

Bangladesh Water Development Board

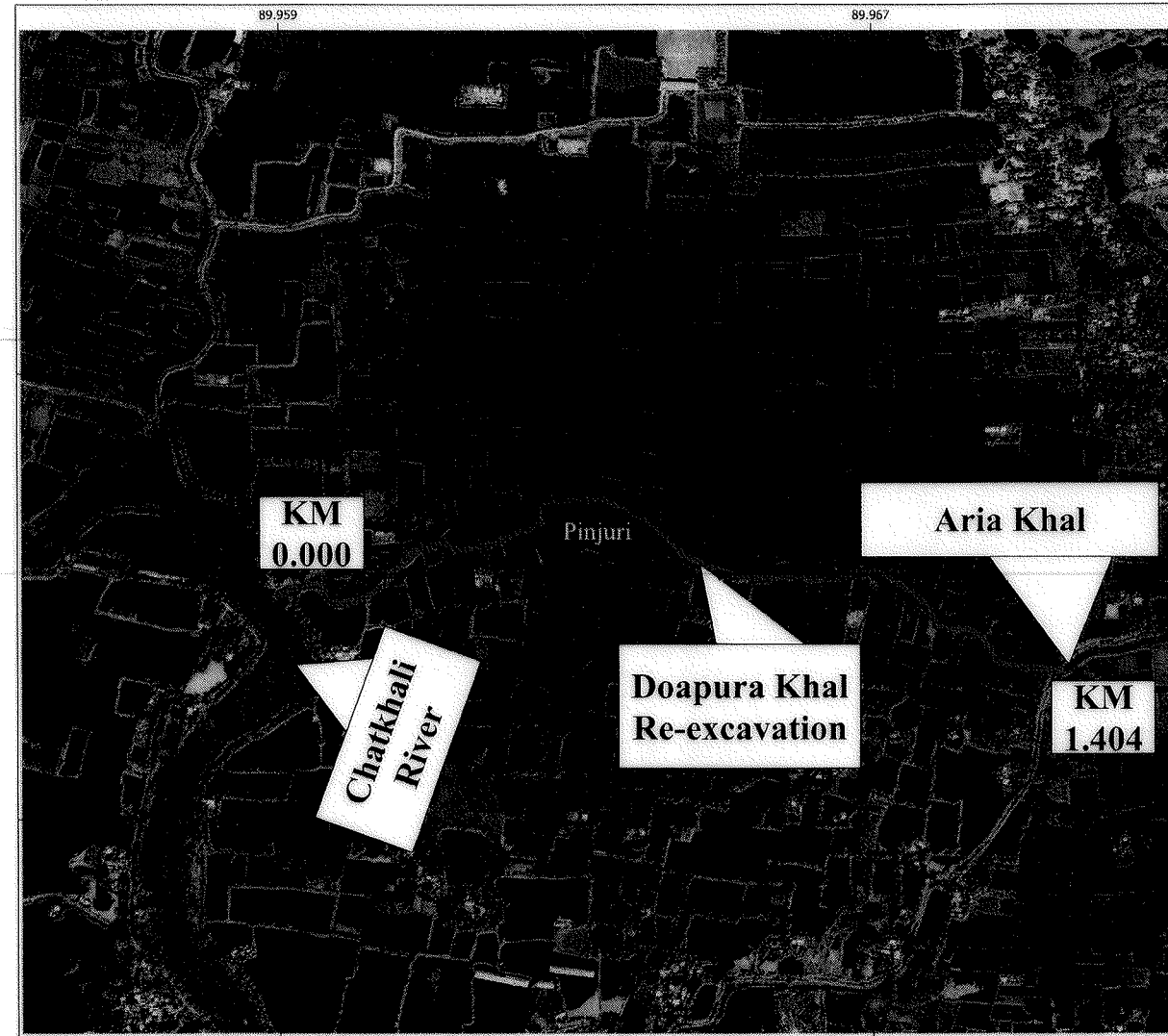
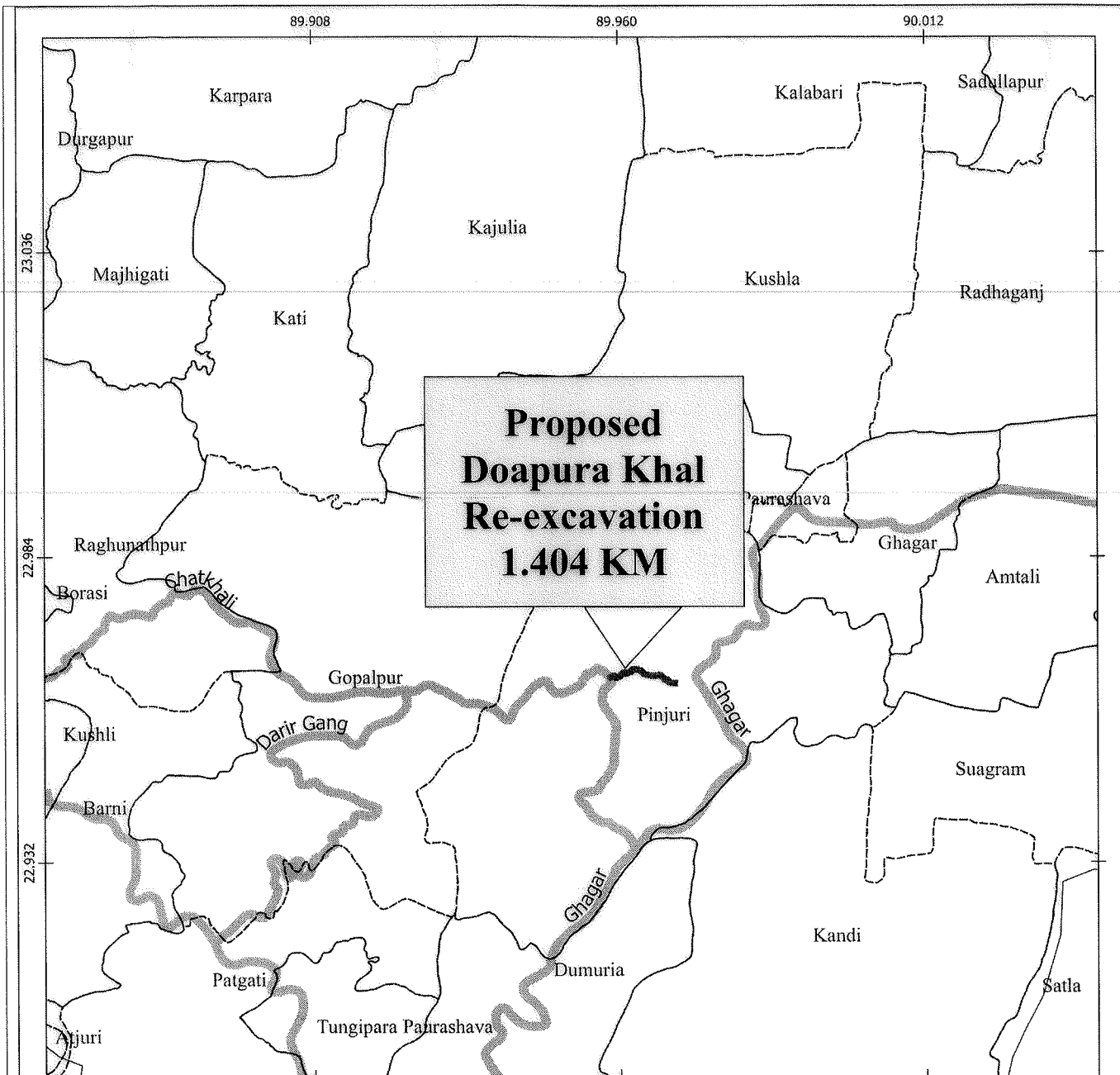
CRISP-WRM

