

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 Modified for Strength I

TRAFFIC DATA

	Route 1	I-295 NB	I-295 SB
Current (2023) AADT	10,240	23,770	25,040
Future (2043) AADT	11,260	26,150	27,540
DHV - % of AADT	13	13	13
Design Hour Volume	1464	3400	3580
Heavy Trucks (% of AADT)	3	12	11
Heavy Trucks (% of DHV)	1	4	6
Directional Distribution (% of DHV)	77	100	100
18 kip Equivalent P 2.0	73	2810	2796
18 kip Equivalent P 2.5	70	2677	2664
Design Speed (mph)	45	65	65

MATERIALS

Concrete:
Fill "Fill"
Deck Class "A1"
All Other Class "A"

Reinforcing:
Plain Reinforcing Steel ASTM A615, Grade 60
Low-Carbon Chromium Reinforcing ASTM A1035, Type CS Grade 100

Structural Steel:
All Material (except as noted) ASTM A 709, Grade 50 (metalized)
High Strength Bolts ASTM F 3125, Grade A 325, Type 1 (galvanized)

BASIC DESIGN STRESSES

Concrete
Class "A1" f 'c = 4,000 psi
Class "A" f 'c = 4,000 psi

Reinforcing:
Plain Reinforcing Steel f y = 60,000 psi
Low-Carbon Chromium Reinforcing f y = 100,000 psi

Structural Steel:
ASTM A 709, Grade 50 f y = 50,000 psi
ASTM F 3125, Grade A 325 Type 1 F μ = 120,000 psi

CUMBERLAND-YARMOUTH
CUMBERLAND COUNTY
RELOCATED US 1 BRIDGE
OVER
INTERSTATE 295
US ROUTE 1
FEDERAL AID PROJECT NO. 2238200
PROJECT LENGTH 0.42 mi.
BRIDGE NO. 5804

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UTILITIES

Central Maine Power Co. Charter/Spectrum Cable
Firstlight Consolidated Communications
MaineDOT

MAINTENANCE OF TRAFFIC

Traffic maintained on existing bridge during construction.

PROJECT LOCATION	Route 1 in Yarmouth at Exit 15 of Interstate 295 Lat./Long. 43°47'04.79" N 70°11'25.52" W
OUTLINE OF WORK	Bridge Replacement

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
	COMMISSIONER: <i>[Signature]</i>	5-30-25
	CHIEF ENGINEER: <i>[Signature]</i>	5-31-2025



SIGNATURE	P.E. NUMBER	DATE
<i>[Signature]</i>	13444	MAY 21, 2025

PROJECT INFORMATION					
PROGRAM	Bridge Program	PROJECT MANAGER	Julie Brask	DESIGNER	Sean James
CONSULTANT	Hoyle, Tanner & Assoc., Inc.	PROJECT RESIDENT		CONTRACTOR	
COMPLETION DATE					

WIN 22382.00

2238200

CUMBERLAND-YARMOUTH RELOCATED US 1 BRIDGE	TITLE SHEET
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SHEET NUMBER
1
OF 121

GENERAL CONSTRUCTION NOTES

1. For easements, construction limits, and right of way lines, refer to the Right of Way Map.

2. The clearing limits as shown on the plans are approximate. The actual clearing limits for payment will be established in the field by the Resident.

3. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

4. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.

5. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.

6. Construct the riprap shelf at Abutment 1 at EL. 100.00 and at Abutment 2 at EL. 99.00.

7. Place loam 2 inches deep on all new or reconstructed sideslopes or as directed by the Resident.

8. *Erosion Control Mix* may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Pay Item 619.14, *Erosion Control Mix*.

9. A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.

10. Where it is apparent that runoff will cause continual erosion, Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed. Payment will be made under the appropriate Contract Items.

11. *Protective Coating for Concrete Surfaces shall be applied to the following areas:*

*All exposed surfaces of concrete curbs and sidewalks,
Fascias down to the drip notch,
Top of abutment backwalls and wingwalls
To one foot below the top of backwalls and wingwalls on the backside, and
All exposed horizontal and vertical faces of abutment and piers, to one foot below
the ground.*

12. Project information referred to below may be accessed at the following
MaineDOT web address: <http://www.maine.gov/mdot/contractors/>

13. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

14. The project geotechnical report titled: *Geotechnical Design Report_Replacement of Tuttle Road, March 2025* may be accessed at the MaineDOT web address.

15. Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations.

16. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.

17. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials included in the existing bridge. No work related to the removal of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting, and finalizing the Demolition Plan will be considered incidental to the bridge removal pay item.

18. The existing bridge shall be removed by and become the property of the Contractor. The steel portions of the existing bridge may be coated with a lead-based paint system. The Contractor is responsible for the containment, proper management and disposal of all lead-contaminated hazardous waste generated by the process of demolishing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge is removed, the Contractor is solely responsible for the care, custody, and control of the components of the existing bridge and any hazardous waste generated as a result of the storage, recycling, or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment, and other costs required to remove and dispose of the existing bridge will be considered incidental to the bridge removal pay item.

19. Pavement cuts for installation of drainage or other items in areas where traffic is being maintained shall be covered with temporary pavement. Payment for temporary pavement will be incidental to related contract items.

20. The location of existing underground utilities and drainage shown on plans and cross-sections is approximate and should be confirmed by the Contractor.

SIGNAGE AND PAVEMENT MARKING NOTES

1. The Contractor shall install and activate the new traffic configuration at the Tuttle Road and Middle Road intersection as soon after starting work on site as is feasible given material lead times and site conditions. Temporary sign locations, pavement marking symbols, and striping may be used as directed by the Resident where the permanent location is not possible to install until the roadway has been realigned.

2. Red reflective vertical strips will be placed on each stop sign post facing traffic and yellow reflective vertical strips will be placed on each stop ahead sign post facing traffic. This work is considered incidental to the pay items for the new all-way stop signs.

3. All new signs on Tuttle Road for the proposed all-way stop configuration shall be kept covered until new Tuttle Road flashing stop signs are activated. Stop signs and advanced warning signs on Middle Road approaches do not need to be covered.

4. *Proposed sign locations shown on the plans are approximate. Actual locations should be determined in the field per MUTCD and as directed by the Resident.*

5. New traffic pattern ahead signs are temporary and shall remain in place for approximately 6 months.

6. Portable changeable message signs (PCMS) shall be installed on both Tuttle Road approaches at least 14 days before new all-way stop signs are uncovered and shall remain in place for at least 14 days after the traffic pattern change.

7. PCMS messages shall be:

<i>First screen:</i>	<i>Before change</i>	<i>After change</i>
	"NEW	"NEW
	TRAFFIC	TRAFFIC
	PATTERN"	PATTERN
<i>Second screen:</i>	"STARTING	"STOP
	[DATE]"	AHEAD"

8. Apply new center and edge line pavement markings from new stop bars, extending approximately 100 ft along each leg of the all-way stop intersection (outside of project limits) or as directed by the Resident.

9. The General Plans (Sheets 4-6) show the final location of pavement markings and symbols. Install "stop" and "stop ahead" symbol in advance of stop bars on each leg of the all-way stop intersection, per MUTCD and MaineDOT Traffic Engineering, Striping & Stenciling Handbook.

10. All proposed solar-powered signs are to be LED flashing white.

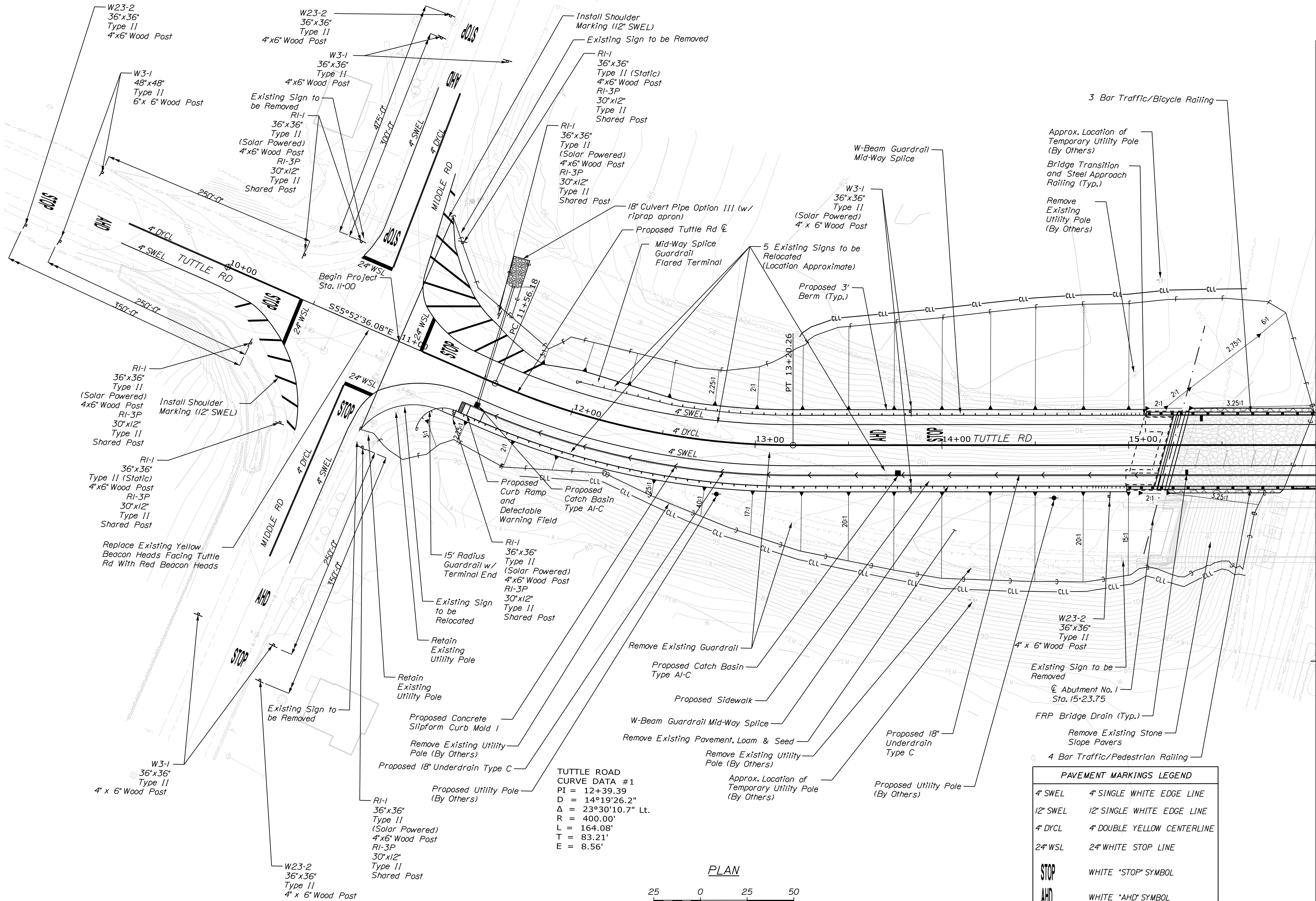
SHEET NUMBER 3 OF 88	TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY				PROJ. MANAGER	Cerdol Dostie	BY	DATE
	GENERAL CONSTRUCTION NOTES				DESIGN-DETAILED	CJ	CJ	05/2025
					CHECKED-REVIEWED	RF	RF	05/2025
					DESIGN2-DETAILED2			
					DESIGN3-DETAILED3			
				REVISIONS 1			P.E. NUMBER	
				REVISIONS 2				
				REVISIONS 3				
				REVISIONS 4			DATE	
				FIELD CHANGES				
STATE OF MAINE DEPARTMENT OF TRANSPORTATION <								

Date:5/28/2025

Username: common

Division: BRIDGE

Filename: ... \BRIDGE\004_BDPlan_ 1.dgn



MATCH LINE - STA. 16+00

TUTTLE ROAD
CURVE DATA #1
PI = 12+39.39
D = 14°19'26.2"
Δ = 23°30'10.7" Lt.
R = 400.00'
L = 164.08'
T = 83.21'
E = 8.56'

PLAN



PAVEMENT MARKINGS LEGEND	
4" SWEL	4" SINGLE WHITE EDGE LINE
12" SWEL	12" SINGLE WHITE EDGE LINE
4" DYCL	4" DOUBLE YELLOW CENTERLINE
24" WSL	24" WHITE STOP LINE
STOP	WHITE "STOP" SYMBOL
AHD	WHITE "AHD" SYMBOL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100

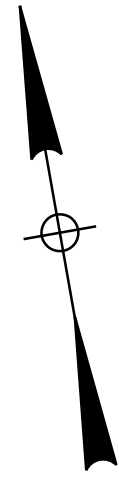
TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND COUNTY
GENERAL PLAN (1 OF 3)

SHEET NUMBER
4
OF 88

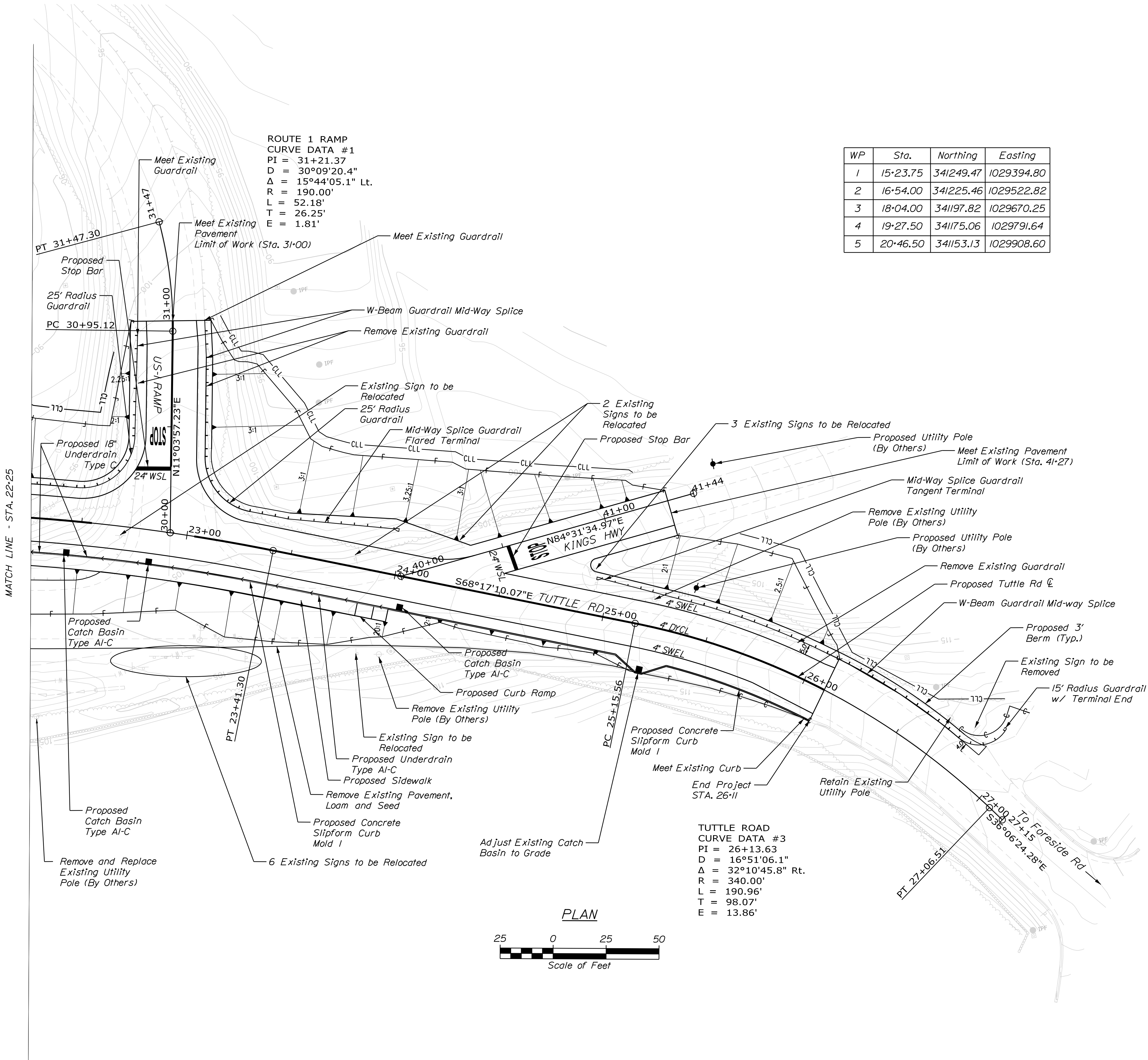
BRIDGE NO. 6601
WIN
2516100

DATE
05/2025
SIGNATURE
P.E. NUMBER
DATE

FIELD CHANGES
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4



OF 88 SHEET NUMBER		TUTTLE ROAD BRIDGE				PROJ. MANAGER	Gerold Dostle	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2516100	
		INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY GENERAL PLAN (2 OF 3)				DESIGN-DETAILED	GRS	GRS	05/2025		
						CHECKED-REVIEWED		SLM	SLM		05/2025
						DESIGN2-DETAILED2					
						DESIGN3-DETAILED3					P.E. NUMBER
						REVISIONS 1				WIN 25161.00 BRIDGE NO. 5601 BRIDGE PLANS	
						REVISIONS 2					
						REVISIONS 3					
						REVISIONS 4			DATE		
						FIELD CHANGES					



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
GENERAL PLAN (3 OF 3)

