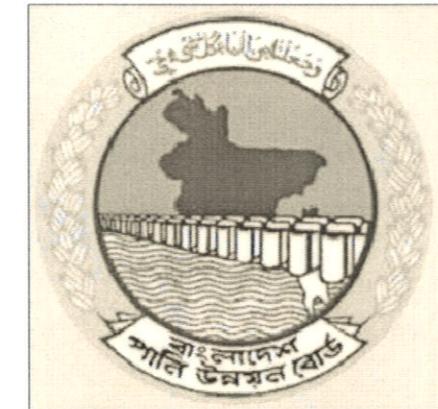


Bangladesh Water Development Board



Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M
Division-2, BWDB, Satkhira

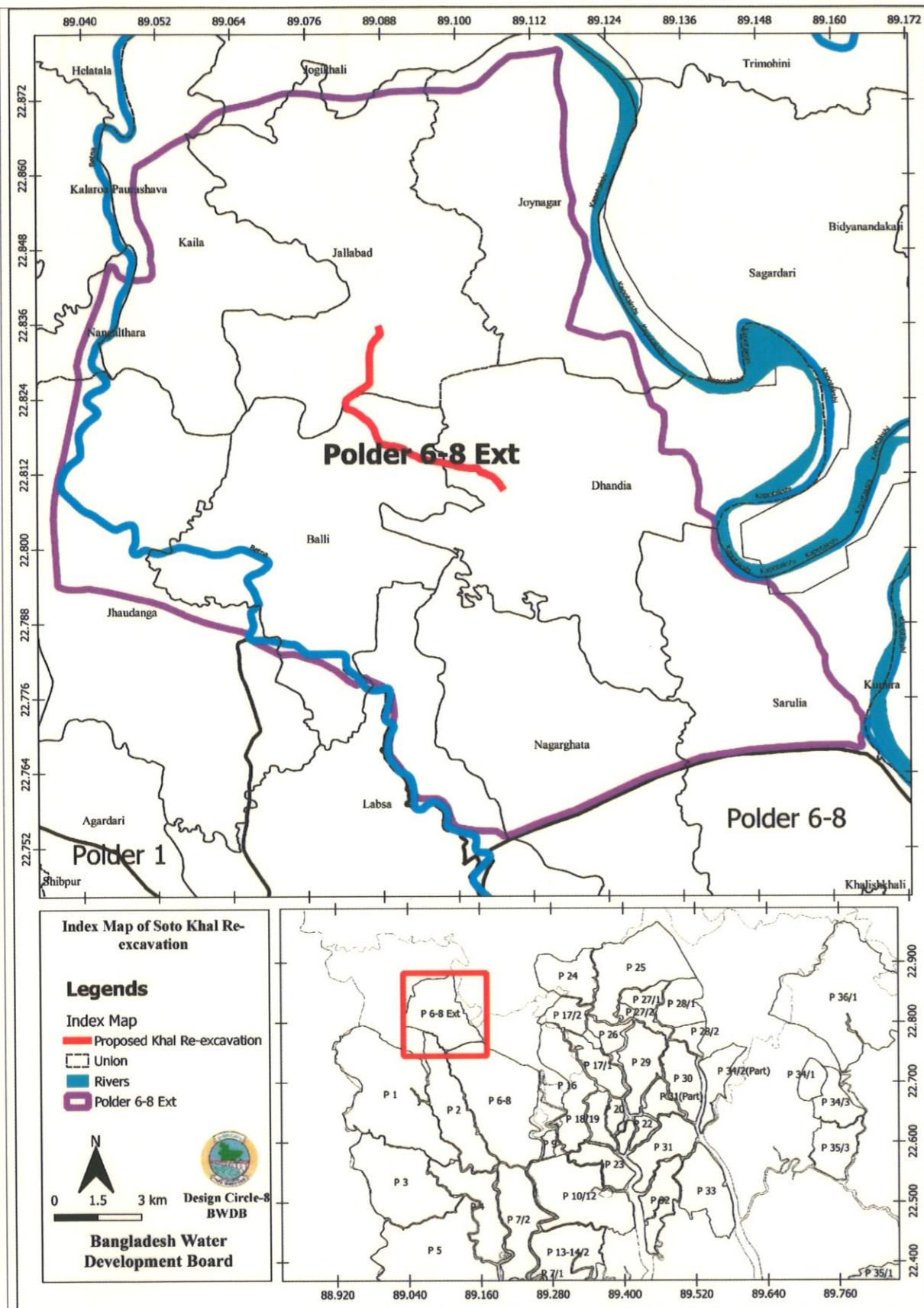
Re-excavation of Boro khal From km.0.000 to Km. 2.400 = 2.400 Km , Soto Khal From Km.0.000 to km. 4.800 = 4.800 Km, Dangi Khal From km.0.000 to km. 2.000 = 2.000 Km & Dapua Khal From Km. 0.000 To Km. 5.200 = 5.200 Km. Total = 14.400 Km. in Polder No. 6-8, InTala, Kolaroa & Assasuni Upazila, in c/w
“ Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M
Division-2, BWDB, Satkhira.

