

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Ninth Edition 2020.

DESIGN LOADING

Live Load HL - 93 Maine Modified for Strength I

HYDROLOGIC DATA

Drainage Area 326 sq mi
Existing Headwater Elevation (Q1.1) 93.8 ft
Existing Headwater Elevation (Q25) 99.3 ft
Existing Headwater Elevation (Q50) 99.6 ft
Existing Headwater Elevation (Q100) 101.8 ft
Existing Discharge Velocity (Q1.1) 6.1 fps
Existing Discharge Velocity (Q50) 15.1 fps
Existing Discharge Velocity (Q100) 17.3 fps

MATERIALS

Concrete: Class "A"
All Other
Reinforcing:
Plain Reinforcing Steel ASTM A615, Grade 60
Structural Steel:
All Material (except as noted) ASTM A709, Grade 50
High Strength Bolts ASTM F3125, Grade A325, Type 1

BASIC DESIGN STRESSES

Concrete: f 'c = 4,000 psi
Class "A"
Reinforcing:
Plain Reinforcing Steel f y = 60,000 psi
Structural Steel:
ASTM A709, Grade 50 F y = 50,000 psi
ASTM F3125, Grade A325 F μ = 120,000 psi

OLD TOWN
PENOBSCOT COUNTY
TEMPORARY BRIDGE
OVER
STILLWATER RIVER
STILLWATER AVENUE
FED. PROJ. NO. 2189401
PROJECT LENGTH 0.223 mi.
BRIDGE NO. 1472 & 2806

LIST OF DRAWINGS

Title Sheet	1
Quantities & General Notes	2
Typical Roadway Section	3
Temporary Detour Plan	4-5
Temporary Detour Profile	6-7
Closure Detour Plan	8
Temporary Approach Cross Sections	9-19
Temporary Bridge Typical Sections	20
Temporary Abutment Details	21
Temporary Pier Details	22
Temporary Pier Pile Pile Socket Details	23

UTILITIES

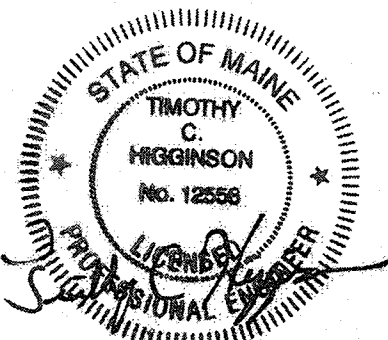
Emera Maine	Spectrum
Fairpoint Communications	Maine Fiber
Old Town Water and Sewer District	First Light

TRAFFIC DATA

Current (2023) AADT	16360(2023)
Future (2043) AADT	18000(2043)
DHV - % of AADT	11%
Design Hour Volume	1980
Heavy Trucks (% of AADT)	5%
Heavy Trucks (% of DHV)	3%
Directional Distribution (% of DHV)	51%
18 kip Equivalent P 2.0	362
18 kip Equivalent P 2.5	346
Design Speed (mph)	25

MAINTENANCE OF TRAFFIC

Temporary two-lane bridge with a minimum curb to curb width of 26'-0" on the upstream side of the proposed bridges, with separated 5'-0" sidewalk on the upstream side of the temporary bridge.



PE Stamp is applicable to plan sheets 1-19.

PROJECT LOCATION	Along Stillwater Avenue starting 0.18 miles north of Bennoch Road, ending 0.11 miles south of College Avenue. Bridges are located 0.69 miles northeast of I-95 Exit 193N Bridge No. 1: Latitude 44°54'41.50" N 68°41'5.70" W Bridge No. 2: Latitude 44°54'45" N 68°41'4.0" W
PROGRAM AREA	Bridge Program
OUTLINE OF WORK	Temporary Bridge Construction

WIN 022511.01A 022512.01A

OLD TOWN
STILLWATER AVENUE
TITLE SHEET

SHEET NUMBER
1
OF 23

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>[Signature]</i>	<i>[Signature]</i>	5-22-23
CHIEF ENGINEER: <i>[Signature]</i>	<i>[Signature]</i>	5-19-2023

SIGNATURE	P.E. NUMBER	DATE
<i>[Signature]</i>		

PROJECT INFORMATION	BRIDGE	ANDREW LATHE	TIM HIGGINSON	WSP USA	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
PROGRAM	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE	

ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
461.131	TEMPORARY PAVEMENT	670.0	TON
501.77	24 INCH DIAMETER DRILLED SHAFT	20.0	LF
501.912	PILE SPLICE - DRILLED SHAFT	2.0	EA
510.12	SPECIAL DETOUR, 26 FOOT ROADWAY WIDTH VEHICULAR AND PEDESTRIAN TRAFFIC SEPARATED WITH 5 FOOT SIDEWALK	1.0	LS
527.34	WORK ZONE CRASH CUSHIONS	4.0	UN
626.26	3 INCH DIAMETER UTILITY CONDUIT SYSTEM, TEMPORARY	1.0	LS
626.271	5 INCH DIAMETER UTILITY CONDUIT SYSTEM, TEMPORARY	1.0	LS
629.05	HAND LABOR, STRAIGHT TIME	20.0	HR
631.112	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20.0	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20.0	HR
643.62	RECTANGULAR RAPID FLASHING BEACON	1.0	EA
652.312	TYPE III BARRICADE	10.0	EA
652.33	DRUM	20.0	EA
652.34	CONE	50.0	EA
652.35	CONSTRUCTION SIGNS	1000.0	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1.0	LS
652.38	FLAGGERS	1020.0	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2.0	EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1.0	LS
659.10	MOBILIZATION	1.0	LS
801.03	TEST PIT	5.0	EA
801.07	TEMPORARY SEWER BYPASS	270.0	LF
824.31	REMOVE HYDRANT	1.0	EA
825.60	12-INCH SDR II HDPE WATER MAIN	363.0	LF
910.301	SPECIAL WORK, TEMP WATER MAIN INSTALLATION	1.0	LS
910.301	SPECIAL WORK, TEMP SEWER MAIN INSTALLATION	1.0	LS

GENERAL NOTES:

1. THE TEMPORARY BRIDGE AND ASSOCIATED APPROACHES SHOWN IN THESE PLANS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL LOCATION, DESIGN, AND LAYOUT SHALL BE DETERMINED BY THE CONTRACTOR.
2. CLEARING SHALL BE INCIDENTAL TO PAY ITEM 510.12.
3. THERE IS AN ADJACENT ACTIVE HIGHWAY RECONSTRUCTION PROJECT (WIN 022950.01) CURRENTLY IN CONSTRUCTION WITH LIMITS OF WORK STARTING/ENDING AT STATIONS 21+50 AND 30+50. THE CONTRACTOR SHALL COORDINATE TEMPORARY DETOUR TIE-IN WORK WITH THE ADJACENT PROJECT.
4. CONTRACTOR TO COORDINATE THE RELOCATION AND SUPPORT OF ALL UTILITIES.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2189401
WIN 022512.01A
WIN 022511.01A
BRIDGE NO. 1472
BRIDGE NO. 2806
BRIDGE PLANS

TEMPORARY BRIDGE
OVER STILLWATER RIVER
OLD TOWN
PENOBSCOT COUNTY
QUANTITIES &
GENERAL NOTES

SHEET NUMBER
2
OF 23

PROJ. MANAGER ANDREW LATHE
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

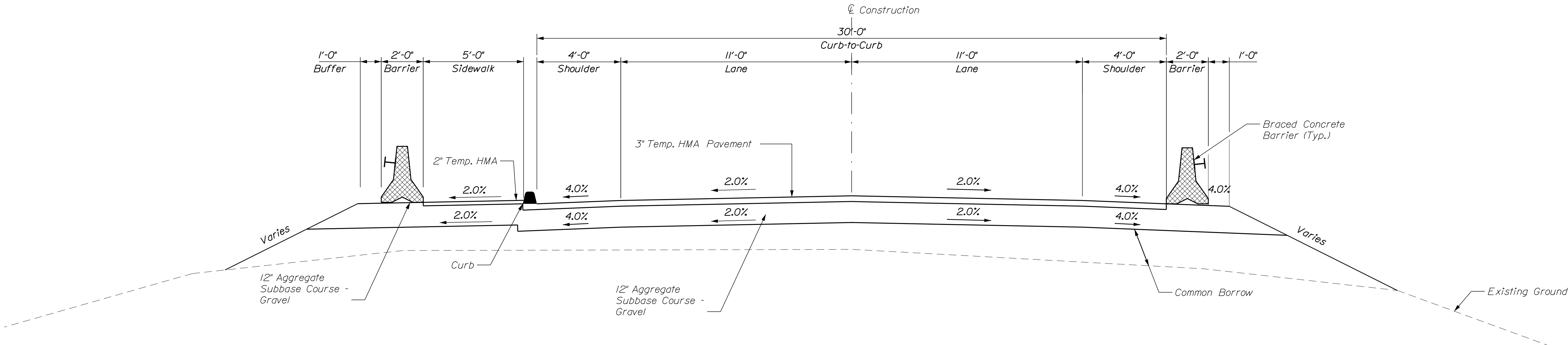
DATE
04/2023

BY

SIGNATURE

P.E. NUMBER

DATE



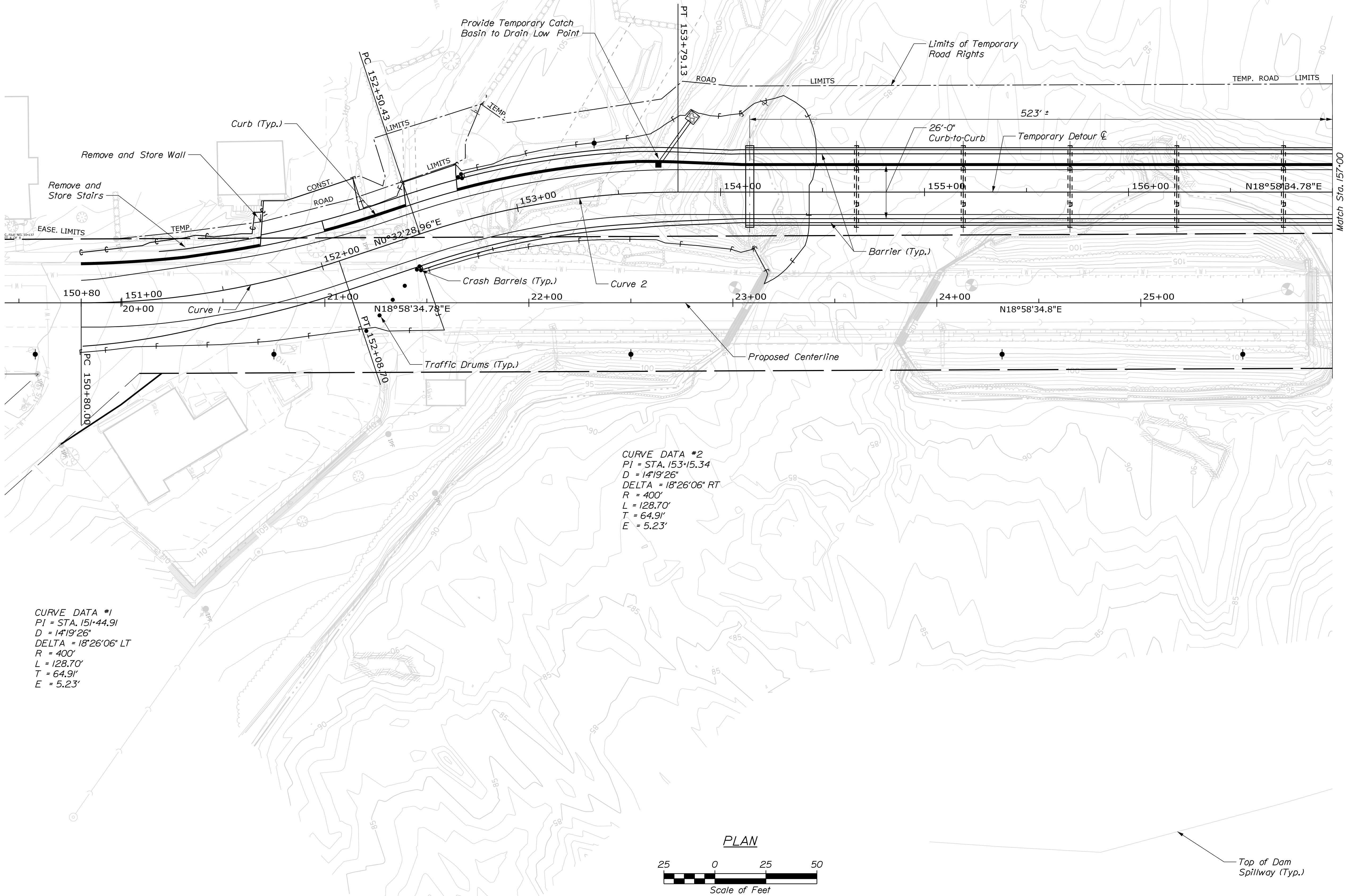
PROPOSED APPROACH TYPICAL SECTION

TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY	STATE OF MAINE			
	DEPARTMENT OF TRANSPORTATION			
	2189401			
	BRIDGE NO. 1472 BRIDGE NO. 2806			
TEMPORARY BRIDGE TYPICAL ROADWAY SECTION	SIGNATURE			
	P.E. NUMBER			
	DATE			
	BRIDGE PLANS			
SHEET NUMBER	3			
	OF 23			
	WIN 022512.01A			
	WIN 022511.01A			