Re-excavation of Doapara Khal from km. 0.000 to km. 1.404 in polder -2 in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under Specialized Division. BWDB, Gopalganj during the year 2024-2025

SMO, IDWRM-KT

Designed by: Design Circle-5, BWDB, Dhaka

February, 2025

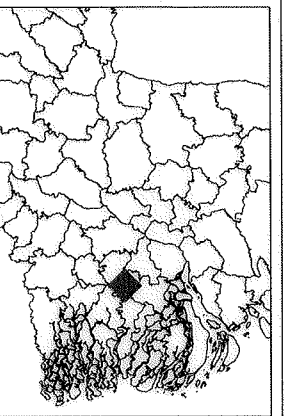
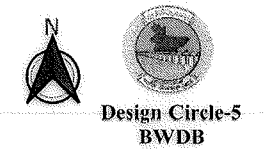


SITE PLAN
Bangladesh Water Development Board

Legends

Site Plan
Proposed Khal Re-excitation
Upazilla

0 100 200 m



Index Map

Legends

Index Map

Proposed Khal Re-excitation

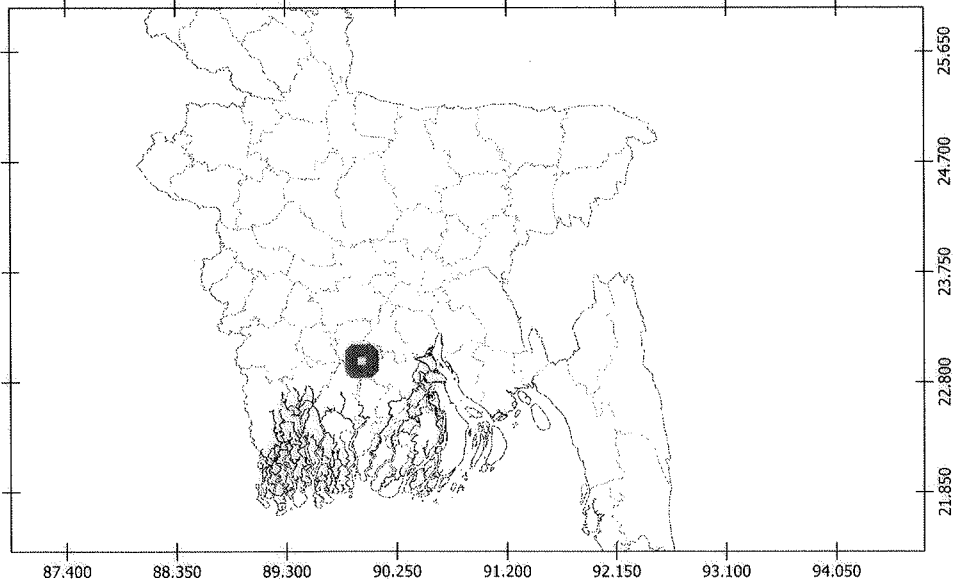
Union




Rivers

0 1.5 3 km

Design Circle-5 BWDB

Bangladesh Water Development Board





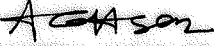
Bangladesh Water Development Board	
Office of The Superintending Engineer, Design Circle-5	
CRISP-WRM	
Re-excitation of Doapara Khal from km. 0.000 to km. 1.404 in polder -2 in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under Specialized Division. BWDB, Gopalganj during the year 2024-2025	
INDEX MAP & SITE MAP FOR DUAPARA KHAL	
DESIGNED BY:  (MD.MOSTAFA KAMAL), AE	APPROVED BY:  (JAKARIA PERVEZ), SE
CHECKED AND RECOMMENDED BY:  (MD.KAMRUL HASAN), EE	
Date:04/02/2025	Drawing No:DC5-5774-01/11

