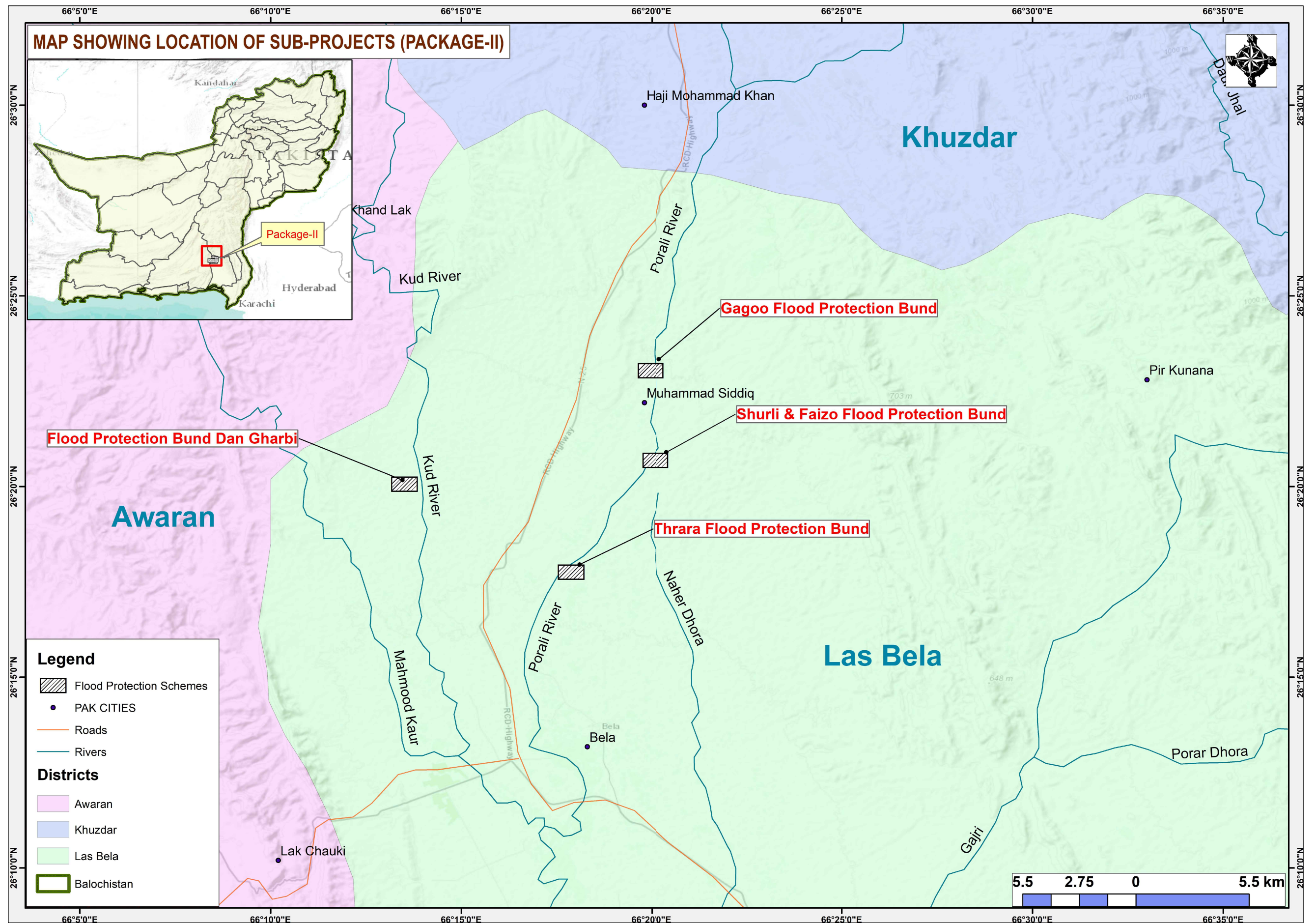


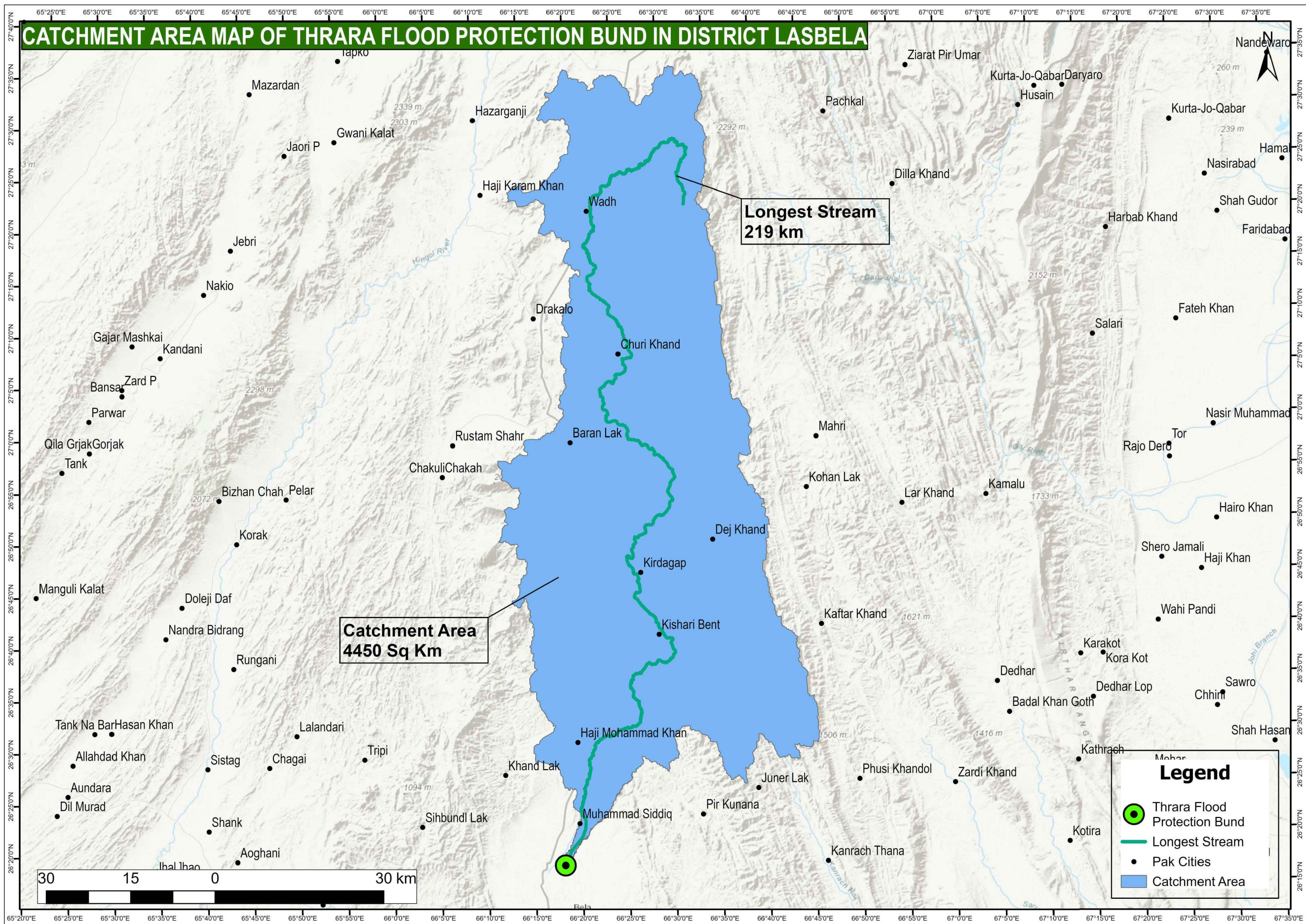
CONSTRUCTION OF THRARA FLOOD PROTECTION BUND ALONG PORALI RIVER FOR PROTECTION OF BELLA & SURROUNDING AREA DISTRICT LASBELLA DRAWING INDEX		
S.No.	Drawing No.	Description
		GENERAL
01	IFRAP-P02/TFP-01	LOCATION AREA MAP
02	IFRAP-P02/TFP-02	CATCHMENT AREA MAP
		THRARA FLOOD PROTECTION
03	IFRAP-P02/TFP-01	LAYOUT PLAN OF THRARA SHEET (01 OF 01)
04	IFRAP-P02/TFP-02	SETTING OUT PLAN OF THRARA SHEET (01 OF 01)
05	IFRAP-P02/TFP-03	PLAN AND PROFILE OF PROTECTION BUND (01 OF 05)
06	IFRAP-P02/TFP-04	PLAN AND PROFILE OF PROTECTION BUND (02 OF 05)
07	IFRAP-P02/TFP-05	PLAN AND PROFILE OF PROTECTION BUND (03 OF 05)
08	IFRAP-P02/TFP-06	PLAN AND PROFILE OF PROTECTION BUND (04 OF 05)
09	IFRAP-P02/TFP-07	PLAN AND PROFILE OF PROTECTION BUND (05 OF 05)
10	IFRAP-P02/TFP-08	TYPICAL CROSS SECTION OF PROTECTION BUND
11	IFRAP-P02/TFP-09	CROSS SECTION OF BUND AT RD (0+000 TO 0+300)
12	IFRAP-P02/TFP-10	CROSS SECTION OF BUND AT RD (0+400 TO 0+700)
13	IFRAP-P02/TFP-11	CROSS SECTION OF BUND AT RD (0+800 TO 1+100)
14	IFRAP-P02/TFP-12	CROSS SECTION OF BUND AT RD (1+200 TO 1+500)
15	IFRAP-P02/TFP-13	CROSS SECTION OF BUND AT RD (1+600 TO 1+741)

ABBREVIATIONS	
C NO	CURVE NUMBER
PE	POINT OF ENTRY (CHAINAGE OF START OF CURVE)
E	EASTING COORDINATE OF CURVE POINT
N	NORTHING COORDINATE OF CURVE POINT
PC	POINT OF CURVATURE (START OF CURVE WHERE STRAIGHT ALIGNMENT END) IT IS ALSO KNOWN AS BC BEGINNING OF CURVE
PT	PT (POINT OF TANGENCY) END OF CURVE WHERE THE CURVE ENDS AND STRAIGHT PORTION START AGAIN IT IS ALSO KNOWN AS EC END OF CURVE
DA	DEFLECTION ANGLE (INITIAL DEFLECTION FROM TANGENT)
DC	DEFLECTION CHANGE (INCREMENTAL DEFLECTION, OFTEN PER CHORD)
T	TANGENT LENGTH DISTANCE FROM PI (POINT OF INTERSECTION) TO PC OR PT
R	RADIUS RADIUS OF THE CIRCULAR CURVE
L	LENGTH OF CURVE ARC LENGTH OF THE CIRCULAR CURVE
C	LONG CHORD LENGTH STRAIGHT-LINE DISTANCE FROM PC TO PT
E	EXTERNAL DISTANCE DISTANCE FROM PI TO MID-POINT OF CURVE
Δ (Delta)	CENTRAL / INTERSECTION ANGLE TOTAL ANGLE SUBTENDED BY THE CURVE AT THE CENTER
	RELATIONSHIP (FOR UNDERSTANDING) $L = (\pi \times R \times \Delta) / 180$ $T = R \times \tan(\Delta / 2)$ $E = R [\sec(\Delta/2) - 1]$ $C = 2R \sin(\Delta/2)$



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H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

**INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT**

SCHEME NAME:

**REHABILITATION OF FLOOD PROTECTION
BUND MOUZA DAAN GHARBI
TEHSIL LASBELLA**

DRAWING TITLE:-

**LOCATION MAP OF
PACKAGE-II, IFRAP
THRARA F.P.BUND**

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

DESIGNED BY: KAMRAN BABAR

CHECKED BY: ZIA-UL-HAQ

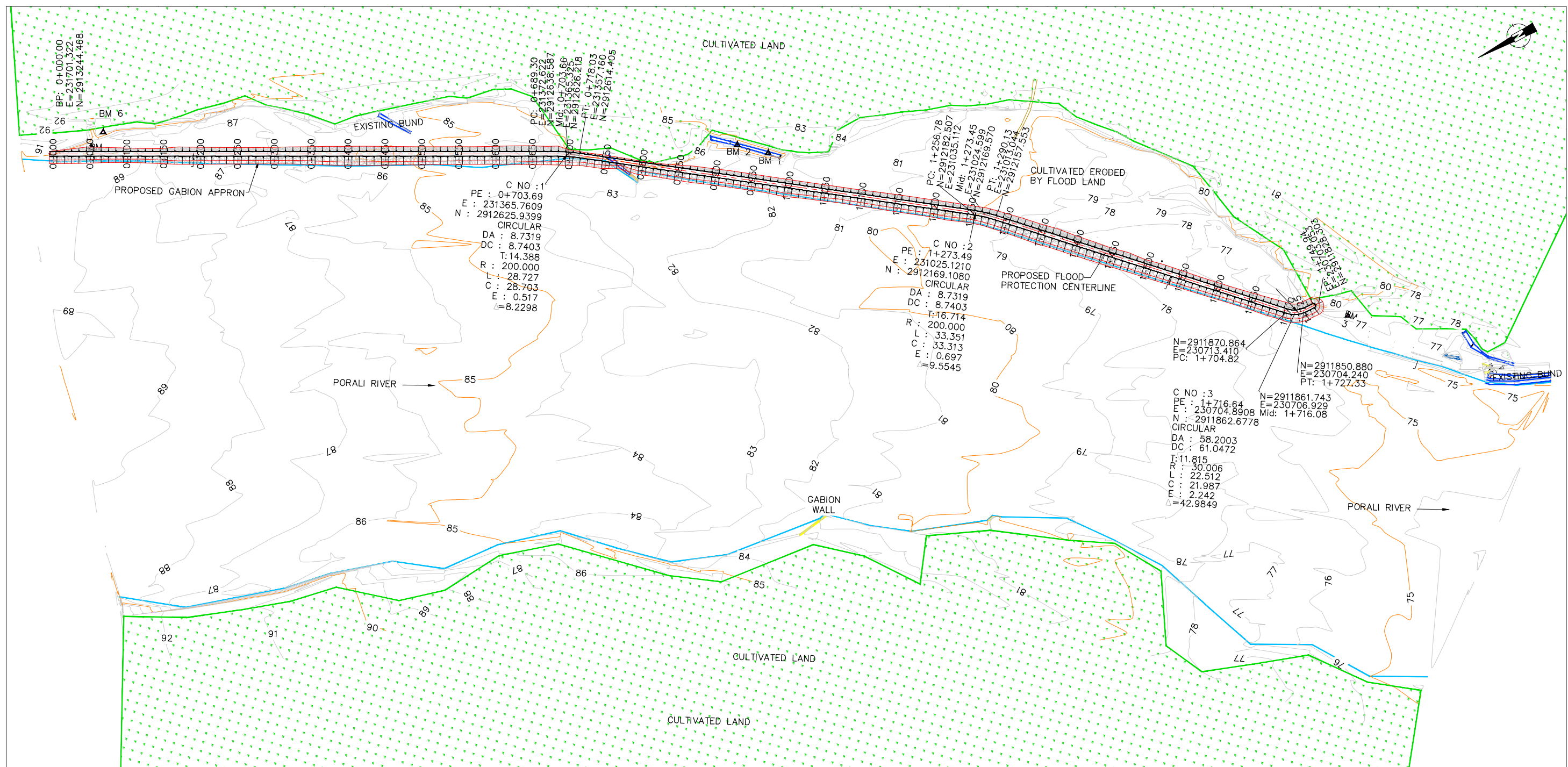
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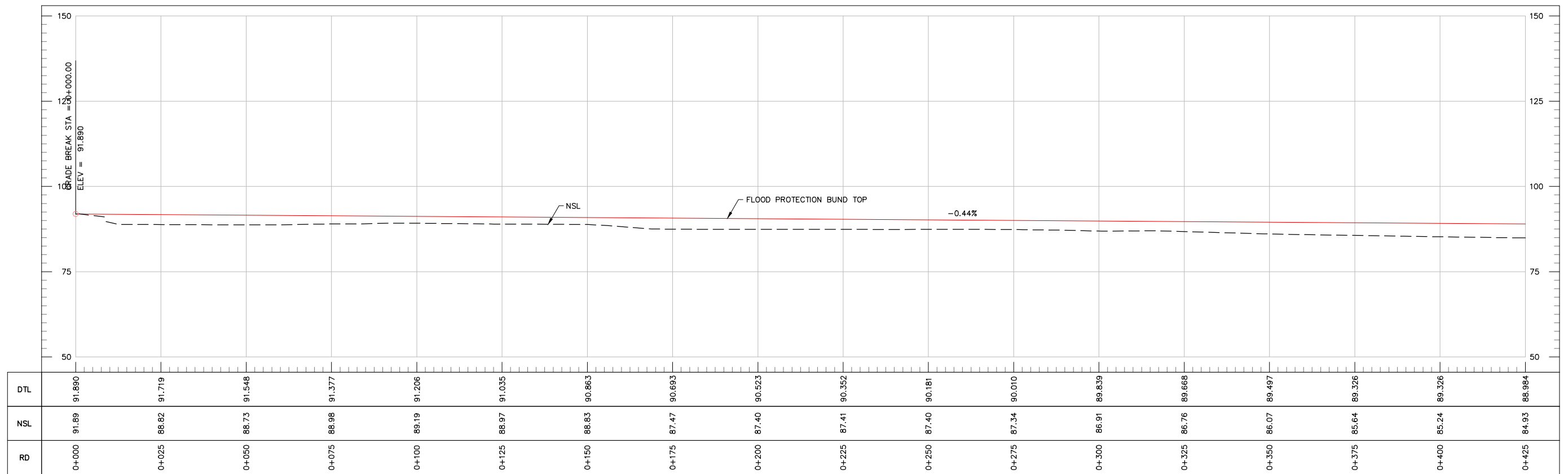
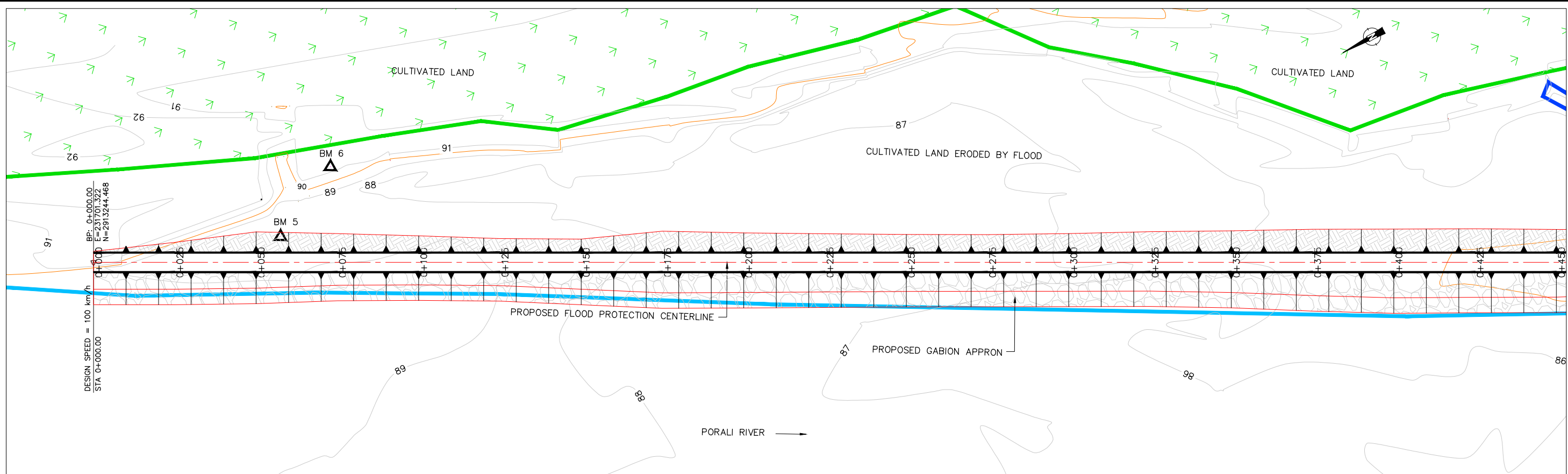
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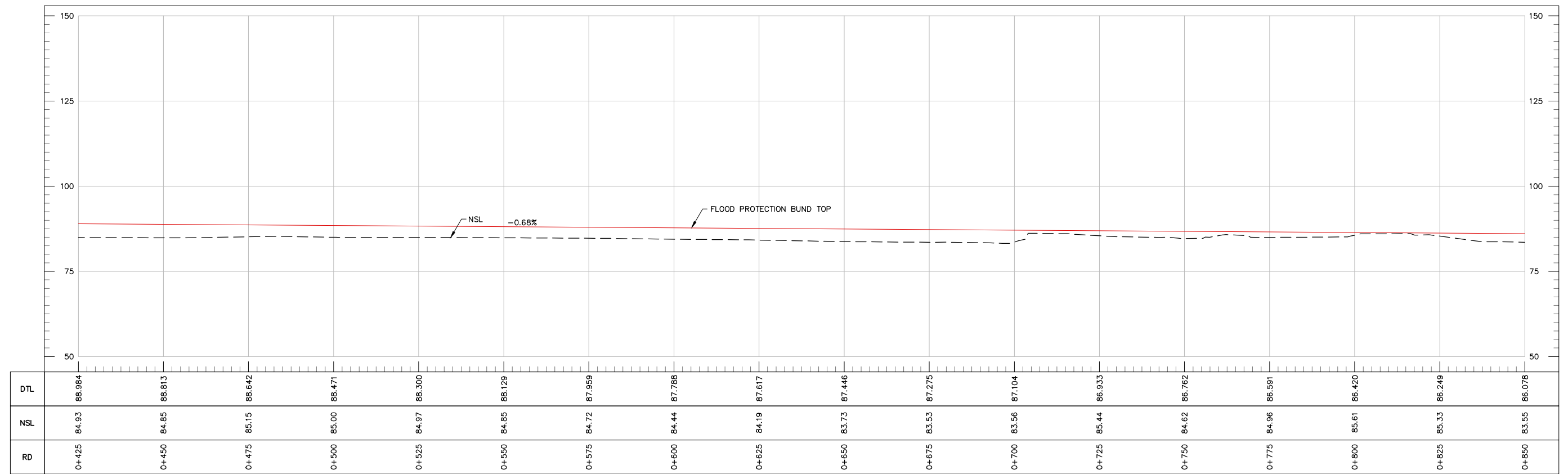
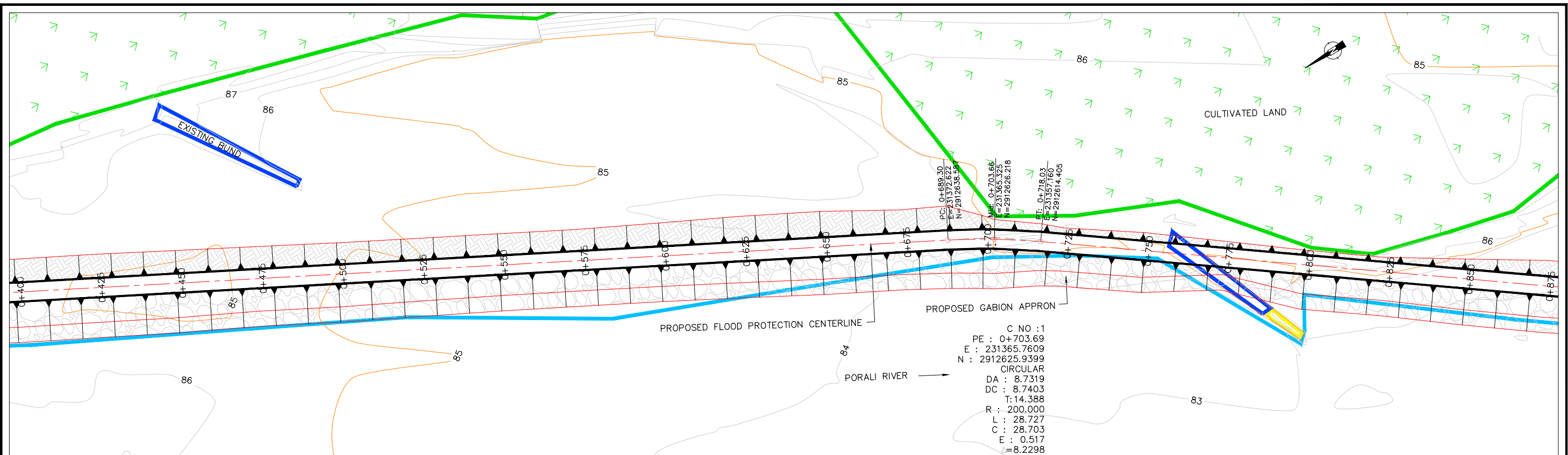
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						CHECKED BY: ZIA-UL-HAQ	SCALE: 1:1250
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PROJECT TITLE:

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SCHEME NAME:

**CONSTRUCTION OF THRARA FLOOD
PROTECTION BUND ALONG PORALI
RIVER FOR PROTECTION OF BELLA AND
SURROUNDING AREA DISTRICT
LASBELLA**

DRAWING TITLE:-

PLAN AND PROFILE THRARA F.P.BUND

NOTES:

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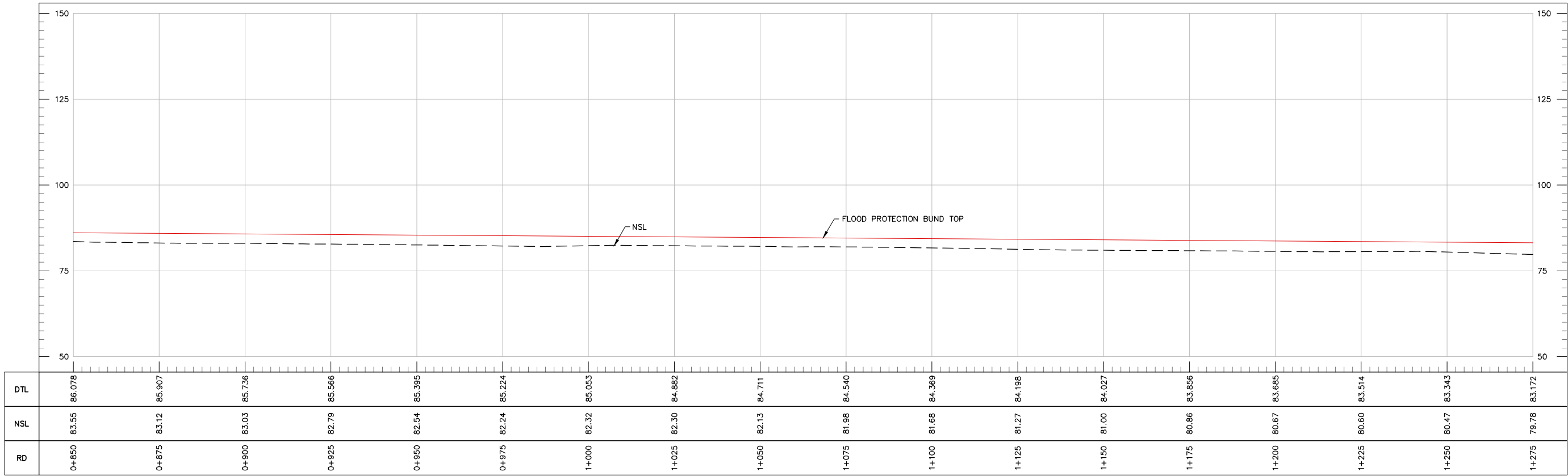
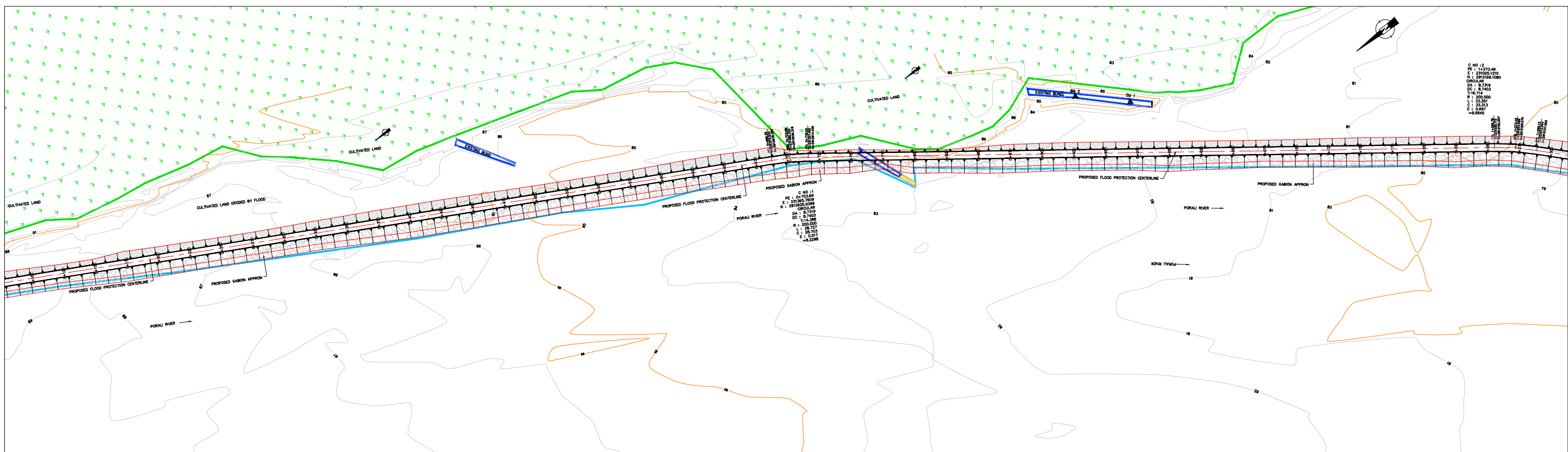
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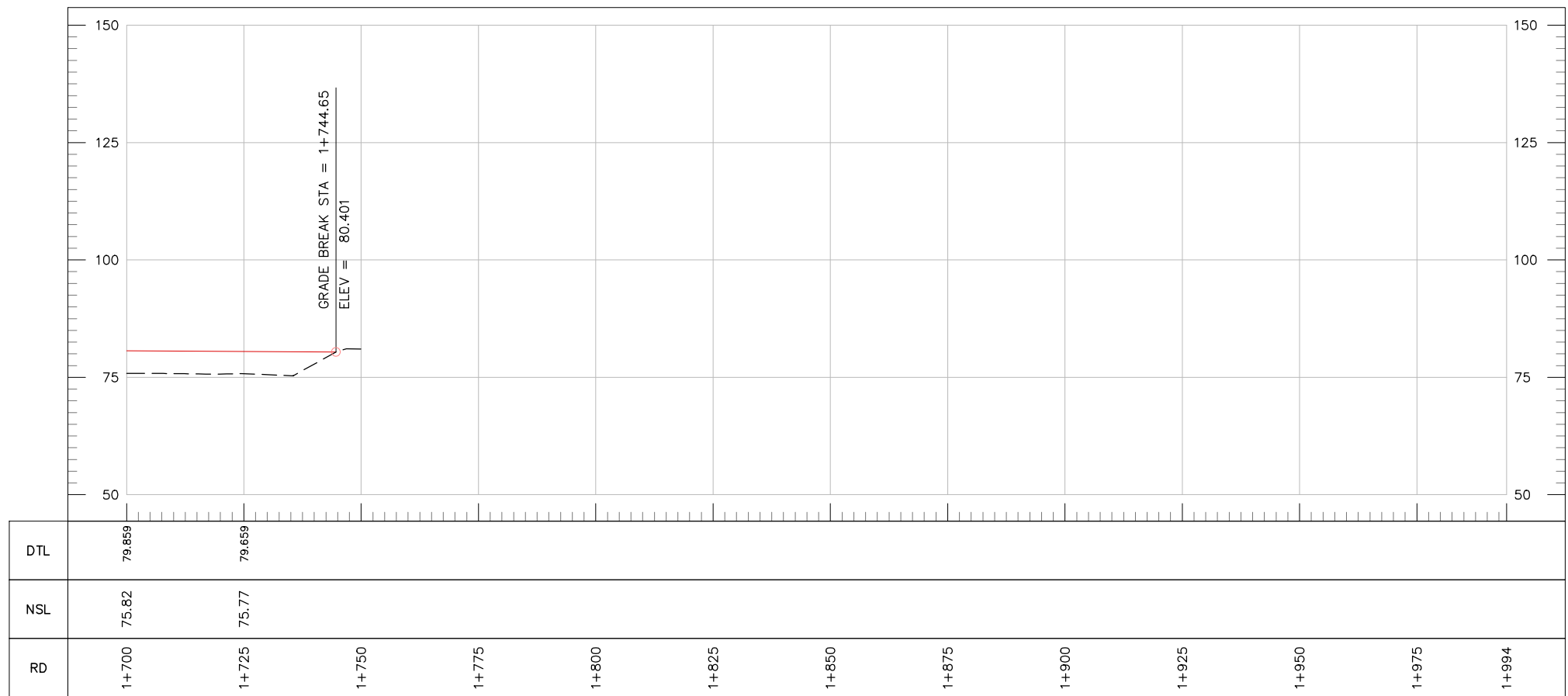
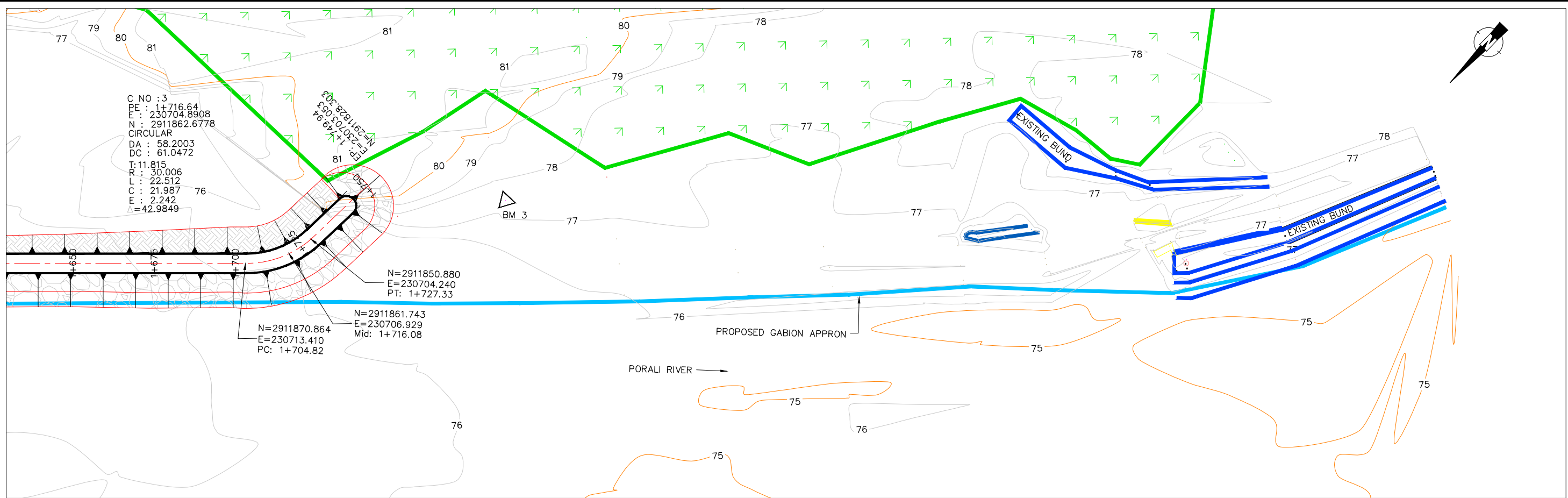
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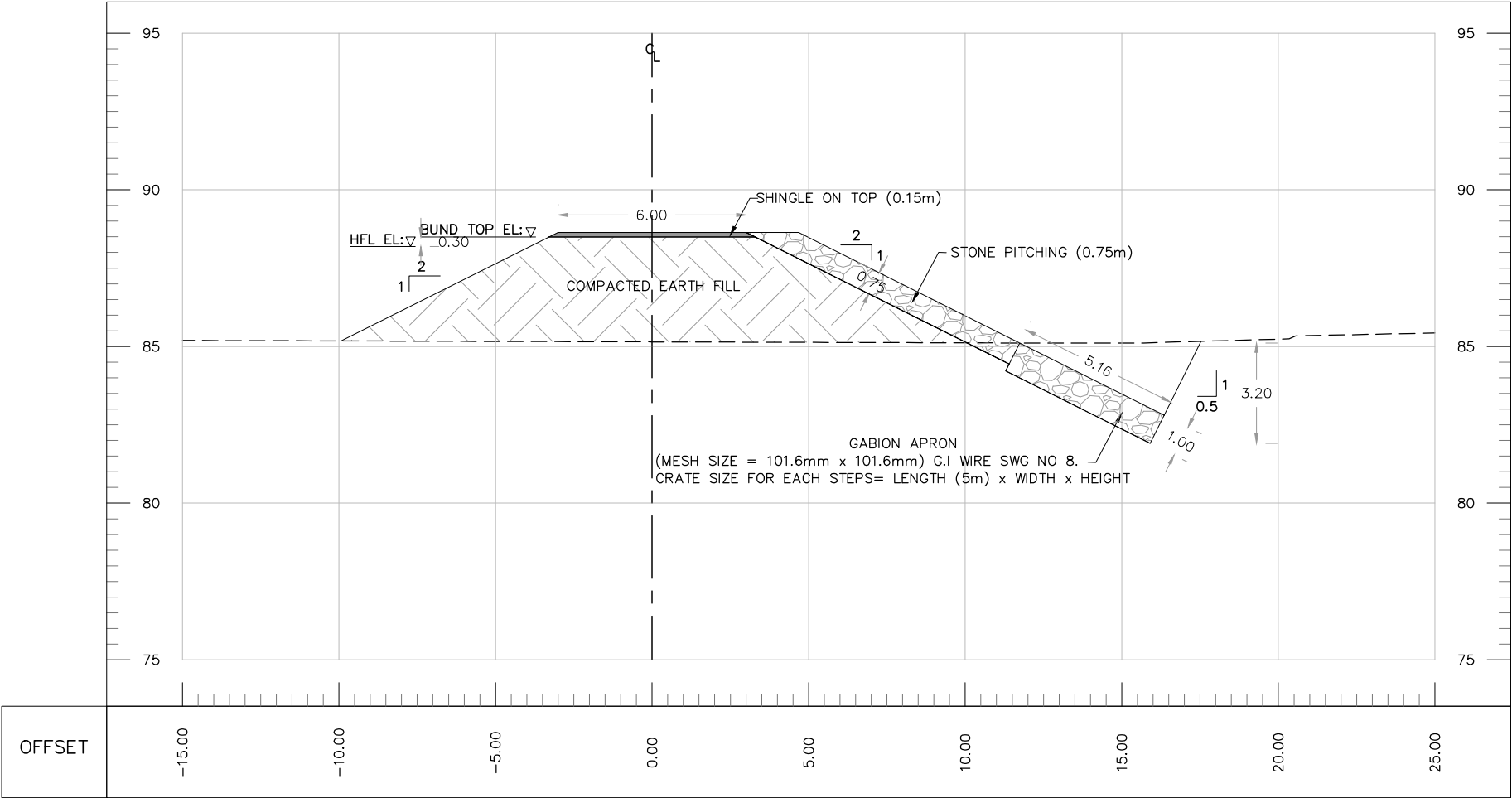
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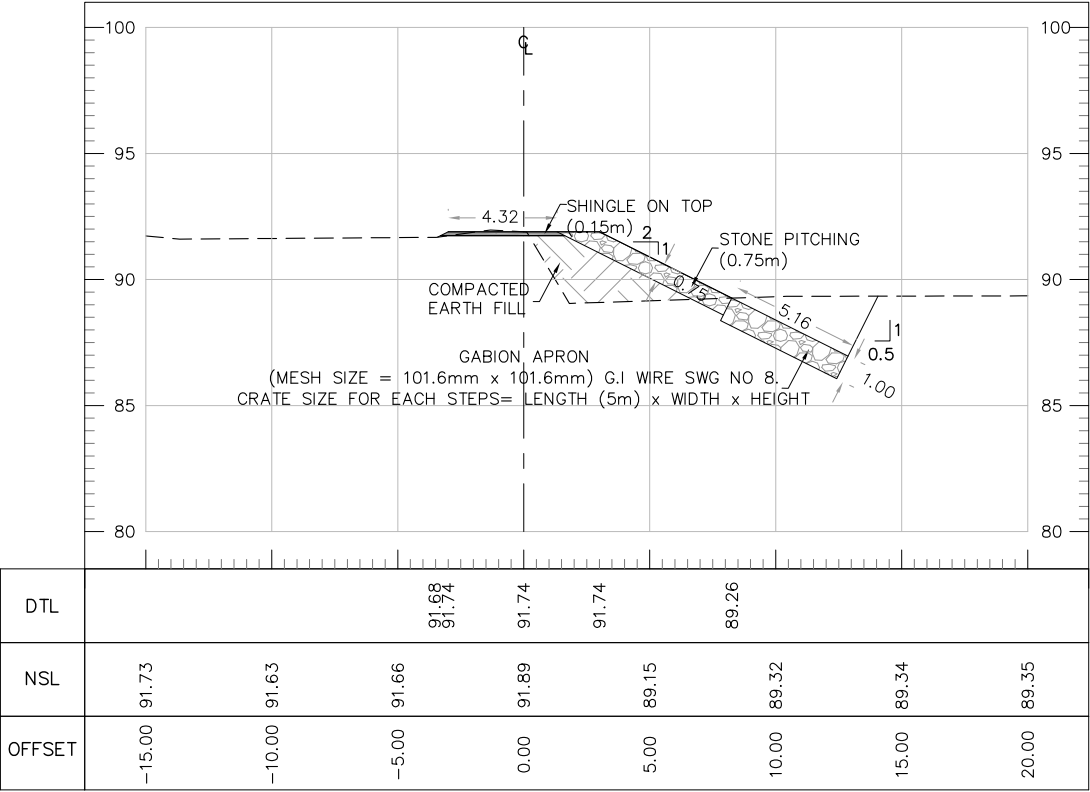
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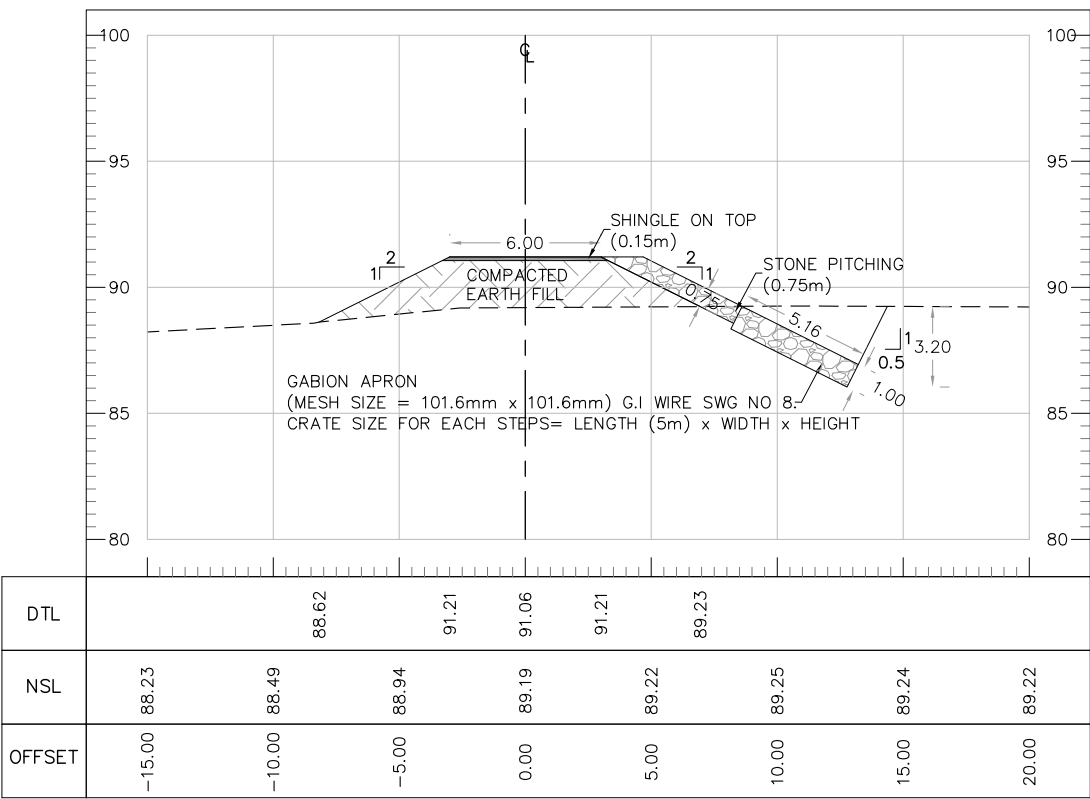
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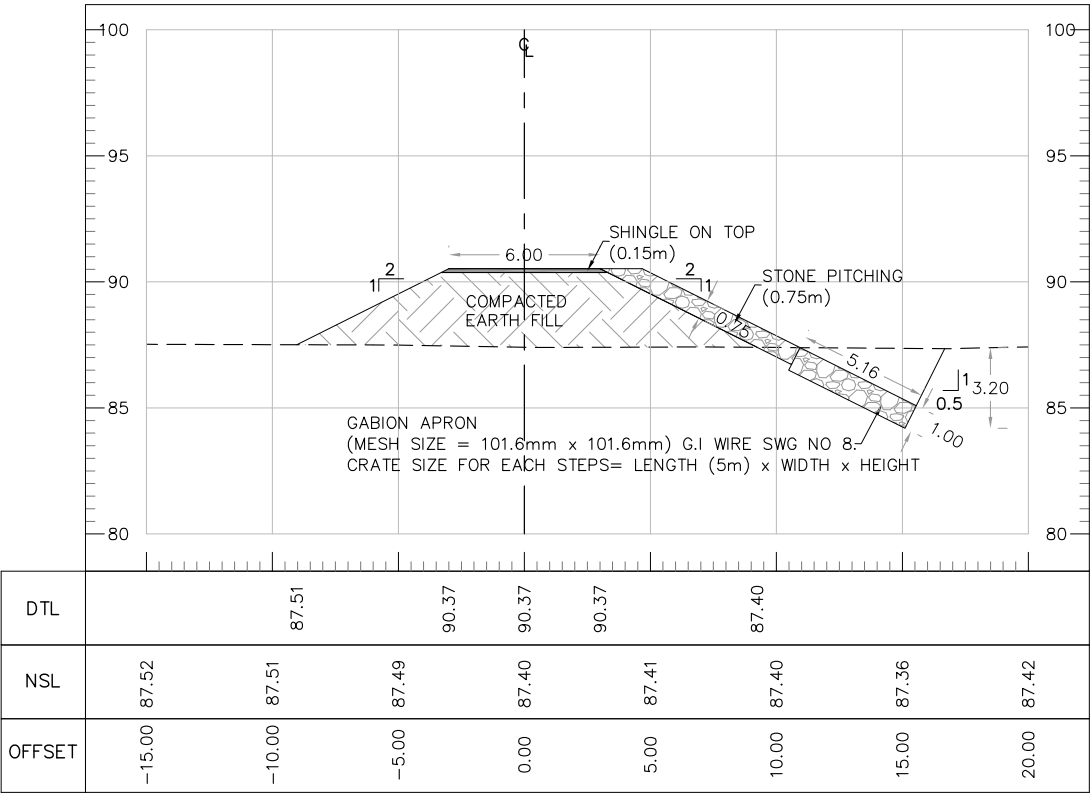
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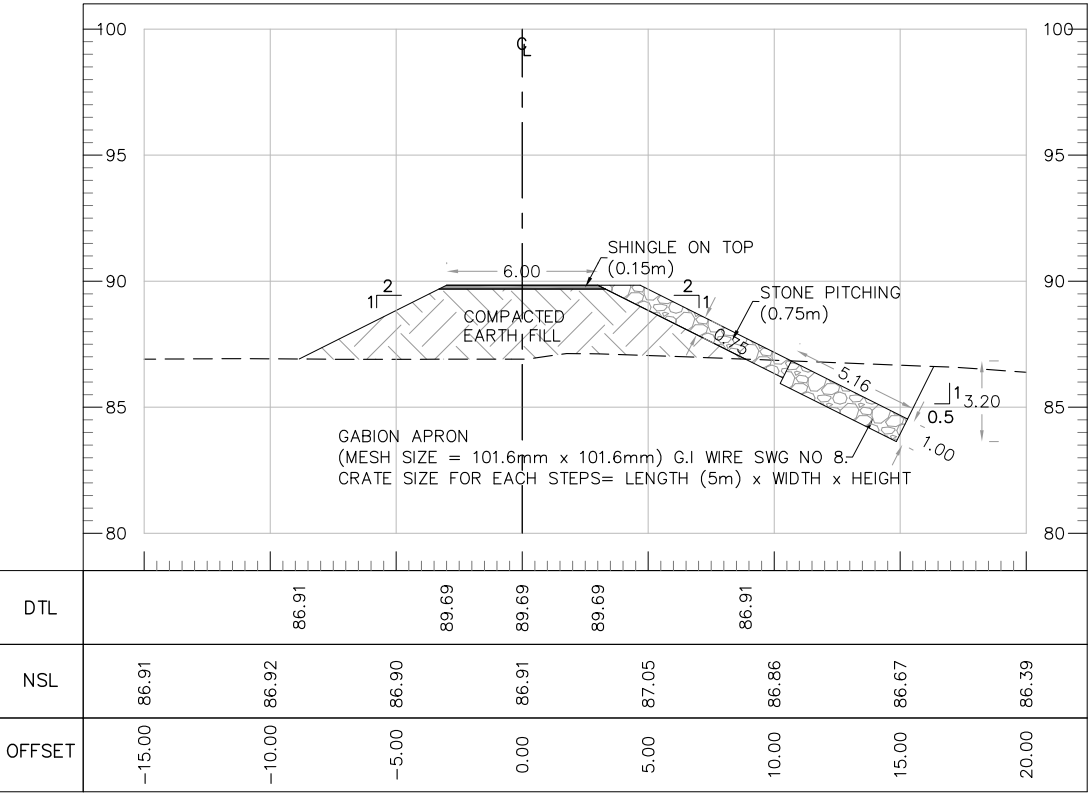
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CROSS SECTIONS THRARA F.P.BUND