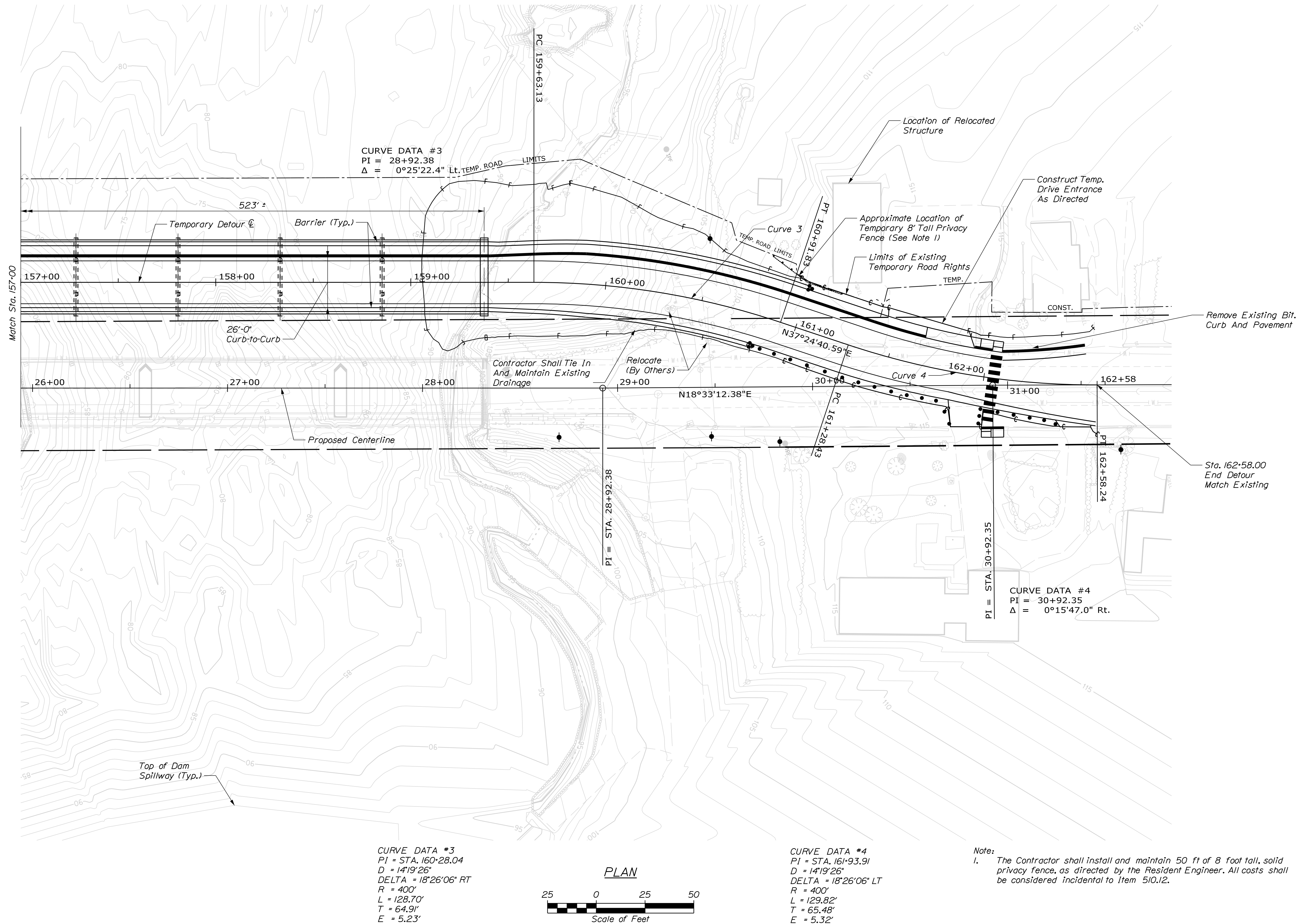
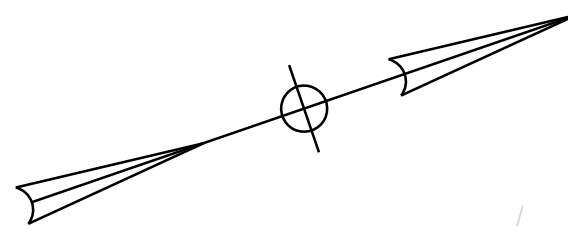
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Division: BRIDGE

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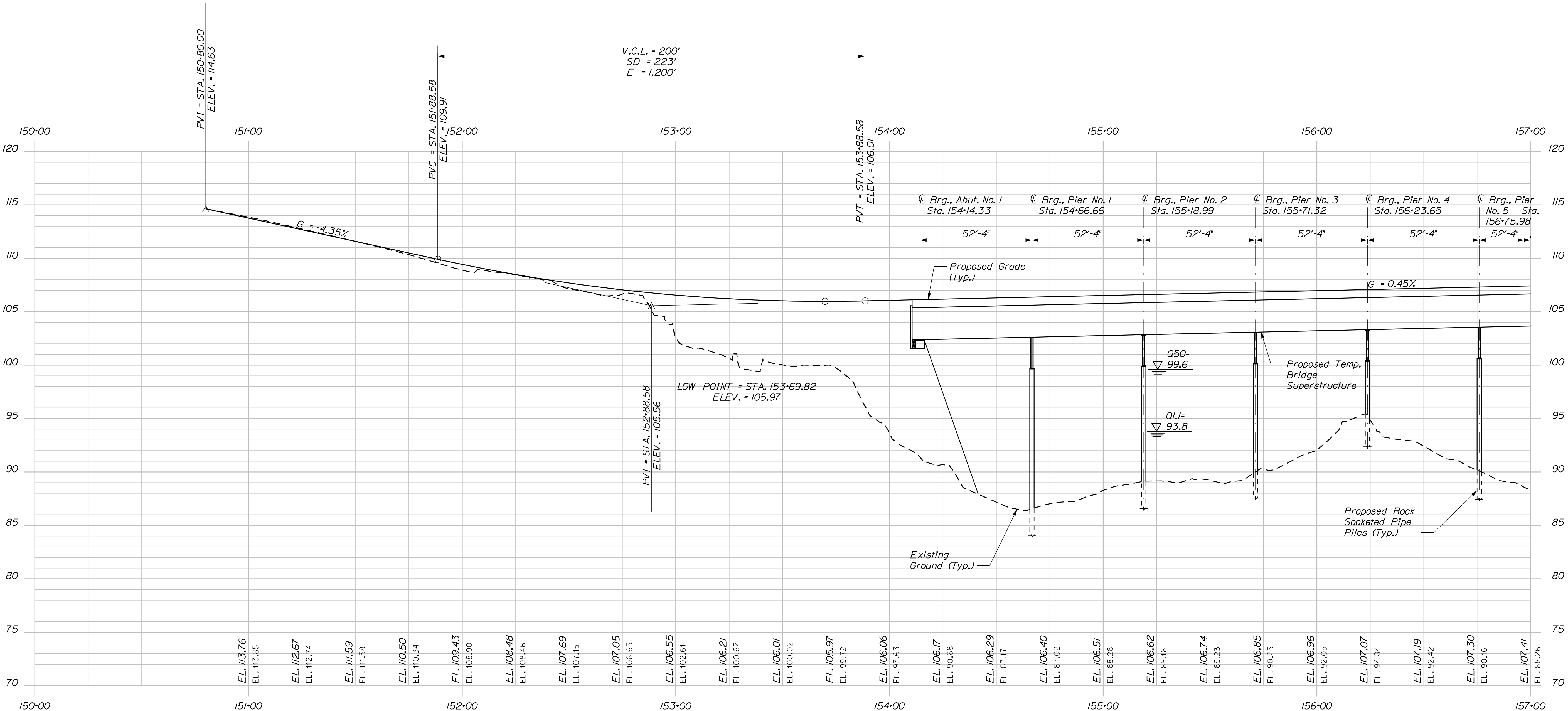
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2189401		BRIDGE NO. 1472 BRIDGE NO. 2806	
2189401		WIN 022512.01A WIN 022511.01A	
BRIDGE NO. 1472 BRIDGE NO. 2806		BRIDGE PLANS	
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY		TEMPORARY DETOUR PLAN 1	
SHEET NUMBER		4	
OF 23			



Date:5/11/2023

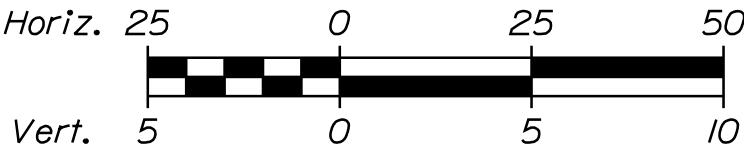
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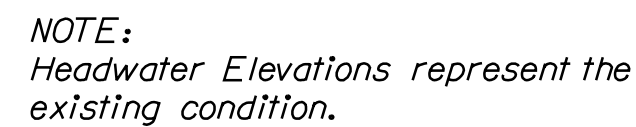
NOTE:
Headwater Elevations represent the
existing condition.

PROFILE TEMPORARY BRIDGE



Scale of Feet

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2189401		BRIDGE NO. 1472 BRIDGE NO. 2806		WIN 022512.01A WIN 022511.01A		BRIDGE PLANS	
TEMPORARY BRIDGE		OVER STILLWATER RIVER		PENOBSCOT COUNTY		OLD TOWN		TEMPORARY DETOUR		PROFILE (1 OF 2)	
PROJ. MANAGER		ANDREW LATHE		BY		DATE		SIGNATURE		P.E. NUMBER	
DESIGN-DETAILED		J. KHERA		G. SKIBA		04/2023		T. POLSON		04/2023	
CHECKED-REVIEWED		T. HIGGINS		DESIGN-DETAILED		DESIGN-DETAILED		REVISIONS 1		REVISIONS 2	
DESIGN-DETAILED		DESIGN-DETAILED		DESIGN-DETAILED		DESIGN-DETAILED		REVISIONS 3		REVISIONS 4	
FIELD CHANGES		FIELD CHANGES		FIELD CHANGES		FIELD CHANGES		FIELD CHANGES		FIELD CHANGES	
SHEET NUMBER		6		OF 23							



SHEET NUMBER 2 OF 23	TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY	PROJ. MANAGER: ANDREW LATHE	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION
		DESIGN: DETAILED 1, J. KHEERA CHECKED: REVIEWED T. HIGGINS DESIGN: DETAILED 2 DESIGN: DETAILED 3	G. SKIBA T. POLSON	04/20/23 04/20/23	
	TEMPORARY DETOUR PROFILE (2 OF 2)	REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES			2189401
					BRIDGE NO. 1472 BRIDGE NO. 2806 WIN 022512.01A WIN 022511.01A

- 1

STILLWATER AVE
NORTH

DETOUR
→
- 2

STILLWATER AVE
SOUTH

DETOUR
←
- 3

STILLWATER AVE
NORTH

DETOUR
←
- 4

STILLWATER AVE
NORTH

DETOUR
↑
- 5

STILLWATER AVE
SOUTH

DETOUR
→
- 6

STILLWATER AVE
SOUTH

DETOUR
↑
- 7

STILLWATER AVE
CLOSED
0.5 MILES NORTH
- 8

STILLWATER AVE
CLOSED
1 MILE SOUTH
- 9

STILLWATER AVE
CLOSED
1 MILE NORTH
- 10

ROAD
CLOSED
500 FT

- 11

ROAD
CLOSED
1000 FT
- 12

DETOUR
AHEAD
- 13

ROAD
CLOSED
- 14

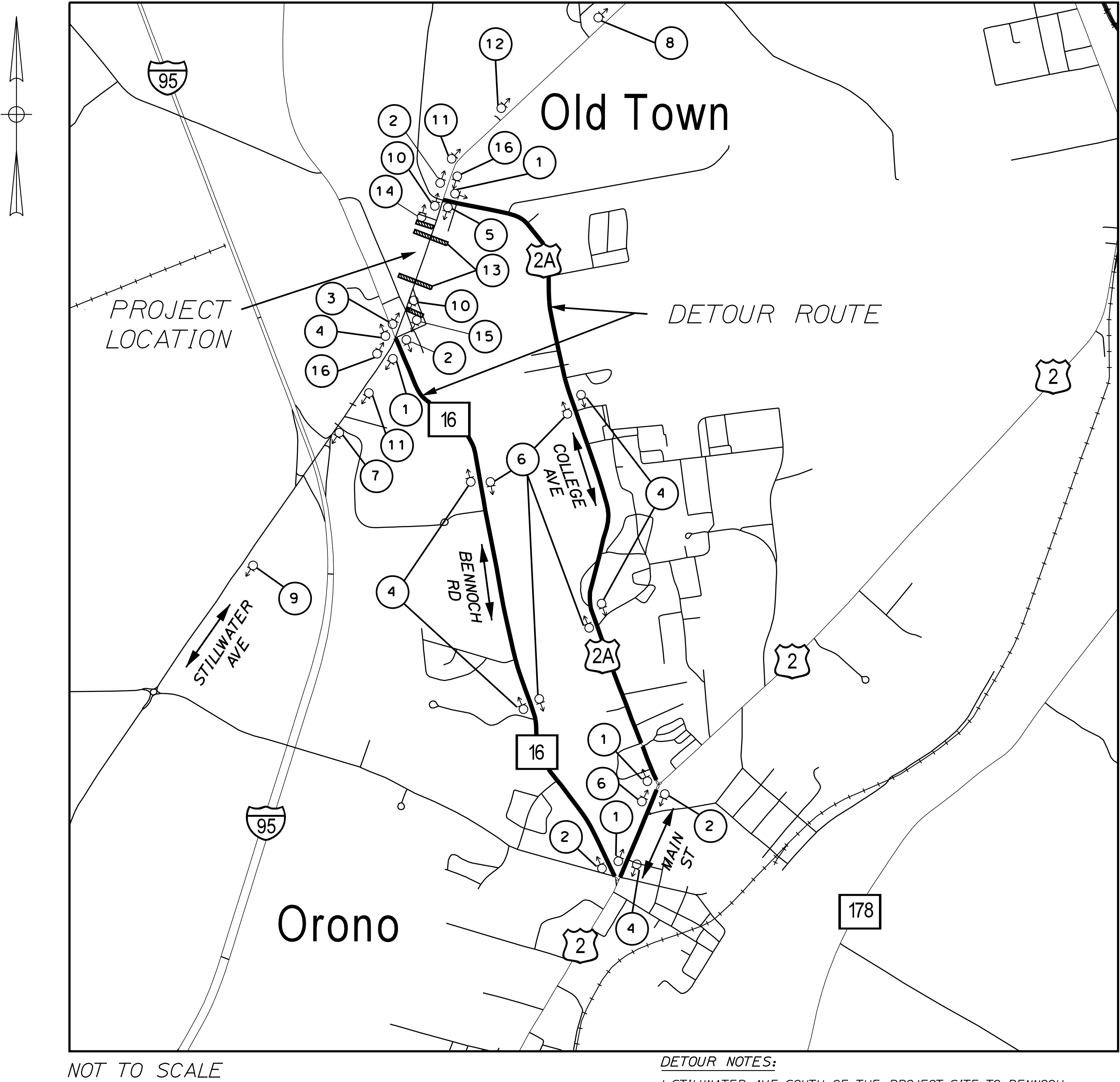
ROAD CLOSED
LOCAL TRAFFIC ONLY

(ON TYPE III BARRICADES)
- 15

ROAD CLOSED
LOCAL TRAFFIC ONLY

(ON TYPE III BARRICADES)
- 16

END
DETOUR
STILLWATER AVE



DETOUR NOTES:

1. STILLWATER AVE, SOUTH OF THE PROJECT SITE, TO BENNOCH ROAD/ROUTE 16 TO MAIN STREET/ROUTE 2 TO COLLEGE AVE/ROUTE 2A, NORTH OF THE PROJECT SITE.