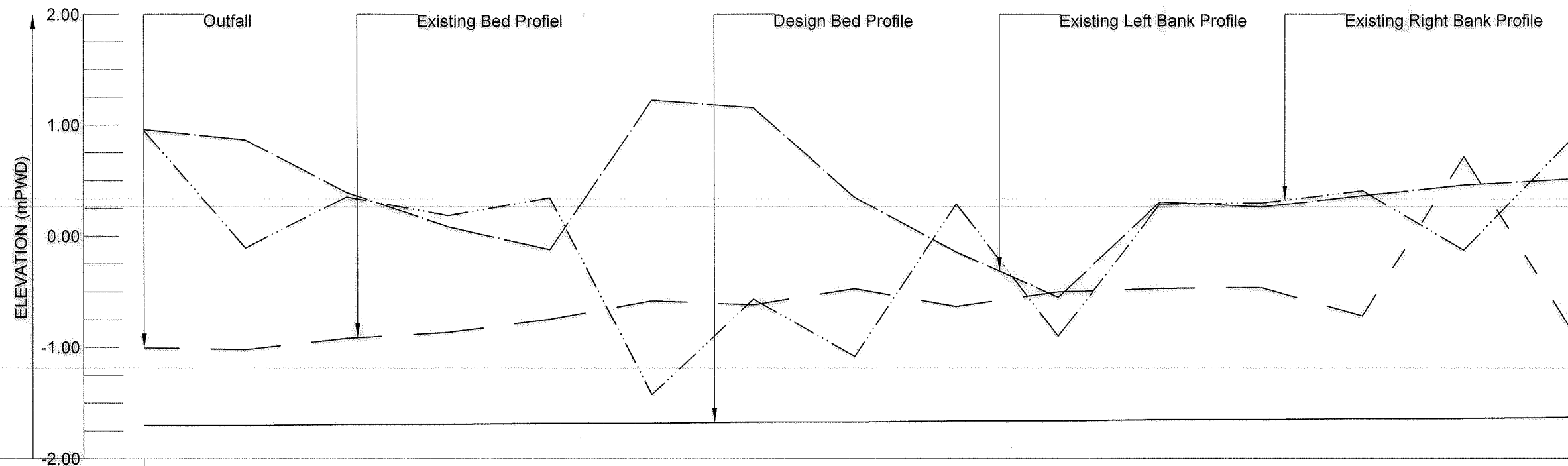
Adminstrative Notes :

1. FOR ANY ERROR, OMISSION OR CONFUSION PLEASE REFER TO THIS OFFICE AS QUICK AS POSSIBLE FOR FURTHER NECESSARY ACTION
2. WORK SHALL BE EXECUTED AFTER ADMINISTRATIVE AND FINANCIAL APPROVAL AND TECHNICAL SANCTION FROM THE COMPETENT AUTHORITY AND WITHIN THE DPP / BUDGET PROVISION.
3. ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETER AND METER(PWD) RESPECTIVELY UNLESS OTHERWISE MENTIONED IN THE DRAWING.
4. ALL MATERIALS AND WORK MUST CONFIRM WITH BWDB TECHNICAL SPECIFICATION.
5. NECESSARY LAND (IF REQUIRED) SHALL BE ARRANGED BY THE FIELD OFFICE FOR RE-EXCAVATION & CONSTRUCTION OF DYKE (IF REQUIRED).
6. THE RE-EXCAVATION OF THE KHAL SHALL START FROM DOWNSTREAM SIDE.
7. A SMOOTH TRANSITION SHALL BE PROVIDED BETWEEN THE EXCAVATED SECTION OF THE KHAL AND THE EXISTING SECTION.
8. A SMOOTH TRANSITION 1:100 SHALL BE PROVIDED AT THE POINT WHERE DESIGN BED WIDTH OR BED LEVEL CHANGES.
9. A SMOOTH TRANSITION AT A SLOPE OF 1:100 SHALL BE KEPT BETWEEN APRON LEVEL OF CONNECTING STRUCTURE (IF ANY) TO DESIGN BED LEVEL OF KHAL.
10. THE RE-EXCAVATION WORK SHALL BE DONE IN THE DRY SEASON WHEN WATER LEVEL IS AT OR NEAR LOW WATER LEVEL
11. NO FILLING SHALL BE DONE WHERE THE EXISTING BED LEVEL OF THE KHAL IS LOWER THAN THE DESIGN BED LEVEL AND EXISTING SIDE SLOPE IS FLATTER THAN DESIGN SECTION.
12. ANY OUTFALL/OFTAKE RIVER/KHAL WHICH IS CONNECTED WITH THE PROPOSED KHAL SHALL BE KEPT OPEN.
13. TYPICAL DESIGN SECTIONS ARE PROVIDED IN THIS DESIGN FOR RE-EXCAVATION. CROSS SECTIONS AT AN INTERVAL NOT MORE THAN 150.00M TO BE TAKEN BY THE FIELD OFFICE FOR THE ESTIMATION OF ACTUAL VOLUME OF EARTH CUTTING.
- 14.EXCAVATED EARTH TO BE COLLECTED FROM RIVER CAREFULLY CONSIDERING NO ADVERSE EFFECT ON CHANNEL FLOW AND BANK ERROSION.
15. ANY PROPOSED BOX CULVERT /BRIDGE OVER THIS KHAL WILL BE DESIGNED CONSIDERING DESIGN SECTIONS OF THIS KHAL

SPECIAL NOTES :