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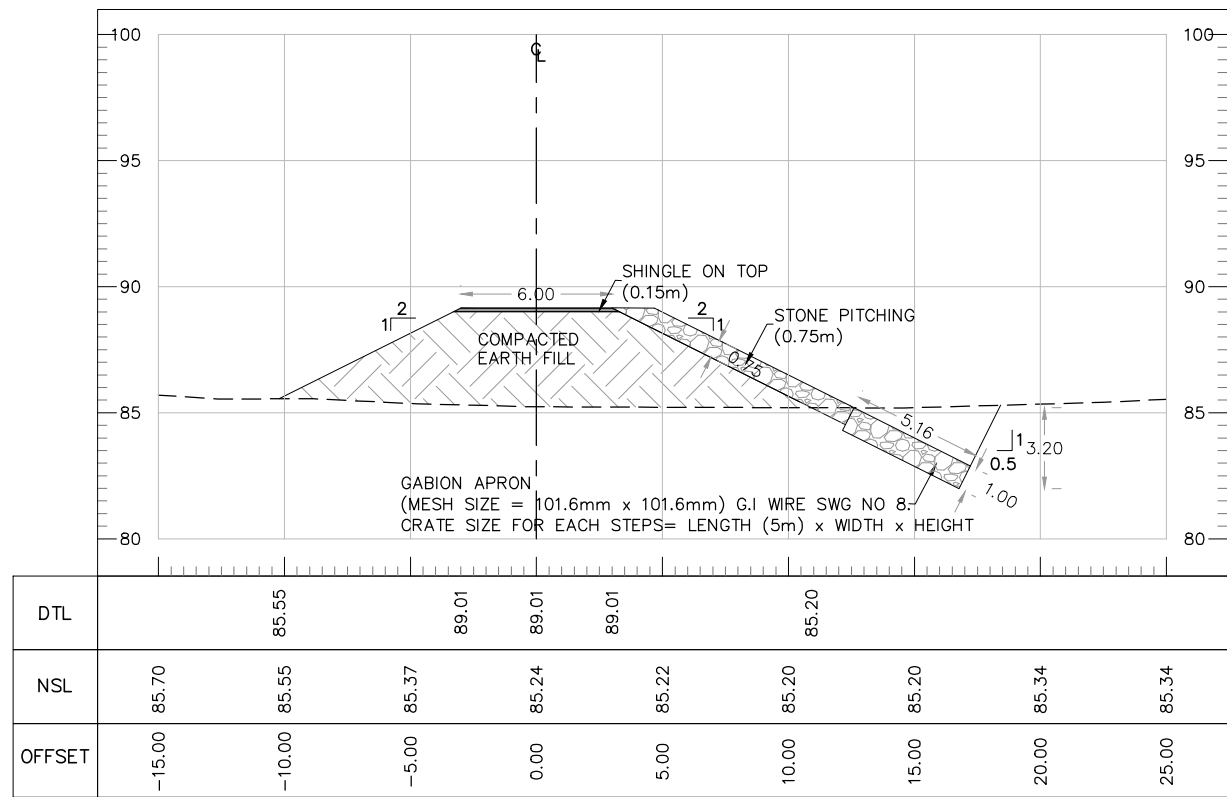
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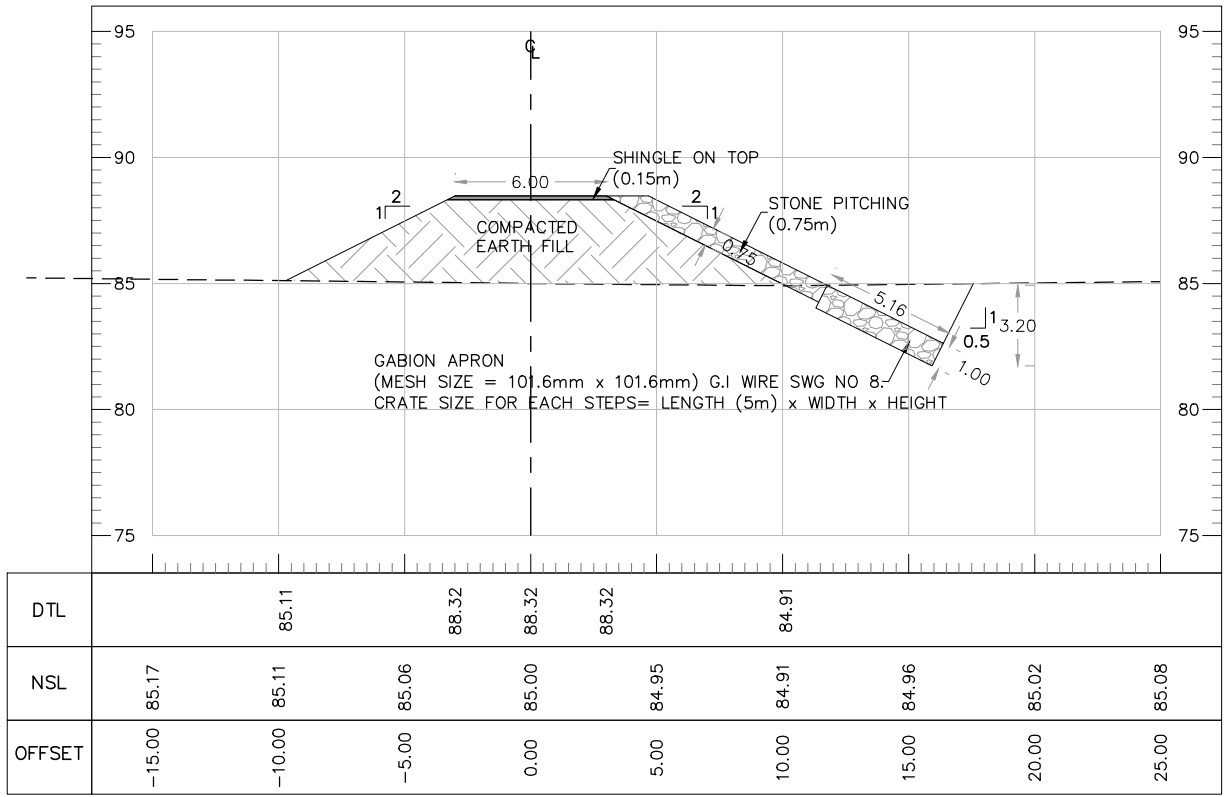
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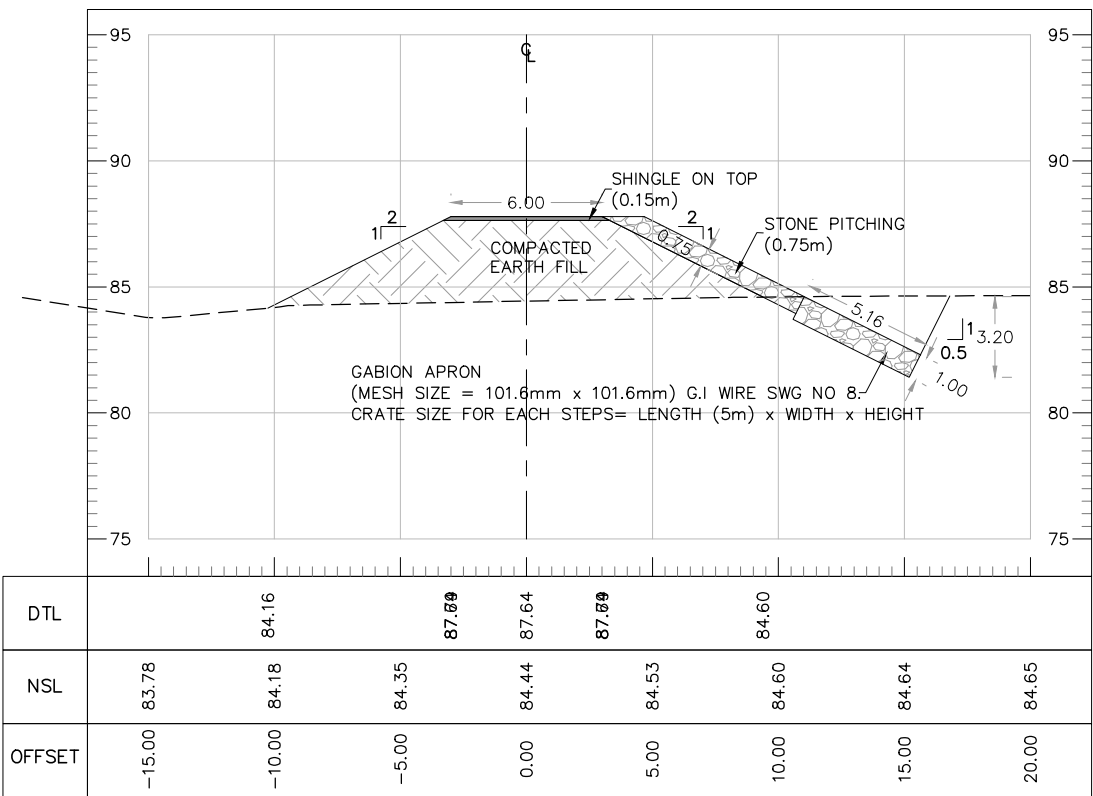
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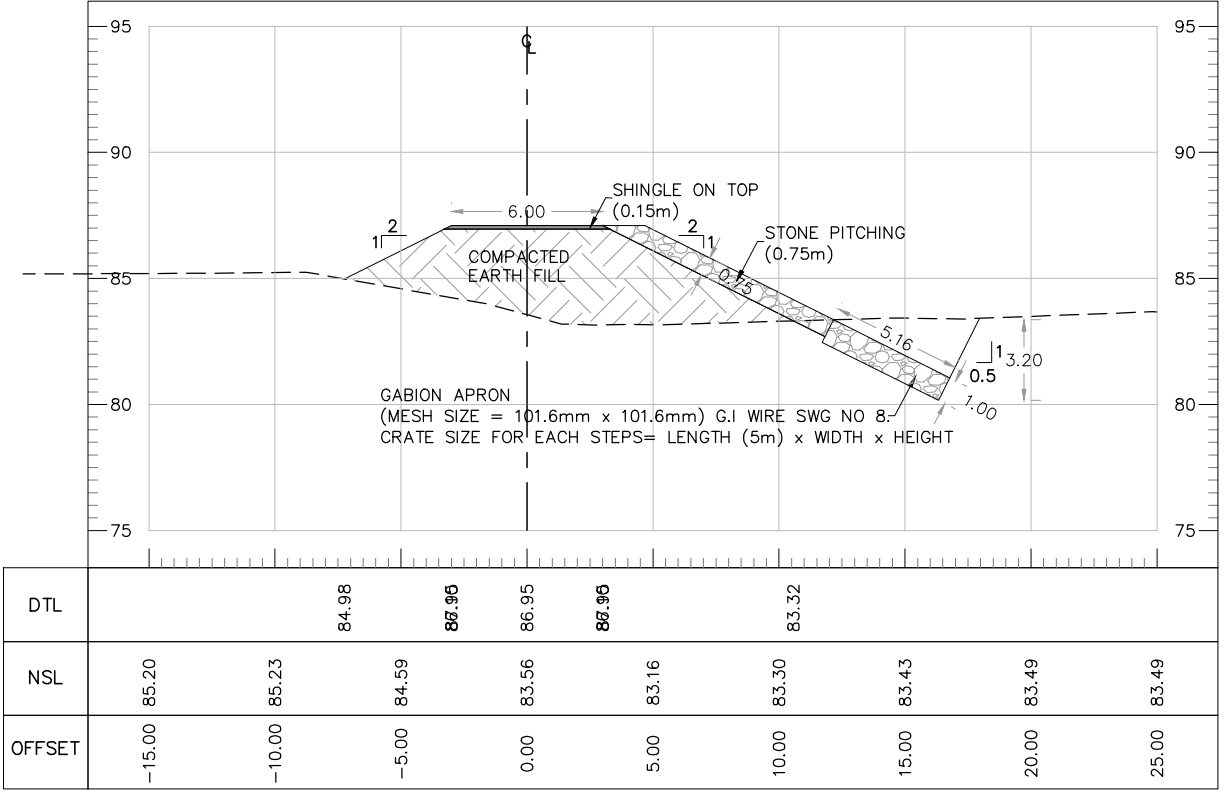
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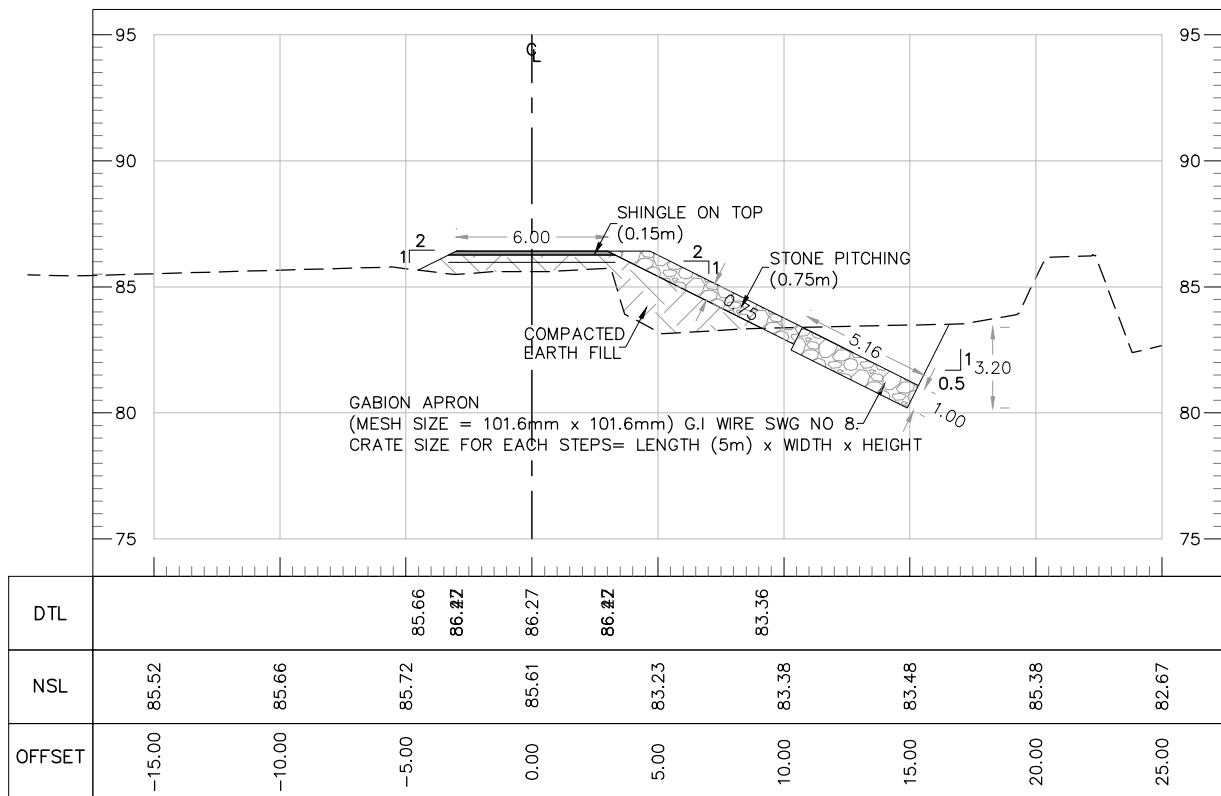


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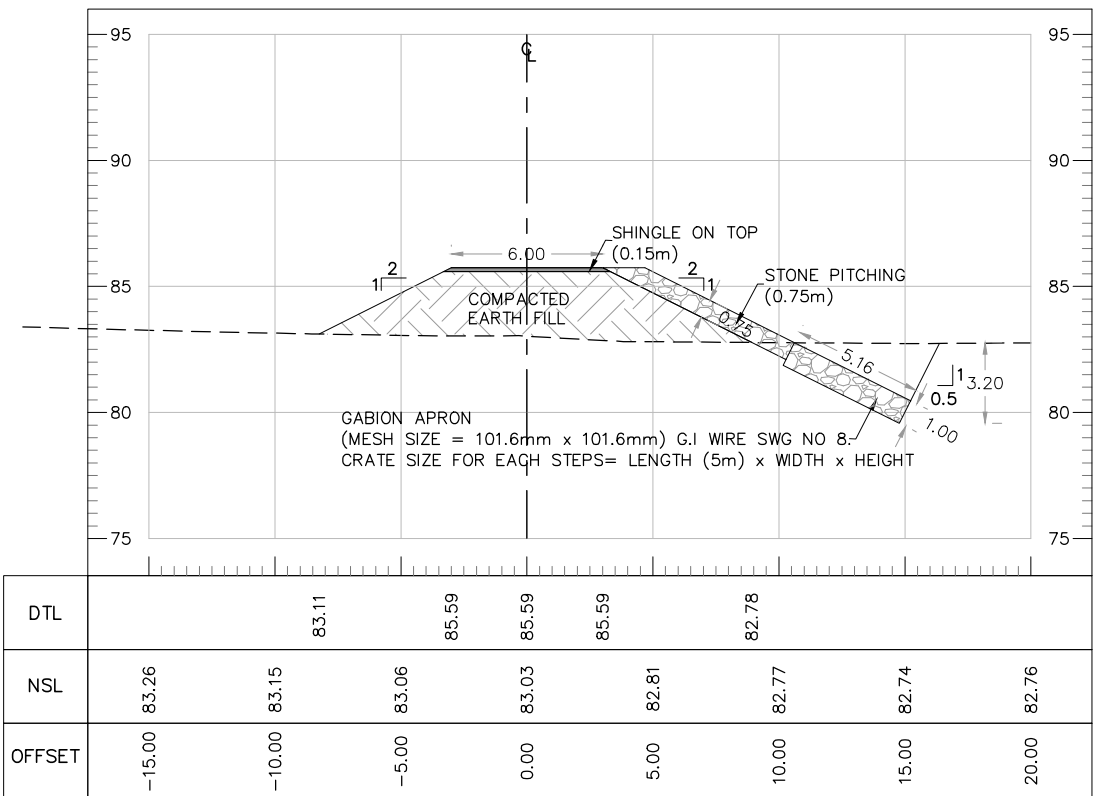


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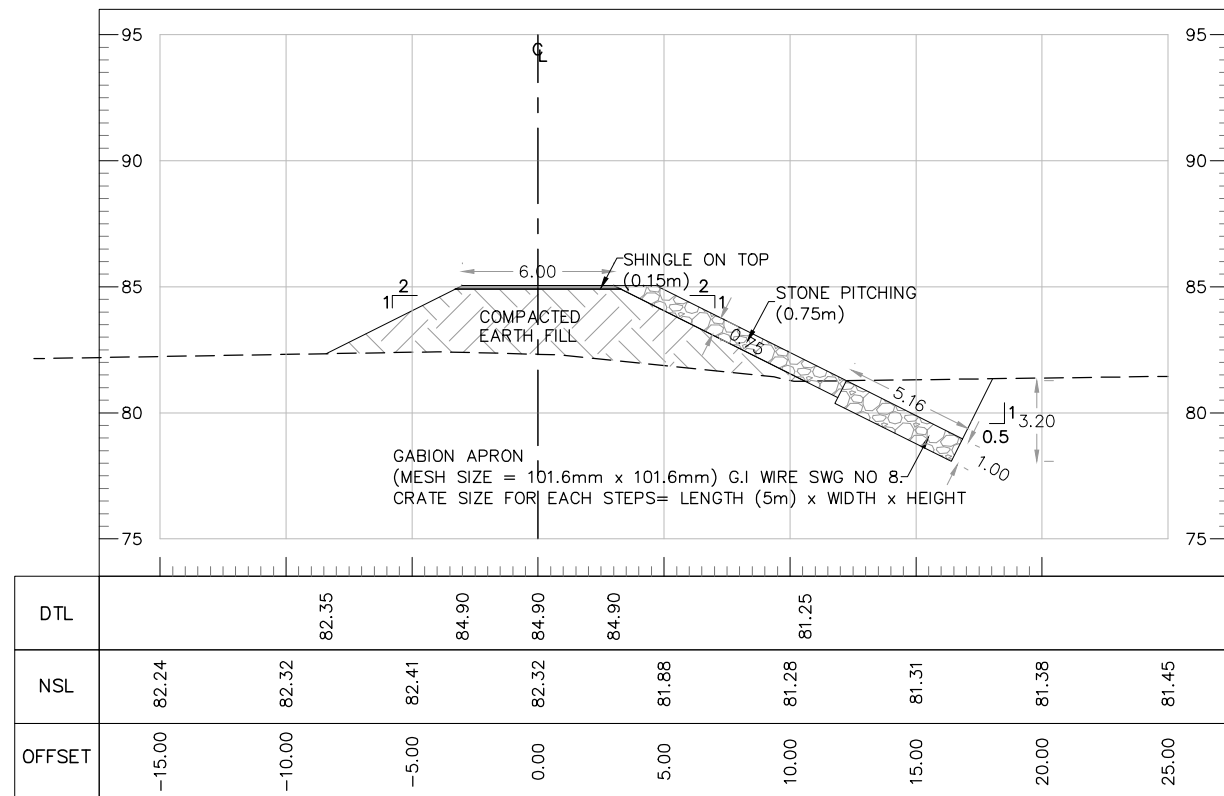
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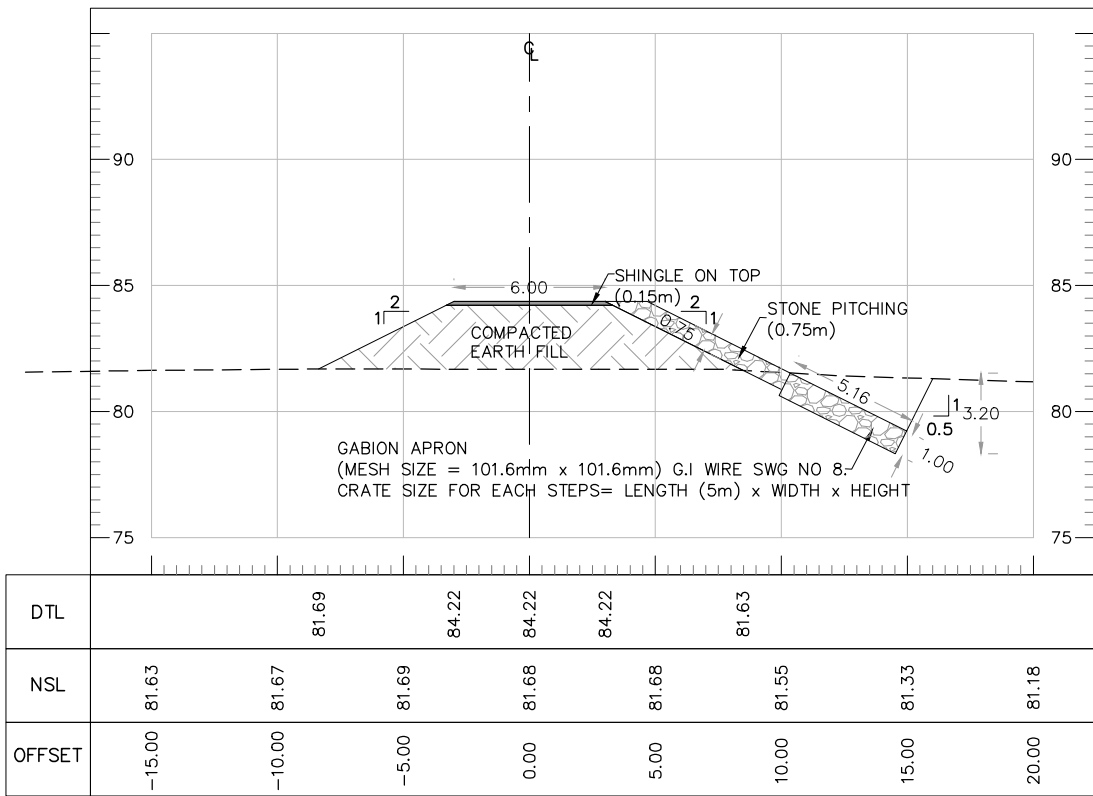
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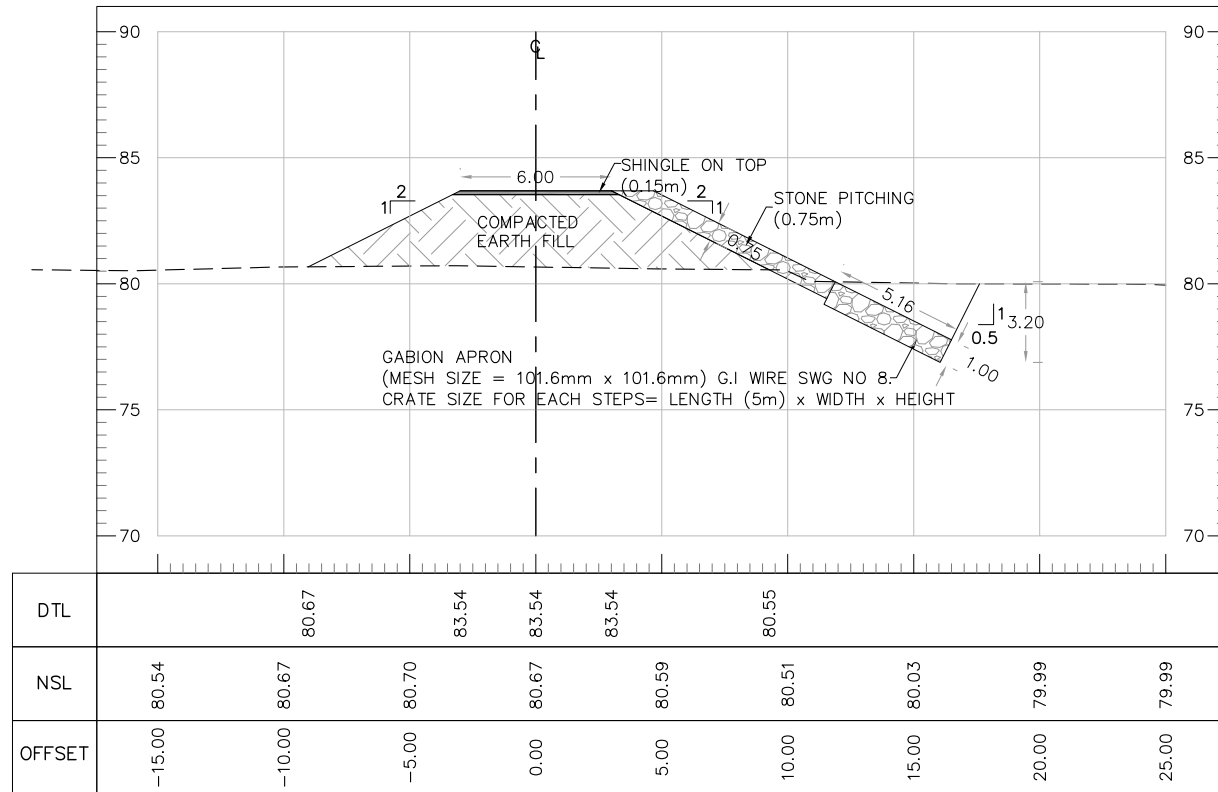


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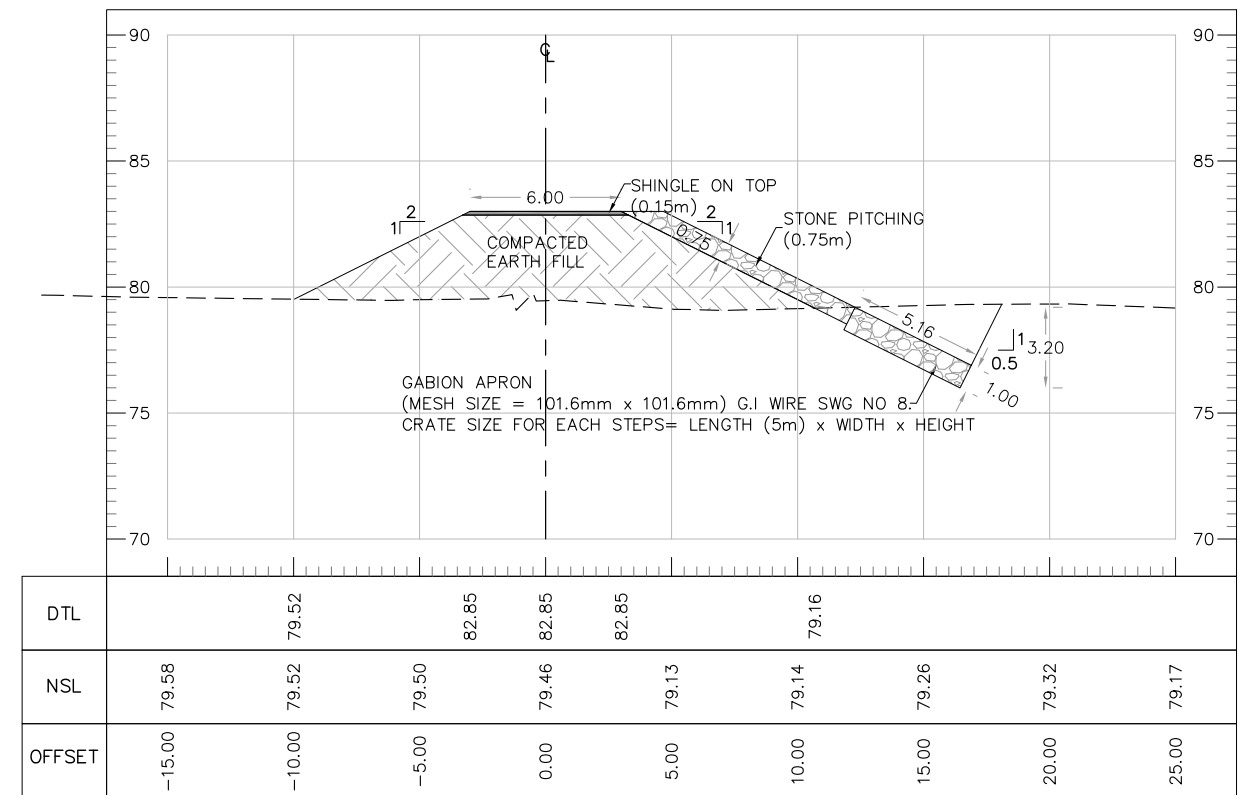


