-TEXTILE FILTER SHALL BE EXTENDED UPTO 1000 mm BELOW THE W.W.L/TOE & SHALL HAVE TO BE ANCHORED CAREFULLY AT THE TOP OF THE SLOPE AS SHOWN IN THE DRAWING.
9. GEO-TEXTILE MATERIALS SHALL BE PRESERVED AGAINST UV RAY AND FROM ANY OTHER DAMAGES.
10. GEO-TEXTILE MATERIALS AFTER PLACING SHALL NEVER BE EXPOSED TO SUNLIGHT. GEO-TEXTILE FILTER SHALL BE COVERED IMMEDIATELY AFTER PLACEMENT.
12. FULL LENGTH OF PROPOSED PROTECTIVE WORK SHALL BE DONE AT A TIME IN ONE DRY SEASON FOR EFFECTIVENESS.
13. IF THERE ARE ANY POND OR DITCH EXISTS WITHIN 100 m DISTANCE FROM THE RIVER BANK, IT MUST BE PROPERLY FILLED UPTO G.L WITH LOCAL EARTH AND SHALL BE COMPAKTED AS PER SCHEDULE BEFORE STARTING THE PROTECTIVE WORK.
14. SLOPE OF PITCHING WORK SHALL BE MAINTAINED AS PER EXISTING SLOPE OR AS PER Rehabilitation SECTION, BUT NOT STEEPER THAN 2H:1V. ALL BANK IRREGULARITIES ABOVE WORKING WATER LEVEL SHALL BE REMOVED. NECESSARY CUTTING & FILLING SHALL BE DONE IN THIS RESPECT AS PER FIELD REQUIREMENT.
15. A SMOOTH TRANSITION TO BE PROVIDED BETWEEN HIGHER & LOWER LEVEL AND FLATTER & STEEPER SLOPE OF THE PROTECTIVE WORK. TOP LEVEL OF PITCHING WORK SHOULD BE MATCH WITH EXISTING BANK LEVEL.
16. AT THE STARTING AND AT THE END OF THE PROTECTIVE WORK TRANSITION TO THE EXISTING UNPROTECTED BANK OR THE PREVIOUSLY COMPLETED WORK MUST BE GRADUAL AND TANGENTIAL.

NOTES FOR C.C BLOCKS:.

1. CONCRETE FOR C.C BLOCK SHALL HAVE MINIMUM CYLINDER STRENGTH OF 15.00N/mm² AT 28 DAYS.
2. CURING OF C.C BLOCKS SHALL BE CONTINUED FOR 21 DAYS
3. THE PITCHING WORK SHALL BE PLACED ON PROPERLY COMPAKTED SLOPE.
1. EACH BAG DELIVERED AT SITE SHALL BE MARKED WITH LABELS THAT IDENTIFY BRAND NAME, CONTRACT PACKAGE NO, SIZE OF BAG, ATE OF PRODUCTION OF GEOTEXTILE, NAME OF CONTRACTOR ETC.
2. SEWING SHALL BE DONE BY MACHINE WITH LOCK STITCH (TYPE 301 UNDER ISO 4915/DIN61400) OR DOUBLE CHAIN STITCH (TYPE 401 UNDER ISO 4915/DIN61400) AS PER BWDB TECHNICAL SPECIFICATION AND TENDER DOCUMENT. THREAD FOR STITCHING SHOULD BE 100% POLYPROPYLENE OR NYLON.
3. FILLING MATERIAL OF GEOBAG SHOULD BE SAND AND 80% SHOULD RETAIN ON #100 SEIVE. SAND SHOULD BE FREE FROM CLAY & ORGANIC MATTER.
4. MATERIAL OF GEOBAG SHALL BE 100% POLYPROPYLENE.
5. SIEVE ANALYSIS FOR CHECKING 80% RETAINED ON #100 SIEVE AND TEST FOR CLAY & ORGANIC MATTER CONTENT SHOULD BE DONE (AS PER ACTUAL NEED). SPECIFICATIONS OF GEOTEXTILE SHALL BE AS PER ITEM CODE 40-500-40.

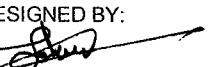
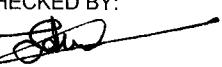
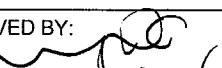
1. WORK SHALL BE EXECUTED ONLY WHEN WL IS AT OR NEAR WORKING L.W.L AS SHOWN IN THE DRAWING.
2. SURVEY BOAT EQUIPPED WITH NECESSARY DUMPING EQUIPMENT, SURVEY EQUIPMENT & SURVEY TEAM SHOULD BE ENSURED AT SITE BEFORE START OF DUMPING.
3. DUMPING MATERIALS SHALL BE DUMPED FROM BARGE EQUIPPED WITH GUIDED FENCE SO THAT DUMPING MATERIALS CAN BE DUMPED INTO PROPER POSITION.

Bangladesh Water Development Board	
Office of The Superintending Enginner,Design Circle-8	
Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river	
Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km	
NOTES	
DESIGNED BY:  (JAKARIA PERVEZ),EE	RECOMMENDED BY:  (MOHAMMAD SAIF UDDIN),SE
CHECKED BY:  (JAKARIA PERVEZ),EE	APPROVED BY:  (MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-02/17

4. THE FOLLOWING EQUIPMENT SHOULD BE USED FOR DUMPING.
- a.. FLAT TOP BARGE /PONTOONS/BOAT SHALL BE USED FOR DUMPING .
 - b.. ENGINE BOAT - FOR TRANSPORTING THE DUMPING MATERIAL TO THE BARGE.
 - c.. TOPOGRAPHIC & BATHYMETRIC SURVEY TEAM EQUIPPED WITH TOTAL STATION.
 - d.. NO DUMPING SHALL ALLOWED WITHOUT PROPERLY POSITIONED & ANCHORED FLAT TOP BARGE OR DUMPING PONTOON OR BOAT.
6. SPECIAL CARE SHALL BE TAKEN FOR ANCHORING OF DUMPING PONTOON/ BOAT.
7. WORK SHALL BE STARTED FROM U/S END AND FROM DUMPING END TO BANK.
8. FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED DURING EXECUTION OF THIS PROTECTIVE WORK:
- a.. EXECUTION OF WORK SHALL BE DONE FROM THE EXTREME END OF DUMPING TO TOWARDS THE BANK.
 - b.. DUMPING OF GEOBAG BELOW L.W.L.
 - c.. DUMPING OF C.C BLOCKS BELOW LWL OVER GEOBAG.
 - d.. SLOPE PREPARATION & PITCHING WORK ABOVE LWL.
1. AS BUILT DRAWING CONTAINING CROSS SECTIONS AT 50 m INTERVAL SHALL BE PREPARED IMMEDIATELY AFTER COMPLETION OF DUMPING.
2. THE RIVER BEHAVIOUR WITH RESPECT TO SCOUR AND EROSION AND PERFORMANCE OF REVETMENT WORK DURING AND AFTER EXECUTION SHALL BE MONITORED CAREFULLY ON REGULAR BASIS TO TAKE TIMELY MITIGATIVE AND STRENGTHENING MEASURES .REGULAR MONITORING OF THIS PROTECTIVE WORK MUST BE DONE THROUGH BATHYMETRIC SURVEY .
3. FROM JUNE TO OCTOBER BATHYMETRIC SURVEY SHOULD BE DONE ON REGULAR INTERVAL & SHALL BE KEPT AS RECORD FOR FURTHER USE.
4. DREDGING ADJACENT TO PROTECTIVE WORK SHALL NOT BE ALLOWED.

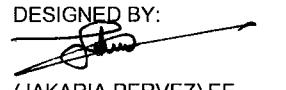
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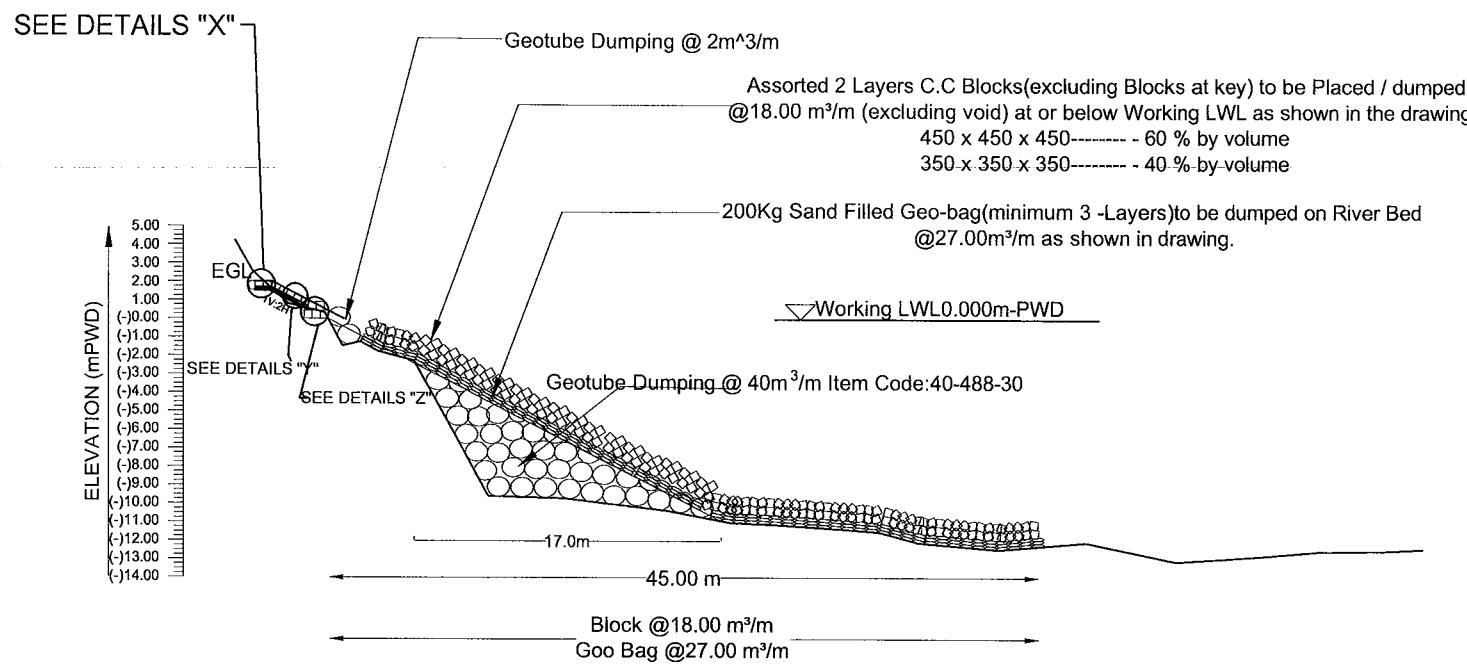
- 1. DUMPING BLOCK 450X450X450 : 40-170-25**
- 2. DUMPING BLOCK 350X350X350 : 40-170-45**
- 3. PLACING BLOCK 400X400X200 : 40-190-40**
- 4. GEOTUBE 40-488-30**