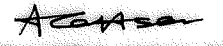
1. THIS REVISED DRAWING HAS BEEN PREPARED AS PER PROPOSAL AND DESIGN DATA SUBMITTED BY PD,CRISP-WRM HIS OFFICE MEMO NO-PMO/190; DATE: 11/11/2024
2. THIS RE-REEXCAVATION WORK HAS ALSO BEEN DESIGNED CONSIDERING THE WATER RESERVOIR AS WELL AS FOR IRRIGATION PURPOSE.
3. IF THE EXISTING BED LEVEL OF THE OUTFALL (RIVER / KHAL) IS HIGHER THAN DESIGN BED LEVEL OF THIS KHAL, RE-EXCAVATION OF THIS KHAL MUST BE DONE IN PARALLEL/ AFTER THE RE-EXCAVATION OF ITS OUTFALL RIVER / KHAL AS PER APPROVED DESIGN.
4. IF THERE EXISTS ANY STRUCTURE (REGULATOR, BOX CULVERT ETC.) OTHER THAN BRIDGE WITHIN THE PROPOSED LENGTH OF THE KHAL, RE-EXCAVATION WORK IS PROHIBITED THROGHOUT THE LENGTH OF THAT STRUCTURE.
5. DESIGN BED LEVEL OF THE KHAL SHALL NOT BE BELOW THE FOUNDATION TOP LEVEL OF THE EXISTING STRUCTURES (IF ANY) IN THE KHAL. IF THE DESIGN BED LEVEL IS BELOW THE FOUNDATION TOP LEVEL THEN THE DIFFERENCE BETWEEN THESE LEVELS SHALL BE MATCHED IN A SLOPE 1:100, OR A DISTANCE OF 100 M, WHICHEVER IS HEIGHER (U/S AND D/S OF THE STRUCTURE), (OR AS SHOWN IN THE DRAWING).
6. DESIGN BED LEVEL & BED WIDTH OF THIS KHAL HAVE BEEN FIXED CONSIDERING THE BED LEVEL & BED WIDTH OF EXISTING KHAL/ FLOOR LEVEL OF EXISTING HYDRAULIC STRUCTURE.
7. ALL SAFETY PRECAUTION MUST BE TAKEN DURING EXECUTION OF WORK.

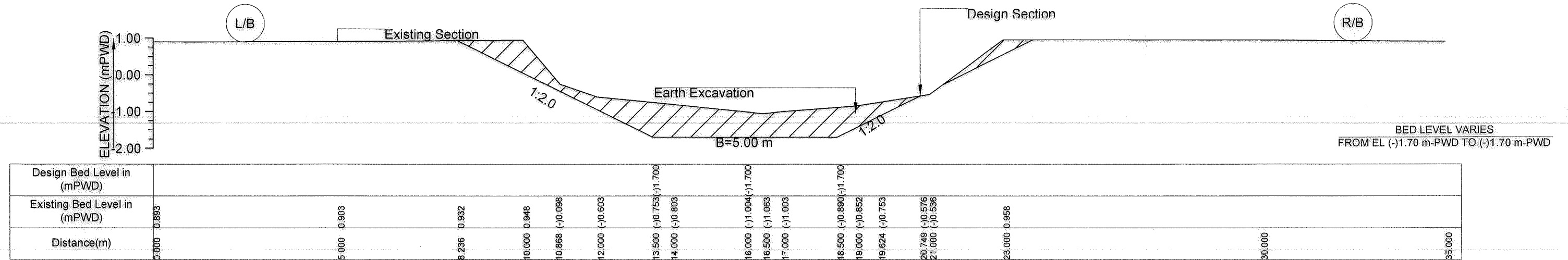
Bangladesh Water Development Board	
Office of The Superintending Engineer,Design Circle-5	
CRISP-WRM	
Re-excavation of Doapara Khal from km. 0.000 to km. 1.404in polder -2 in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under Specialized Division. BWDB, Gopalganj during the year 2024-2025	
NOTES FOR DUAPARA KHAL	
DESIGNED BY:  (MD.MOSTAFA KAMAL),AE	APPROVED BY:  (JAKARIA PERVEZ),SE
CHECKED AND RECOMMENDED BY:  (MD.KAMRUL HASAN),EE	
Date:04/02/2025	Drawing No:DC5-5774-02/11