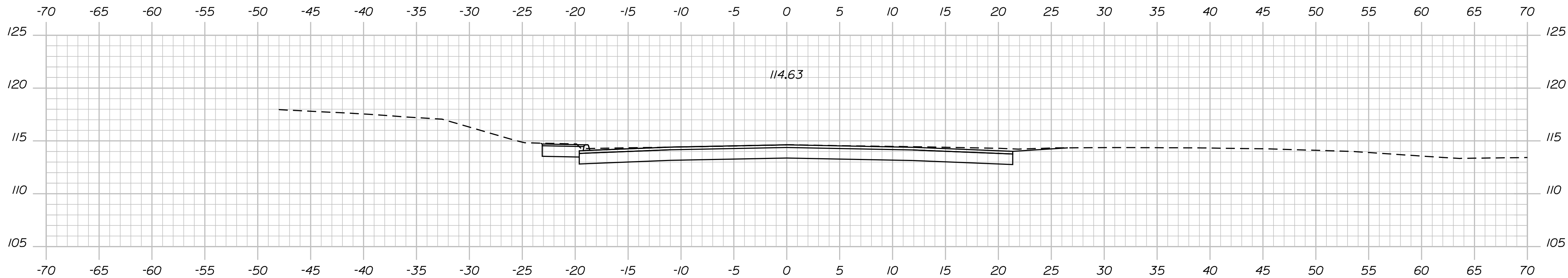
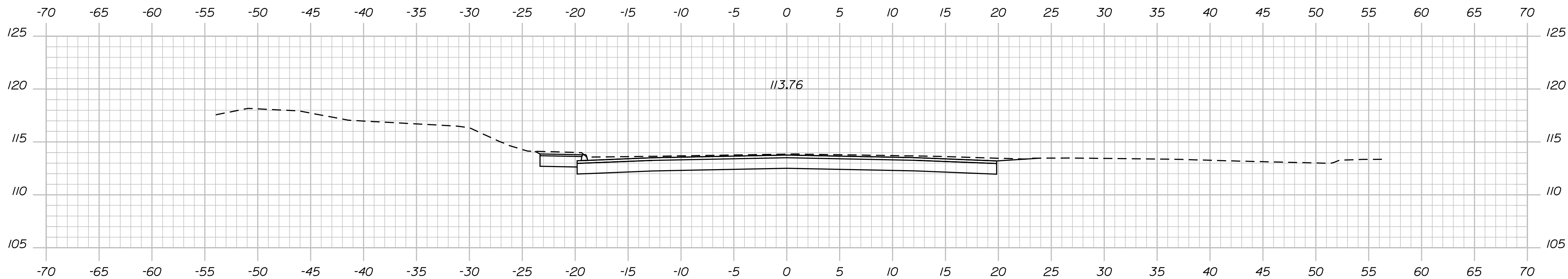
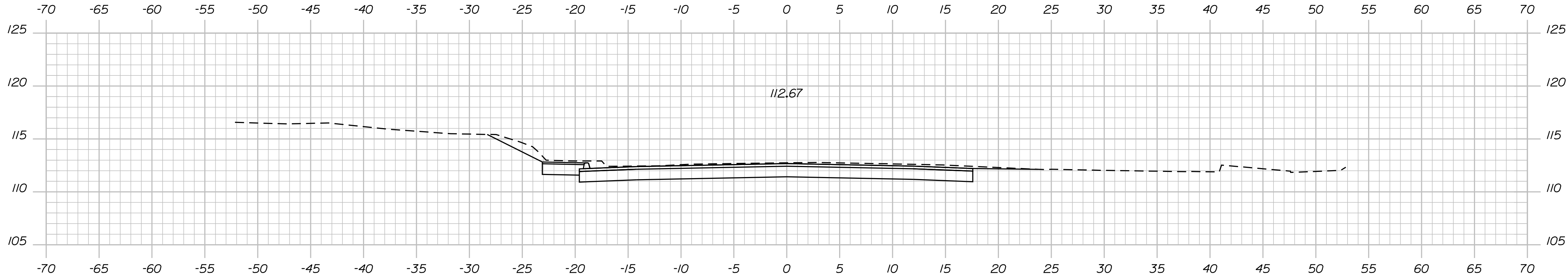
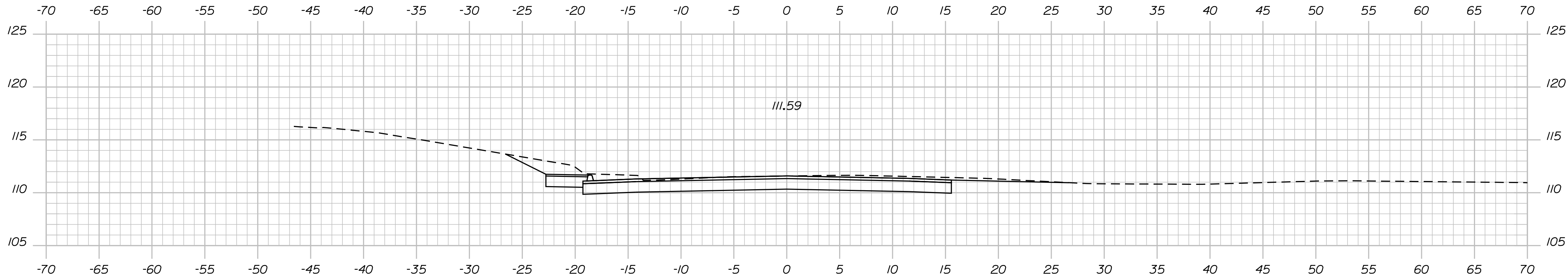
2. SPACING OF TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE IN ACCORDANCE WITH MUTCD.

3. COVER AND REMOVE ALL CONFLICTING ROUTE SIGNS.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION				SIGNATURE				P.E. NUMBER				BRIDGE NO. 1472 BRIDGE NO. 2806				WIN 022512.01A WIN 022511.01A				BRIDGE PLANS															
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY																PROJ. MANAGER				ANDREW				LATHE				BY				DATE			
CLOSURE DETOUR PLAN																DESIGN-DETAILED				J. KHERA				G. SKIBA				04/2023							
																CHECKED-REVIEWED				T. HIGGINS				T. POLSON				04/2023							
																DESIGN2-DETAILED2																			
																DESIGN3-DETAILED3																			
																REVISIONS 1																			
																REVISIONS 2																			
																REVISIONS 3																			
																REVISIONS 4																			
																FIELD CHANGES												DATE							

Date:5/11/2023

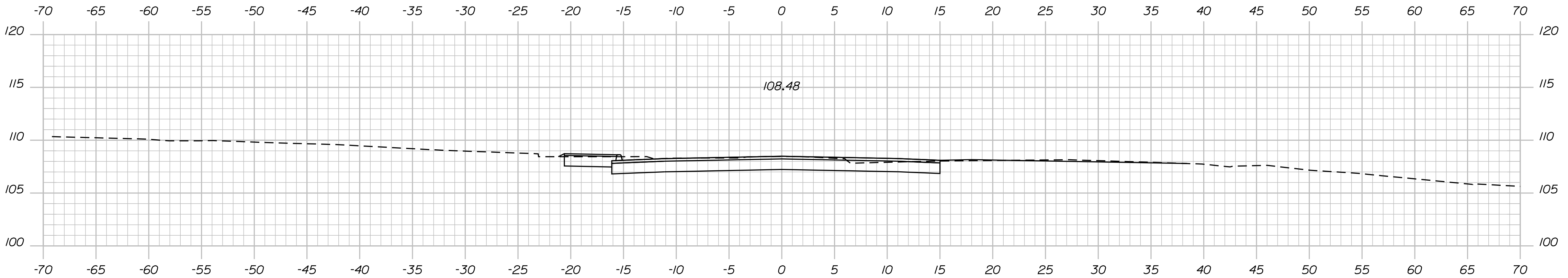
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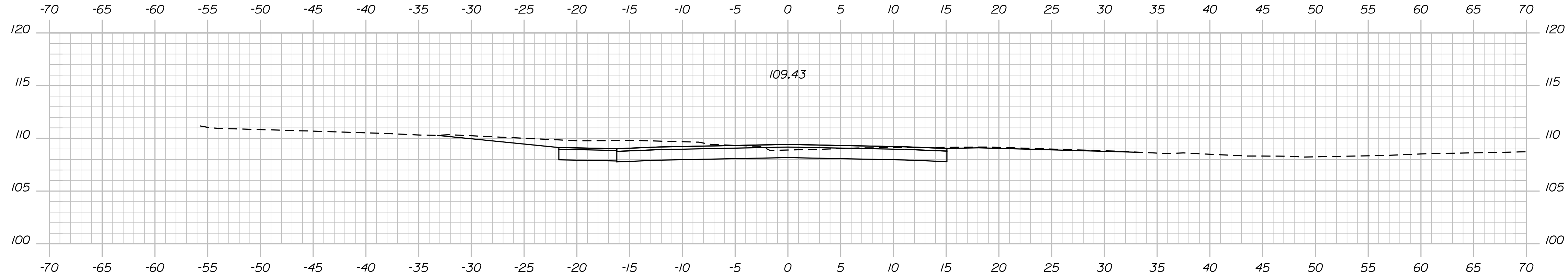
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2189401		BRIDGE NO. 1472 BRIDGE NO. 2806	WIN 022512.01A WIN 022511.01A	BRIDGE PLANS
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY TEMPORARY APPROACH CROSS SECTIONS		PROJ. MANAGER	ANDREW LATHE	BY	DATE
		CHECKED-DETAILED	J. KHERA	G. SKIBA	04/2023
		DESIGNED-DETAILED	T. HIGGINS	T. POLSON	04/2023
		REVISIONS 1			
		REVISIONS 2			
SHEET NUMBER 9 OF 23		SIGNATURE		P.E. NUMBER	
		DATE			

Date:5/11/2023

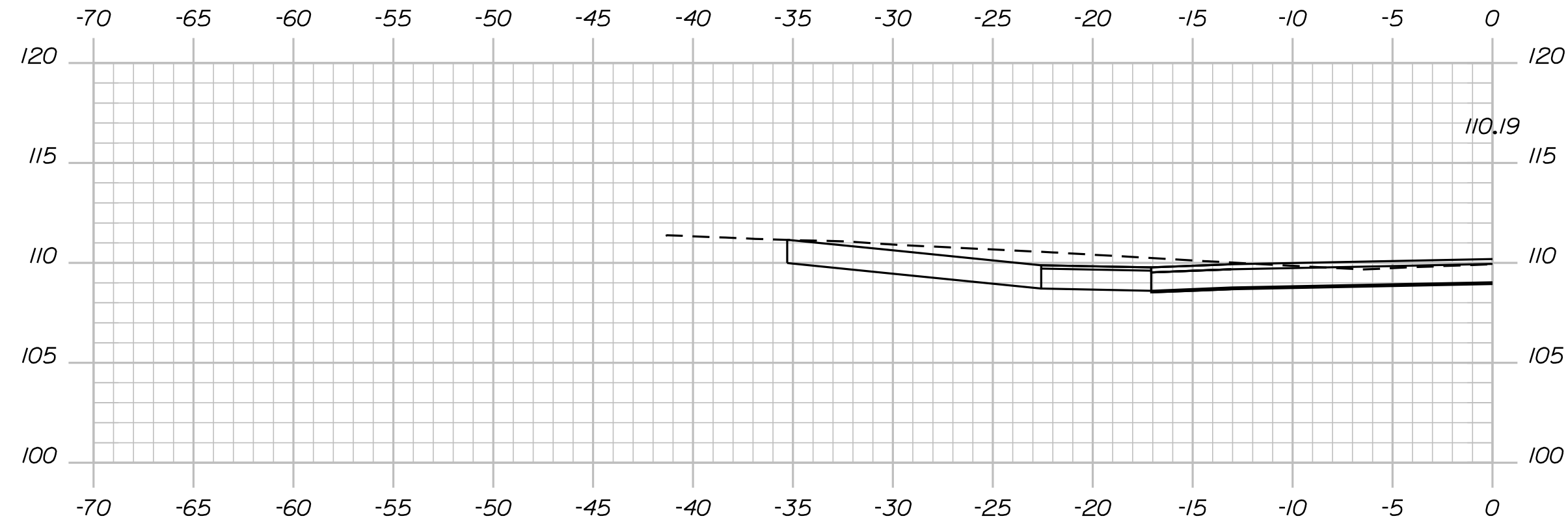
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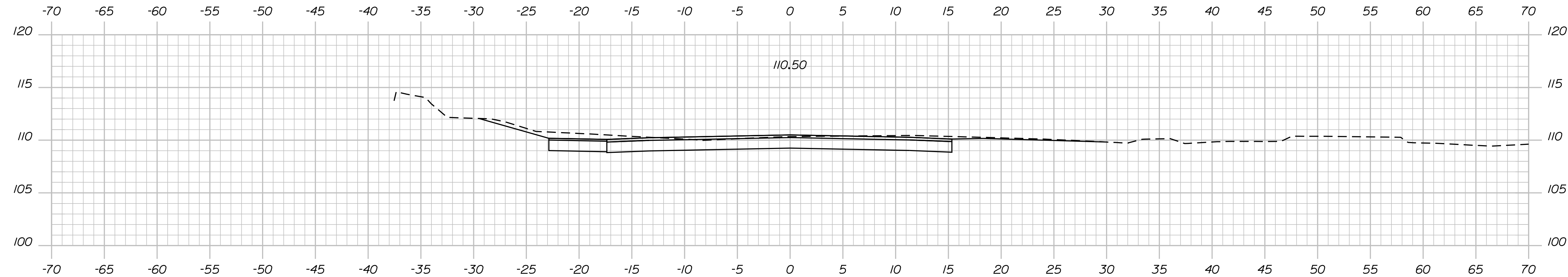
152+25.00



152+00.00



151+82.00



151+75.00

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

2189401

BRIDGE NO. 1472
BRIDGE NO. 2806

WIN 022512.01A
WIN 022511.01A

BRIDGE PLANS

PROJ. MANAGER	ANDREW LATHE	BY	DATE
DESIGN-DETAILED	J. KHERA	G. SKIBA	04/2023
CHECKED-REVIEWED	T. HIGGINS	T. POLSON	04/2023
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

TEMPORARY BRIDGE
OVER STILLWATER RIVER
OLD TOWN
PENOBSCOT COUNTY

TEMPORARY APPROACH
CROSS SECTIONS

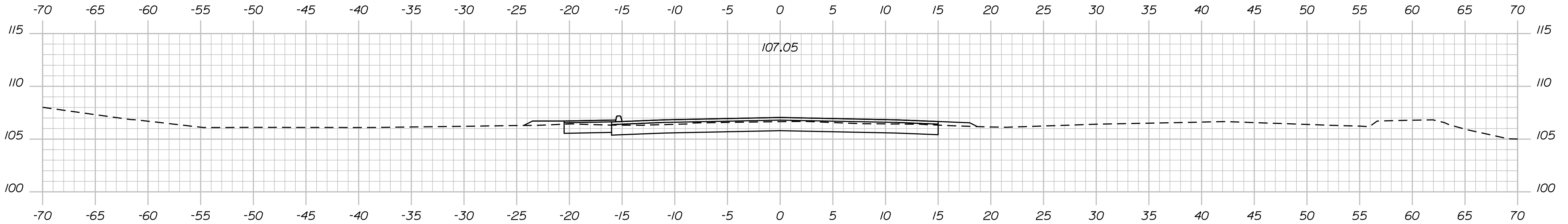
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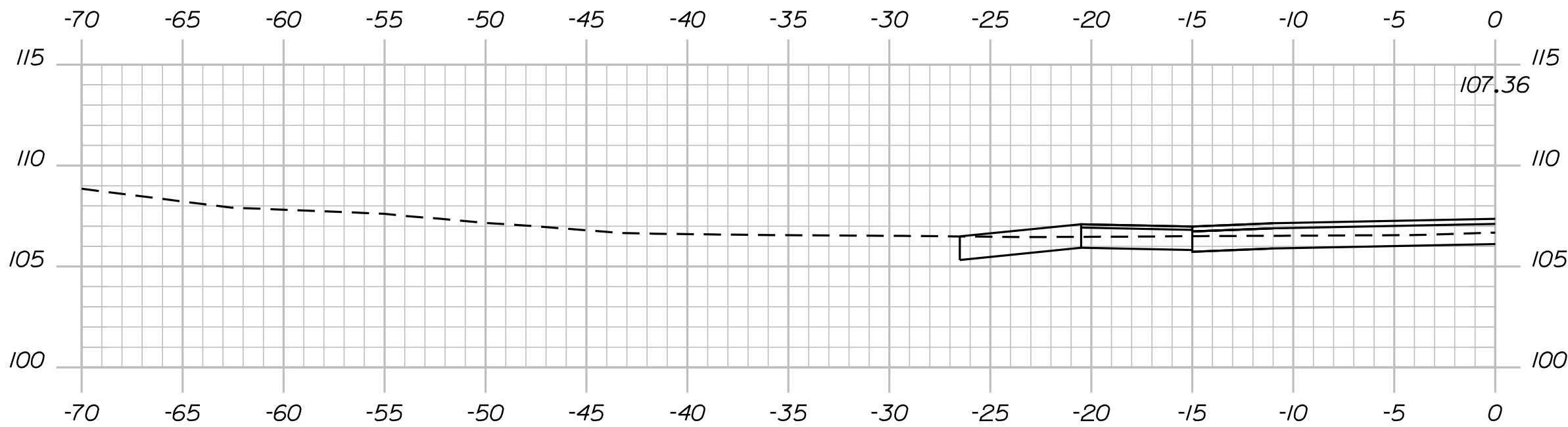
OF 23