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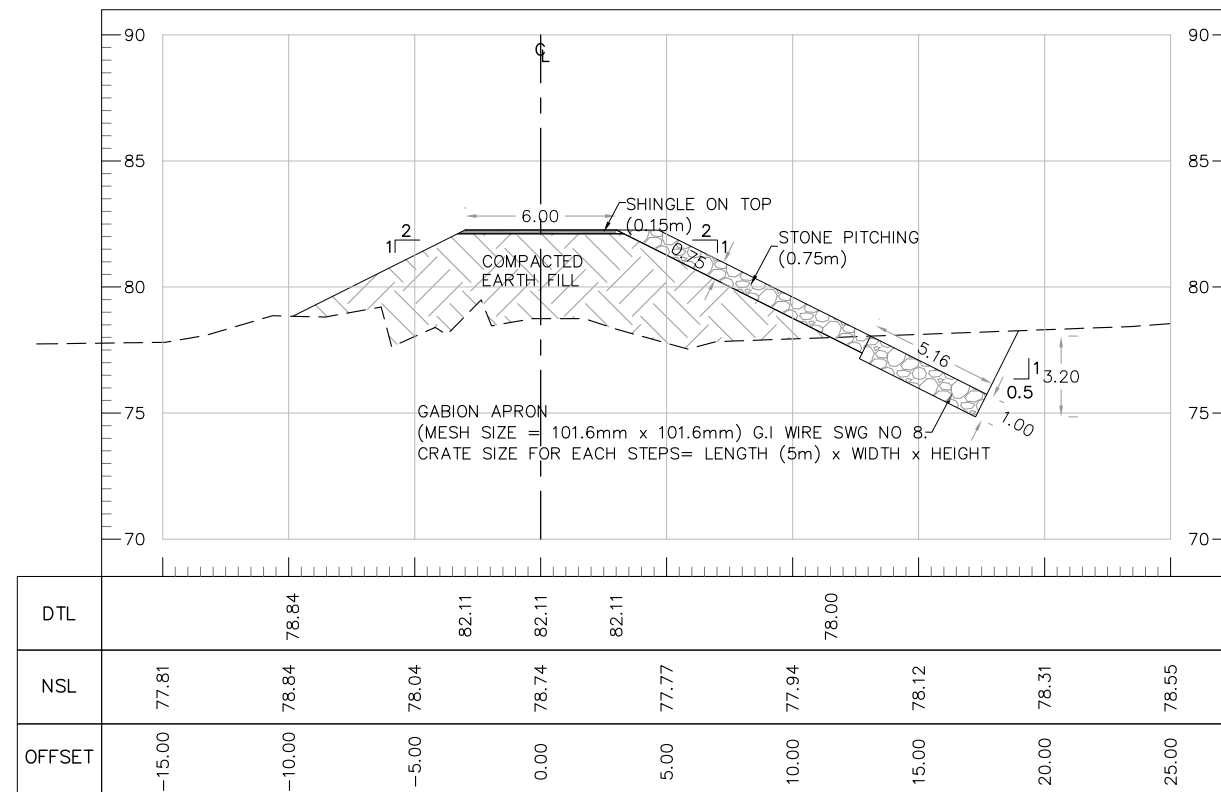
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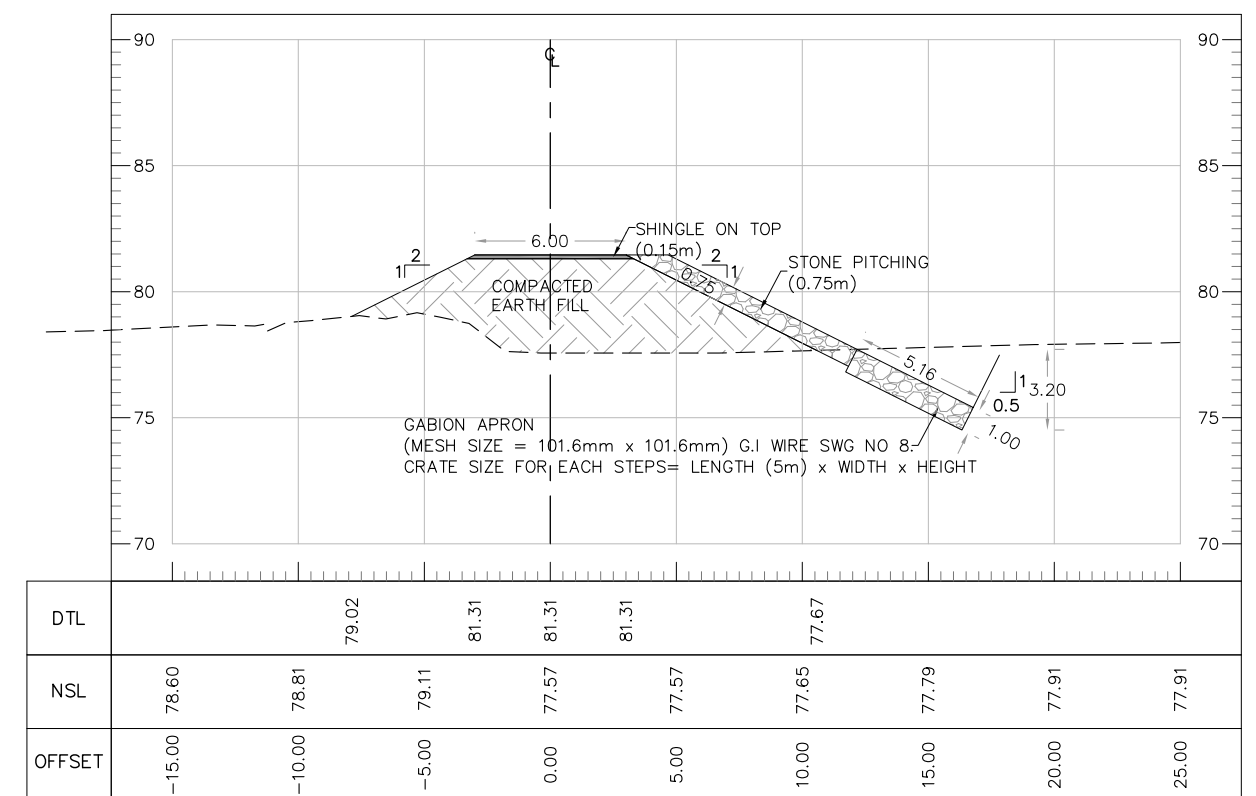
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CONSULTANTS:



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DRAWING TITLE:-

CROSS SECTIONS THRARA F.P.BUND

NOTES:

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CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

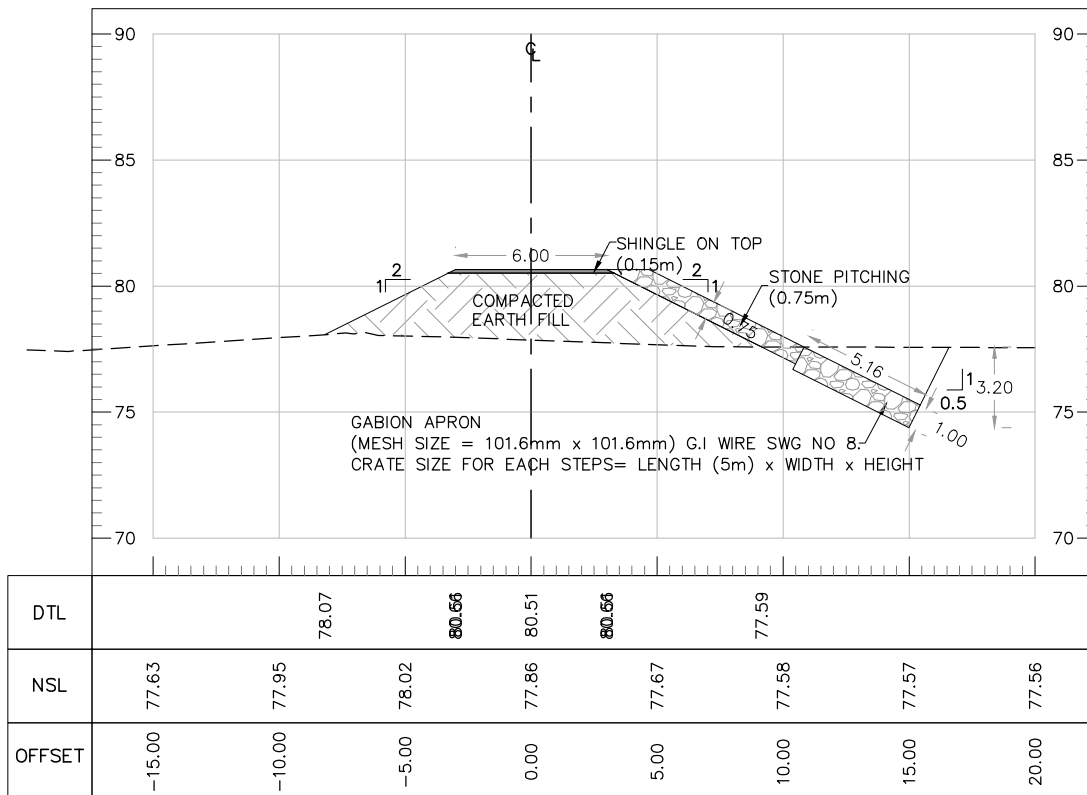
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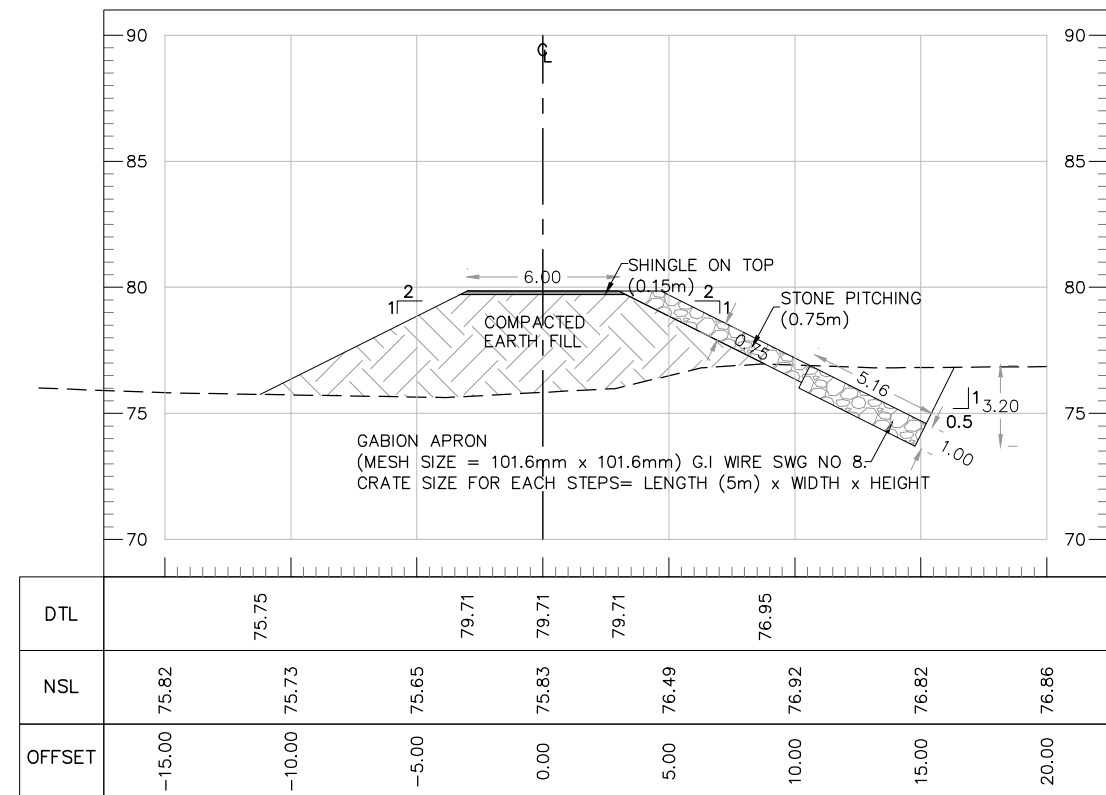
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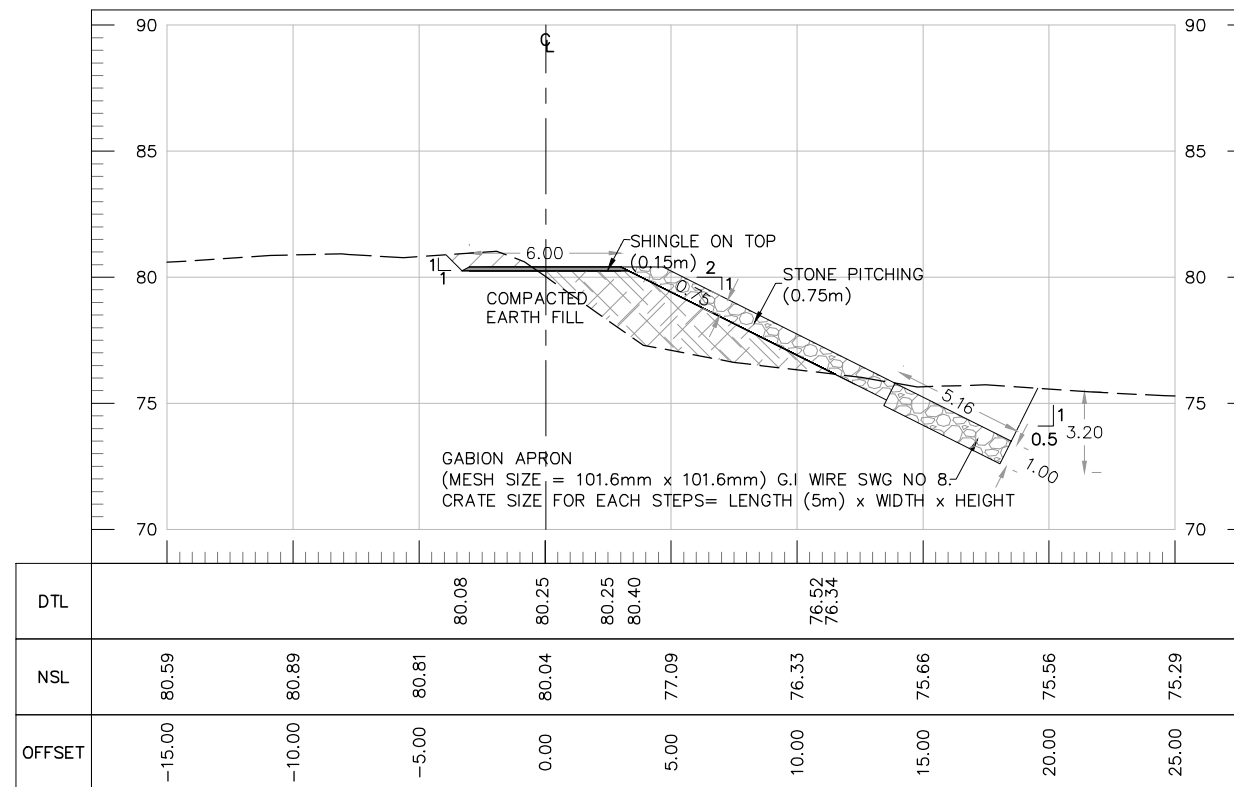
SHEET:- 01 OF 01



AT RD 1+600.00



AT RD 1+700.00



AT RD 1+741.65

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IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

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PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

CONSTRUCTION OF THRARA FLOOD
PROTECTION BUND ALONG PORALI RIVER
FOR PROTECTION OF BELLA AND
SURROUNDING AREA DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS THRARA F.P.BUND

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

DESIGNED BY: KAMRAN BABAR

CHECKED BY: ZIA-UL-HAQ

SCALE: 1:300

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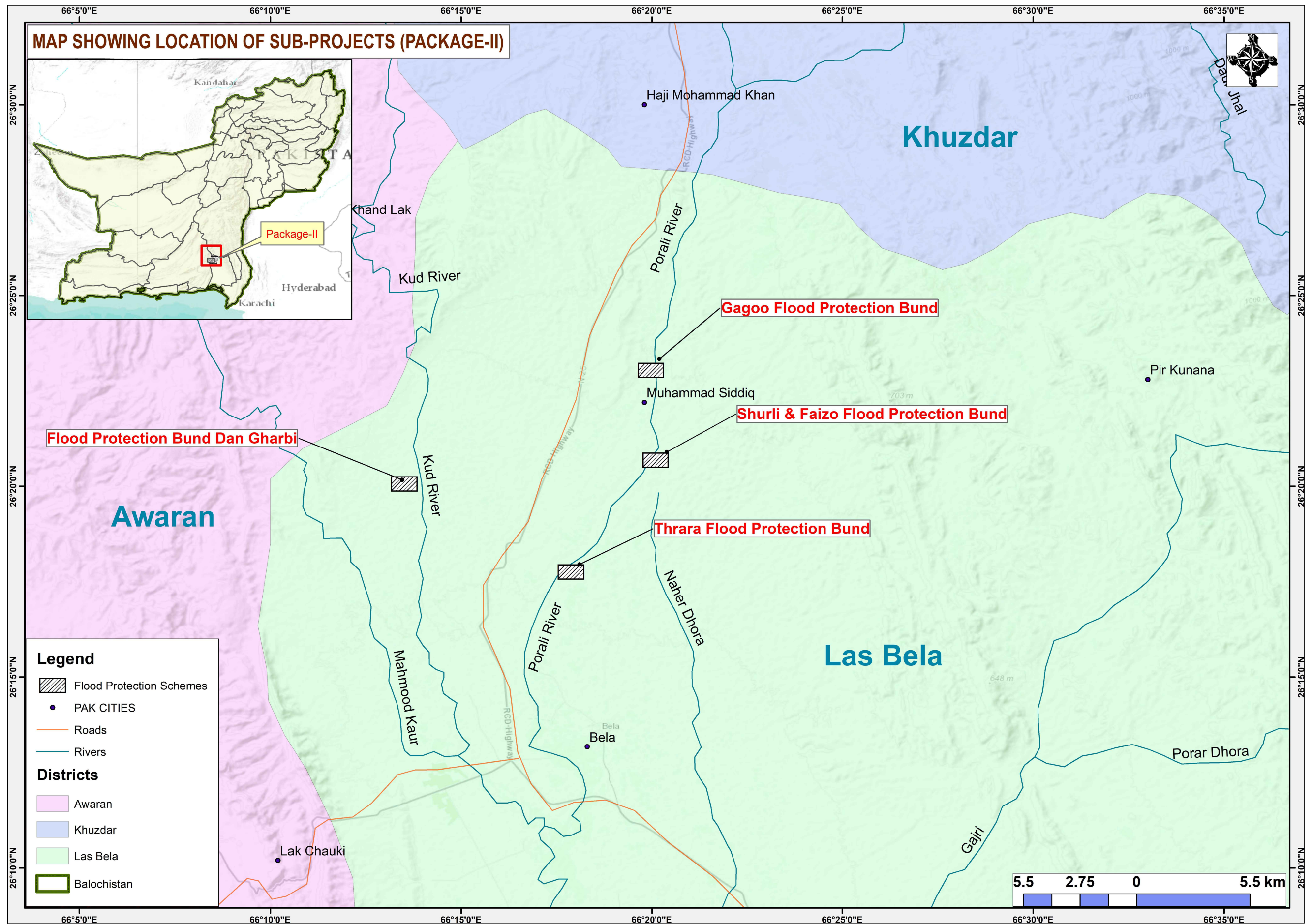
DATE: AUG / 2025

DRAWING NO: IFRAP-P02/TFP-13

SHEET:- 01 OF 01

CONSTRUCTION OF GAGOO PROTECTION BUND ALONG PORALI AND SURROUNDING AREA DISTRICT LASBELLA		
DRAWING INDEX		
S.No.	Drawing No.	Description
		GENERAL
01	IFRAP-P02/DGP-01	LOCATION AREA MAP
02	IFRAP-P02/DGP-02	CATCHMENT AREA MAP OF GAGOO BUND
03	IFRAP-P02/DGP-03	CATCHMENT AREA MAP OF DAAN GHARBI
		GAGO FLOOD PROTECTION
04	IFRAP-P02/GFP-01	LAYOUT PLAN OF GAGOO PROTECTION BUND SHEET
05	IFRAP-P02/GFP-02	SETTING OUT PLAN OF GAGOO PROTECTION BUND SHEET
06	IFRAP-P02/GFP-03	PLAN AND PROFILE OF PROTECTION BUND (01 OF 01)
07	IFRAP-P02/GFP-04	PLAN AND PROFILE OF PROTECTION BUND (02 OF 04)
08	IFRAP-P02/GFP-05	PLAN AND PROFILE OF PROTECTION BUND (03 OF 04)
09	IFRAP-P02/GFP-06	PLAN AND PROFILE OF PROTECTION BUND (04 OF 04)
10	IFRAP-P02/GFP-07	TYPICAL CROSS SECTION OF PROTECTION BUND
11	IFRAP-P02/GFP-08	CROSS SECTION OF PROTECTION BUND AT RD (0+000 TO 0+100)
12	IFRAP-P02/GFP-09	CROSS SECTION OF PROTECTION BUND AT RD (0+200 TO 0+300)
13	IFRAP-P02/GFP-10	CROSS SECTION OF PROTECTION BUND AT RD (0+400 TO 0+500)
14	IFRAP-P02/GFP-11	CROSS SECTION OF PROTECTION BUND AT RD (0+600 TO 0+700)
15	IFRAP-P02/GFP-12	CROSS SECTION OF PROTECTION BUND AT RD (0+800 TO 0+900)
16	IFRAP-P02/GFP-13	CROSS SECTION OF PROTECTION BUND AT RD (1+000 TO 1+100)
17	IFRAP-P02/GFP-14	CROSS SECTION OF PROTECTION BUND AT RD (1+200 TO 1+300)
18	IFRAP-P02/GFP-15	CROSS SECTION OF PROTECTION BUND AT RD (1+400 TO 1+450)
		DAAN GHARBI FLOOD PROTECTION
19	IFRAP-P02/DGP-01	LAYOUT PLAN OF DAAN GHARBI
20	IFRAP-P02/DGP-02	SETTING OUT PLAN OF DAAN GHARBI
21	IFRAP-P02/DGP-03	PLAN AND PROFILE OF PROTECTION BUND (01 OF 03)
22	IFRAP-P02/DGP-04	PLAN AND PROFILE OF PROTECTION BUND (02 OF 03)
23	IFRAP-P02/DGP-05	PLAN AND PROFILE OF PROTECTION BUND (03 OF 03)
24	IFRAP-P02/DGP-06	TYPICAL CROSS SECTION OF PROTECTION BUND
25	IFRAP-P02/DGP-07	CROSS SECTION OF PROTECTION BUND AT RD (0+000 TO 0+300)
26	IFRAP-P02/DGP-08	CROSS SECTION OF PROTECTION BUND AT RD (0+400 TO 0+700)
27	IFRAP-P02/DGP-09	CROSS SECTION OF PROTECTION BUND AT RD (0+800 TO 1+100)
28	IFRAP-P02/DGP-10	CROSS SECTION OF PROTECTION BUND AT RD (1+200 TO 1+278)

ABBREVIATIONS	
C NO	CURVE NUMBER
PE	POINT OF ENTRY (CHAINAGE OF START OF CURVE)
E	EASTING COORDINATE OF CURVE POINT
N	NORTHING COORDINATE OF CURVE POINT
PC	POINT OF CURVATURE (START OF CURVE WHERE STRAIGHT ALIGNMENT END) IT IS ALSO KNOWN AS BC BEGINNING OF CURVE
PT	PT (POINT OF TANGENCY) END OF CURVE WHERE THE CURVE ENDS AND STRAIGHT PORTION START AGAIN IT IS ALSO KNOWN AS EC END OF CURVE
DA	DEFLECTION ANGLE (INITIAL DEFLECTION FROM TANGENT)
DC	DEFLECTION CHANGE (INCREMENTAL DEFLECTION, OFTEN PER CHORD)
T	TANGENT LENGTH DISTANCE FROM PI (POINT OF INTERSECTION) TO PC OR PT
R	RADIUS RADIUS OF THE CIRCULAR CURVE
L	LENGTH OF CURVE ARC LENGTH OF THE CIRCULAR CURVE
C	LONG CHORD LENGTH STRAIGHT-LINE DISTANCE FROM PC TO PT
E	EXTERNAL DISTANCE DISTANCE FROM PI TO MID-POINT OF CURVE
Δ (Delta)	CENTRAL / INTERSECTION ANGLE TOTAL ANGLE SUBTENDED BY THE CURVE AT THE CENTER
	RELATIONSHIP (FOR UNDERSTANDING) $L = (\pi \times R \times \Delta) / 180$ $T = R \times \tan(\Delta / 2)$ $E = R [\sec(\Delta/2) - 1]$ $C = 2R \sin(\Delta/2)$



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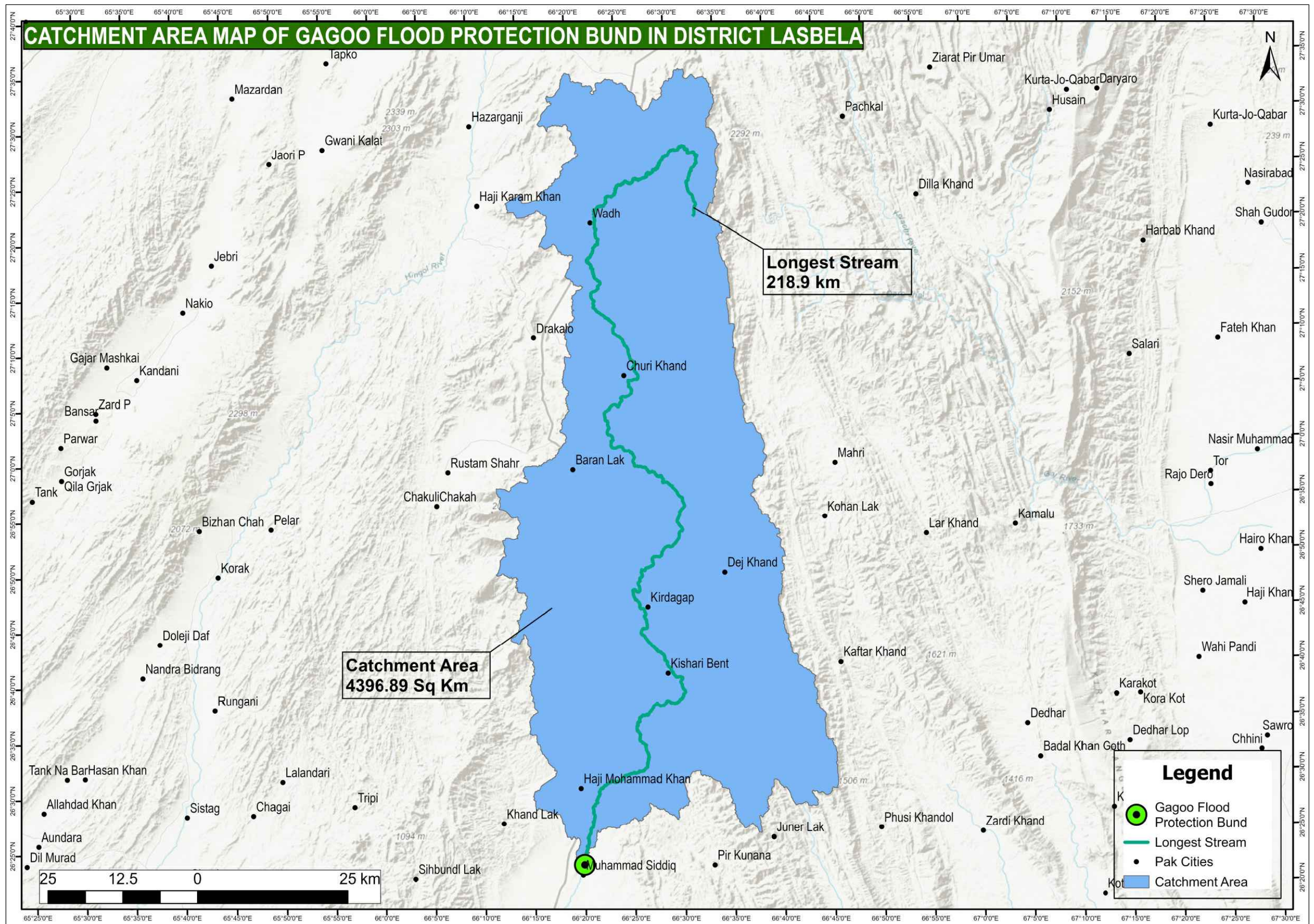
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**INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT**

SCHEME NAME:
**CONSTRUCTION OF GAGOO PROTECTION
BUND ALONG PORALI AND
SURROUNDING AREA DISTRICT
LASBELLA**

DRAWING TITLE:-
**LOCATION MAP
OF PACKAGE-II, IFRAP
F.P BUND DAAN GHARBI & GAGOO**

NOTES:
ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

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CHECKED BY:	ZIA-UL-HAQ	SCALE:	N.T.S
FILE PATH:	G/ IFRAP	DATE:	SEP / 2025
DRAWING NO:	IFRAP-P02/DGP-01	SHEET:-	01 OF 01



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PROJECT TITLE:

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ADAPTATION PROJECT**

SCHEME NAME:

**CONSTRUCTION OF GAGOO PROTECTION
BUND ALONG PORALI AND
SURROUNDING AREA DISTRICT
LASBELLA**

DRAWING TITLE:-

**CATCHMENT MAP OF GAGOO
FLOOD PROTECTION BUND**

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

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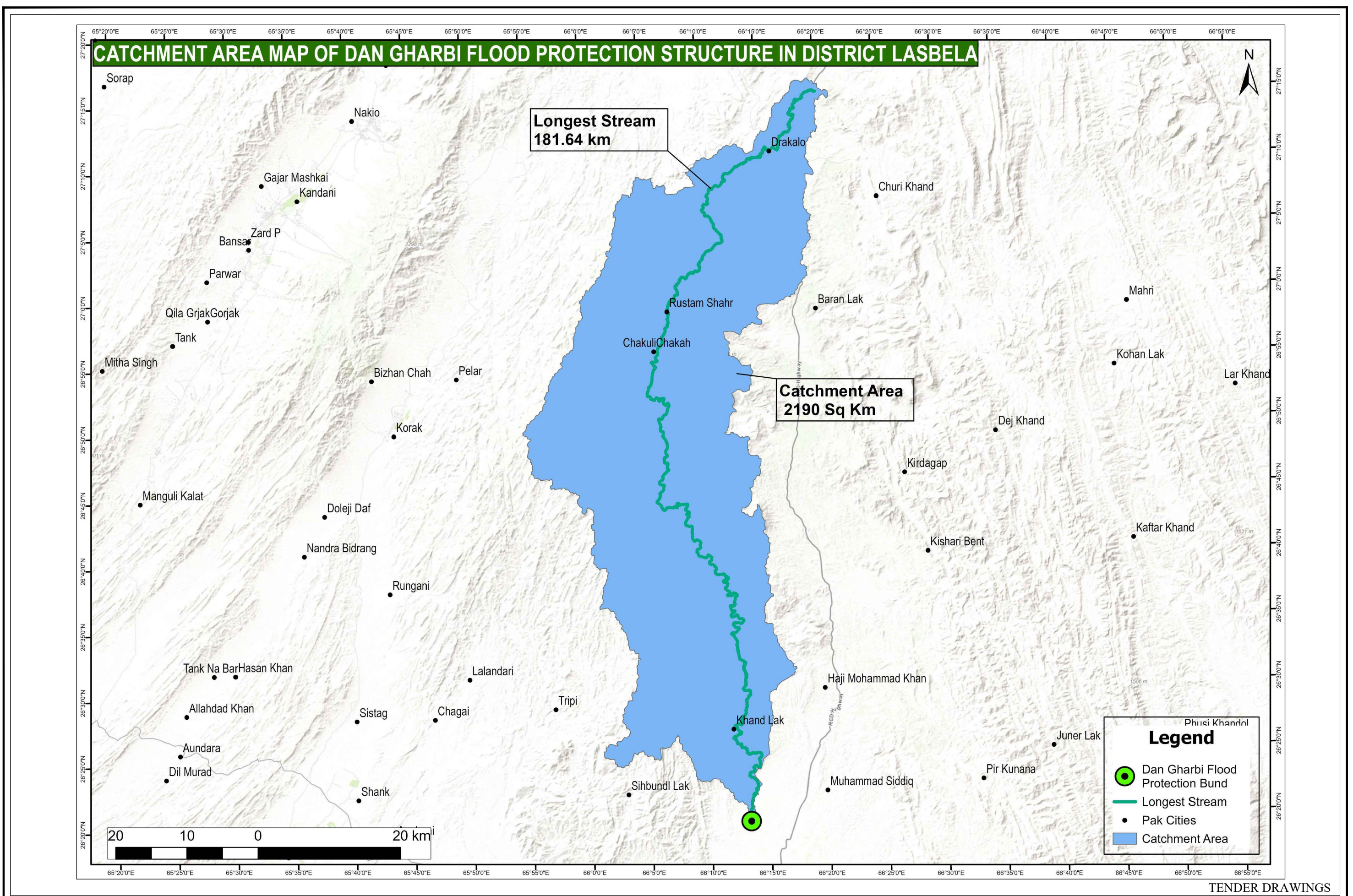
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DESIGNED BY: KAMRAN BABAR

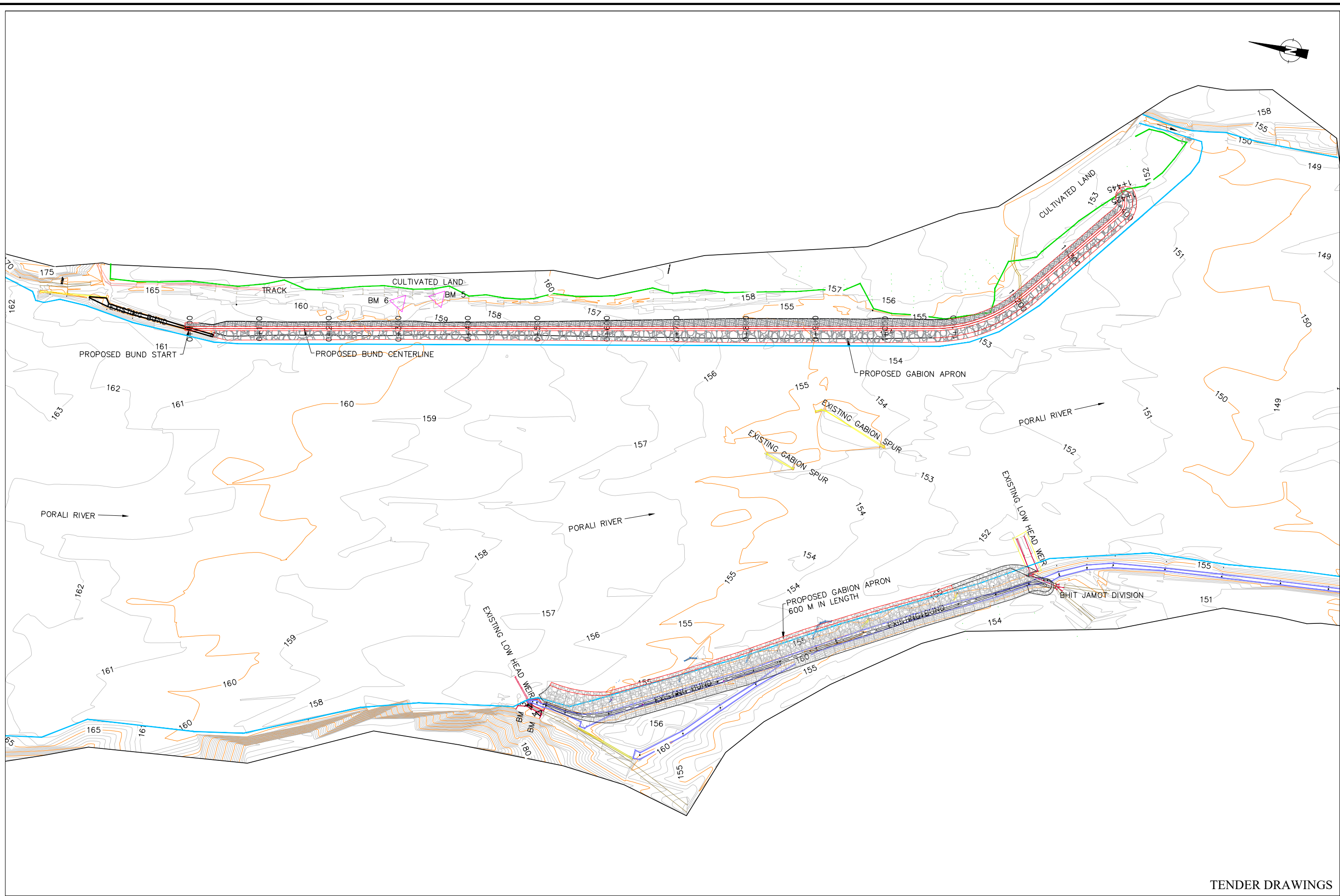
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DATE: SEP / 2025

SHEET:- 01 OF 01

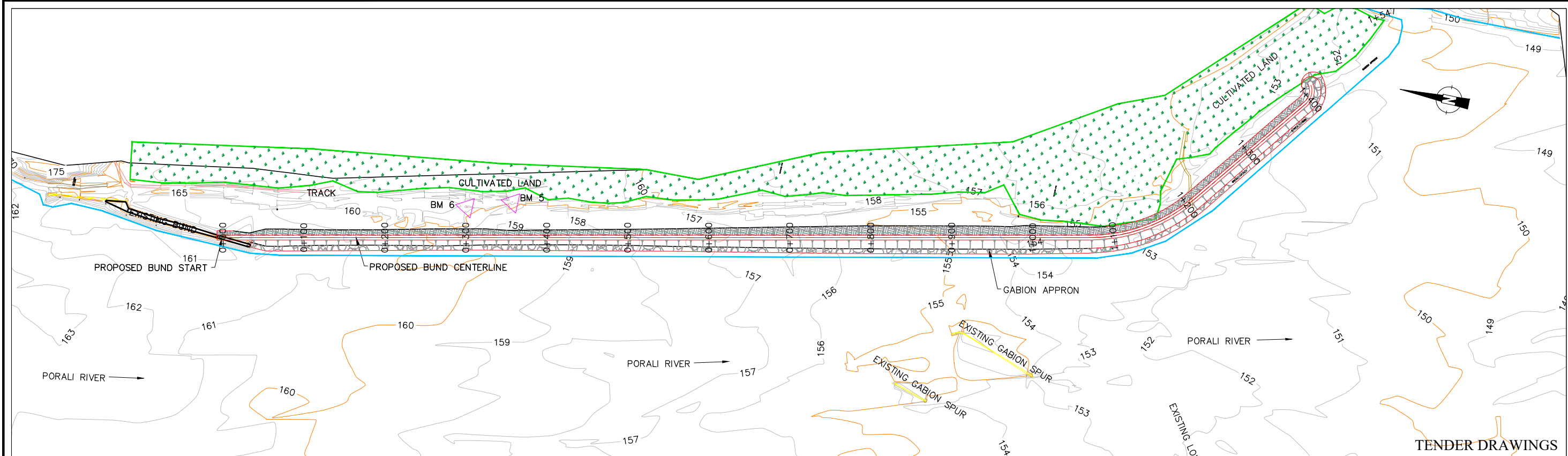


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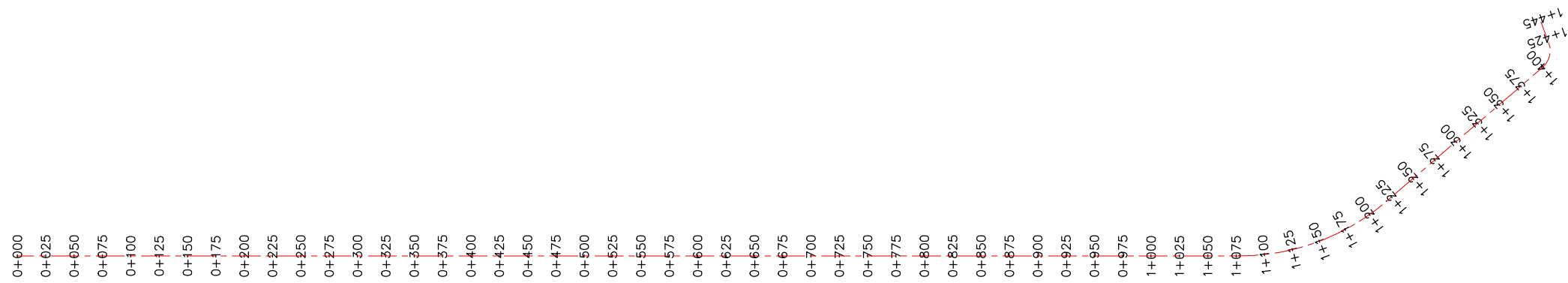


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0+025	2921967.15	234136.357	0+425	2921576.19	234220.889	0+650	2921356.27	234268.438	0+700	2921307.4	23427948	0+925	2921087.48	234326.55	1+150	2920871.85	234386.48	1+375	2920727.13	234557.38
0+050	2921942.72	234141.64	0+450	2921551.75	234226.172	0+225	2921771.67	234178.623	0+725	2921282.96	234284.288	0+950	2921063.05	234331.84	1+175	2920851.78	234401.36	1+400	2920712	234577.28
0+075	2921918.28	234146.923	0+475	2921527.32	234231.455	0+250	2921747.24	234183.906	0+750	2921258.53	234289.571	0+975	2921038.61	234337.12	1+200	2920833.73	234418.63	1+425	2920711.41	234600.68
0+100	2921893.85	234152.207	0+500	2921502.88	234236.739	0+275	2921722.8	234189.189	0+775	2921234.09	234294.855	1+000	2921014.17	234342.4	1+225	2920817.89	234437.96	1+445	2920721.56	234616.47
0+125	2921869.41	234157.49	0+525	2921478.45	234242.022	0+300	2921698.36	234194.473	0+800	2921209.66	234300.138	1+025	2920989.74	234347.69	1+250	2920802.77	234457.86			
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0+200	2921796.11	234173.34	0+600	2921405.14	234257.872	0+375	2921625.06	234210.322	0+875	2921136.35	234315.988	1+100	2920916.75	234364.76	1+325	2920757.38	234517.57			