(Design of Soto Khal)

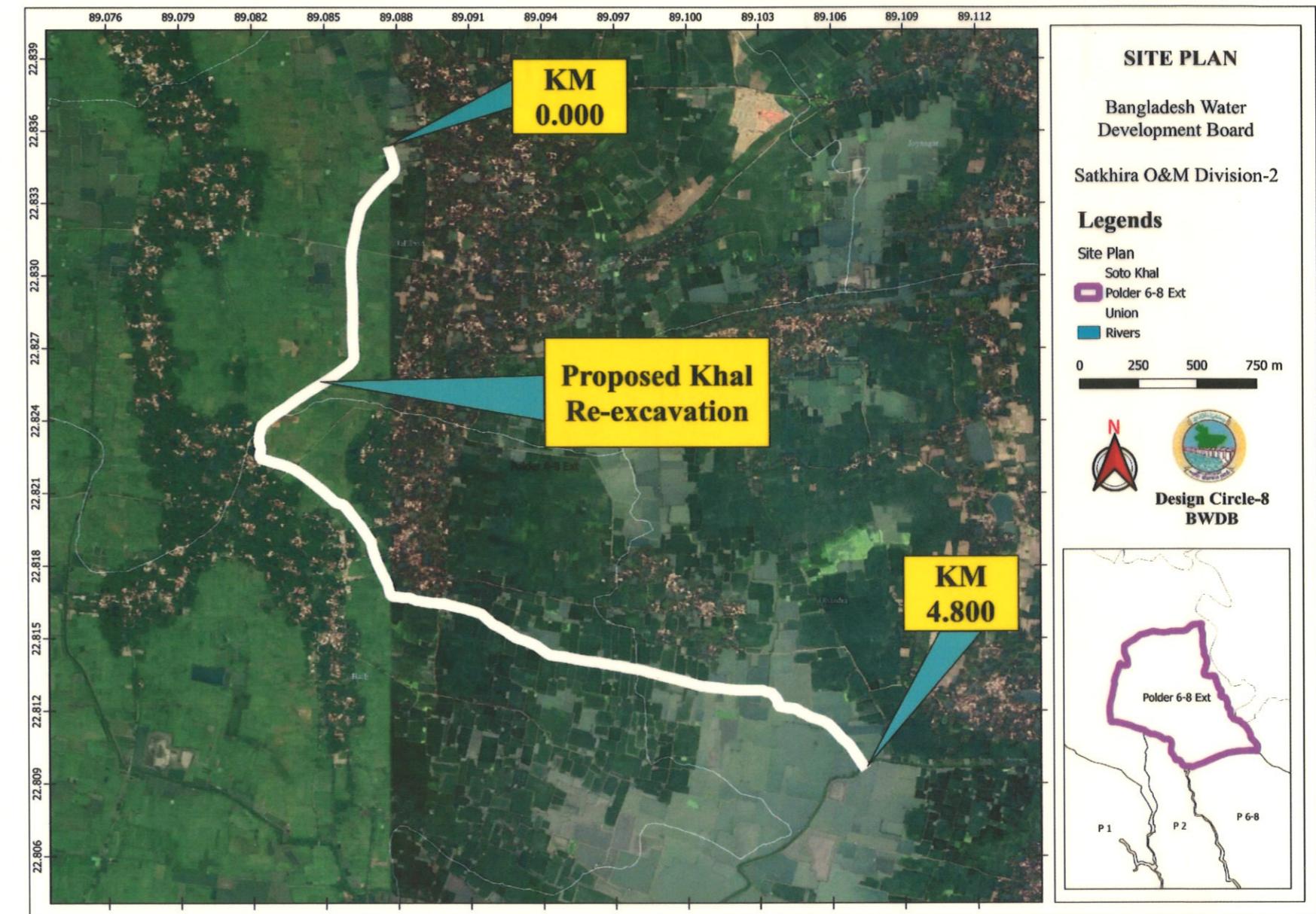
Satkhira O&M Division-2

Designed by:Design Circle-8,BWDB,Dhaka

February,2022



INDEX MAP FOR SOTO KHAL



SITE MAP FOR SOTO KHAL

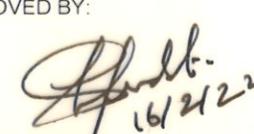
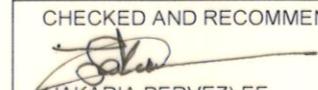
Bangladesh Water Development Board	
Office of The Superintending Engineer, Design Circle-8	
Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira	
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INDEX MAP & SITE MAP FOR SOTO KHAL	