Date:5/11/2023

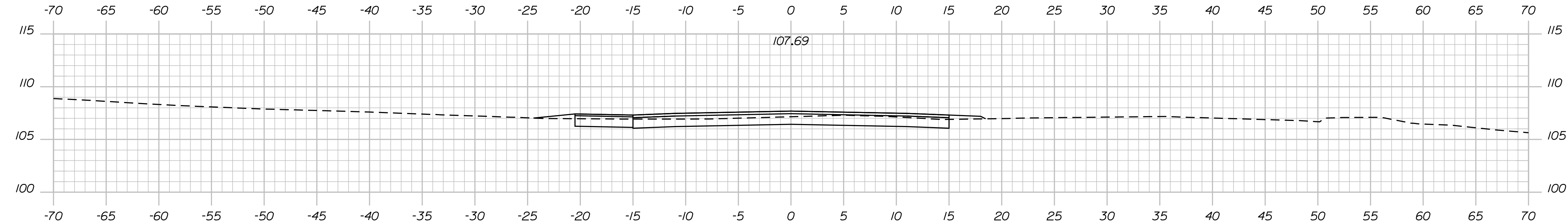
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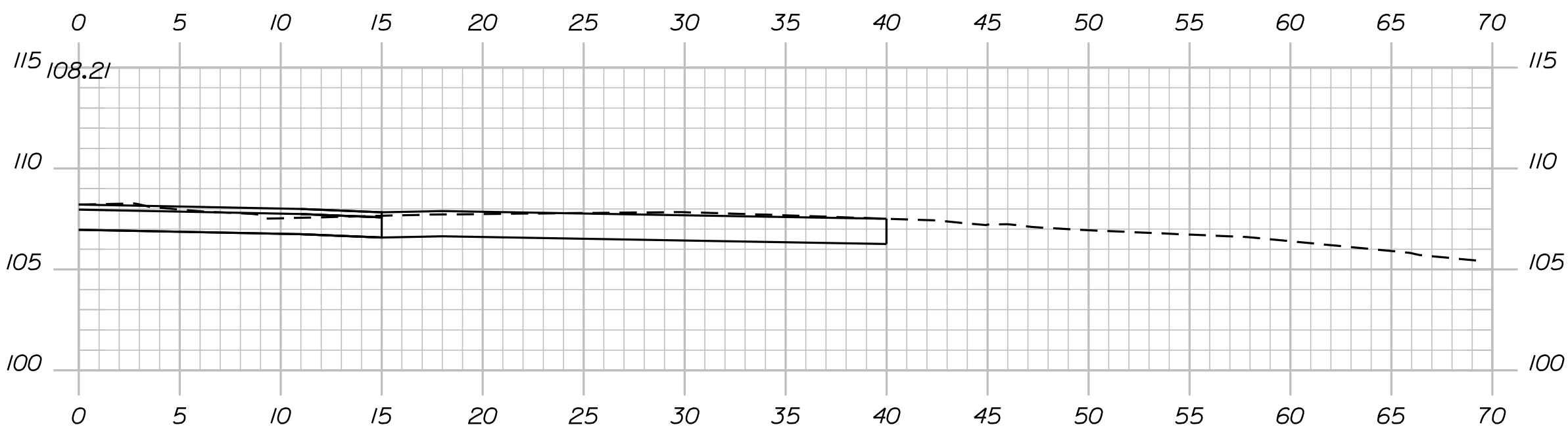
152+75.00



152+62.00



152+50.00



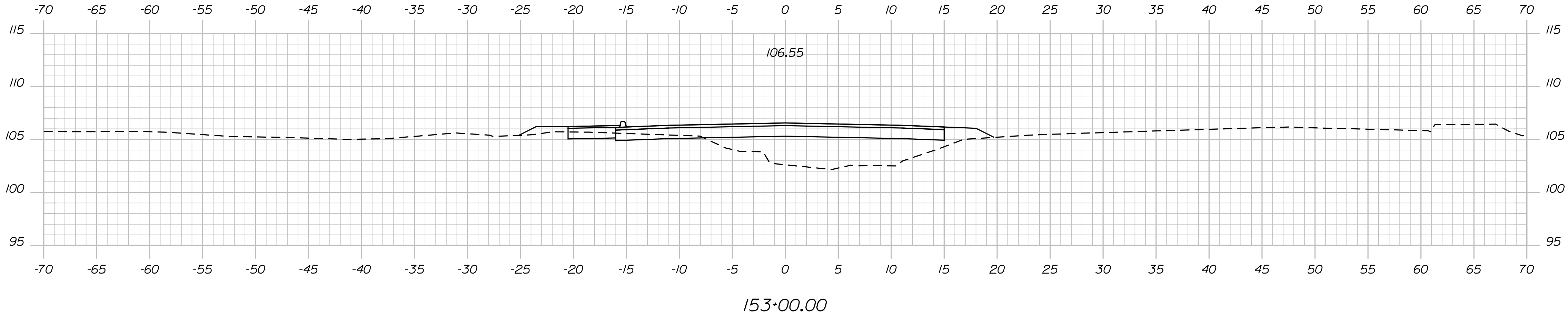
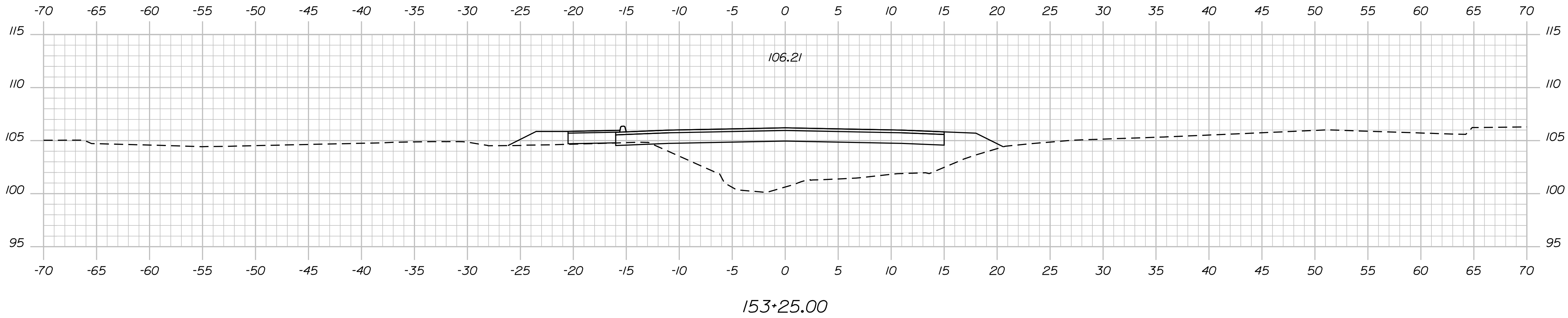
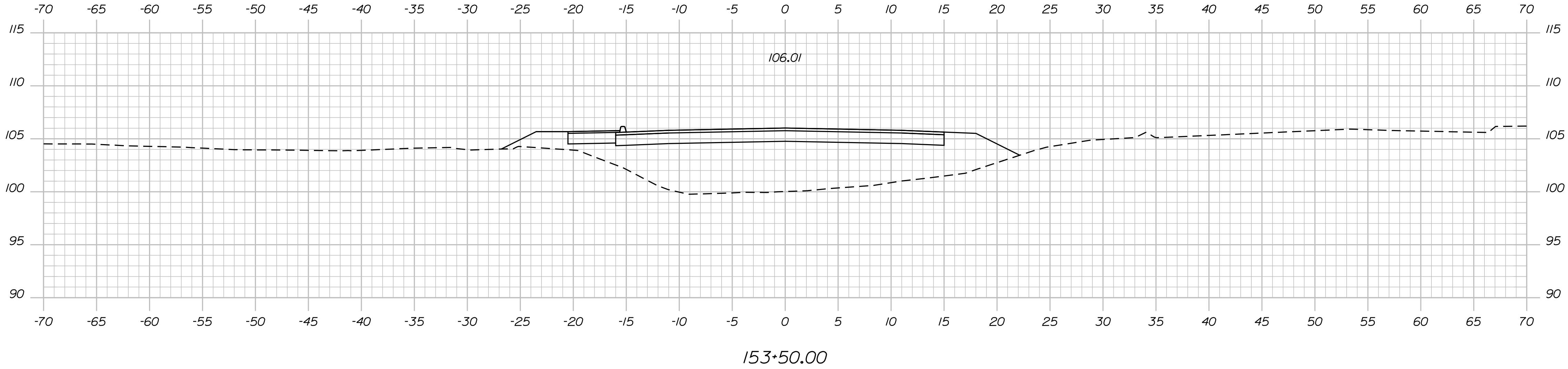
152+33.00

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
		2189401	
		BRIDGE NO. 1472 BRIDGE NO. 2806	
		WIN 022512.01A WIN 022511.01A	
		BRIDGE PLANS	
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY		PROJ. MANAGER ANDREW W. LATHE	BY G. SKIBA
		CHECKED-DETAILED J. KHERA	DATE 04/2023
		DESIGNED-DETAILED T. HIGGINS	SIGNATURE 04/2023
		DESIGNED-DETAILED T. HIGGINS	P.E. NUMBER
		REVISIONS 1	DATE
		REVISIONS 2	
		REVISIONS 3	
		REVISIONS 4	
		FIELD CHANGES	
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY		TEMPORARY APPROACH CROSS SECTIONS	
SHEET NUMBER		11	
		OF 23	

Date:5/11/2023

Division: BRIDGE

Filename: ... \009-019_TempBridge_Sections.dgn



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2189401		BRIDGE NO. 1472 BRIDGE NO. 2806		WIN 022512.01A WIN 022511.01A		BRIDGE PLANS		
	SIGNATURE		P.E. NUMBER		DATE				
	BY		DATE						
PROJ. MANAGER ANDREW LATHE		G. SKIBA		T. POLSON					
DESIGNED-Detailed		J. KHERA		04/2023					
CHECKED-Reviewed		T. HIGGINS		04/2023					
DESIGNED-Detailed									
REVISIONS 1									
REVISIONS 2									
REVISIONS 3									
REVISIONS 4									
FIELD CHANGES									