SHEET NUMBER
6
OF 88

BRIDGE NO. 6601
WIN
25161.00
BRIDGE PLANS

DATE
03/2025
SIGNATURE
P.E. NUMBER
DATE

DESIGN-DETAILED
CHECKED-REVIEWED
DESIGN-DETAILED
DESIGN-DETAILED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

PERMANENT SIGN RELOCATIONS / REMOVALS					
EXISTING STA.	EXISTING OFFSET	PROPOSED STA.	PROPOSED OFFSET	SIGN DESCRIPTION	REMARKS
EXISTING TUTTLE RD SIGNS WITHIN CONSTRUCTION LIMITS					
11+08	67' LT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"STOP", "CROSS TRAFFIC DOES NOT STOP"	
11+16	31' RT	11+22	31' RT	"BICYCLE 1"	
12+06	21' RT	12+06	26' RT	"SPEED LIMIT 35"	
12+18	14' LT	12+50	20' LT	"VAL HALLA"	
12+18	16' LT	12+50	22' LT	"NORTH" BICYCLE "1"	
12+76	7' LT	13+00	20' LT	"MAIN LINE FENCE"	
13+44	11' RT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"25 MPH" SPEED ADVISORY	
13+69	14' RT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	INTERSECTION "MIDDLE RD"	
14+97	62' RT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"WEIGHT LIMIT 25 TONS"	
14+99	29' RT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"CAUTION HIGH CRASH LOCATION AHEAD"	
20+89	25' RT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"WEIGHT LIMIT 25 TONS"	
21+50	25' RT	21+50	25' LT	"SPEED LIMIT 35"	
22+67	4' RT	30+40	22' LT	"STOP"	
22+80	65' RT	22+70	25' RT	"PORTLAND 9, BRUNSWICK 16" "TO" RT 1	
22+87	64' RT	22+75	25' RT	"CHURCH, CUMBERLAND 3.5 MILES"	
22+90	61' RT	22+80	25' RT	"TUTTLE RD" "VAL HALLA"	
22+94	59' RT	22+85	25' RT	"CUMBERLAND FORESIDE", "COUSINS ISLAND 4", "CUMBERLAND CTR 3", "TO" 81	
23+03	60' RT	22+90	25' RT	"TUTTLE RD", "COMMUNITY CHURCH"	
23+08	56' RT	23+08	25' RT	"TO" RT 1	
23+38	52' RT	23+38	25' RT	BICYCLE "1"	
23+81	3' LT	40+38	9' LT	BICYCLE "1"	
23+89	40' RT	23+82	25' RT	NO LEFT TURN	
24+27	22' LT	40+55	9' LT	"STOP" "DO NOT ENTER"	
24+89	19' LT	40+92	21' RT	"DO NOT ENTER"	
24+93	21' LT	40+94	21' RT	"KINGS HWY" "TUTTLE RD"	
24+95	14' LT	25+45	21' LT	NO RIGHT TURN	
26+78	24' LT	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"BRIDGE POSTED AHEAD" "25 TONS"	
EXISTING TUTTLE RD / MIDDLE RD INTERSECTION SIGNS					
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"CAUTION HIGH CRASH LOCATION AHEAD"	MIDDLE RD. (SOUTH) APPROX. 490' SOUTH OF EXIST. STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"BRIDGE POSTED TUTTLE RD LIMIT TO 25 TONS"	MIDDLE RD. (SOUTH) APPROX. 430' SOUTH OF EXIST. STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"STOP AHEAD"	MIDDLE RD. (SOUTH) APPROX. 190' SOUTH OF EXIST. STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"STOP"	MIDDLE RD. (SOUTH) APPROX. 20' SOUTH OF EXIST. STOP BAR (2 SIGNS)
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"BRIDGE POSTED TUTTLE RD LIMIT TO 25 TONS"	MIDDLE RD. (NORTH) APPROX. 500' NORTH OF EXIST. STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"CAUTION HIGH CRASH LOCATION AHEAD"	MIDDLE RD. (NORTH) APPROX. 440' NORTH OF EXIST. STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"STOP AHEAD"	MIDDLE RD. (NORTH) APPROX. 270' NORTH OF EXIST. STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"STOP"	MIDDLE RD. (NORTH) APPROX. 15' NORTH OF EXIST. STOP BAR (2 SIGNS)
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"BRIDGE POSTED AHEAD 25 TONS"	TUTTLE RD. APPROX. 680' WEST OF NEW STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"CAUTION HIGH CRASH LOCATION AHEAD"	TUTTLE RD. APPROX. 430' WEST OF NEW STOP BAR
-	-	RELOCATE TO 100' WEST OF NEW "STOP AHEAD" SIGN	RELOCATE	"MAIN LINE FENCE"	TUTTLE RD. APPROX. 340' WEST OF NEW STOP BAR
-	-	N/A - TO BE REMOVED	N/A - TO BE REMOVED	"25 MPH" SPEED ADVISORY	TUTTLE RD. APPROX. 320' WEST OF NEW STOP BAR
PROPOSED TUTTLE RD / MIDDLE RD ADVANCED WARNING SIGNS (REMOVE AFTER 6 MONTHS)					
-	-	SEE GENERAL PLAN (SHEET 4)	SEE GENERAL PLAN (SHEET 4)	"NEW TRAFFIC PATTERN AHEAD"	SEE SIGNAGE AND PAVEMENT MARKING NOTE 5
-	-	SEE GENERAL PLAN (SHEET 4)	SEE GENERAL PLAN (SHEET 4)	"NEW TRAFFIC PATTERN AHEAD"	SEE SIGNAGE AND PAVEMENT MARKING NOTE 5
-	-	SEE GENERAL PLAN (SHEET 4)	SEE GENERAL PLAN (SHEET 4)	"NEW TRAFFIC PATTERN AHEAD"	SEE SIGNAGE AND PAVEMENT MARKING NOTE 5
-	-	14+90	27' RT	"NEW TRAFFIC PATTERN AHEAD"	SEE SIGNAGE AND PAVEMENT MARKING NOTE 5
PROPOSED TUTTLE RD WESTBOUND ADVANCED WARNING SIGNS (RELOCATE TO FINAL LOCATION)					
-	-	13+83	23' RT	"STOP AHEAD" (SOLAR POWERED)	SEE SIGNAGE AND PAVEMENT MARKING NOTE 1
-	-	13+83	18' LT	"STOP AHEAD" (SOLAR POWERED)	SEE SIGNAGE AND PAVEMENT MARKING NOTE 1

DRAINAGE SUMMARY								
STATION		CULVERT PIPE OPTION III		CATCH BASIN		UNDERDRAIN TYPE C		REMARKS
STATION START	STATION END	SIZE	LENGTH	A1-C	ADJUST TO GRADE	SIZE	LENGTH	
STA. 11+47, 52' LT	STA. 11+53, 15' RT (CB #1)	18"	66'	1				
STA. 11+53, 15' RT (CB #1)	STA. 13+75, 15' RT (CB #2)			1		18"	218'	
STA. 13+75, 15' RT (CB #2)	STA. 14+98, 15' RT					18"	121'	
STA. 20+60, 15' RT	STA. 21+93, 15' RT (CB #3)			1		18"	131'	
STA. 21+93, 15' RT (CB #3)	STA. 22+45, 15' RT (CB #4)			1		18"	46'	
STA. 21+95, 46' LT	STA. 21+93, 15' RT (CB #3)	24"	59'					CONNECT EXISTING 18" CPP TO PROPOSED CB
STA. 22+45, 15' RT (CB #4)	STA. 22+85, 15' RT (CB #5)			1		18"	38'	
STA. 22+85, 15' RT (CB #5)	STA. 24+05, 15' RT (CB #6)			1		18"	118'	
STA. 25+22, 22' RT (CB #7)					1			

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2516100

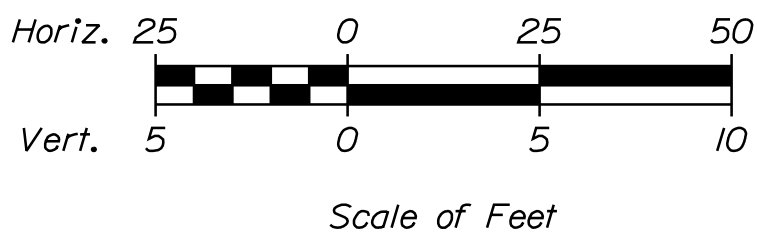
PIN 25161.00
BRIDGE NO. 6601
BRIDGE PLANS

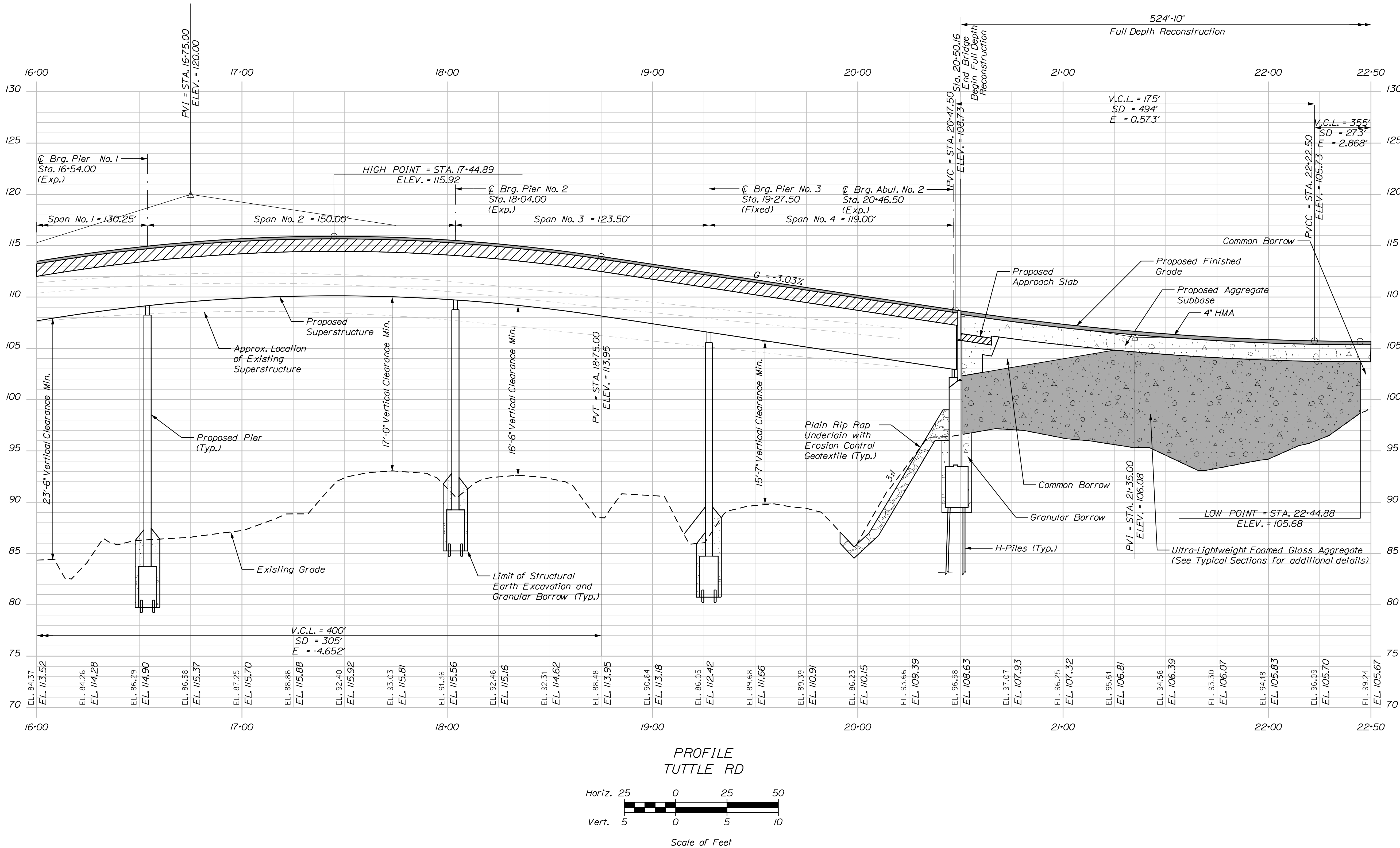
TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
PERMANENT SIGNS &
DRAINAGE TABLES

SHEET NUMBER

7

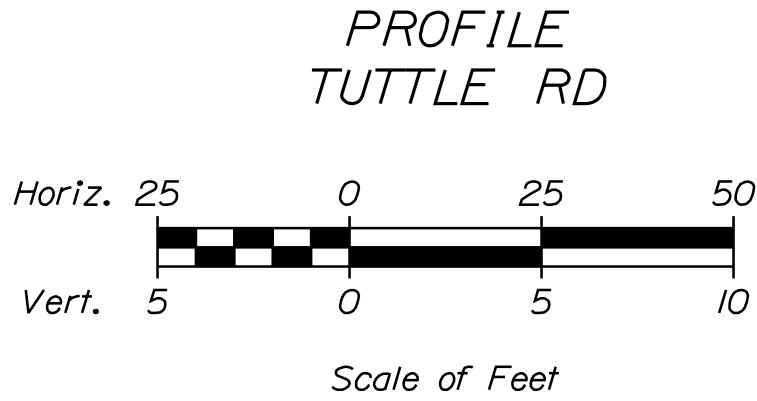
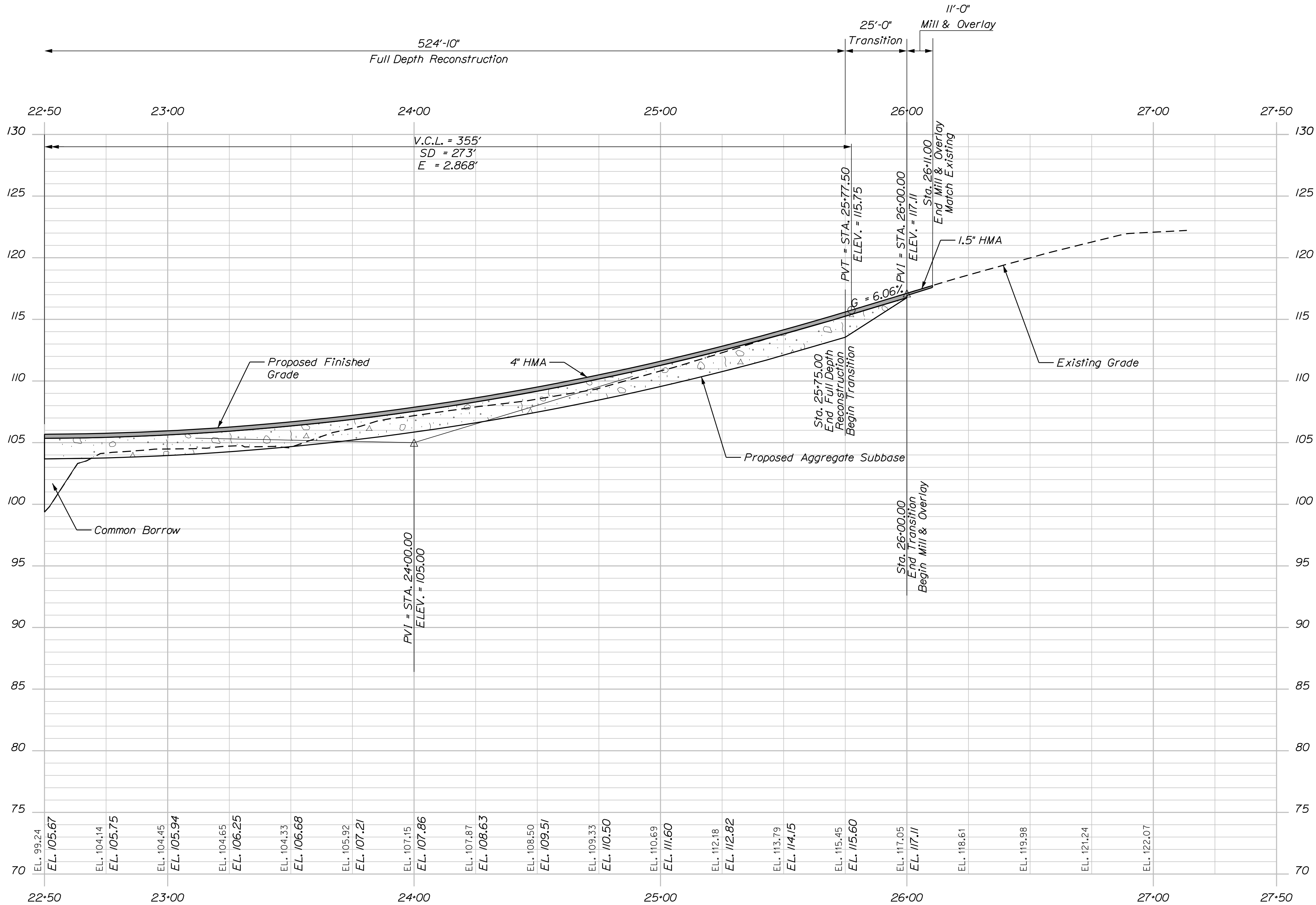
OF 88





NOTE:
An existing sewer line runs underneath the roadside ditch on the northbound side of US Route 1.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2516100		WIN		BRIDGE NO. 5601		BRIDGE PLANS	
TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR		CUMBERLAND COUNTY		TUTTLE RD PROFILE (2 OF 3)		SHEET NUMBER		10	
PROJ. MANAGER		DESIGN-DETAILED		CHECKED-REVIEWED		DESIGN-DETAILED		REVISIONS 1		REVISIONS 2	
Gerald Dostie		GRS		SLM		SLM		REVISIONS 3		REVISIONS 4	
BY		DATE		SIGNATURE		P.E. NUMBER		DATE		FIELD CHANGES	
GRS		03/2025									
SLM		03/2025									