DESIGNED BY: (SAKIB BIN RAFI),AE	APPROVED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ),EE	
Date: 2022-02-16	Drawing No: DC8-0216-01/8

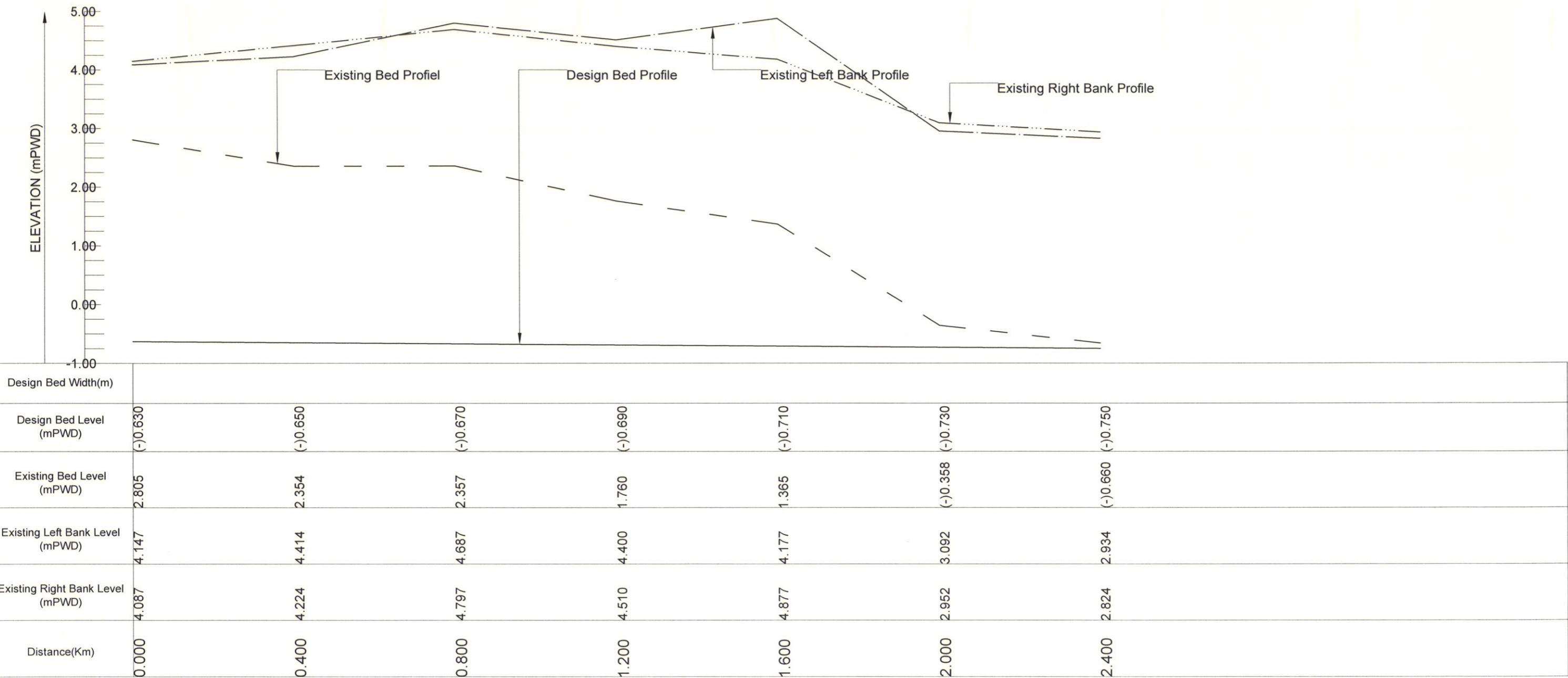
Administrative Notes. :

1. ALL MATERIALS AND WORK MUST CONFIRM WITH TECHNICAL SPECIFICATION OF BWDB.
2. WORK SHALL BE EXECUTED WITH PRIOR ADMINISTRATIVE AND FINANCIAL APPROVAL AND WITHIN DPP/ BUDGET PROVISION.
3. FOR ANY ERROR, OMISSION FIELD OFFICE IS HIGHLY RECOMMENDED TO INFORM IT TO CONCERN DESIGN CIRCLE OF BWDB.
4. NECESSARY LAND SHALL BE ARRANGED FOR EXCAVATION WORK.