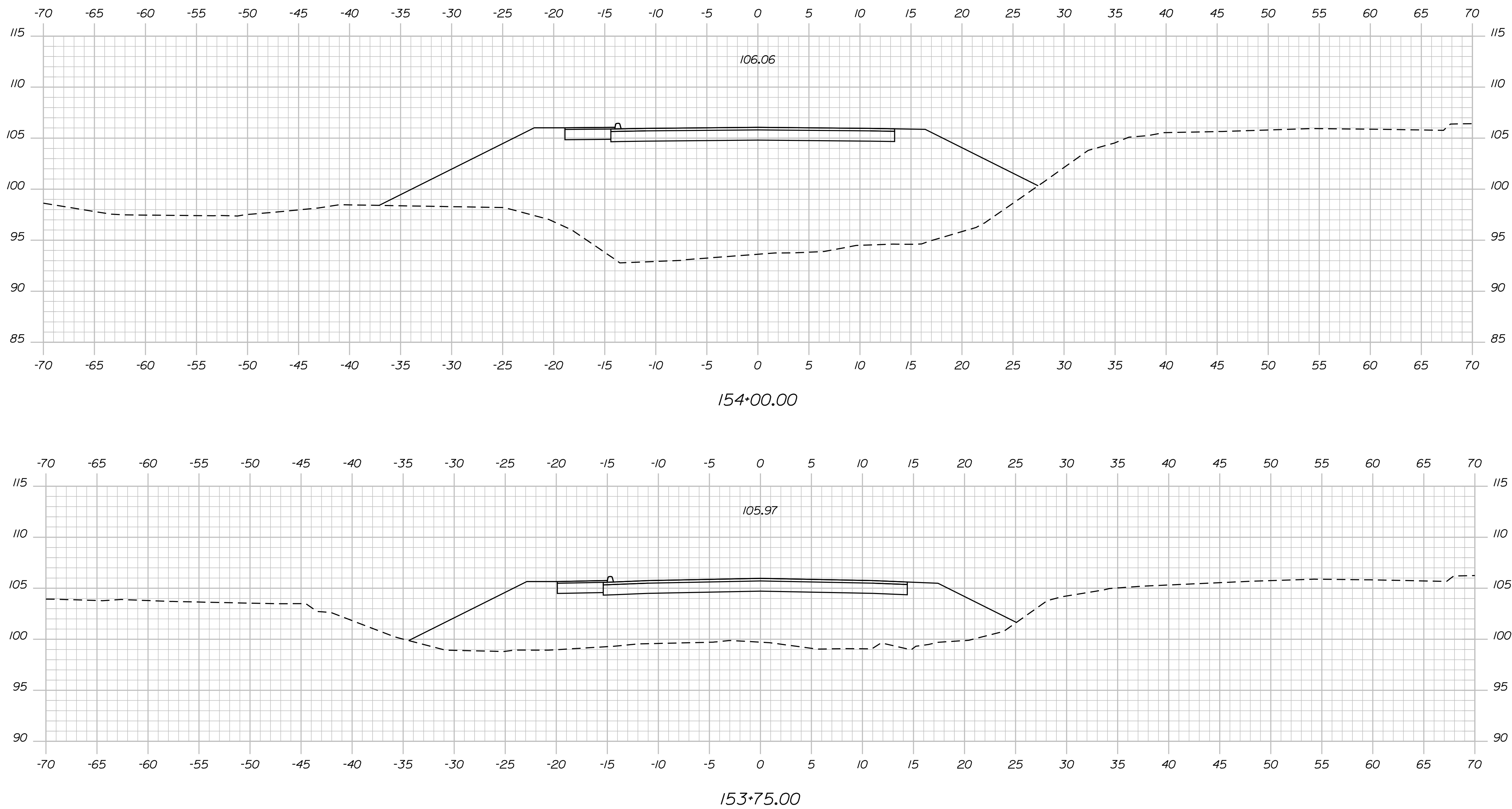
TEMPORARY BRIDGE
OVER STILLWATER RIVER
OLD TOWN
PENOBSCOT COUNTY

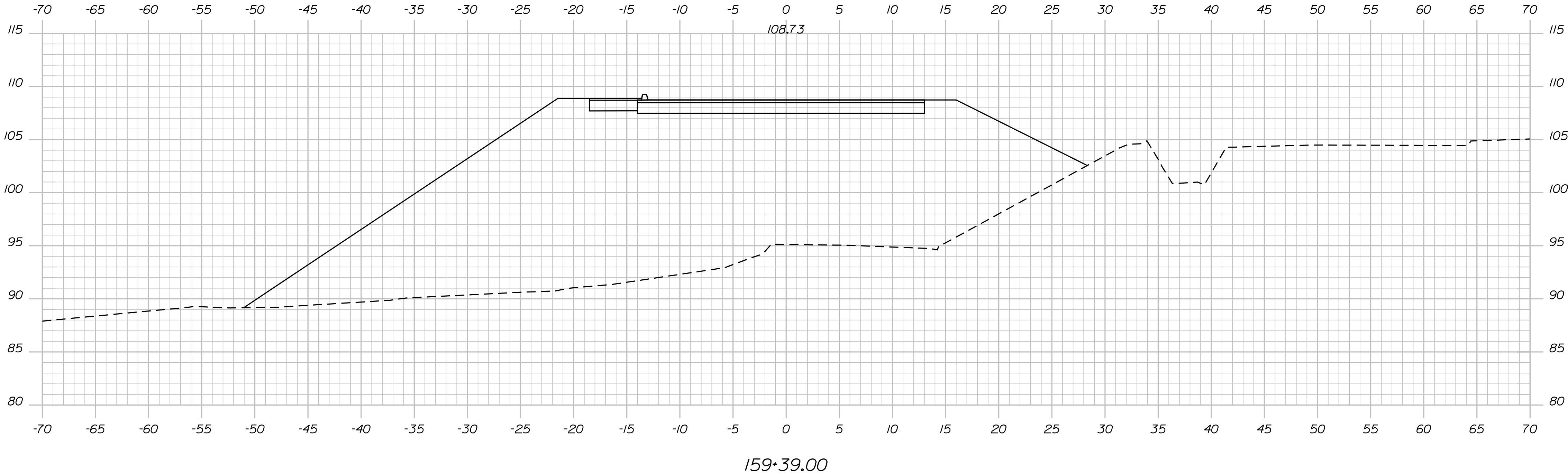
TEMPORARY APPROACH
CROSS SECTIONS

SHEET NUMBER

12

OF 23



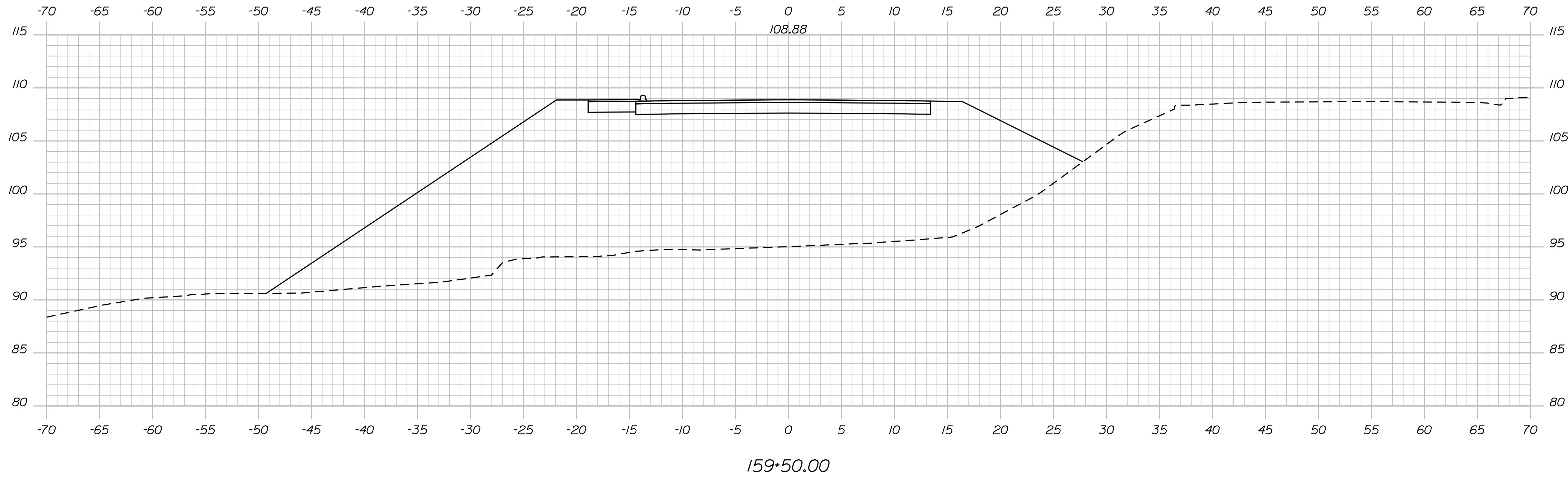
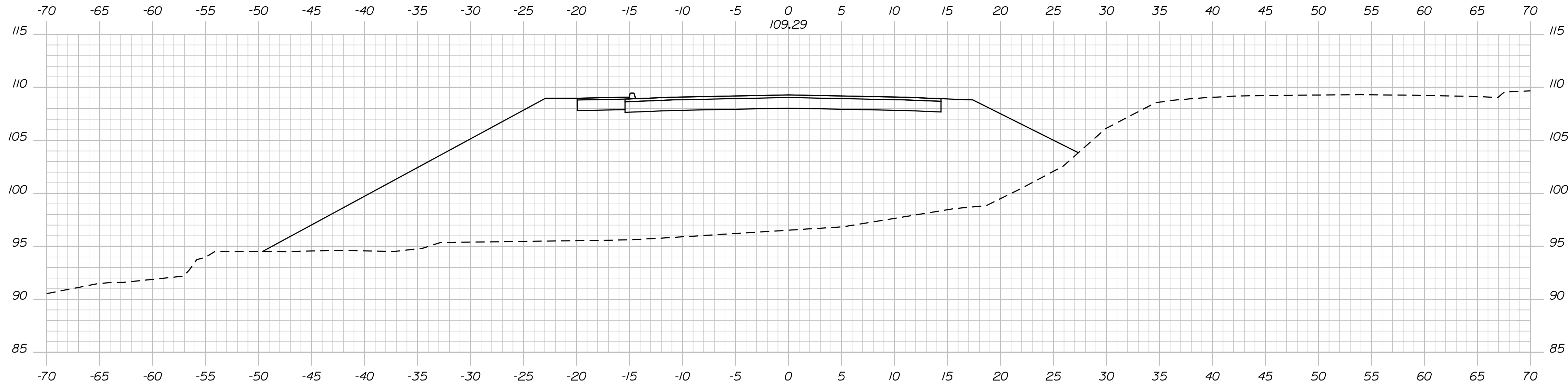
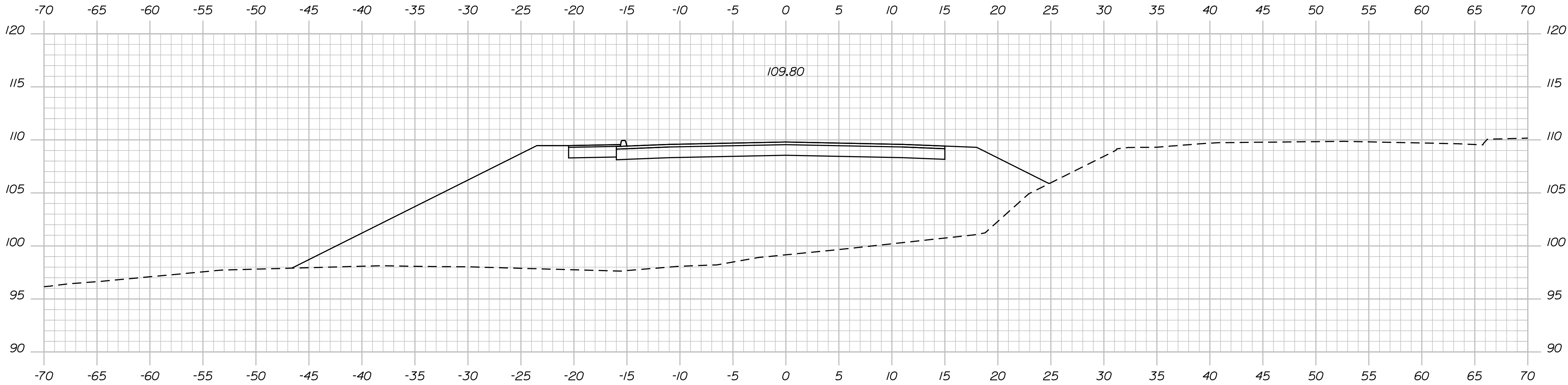


STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2189401	SIGNATURE		PROJ. MANAGER	ANDREW LATHE	BY	DATE
			CHECKED-REVIEWED	J. KHERA	G. SKIBA	04/2023
			DESIGNS-DETAILED	T. HIGGINS	T. POLSON	04/2023
			DESIGNS-DETAILED			
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY TEMPORARY APPROACH CROSS SECTIONS		SHEET NUMBER		14		
		OF 23				
		BRIDGE NO. 1472		WIN 022512.01A		
		BRIDGE NO. 2806		WIN 022511.01A		

BRIDGE PLANS

Date:5/11/2023

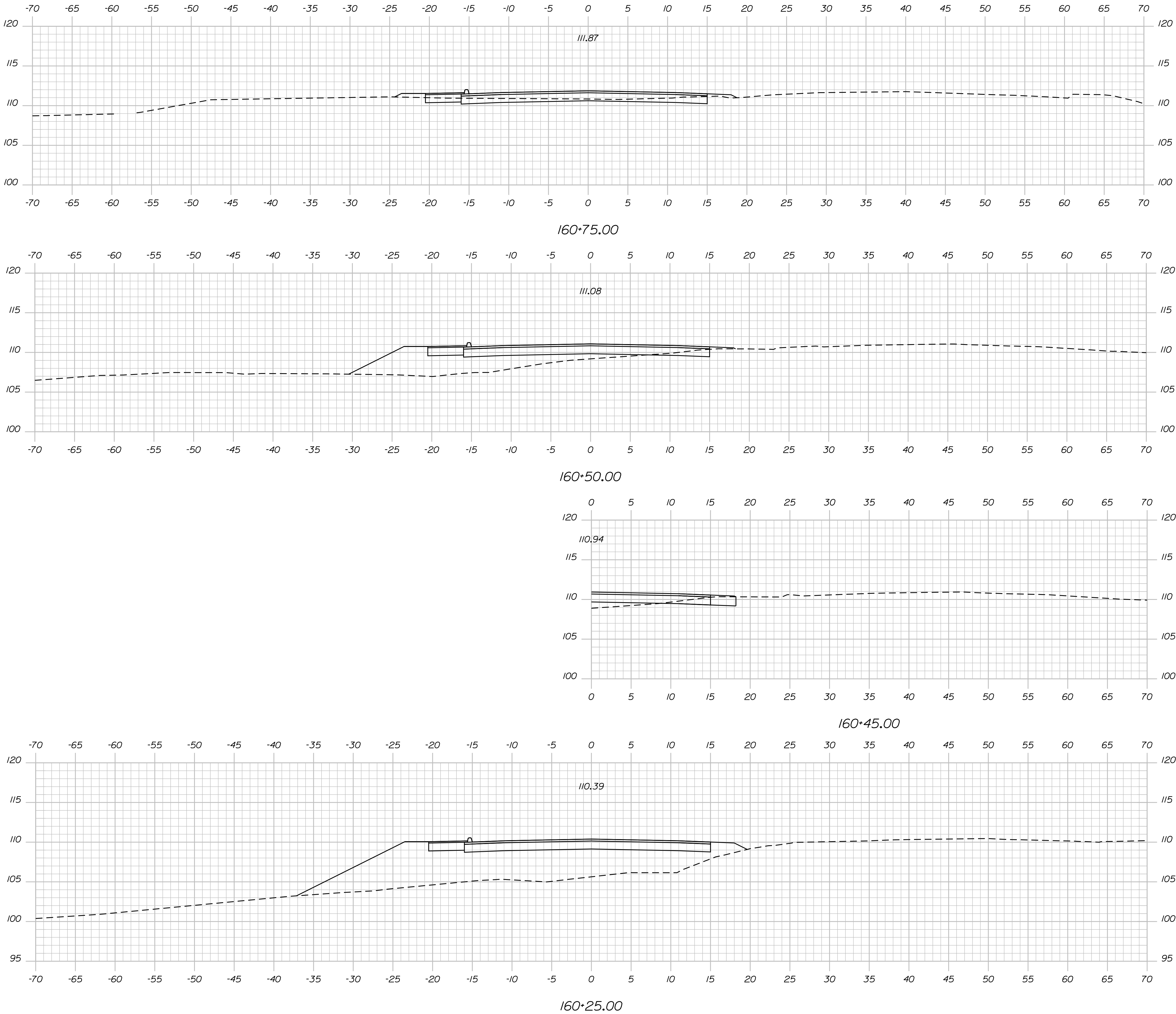
Filename: ... \009-019_TempBridge_Sections.dgn Division: BRIDGE



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2189401		BRIDGE NO. 1472 BRIDGE NO. 2806		BRIDGE PLANS	
	TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY					SHEET NUMBER 15 OF 23
	TEMPORARY APPROACH CROSS SECTIONS					
PROJ. MANAGER ANDREW LATHE	BY G. SKIBA	DATE 04/2023	SIGNATURE	P.E. NUMBER	DATE	
DESIGNED-Detailed	CHECKED-Reviewed	DESIGNED-Detailed	DESIGNED-Detailed	REVISIONS 1	REVISIONS 2	
				REVISIONS 3	REVISIONS 4	
				FIELD CHANGES		

Date:5/11/2023

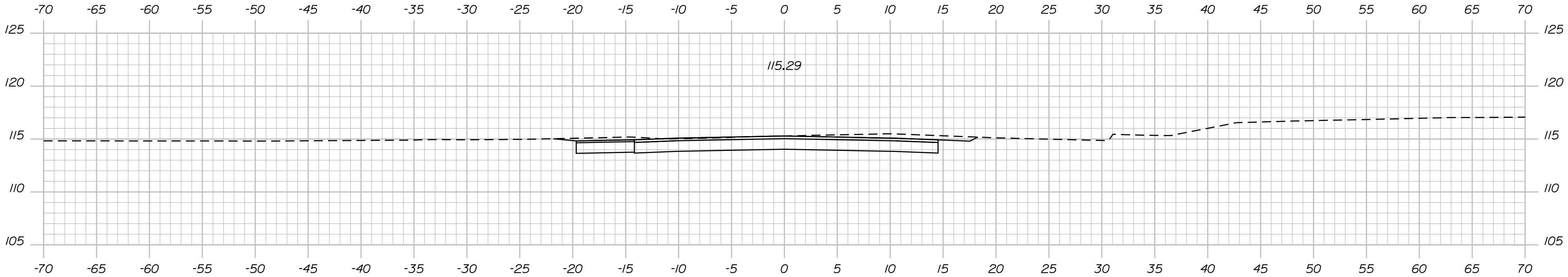
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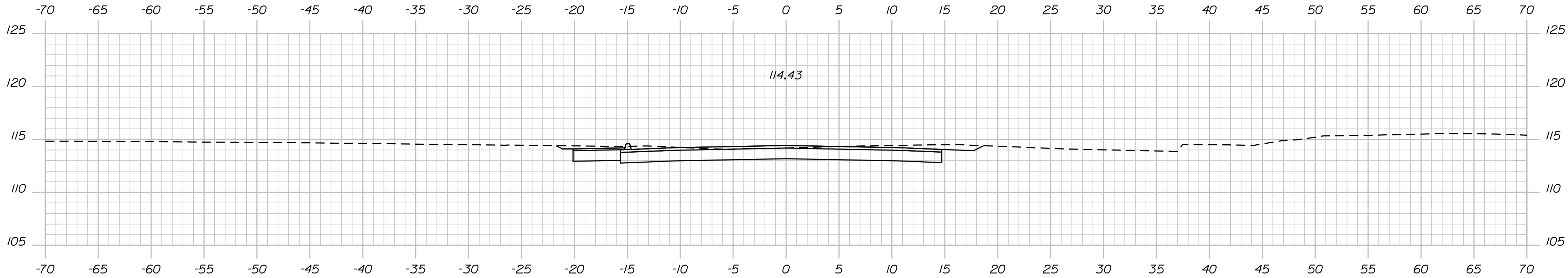
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2189401		BRIDGE NO. 1472 BRIDGE NO. 2806	BRIDGE PLANS
	TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY			
	SHEET NUMBER 16 OF 23			
TEMPORARY APPROACH CROSS SECTIONS		DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	BY G. SKIBA T. POLSON	DATE 04/2023 04/2023
		SIGNATURE	P.E. NUMBER	DATE