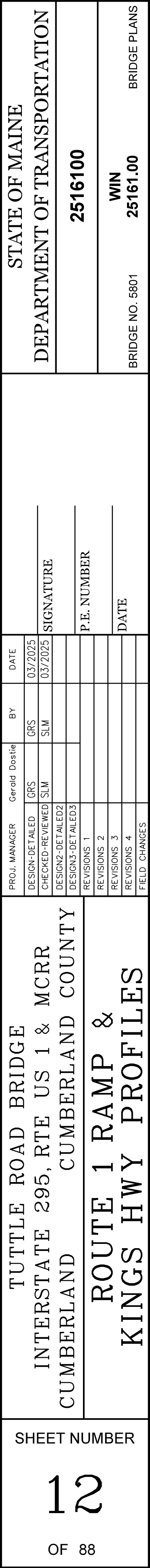
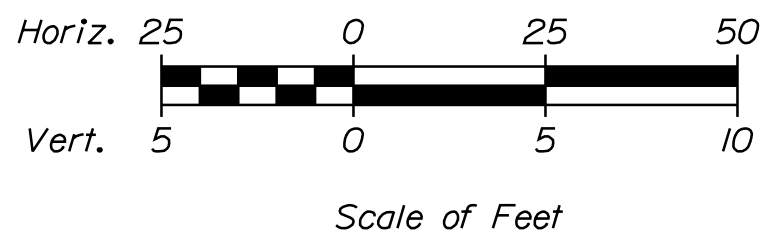


STATE OF MAINE DEPARTMENT OF TRANSPORTATION				
	2516100			
	WIN 25161.00			
	BRIDGE NO. 5801			
	BRIDGE PLANS			

TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND COUNTY	PROJ. MANAGER	Gerald Dastie	BY	DATE
	DESIGN-DETAILED	GRS	SLM	03/2025
	CHECKED-REVIEWED	GRS	SLM	03/2025
	DESIGN2-DETAILED2			
	DESIGN3-DETAILED3			
	REVISIONS 1			
	REVISIONS 2			
	REVISIONS 3			
	REVISIONS 4			
	FIELD CHANGES			

TUTTLE RD PROFILE (3 OF 3)	DATE			

SHEET NUMBER	11
	OF 88

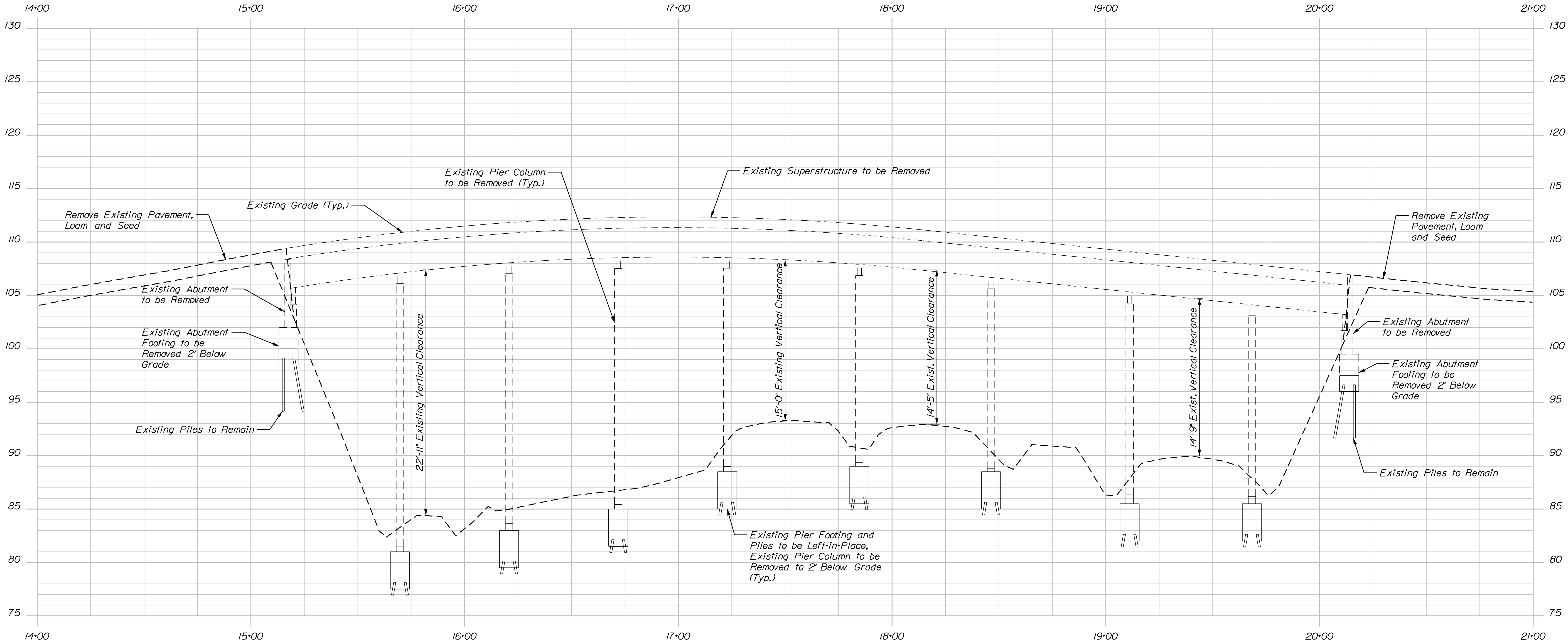


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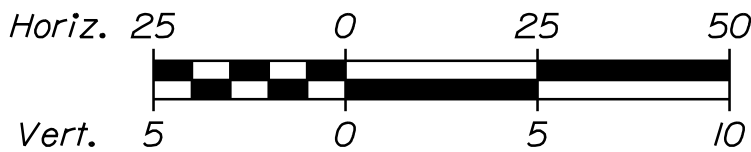
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Division: BRIDGE

Filename: ... \HIGHWAY\013_Profile.dgn



EXISTING PROFILE
(APPROX. 46' SOUTH OF PROPOSED CL TO EXISTING CL)



Scale of Feet

NOTE:
An existing sewer line runs underneath the roadside ditch on the northbound side of US Route 1.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100
WIN
25161.00
BRIDGE NO. 6601
BRIDGE PLANS

DATE
03/2025
SIGNATURE

BY
GFS
SLM

PROJ. MANAGER
Gerald Dostie

DESIGN-DETAILED
GFS

CHECKED-REVIEWED
SLM

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

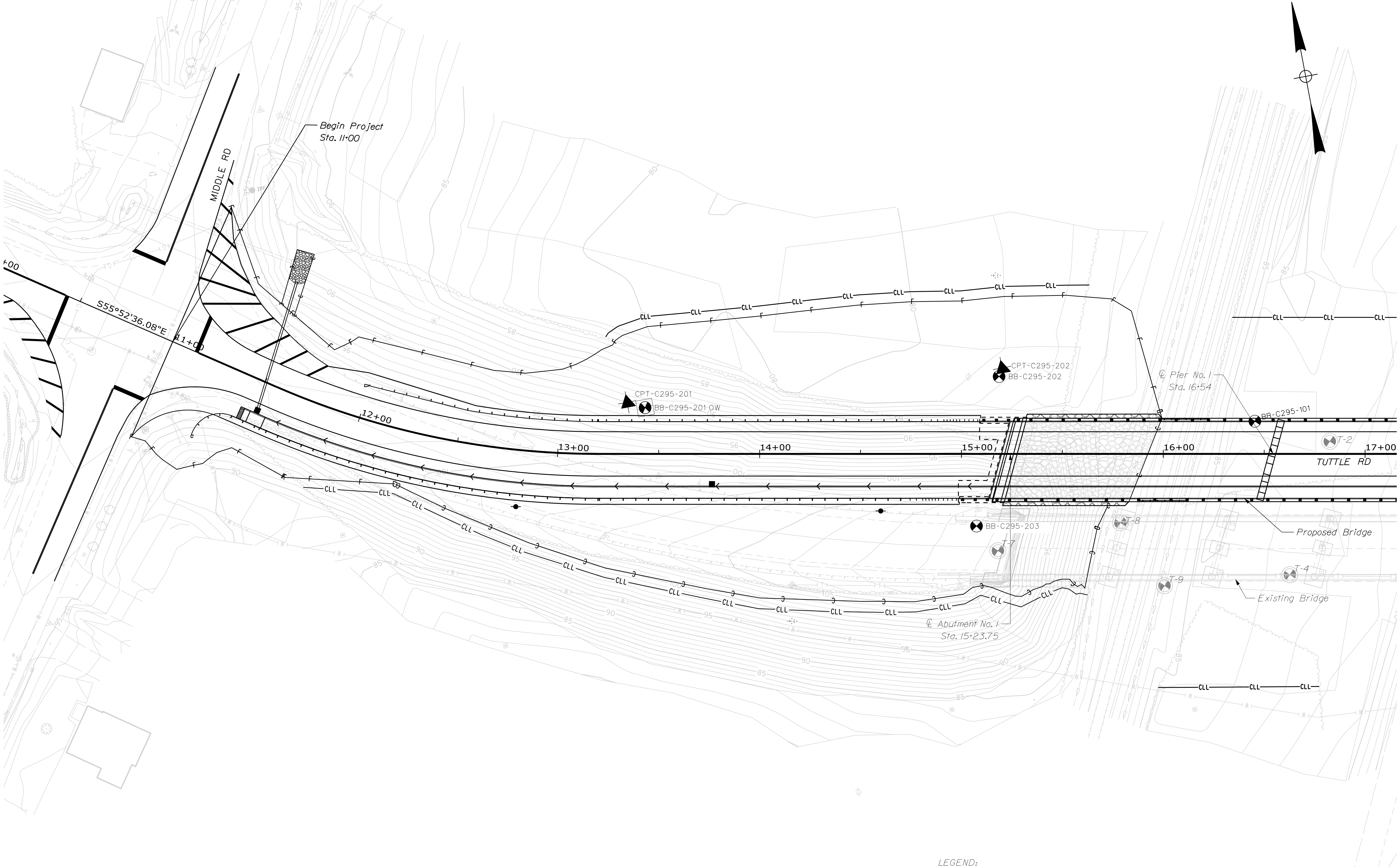
FIELD CHANGES

DATE
03/2025
P.E. NUMBER

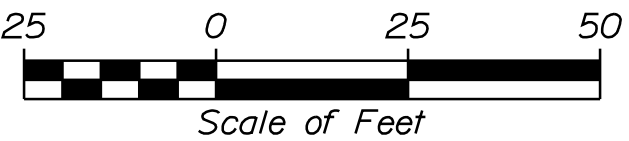
DATE

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
EXISTING PROFILE

SHEET NUMBER
13
OF 88

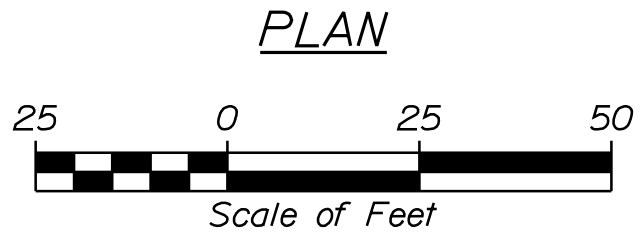
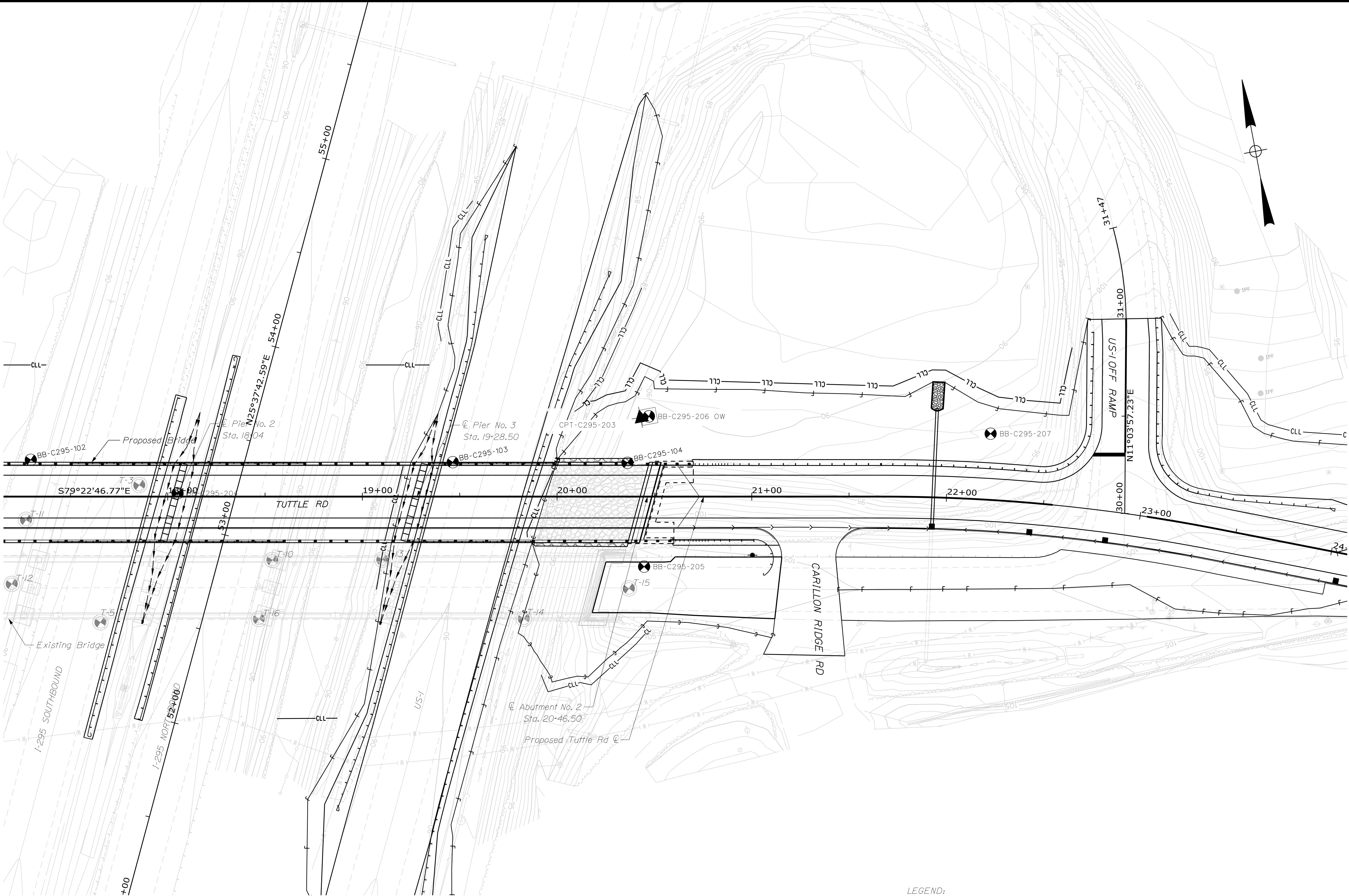


PLAN



- LEGEND:
- Subsurface Exploration Boring*
 - Subsurface Exploration Boring with Observation Well
 - Historical Subsurface Exploration Boring from 1957
 - Cone Penetration Test (CPT) Location from Phase II
- *100-Series Borings from Preliminary Design Report in 2022
 200-Series Borings from Phase II in 2024

SHEET NUMBER										STATE OF MAINE															
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY										PROJ. MANAGER		Gerald Dostie		BY		DATE		DEPARTMENT OF TRANSPORTATION							
										DESIGN-DETAILED		AS		LNH		03/2025									
										CHECKED-REVIEWED		AG		RF		03/2025									
BORING LOCATION PLAN										DESIGN2-DETAILED2								2516100							
										DESIGN3-DETAILED3															
										REVISIONS 1						P.E. NUMBER									
										REVISIONS 2															
										REVISIONS 3															
										REVISIONS 4				DATE		WIN 25161.00									
										FIELD CHANGES															
OF 88										BRIDGE NO. 5801										BRIDGE PLANS					