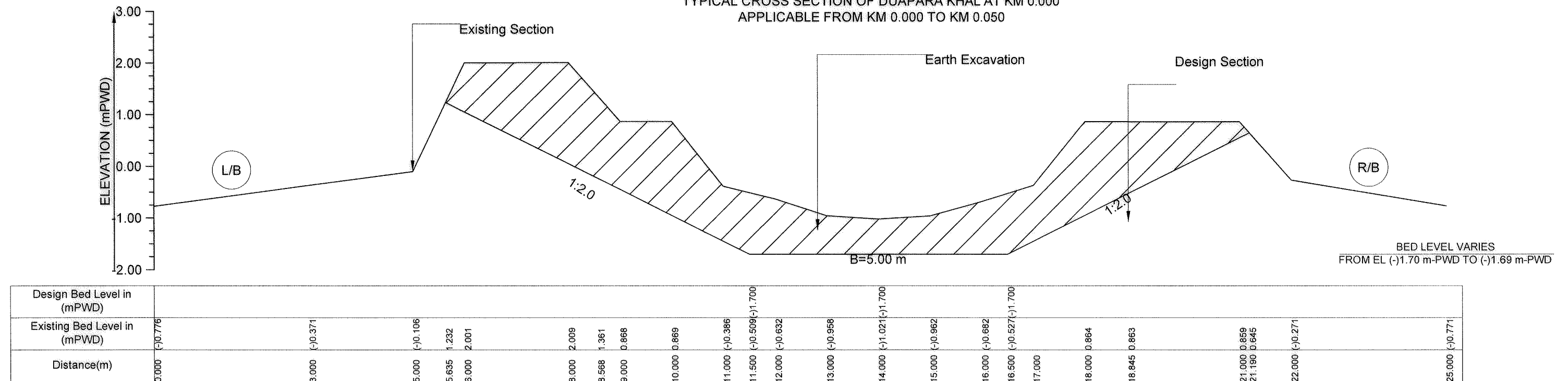
Design Bed Width(m)															
Design Bed Level (mPWD)	(-)1.700		(-)1.690		(-)1.680		(-)1.670		(-)1.660		(-)1.650		(-)1.640		(-)1.630
Existing Bed Level (mPWD)	(-)1.004	(-)1.021	(-)0.920	(-)0.866	(-)0.747	(-)0.581	(-)0.617	(-)0.472	(-)0.633	(-)0.501		(-)0.466	(-)0.719	0.710	(-)0.819
Existing Left Bank Level (mPWD)	0.948	(-)0.106	0.352	0.183	0.344	(-)1.426	(-)0.566	(-)1.082	0.288	(-)0.901	0.284	0.294	0.405	(-)0.129	0.851
Existing Right Bank Level (mPWD)	0.958	0.864	0.392	0.083	(-)0.122	1.224	1.154	0.348	(-)0.143	(-)0.551	0.304	0.259	0.361	0.456	0.510
Distance(Km)	0.000	0.100	0.200	0.300	0.400	0.500	0.600	0.700	0.800	0.900	1.000	1.100	1.200	1.300	1.404

LONG SECTION OF DUAPARA KHAL APPLICABLE FROM KM 0.000 TO KM 1.404

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LONG SECTION OF DUAPARA KHAL	
DESIGNED BY:  (MD.MOSTAFA KAMAL),AE	APPROVED BY:  (JAKARIA PERVEZ),SE
CHECKED AND RECOMMENDED BY:  (MD.KAMRUL HASAN),EE	
Date:04/02/2025	Drawing No:DC5-5774-03/12



TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 0.000
APPLICABLE FROM KM 0.000 TO KM 0.050



TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 0.100
APPLICABLE FROM KM 0.050 TO KM 0.150

Bangladesh Water Development Board

Office of The Superintending Engineer, Design Circle-5

CRISP-WRM

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in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under
Specialized Division. BWDB, Gopalganj during the year 2024-2025

TYPICAL CROSS SECTION OF DUAPARA KHAL

DESIGNED BY:

(MD.MOSTAFA KAMAL), AE

CHECKED AND RECOMMENDED BY:

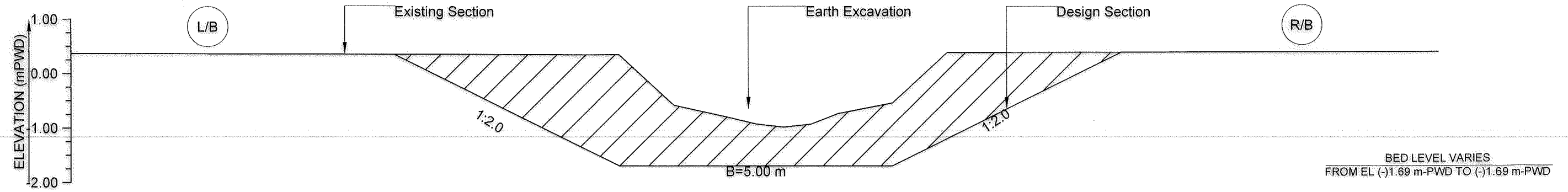
(MD.KAMRUL HASAN), EE

APPROVED BY:

(JAKARIA PERVEZ), SE

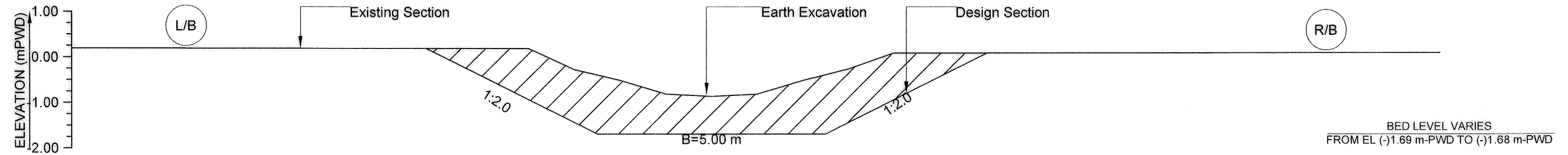
Date:04/02/2025

Drawing No:DC5-5774-04/11



Design Bed Level in (mPWD)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Existing Bed Level in (mPWD)	0.367		0.362		0.360		0.356		0.352	-1.690		-0.578		-0.799		-0.920	-1.690		-0.978		-0.923		-0.730		-0.534	-1.690		-0.392		-0.395		-0.400		-0.402																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 0.200
APPLICABLE FROM KM 0.150 TO KM 0.250



Design Bed Level in (mPWD)																				
Existing Bed Level in (mPWD)	0.193		0.186		0.184		0.183		0.183		-0.281	-0.399	-0.517	-0.816	-0.866	-0.817	-0.518	-0.392	-0.266	
Distance(m)	0.000	5.000	7.751	9.626	10.000	11.000	11.500	12.000	13.000	14.000	15.000	16.000	16.500	17.000	18.000	18.275	20.050	25.000	30.000	

TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 0.300
APPLICABLE FROM KM 0.250 TO KM 0.350