Technical Notes. :

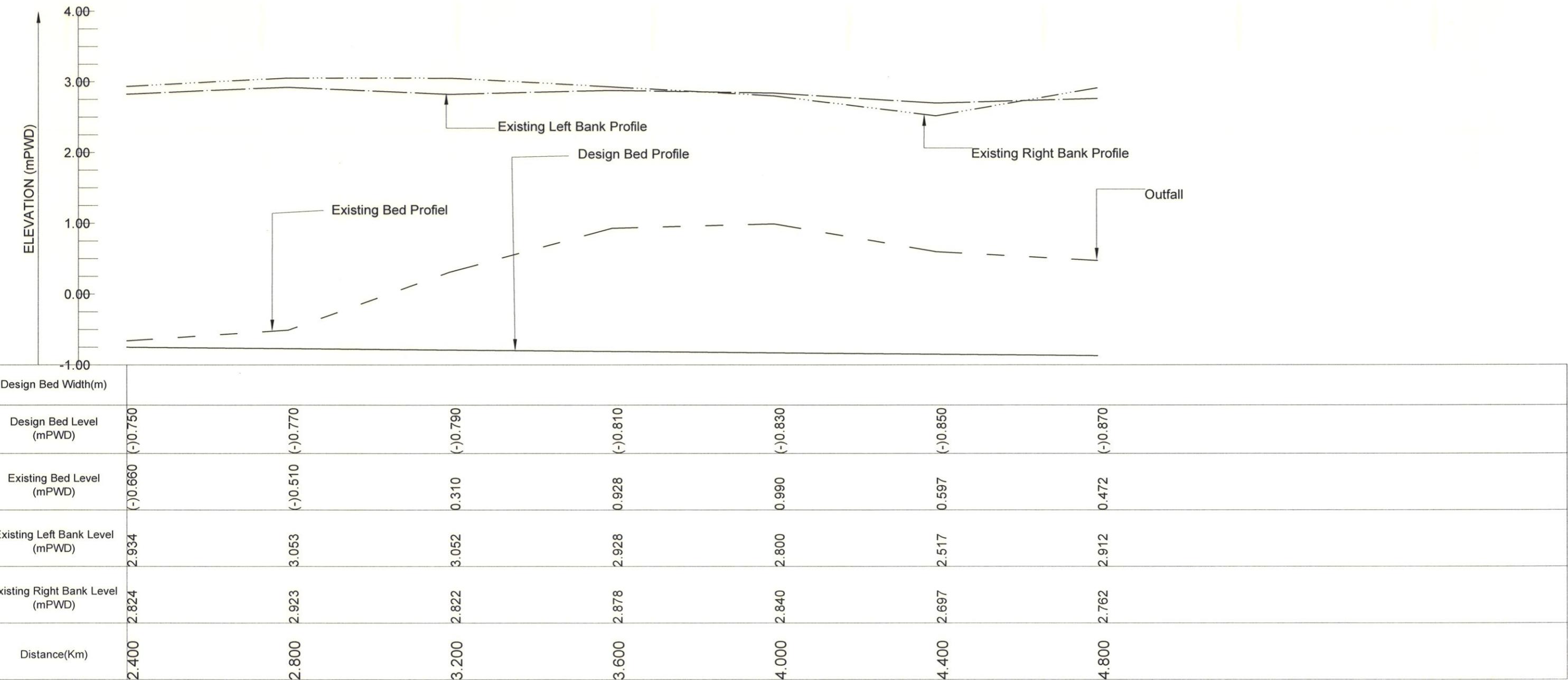
1. ALL DIMENSIONS ARE METERE & ALL ELEVATIONS ARE IN METRE (PWD) UNLESS OTHERWISE MENTIONED IN THE DRAWING.
2. RE-EXCAVATION WORK SHALL BE STARTED FROM D/S OF CHANNEL.
3. TYPICAL DESIGN SECTIONS ARE PROVIDED IN THIS DESIGN FOR RE-EXCAVATION. X-SECTIONS AT AN INTERVAL NOT MORE THAN 150.00m TO BE TAKEN BY THE FIELD OFFICE FOR THE ESTIMATION OF ACTUAL VOLUME OF EARTH CUTTING.
4. EXCAVATED EARTH SHALL NOT BE DEPOSITED WITHIN THE EXISTING SECTION OF THE RIVER / KHAL. EXCAVATED EARTH SHALL BE DEPOSITED AT A DISTANCE OF AT LEAST 3.00 METER AWAY FROM THE BANK LINE OF THE RIVER / KHAL (IN A DISCONTINUOUS MANNER TO PROVIDE SPACE FOR OVERLAND FLOW TOWARDS KHAL) FROM WHERE NO FLOW BACK OF THE EXCAVATED EARTH IN THE RIVER IS POSSIBLE. UNDER NO CIRCUMSTANCES FLOW BACK OF THE EXCAVATED EARTH INTO THE RIVER SHALL BE ALLOWED. DIPOSITION OF EARTH NOT BE MORE THAN 30M OF CONTINUOUS LENGTH AND MINIMUM 5M INTERVAL TO BE PROVIDED.
5. EXCAVATED EARTH MAY BE USED FOR CONSTRUCTION / RE-SECTIONING OF DYKE / ROAD/ EMBANKMENT (WHERE APPLICABLE). EXCAVATED EARTH MAY BE ALSO USED FOR FILLING OF DITCH, POND, LOW LAND ETC.
6. EXCAVATED EARTH SHALL NOT BE DIPOSED ON ANY OPEN CHANNEL AND AT THE FLOOD PLANE OF RIVER.
7. DIPOSED EARTH TO BE DRESSED IN A REGULAR SHAPE & CLOSED TURFING WITH PLANTATION TO BE PROVIDED OVER DIPOSED EARTH. PLANTATION OF VETIVER (BINNA GRASS) MAY BE PROVIDED ON SLOPE OF DIPOSED EARTH.