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ADAPTATION PROJECT**

SCHEME NAME:
**CONSTRUCTION OF GAGOO PROTECTION
BUND ALONG PORALI AND SURROUNDING
AREA DISTRICT LASBELLA**

DRAWING TITLE:-
**SETT'ING OUT PLAN
GAGOO F.P. BUND**

NOTES:
ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

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CHECKED BY: ZIA-UL-HAQ

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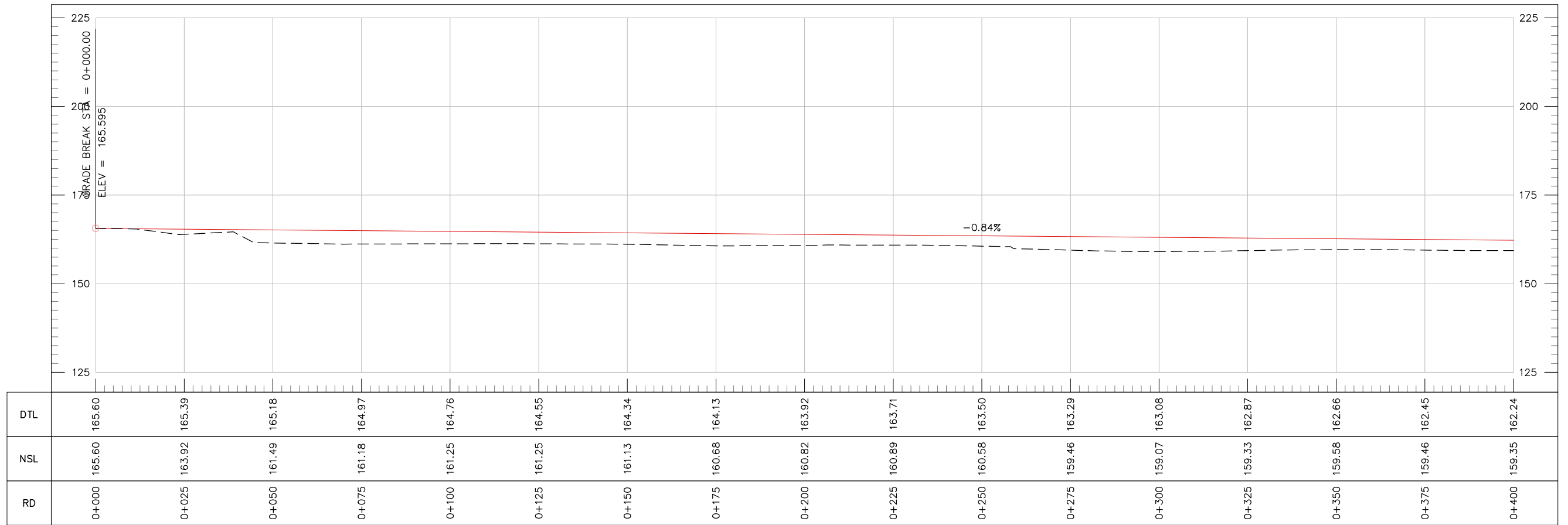
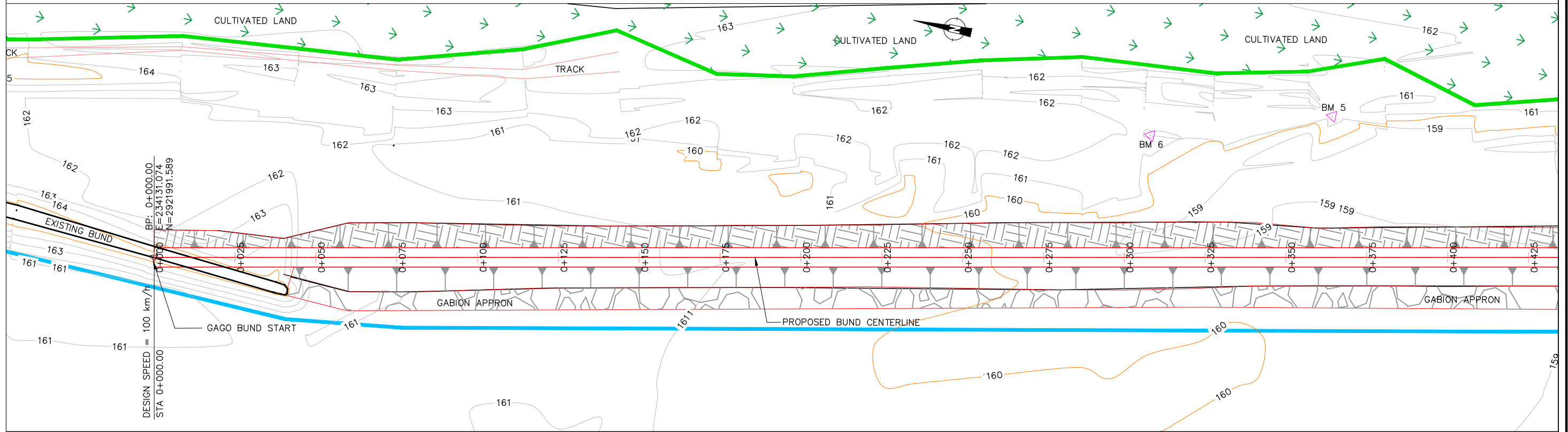
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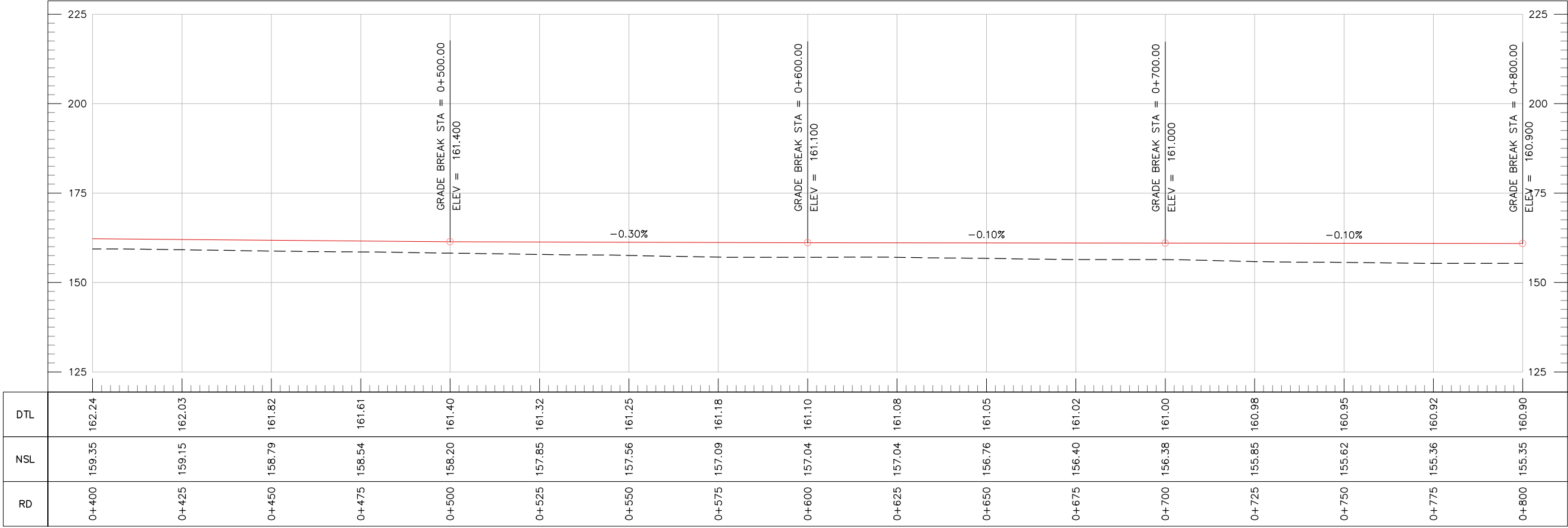
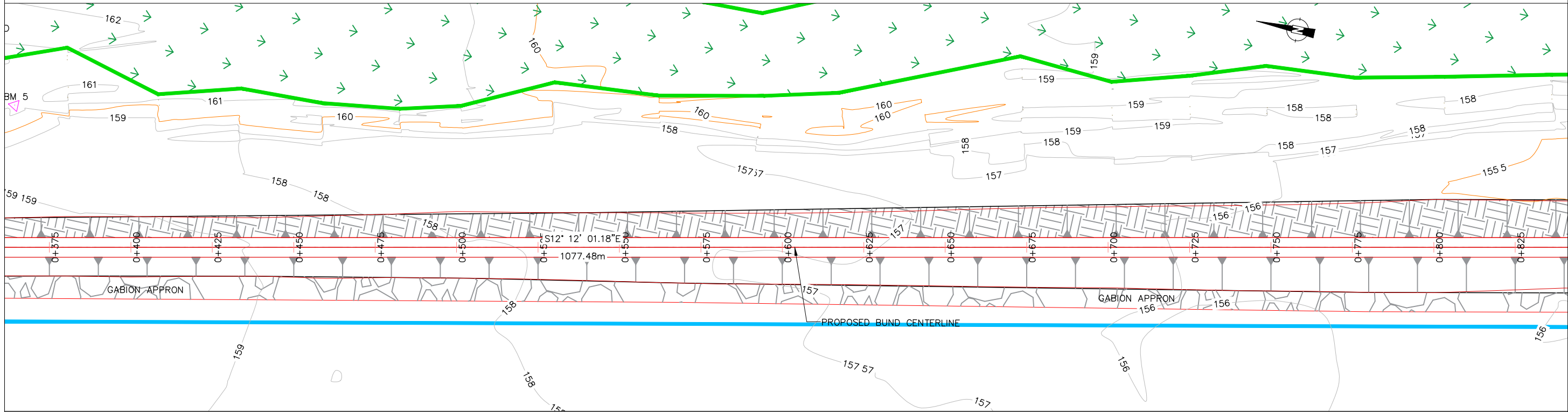
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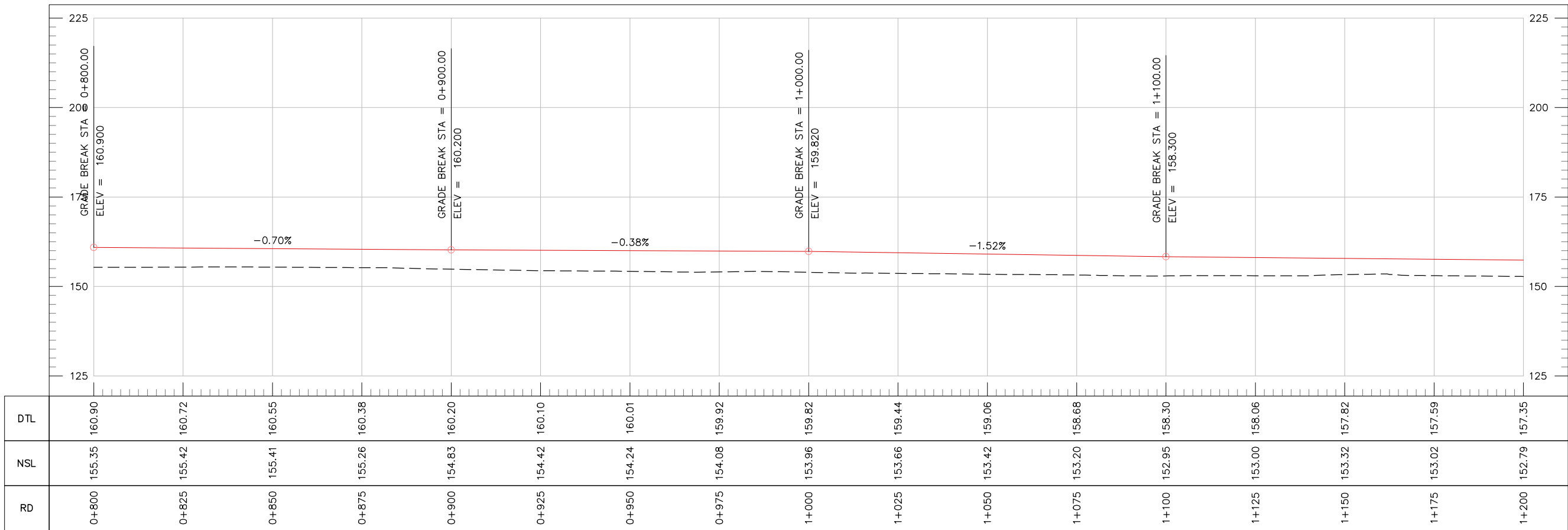
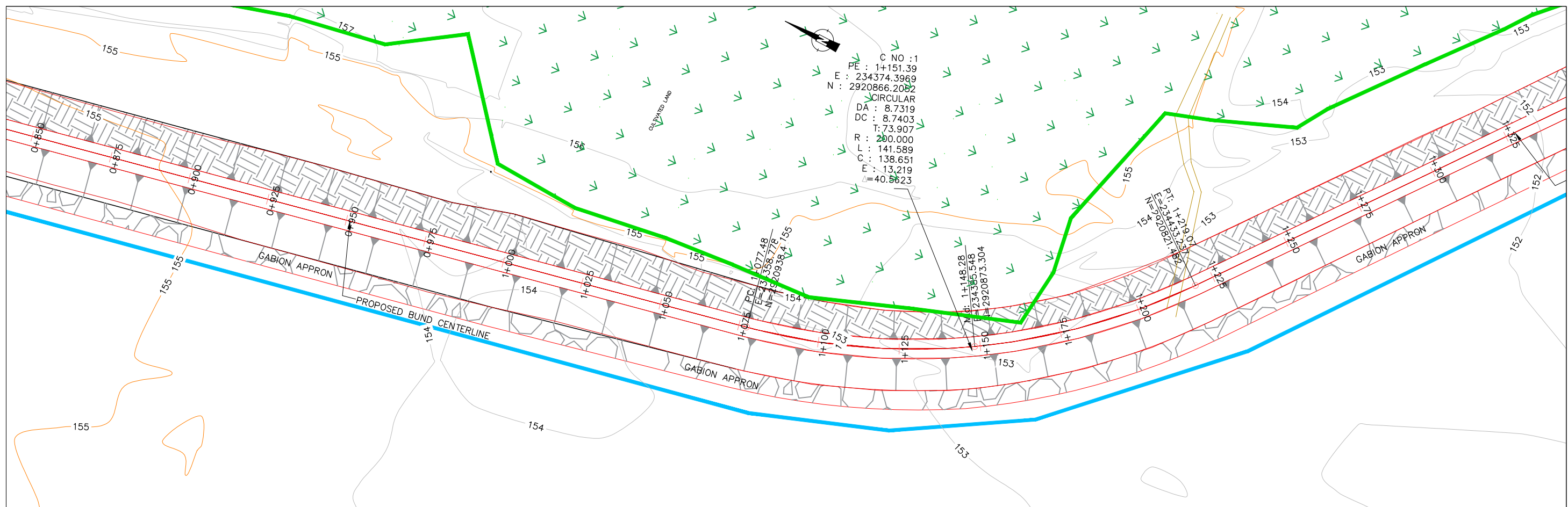
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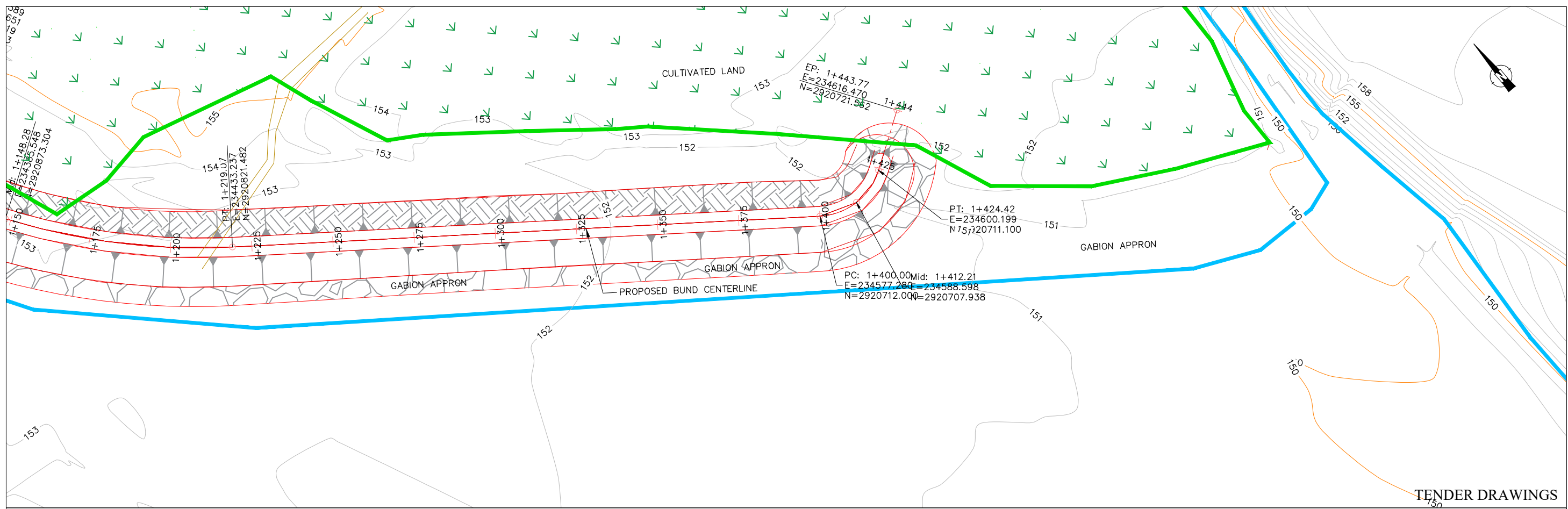
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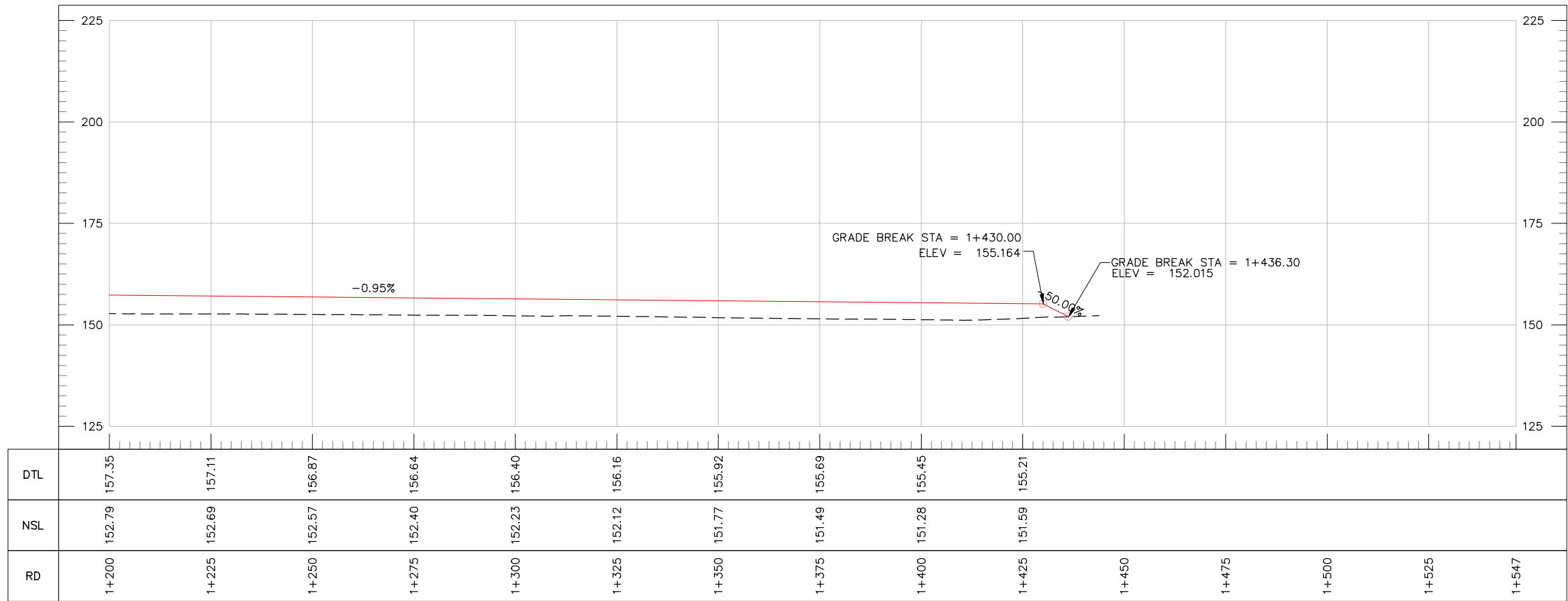


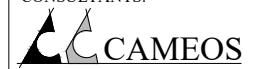
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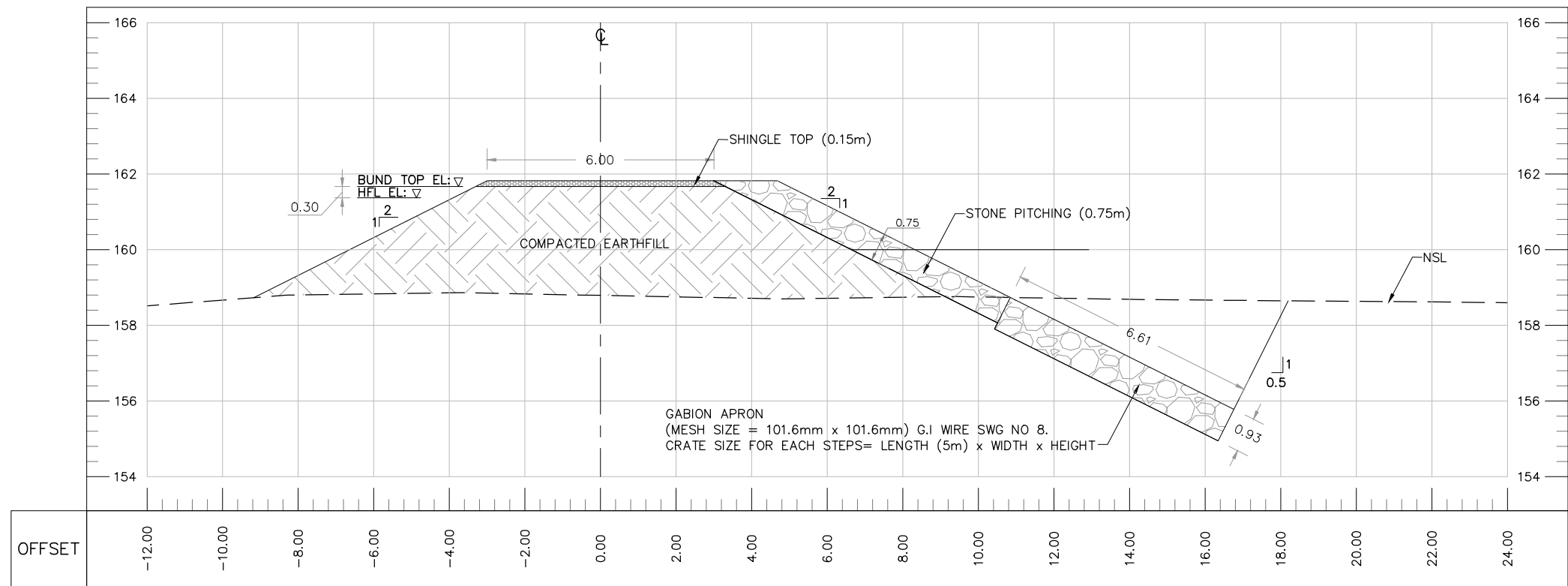
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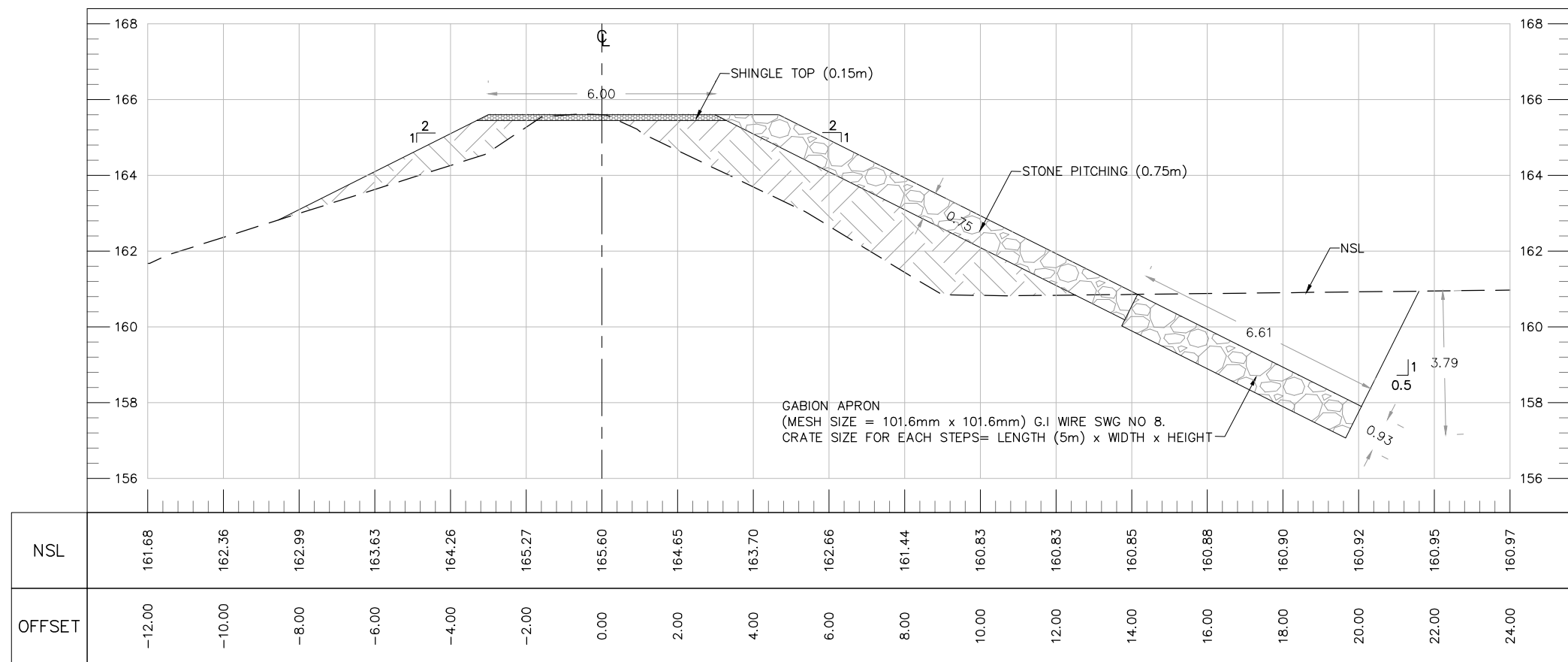
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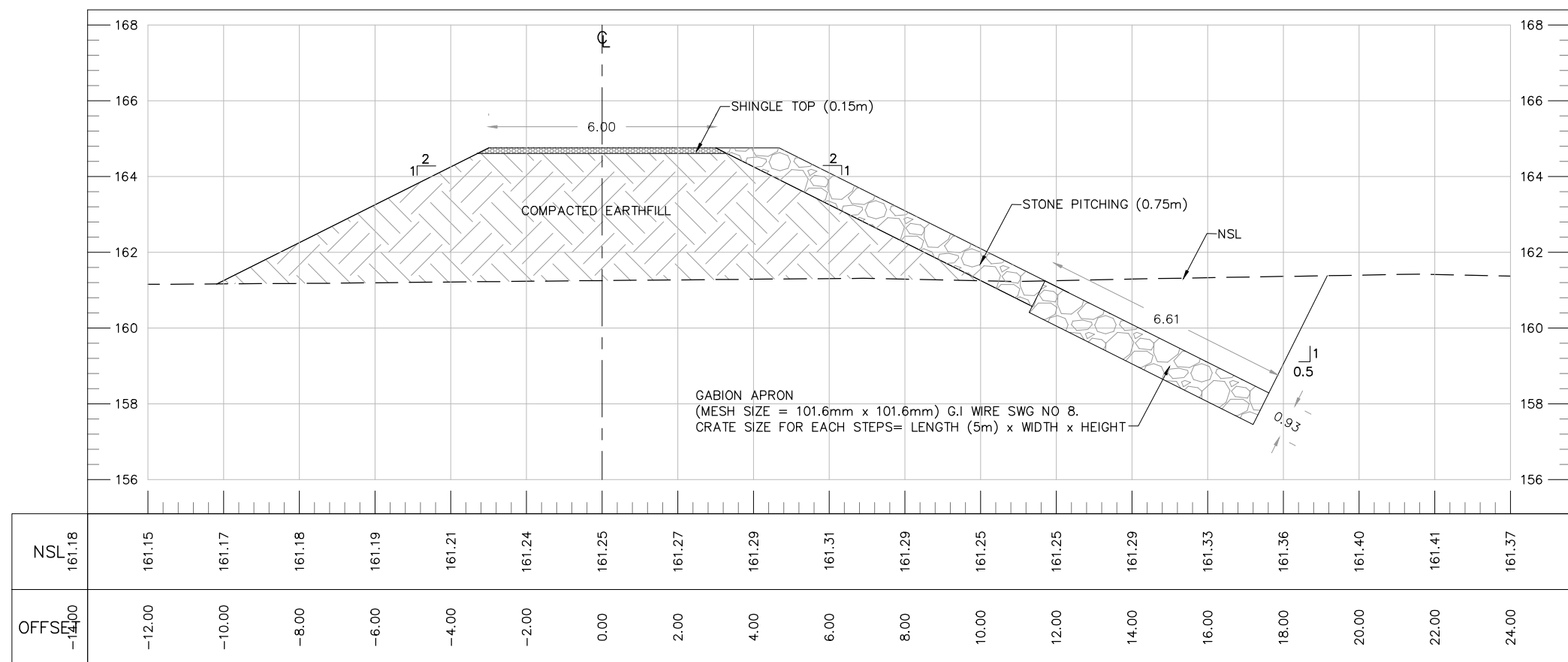
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AT RD 0+000.00



AT RD 0+100.00

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CLIENT:



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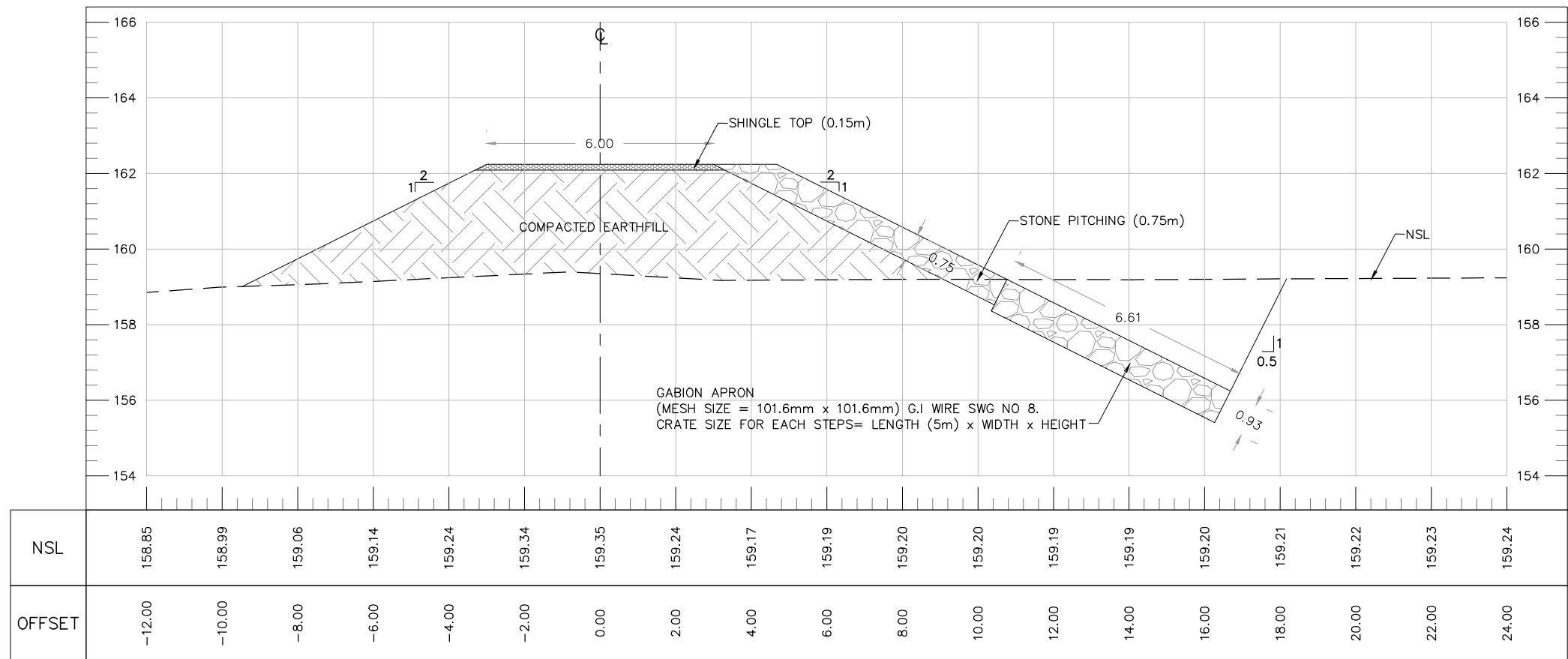
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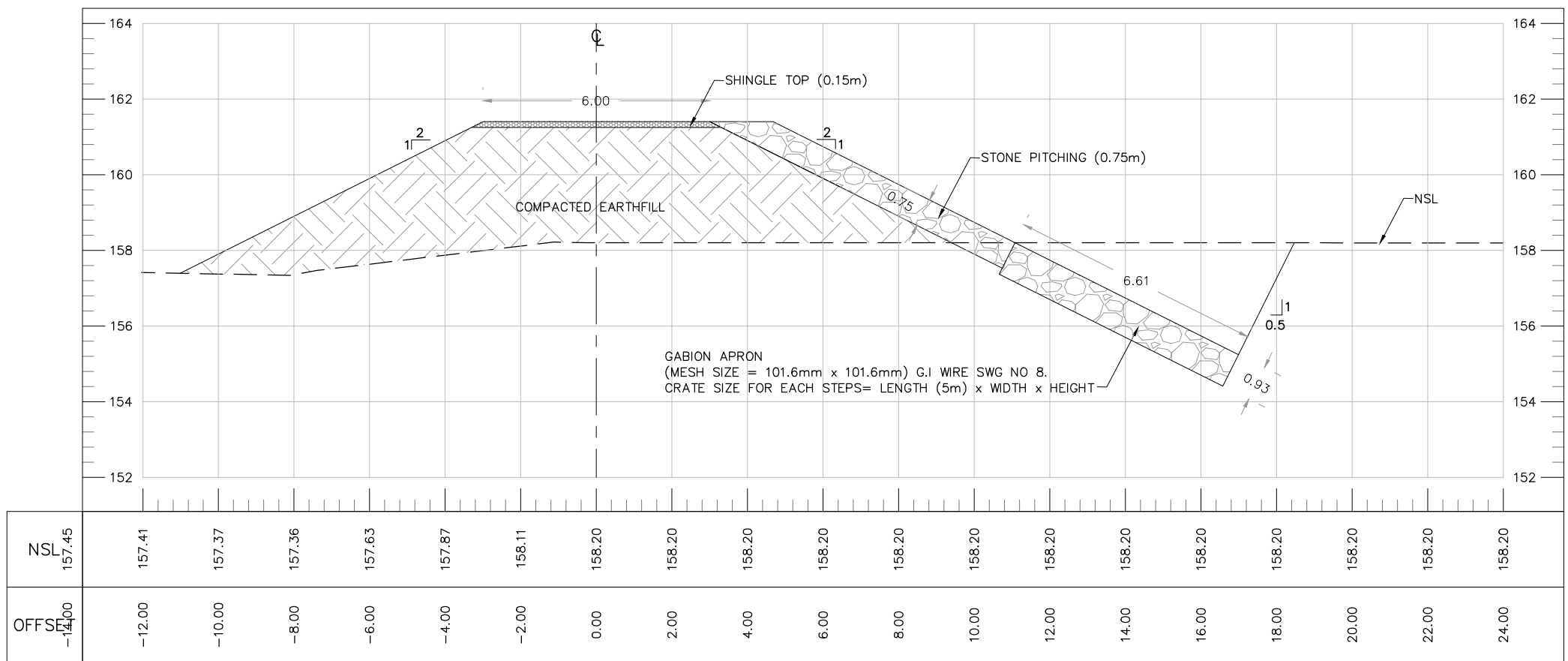
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DATE: AUG / 2025

SHEET:- 01 OF 01



AT RD 0+400.00



AT RD 0+500.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:



CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

CONSTRUCTION OF GAGOO PROTECTION
BUND ALONG PORALI AND SURROUNDING
AREA DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS GAGOO F.P.BUND

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

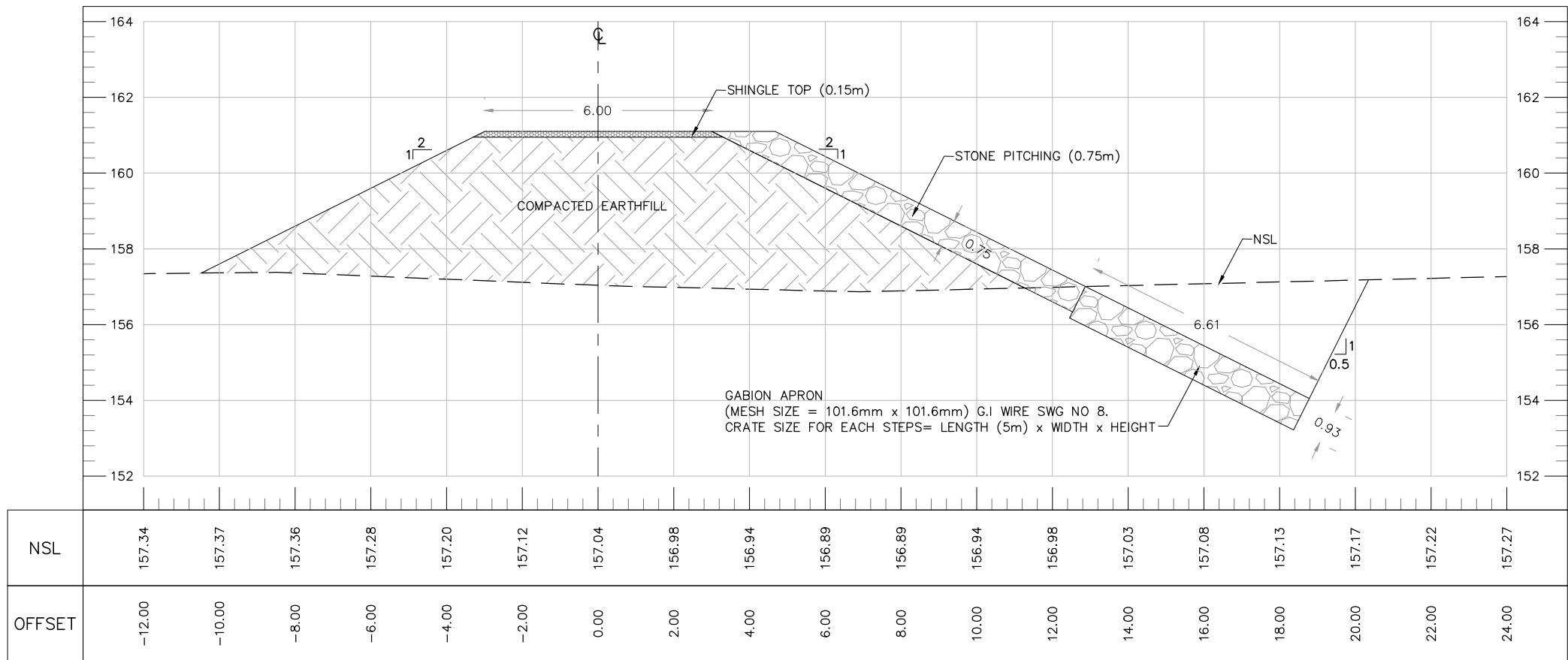
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DESIGNED BY: KAMRAN BABAR

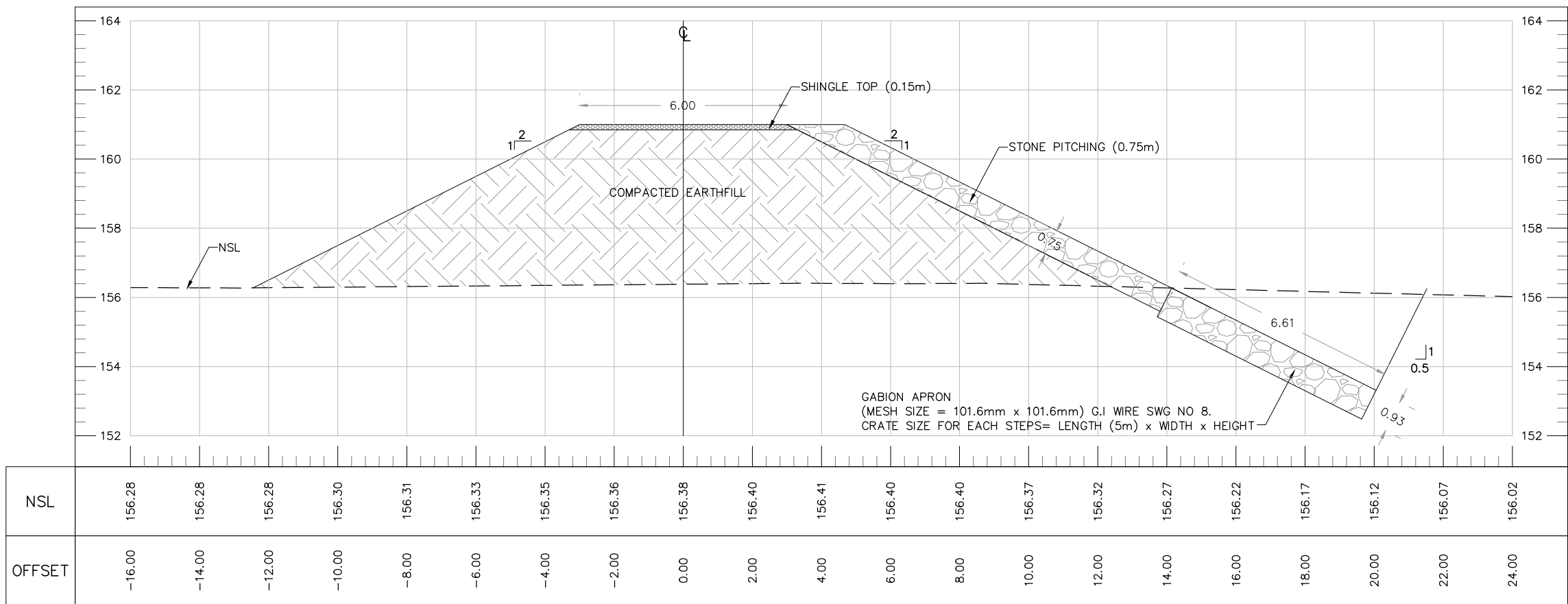
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DATE: AUG / 2025

SHEET:- 01 OF 01



AT RD 0+600.00



AT RD 0+700.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
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AREA DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS GAGOO F.P.BUND

NOTES:

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OTHERWISE.