Bangladesh Water Development Board

Office of The Superintending Engineer, Design Circle-5

CRISP-WRM

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in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under
Specialized Division. BWDB, Gopalganj during the year 2024-2025

TYPICAL CROSS SECTION OF DUAPARA KHAL

DESIGNED BY:
[Signature]
04.02.25
(MD. MOSTAFA KAMAL), AE

APPROVED BY:

CHECKED AND RECOMMENDED BY:
[Signature]
(MD. KAMRUL HASAN), EE

[Signature]
04.02.25
(JAKARIA PERVEZ), SE

Date: 04/02/2025

Drawing No: DC5-5774-05/11

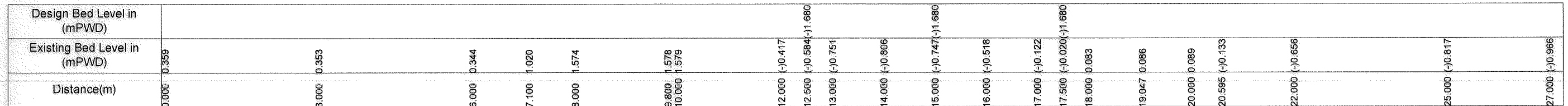


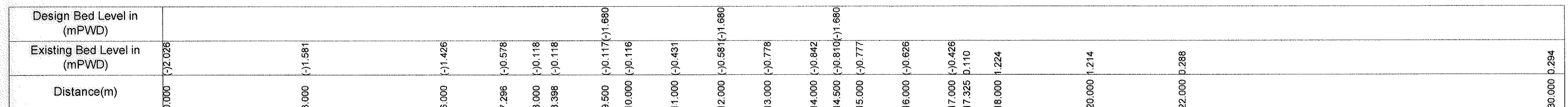
Diagram illustrating the cross-section of a canal bed level, showing the existing section, earth excavation, and design section.




The vertical axis represents ELEVATION (mPWD) from -3.00 to 2.00.

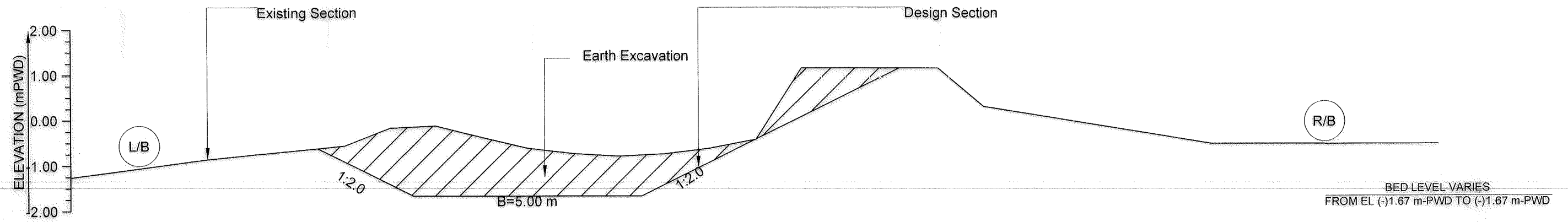
The horizontal axis shows the profile of the canal bed, including the existing section, earth excavation, and design section.

Key features and labels:

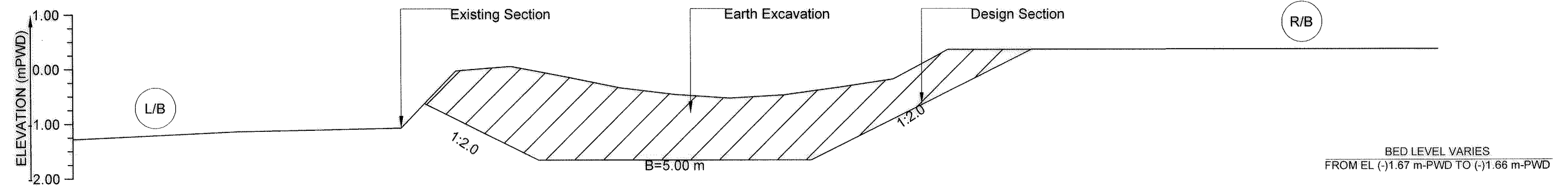
- Existing Section:** The original bed level profile.
- Earth Excavation:** The area to be excavated, indicated by the shaded region.
- Design Section:** The proposed bed level profile.
- Slope:** The design section has a slope of 1:2.0.
- Width:** The width of the excavation is $B = 5.00 \text{ m}$.
- Bank Labels:** L/B (Left Bank) and R/B (Right Bank).
- Bed Level Variation:** BED LEVEL VARIES FROM EL (-)1.68 m-PWD TO (-)1.67 m-PWD.



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CHECKED AND RECOMMENDED BY:  (MD. KAMRUL HASAN), EE	
Date: 04/02/2025	Drawing No: DC5-5774-06/11

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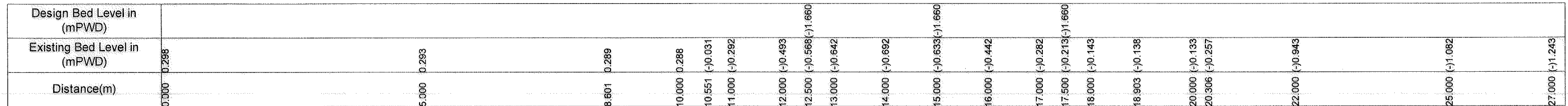
TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 0.600
APPLICABLE FROM KM 0.550 TO KM 0.650