Date:5/11/2023

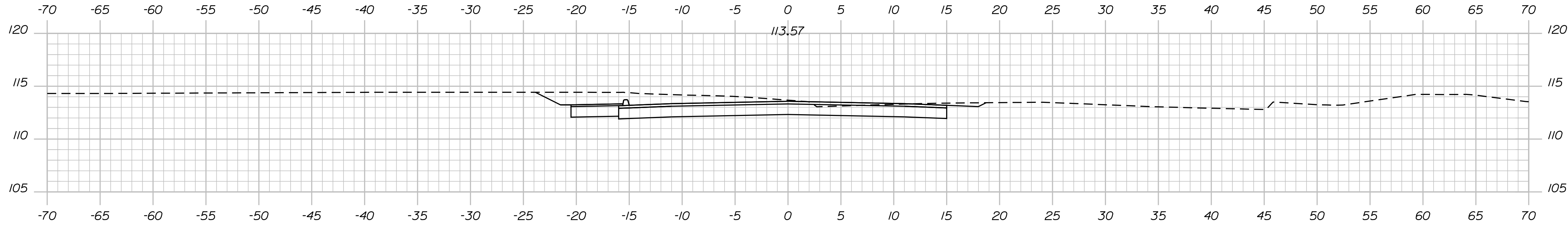
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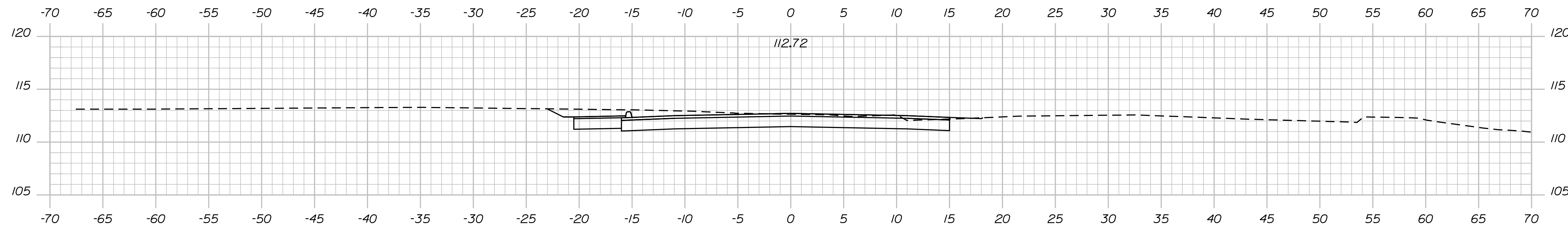
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161+50.00



161+25.00

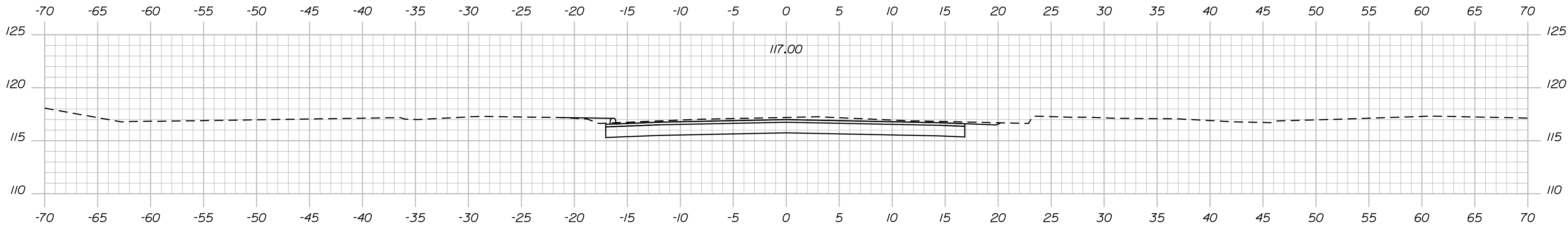


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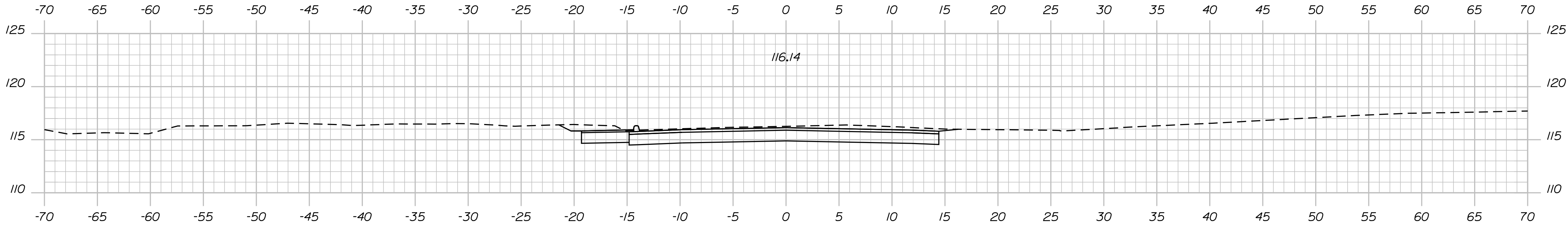
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2189401		BRIDGE NO. 1472 BRIDGE NO. 2806		WIN 022512.01A WIN 022511.01A		BRIDGE PLANS		
	PROJ. MANAGER ANDREW LATHE		BY G. SKIBA	DATE 04/2023	SIGNATURE		P.E. NUMBER		
	DESIGN-DETAILED J. KHERA		CHECKED-REVIEWED T. HIGGINS	DATE 04/2023	DESIGN-DETAILED		P.E. NUMBER		
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY				DESIGN-DETAILED		P.E. NUMBER		DATE	
				REVISIONS 1		REVISIONS 2		REVISIONS 3	
				REVISIONS 4		REVISIONS 5		REVISIONS 6	
				FIELD CHANGES		FIELD CHANGES		FIELD CHANGES	
SHEET NUMBER				17					
				OF 23					

Date:5/11/2023

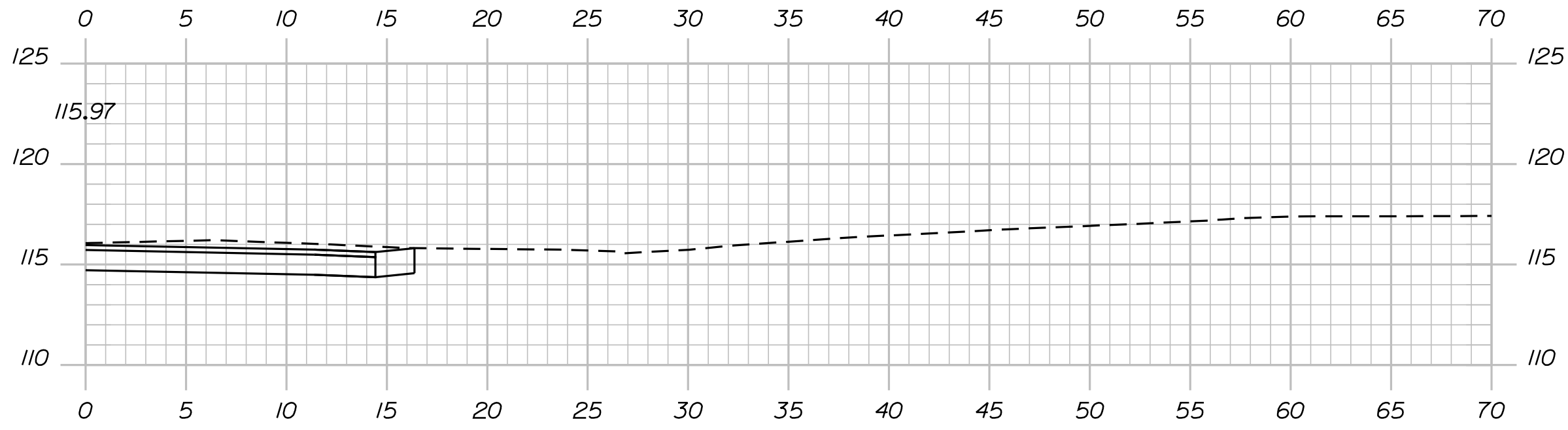
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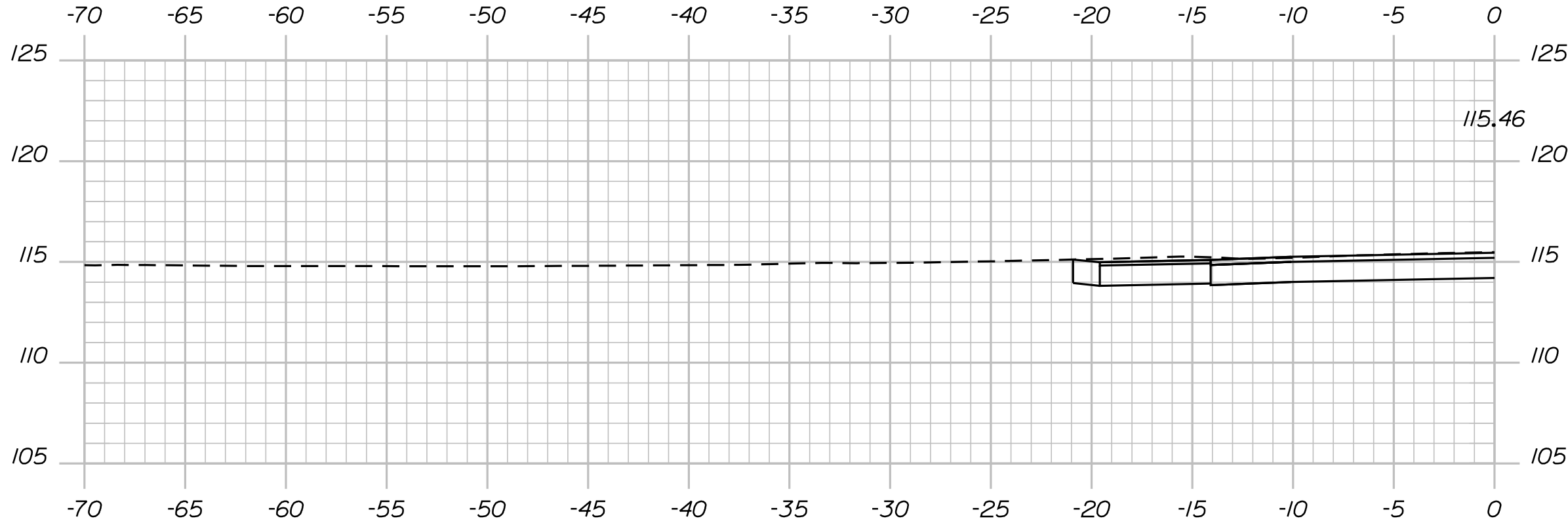
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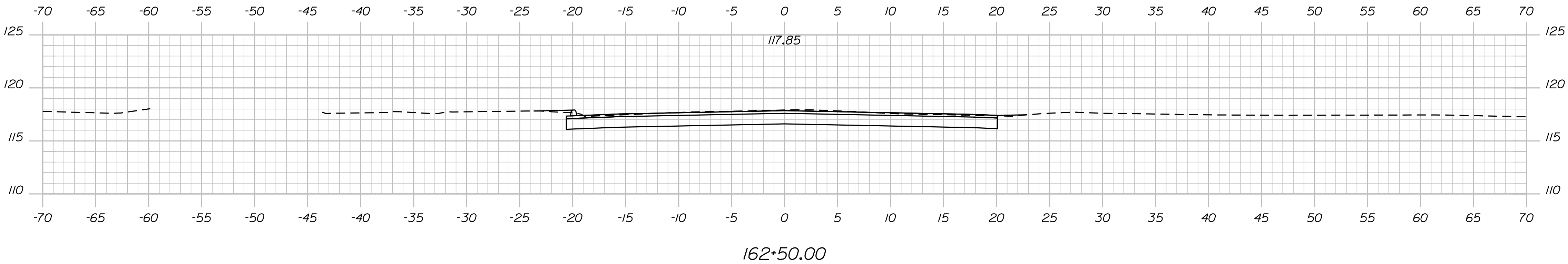