DRAWN BY: IMRAN ULLAH

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

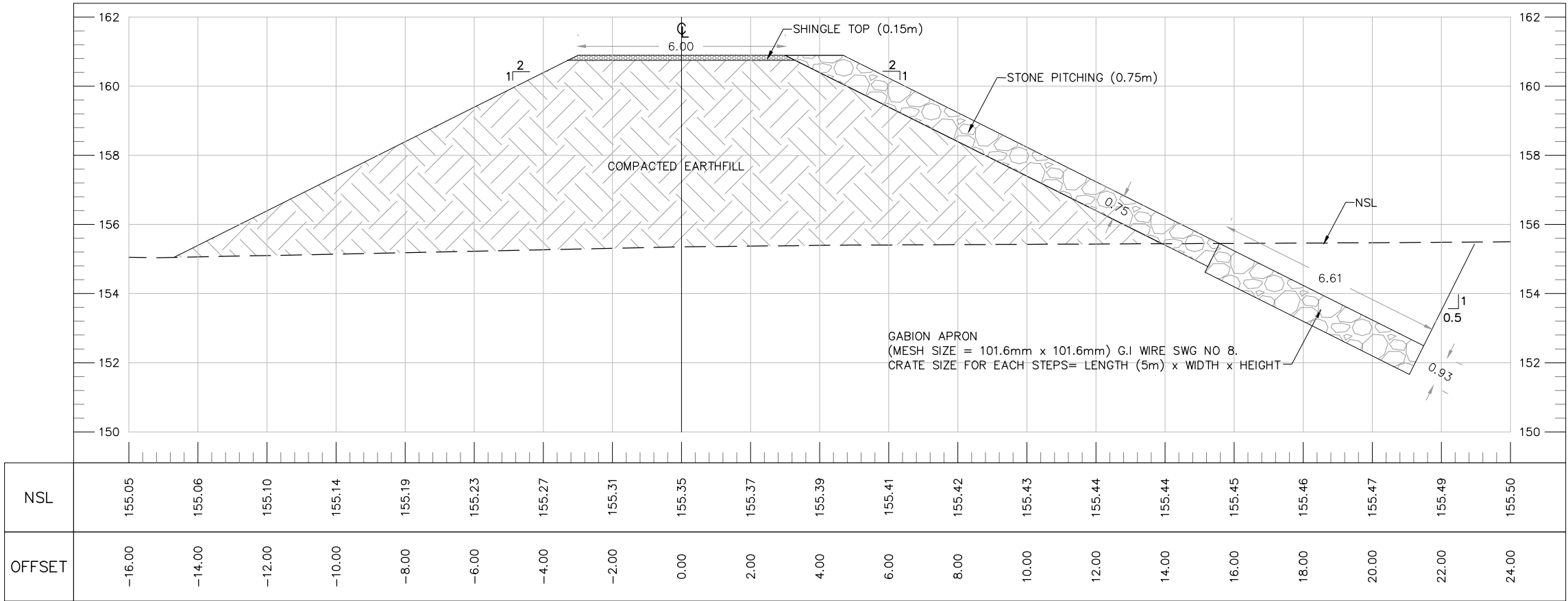
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DESIGNED BY: KAMRAN BABAR

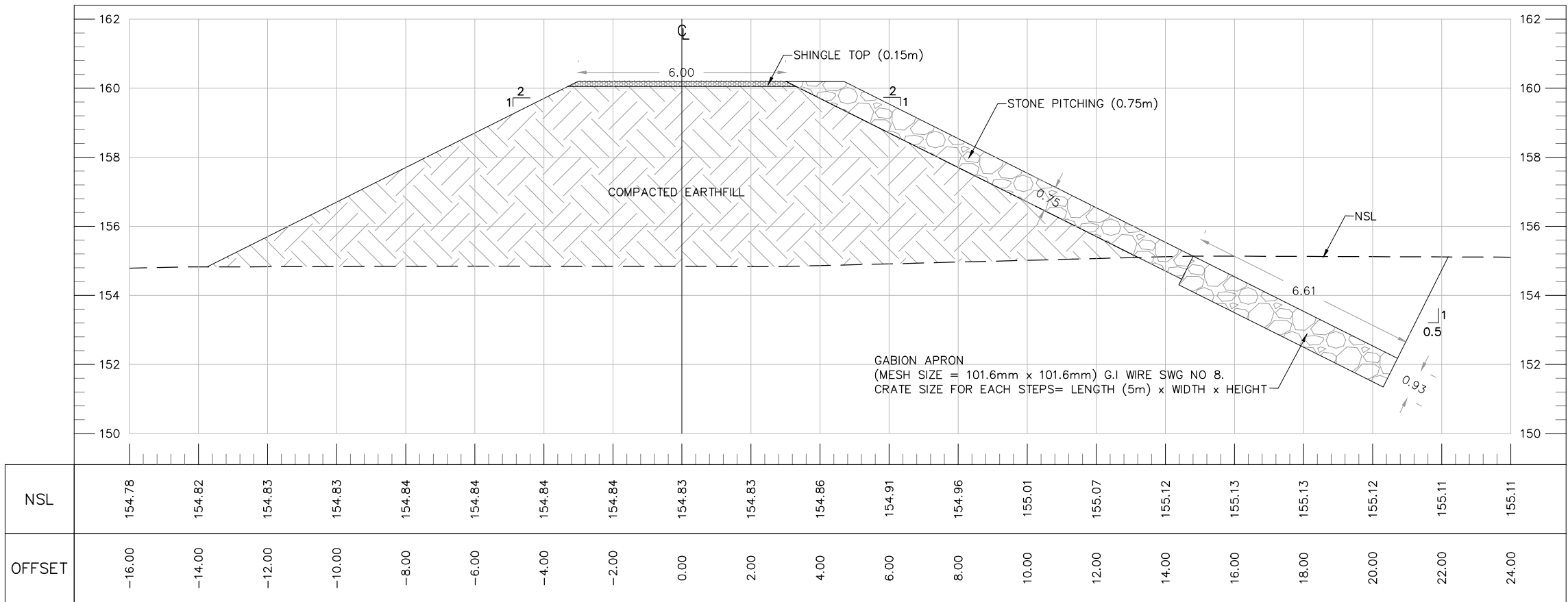
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DATE: AUG / 2025

SHEET:- 01 OF 01



AT RD 0+800.00



AT RD 0+900.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:



CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
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PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
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AREA DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS GAGOO F.P.BUND

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G/ IFRAP

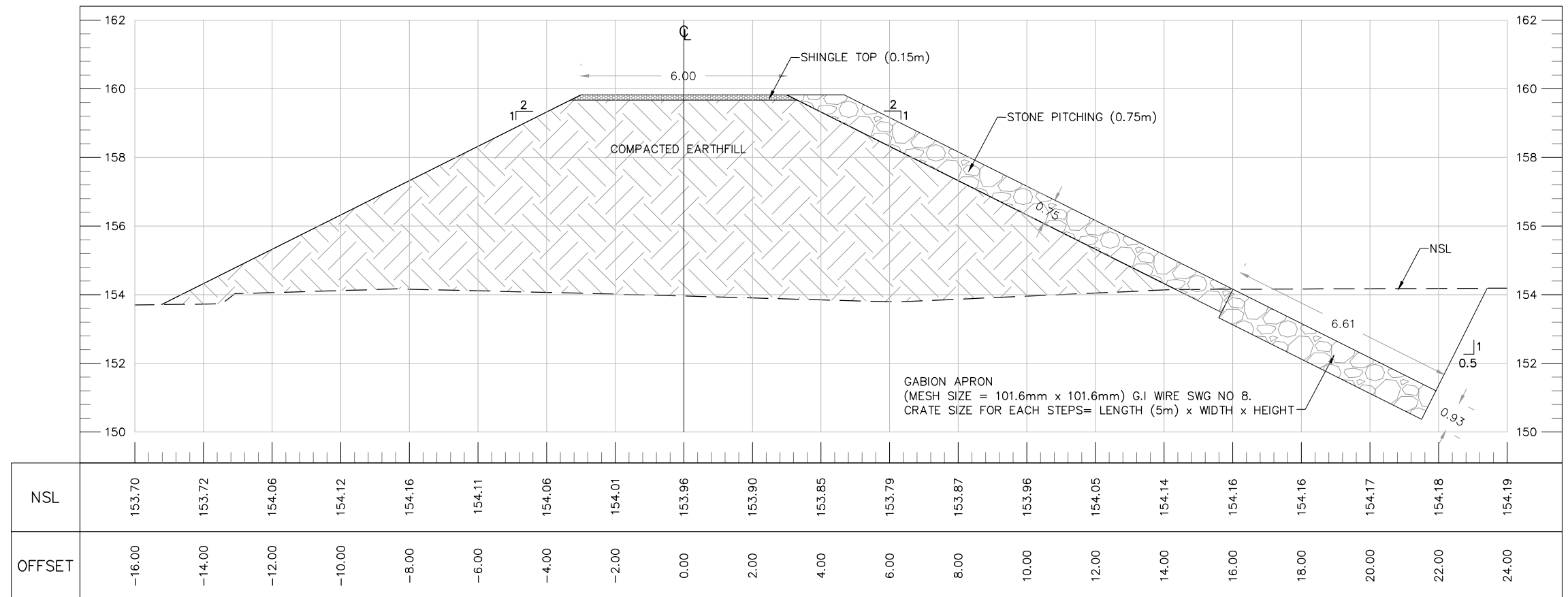
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DESIGNED BY: KAMRAN BABAR

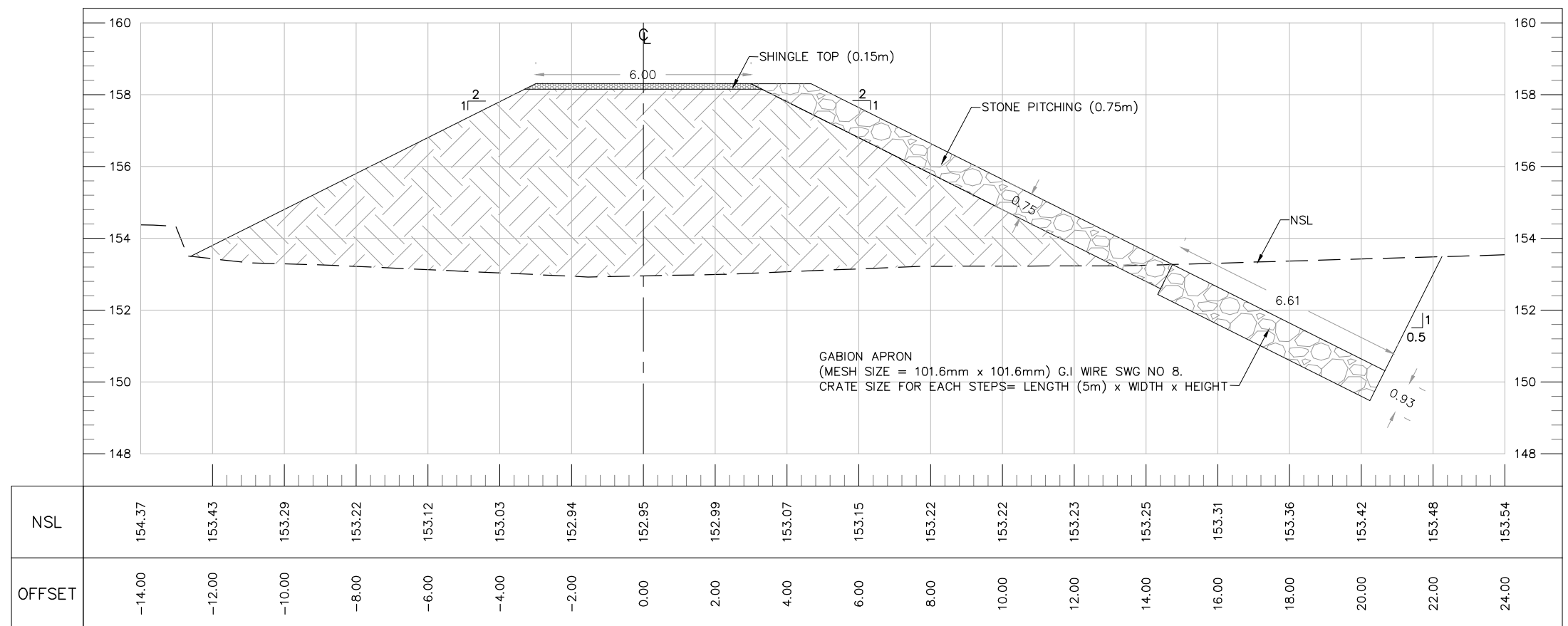
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DATE: AUG / 2025

SHEET:- 01 OF 01



AT RD 1+000.00



AT RD 1+100.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:



CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

CONSTRUCTION OF GAGOO PROTECTION
BUND ALONG PORALI AND SURROUNDING
AREA DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS GAGOO F.P.BUND

NOTES:

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IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

DESIGNED BY: KAMRAN BABAR

CHECKED BY: ZIA-UL-HAQ

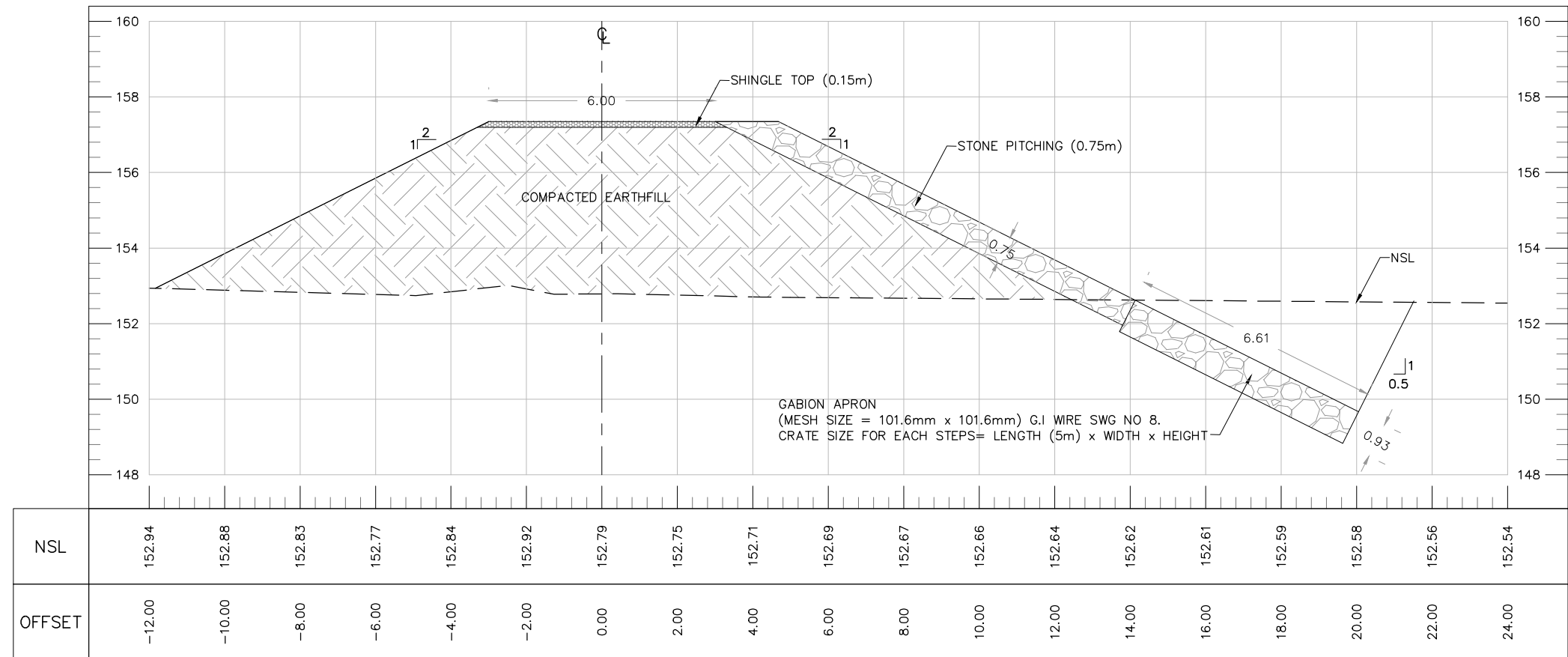
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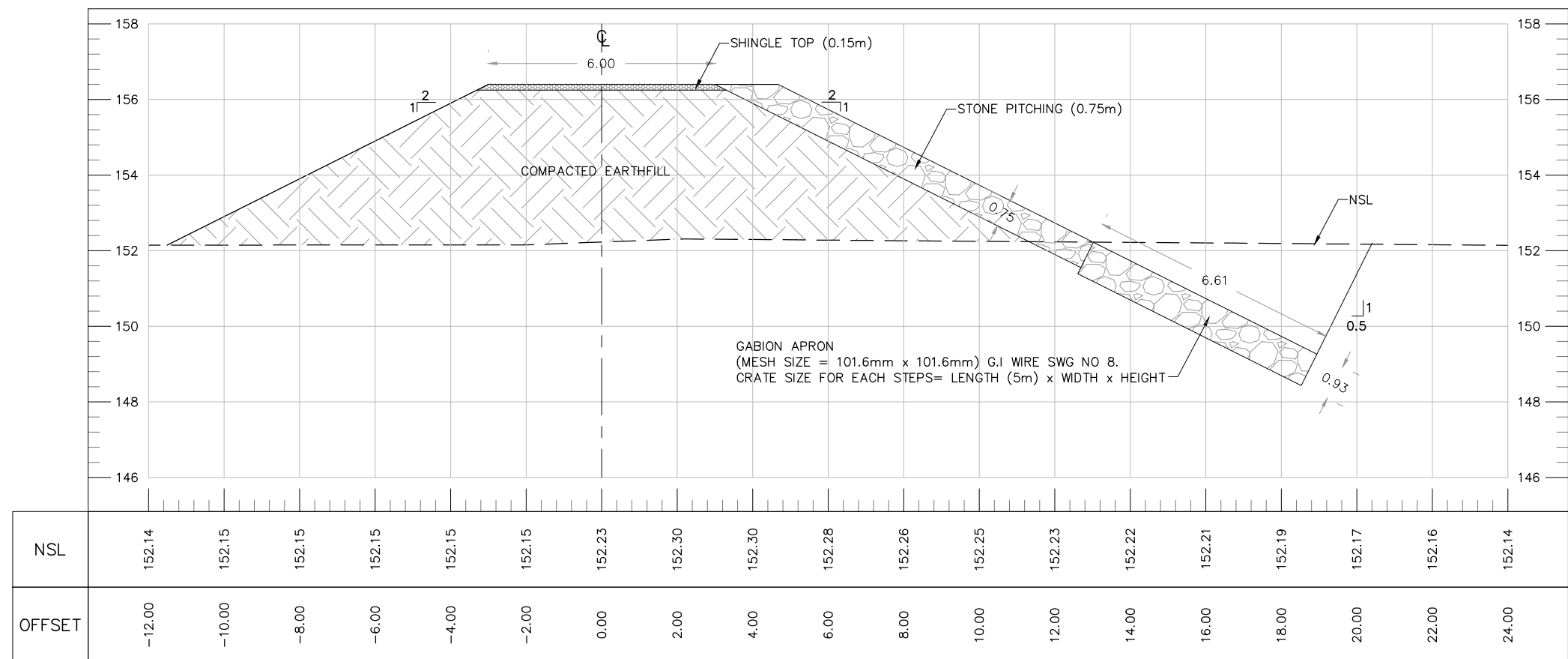
DATE: AUG / 2025

DRAWING NO: IFRAP-P02/GFP-13

SHEET:- 01 OF 01



AT RD 1+200.00



AT RD 1+300.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:



CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

CONSTRUCTION OF GAGOO PROTECTION
BUND ALONG PORALI AND SURROUNDING
AREA DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS GAGOO F.P.BUND

NOTES:

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OTHERWISE.

DRAWN BY: IMRAN ULLAH

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

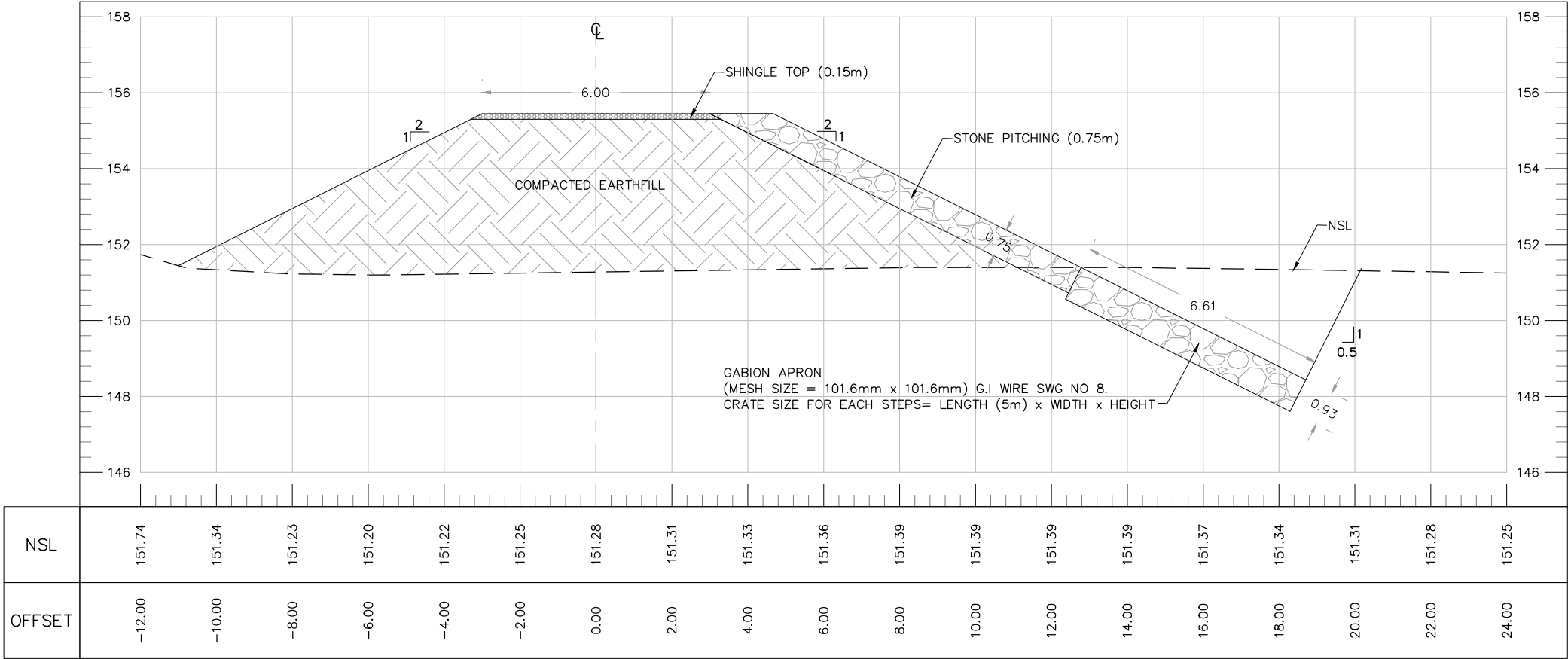
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DESIGNED BY: KAMRAN BABAR

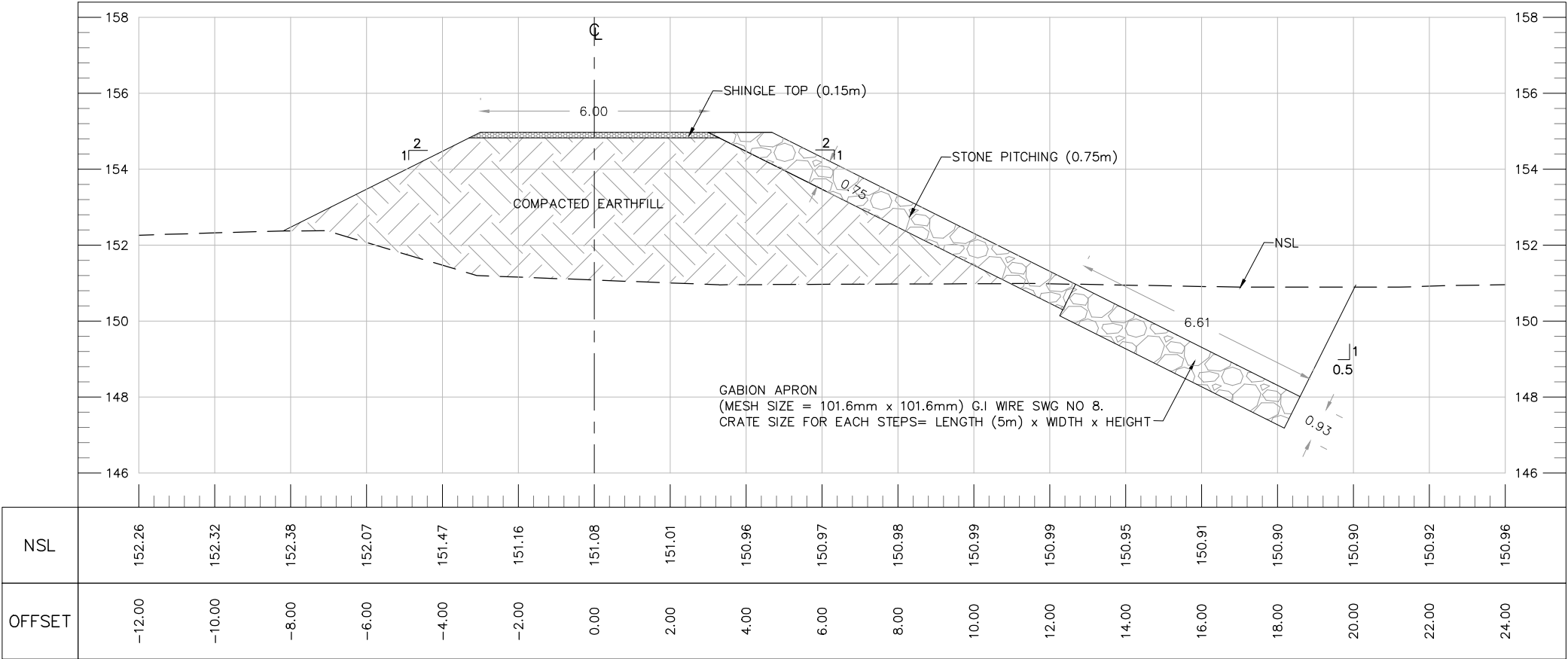
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DATE: AUG / 2025

SHEET:- 01 OF 01

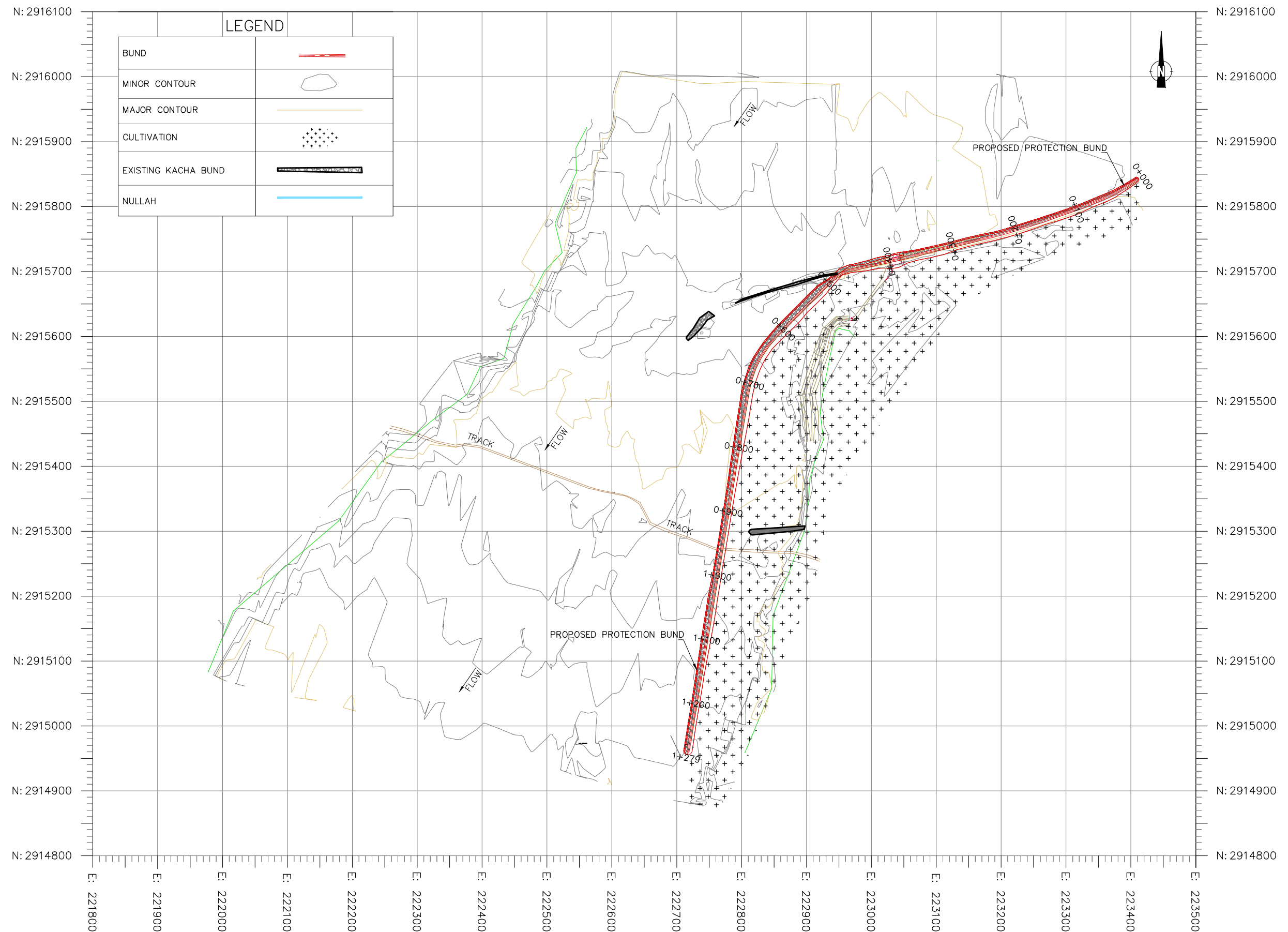


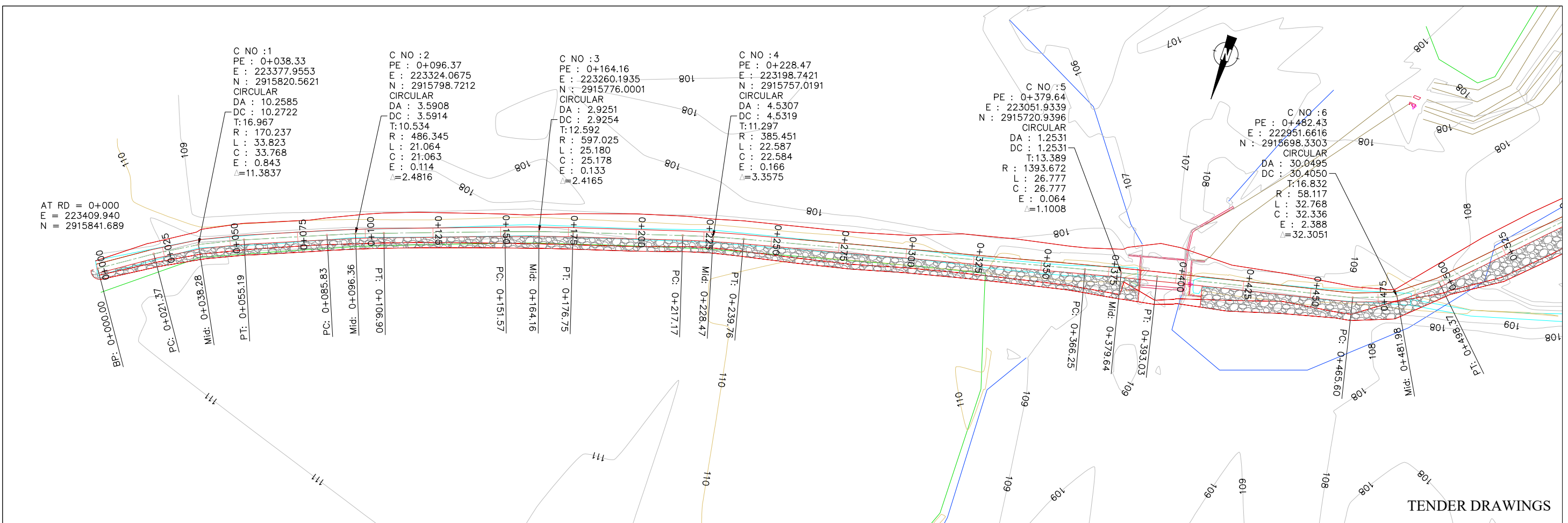
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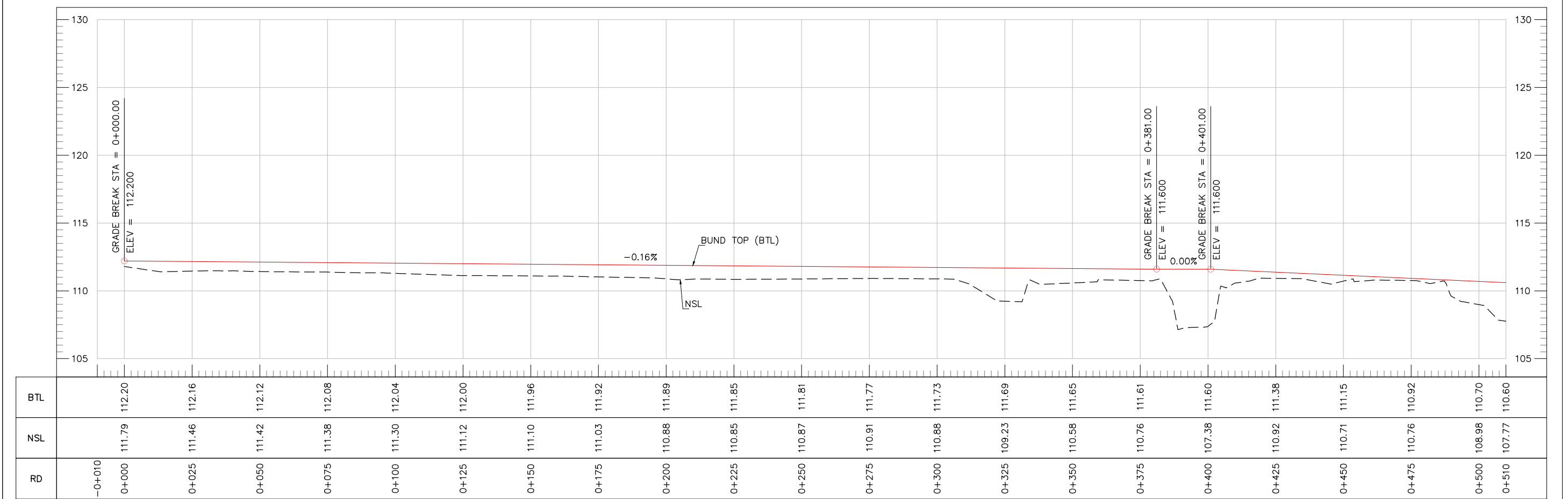
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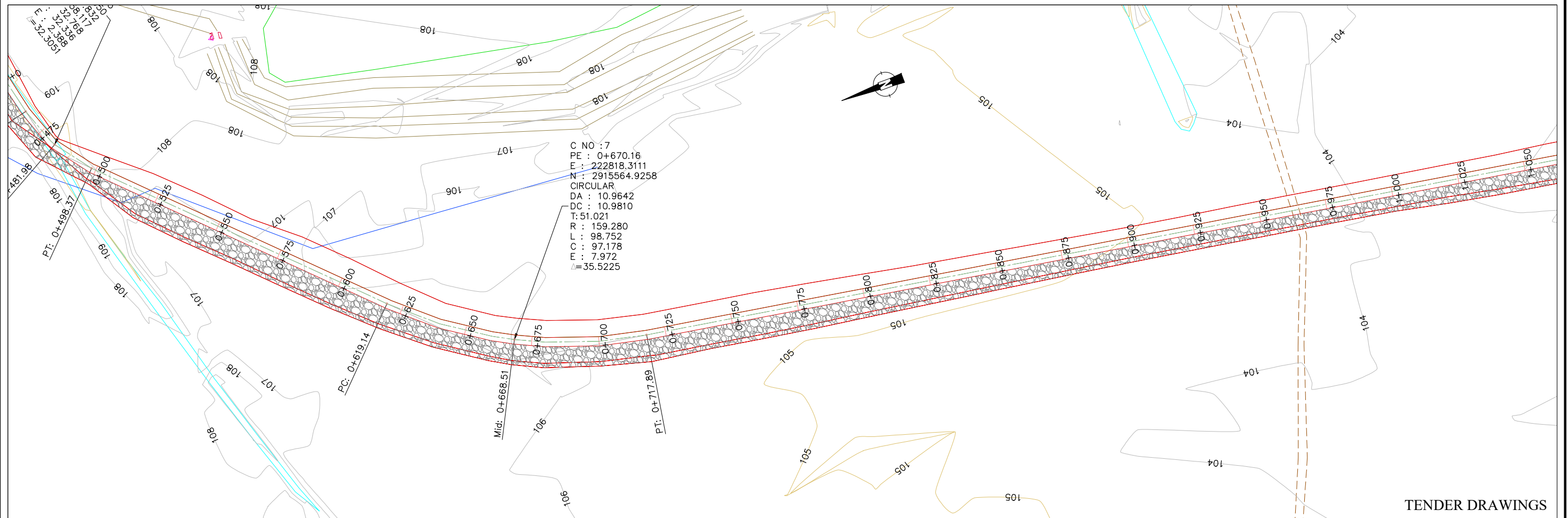
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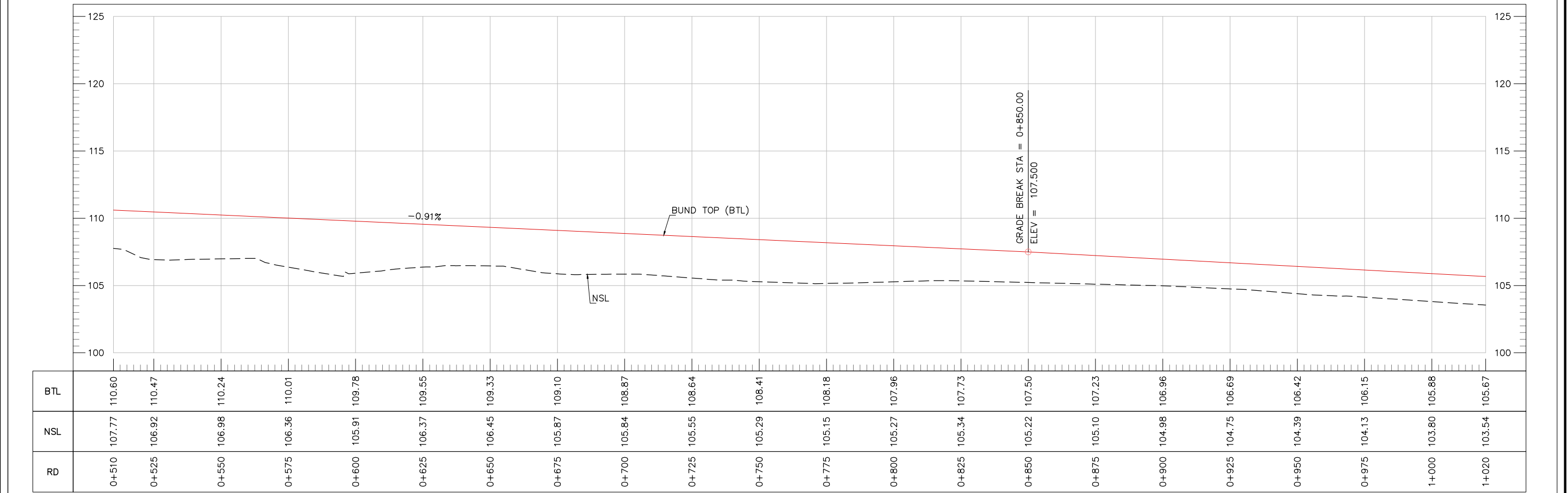