Design Bed Level in (mPWD)	Existing Bed Level in (mPWD)	Distance(m)
	-1.282	7.000
	-1.143	8.000
	-1.082	9.000
	-10.634	8.428
	-10.037	7.000
	0.000	7.464
	0.043	8.000
	-10.063(-1.670	9.500
	-10.148	9.000
	-10.352	10.000
	-10.472(-1.670	11.000
	-10.542	12.000
	-10.482	13.000
	-10.413(-1.670	13.500
	-10.343	14.000
	-10.192	15.000
	0.089	15.520
	0.348	16.000
	0.353	20.000
	0.358	25.000

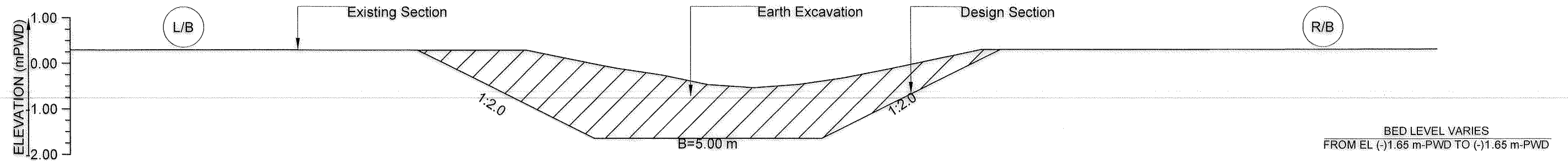
TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 0.700
APPLICABLE FROM KM 0.650 TO KM 0.750

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Date: 04/02/2025	Drawing No: DC5-5774-07/11



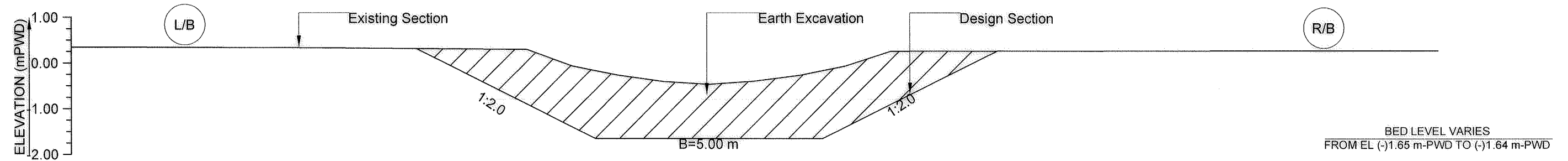
Design Bed Level in (mPWD)	Existing Bed Level in (mPWD)	Distance(m)
	(-1.421)	0.000
	(-1.152)	3.000
	(-0.901)	5.000
	(-0.195)	5.569
	(-0.001)	7.000
	0.024	8.035
	0.048	9.000
	(-0.024)(-1.660)	9.500
	(-0.096)	10.000
	(-0.306)	11.000
	(-0.501)(-1.660)	12.000
	(-0.541)	13.000
	(-0.601)	14.000
	(-0.576)(-1.660)	14.500
	(-0.551)	15.000
	(-0.453)	15.988
	(-0.281)	17.000
	(-0.172)	17.476
	(-0.052)	18.000
	0.394	25.000
		30.000
		30.997

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CHECKED AND RECOMMENDED BY:  (MD. KAMRUL HASAN), EE	
Date: 04/02/2025	Drawing No: DC5-5774-08/11



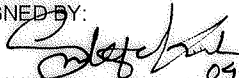


Design Bed Level in (mPWD)	Existing Bed Level in (mPWD)	Distance(m)
	0.284	0.000
		5.000
	0.289	
		7.627
	0.286	
		9.564
	0.284	
		10.000
	0.284	
		11.500
	(-0.016)(-1.650)	
		12.000
	(-0.116)	
		13.000
	(-0.267)	
		14.000
	(-0.472)(-1.650)	
		15.000
	(-0.542)	
		16.000
	(-0.467)	
		16.500
	(-0.394)(-1.650)	
		17.000
	(-0.321)	
		18.000
	(-0.124)	
		18.454
	(-0.027)	
		20.000
	0.304	
		20.409
	0.304	
		25.000
	0.309	
		30.000
	0.319	

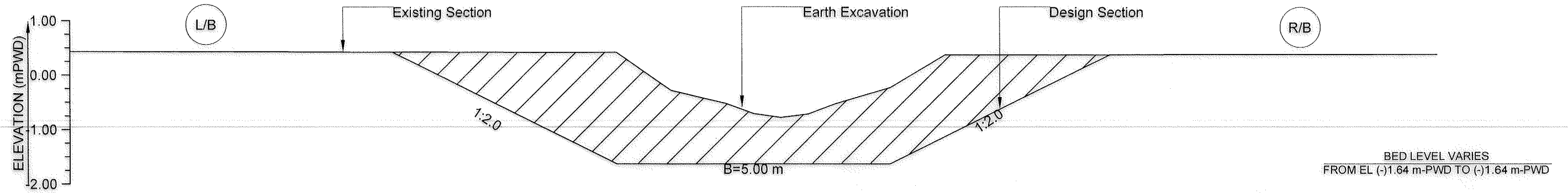
TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 1.000
APPLICABLE FROM KM 0.950 TO KM 1.050



Design Bed Level in (mPWD)	Existing Bed Level in (mPWD)	Distance(m)
	0.343	0.000
	0.333	05.000
	0.313	07.574
	0.298	09.537
	0.294	10.000
	-0.067	11.000
	-0.167	11.500
	-0.267	12.000
	-0.406	13.000
	-1.650	14.000
	-0.397	15.000
	-0.268	16.000
	-1.650	16.500
	-0.068	17.000
	0.259	18.000
	0.260	18.414
	0.264	20.000
	0.264	20.329
	0.269	25.000
		30.000
		0.274