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Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km	
NOTES	
DESIGNED BY:  (JAKARIA PERVEZ),EE	RECOMMENDED BY:  (MOHAMMAD SAIF UDDIN),SE
CHECKED BY:  (JAKARIA PERVEZ),EE	APPROVED BY:  (MD. ENAYET ULLAH),CE,DESIGN 20.03.2026
DATE:10-01-2023	Drawing No:DC-8-0332-03/17

Special Notes For Revised Bathymetric Survey

1. IN PROVIDED BATHYMETRIC SURVEY DATA SOME X-SECTIONS HAVE UNUSAL SHAPES WHICH RESULT IN EXCESSIVE FILLING.
2. FOR PROPER INVESTIGATION, SAFE AND ECONOMICAL DESIGN FILED OFFICE IS REQUESTED TO CONDUCT BATHYMETRIC SURVEY ALONG THE WHOLE REACH OF THE WORK AT 20 METER INTERVAL TO DETERMINE THE SCOUR HOLES AND GEOTUBE FILLING VOLUME BEFORE EXECUTION OF THE WORK.
4. FIELD OFFICE HAS TO SEND ABOVE SURVEY DATA FOR REVISION OF GEO-TUBE FILL VOLUME BEFORE INITIATION OF ANY DUMPING WORK TO THE DESIGN OFFICE.
5. DUMPING WORK CAN PROCEED ONLY AFTER GETTING REVISED DRAWING FOR GEO-TUBE FILLING.
6. THE COST OF SURVEYING SHOULD BE INCLUDED IN ESTIMATE AND BOQ.

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CHECKED BY:  (JAKARIA PERVEZ),EE	APPROVED BY:  (MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-04/17



Existing Bed Level in (mPWD)	4.234 2.555 0.804 0.344 (-)1.456 (-)1.236 (-)1.756 (-)2.256	12.004 14.005 16.006 17.006 18.007 19.007 21.008	25.108 29.350 (-)9.580 (-)9.700	35.004 38.558 40.708 45.167 46.743 48.943 53.351	(-)10.350 (-)11.010 (-)11.100 (-)11.400 (-)11.530 (-)12.090 (-)12.460	58.145 63.144 68.144 70.948 74.546 76.743	(-)12.070 (-)12.760 (-)12.520 (-)12.480 (-)12.370
Distance(m)							

TYPICAL CROSS SECTION AT KM 0.000
(APPLICABLE FROM KM 0.000 TO KM 0.070)

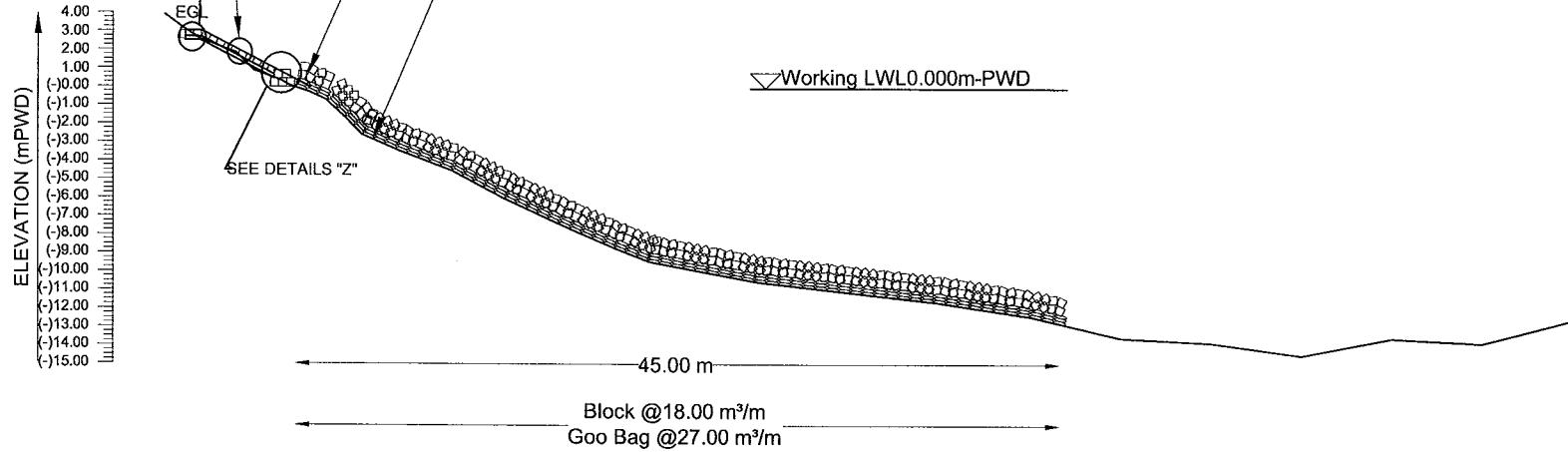
Bangladesh Water Development Board	
Office of The Superintending Enginner,Design Circle-8	
Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river	
Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km	
TYPICAL CROSS SECTION OF FROM SANNASHI TO KHAWLIA PROTECTIVE WORK	
DESIGNED BY: (JAKARIA PERVEZ),EE	RECOMMENDED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED BY: (JAKARIA PERVEZ),EE	APPROVED BY: (MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-05/17

SEE DETAILS "X"

Assorted 2 Layers C.C Blocks(excluding Blocks at key) to be Placed / dumped @18.00 m³/m (excluding void) at or below Working LWL as shown in the drawing.

450 x 450 x 450----- 60 % by volume
350 x 350 x 350----- 40 % by volume

— 200Kg Sand Filled Geo-bag(minimum 3 -Layers)to be dumped on River Bed
@27.00m³/m as shown in drawing.



Existing Bed Level in (mPWD)	7.000	
	3.893	
Distance(m)	8.000	3.203
	3.000	
	2.573	
	11.000	
	12.000	
	1.843	
	0.881	
	13.500	
	0.341	
	15.000	
	(-)0.249	
	16.000	
	(-)0.679	
	17.000	
	(-)1.579	
	18.000	
	(-)2.579	
	20.000	
	(-)3.429	
	23.000	
	(-)4.529	
	26.000	
	(-)6.049	
	30.000	
	(-)7.829	
	32.000	
	(-)8.679	
	34.000	
	(-)9.429	
	40.000	
	(-)10.529	
	50.000	
	(-)11.629	
	55.000	
	(-)12.379	
	60.000	
	(-)13.529	
	65.000	
	(-)13.779	
	70.000	
	(-)14.429	
	75.000	
	(-)13.479	
	80.000	
	(-)13.729	
	85.000	
	(-)12.429	

**TYPICAL CROSS SECTION AT KM 0.080
(APPLICABLE FROM KM 0.070 TO KM 0.190)**

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TYPICAL CROSS SECTION OF PROTECTIVE WORK FROM SANNASHI TO KHAWLIA

DESIGNED BY:

(JAKARIA PERVEZ),EE

RECOMMENDED BY:

(MOHAMMAD SAIF UDDIN), SE

CHECKED BY:

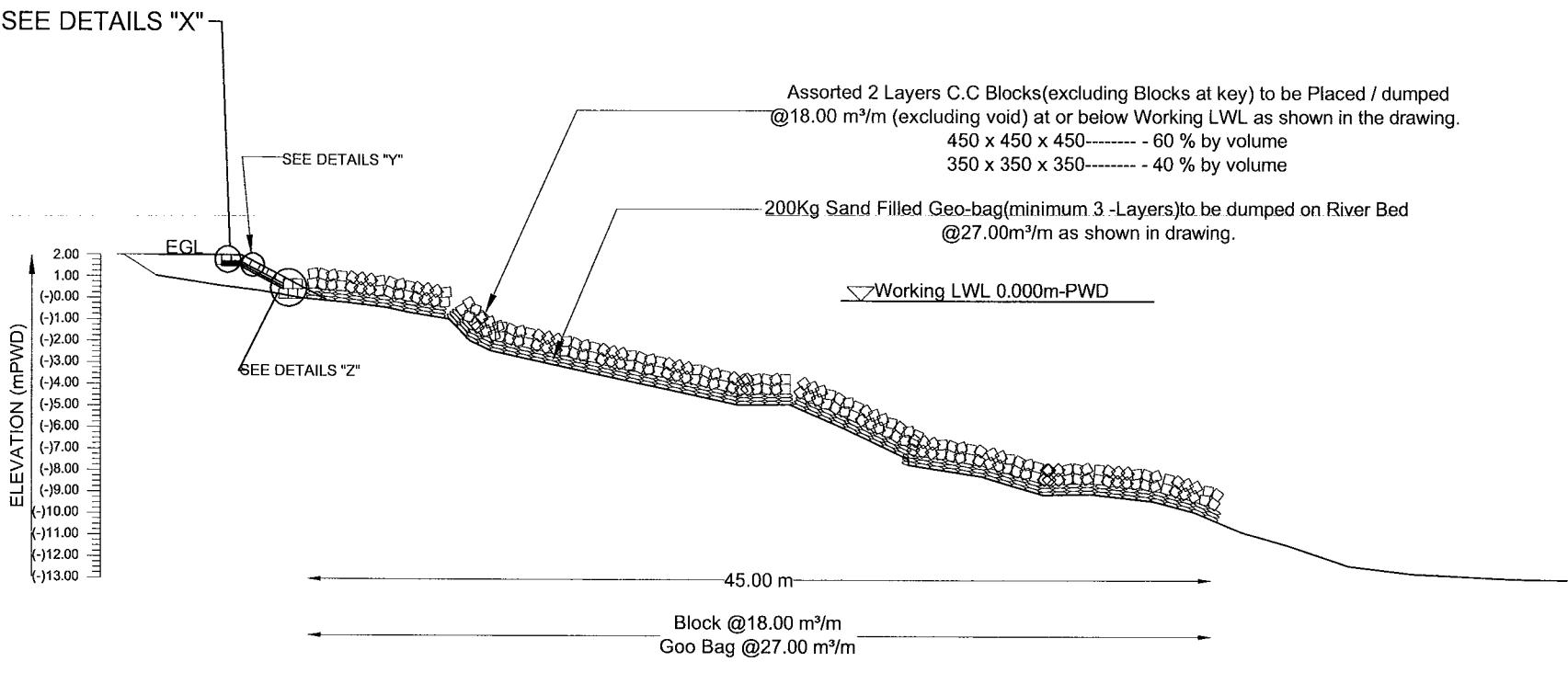
(JAKARIA PERVEZ), EE

APPROVED BY:

(MD. ENAYET ULLAH),CE,DESIGN

DATE:10-01-2023

Drawing No:DC-8-0332-06/17



Existing Bed Level in (mPWD)	Distance(m)
29.000	1.027
32.000	0.582
34.000	0.357
36.000	0.017
38.000	(-)0.153
40.000	(-)0.393
41.000	(-)0.593
43.000	(-)0.903
44.000	(-)1.923
45.000	(-)2.383
56.732	(-)4.860
59.159	(-)4.840
61.412	(-)5.800
64.801	(-)7.360
68.401	(-)8.190
71.202	(-)9.030
73.401	(-)8.980
76.409	(-)9.310
78.401	(-)9.840
80.603	(-)10.750
82.806	(-)11.370
85.603	(-)12.310
88.614	(-)12.660
93.401	(-)12.900
96.016	(-)12.930

TYPICAL CROSS SECTION AT KM 0.200
(APPLICABLE FROM KM 0.190 TO KM 1.050)

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TYPICAL CROSS SECTION OF FROB FROM SANNASHI TO KHAWLA PROTECTIVE WORK

DESIGNED BY:

(JAKARIA PERVEZ),EE

RECOMMENDED BY:

(MOHAMMAD SAIF UDDIN), SE

CHECKED BY:

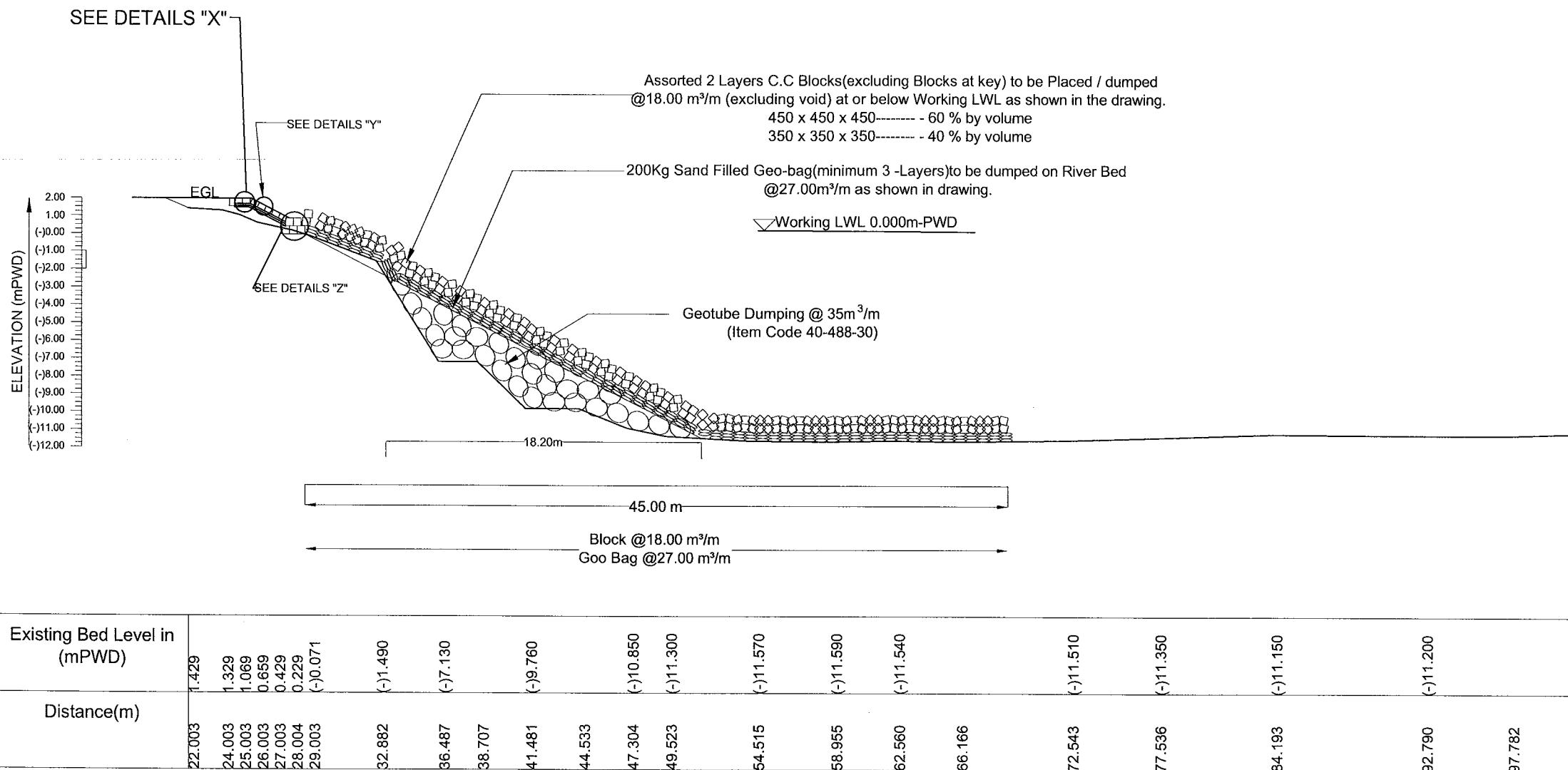
(JAKARIA PERVEZ),EE

APPROVED BY:

20.05.2025
(MD. ENAYET ULLAH), CE, DESIGN

DATE:10-01-2023

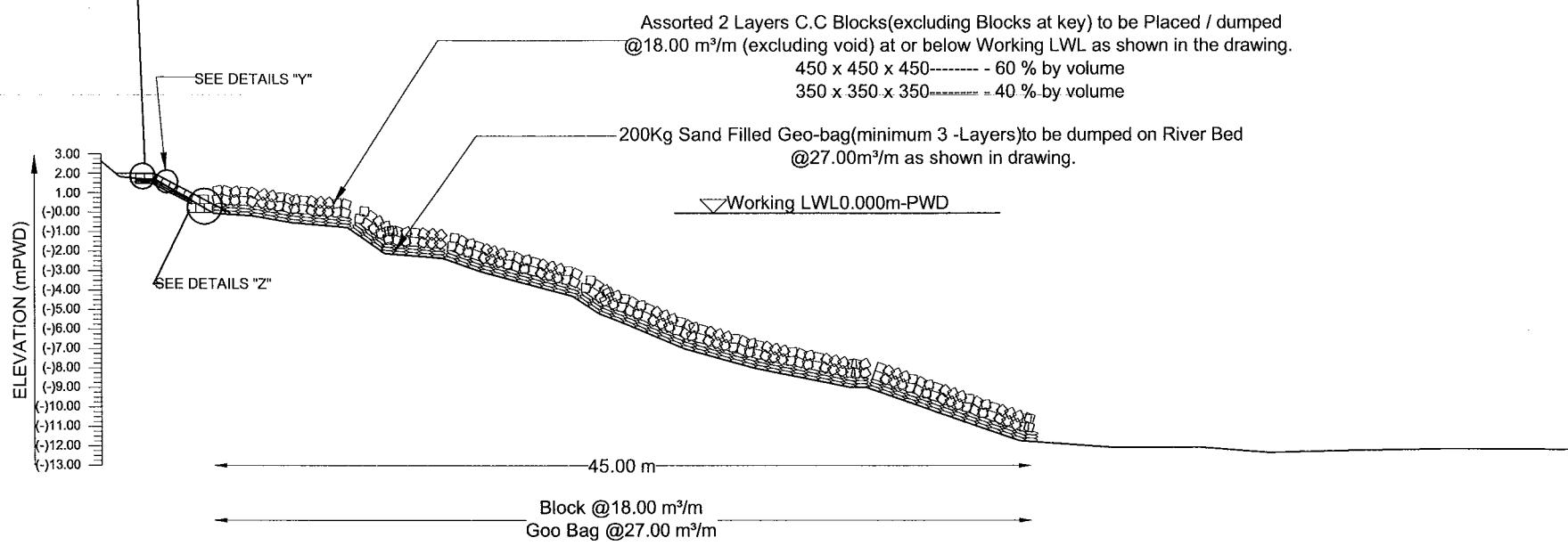
Drawing No:DC-8-0332-07/17



TYPICAL CROSS SECTION AT KM 1.100
(APPLICABLE FROM KM 1.050 TO KM 1.140)

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DESIGNED BY:	RECOMMENDED BY:
(JAKARIA PERVEZ),EE	(MOHAMMAD SAIF UDDIN),SE
CHECKED BY:	APPROVED BY:
(JAKARIA PERVEZ),EE	(MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-08/17

SEE DETAILS "X"



Existing Bed Level in (mPWD)	22.000 23.000 25.000 28.000 30.000 32.000 35.000 37.000 40.000 41.999 46.872 48.241 49.612 52.703 55.302 61.274 62.133 70.195 75.165 79.626 83.226 87.687 92.658 99.349	2.632 1.815 1.632 (-)0.048 (-)0.158 (-)0.508 (-)0.748 (-)2.088 (-)2.318 (-)2.998 (-)4.280 (-)5.180 (-)5.720 (-)6.980 (-)7.960 (-)8.950 (-)11.710 (-)12.070 (-)12.340 (-)12.250 (-)12.170 (-)12.200
Distance(m)		

**TYPICAL CROSS SECTION AT KM 1.400
(APPLICABLE FROM KM 1.140 TO KM 1.850)**

Bangladesh Water Development Board

Office of The Superintending Enginner,Design Circle-8

Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river

TYPICAL CROSS SECTION OF FROB SANNA SHI TO KHAWI IA PROTECTIVE WORK

DESIGNED BY:

(JAKARIA PERVEZ),EE

RECOMMENDED BY:

MOHAMMAD SAIFUDDIN),SE

CHECKED BY:

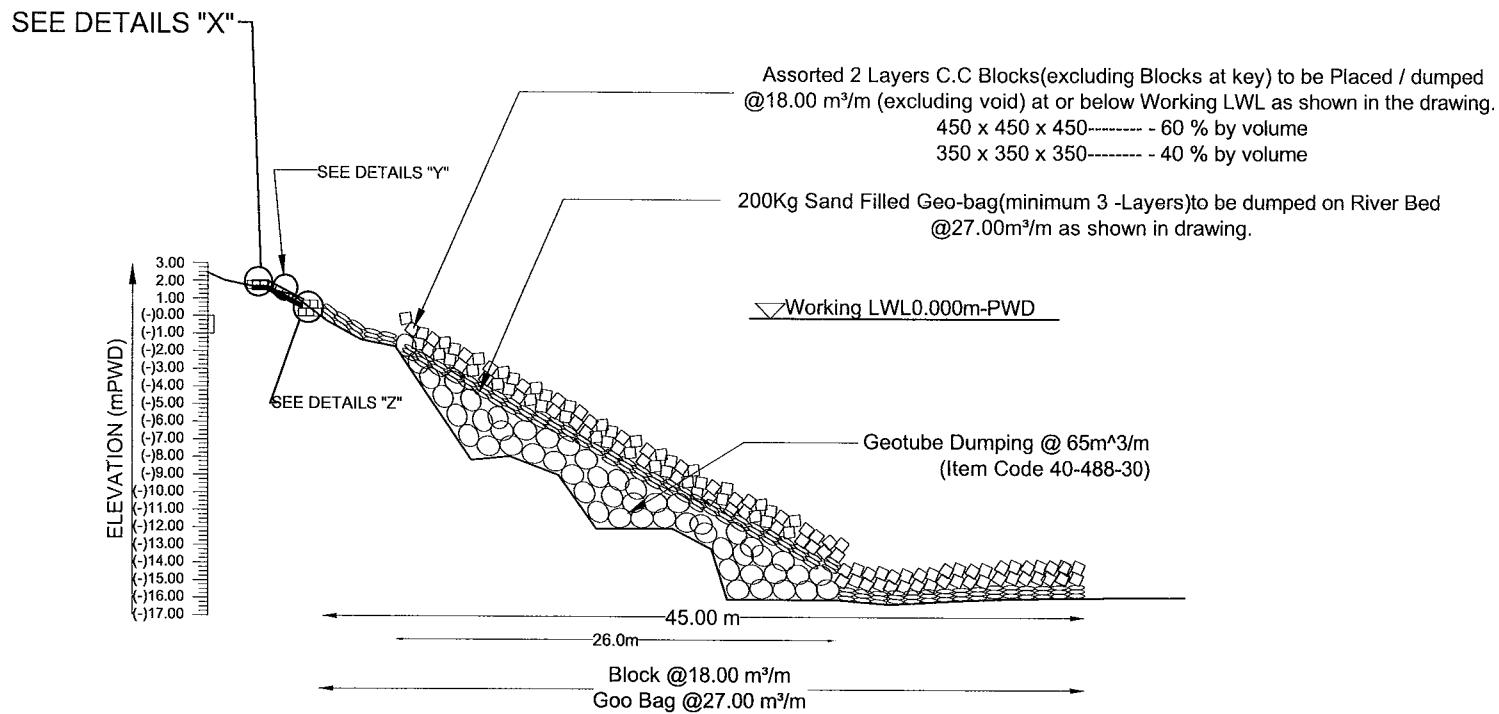
(JAKARIA PERVEZ), EE

APPROVED BY:

MD. ENAYET ULLAH, CE DESIGN

DATE:10-01-2023

Drawing No:DC-8-0332-09/17

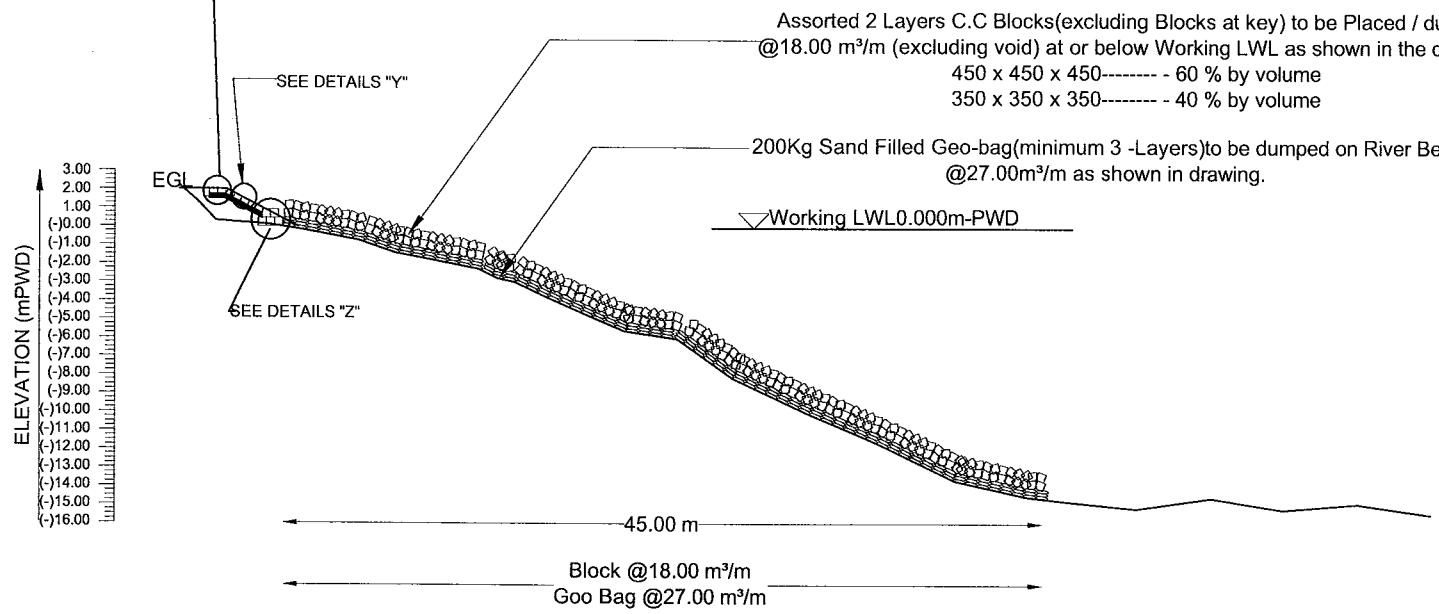


Existing Bed Level in (mPWD)	2.463	2.020	1.230	-0.230	-1.310	-1.680	-1.110	-1.7890	-1.950	-11.980	-13.120	-16.260	-16.060	-15.930	-15.850	-15.859
Distance(m)	18.998	23.998	25.998	27.998	29.998	34.438	36.668	39.458	41.683	43.910	46.137	52.453	55.612	58.771	62.292	71.766