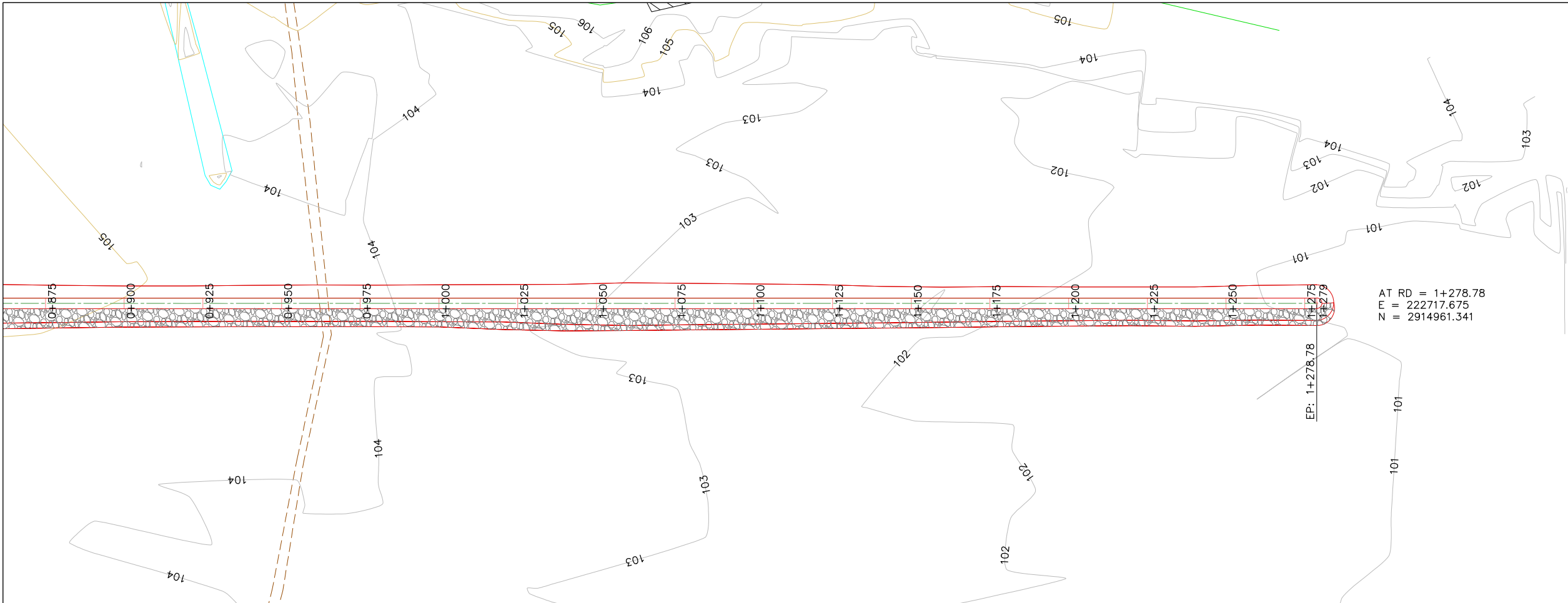
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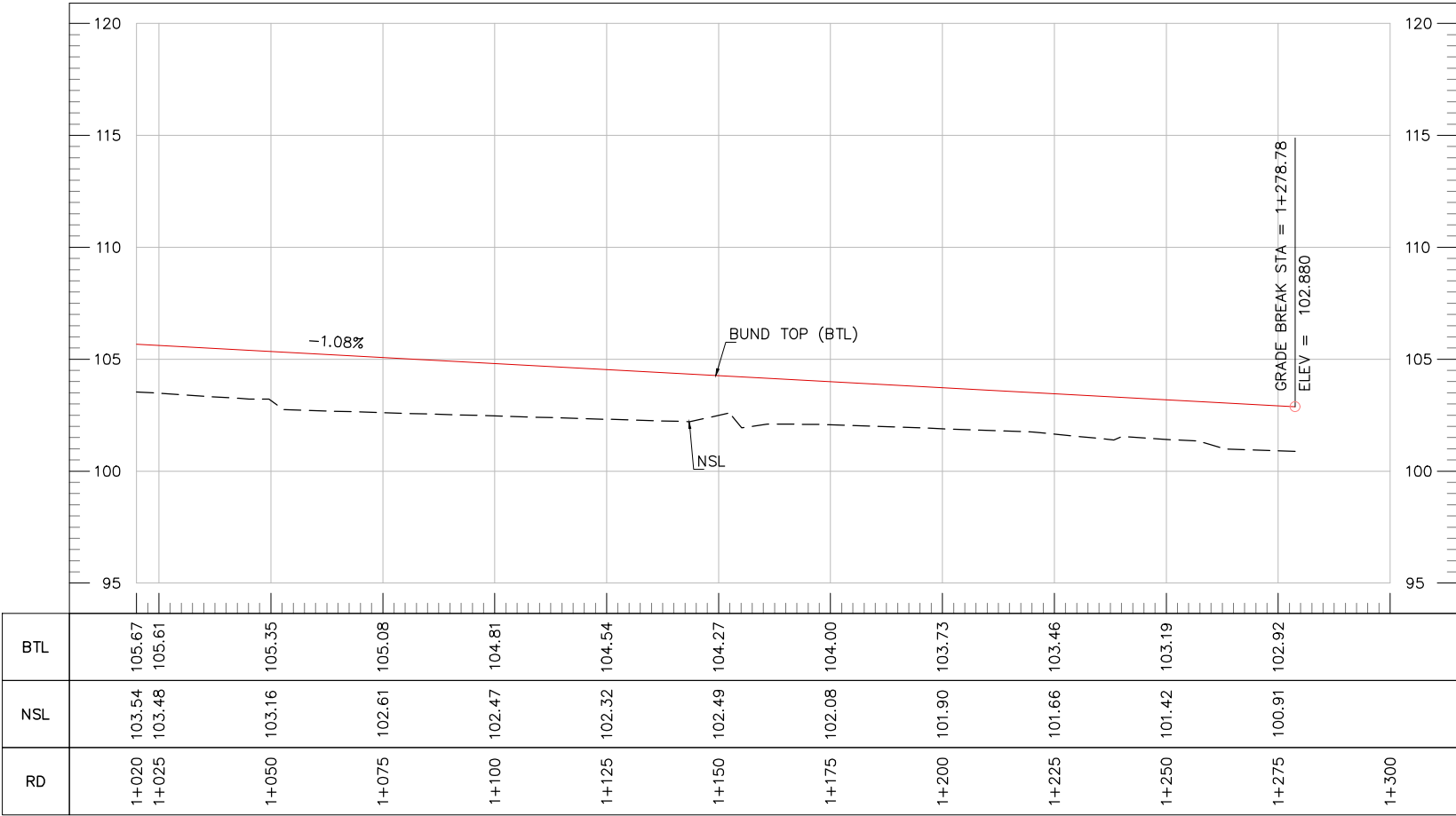


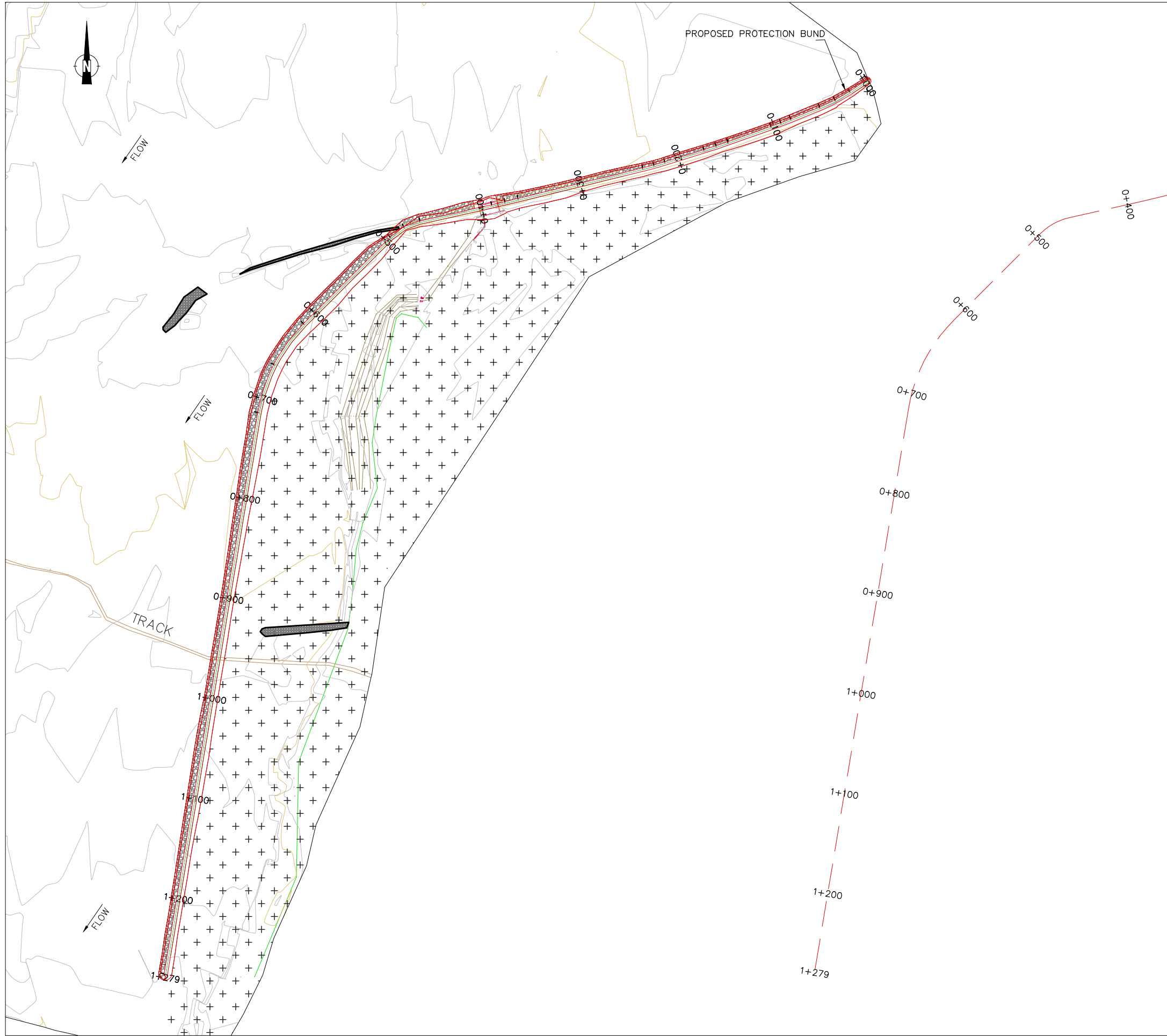
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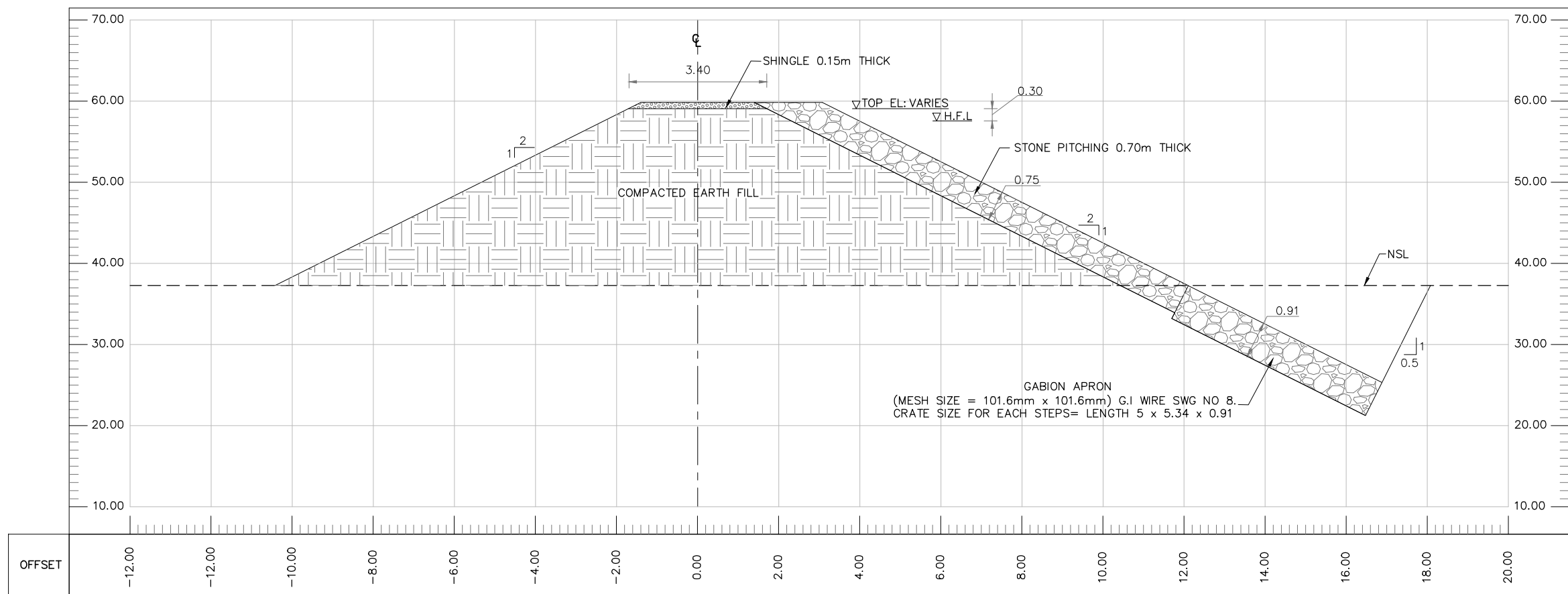


TENDER DRAWINGS





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0+38.28	223377.563	2915821.309	CURVE 1 MID
0+55.19	223362.230	2915814.189	CURVE 1 END
0+85.83	223333.830	2915802.678	CURVE 2 START
0+96.36	223324.027	2915798.828	CURVE 2 MID
0+106.90	223314.143	2915795.191	CURVE 2 END
0+151.57	223272.057	2915780.220	CURVE 3 START
0+164.16	223260.152	2915776.126	CURVE 3 MID
0+176.75	223248.163	2915772.284	CURVE 3 END
0+217.17	223209.536	2915760.353	CURVE 4 START
0+228.47	223198.698	2915757.179	CURVE 4 MID
0+239.76	223187.772	2915754.323	CURVE 4 END
0+366.25	223064.936	2915724.135	CURVE 5 START
0+379.64	223051.919	2915721.002	CURVE 5 MID
0+393.03	223038.873	2915717.995	CURVE 5 END
0+465.60	222968.082	2915702.033	CURVE 6 START
0+481.98	222952.814	2915696.238	CURVE 6 MID
0+498.37	222939.762	2915686.426	CURVE 6 END
0+619.14	222854.381	2915601.010	CURVE 7 START
0+668.51	222825.400	2915561.278	CURVE 7 MID
0+717.89	222809.920	2915514.600	CURVE 7 END
1+279.00	222717.675	2914961.341	END OF ALIGNMENT



TYPICAL CROSS SECTION

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:



CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

REHABILITATION OF FLOOD PROTECTION
BUND MOUZA DAAN GHARBI
DISTRICT LASBELLA

DRAWING TITLE:-

TYPICAL CROSS SECTION
OF DAAN GHARBI
FLOOD PROTECTION BUND

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: KISHWAR

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

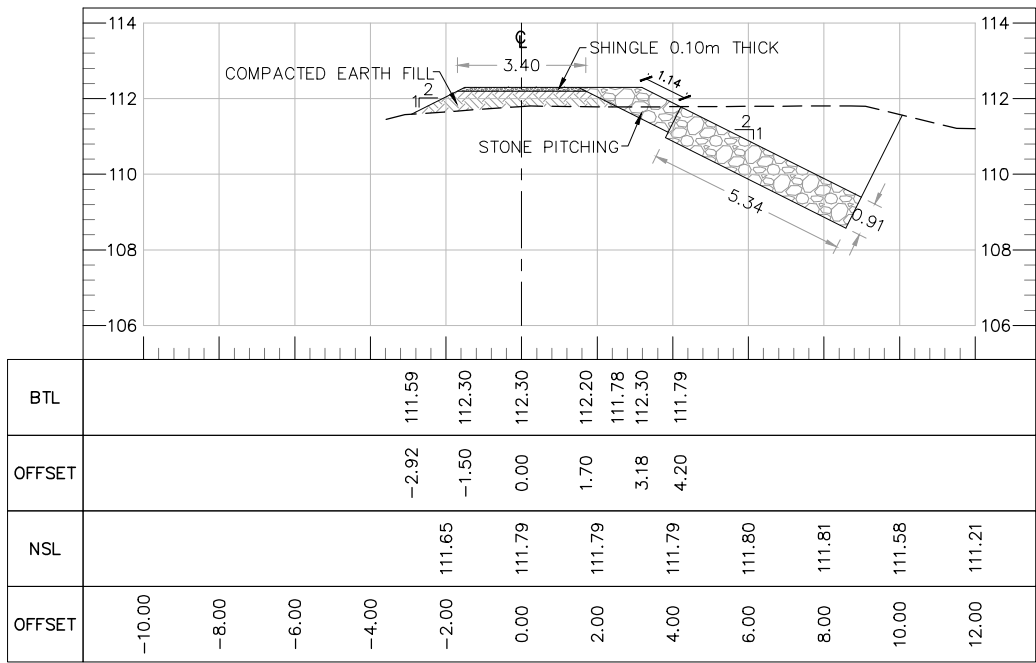
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DESIGNED BY: KAMRAN BABAR

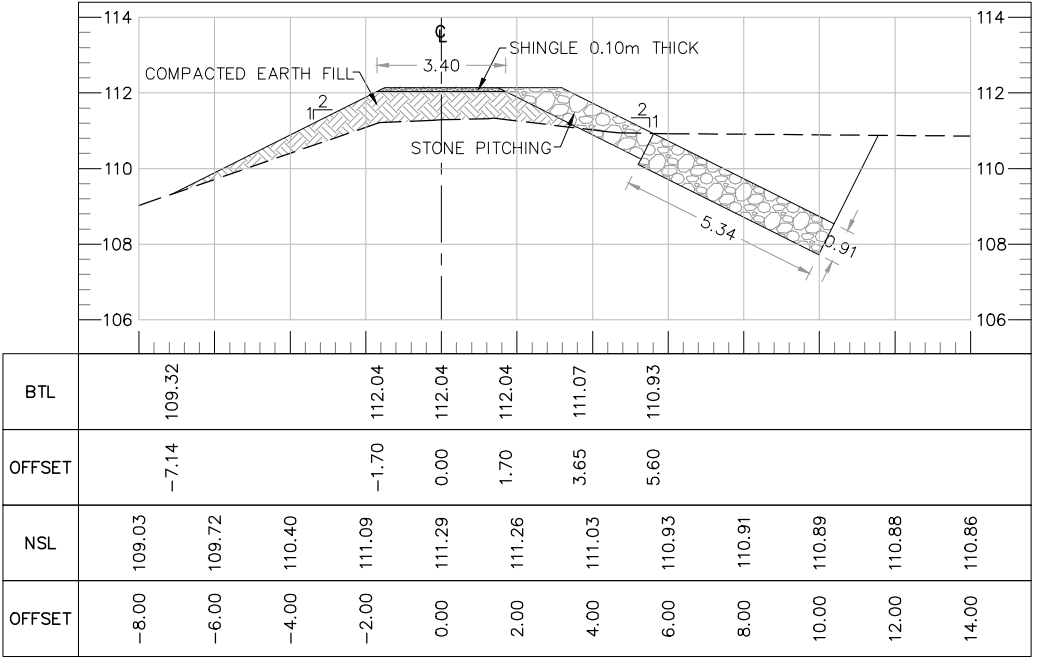
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DATE: SEP / 2025

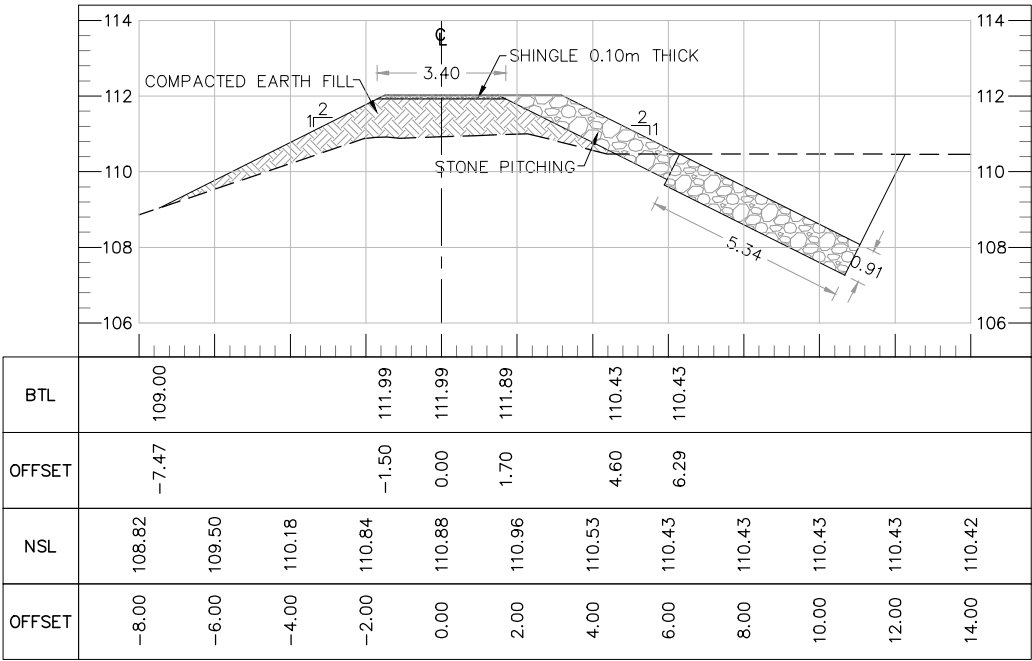
SHEET:- 01 OF 01



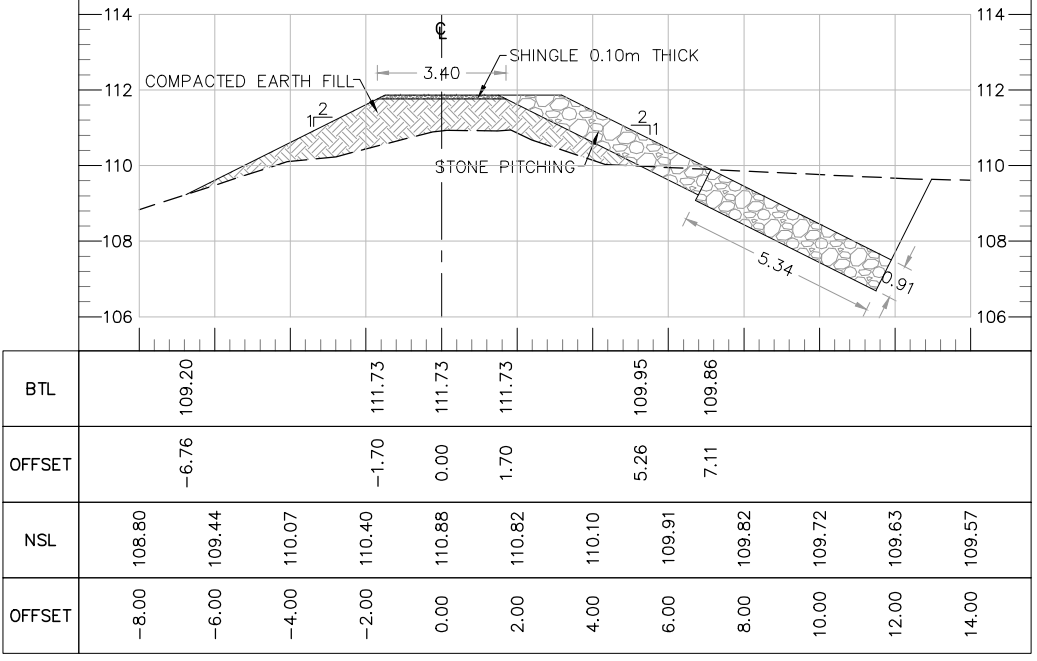
AT RD 0+000.00



AT RD 0+100.00



AT RD 0+200.00



AT RD 0+300.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

REHABILITATION OF FLOOD PROTECTION
BUND MOUZA DAAN GHARBI
DISTRICT LASBELLA

DRAWING TITLE:-

CROSS SECTIONS OF
FLOOD PROTECTION BUND

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY:

KISHWAR

DESIGNED BY: KAMRAN BABAR

CHECKED BY: ZIA-UL-HAQ

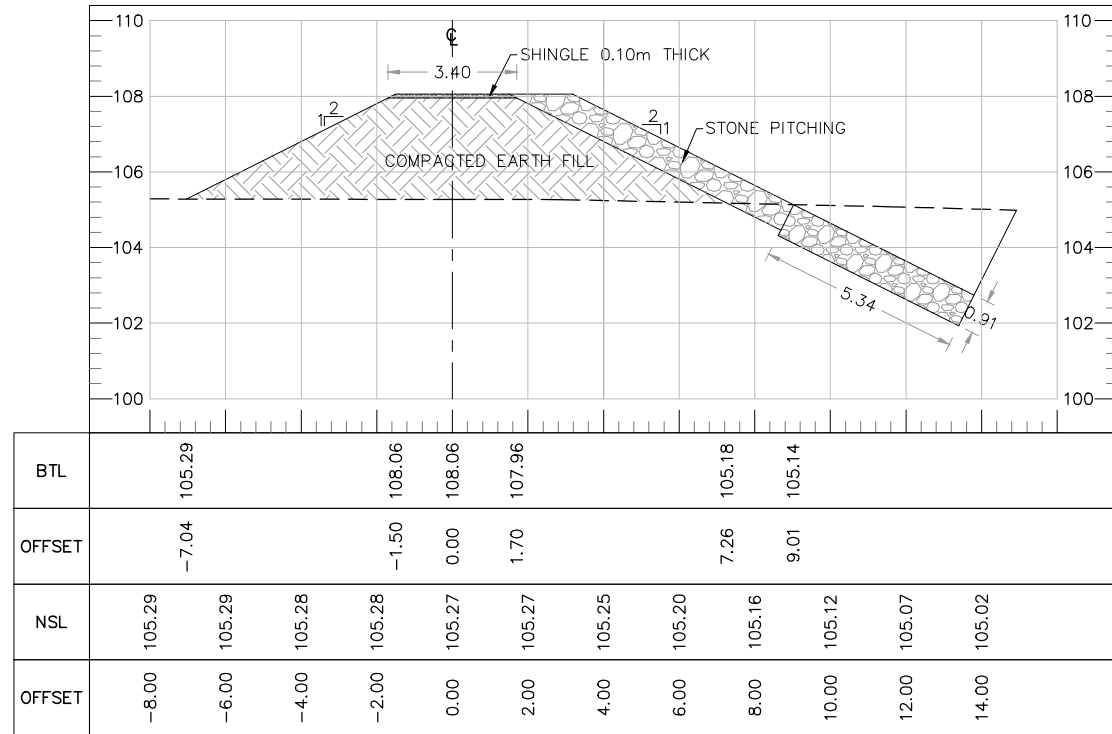
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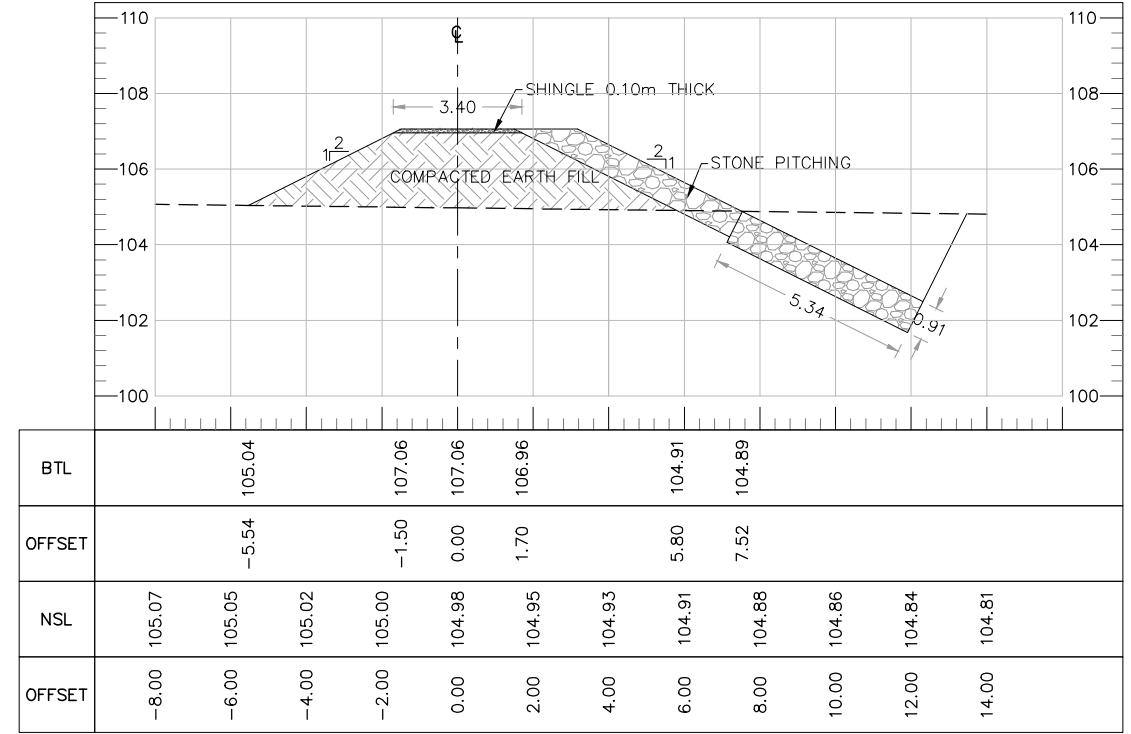
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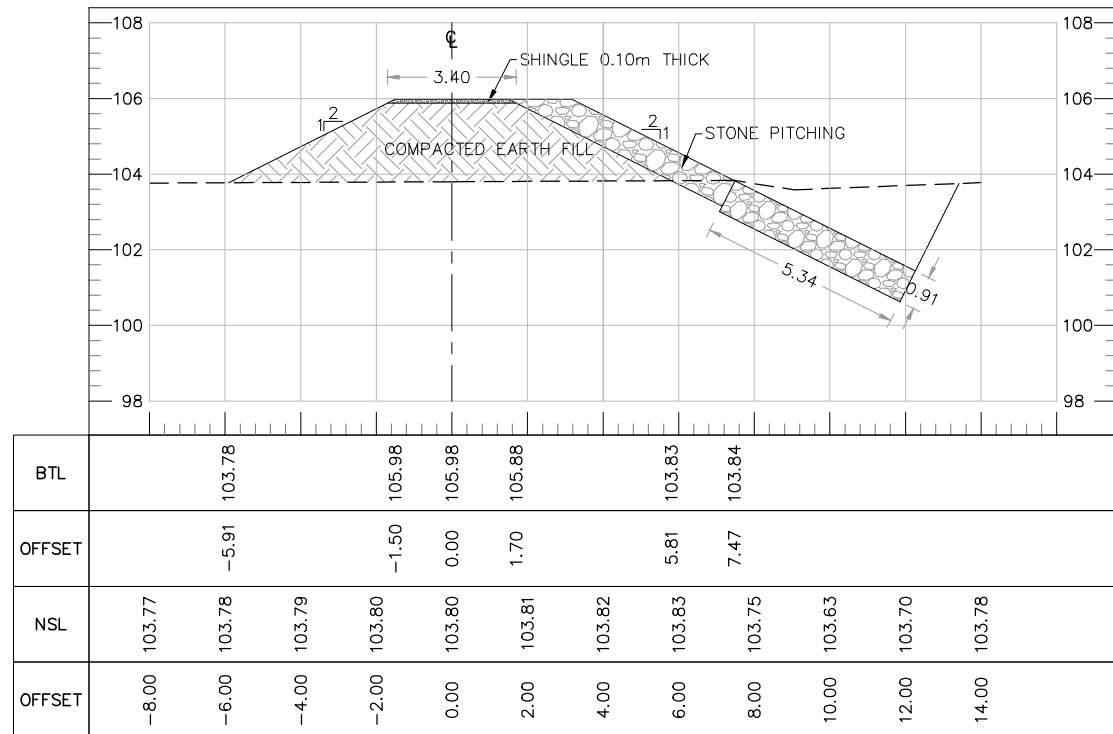
SHEET:- 01 OF 01



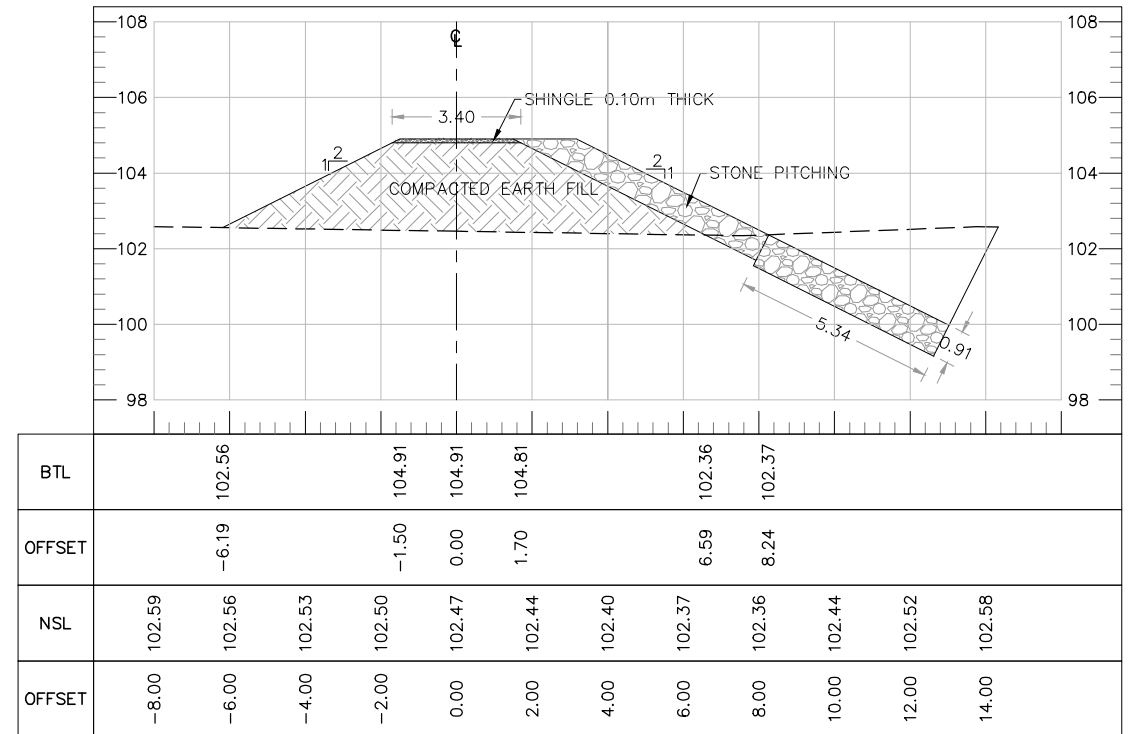
AT RD 0+800.00



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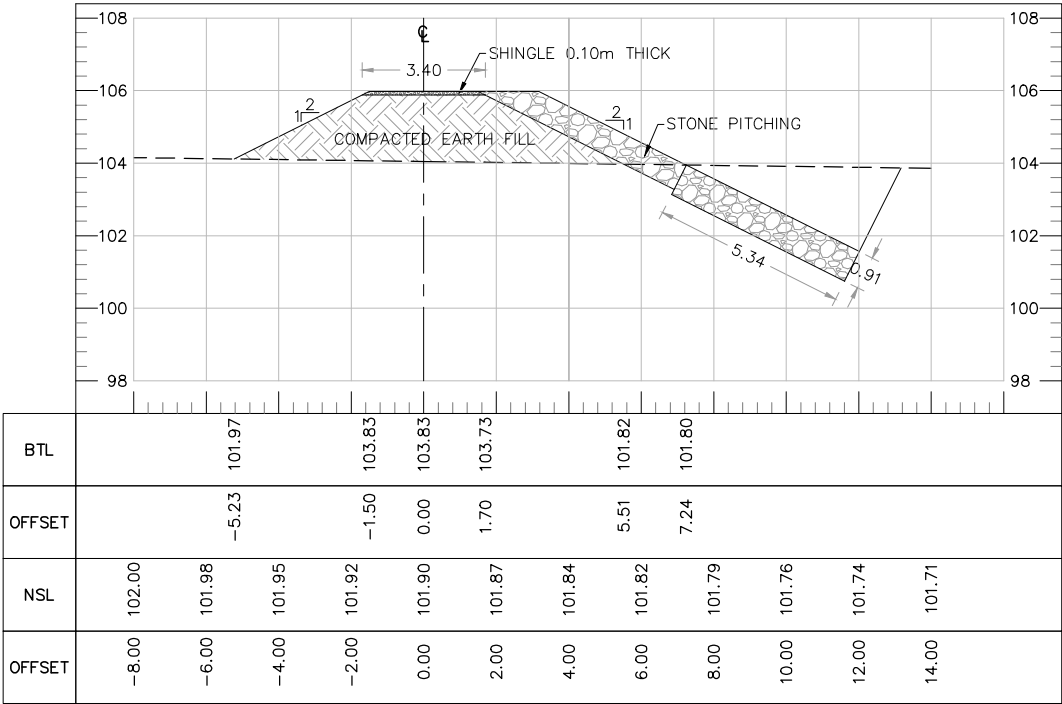


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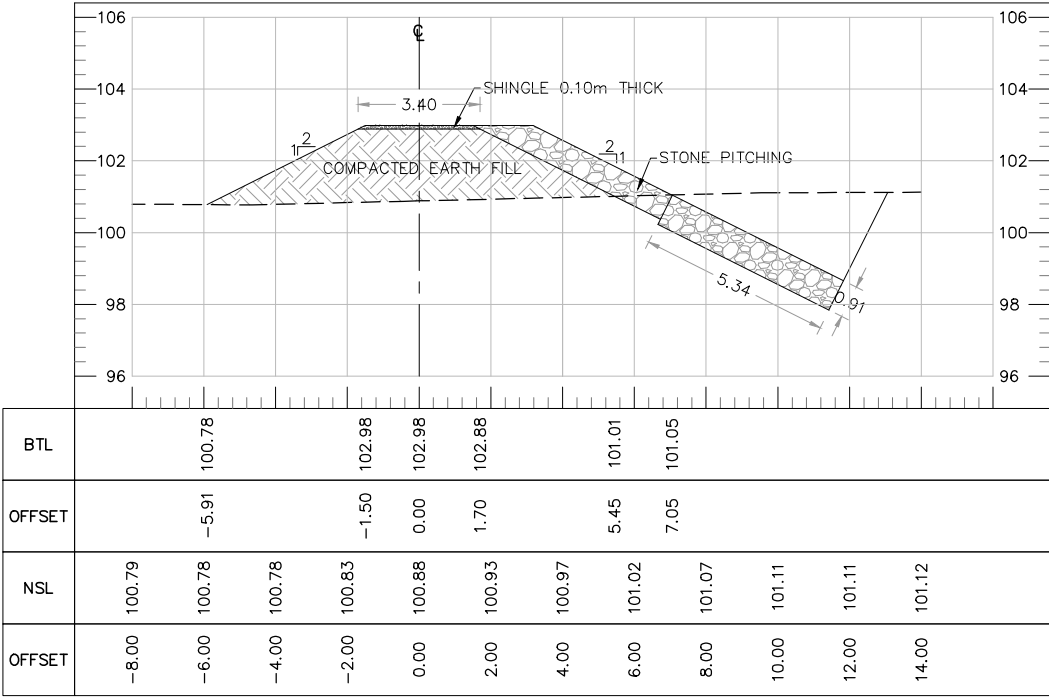


AT RD 1+100.00

TENDER DRAWINGS



AT RD 1+200.00



AT RD 1+278.78

TENDER DRAWINGS

RESTORATION OF FLOOD PROTECTION EMBANKMENT
U/S OF NURG HINGRI WEIR (SHURLI & FAIZO BUND)
DRAWING INDEX

S.No.	Drawing No.	Description
		GENERAL
01	IFRAP-P02/FAS-01	LOCATION AREA MAP
02	IFRAP-P02/FAS-02	CATCHMENT AREA MAP
		FAIZO & SHURLI FLOOD PROTECTION
03	IFRAP-P02/FAS-01	LAYOUT PLAN OF FAIZO & SHURLI SHEET (01 OF 01)
04	IFRAP-P02/FAS-02	SETTING OUT PLAN OF FAIZO & SHURLI SHEET (01 OF 01)
		FAIZO FLOOD PROTECTION
05	IFRAP-P02/FAS-03	PLAN AND PROFILE OF FAIZO PROTECTION BUND
06	IFRAP-P02/FAS-04	TYPICAL CROSS SECTION OF FAIZO PROTECTION BUND
07	IFRAP-P02/FAS-05	CROSS SECTION OF FAIZO BUND AT RD 0+000 TO 0+300
08	IFRAP-P02/FAS-06	CROSS SECTION OF FAIZO BUND AT RD 0+400 TO 0+600
		SHURLI FLOOD PROTECTION
09	IFRAP-P02/FAS-07	PLAN AND PROFILE OF SHURLI PROTECTION BUND
10	IFRAP-P02/FAS-08	TYPICAL CROSS SECTION OF SHURLI PROTECTION BUND
11	IFRAP-P02/FAS-09	CROSS SECTION OF SHURLI BUND AT RD 0+000 TO 0+300
12	IFRAP-P02/FAS-10	CROSS SECTION OF SHURLI BUND AT RD 0+400 TO 0+588

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

**INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT**

SCHEME NAME:

RESTORATION OF FLOOD PROTECTION
EMBANKMENT U/S OF NURG HINGRI
WEIR (SHURLI & FAIZO BUND)