8. NO FILLING SHALL BE DONE WHERE THE EXISTING BED LEVEL OF KHAL IS LOWER THAN THE DESIGN BED LEVEL (IF EXIST).
9. A SMOOTH TRANSITION (1:100) SHOULD BE PROVIDED BETWEEN TWO DIFFERENT BED WIDTH AND BED LEVEL AND ALSO AT THE OUTTER END OF EXISTING CULVERT/BIDGE (IF REQUIRED).
10. THE PROPOSED WORK SHALL BE EXECUTED PREFERABLY IN DRY SEASON.
11. EXCAVATION MUST BE DONE VERY CAREFULLY SO THAT BASE SLAB/ FOUNDATION OF THE EXISTING REGULATOR/CULVERT/BIDGE ETC (IF ANY) DO NOT BE DISTURBED .
12. IF THERE EXISTS ANY STRUCTURE OTHER THAN BRIDGE WITHIN THE PROPOSED LENGTH OF THE RIVER, RE-EXCAVATION WORK IS PROHIBITED THROUGHOUT THE LENGTH OF THAT STRUCTURE.
13. DESIGN BED LEVEL SHALL NOT BE BELOW THE FOUNDATION TOP LEVEL OF THE EXISTING STRUCTURES (IF ANY) IN THE RIVER. 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 AT A DISTANCE OF 100 M, WHICHEVER IS HEIGHER (U/S AND D/S OF THE STRUCTURE) AS SHOWN IN THE DRAWING.
14. RE-EXCAVATION OF KHAL/ RIVER WILL FACILITATE QUICK DRAINAGE, FLUSHING & STORAGE OF WATER. BUT COMPLETE DRAIN OUT OF BEEL AREA SHALL NOT BE ALLOWED FOR MAINTAINING ECOLOGICAL BALANCE.
15. IF THE BED LEVEL OF OUTFALL KHAL/RIVR IS HIGHER THAN THE DESIGN BED LEVEL OF PROPOSED KHAL, THEN RE-EXCAVATION OF PROPOSED KHAL TO BE IMPLEMENTED AFTER IMPLEMENTATION OF RE-EXCAVATION OF OUTFALL KHAL/RIVER.
16. RE-EXCAVATION OF KHAL SHALL BE STARTED FROM D/S.
17. THIS DRAWING HAS BEEN PREPARED AS PER PROPOSAL SUBMITTED BY SE, KHULNA O & M CIRCLE, BWDB, KHULNA VIDE HIS OFFICE MEMO NO-812, DATE: 02/02/2022