TYPICAL CROSS SECTION AT KM 1.900
(APPLICABLE FROM KM 1.850 TO KM 1.940)

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DESIGNED BY:	RECOMMENDED BY:
(JAKARIA PERVEZ),EE	(MOHAMMAD SAIF UDDIN),SE
CHECKED BY:	APPROVED BY:
(JAKARIA PERVEZ),EE	(MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-10/17

SEE DETAILS "X"



Existing Bed Level in (mPWD)	22.204 1.354 0.304	24.007 25.008 26.008	0.104 (-)0.195
Distance(m)	31.010	34.011	(-)0.736
	36.011		(-)1.396
		40.601 41.589 42.578	(-)2.250 (-)2.740 (-)2.940
		44.557	(-)3.840
		48.660	(-)5.590
		51.628	(-)6.000
		54.742	(-)8.140
		58.699	(-)9.970
		62.802	(-)11.710
		66.907	(-)13.680
		70.862	(-)14.520
		72.990	(-)14.760
		76.944	(-)15.150
		81.048	(-)14.550
		85.004	(-)15.180
		89.108	(-)14.850
		93.213	(-)15.420

**TYPICAL CROSS SECTION AT KM 2.500
(APPLICABLE FROM KM 1.940 TO KM 2.650)**

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TYPICAL CROSS SECTION OF FROM SANNASHI TO KHAWI IA PROTECTIVE WORK

DESIGNED BY:

(JAKARIA PERVEZ), EE

RECOMMENDED BY:

MOHAMMAD SAIF UDDIN (SE)

CHECKED BY:

(JAKARIA PERVEZ), EE

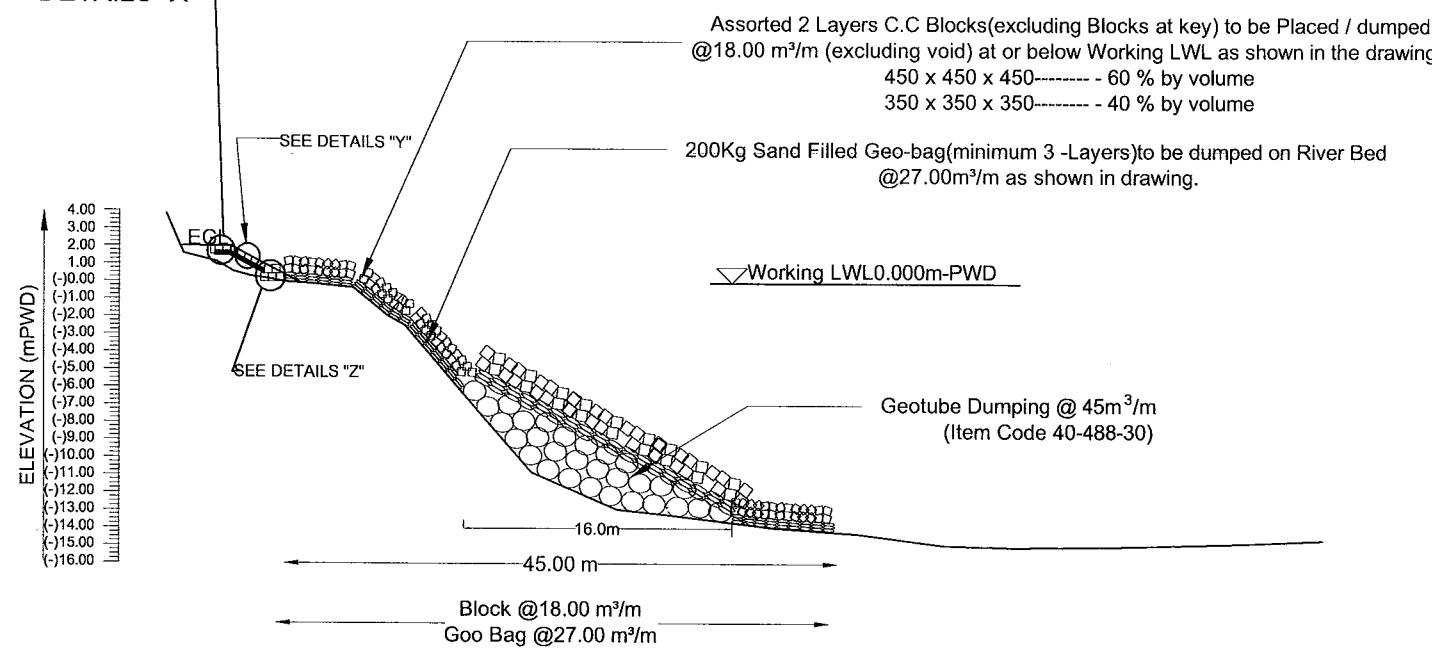
APPROVED BY:

Md. ENAYET ULLAH (CE. DESIGN)

DATE:10-01-2023

Drawing No:DC-8-0332-11/17

SEE DETAILS "X"



Existing Bed Level in (mPWD)	3.939 2.582 1.102 0.557 0.297 0.167 (-)0.013 (-)0.143 (-)0.323 (-)1.893 (-)2.443
Distance(m)	26.001 27.001 29.001 30.001 31.001 32.001 33.001 35.001 37.001 39.001 40.001

TYPICAL CROSS SECTION AT KM 2.700
(APPLICABLE FROM KM 2.650 TO KM 2.740)

Bangladesh Water Development Board

Office of The Superintending Enginner,Design Circle-8

Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river

Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km

TYPICAL CROSS SECTION OF FROM SANNASHI TO KHAWLIA PROTECTIVE WORK

DESIGNED BY:

(JAKARIA PERVEZ),EE

RECOMMENDED BY:

(MOHAMMAD SAIF UDDIN),SE

CHECKED BY:

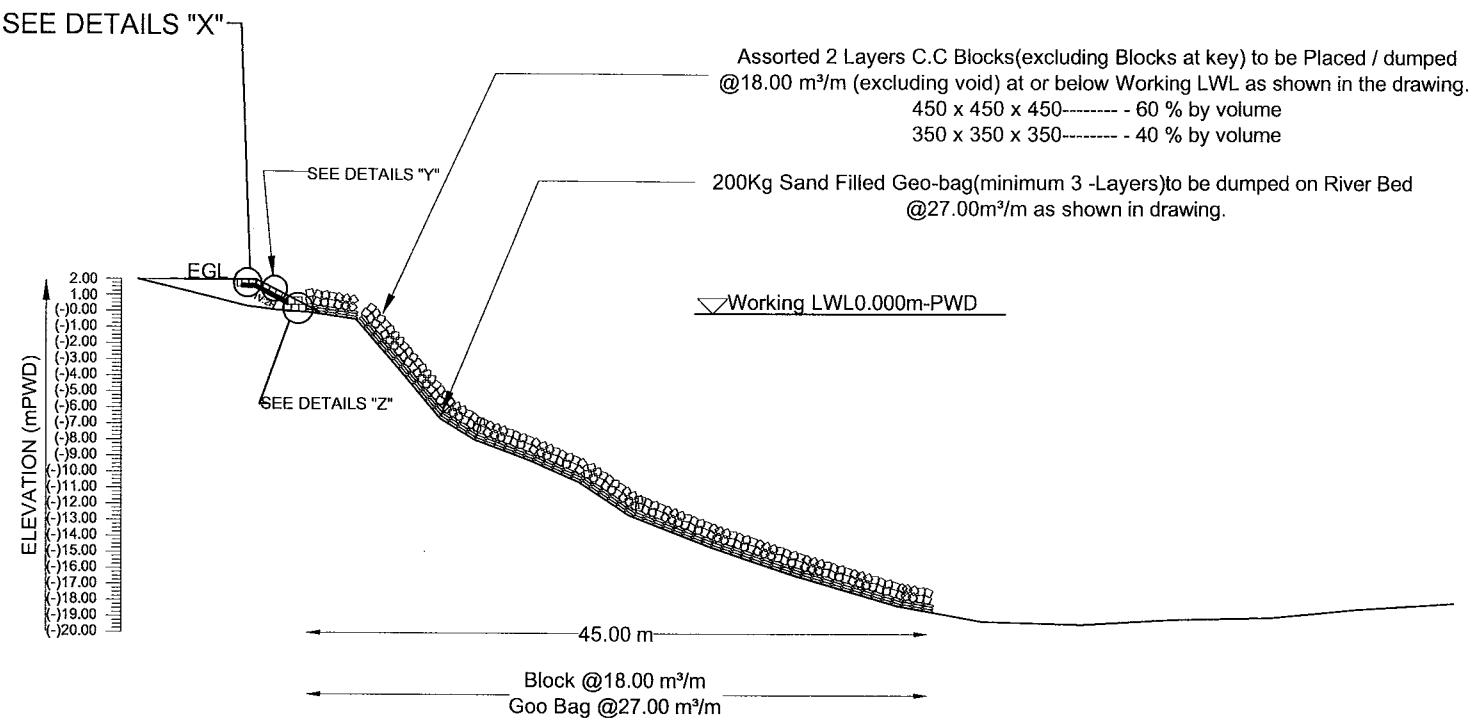
(JAKARIA PERVEZ),EE

APPROVED BY:

(MD. ENAYET ULLAH),CE,DESIGN

DATE:10-01-2023

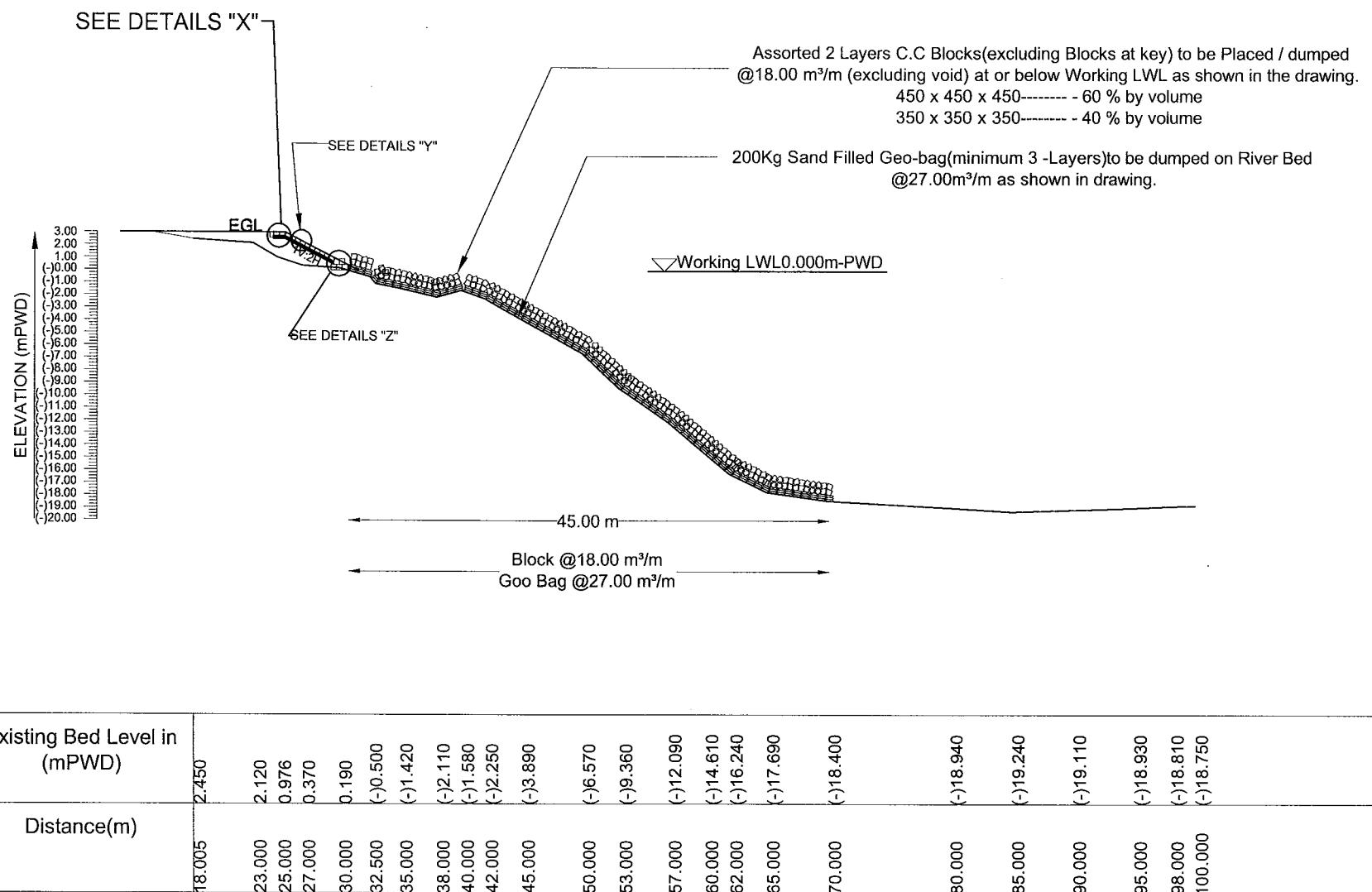
Drawing No:DC-8-0332-12/17



Existing Bed Level in (mPWD)	1.532	0.832	0.355	0.105	(-)0.015	(-)0.445	(-)2.745	(-)6.610	(-)7.950	(-)10.550	(-)12.600	(-)14.630	(-)16.400	(-)18.240	(-)19.200	(-)19.370	(-)19.060	(-)18.920	(-)18.390	(-)17.990	
Distance(m)	16.000	18.999	20.999	22.999	24.999	27.999	29.999	33.354	35.580	39.108	42.264	45.420	50.805	56.190	62.505	67.890	74.206	79.960	86.273	91.658	97.973

TYPICAL CROSS SECTION AT KM 3.300
(APPLICABLE FROM KM 2.740 TO KM 3.550)

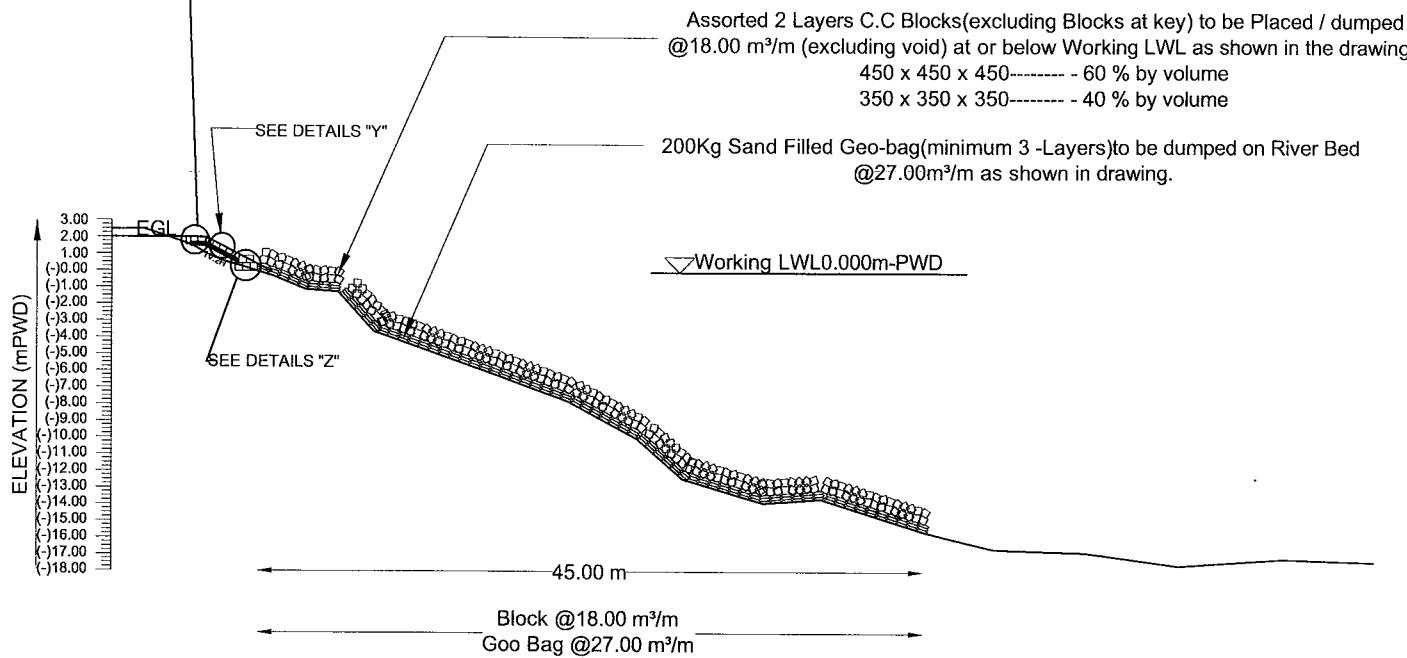
Bangladesh Water Development Board	
Office of The Superintending Enginner,Design Circle-8	
Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river	
Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km	
TYPICAL CROSS SECTION OF FROM SANNASHI TO KHAWLIA PROTECTIVE WORK	
DESIGNED BY: (JAKARIA PERVEZ),EE	RECOMMENDED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED BY: (JAKARIA PERVEZ),EE	APPROVED BY: (MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-13/17



TYPICAL CROSS SECTION AT KM 3.580
(APPLICABLE FROM KM 3.550 TO KM 3.640)

Bangladesh Water Development Board	
Office of The Superintending Enginner,Design Circle-8	
Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river	
Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km	
TYPICAL CROSS SECTION OF PROTECTIVE WORK FROM SANNASHI TO KHALWIA	
DESIGNED BY: (JAKARIA PERVEZ),EE	RECOMMENDED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED BY: (JAKARIA PERVEZ),EE	APPROVED BY: (MD. ENAYET ULLAH),CE,DESIGN
DATE:10-01-2023	Drawing No:DC-8-0332-14/17

SEE DETAILS "X"



Existing Bed Level in (mPWD)	2.459	2.478	1.544	0.975	0.295	(-0.295)	(-1.095)	(-1.225)	(-3.580)	(-5.040)	(-6.260)	(-7.770)	(-9.970)	(-12.410)	(-13.860)	(-15.580)	(-16.600)	(-16.790)	(-17.560)	(-17.150)	(-17.310)		
Distance(m)	13.000	15.000	18.000	18.999	20.000	21.000	23.000	25.000	27.000	29.151	33.390	36.954	41.191	45.430	48.256	53.232	56.735	63.121	67.360	73.013	78.657	85.052	90.705