DRAWING TITLE:-

DRAWING INDEX

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

DRAWING NO: IFRAP-P03/DFP-000

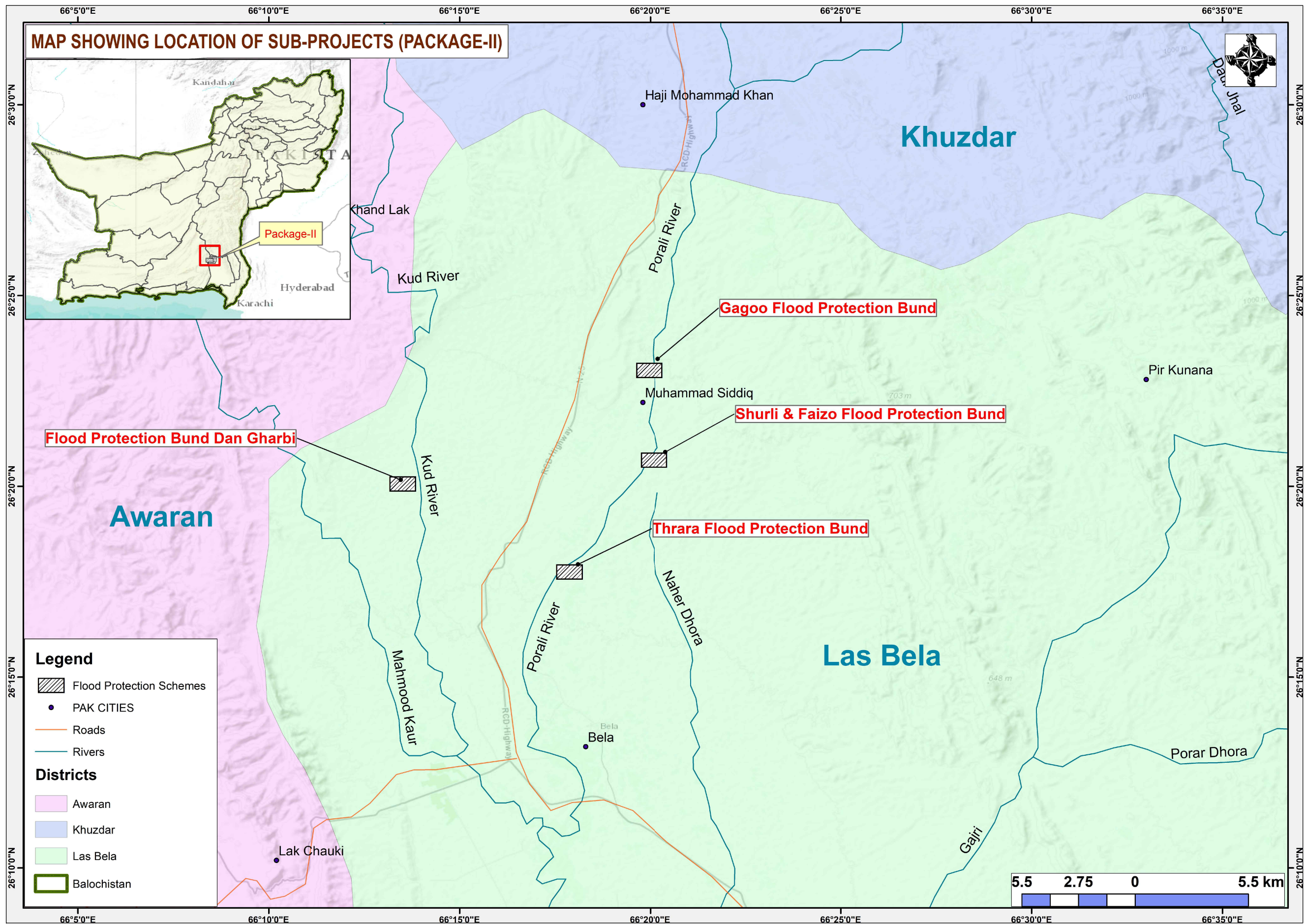
DESIGNED BY: KAMRAN BABAR

SCALE: N.T.S

DATE: SEP / 2025

SHEET:- 01 OF 01

ABBREVIATIONS	
C NO	CURVE NUMBER
PE	POINT OF ENTRY (CHAINAGE OF START OF CURVE)
E	EASTING COORDINATE OF CURVE POINT
N	NORTHING COORDINATE OF CURVE POINT
PC	POINT OF CURVATURE (START OF CURVE WHERE STRAIGHT ALIGNMENT END) IT IS ALSO KNOWN AS BC BEGINNING OF CURVE
PT	PT (POINT OF TANGENCY) END OF CURVE WHERE THE CURVE ENDS AND STRAIGHT PORTION START AGAIN IT IS ALSO KNOWN AS EC END OF CURVE
DA	DEFLECTION ANGLE (INITIAL DEFLECTION FROM TANGENT)
DC	DEFLECTION CHANGE (INCREMENTAL DEFLECTION, OFTEN PER CHORD)
T	TANGENT LENGTH DISTANCE FROM PI (POINT OF INTERSECTION) TO PC OR PT
R	RADIUS RADIUS OF THE CIRCULAR CURVE
L	LENGTH OF CURVE ARC LENGTH OF THE CIRCULAR CURVE
C	LONG CHORD LENGTH STRAIGHT-LINE DISTANCE FROM PC TO PT
E	EXTERNAL DISTANCE DISTANCE FROM PI TO MID-POINT OF CURVE
Δ (Delta)	CENTRAL / INTERSECTION ANGLE TOTAL ANGLE SUBTENDED BY THE CURVE AT THE CENTER
	RELATIONSHIP (FOR UNDERSTANDING) $L = (\pi \times R \times \Delta) / 180$ $T = R \times \tan(\Delta / 2)$ $E = R [\sec(\Delta/2) - 1]$ $C = 2R \sin(\Delta/2)$



TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
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PROJECT TITLE:

**INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT**

SCHEME NAME:

**RESTORATION OF FLOOD PROTECTION
EMBANKMENT U/S OF NURG HINGRI
WEIR (SHURLI & FAIZO BUND)**

DRAWING TITLE:-

**LOCATION MAP
OF PACKAGE-II, SCHEMES**

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

DESIGNED BY: KAMRAN BABAR

CHECKED BY: ZIA-UL-HAQ

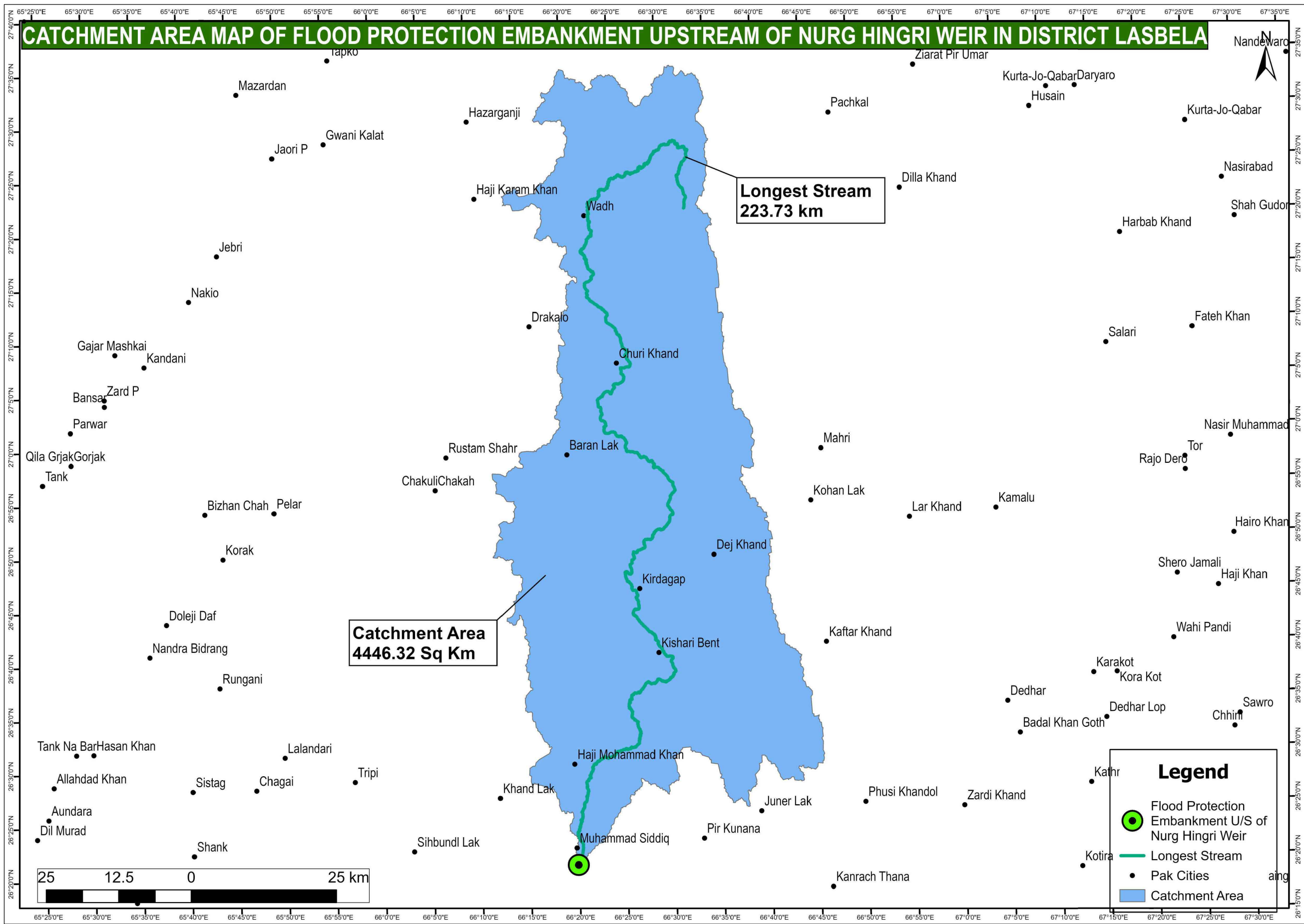
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DATE: SEP / 2025

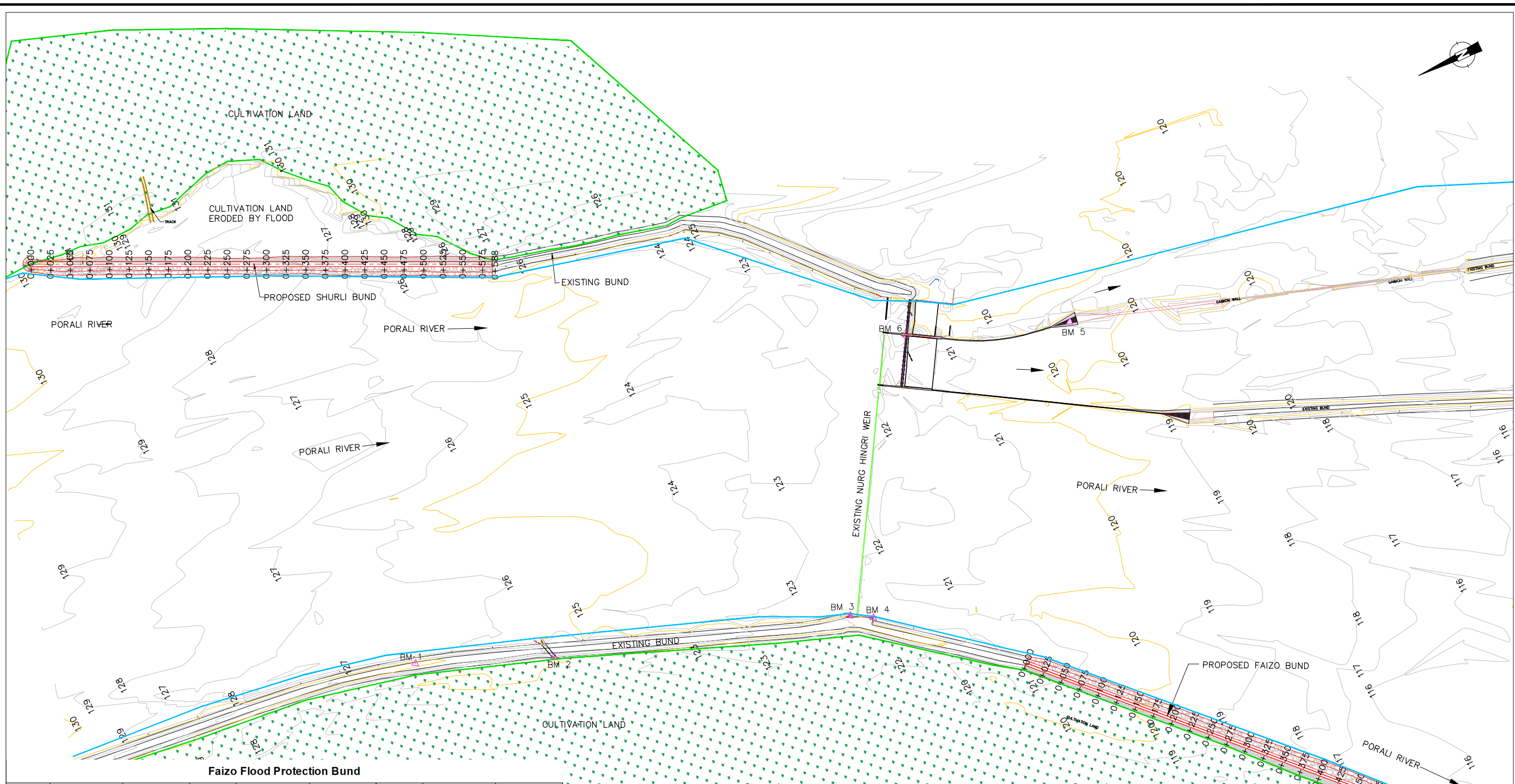
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SHEET:- 01 OF 01



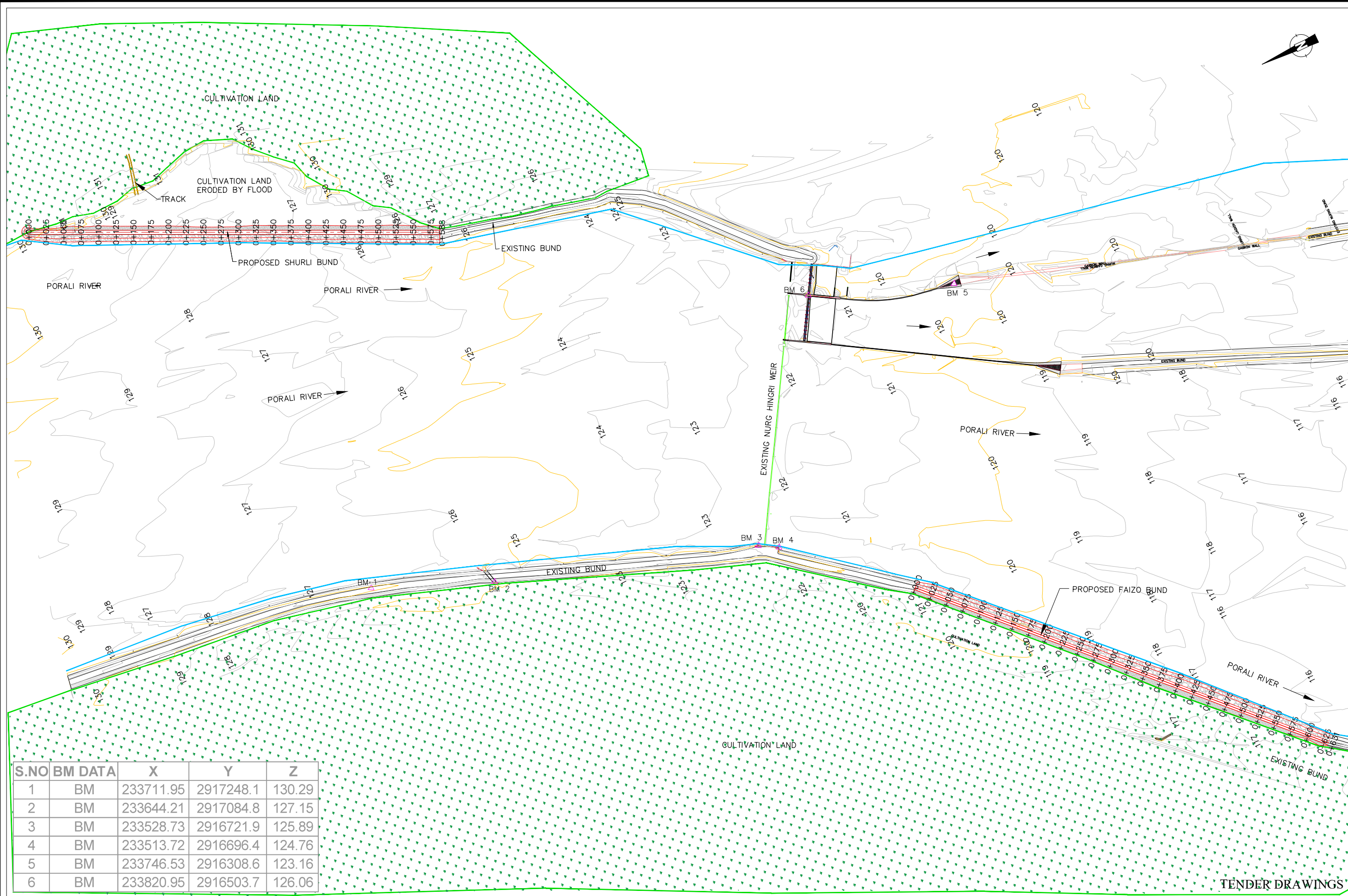
TENDER DRAWINGS

CLIENT:  IRRIGATION DEPARTMENT GOVERNMENT OF BALOCHISTAN	CONSULTANTS:  CAMEOS CONSULTANTS CONSULTING ENGINEERS ARCHITECTS & PLANNERS. PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD. H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.	PROJECT TITLE: INTEGRATED FLOOD RESILIENCE AND ADAPTATION PROJECT	SCHEME NAME: RESTORATION OF FLOOD PROTECTION EMBANKMENT U/S OF NURG HINGRI WEIR (SHURLI & FAIZO BUND)	DRAWING TITLE:- CATCHMENT MAP SHOOLI & FAIZO FPS	NOTES: ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.	DRAWN BY: IMRAN ULLAH CHECKED BY: ZIA-UL-HAQ FILE PATH: G:/IFRAP DRAWING NO: IFRAP-P02/DGP-01	DESIGNED BY: KAMRAN BABAR SCALE: N.T.S DATE: SEP / 2025 SHEET:- 01 OF 01
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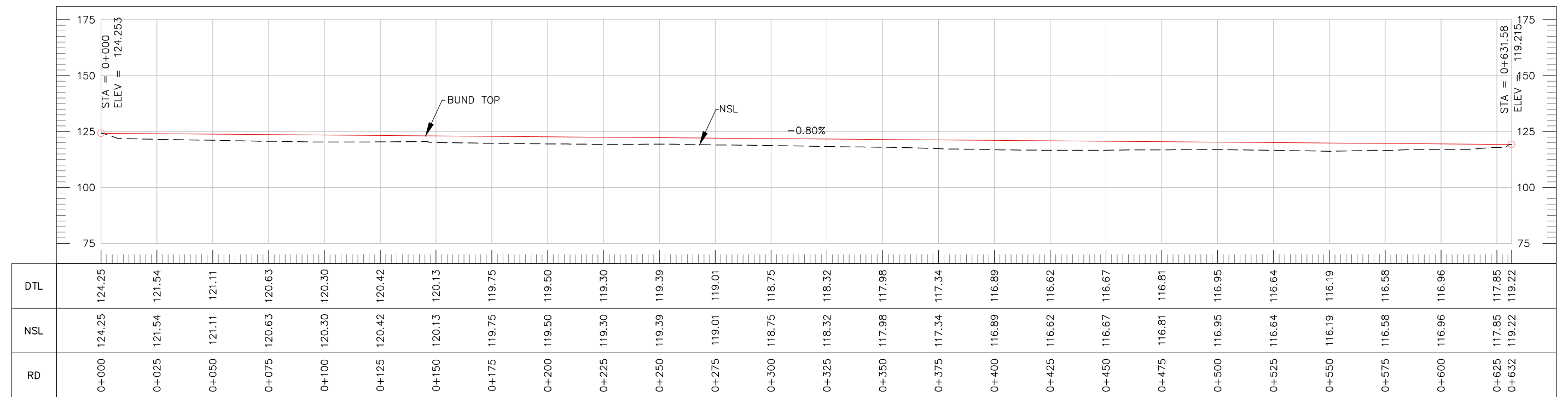
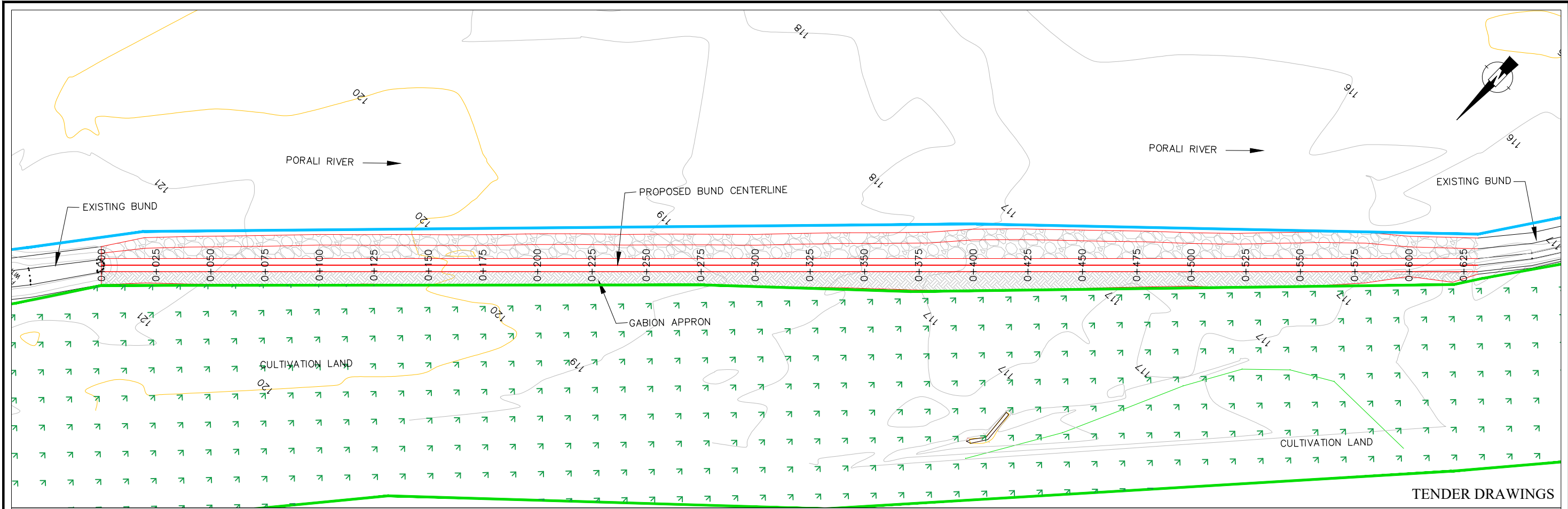
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Station	Northing (m)	Easting (m)	Station	Northing (m)	Easting (m)	Station	Northing (m)	Easting (m)
0+000	2916545.54	233378.2996	0+225	2916389.34	233216.3533	0+450	2916233.14	233054.407
0+025	2916528.184	233360.3055	0+250	2916371.984	233198.3593	0+475	2916215.784	233036.413
0+050	2916510.828	233342.3115	0+275	2916354.629	233180.3652	0+500	2916198.429	233018.419
0+075	2916493.473	233324.3175	0+300	2916337.273	233162.3712	0+525	2916181.073	233000.4249
0+100	2916476.117	233306.3235	0+325	2916319.917	233144.3772	0+550	2916163.718	232982.4309
0+125	2916458.762	233288.3294	0+350	2916302.562	233126.3831	0+575	2916146.362	232964.4369
0+150	2916441.406	233270.3354	0+375	2916285.206	233108.3891	0+600	2916129.006	232946.4428
0+175	2916424.051	233252.3414	0+400	2916267.851	233090.3951	0+625	2916111.651	232928.4488
0+200	2916406.695	233234.3473	0+425	2916250.495	233072.401	0+631.58	2916107.083	232923.7128

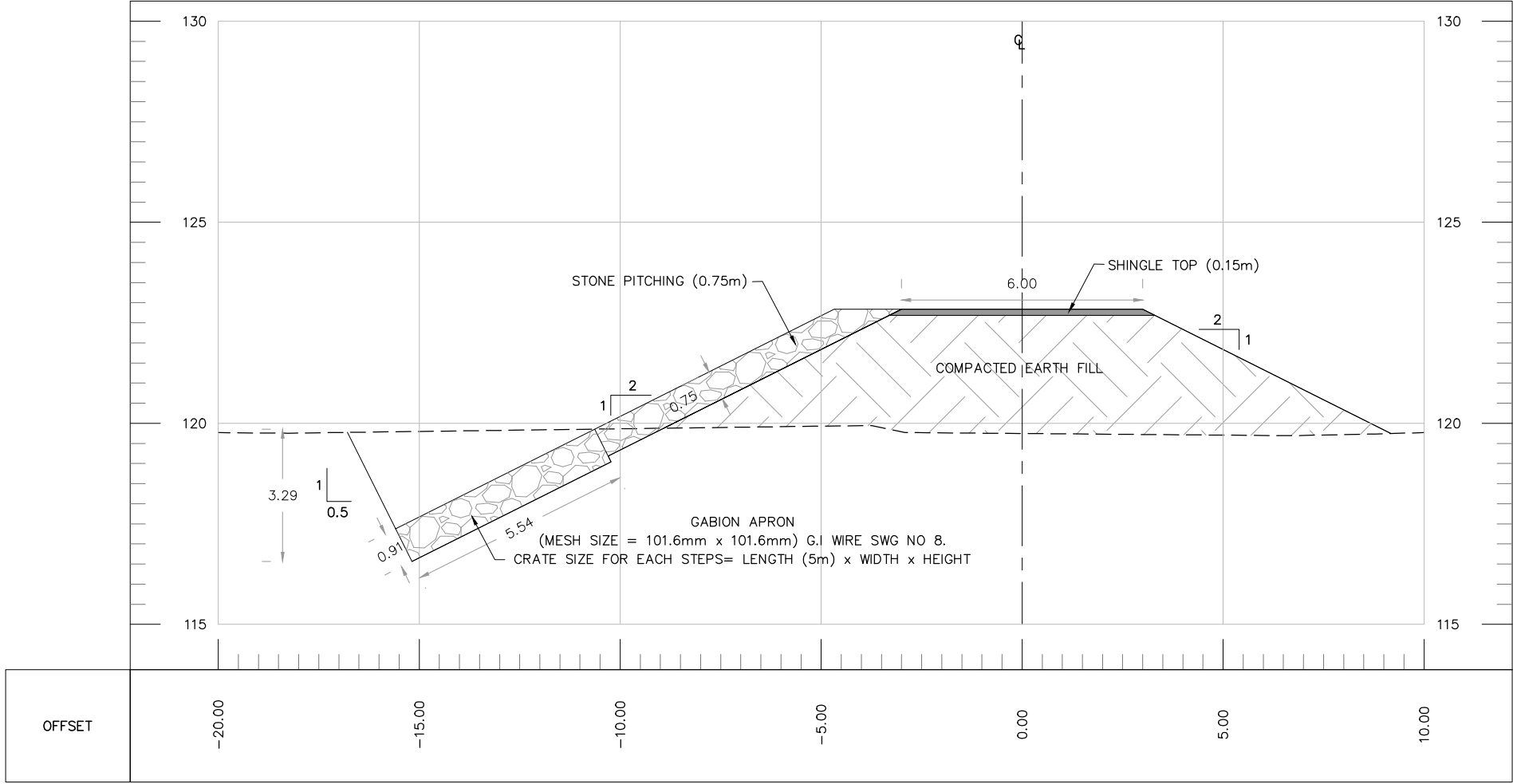
Shooli Flood Protection Bund								
Station	Northing (m)	Easting (m)	Station	Northing (m)	Easting (m)	Station	Northing (m)	Easting (m)
0+000	2917471.863	234381.605	0+225	2917268.698	234284.914	0+425	2917088.108	234198.966
0+025	2917449.289	234370.862	0+250	2917246.125	234274.17	0+450	2917065.534	234188.222
0+050	2917426.715	234360.118	0+275	2917223.551	234263.427	0+475	2917042.96	234177.479
0+075	2917404.141	234349.375	0+300	2917200.977	234252.683	0+500	2917020.386	234166.735
0+100	2917381.568	234338.631	0+325	2917178.403	234241.94	0+525	2916997.813	234155.992
0+125	2917358.994	234327.888	0+350	2917155.829	234231.196	0+550	2916975.239	234145.248
0+150	2917336.42	234317.144	0+375	2917133.255	234220.453	0+575	2916952.665	234134.505
0+175	2917313.846	234306.401	0+400	2917110.682	234209.709	0+588	2916940.927	234128.918
0+200	2917291.272	234295.657						



S.NO	BM DATA	X	Y	Z
1	BM	233711.95	2917248.1	130.29
2	BM	233644.21	2917084.8	127.15
3	BM	233528.73	2916721.9	125.89
4	BM	233513.72	2916696.4	124.76
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TENDER DRAWINGS

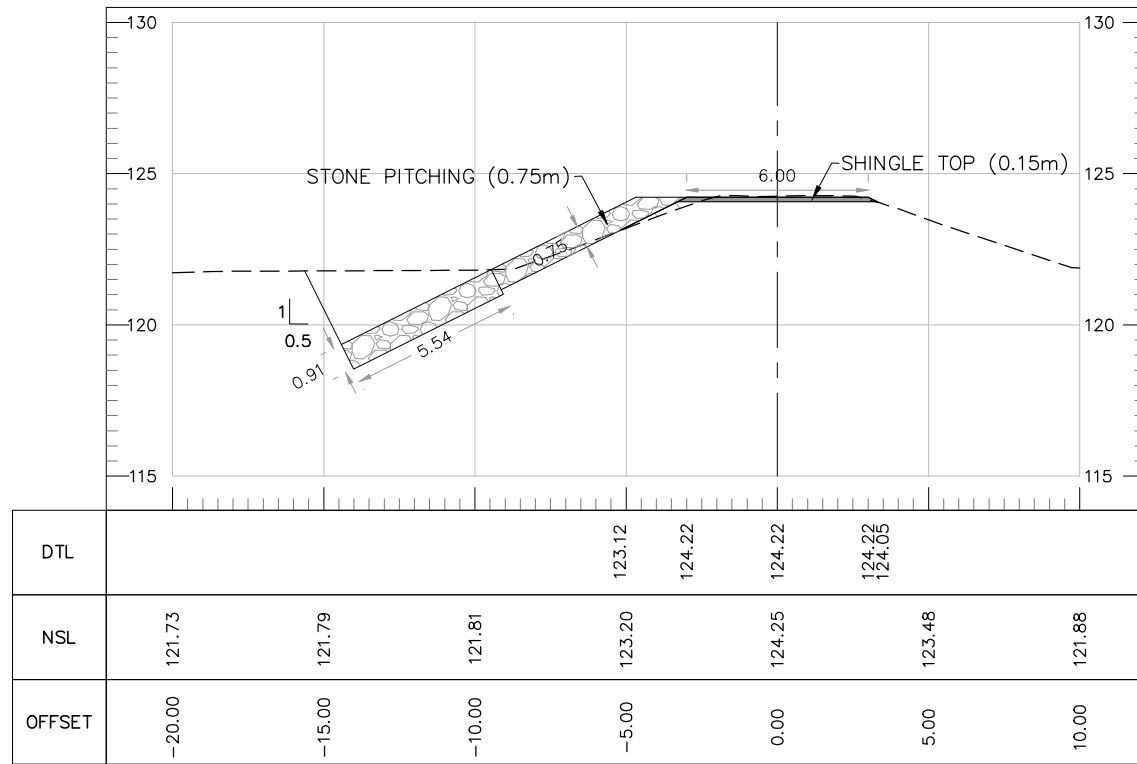




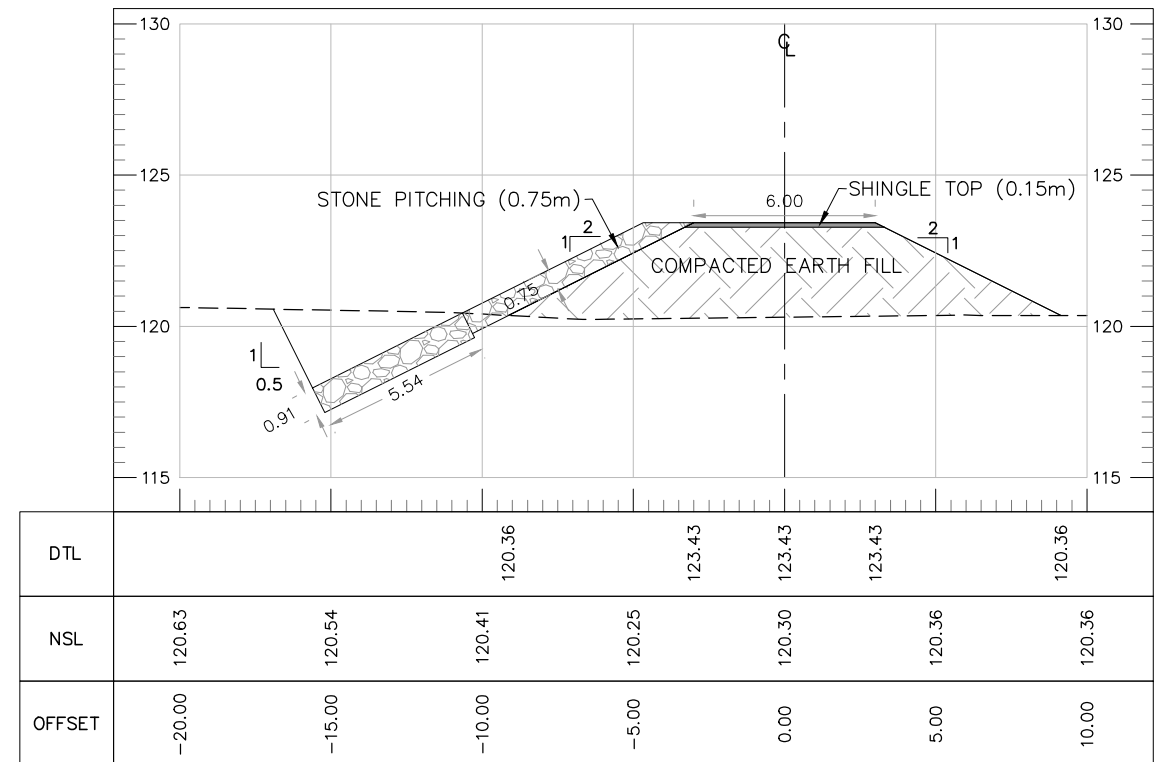
TYPICAL CROSS SECTION

TENDER DRAWINGS

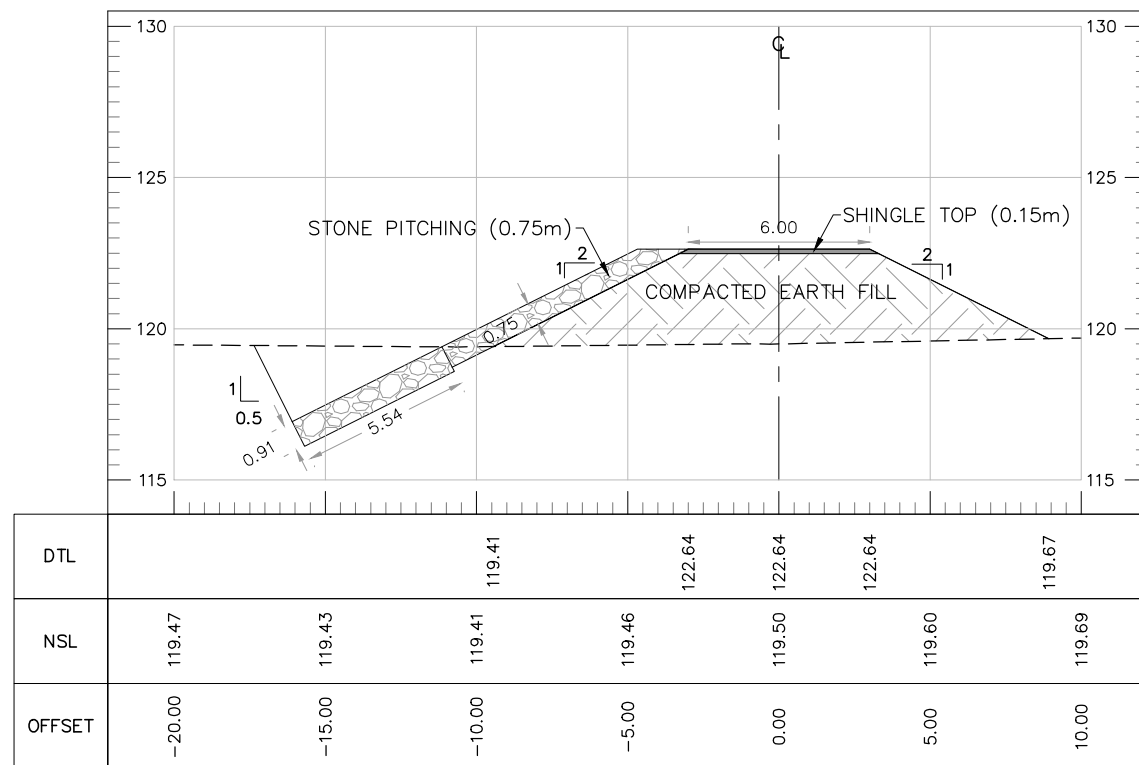
CLIENT:  IRRIGATION DEPARTMENT GOVERNMENT OF BALOCHISTAN	CONSULTANTS: CAMEOS CONSULTANTS CONSULTING ENGINEERS ARCHITECTS & PLANNERS. PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD. H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.	PROJECT TITLE: INTEGRATED FLOOD RESILIENCE AND ADAPTATION PROJECT	SCHEME NAME: RESTORATION OF FLOOD PROTECTION EMBANKMENT U/S OF NURG HINGRI WEIR (SHURLI & FAIZO BUND)	DRAWING TITLE:- TYPICAL CROSS SECTIONS OF FAIZO BUND	NOTES: ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.	DRAWN BY: IMRAN ULLAH CHECKED BY: ZIA-UL-HAQ FILE PATH: G:/IFRAP DRAWING NO: IFRAP-P02/FAS-04	DESIGNED BY: KAMRAN BABAR SCALE: 1:150 DATE: AUG / 2025 SHEET:- 01 OF 01
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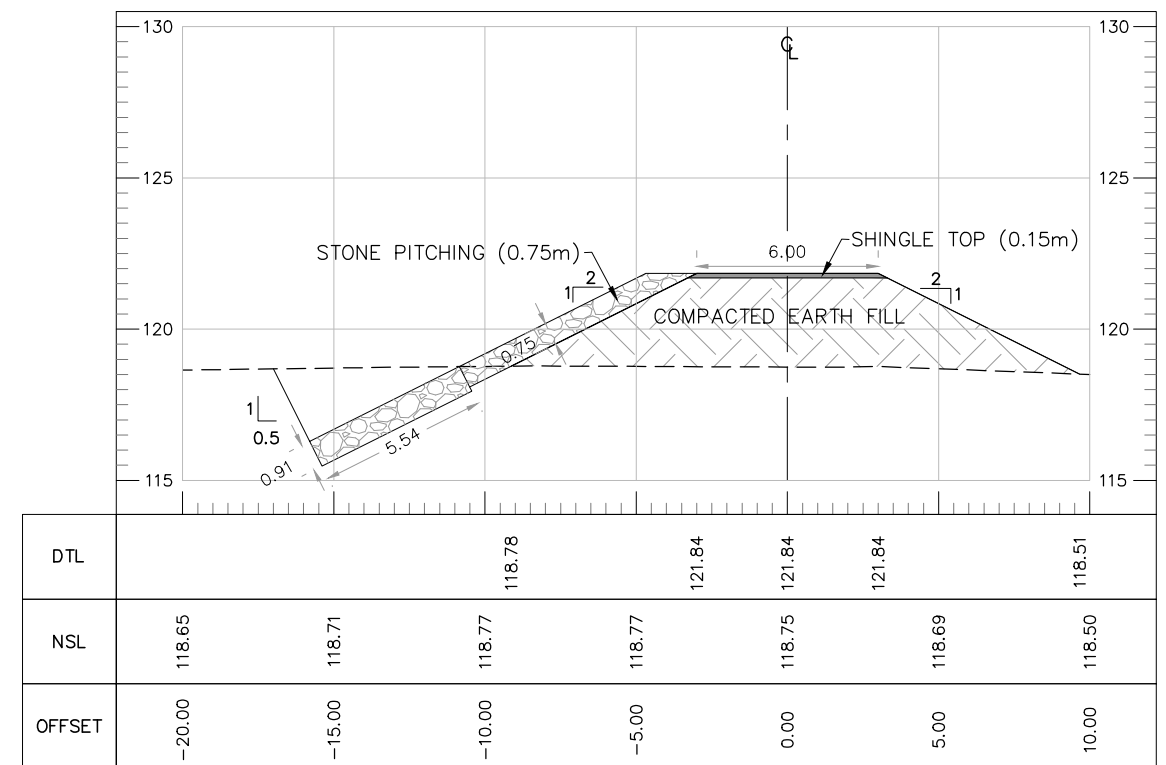
AT RD 0+000.00