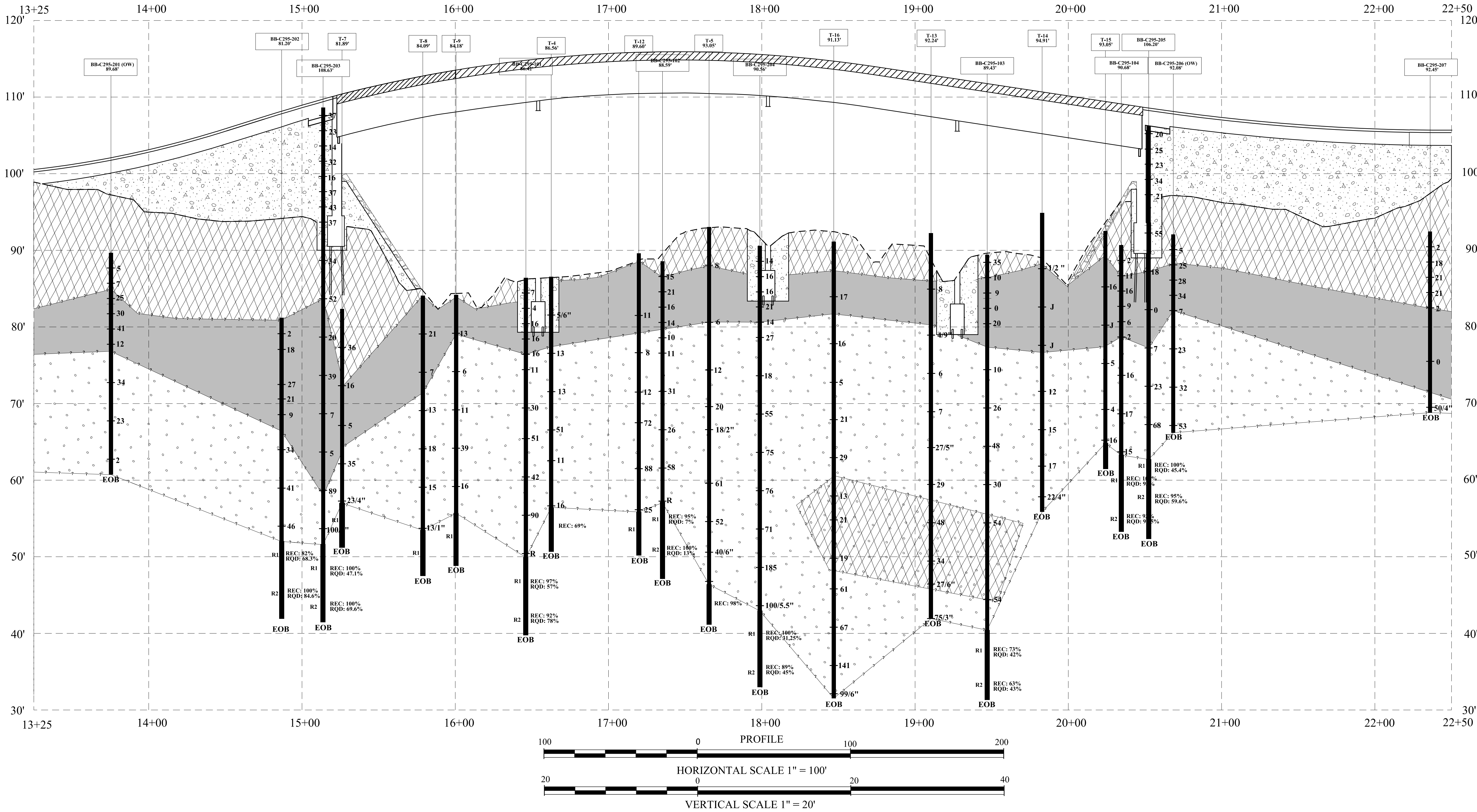
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TUTTLE ROAD BRIDGE		STATE OF MAINE	
INTERSTATE 295, RTE US 1 & MCRR		DEPARTMENT OF TRANSPORTATION	
CUMBERLAND CUMBERLAND COUNTY		2516100	
BORING LOCATION PLAN		BRIDGE NO. 6601	WIN 25161.00
SHEET NUMBER		BRIDGE PLANS	
15			
OF 88			

Date: 5/25/2025

Username: common

Filename: ...\\016_GeoProfile_Interpretive Subsurface.dgn



[illegible][illegible]

Maine Department of Transportation

Soil/Bore Exploration Log

US CUSTOMARY UNITS

Project:

Tuttle Road Bridge/295 #S801 over I-295, Rte US1 & MCR

Boring No. :

BB-C295-103

Location:

Cumberland, Maine

WIN:

25161.00

Driller:

New England Boring Contractors

Operator:

T. Shaffer

Logged by:

A. Nabel

Date Start/Finish:

10/17/2022 - 10/13/2022

Boring Location:

1029813.5111E 341188.9326N

Hammer Efficiency Factor:

0.742**

Elevation:

89.43'

Datum:

NAVD 88

Rig Type:

Mobile S/S Track Rig

Drilling method:

Rotary Wash

Casting ID/OD:

3.5/4.0 inches

Hammer Type:

☒ Automatic☐ Hydraulic☐ Rope & Cathead

Auger ID/OD:

2.5 inches SSA

Sampler:

Standard Split Spoon

Hammer Wt./Fall:

140lb/30in

Core Barrel:

N/C

Water Level*:

5.7 bgs

R - Rock Core Sample
SS - Solid Stem Auger
NS - Non-Solen Auger
RC - Rodded Core
W - Wire
Wt - Weight of 140lb. Hammer
Wt/C - Weight of Rods in Casting
Wt/S - Weight of One Person

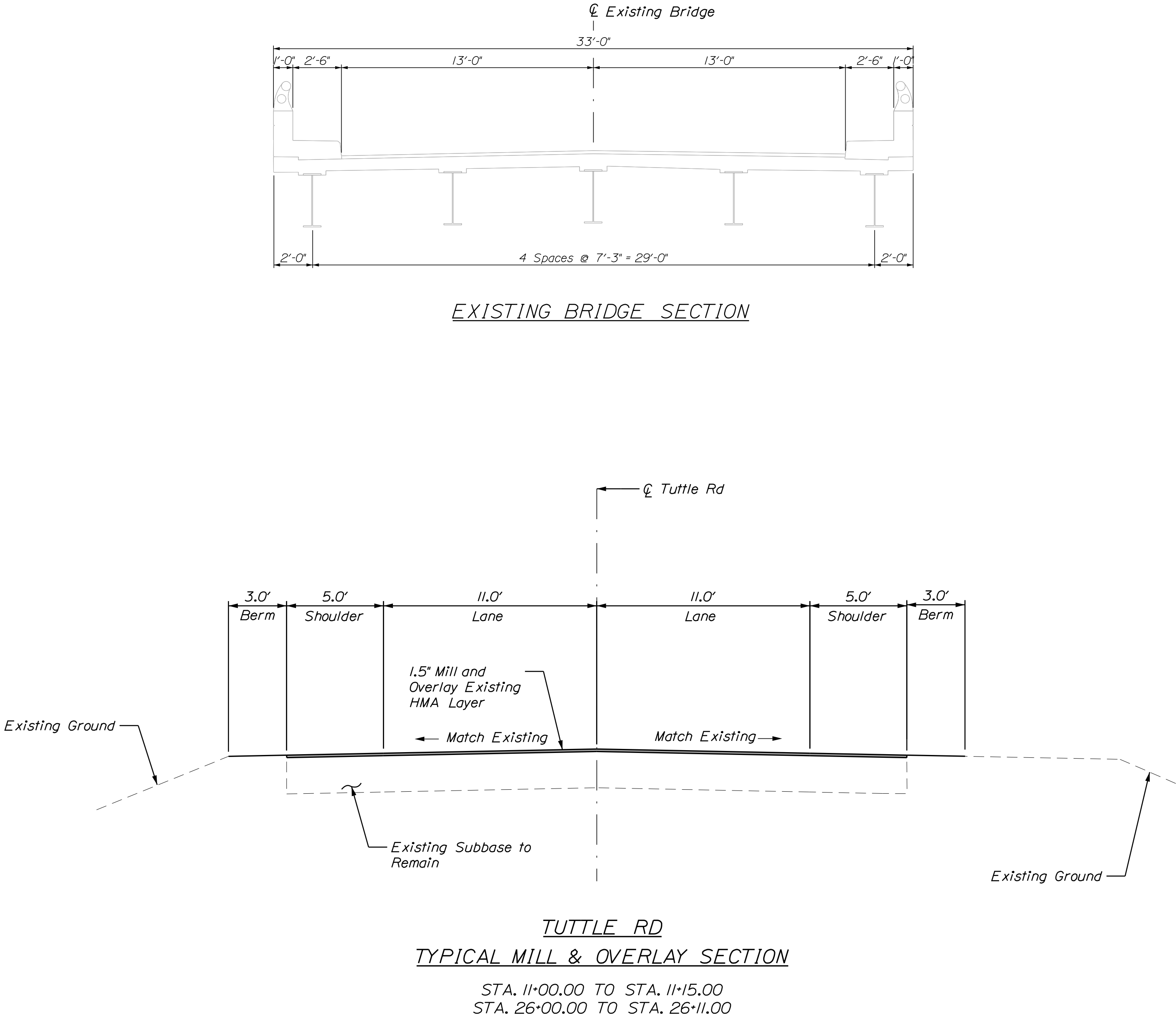
1 - Peak Unconfined Field Core Shear Strength (psf)
S_{avg} - Lab View Unconfined Shear Strength (psf)
q_u - Unconfined Compression Strength (psf)
N_{corrected} - Blow Field SPT N-value
Hammer Efficiency Factor - Rig Specific Annual Calibration Value
N_{avg} - SPT N_{corrected} Corrected for Hammer Efficiency
N_{avg} (Shannon Efficiency Factor/50%) Uncorrected

W - Pocket Tension Shear Strength (psf)
WC - Water Content, percent
LI - Liquid Limit
PI - Plastic Limit
P_L - Plasticity Index
C - Grain Size Analysis
C - Consolidation Test

Sample Information							Visual Description and Remarks		Laboratory Testing Results/ AASHTO and Unified Class.
Depth (ft.)	Sample No.	Core Depth (ft.)	Sample Depth (ft.)	Blow Count (blows/ft.)	Shear Strength (psf)	N-value (blows/ft.)	Remarks		
0							SSA		
1D	24/4	1-3	18-18-10-10	28	35			Brown, moist, dense, fine to coarse SAND, trace gravel (topsoil material).	
2D	24/24	3-5	2-4-4-5	8	10			Gray, moist, stiff, Sandy Clayey SILT, (Presumpscott Formation).	
3D	24/24	5-7	6-4-3-4	7	9			Gray, moist, stiff, Clayey SILT, trace sand, (Presumpscott Formation) (PPH=1.5 tf).	WC=25.8% LI=39 PI=14 P _L =44 SO=2.80
4D	24/24	7-9	won won won	0	0			Gray, moist, very soft, SILT CLAY, trace sand, (Presumpscott Formation) (PPH=1.5 tf).	WC=26.3% LI=39 PI=15 P _L =45 SO=2.80
5D	24/2	9-11	4-8-8-6	16	20	3		Gray, moist, very stiff, SILT CLAY, trace sand, (Presumpscott Formation) (PPH=1.5 tf).	
6D	24/16	15-17	3-4-4-5	8	10	5		Gray, moist, loose, fine to coarse SAND, some silt, trace gravel.	
7D	24/16	20-22	5-11-10-10	21	26	11		Gray, moist, medium dense, fine to coarse SAND, some silt, little gravel.	A-2 (4.0) WC=9.9%
8D	24/16	25-27	12-22-17-19	39	48	15		Gray, moist, dense, fine to coarse SAND, some gravel, trace silt.	

Maine Department of Transportation Soil/Rock Exploration Log US CUSTOMARY UNITS						Project: Tuttle Road Bridge/S285/0301 over I-295, Rte US1 & MCRR		Boring No. : _____		BB-C295-104																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Driller: New England Boring Contractors		Elevation: 90.68'		Auger ID/OD: 2.5 inches SSA																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Cased by: A. Loyal		Rig Type: Model B-53 Track Rig		Hammer Wt./Fall: 140lb/30in																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Date Start / Finish: 10/11/17		Drilling method: Rotary/Wash		Core Barrel: NY																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Boring Location: 1029901.6709E 341172.6709N		Casing ID/OD: 3 5/4" inches		Water Level#: See notes																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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M = - Unconsolidated Soil Sample Attempt M+ = Thin Wall Tube Sample NY = Unconsolidated Thin Wall Tube Sample Attempt B = Solid Core Sample PP = Pocket Penetration Meter MU = Unconsolidated Field Vane Shear Test Attempt		F = Rock Core Sample SSA = Solid Stem Auger HMS = Hollow Stem Auger RC = Rubber Core WHL = Weight of 140lb Hammer WOHC = Weight of Hook-on Logging WSPR = Weight of Two Person		1 = Push/Pull Resisted Field Vane Shear Strength (psf) 2 = Unconfined Compression Strength (psi) 3 = Unconfined Compressive Strength (psi) 4 = Unconfined Compressive Strength (psi) 5 = Unconfined Compressive Strength (psi) 6 = Specific Annual Calibration Value Avg = SPR Unconsolidated Corrected for Hammer Efficiency Non = Shearman Efficiency Factor/SPR Unconsolidated		Tc = Pocket Pressure Shear Strength (psi) WC = Water Content, percent L = Liquid Limit P = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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30.7') Gray, fine to coarse grained, slightly to very slightly fractured, QUARTZITE, hard rock, slightly weathered. 10.7' - 32.5') Gray, fine to coarse grained, slightly to very slightly fractured, GNEISS, very hard rock, slightly weathered. 100% Recovery</td><td>27.5</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td rowspan="5">-35</td><td>R2</td><td>60/58</td><td>32.5-37.5</td><td>RQD=97.5%</td><td></td><td></td><td></td><td></td><td>83.18</td><td>R2: Gray, fine to coarse grained, slightly to very slightly fractured, GNEISS, very hard rock, slightly weathered. 93% Recovery</td><td>37.5</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>-40</td><td colspan="10" style="text-align: center;">Bottom of Exploration at 37.5 feet below ground surface</td><td></td></tr><tr><td>-45</td><td colspan="11"></td></tr></tbody></table>												Sample Information								Visual Description and Remarks				Depth (ft.)	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-10	6D	24/24	10-12	1-1-1-2	2	2				Gray, moist, soft, Clayey SILT, trace sand, (Presumpscot Formation).																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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-15	7D	24/8	15-17	6-6-7-9	13	16				Brown, moist, medium dense, fine to coarse SAND, some gravel, trace silt.	14.0																																																																																																																																																																																																																																																																																																																																																																																																																																																								
-20	8D	24/14	20-22	5-7-7-10	14	17				Brown, moist, medium dense, find to coarse SAND, trace gravel.																																																																																																																																																																																																																																																																																																																																																																																																																																																									
-25	9D	24/10	25-27	7-6-6-10	12	15				Brown/Gray, moist, stiff, Clayey SILT, some sand, trace gravel.	A-4(U) WC=57.5%																																																																																																																																																																																																																																																																																																																																																																																																																																																								
-30	R1	60/60	28.2-32.5	RQD=93%					83.18	R1: (28.2' - 30.7') Gray, fine to coarse grained, slightly to very slightly fractured, QUARTZITE, hard rock, slightly weathered. 10.7' - 32.5') Gray, fine to coarse grained, slightly to very slightly fractured, GNEISS, very hard rock, slightly weathered. 100% Recovery	27.5																																																																																																																																																																																																																																																																																																																																																																																																																																																								
-35	R2	60/58	32.5-37.5	RQD=97.5%					83.18	R2: Gray, fine to coarse grained, slightly to very slightly fractured, GNEISS, very hard rock, slightly weathered. 93% Recovery	37.5																																																																																																																																																																																																																																																																																																																																																																																																																																																								
-40	Bottom of Exploration at 37.5 feet below ground surface																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
-45																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Remarks: [1] Continuous up to 12' - Driller did not have any Shelby tubes [2] During first rock coring attempt refusal encountered @ 27.5 ft. Rock coring started at 28 ft. [3] Groundwater measurement not taken																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Stratification lines represent approximate boundaries between soil types; transitions may be gradual																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
**Calibration from 4/2023						Boring No. :			BB-C295-104																																																																																																																																																																																																																																																																																																																																																																																																																																																										

Maine Department of Transportation Soil/Brock Exploration Log US CUSTOMARY UNITS				Project: Tuttle Road Bridge/295 #5801 over I-295, RTE US1 & MCRR				Boring No. : BB-C295-201 (OW)			
Location: Cumberland, Maine				WIN: 25161.00							
Driller: SEABOARD DRILLING		Elevation: 89.69'		Auger ID/OD: 2.5 inches SSA							
Operator: Kevin Hancock		Datum: NAVD 88		Sampler: Standard Split Spoon							
Logged by: A. Sajewski		Rig Type: DIEDRICH D-50 SN-367		Hammer Wt./Fall: 140lbs/30in							
Date Start/Finish: 4/3/2024		Drilling method: Cased Wash Boring		Core Barrel: NO							
Boring Location: 1029213.37E, 341869.52N		Casing ID/OD: 3.5/4.0 inches		Water Level*: See Remarks							
Hammer Efficiency Factor: 1.07		Hammer Type: ☒ Automatic ☐ Hydraulic ☐ Rope & Cathead									
Definitions: D = Split Spoon Sample SSA = Solid Stem Auger WC = Water Content, percent L = Liquid Limit P = Plastic Limit PL = Plastic Index W ₁₀₀ = Weight of 100% W ₂₀₀ = Weight of 200% W ₄₀₀ = Weight of 400% W ₆₀₀ = Weight of 600% W ₈₀₀ = Weight of 800% W ₁₀₀₀ = Weight of 1000% W ₁₂₀₀ = Weight of 1200% W ₁₄₀₀ = Weight of 1400% W ₁₆₀₀ = Weight of 1600% W ₁₈₀₀ = Weight of 1800% W ₂₀₀₀ = Weight of 2000% W ₂₂₀₀ = Weight of 2200% W ₂₄₀₀ = Weight of 2400% W ₂₆₀₀ = Weight of 2600% W ₂₈₀₀ = Weight of 2800% W ₃₀₀₀ = Weight of 3000% W ₃₂₀₀ = Weight of 3200% W ₃₄₀₀ = Weight of 3400% W ₃₆₀₀ = Weight of 3600% W ₃₈₀₀ = Weight of 3800% W ₄₀₀₀ = Weight of 4000% W ₄₂₀₀ = Weight of 4200% W ₄₄₀₀ = Weight of 4400% W ₄₆₀₀ = Weight of 4600% W ₄₈₀₀ = Weight of 4800% W ₅₀₀₀ = Weight of 5000% W ₅₂₀₀ = Weight of 5200% W ₅₄₀₀ = Weight of 5400% W ₅₆₀₀ = Weight of 5600% W ₅₈₀₀ = Weight of 5800% W ₆₀₀₀ = Weight of 6000% W ₆₂₀₀ = Weight of 6200% W ₆₄₀₀ = Weight of 6400% W ₆₆₀₀ = Weight of 6600% W ₆₈₀₀ = Weight of 6800% W ₇₀₀₀ = Weight of 7000% W ₇₂₀₀ = Weight of 7200% W ₇₄₀₀ = Weight of 7400% W ₇₆₀₀ = Weight of 7600% W ₇₈₀₀ = Weight of 7800% W ₈₀₀₀ = Weight of 8000% W ₈₂₀₀ = Weight of 8200% W ₈₄₀₀ = Weight of 8400% W ₈₆₀₀ = Weight of 8600% W ₈₈₀₀ = Weight of 8800% W ₉₀₀₀ = Weight of 9000% W ₉₂₀₀ = Weight of 9200% W ₉₄₀₀ = Weight of 9400% W ₉₆₀₀ = Weight of 9600% W ₉₈₀₀ = Weight of 9800% W ₁₀₀₀₀ = Weight of 10000% W ₁₀₂₀₀ = Weight of 10200% W ₁₀₄₀₀ = Weight of 10400% W ₁₀₆₀₀ = Weight of 10600% W ₁₀₈₀₀ = Weight of 10800% W ₁₁₀₀₀ = Weight of 11000% W ₁₁₂₀₀ = Weight of 11200% W ₁₁₄₀₀ = Weight of 11400% W ₁₁₆₀₀ = Weight of 11600% W ₁₁₈₀₀ = Weight of 11800% W ₁₂₀₀₀ = Weight of 12000% W ₁₂₂₀₀ = Weight of 12200% W ₁₂₄₀₀ = Weight of 12400% W ₁₂₆₀₀ = Weight of 12600% W ₁₂₈₀₀ = Weight of 12800% W ₁₃₀₀₀ = Weight of 13000% W ₁₃₂₀₀ = Weight of 13200% W ₁₃₄₀₀ = Weight of 13400% W ₁₃₆₀₀ = Weight of 13600% W ₁₃₈₀₀ = Weight of 13800% W ₁₄₀₀₀ = Weight of 14000% W ₁₄₂₀₀ = Weight of 14200% W ₁₄₄₀₀ = Weight of 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NOT TO SCALE