Bangladesh Water Development Board
Office of The Superintending Engineer,Design Circle-8
Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira
Re-excavation of Boro khal From km.0.000 to Km. 2.400 = 2.400 Km , Soto Khal From Km.0.000 to km. 4.800 = 4.800 Km, Dangi Khal From km.0.000 to km. 2.000 = 2.000 Km & Dapua Khal From Km. 0.000 To Km. 5.200 = 5.200 Km. Total = 14.400 Km. in Polder No. 6-8, InTala, Kolaroa & Assasuni Upazila, in c/w " Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira.
NOTES FOR SOTO KHAL
DESIGNED BY:  (SAKIB BIN RAFI),AE
APPROVED BY:  (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY:  (JAKARIA PERVEZ),EE
Date:2022-02-16
Drawing No:DC8-0216-02/8



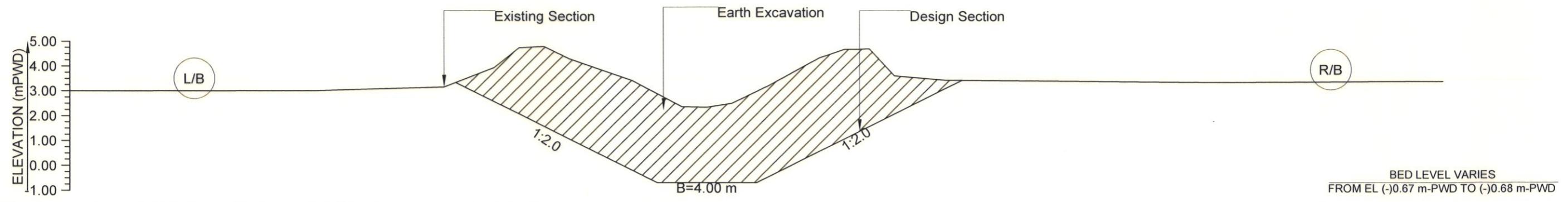
LONG SECTION OF SOTO KHAL APPLICABLE FROM KM 0.000 TO KM 2.400

Bangladesh Water Development Board	
Office of The Superintending Engineer, Design Circle-8	
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LONG SECTION OF SOTO KHAL	
DESIGNED BY: (SAKIB BIN RAFI),AE	APPROVED BY: (MOHAMMAD SAIF UDDIN),SE 6/2/22
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0216-03/8

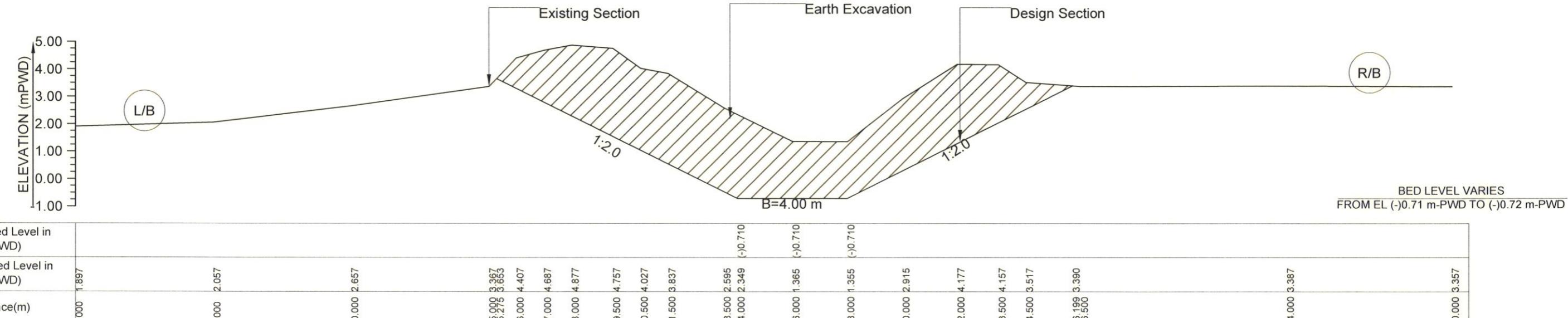


LONG SECTION OF SOTO KHAL APPLICABLE FROM KM 2.400 TO KM 4.800

Bangladesh Water Development Board	
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LONG SECTION OF SOTO KHAL	
DESIGNED BY: (SAKIB BIN RAFI),AE	APPROVED BY: (MOHAMMAD SAIF UDDIN),SE 16/2/22
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0216-04/8