AT RD 0+100.00



AT RD 0+200.00

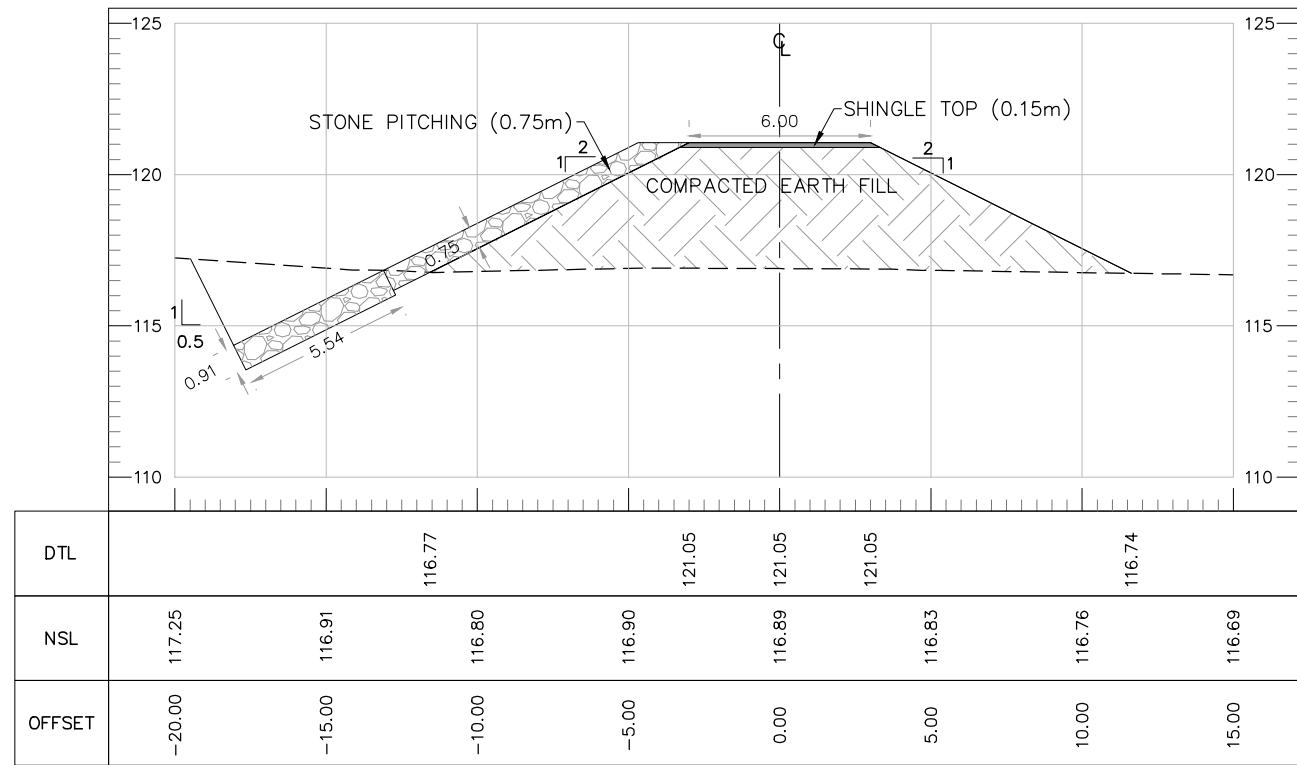


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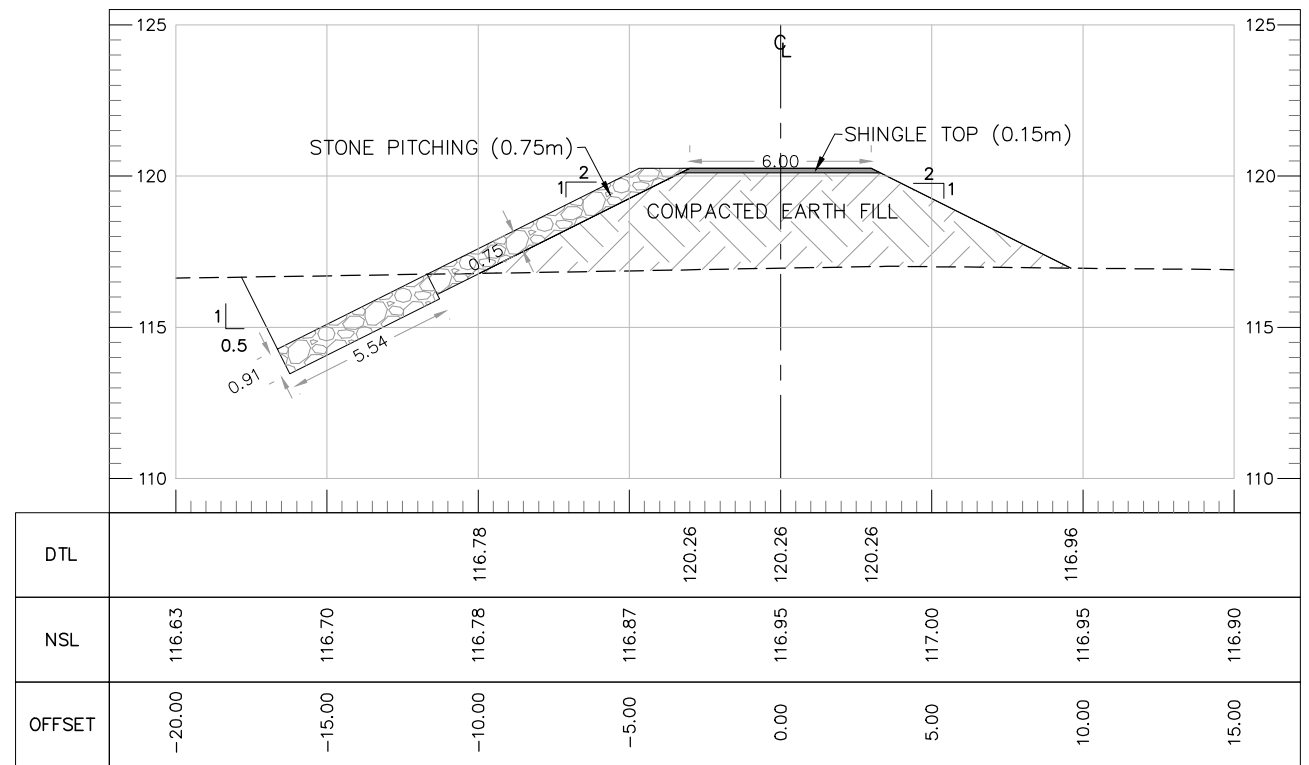
TENDER DRAWINGS

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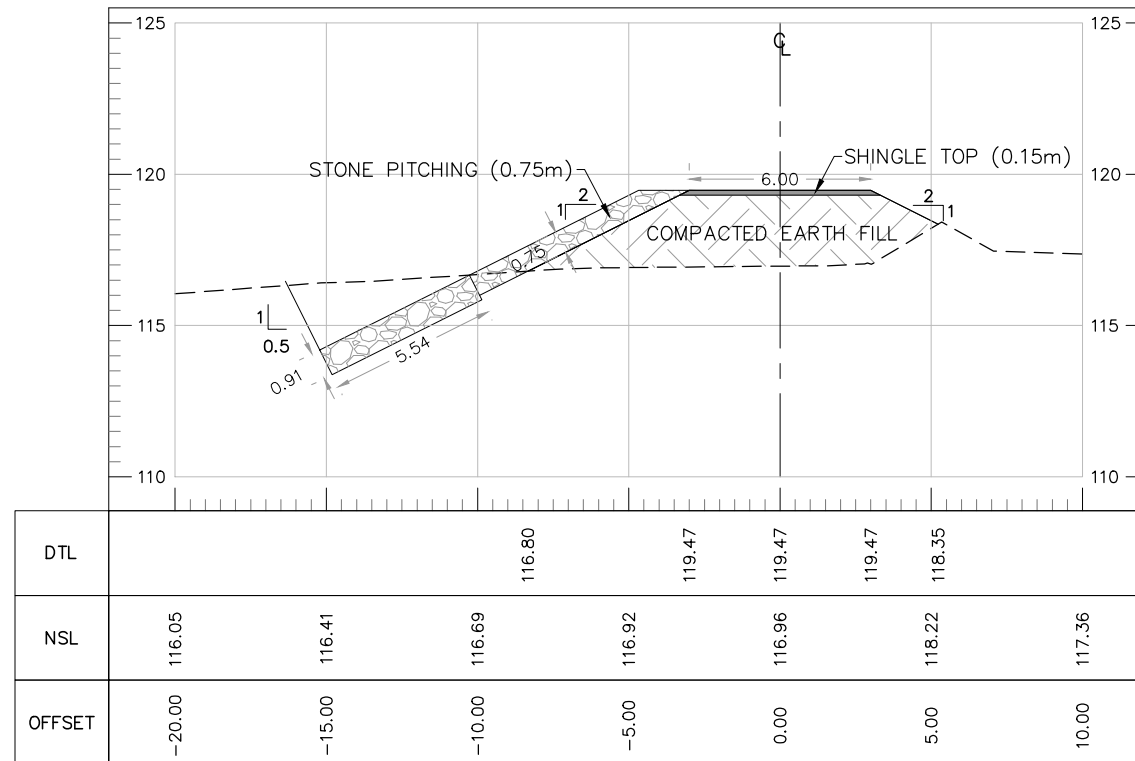
ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.



AT RD 0+400.00

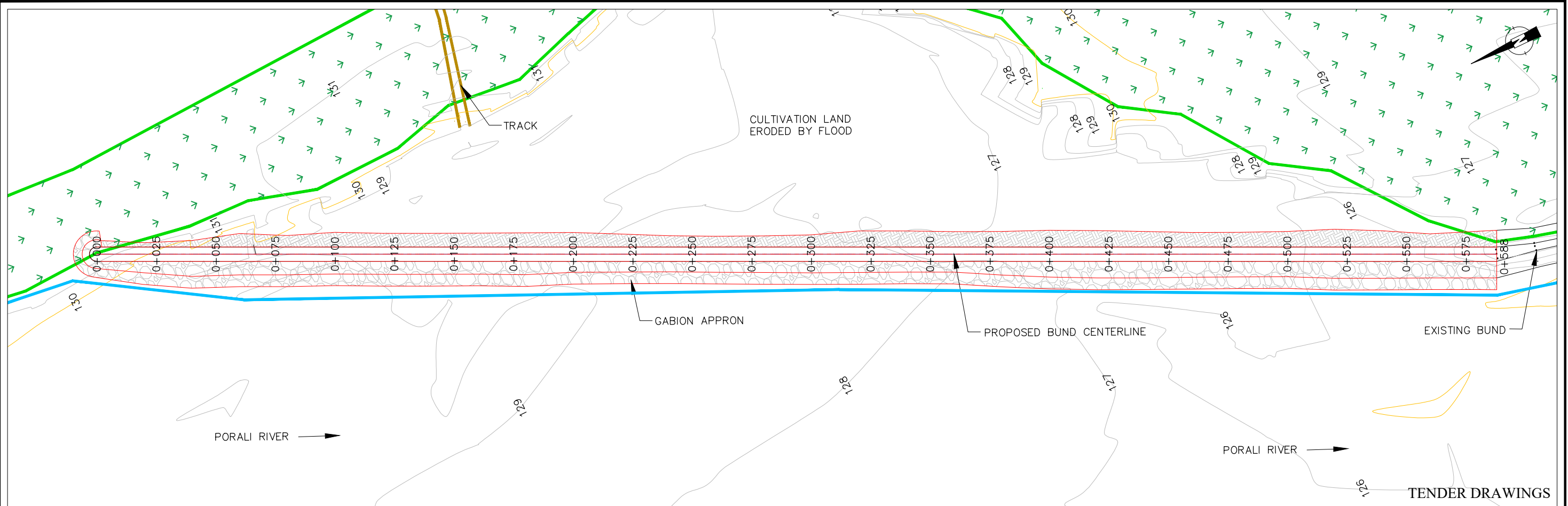


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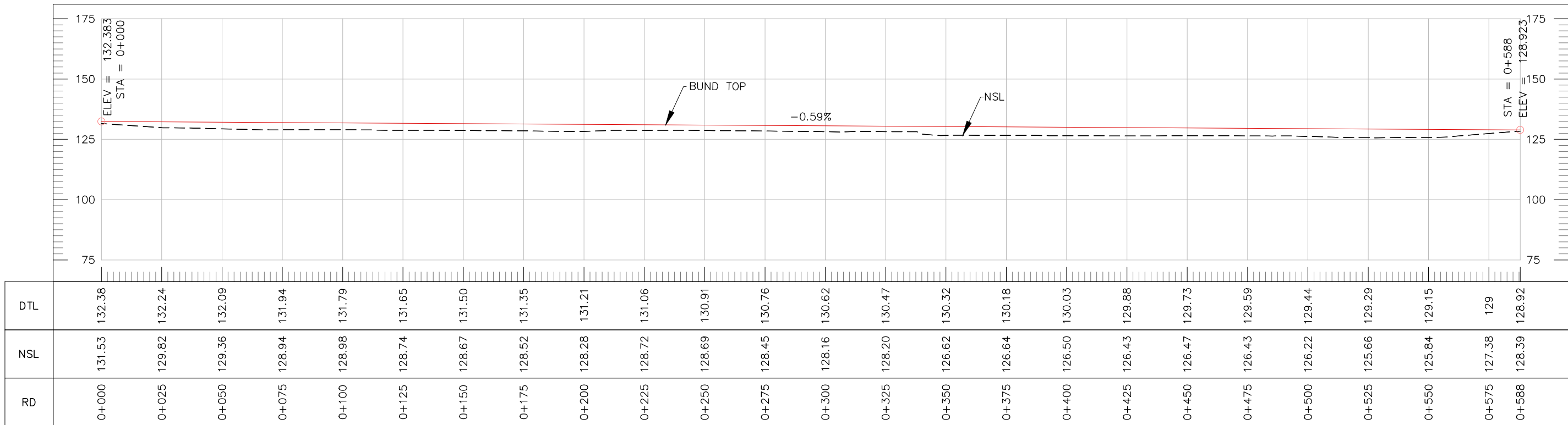


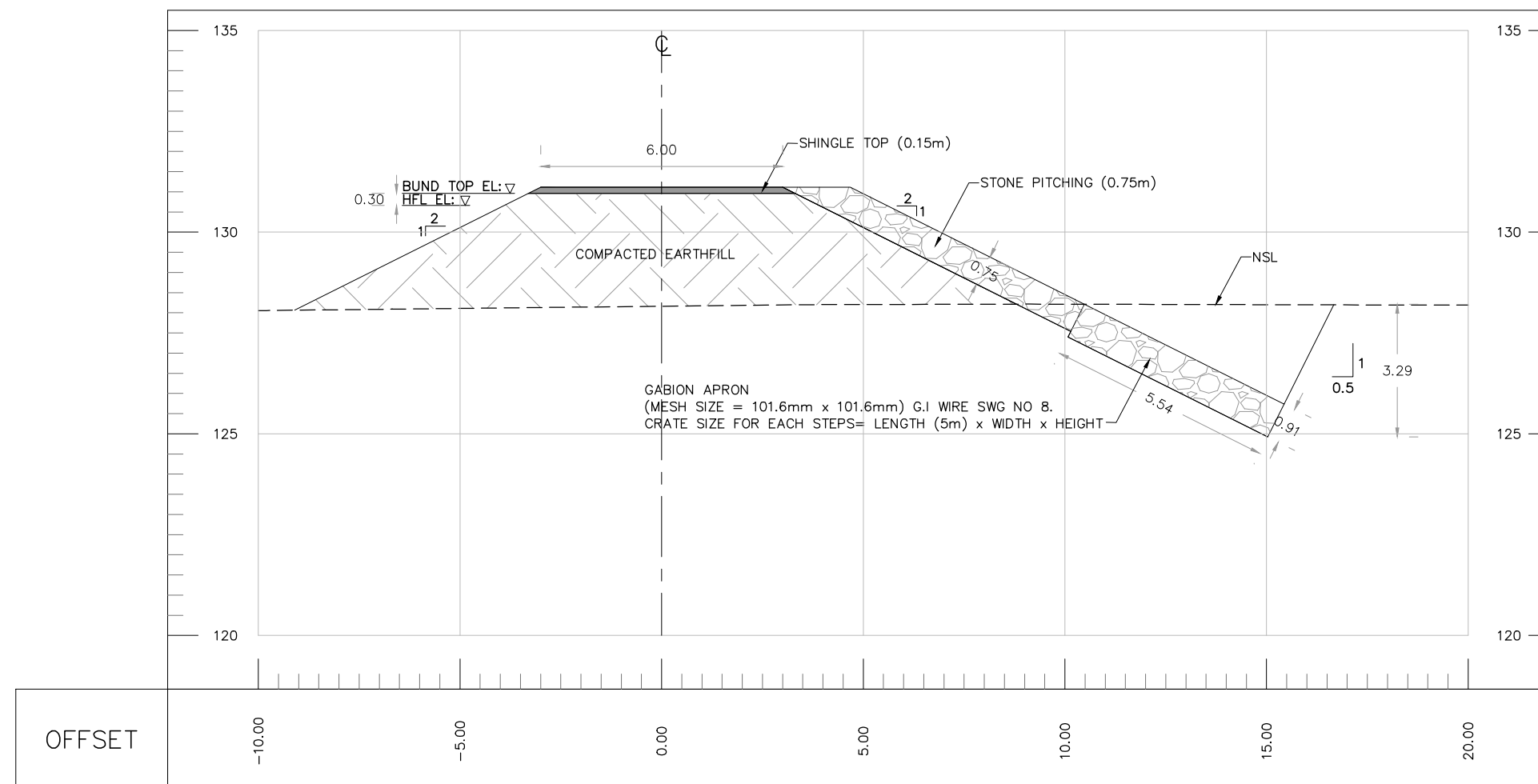
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TENDER DRAWINGS

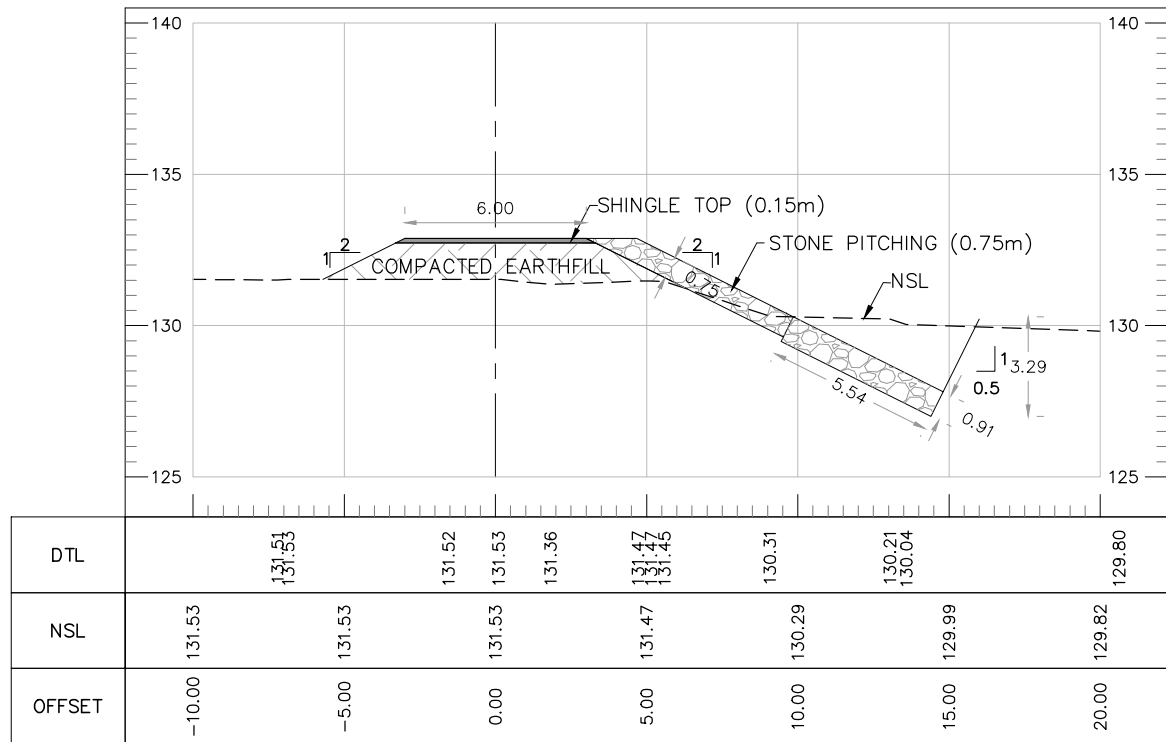


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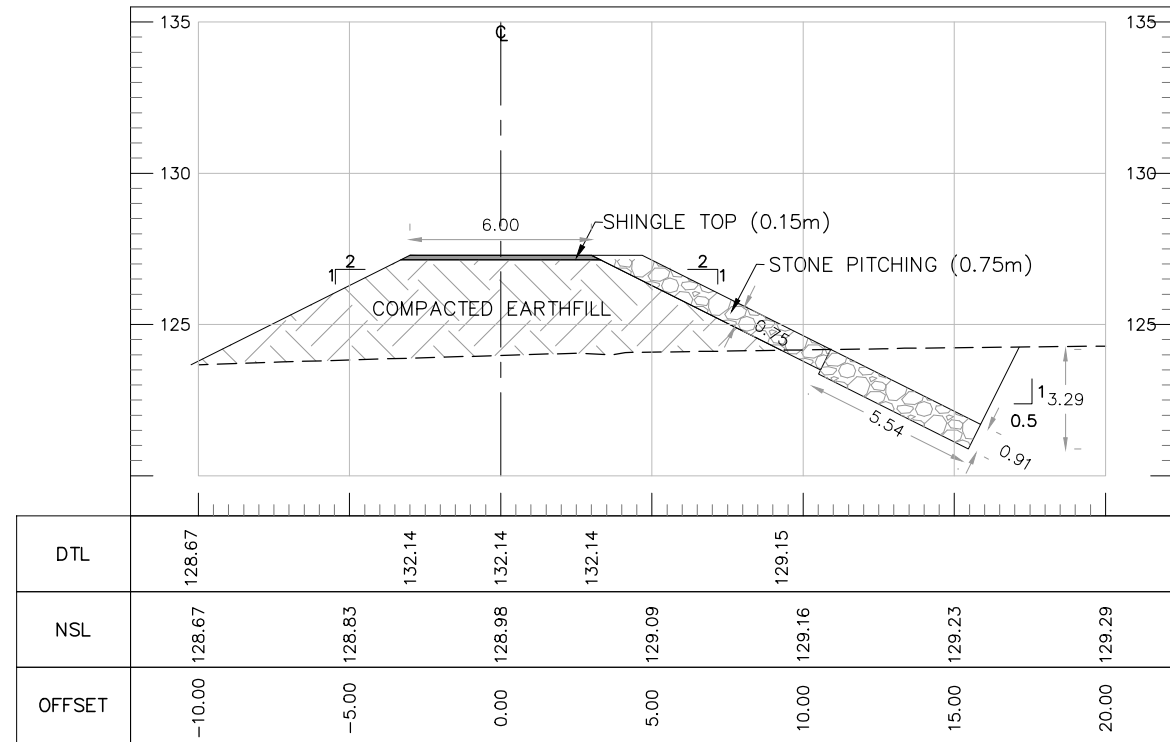




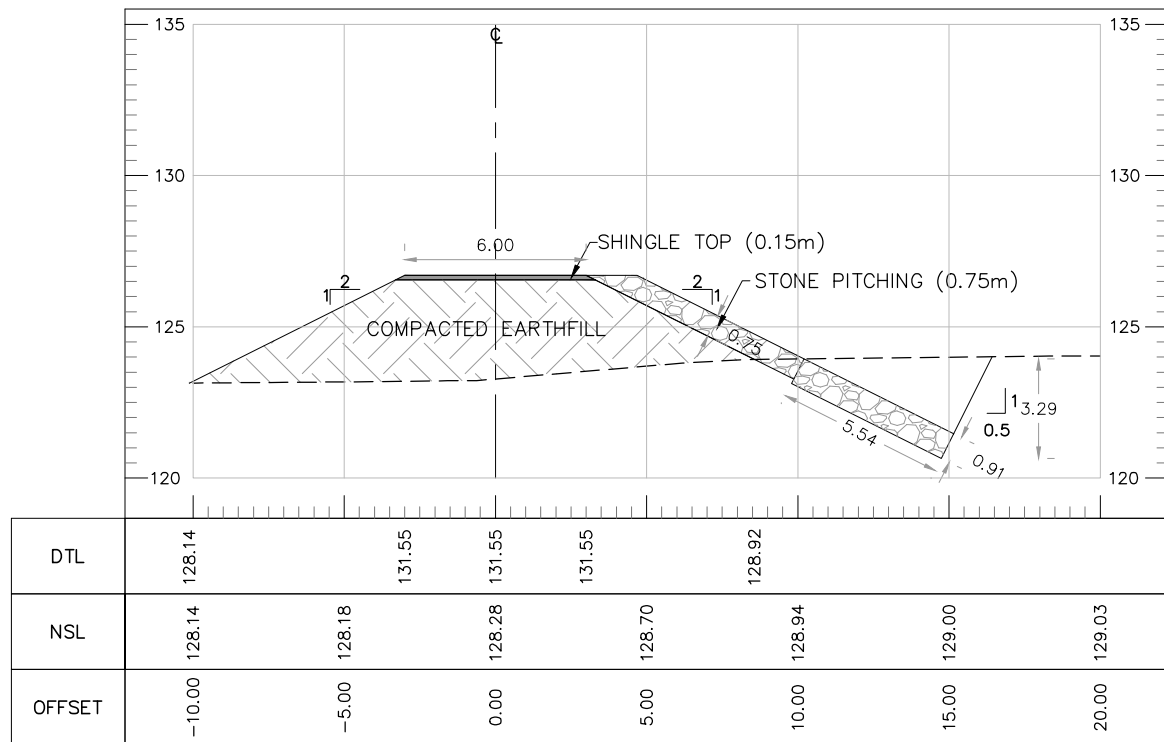
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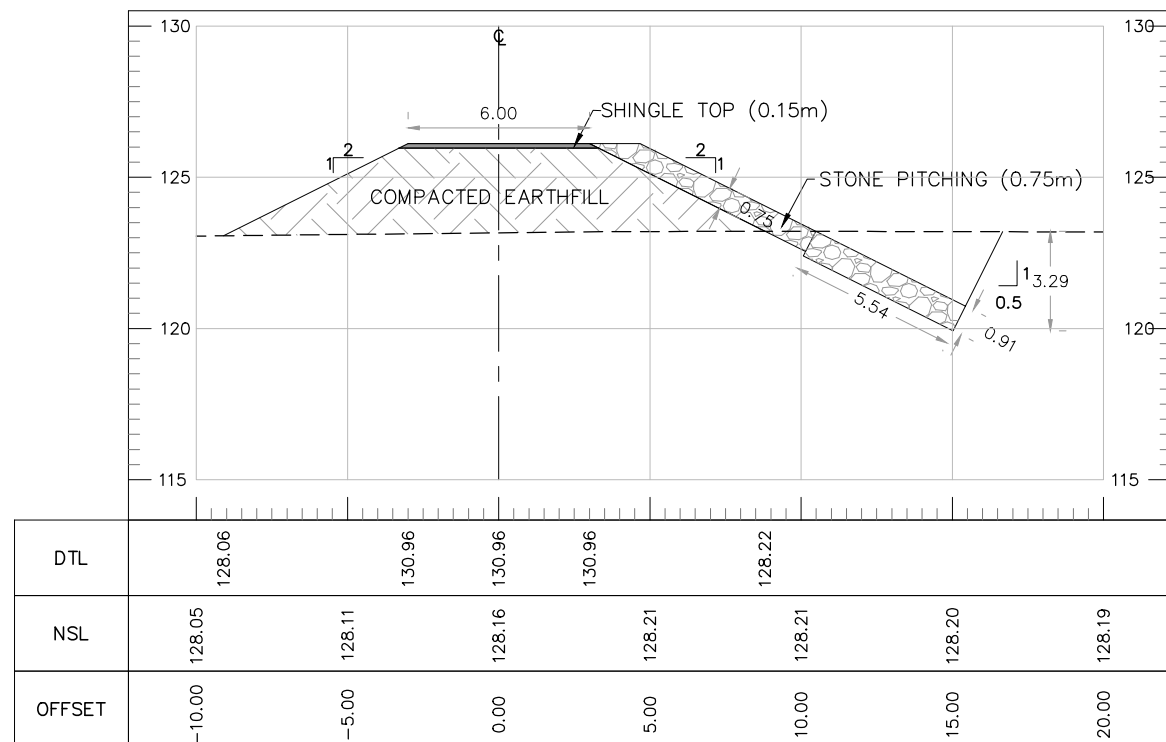
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AT RD 0+100.00



AT RD 0+200.00



AT RD 0+300.00

TENDER DRAWINGS

CLIENT:



IRRIGATION DEPARTMENT
GOVERNMENT OF
BALOCHISTAN

CONSULTANTS:

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD.
H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.

PROJECT TITLE:

INTEGRATED FLOOD RESILIENCE AND
ADAPTATION PROJECT

SCHEME NAME:

RESTORATION OF FLOOD PROTECTION
EMBANKMENT U/S OF NURG HINGRI WEIR
(SHURLI & FAIZO BUND)

DRAWING TITLE:-

CROSS SECTIONS OF SHURLI BUND

NOTES:

ALL LEVELS AND DIMENSIONS ARE
IN METERS UNLESS INDICATED
OTHERWISE.

DRAWN BY: IMRAN ULLAH

CHECKED BY: ZIA-UL-HAQ

FILE PATH: G:/IFRAP

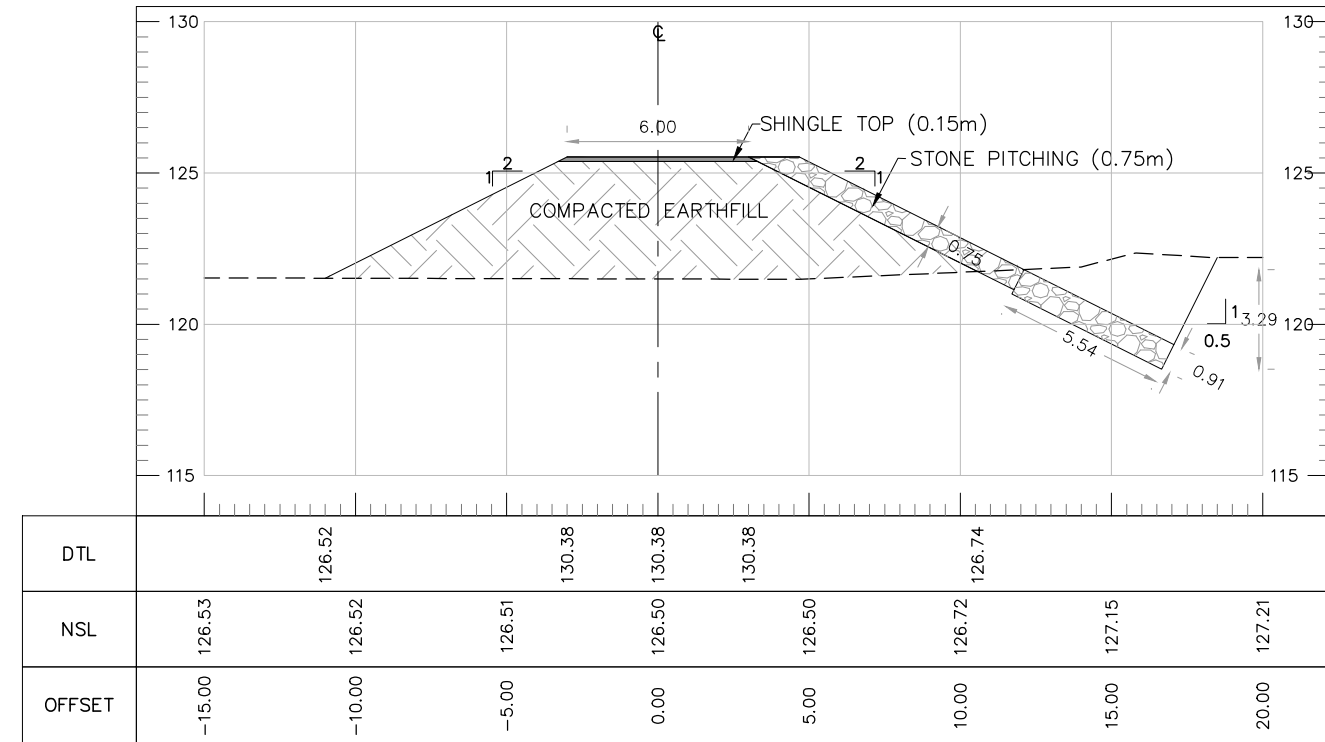
DRAWING NO: IFRAP-P02/FAS-09

DESIGNED BY: KAMRAN BABAR

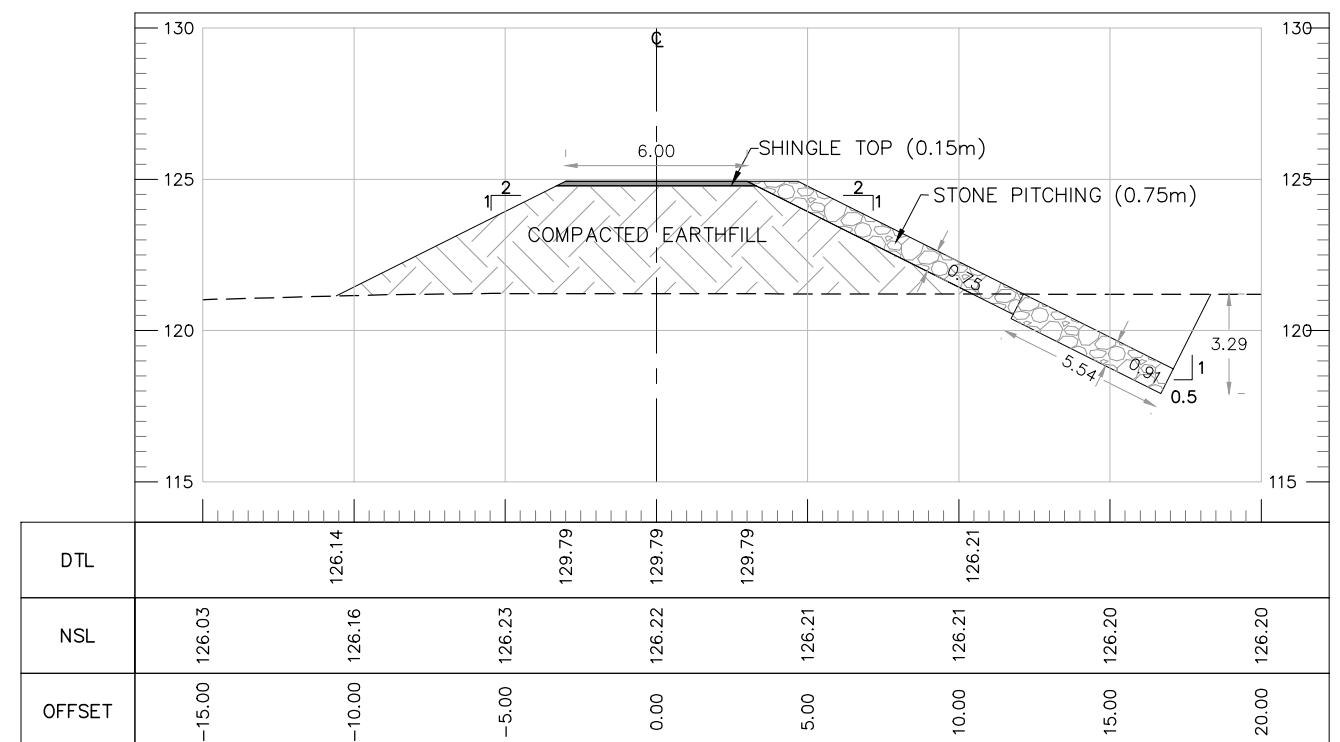
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DATE: AUG / 2025

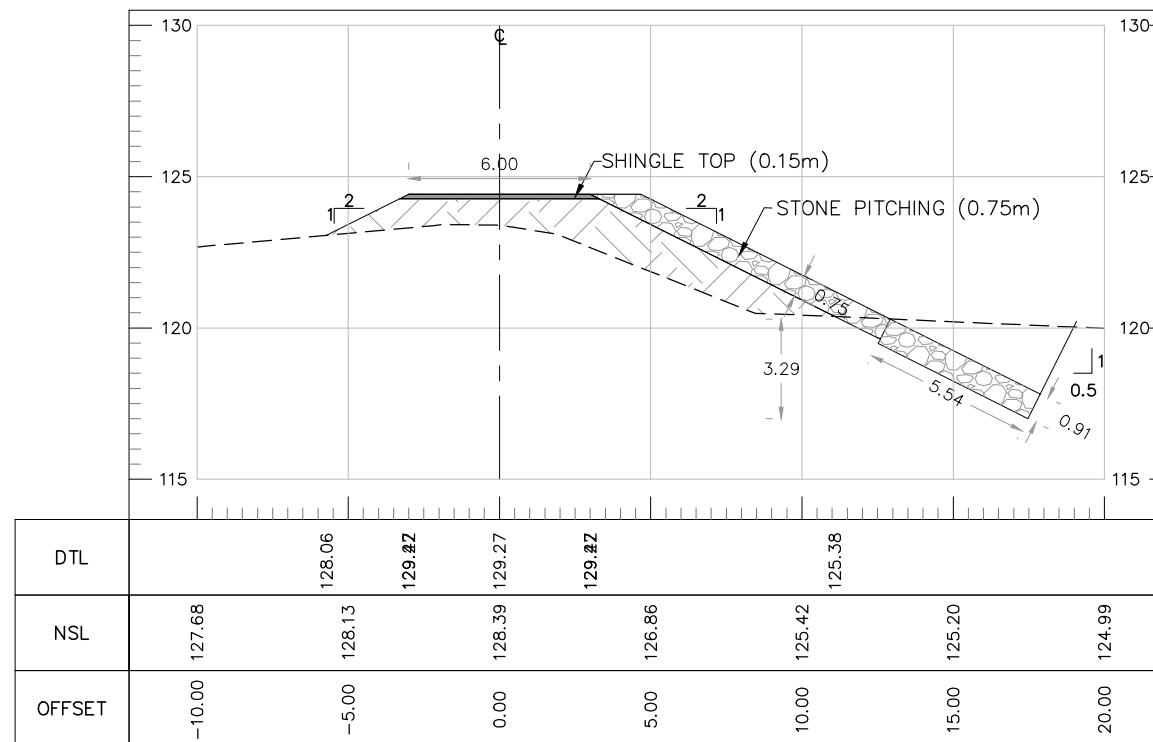
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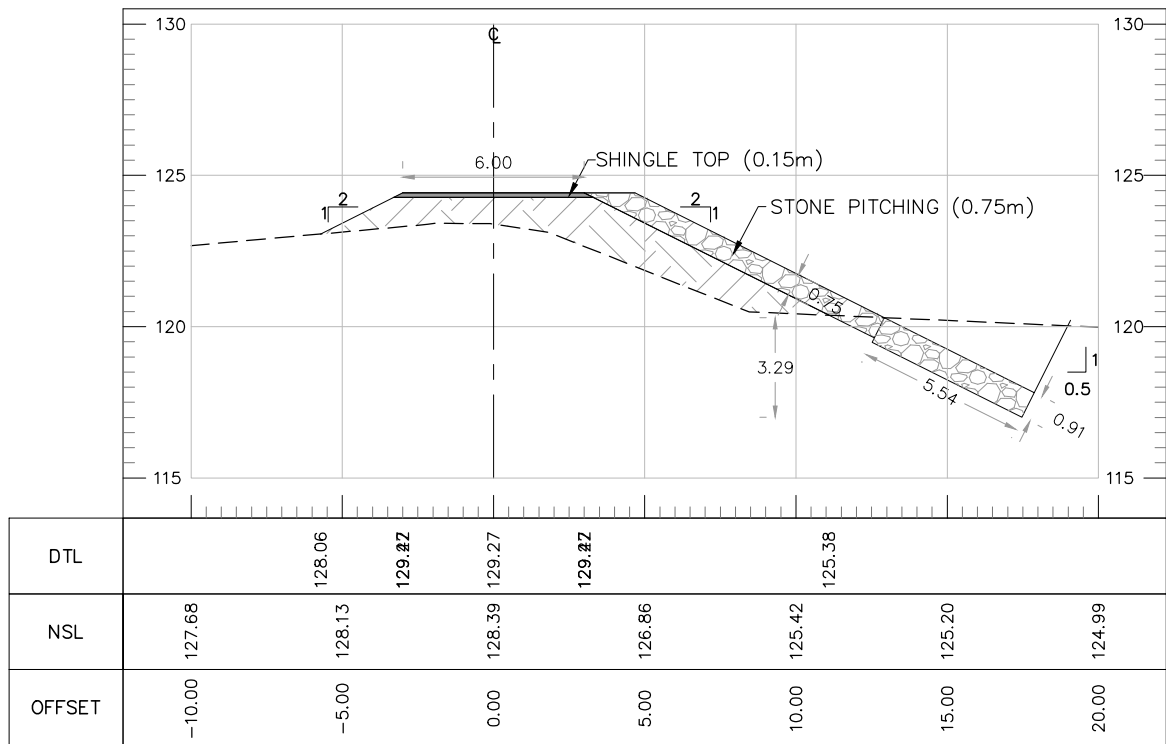
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AT RD 0+588.00

TENDER DRAWINGS

CLIENT:  IRRIGATION DEPARTMENT GOVERNMENT OF BALOCHISTAN	CONSULTANTS:  CAMEOS CONSULTANTS CONSULTING ENGINEERS ARCHITECTS & PLANNERS. PLOT NO.07 PARIS ARCADE STREET, NO. 36 E-11/3 MARKAZ ISLAMABAD. H. NO.38 CHAMAN HOUSING AIRPORT ROAD QUETTA.	PROJECT TITLE: INTEGRATED FLOOD RESILIENCE AND ADAPTATION PROJECT	SCHEME NAME: RESTORATION OF FLOOD PROTECTION EMBANKMENT U/S OF NURG HINGRI WEIR (SHURLI & FAIZO BUND)	DRAWING TITLE:- CROSS SECTIONS OF SHURLI BUND	NOTES: ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.	DRAWN BY: IMRAN ULLAH	DESIGNED BY: KAMRAN BABAR
						CHECKED BY: ZIA-UL-HAQ	SCALE: 1:250
						FILE PATH: G:/IFRAP	DATE: AUG / 2025
						DRAWING NO: IFRAP-P02/FAS-10	SHEET:- 01 OF 01



AT RD 0+588.00

TENDER DRAWINGS