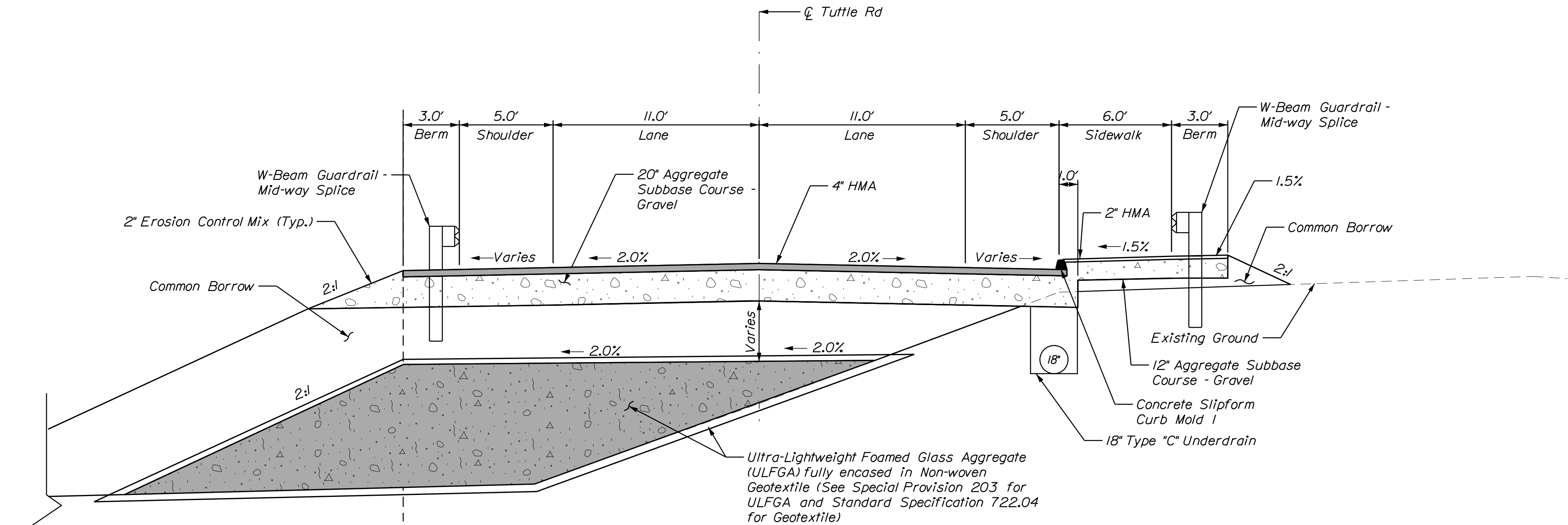
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND COUNTY TYPICAL SECTIONS (1 OF 2)	STATE OF MAINE DEPARTMENT OF TRANSPORTATION		BRIDGE NO. 5801		BRIDGE PLANS	
	2516100		WIN		25161.00	
	SIGNATURE		P.E. NUMBER		DATE	
SHEET NUMBER		20		OF 88		

Date:5/25/2025

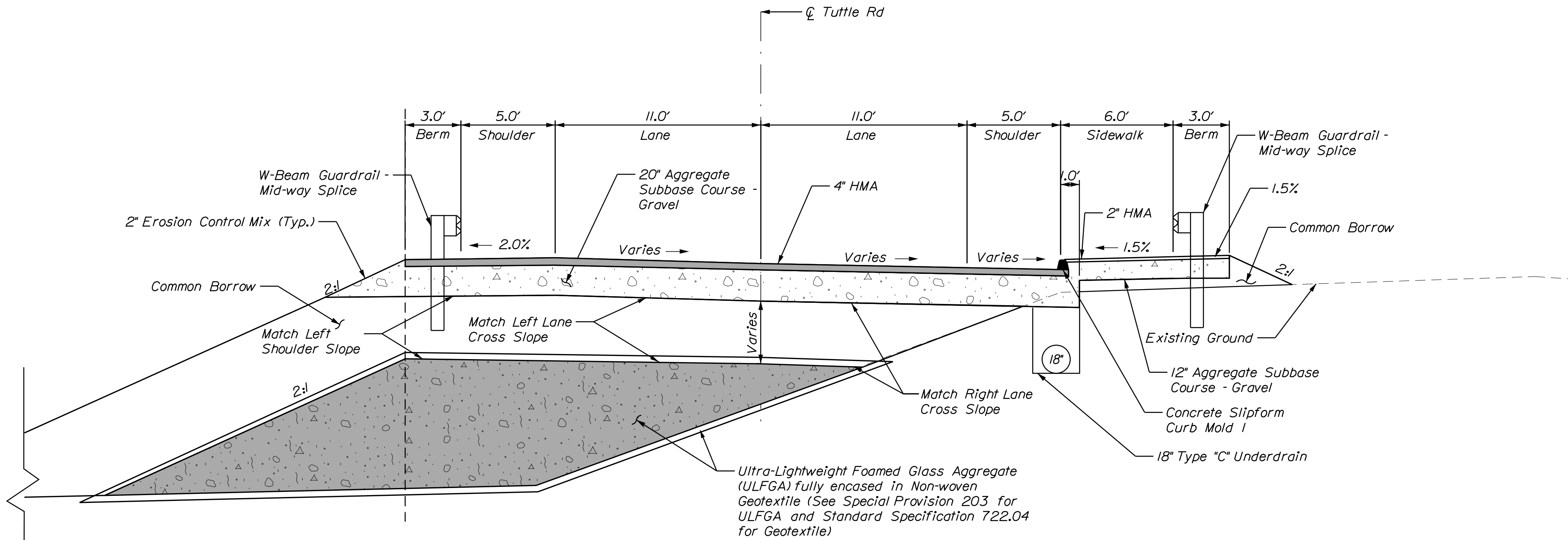
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Division: BRIDGE

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TUTTLE RD
TYPICAL APPROACH SECTION
STA. 14+04.00 TO STA. 15+20.00
STA. 20+50.16 TO STA. 20+69.00
STA. 24+16.00 TO STA. 25+75.00



TUTTLE RD
TYPICAL SUPERELEVATED APPROACH SECTION
STA. 11+25.00 TO STA. 14+04.00
STA. 20+69.00 TO STA. 24+16.00

NOTE

1. Raise the approach roadways to top of aggregate subbase no later than two months after construction of the abutments is complete. Place approach roadway asphalt no earlier than one month prior to opening the bridge to traffic. Prior to placing the asphalt, the contractor shall resurvey the top of embankment and adjust the aggregate subbase as necessary to account for potential settlement.

Curve 1					
Superelevation Table					
	STA.	LT. Shoulder	LT. TW	RT. TW	RT. Shoulder
	11+00	Match Ex.	Match Ex.	Match Ex.	Match Ex.
Begin Transition	11+01	-3.50%	-2.30%	-3.50%	-2.00%
	11+25	-2.91%	-2.30%	-1.91%	-2.00%
	11+50	-2.30%	-2.30%	-0.26%	-2.00%
	11+75	-2.30%	-2.30%	1.39%	-2.00%
	12+00	-3.04%	-3.04%	3.04%	-2.00%
Begin Full Super	12+21	-4.41%	-4.41%	4.41%	-2.00%
End Full Super	13+07	-4.41%	-4.41%	4.41%	-2.00%
	13+25	-3.20%	-3.20%	3.20%	-2.00%
	13+50	-2.00%	-2.00%	1.55%	-2.00%
	13+75	-2.00%	-2.00%	-0.10%	-2.00%
	14+00	-2.00%	-2.00%	-1.75%	-2.00%
Begin Normal Crown	14+04	-2.00%	-2.00%	-2.00%	-2.00%

Curve 2					
Superelevation Table					
	STA.	LT. Shoulder	LT. TW	RT. TW	RT. Shoulder
	20+50	-2.00%	-2.00%	-2.00%	-2.00%
Begin Transition	20+69	-2.00%	-2.00%	-2.00%	-2.00%
	20+75	-2.00%	-1.68%	-2.00%	-2.00%
	21+00	-2.00%	-0.29%	-2.00%	-2.00%
	21+25	-2.00%	1.11%	-2.00%	-2.00%
	21+50	-2.00%	2.51%	-2.51%	-2.51%
	21+75	-2.00%	3.91%	-3.91%	-2.00%
Begin Full Super	21+83	-1.67%	4.33%	-4.33%	-4.33%
End Full Super	23+03	-1.67%	4.33%	-4.33%	-4.33%
	23+25	-2.00%	3.08%	-3.08%	-3.08%
	23+50	-2.00%	1.68%	-2.00%	-2.00%
	23+75	-2.00%	0.28%	-2.00%	-2.00%
	24+00	-2.00%	-1.12%	-2.00%	-2.00%
Begin Normal Crown	24+16	-2.00%	-2.00%	-2.00%	-2.00%

NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100

BRIDGE NO. 5601
WIN
25161.00

BRIDGE PLANS

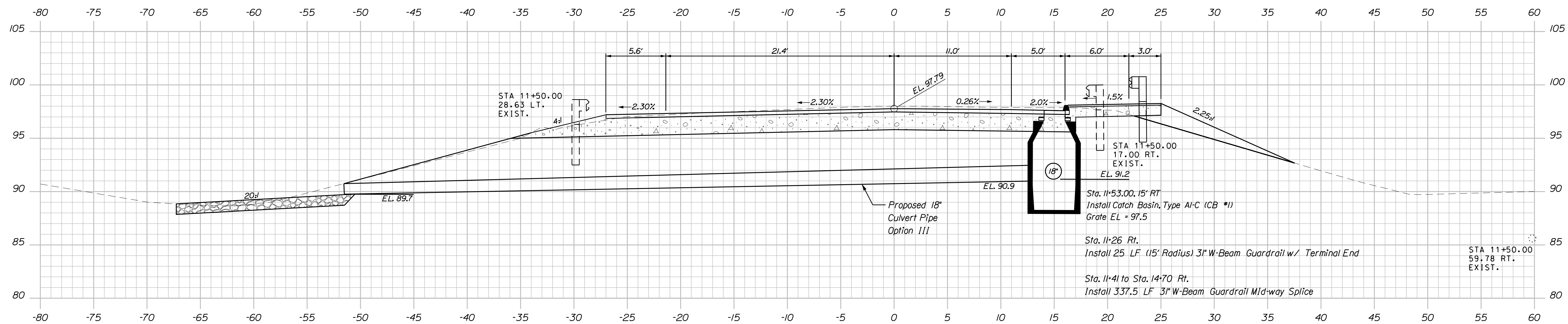
TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY

TYPICAL SECTIONS (2 OF 2)

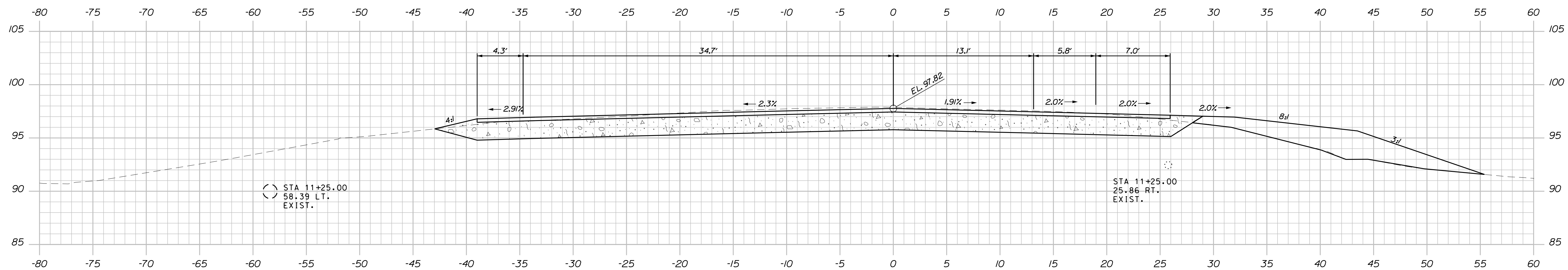
SHEET NUMBER

21

OF 88



11+50.00

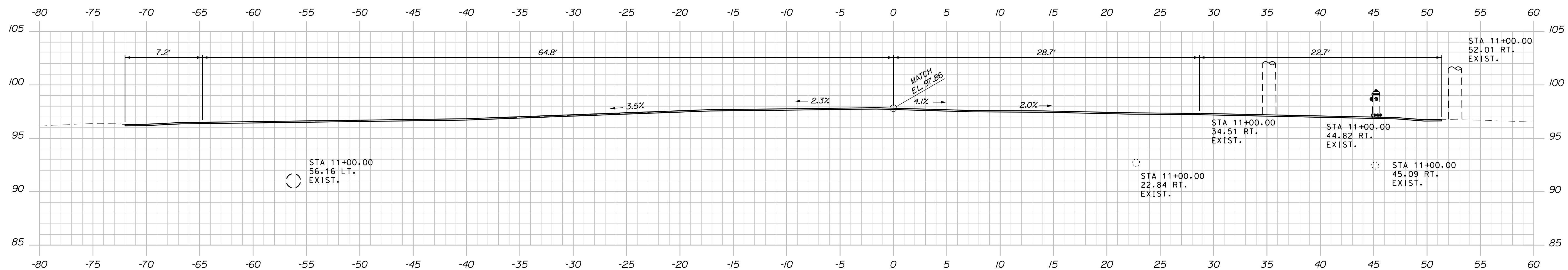


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//+25.00
END TRANSITION
BEGIN FULL DEPTH RECONSTRUCTION

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STA 11+15.00
END 1 1/2" MILL & OVERLAY
BEGIN TRANSITION



11+00.00
BEGIN 1 1/2" MILL & OVERLAY
MATCH EXISTING

PROJ. MANAGER	Gerard Dostle	BY	DATE
DESIGN-DETAILED	GRS	GRS	03/2025
CHECKED-REVIEWED	SJM	SJM	03/2025
DESIGN-DETAILED	GRS		SIGNATURE
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			P.E. NUMBER
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			DATE
FIELD CHANGES			

TUTTLE ROAD BRIDGE
 INTERSTATE 295, RTE US 1 & MCRR
 CUMBERLAND CUMBERLAND COUNTY
 TUTTLE RD CROSS SECTIONS
 (1 OF 21)

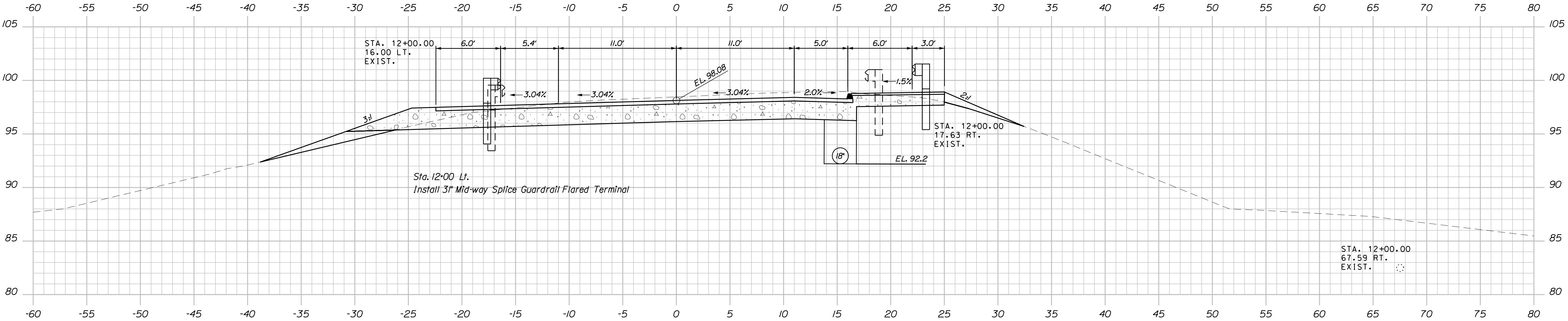
SHEET NUMBER
22
OF 88

Date:5/25/2025

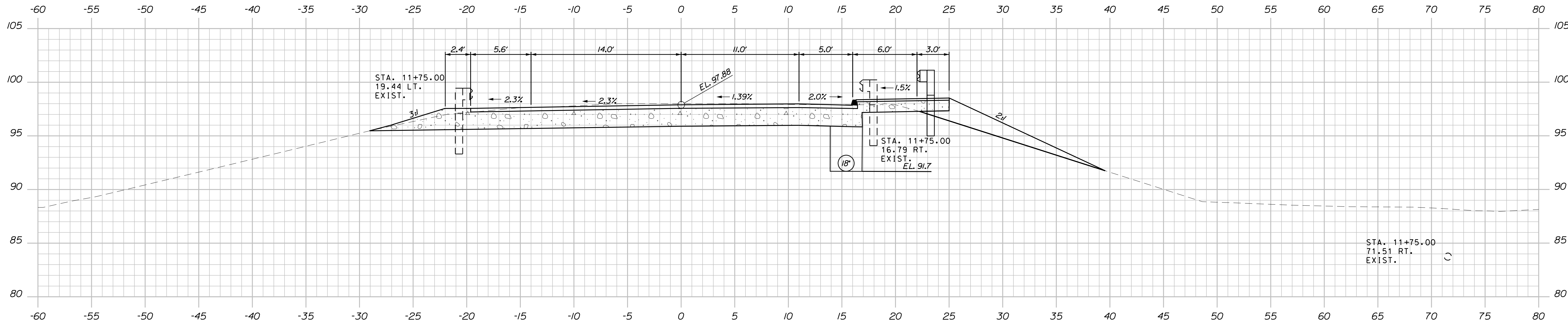
Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\023_Xsect (3).dgn