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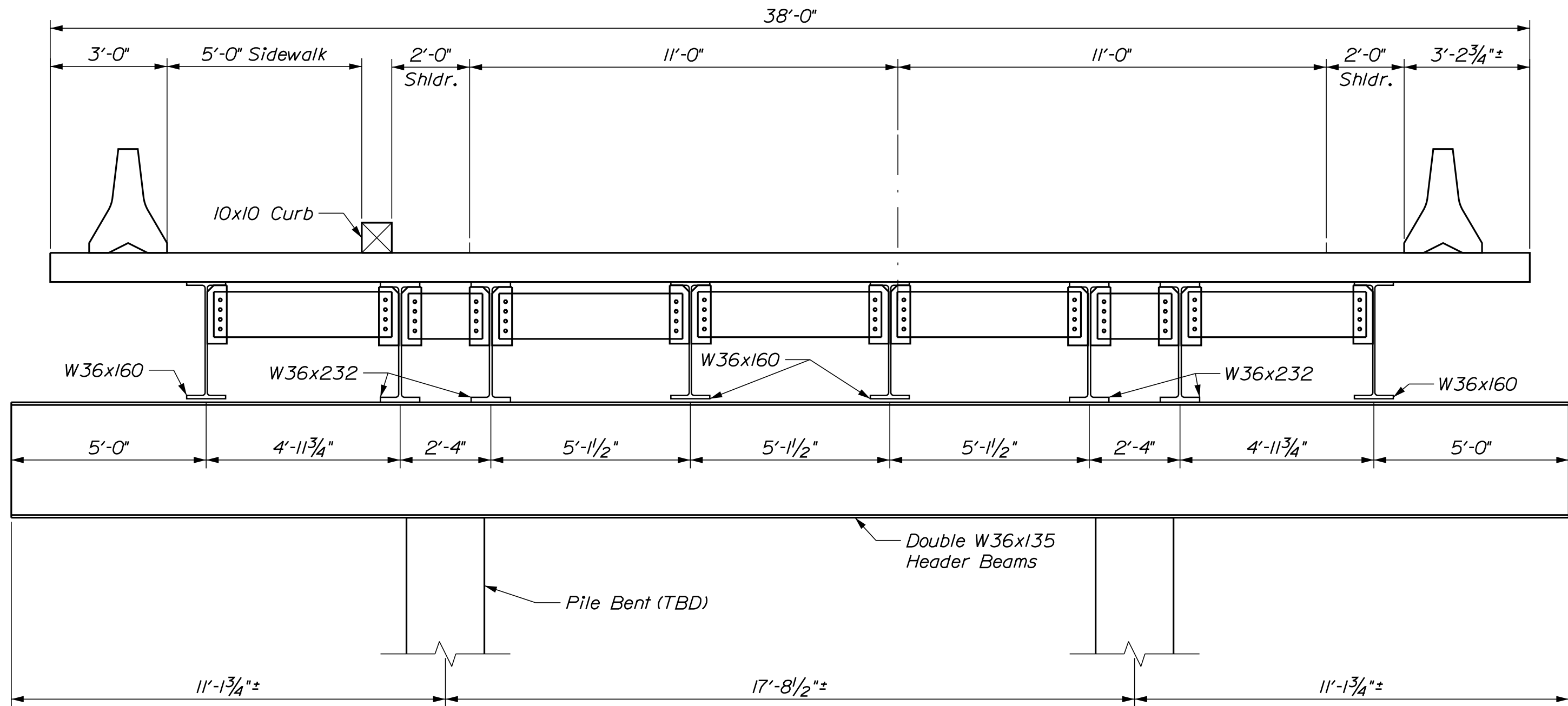
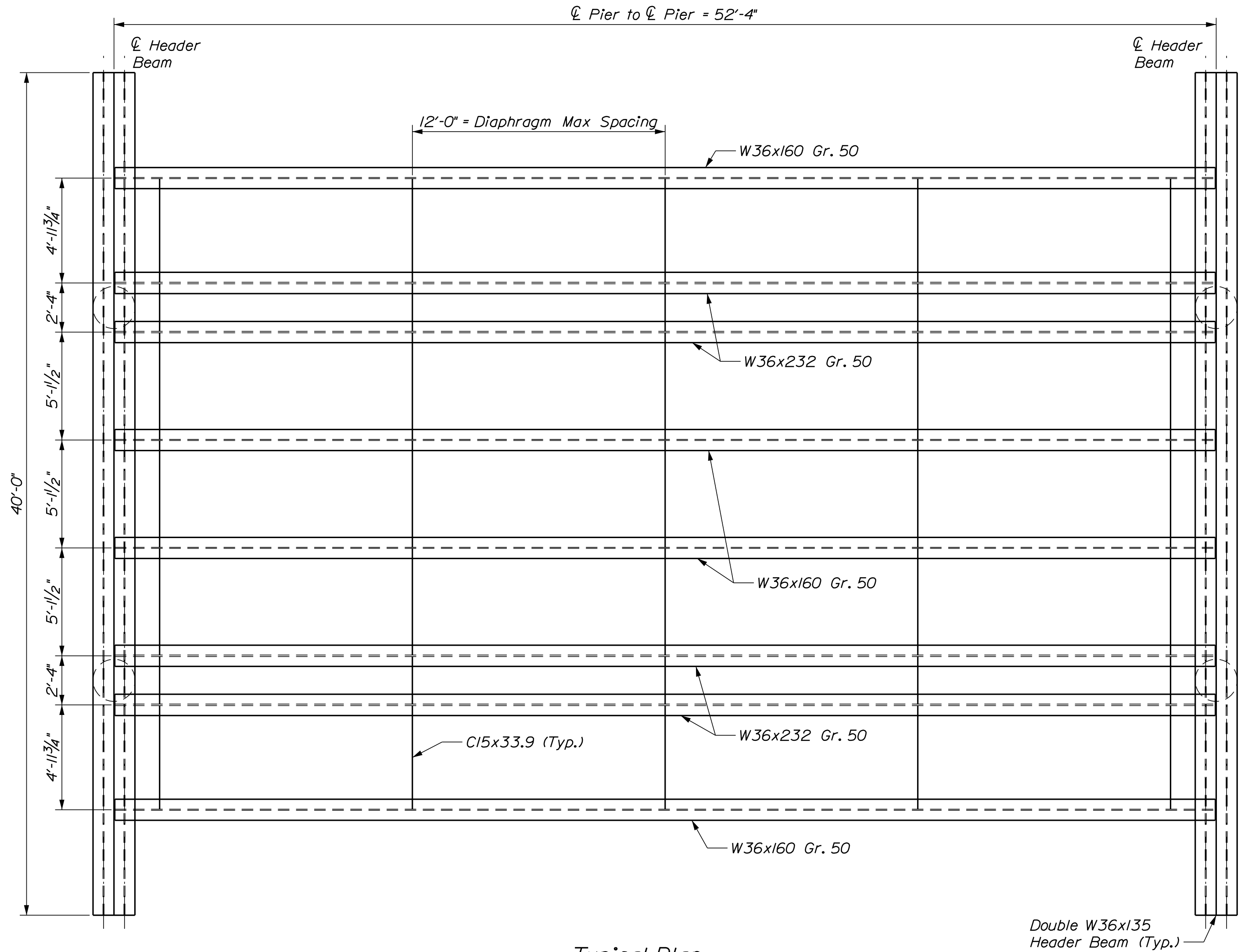


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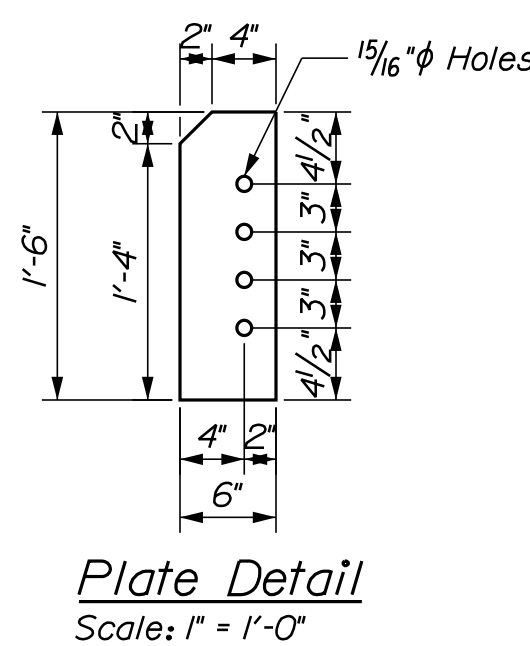
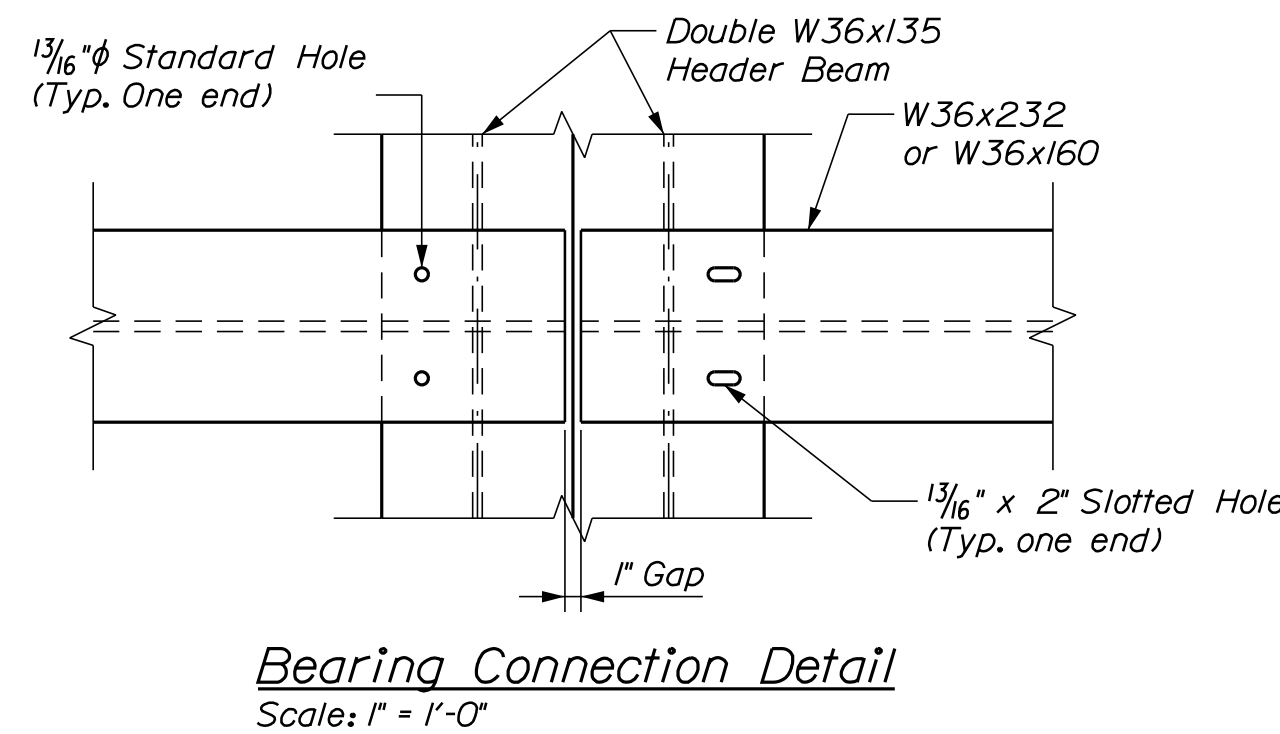
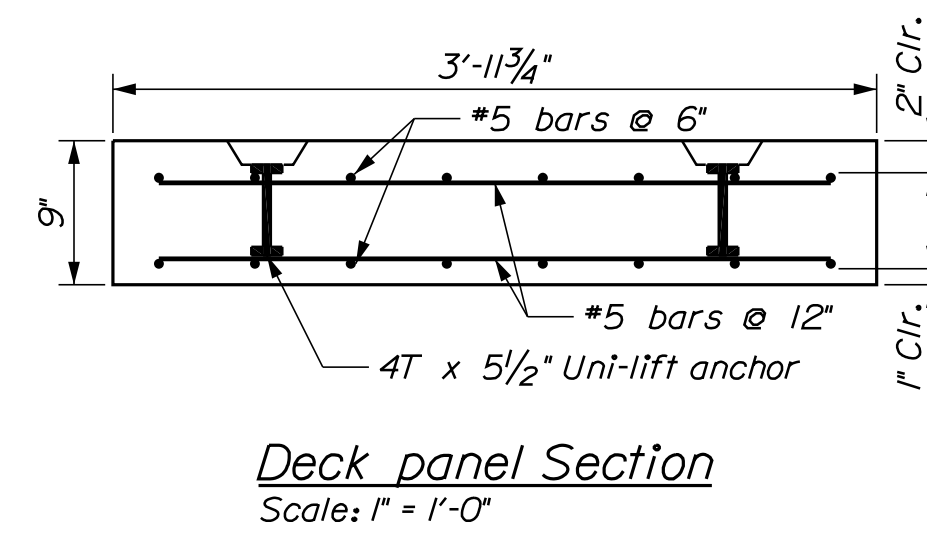
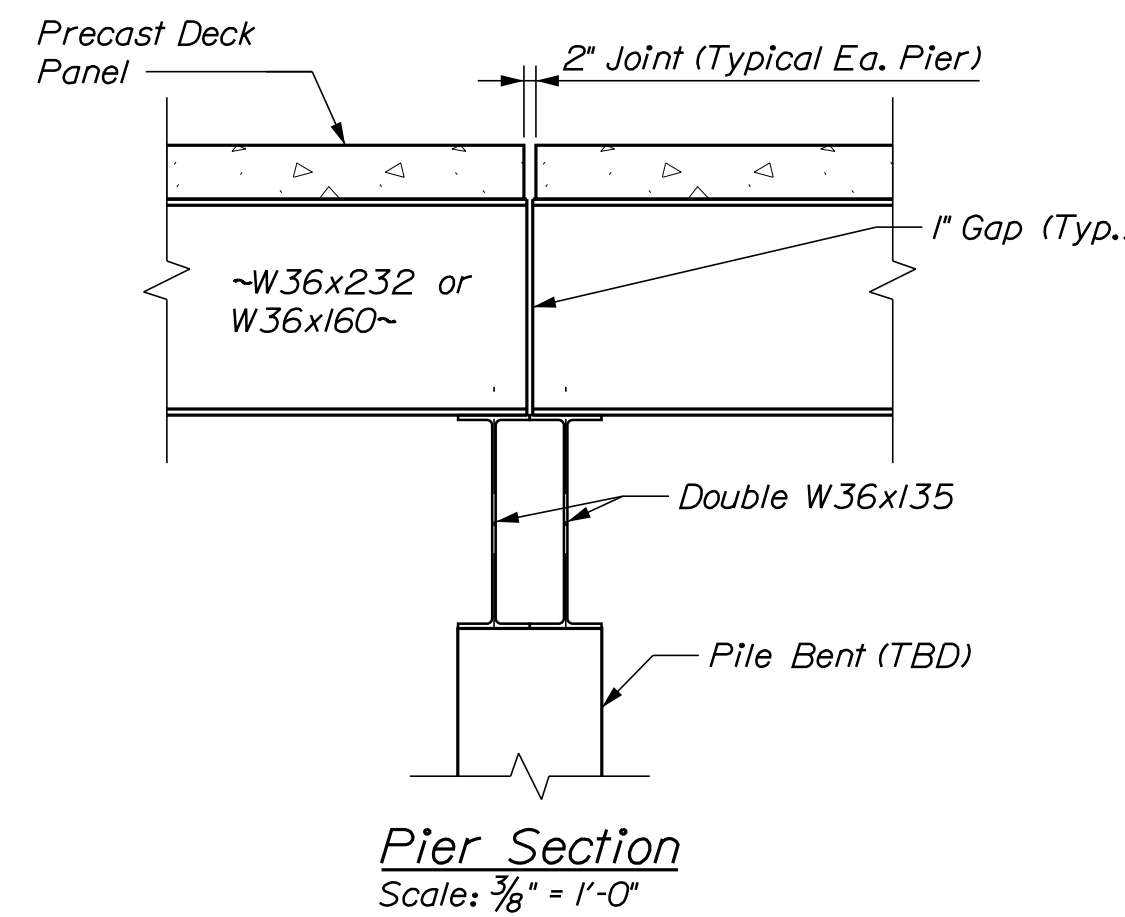
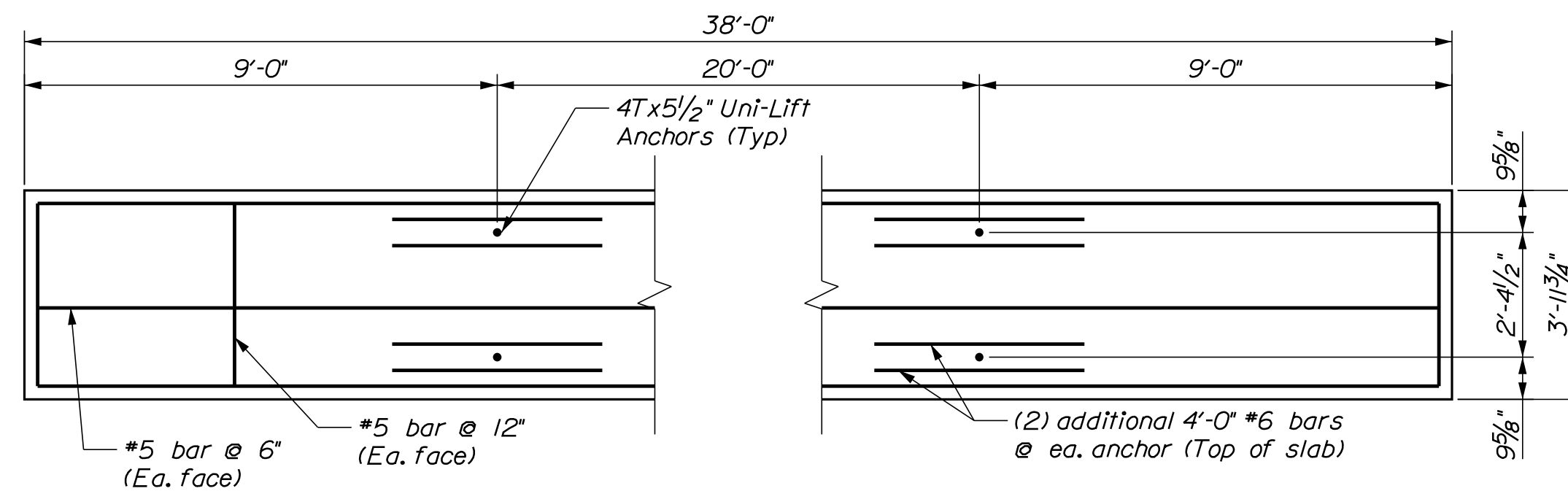
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2189401		BRIDGE NO. 1472 BRIDGE NO. 2806		WIN 022512.01A WIN 022511.01A		BRIDGE PLANS	
	SIGNATURE		P.E. NUMBER		DATE			
	DATE		BY		PROJ. MANAGER			
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY		DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES		DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES		TEMPORARY APPROACH CROSS SECTIONS		SHEET NUMBER
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								OF 23