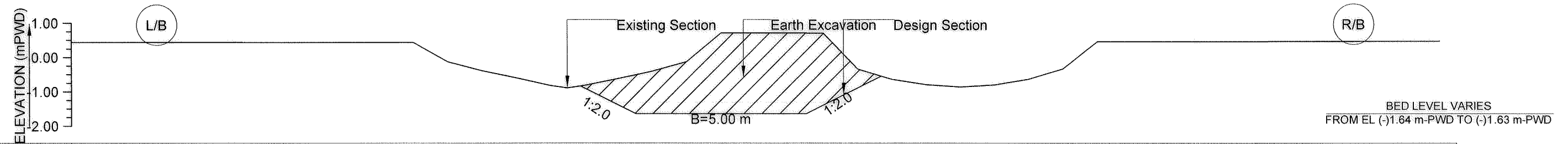
TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 1.100
APPLICABLE FROM KM 1.050 TO KM 1.150

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CHECKED AND RECOMMENDED BY:  (MD. KAMRUL HASAN), EE	
Date: 04/02/2025	Drawing No: DC5-5774-09/11



Design Bed Level in (mPWD)	
Existing Bed Level in (mPWD)	0.431
Distance(m)	0.000
	5.000 0.416
	5.892 0.414
	7.946 0.410
	10.000 0.405 (-)1.640
	11.000 (-)0.290
	12.000 (-)0.534
	12.500 (-)0.719 (-)1.640
	13.000 (-)0.790
	13.500 (-)0.724
	14.000 (-)0.539
	15.000 (-)0.244 (-)1.640
	16.000 0.361
	17.005 0.362
	19.010 0.365
	20.000 0.366
	25.000 0.371

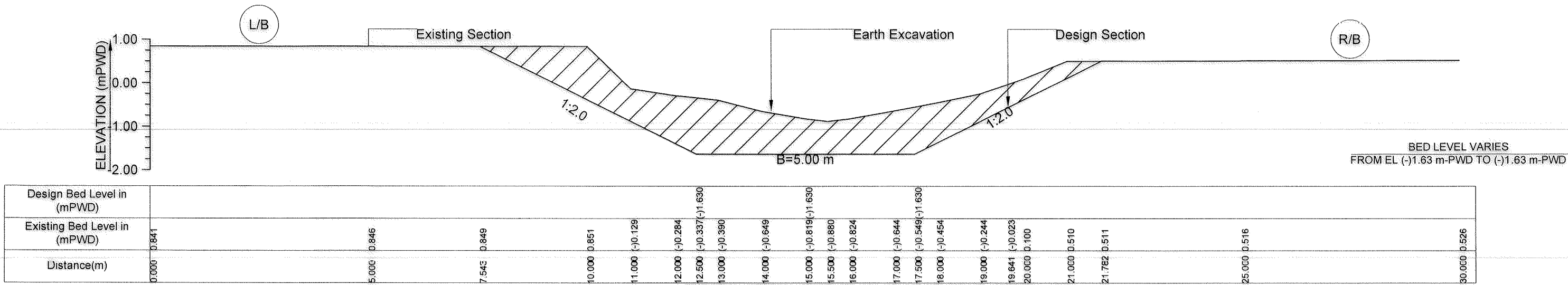
TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 1.200
APPLICABLE FROM KM 1.150 TO KM 1.250



Design Bed Level in (mPWD)	Existing Bed Level in (mPWD)	Distance(m)
	0.441	0.000
	0.436	0.500
	0.431	1.000
	-0.129	1.100
	-0.390	1.200
	-0.595	1.300
	-0.819	1.400
	-0.890	1.450
	-0.835	1.491
	-0.680	1.595
	-0.619	1.600
	-1.640	1.650
	-0.404	1.700
		1.800
	0.710	1.900
	-1.640	
		21.500
	0.703	21.500
	0.701	22.000
	0.083	22.591
	-0.344	23.000
	-0.549	23.682
	-0.544	24.000
	-0.799	25.000
	-0.864	26.000
	-0.904	27.000
	-0.639	28.000
	-0.339	29.000
	0.456	30.000
	0.461	35.000
	0.471	40.000

TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 1.300
APPLICABLE FROM KM 1.250 TO KM 1.352

Bangladesh Water Development Board	
Office of The Superintending Engineer, Design Circle-5	
CRISP-WRM	
Re-excavation of Doapara Khal from km. 0.000 to km. 1.404 in polder -2 in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under Specialized Division. BWDB, Gopalganj during the year 2024-2025	
TYPICAL CROSS SECTION OF DUAPARA KHAL	
DESIGNED BY:  (MD. MOSTAFA KAMAL), AE	APPROVED BY:  (JAKARIA PERVEZ), SE
CHECKED AND RECOMMENDED BY:  (MD. KAMRUL HASAN), EE	
Date: 04/02/2025	Drawing No: DC5-5774-10/11



TYPICAL CROSS SECTION OF DUAPARA KHAL AT KM 1.404
APPLICABLE FROM KM 1.352 TO KM 1.404

Bangladesh Water Development Board	
Office of The Superintending Engineer,Design Circle-5	
CRISP-WRM	
Re-excavation of Doapara Khal from km. 0.000 to km. 1.404in polder -2 in c/w Tarail-Pachuria Sub-Project under CRISP-WRM under Specialized Division. BWDB, Gopalganj during the year 2024-2025	
TYPICAL CROSS SECTION OF DUAPARA KHAL	
DESIGNED BY:  (MD.MOSTAFA KAMAL),AE	APPROVED BY:  (JAKARIA PERVEZ),SE
CHECKED AND RECOMMENDED BY:  (MD.KAMRUL HASAN),EE	
Date:04/02/2025	Drawing No:DC5-5774-11/11