12+00.00



11+75.00

STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2516100	
WIN	25161.00
BRIDGE NO. 6601	
BRIDGE PLANS	

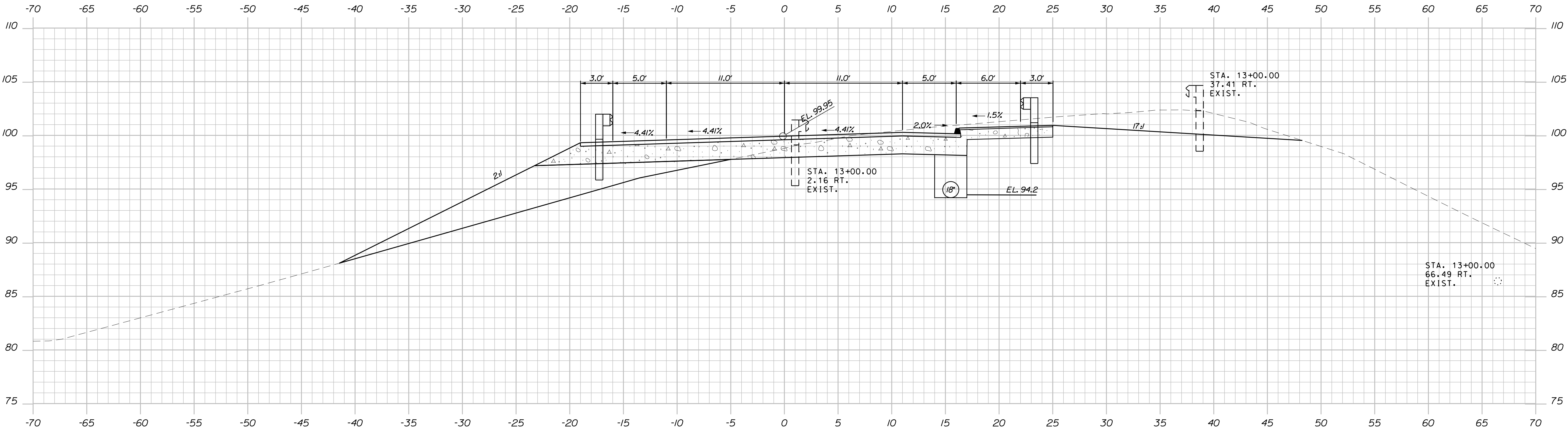
PROJ. MANAGER		Gerald Dostie	BY	DATE
DESIGN-DETAILED		GRS		03/2025
CHECKED-REVIEWED		SLM		SIGNATURE
DESIGN-DETAILED		02		
DESIGNS DETAIL		03		
REVISIONS 1				P.E. NUMBER
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				DATE

Date:5/25/2025

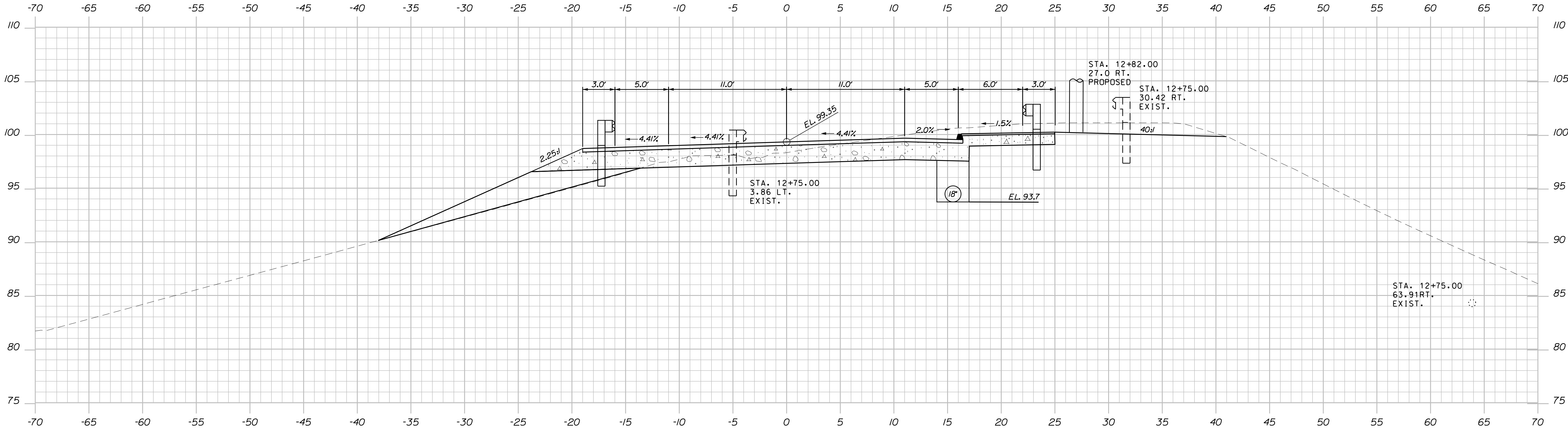
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Division: BRIDGE

Filename: ... \HIGHWAY\025_Xsect (3).dgn



13+00.00



12+75.00

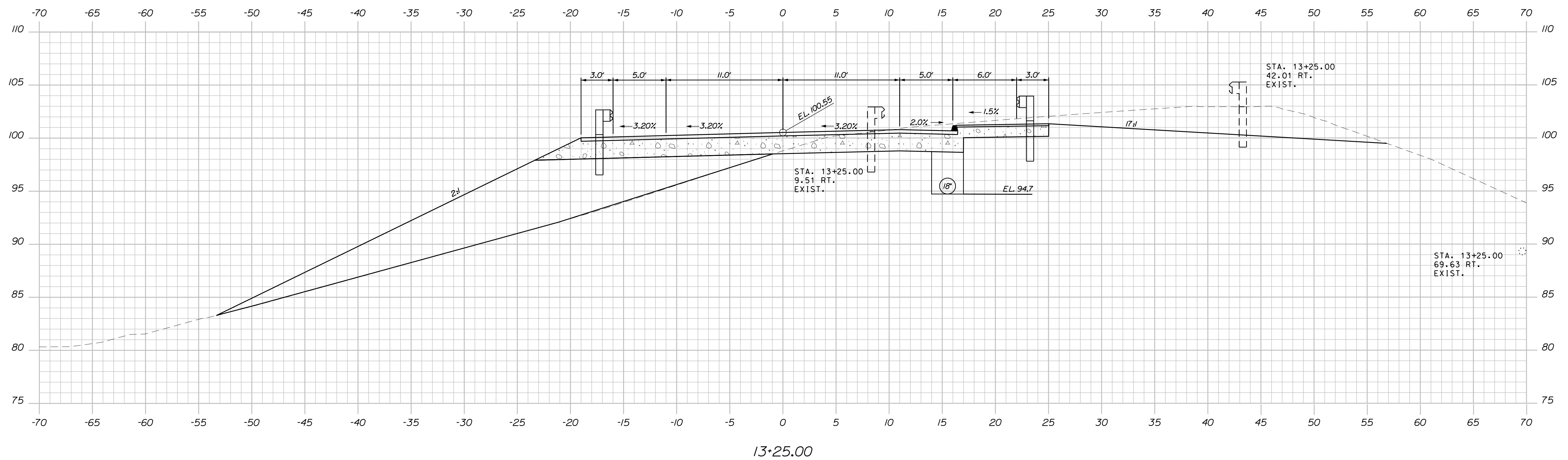
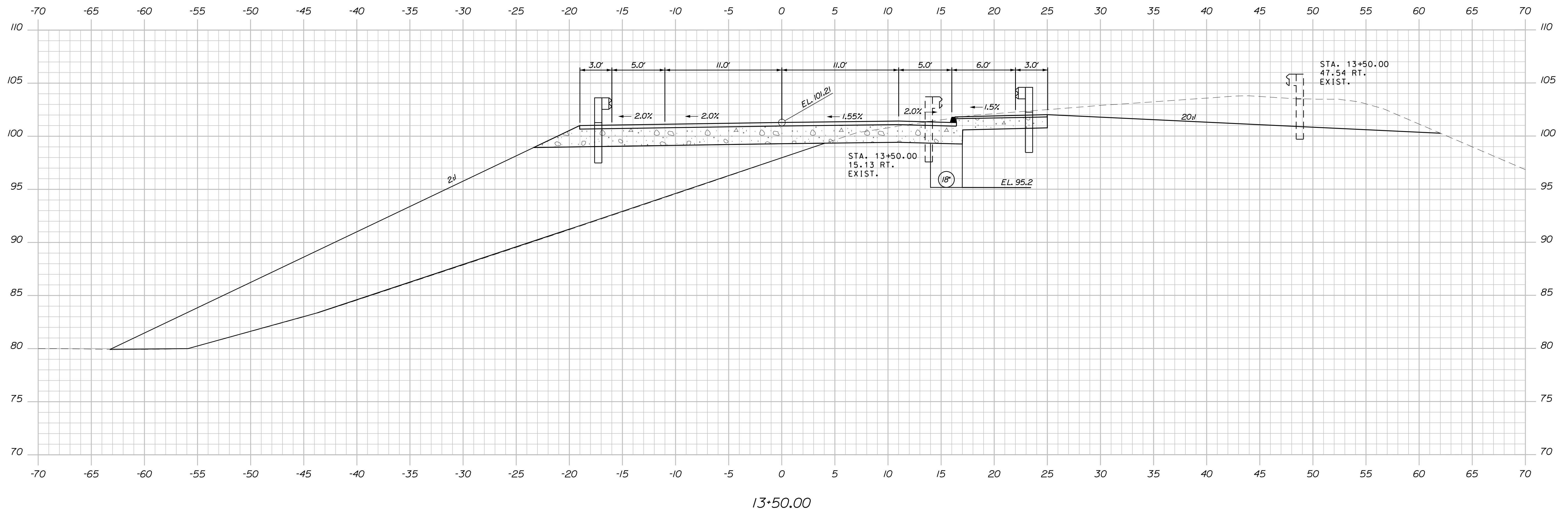
STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2516100	
WIN	25161.00
BRIDGE NO. 6601	
BRIDGE PLANS	

PROJ. MANAGER	Gerald Dostle	BY	DATE	
DESIGN-DETAILED	GRS	GRS	03/2025	SIGNATURE
CHECKED-REVIEWED	SLM	SLM	03/2025	
DESIGN-DETAILED				
DESIGN-DETAILED				P.E. NUMBER
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				DATE
REVISIONS 4				
FIELD CHANGES				

TUTTLE ROAD BRIDGE	
INTERSTATE 295, RTE US 1 & MCRR	
CUMBERLAND CUMBERLAND COUNTY	
TUTTLE RD CROSS SECTIONS	
(4 OF 21)	

SHEET NUMBER	
25	
OF 88	

Sta. 12+75.00 to Sta. 13+00.00



OFFICE OF MARINE
DEPARTMENT OF TRANSPORTATION

2516100

BRIDGE NO. 5801

25161.00

BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE _____

DESIGN-DETAILED	GRS	GRS	03/2025
CHECKED-REVIEWED	SLM	SLM	03/2025
DESIGN-DETAILED			

DESIGNS DETAILLED		
REVISIONS 1		

	REVISIONS 4	
	FIELD CHANGES	

IOWA ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR

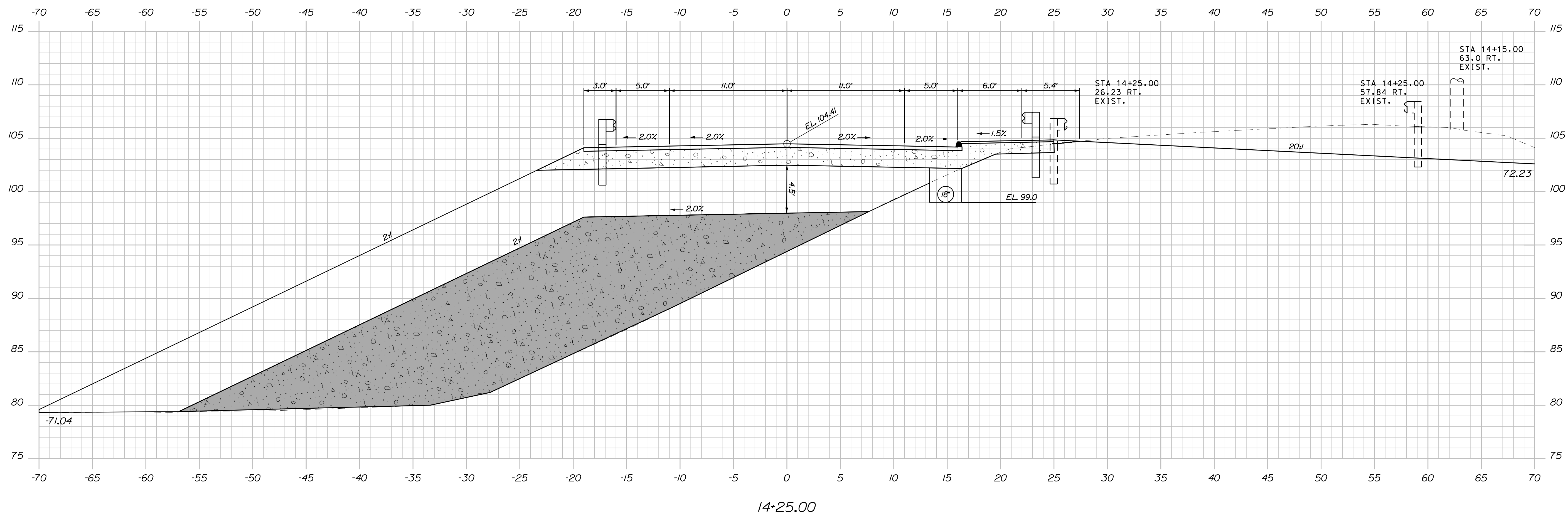
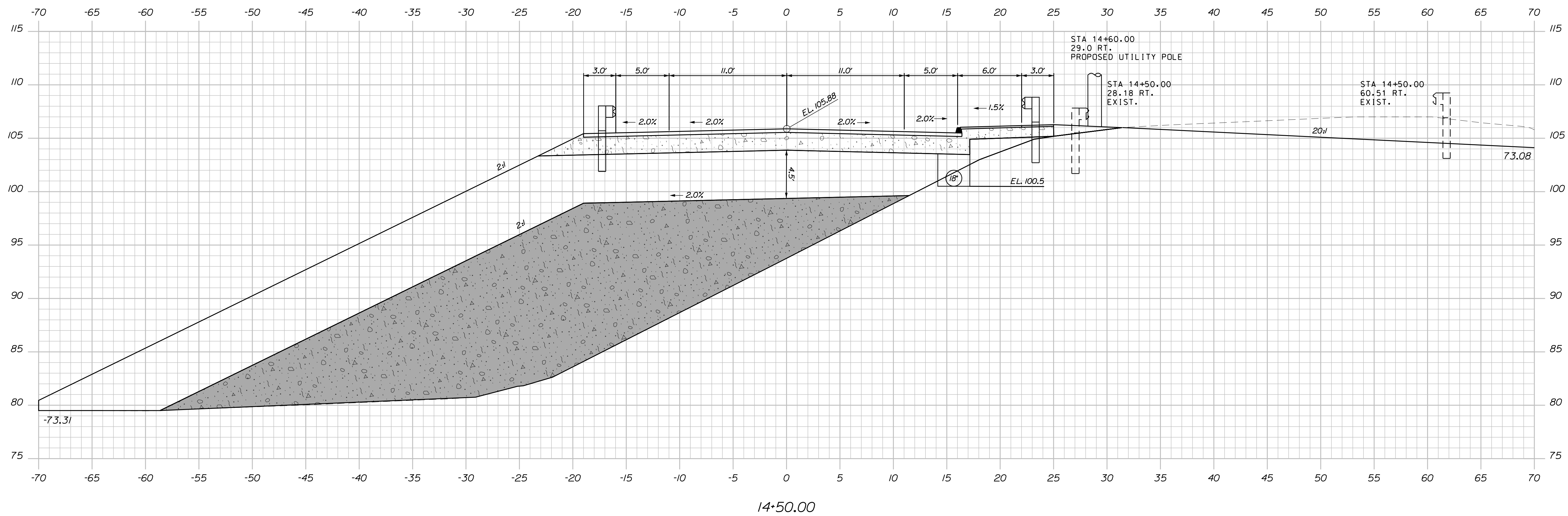
THIRTIETH CROSS SECTIONS