TYPICAL CROSS SECTION AT KM 4.200
(APPLICABLE FROM KM 3.640 TO KM 4.500)

Bangladesh Water Development Board

Office of The Superintending Enginner,Design Circle-8

Protection of Morrelganj Upazila Sadar and adjacent areas from erosion of Pangusi river in Bagerhat District and Re-excavation/Dredging of Bishkhali river

Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km

TYPICAL CROSS SECTION OF FROM SANNASHI TO KHAWLIA PROTECTIVE WORK

DESIGNED BY:

(JAKARIA PERVEZ),EE

RECOMMENDED BY:

(MOHAMMAD SAIF UDDIN),SE

CHECKED BY:

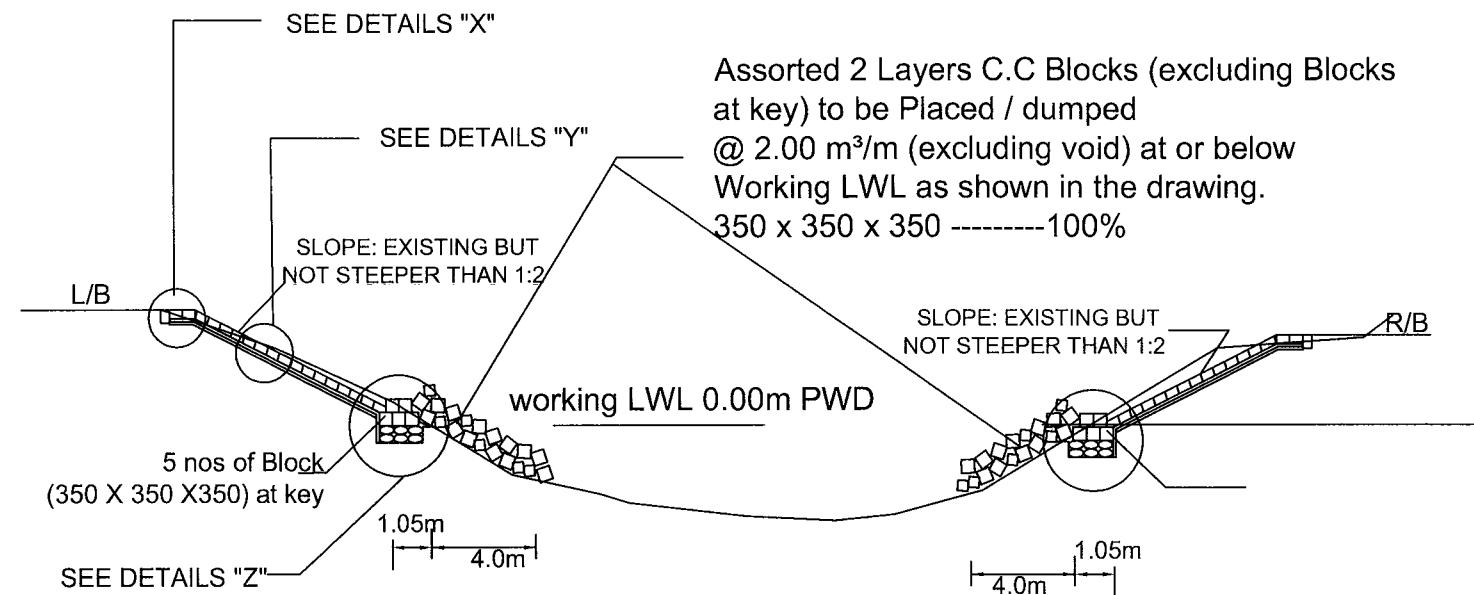
(JAKARIA PERVEZ),EE

APPROVED BY:

(MD. ENAYET ULLAH),CE,DESIGN

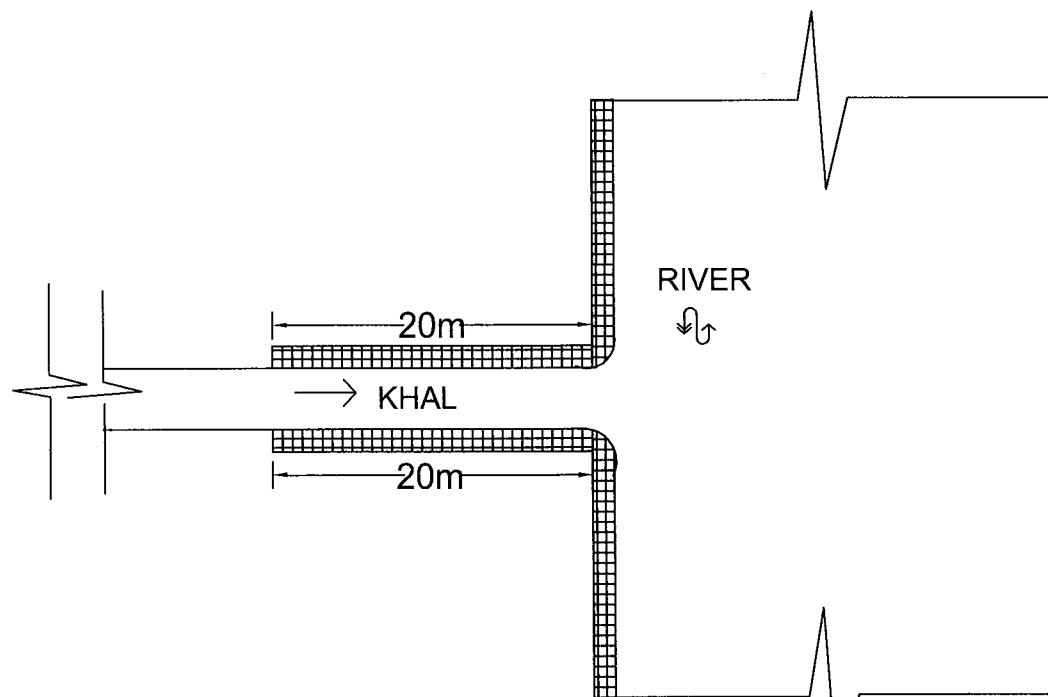
DATE:10-01-2023

Drawing No:DC-8-0332-15/17



TYPICAL X-SECTION FOR ARMOURING OF PROTECTIVE WORK AT CONFLUENCE OF KHAL

(Limit of Wprk: To be Extended 20m towards Khal from Confluence of Khal and River)



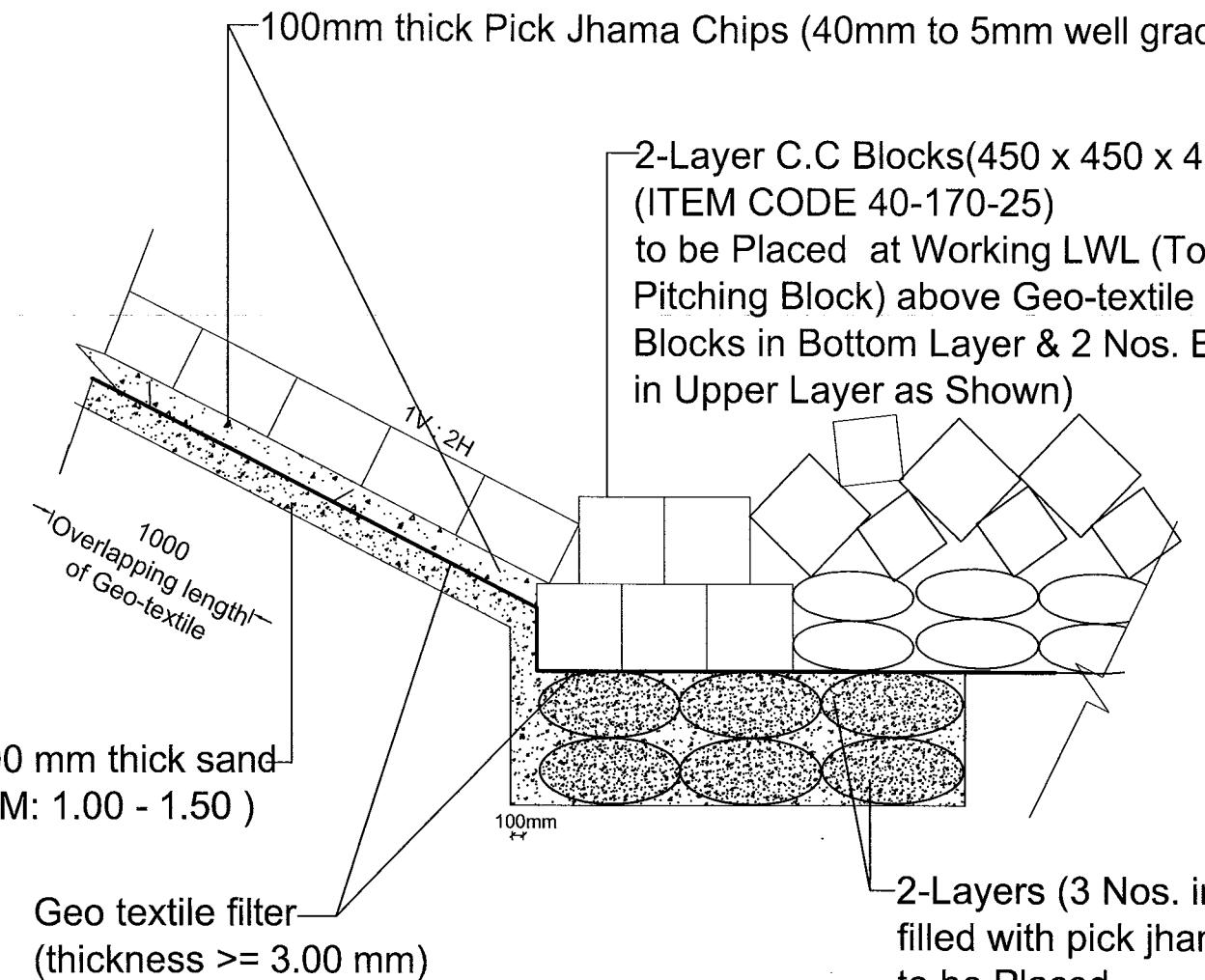
PLAN OF ARMOURING OF KHAL
(NOT TO SCALE)

BANGLADESH WATER DEVELOPMENT BOARD
OFFICE OF THE SUPERINTENDING ENGINEER
DESIGN CIRCLE-8
Protection of Morrelgonj Upazila Sadar & Adjacent Area from Erosion of Panguchi River & Re-excavation/Dredging of Biskhali River in Bagerhat District.