TYPICAL CROSS SECTION OF SOTO KHAL AT KM 0.800



TYPICAL CROSS SECTION OF SOTO KHAL AT KM 1.600

Bangladesh Water Development Board

Office of The Superintending Engineer, Design Circle-8

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TYPICAL CROSS SECTION OF SOTO KHAL

DESIGNED BY:

(SAKIB BIN RAFI),AE

APPROVED BY:

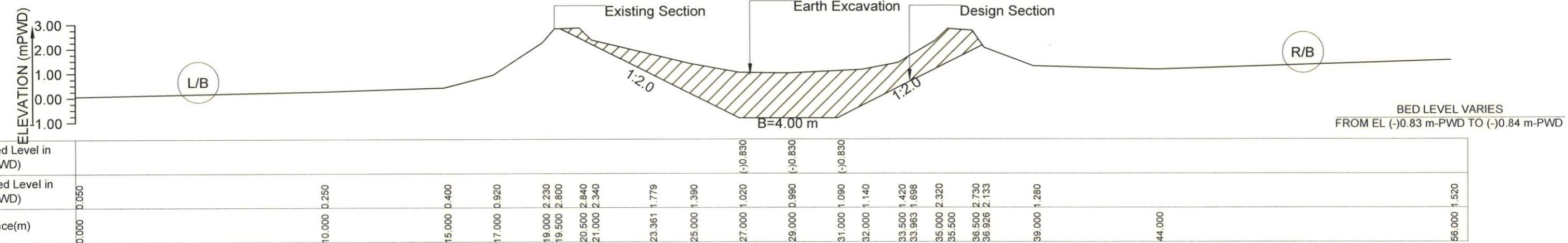
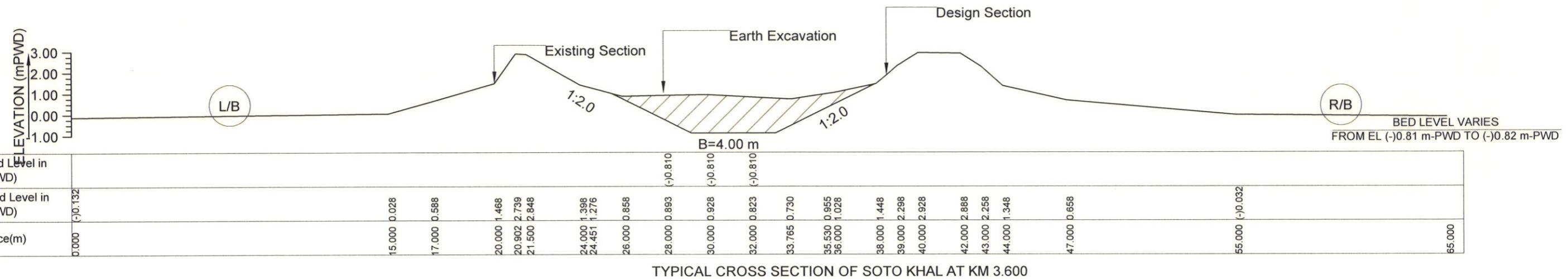
(MOHAMMAD SAIF UDDIN),SE

CHECKED AND RECOMMENDED BY:

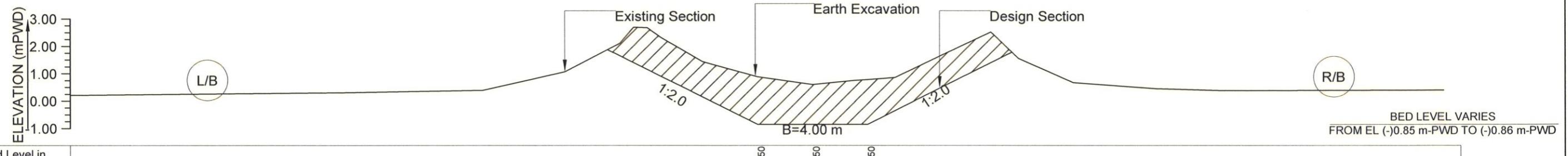
(JAKARIA PERVEZ),EE

Date:2022-02-16

Drawing No:DC8-0216-05/8



Bangladesh Water Development Board	
Office of The Superintending Engineer, Design Circle-8	
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TYPICAL CROSS SECTION OF SOTO KHAL	
DESIGNED BY: (SAKIB BIN RAFI),AE	APPROVED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0216-06/8