(5 OF 21)

SHEET NUMBER

26

F 88



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2516100	
BRIDGE NO. 5801	WIN 25161.00
BRIDGE PLANS	

PROJ. MANAGER	Gen'dl. Dist'dl.	BY	DATE
DESIGN-DETAILED	GRS		03/20/2025
CHECKED-REVIEWED	SLM		03/20/2025
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
			SIGNATURE
			P.E. NUMBER
			DATE

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
TUTTLE RD CROSS SECTIONS
(7 OF 21)

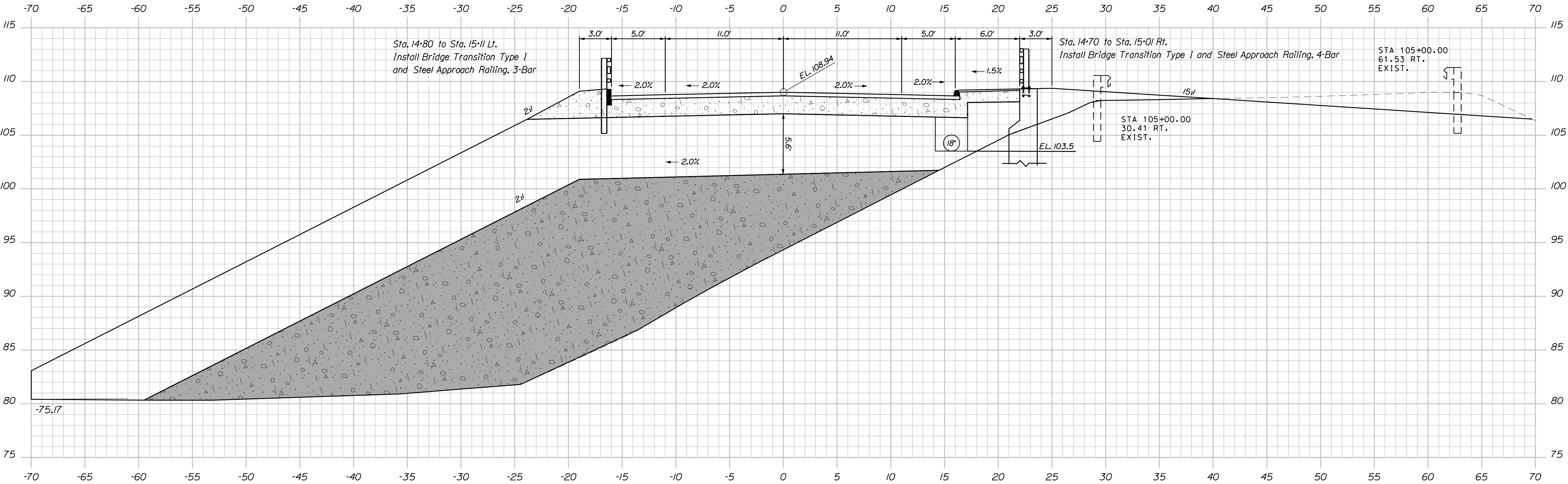
SHEET NUMBER
28
OF 88

Date:5/25/2025

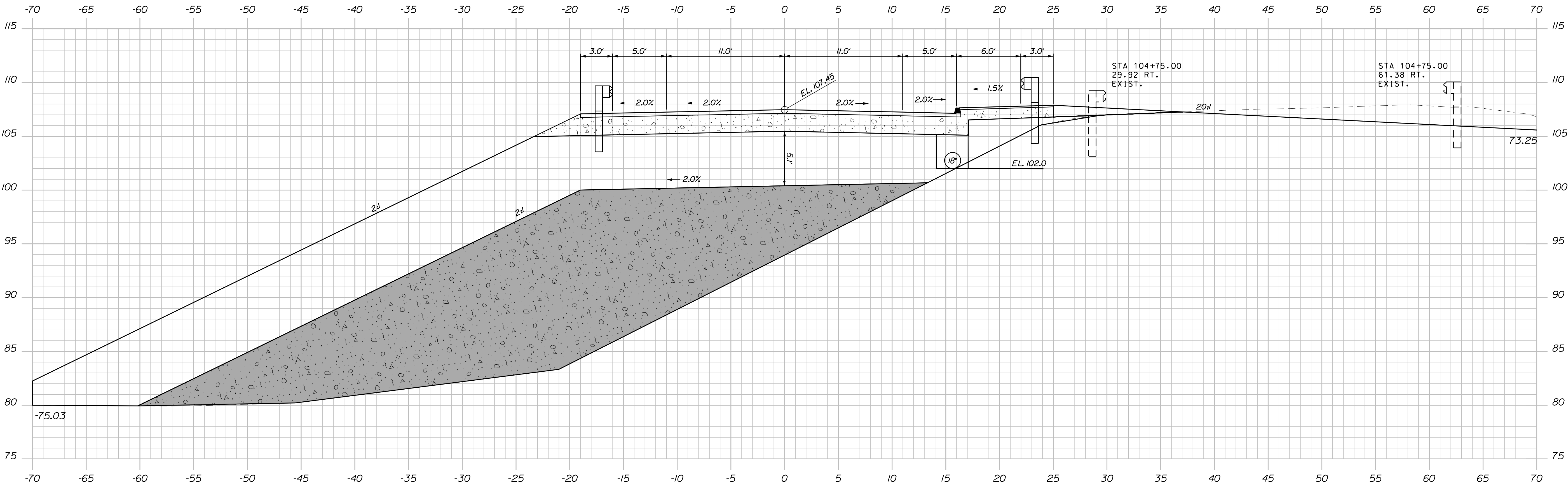
Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\029_Xsect (3).dgn



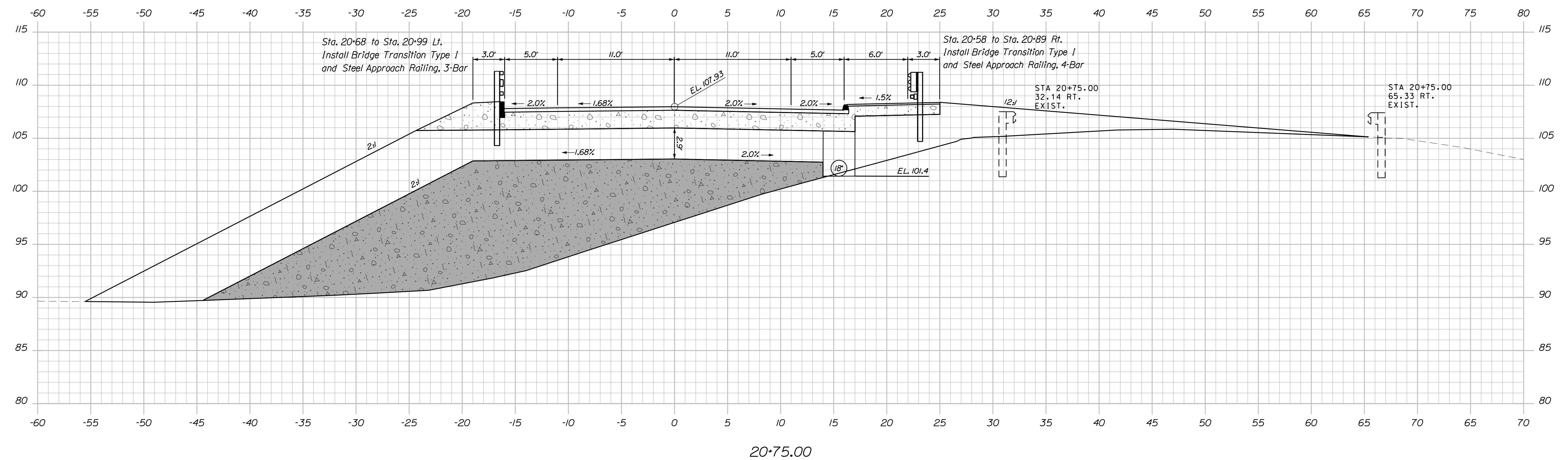
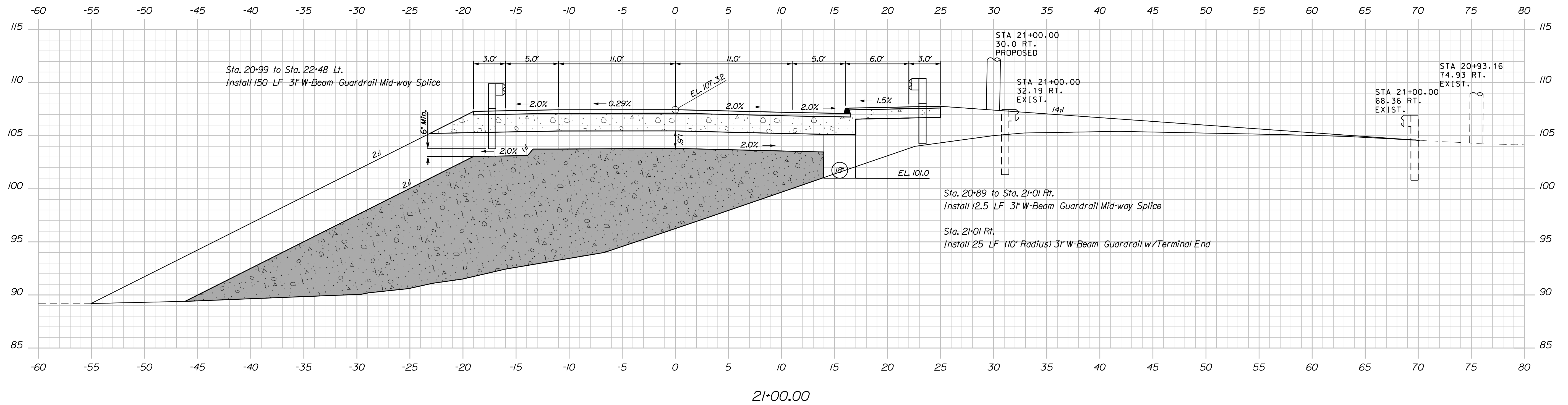
15+00.00



14+75.00

Sta. 14+75.00 to Sta. 15+00.00

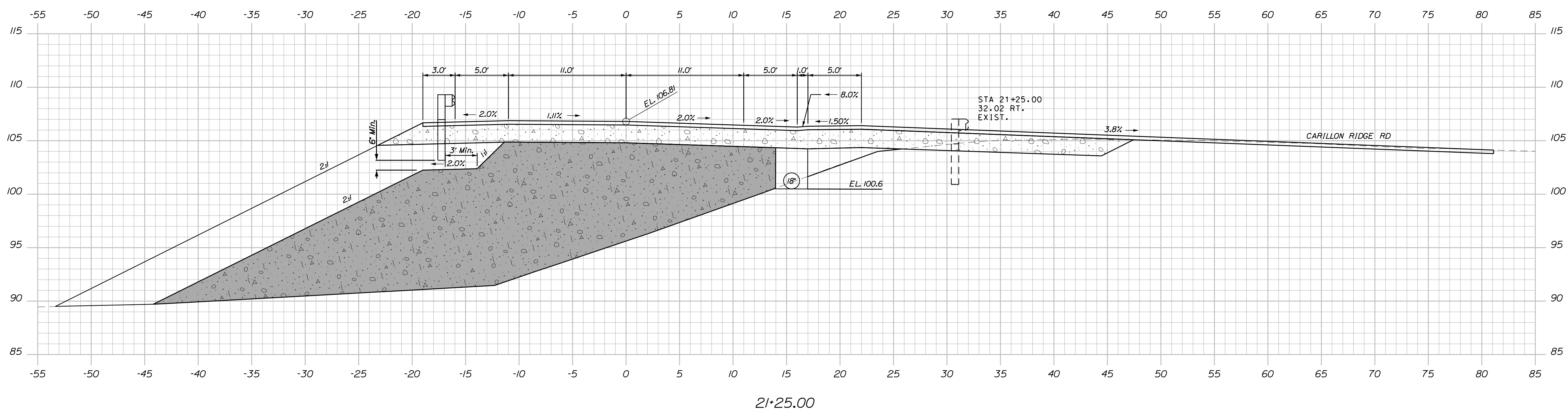
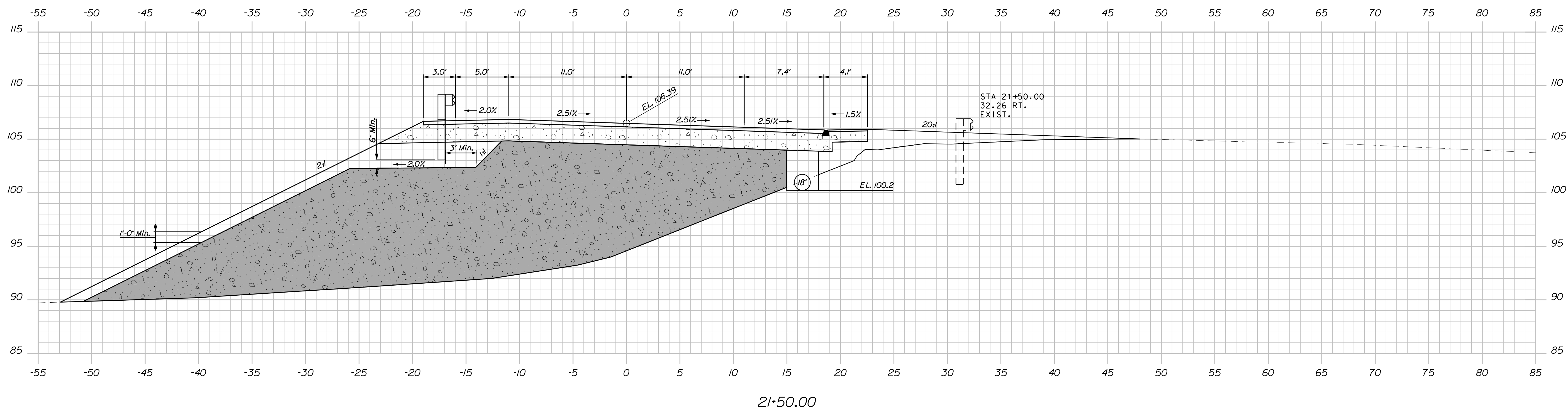
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2516100		BRIDGE PLANS		
	WIN		25161.00		
	BRIDGE NO. 5601				
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND COUNTY TUTTLE RD CROSS SECTIONS (8 OF 21)		PROJ. MANAGER	Gerald Dostle	DATE	03/2025
		CHECKED-DESIGNED	GRS	BY	SLM
		DESIGNED-REVIEWED	SLM	SIGNATURE	
		DESIGNED-REVIEWED	SLM	P.E. NUMBER	
SHEET NUMBER 29 OF 88		REVISIONS 1		DATE	
		REVISIONS 2			
		REVISIONS 3			
		REVISIONS 4			
		FIELD CHANGES			



STA 15+20.00
END FULL DEPTH RECONSTRUCTION
BEGIN BRIDGE

STA 15+20.00
TO STA 20+50.16
BRIDGE STATION RANGE

STA 20+50.16
END BRIDGE
BEGIN FULL DEPTH RECONSTRUCTION



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
	2516100
BRIDGE NO. 5801	WIN 25161.00
BRIDGE PLANS	