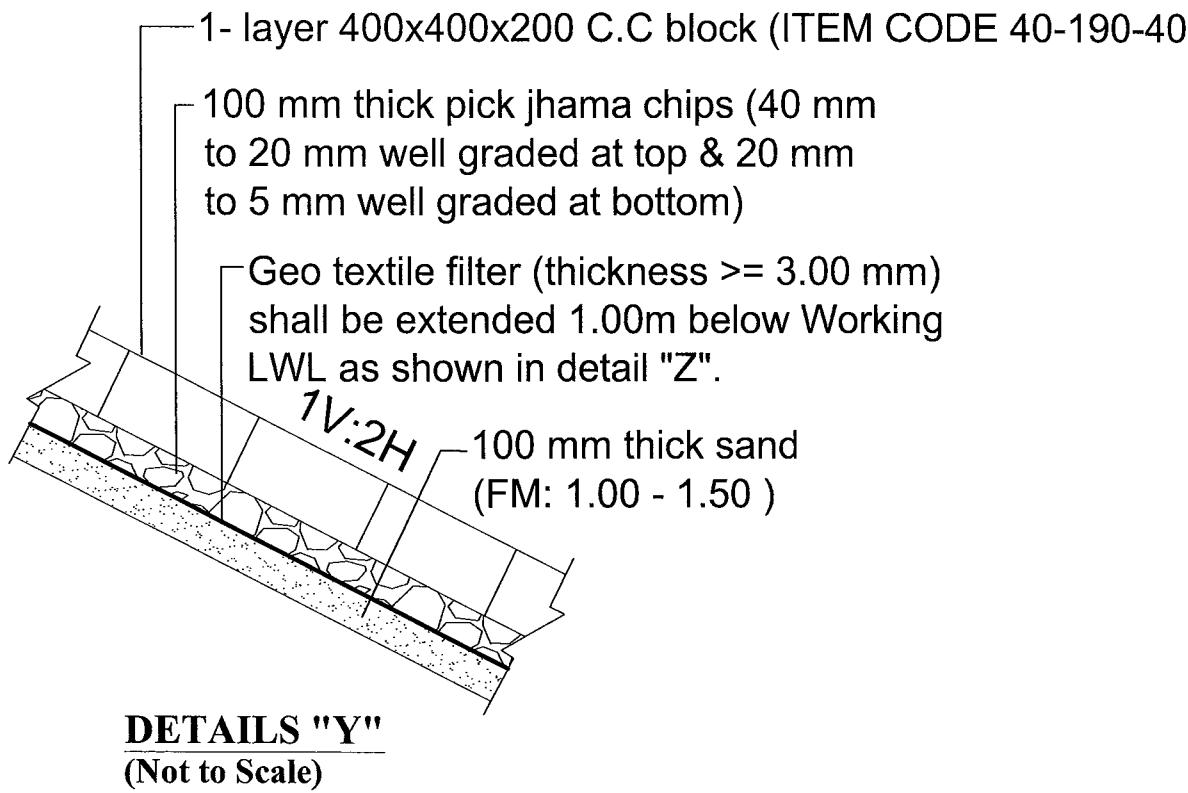
Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km

TYPICAL SECTION FOR KHAL ARMOURING

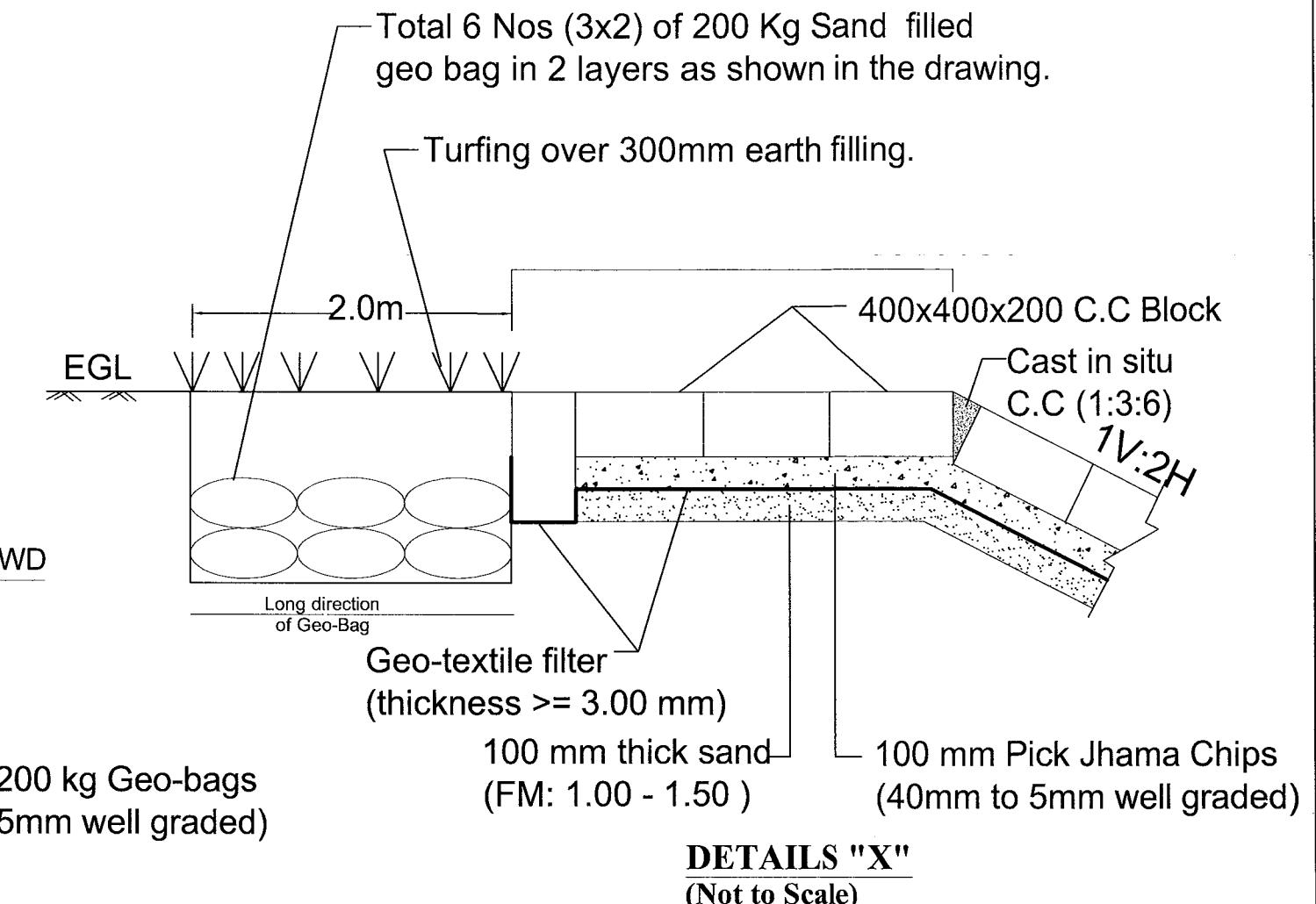
DESIGNED BY:	RECOMMENDED BY:
(JAKARIA PERVEZ), EE	(MOHAMMAD SAIF UDDIN), SE
CHECKED BY:	APPROVED BY:
(JAKARIA PERVEZ), EE	(MD. ENAYET ULLAH), CE, Design
DATE:10-01-2023	DWG NO.: DC-8-0332-16/17



DETAILS "Z"
(Not to Scale)



Scale: Not to Scale



BANGLADESH WATER DEVELOPMENT BOARD
OFFICE OF THE SUPERINTENDING ENGINEER
DESIGN CIRCLE-8
Protection of Morrelgonj Upazila Sadar & Adjacent Area From Erosion of Panguchi River & Dredging of Biskhali River in Bagerhat District.

Design of Protective Work along the Right Bank of Panguchi River From Sannashi to Khawlia From km 0.000 to km 4.500 = 4.500 km

DETAILS OF PROTECTIVE WORK	
DESIGNED BY: 	RECOMMENDED BY:
(JAKARIA PERVEZ), EE	(MD. MAHFUZUR RAHMAN), SE
CHECKED BY: 	APPROVED BY:
(JAKARIA PERVEZ), EE	(MD. ENAYET ULLAH), CE, Design

DATE:10-01-2023 DWG NO.: DC-8-0332-17/17