Design Bed Level in (mPWD)	
Existing Bed Level in (mPWD)	
Distance(m)	

0.000 0.207 10.000 0.307 15.000 0.387 18.000 0.067 19.552 1.874 20.000 2.107 20.500 2.687 21.000 2.677 21.500 2.317 22.276 1.962 23.000 1.437 25.000 0.887 (-0.850) 27.000 0.597 (-0.850) 28.500 0.747 29.000 0.784 30.000 0.857 (-0.850) 31.500 1.577 33.500 2.517 34.265 1.783 36.500 0.667 39.500 0.447 42.000 0.377 50.000 0.397

TYPICAL CROSS SECTION OF SOTO KHAL AT KM 4.400

Bangladesh Water Development Board

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TYPICAL CROSS SECTION OF SOTO KHAL

DESIGNED BY:

(SAKIB BIN RAFI),AE

APPROVED BY:

16/2/22

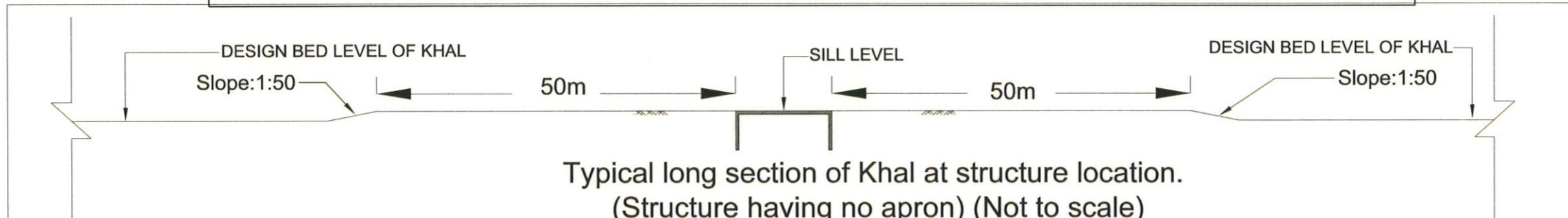
CHECKED AND RECOMMENDED BY:

(JAKARIA PERVEZ),EE

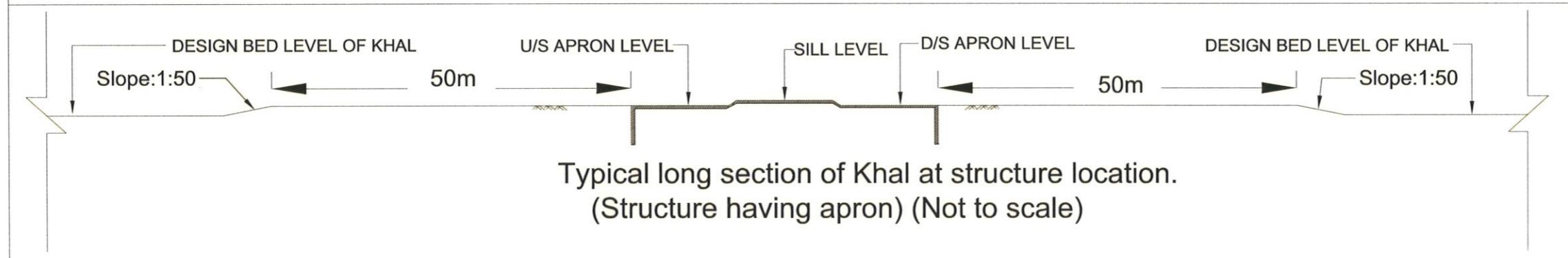
Date:2022-02-16

Drawing No:DC8-0216-07/8

Guideline for matching the excavated level of khal to the existing foundation level of structure (where foundation level of structure is above the design bed level of khal)



Typical long section of Khal at structure location.
(Structure having no apron) (Not to scale)



Typical long section of Khal at structure location.
(Structure having apron) (Not to scale)

Bangladesh Water Development Board

Office of The Superintending Engineer, Design Circle-8

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DETAILS

DESIGNED BY:

(SAKIB BIN RAFI),AE

APPROVED BY:

(MOHAMMAD SAIF UDDIN),SE
16/2/21

CHECKED AND RECOMMENDED BY:

(JAKARIA PERVEZ),EE

Date:2022-02-16

Drawing No:DC8-0216-08/8