SHEET NUMBER 19 OF 23	TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY TEMPORARY APPROACH CROSS SECTIONS	PROJ. MANAGER ANDREW LATHE				BY	DATE
		DESIGN-DETAILED J. KHERA		G. SKIBA	04/2023	SIGNATURE	
		CHECKED-REVIEWED T. HIGGINS		T. POLSON	04/2023		
		DESIGN-DETAILED			P.E. NUMBER		
		REVISIONS 1				DATE	
		REVISIONS 2					
		REVISIONS 3					
		REVISIONS 4					
		FIELD CHANGES					
STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2189401		BRIDGE NO. 1472 BRIDGE NO. 2806 WIN 022512.01A WIN 022511.01A BRIDGE PLANS					



PRELIMINARY DETAILS - FOR BIDDING PURPOSES ONLY

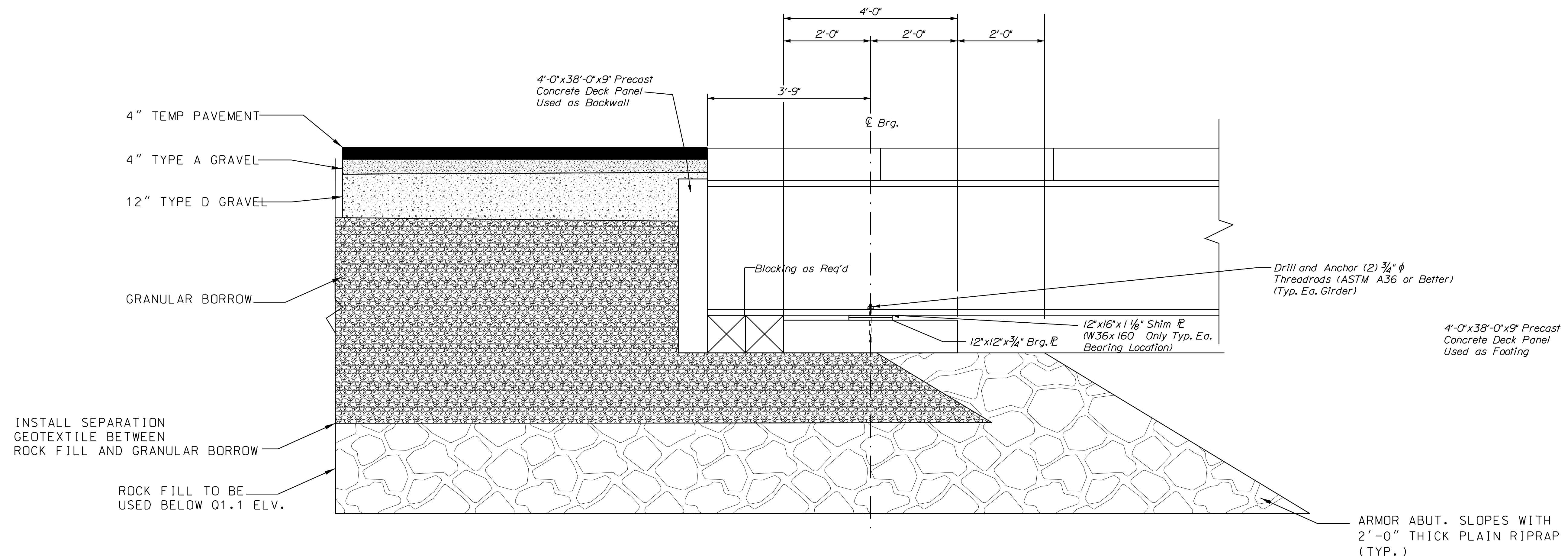


PROJ. MANAGER	ANDREW LATHE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED						
CHECKED-REVIEWED						
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						



Notes:

1. *Concrete shall have have a 28-day Compressive Strength of 4,000psi*
2. *Reinforcing shall have a min. yield strength of 60 KSI and have a Min. Clr. as shown on the details*
3. *All Structural Steel shall be Gr. 36 and shall be in good condition with no appreciable section loss or damage prior to construction.*
4. *All Welding shall be done by certified welders, qualified in the procedure, position, and process required. All welding shall be in accordance with MaineDOT 2020 Standard Specification Section 504 and ANSI/ASHTO/AWS D1.5*
5. *All welds shall be done with E70xx electrodes*
6. *All Bearing and Shim Pls shall be ASTM A36 Gr. 36*
7. *All bolts shall be ASTM A325*



TYPICAL ABUTMENT SECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2189401

BRIDGE NO. 1472 **WIN UZ2512.01A**
 BRIDGE NO. 2806 **WIN 022511.01A**

SIGNATURE

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OLD TOWN
OVER STILLWATER RIVER
TEMPERANCE BRIDGE

TEMPORARY ABUTMENT DETAILS

SHEET NUMBER

21

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PRELIMINARY DETAILS -
FOR BIDDING PURPOSES ONLY

ESTIMATED PIPE PILE LENGTHS

Location	Station	FG Elevation	EG Elevation	Bottom of Header Elv	Socket Depth	Anticipated Pile Length	(+5 ft possible overburden)	Pile Buyout Length
Abut A	154+14.33	106.13	91.29					0
Bent 1	154+66.66	106.36	86.24	99.61	10.00	23.37	28.37	30
Bent 2	155+18.99	106.6	89.15	99.85	10.00	20.70	25.70	30
Bent 3	155+71.32	106.83	90.01	100.08	10.00	20.07	25.07	30
Bent 4	156+23.65	107.07	95.00	100.32	10.00	15.32	20.32	25
Bent 5	156+75.98	107.3	90.09	100.55	10.00	20.46	25.46	30
Bent 6	157+28.31	107.54	79.81	100.79	10.00	30.98	35.98	40
Bent 7	157+80.64	107.77	75.00	101.02	10.00	36.02	41.02	45
Bent 8	158+32.97	108.01	79.00	101.26	10.00	32.26	37.26	40
Bent 9	158+85.30	108.25	82.95	101.50	10.00	28.55	33.55	35
Abut B	159+37.63	108.71	94.09					0

Note: All dimensions in feet.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2189401
WIN 022512.01A
WIN 022511.01A
BRIDGE NO. 1472
BRIDGE NO. 2806
BRIDGE PLANS

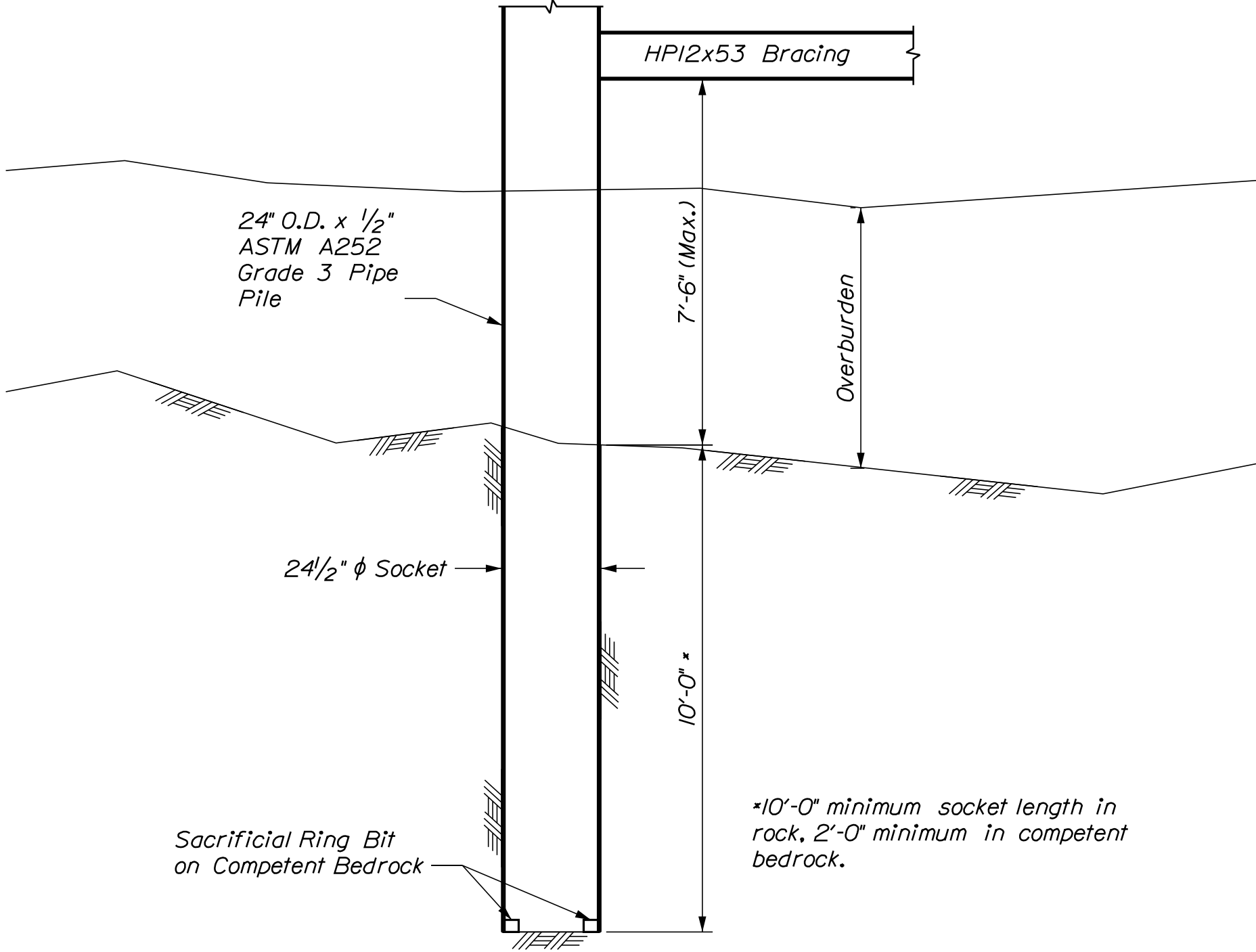
TEMPORARY BRIDGE
OVER STILLWATER RIVER
OLD TOWN
PENOBSCOT COUNTY
TEMPORARY
PIER DETAILS

SHEET NUMBER
22
OF 23

PROJ. MANAGER ANDREW LATHE
DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY
DATE

SIGNATURE
P.E. NUMBER
DATE



PIPE PILE SOCKET DETAIL

Pipe Pile Notes:

- The maximum factored axial load is 594 kips at the Strength Limit State and 400 kips at the Extreme Event Limit State, which were calculated using FBPIer analyses considering design axial and lateral loading.
- Pipe pile material shall be ASTM A252, Grade 3 (45 ksi yield strength) steel pipe with an outside diameter of 24 inches and a minimum wall thickness of 0.5 inches.
- Pipe piles shall be fitted with a Mincon Spiral Flush sacrificial ring bit with a maximum outside diameter of 24.5 inches, or approved equal. The ring bit shall be welded to the end of the pipe pile before installation.
- Pipe piles shall be advanced to a minimum socket depth of 10 feet below the top of bedrock. If more than 8 feet of weathered rock is encountered, the pile shall be advanced to a minimum of 2 feet into competent rock, resulting in a longer socket length. Evaluation of weathered and competent bedrock will be based on drilling characteristics and shall be judged by the Contractor and evaluated and agreed upon by the Department's geotechnical representative.
- An unknown thickness of overburden may be present at the pier locations. An additional 5 feet of pile length shall be provided to account for the possible presence of overburden.
- At the end of pile advancement, the pile shall be cleaned with high pressure air and/or water to provide a clean socket bottom inside the pile. The depth to the clean bottom of socket shall be compared to the installed pile length including the sacrificial bit to confirm that the pile is bearing directly on bedrock.
- The pile performance is a function of the braced length of the upper portion of the piles. Cross bracing shall be designed to minimize bending in the upper portion of the pile. The bottom of the horizontal strut placed at the bottom of the cross bracing shall be located no more than 7.5 feet above the top of bedrock. Actual required bracing lengths below the bottom of cap beams will depend on the presence of overburden and shall be determined for each pier prior to bracing installation.
- The Department's geotechnical representative shall be present during pile installation to observe pile socketing and to evaluate top of rock elevation, presence of weathered rock, tip elevation and bearing conditions for each pile.
- See GZA GeoEnvironmental, Inc.'s geotechnical design memorandum for temporary bridge foundation design dated May 8, 2023 for additional information on the bedrock encountered at the site.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2189401		BRIDGE NO. 1472 BRIDGE NO. 2806		WIN 022512.01A WIN 022511.01A		BRIDGE PLANS	
TEMPORARY BRIDGE OVER STILLWATER RIVER OLD TOWN PENOBSCOT COUNTY		TEMPORARY PIER PILE PILE SOCKET DETAILS		SHEET NUMBER		23		OF 23			
PROJ. MANAGER ANDREW LATHE		BY		DATE		SIGNATURE		P.E. NUMBER		DATE	
DESIGN-DETAILED						Andrew R. Blaisdell		10957		05/19/2023	
CHECKED-REVIEWED											
DESIGN-DETAILED											
REVISIONS 1											
REVISIONS 2											
REVISIONS 3											
REVISIONS 4											
FIELD CHANGES											