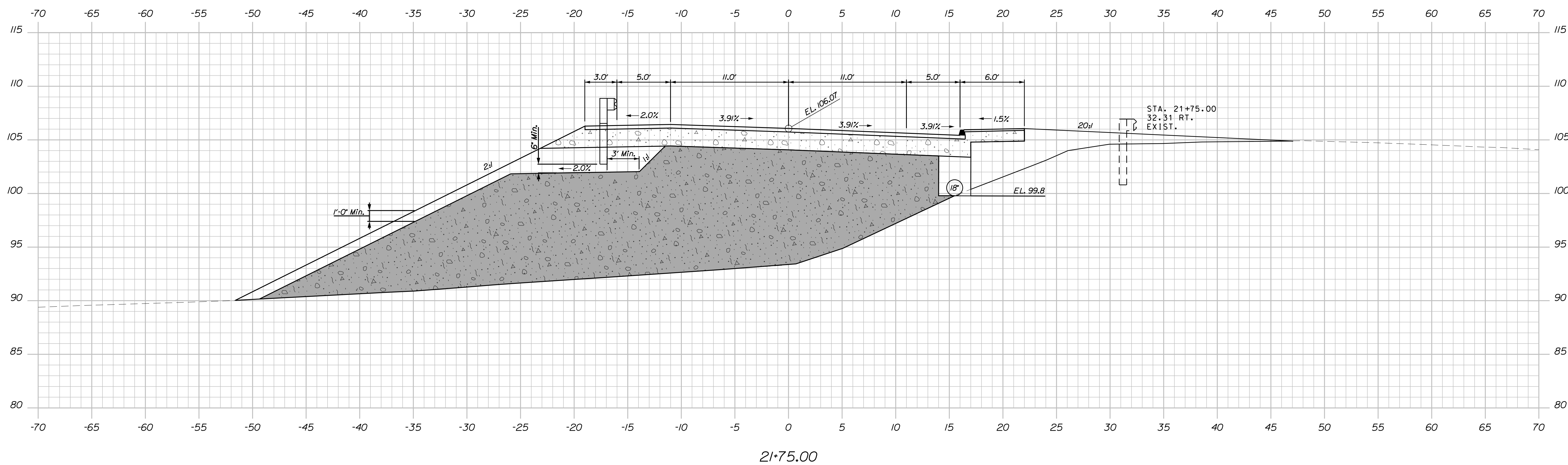
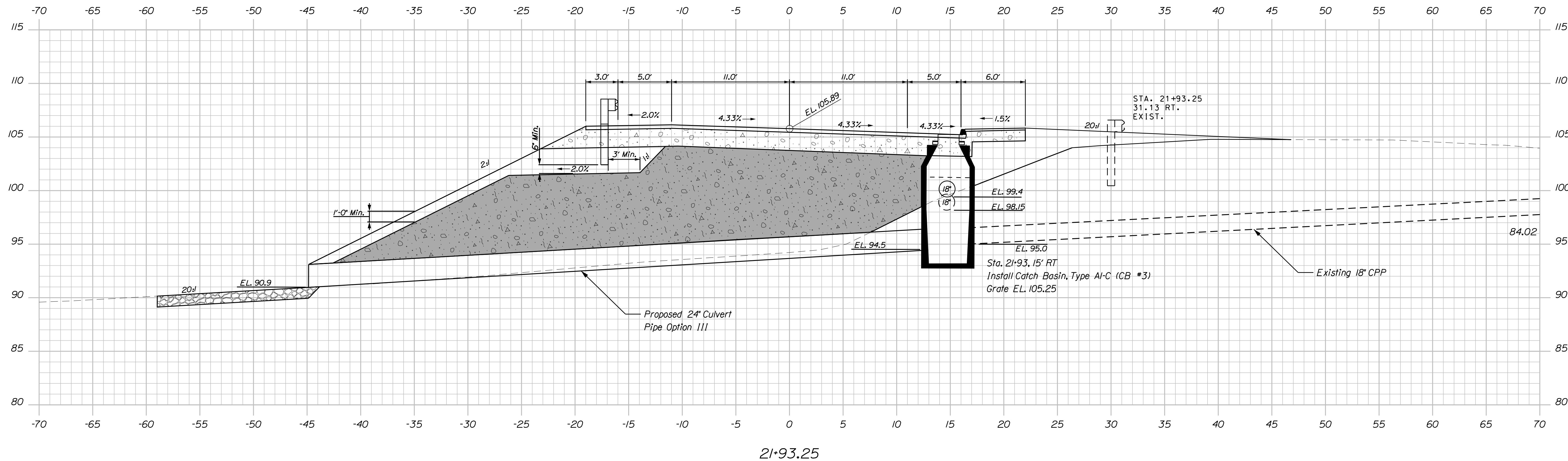
PROJ. MANAGER		Gerald Dostie		BY	DATE
DESIGN-DETAILED	GRS			GRS	03/2025
CHECKED-REVIEWED	SLM			SLM	
DESIGN3-DETAILED2					
DESIGN3-DETAILED3					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					
					SIGNATURE
					P.E. NUMBER
					DATE

TUTTLE ROAD BRIDGE
 INTERSTATE 295, RTE US 1 & MCRR
 CUMBERLAND CUMBERLAND COUNTY
 TUTTLE RD CROSS SECTIONS
 (10 OF 21)

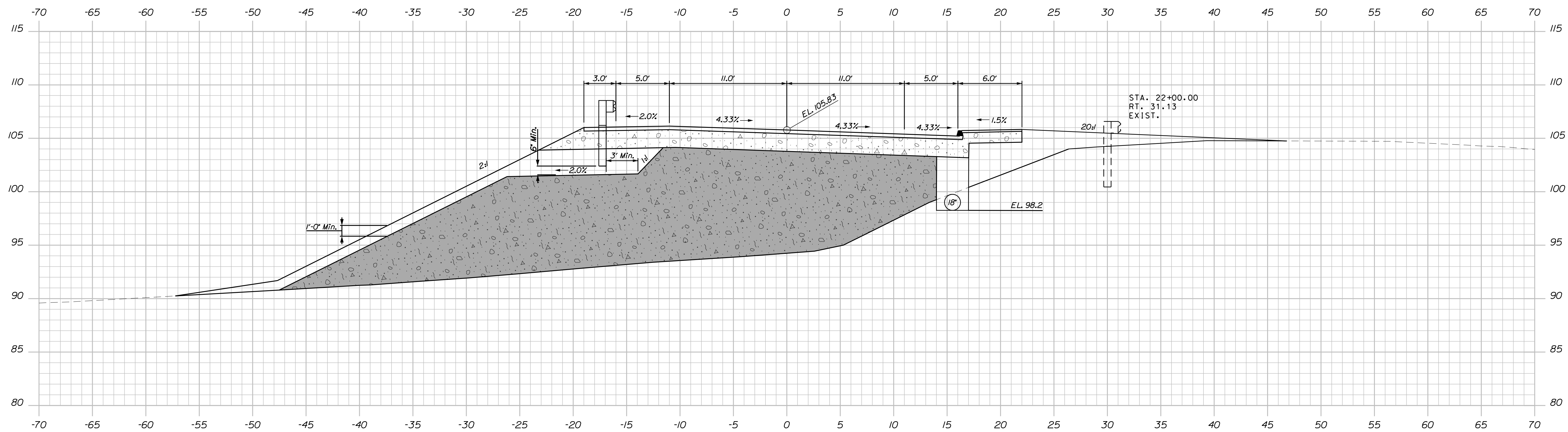
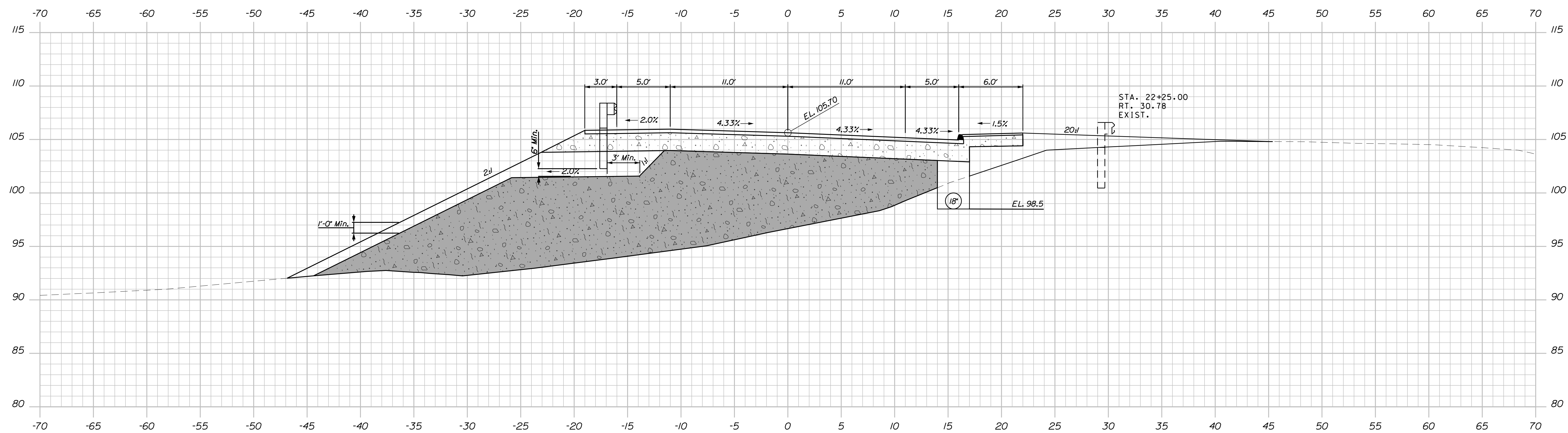
SHEET NUMBER

31

OF 88



 STATE OF MAINE DEPARTMENT OF TRANSPORTATION					
	TUTTLE ROAD BRIDGE				
	INTERSTATE 295, RTE US 1 & MCRR				
	CUMBERLAND CUMBERLAND COUNTY				SIGNATURE
	TUTTLE RD CROSS SECTIONS				P.E. NUMBER
	(11 OF 21)				DATE
SHEET NUMBER		BRIDGE NO. 5801		BRIDGE PLANS	



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
	2516100
BRIDGE NO. 5801	WIN 25161.00
BRIDGE PLANS	

PROJ. MANAGER	Coord	Destile	BY	DATE
DESIGN-DETAILED	GRS		GRS	03/2025
CHECKED-REVIEWED	SLM		SLM	03/2025
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				
SIGNATURE				
P.E. NUMBER				
DATE				

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
TUTTLE RD CROSS SECTIONS
(12 OF 21)

SHEET NUMBER

33

OF 88

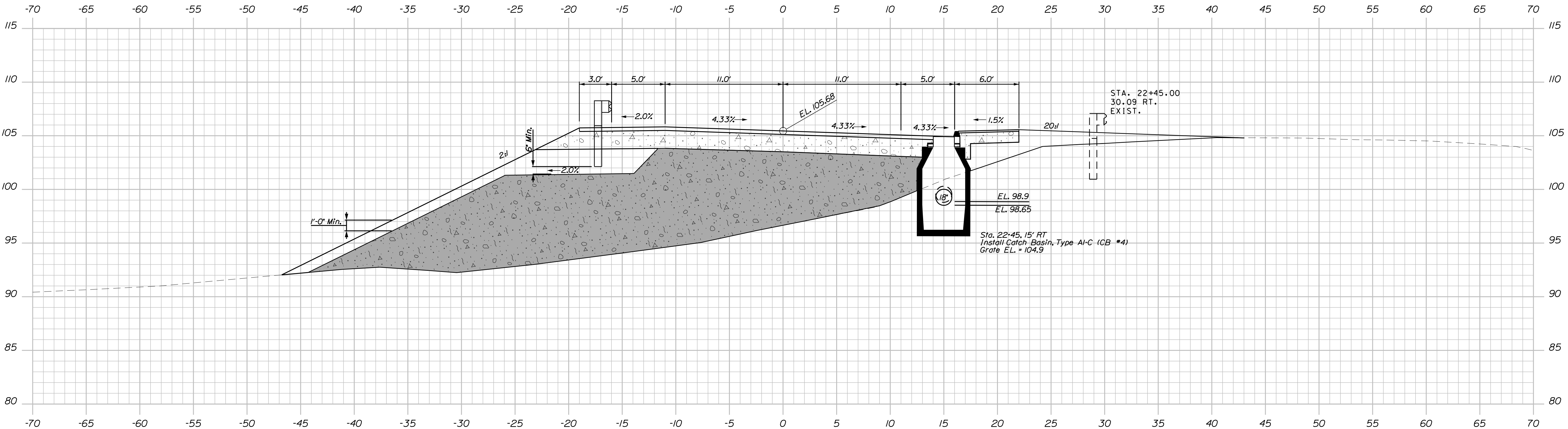
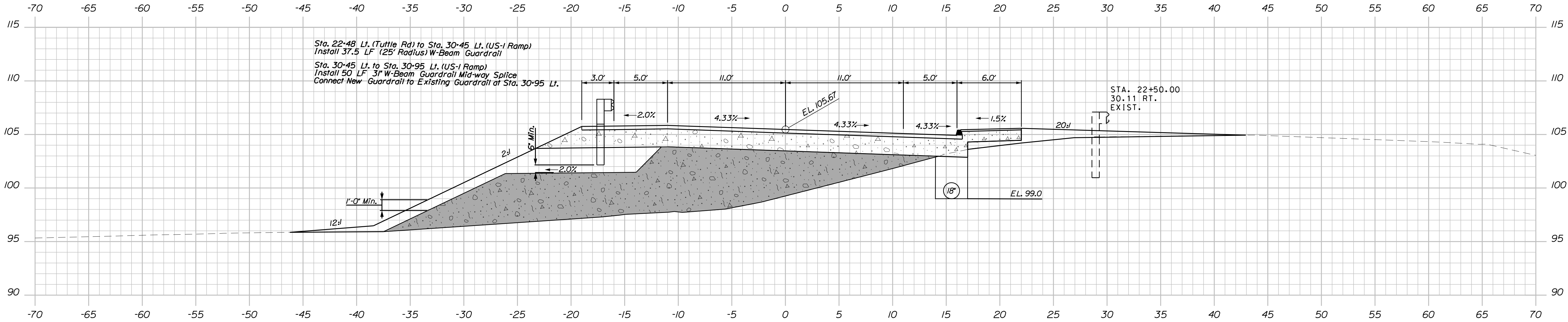
Sta. 22+00.00 to Sta. 22+25.00

Date:5/25/2025

Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\034_Xsect (2).dgn



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2516100	
WIN	25161.00
BRIDGE NO. 6601	BRIDGE PLANS

PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED	03/2025	GRS	03/2025
CHECKED-REVIEWED	03/2025	SLM	03/2025
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TUTTLE ROAD BRIDGE	TUTTLE RD CROSS SECTIONS
INTERSTATE 295, RTE US 1 & MCRR	(13 OF 21)
CUMBERLAND CUMBERLAND COUNTY	

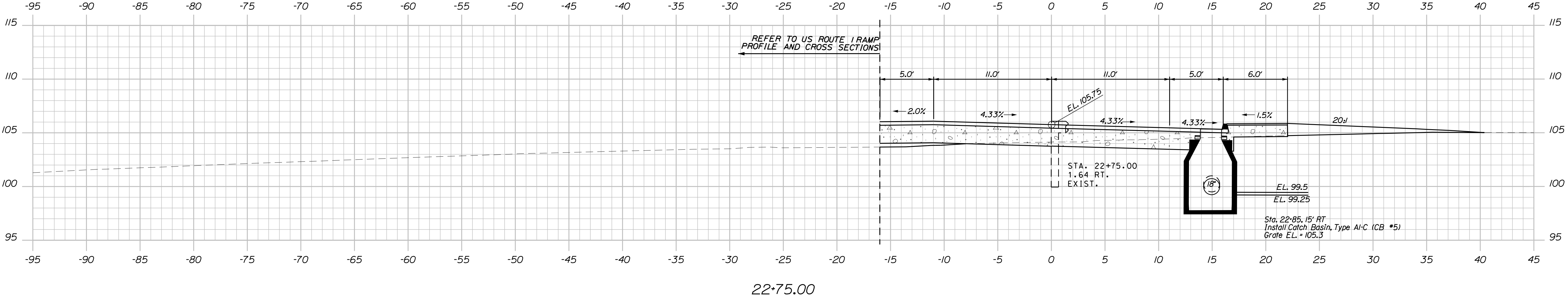
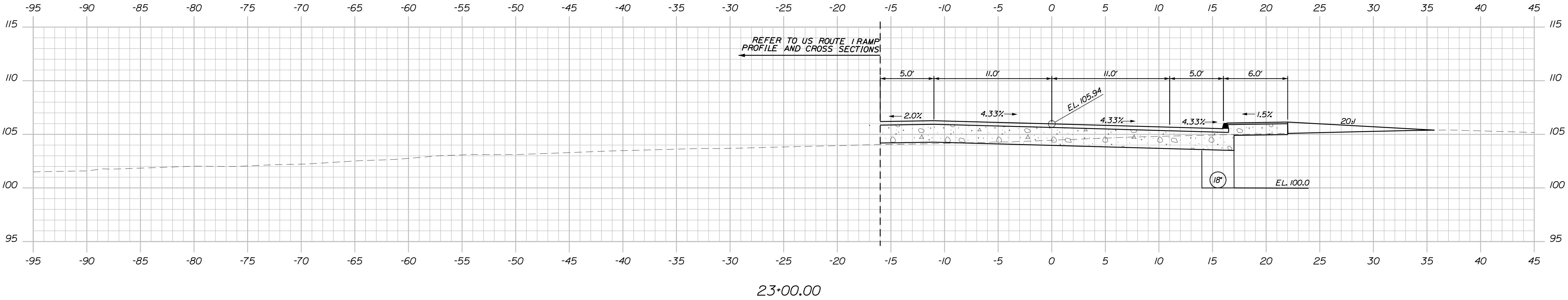
SHEET NUMBER
34
OF 88

Date:5/25/2025

Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\035_Xsect (2).dgn



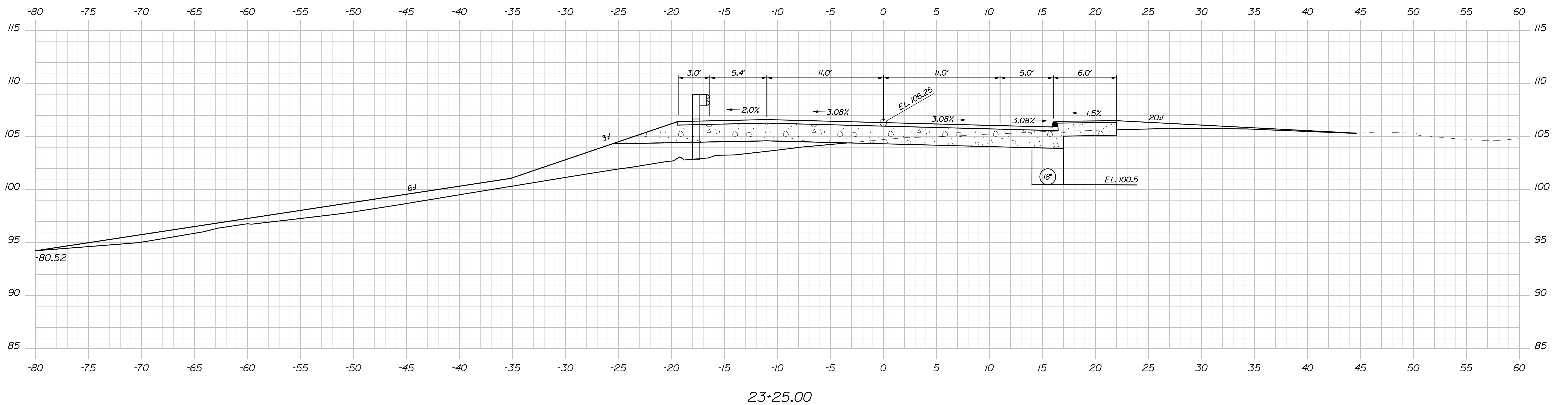
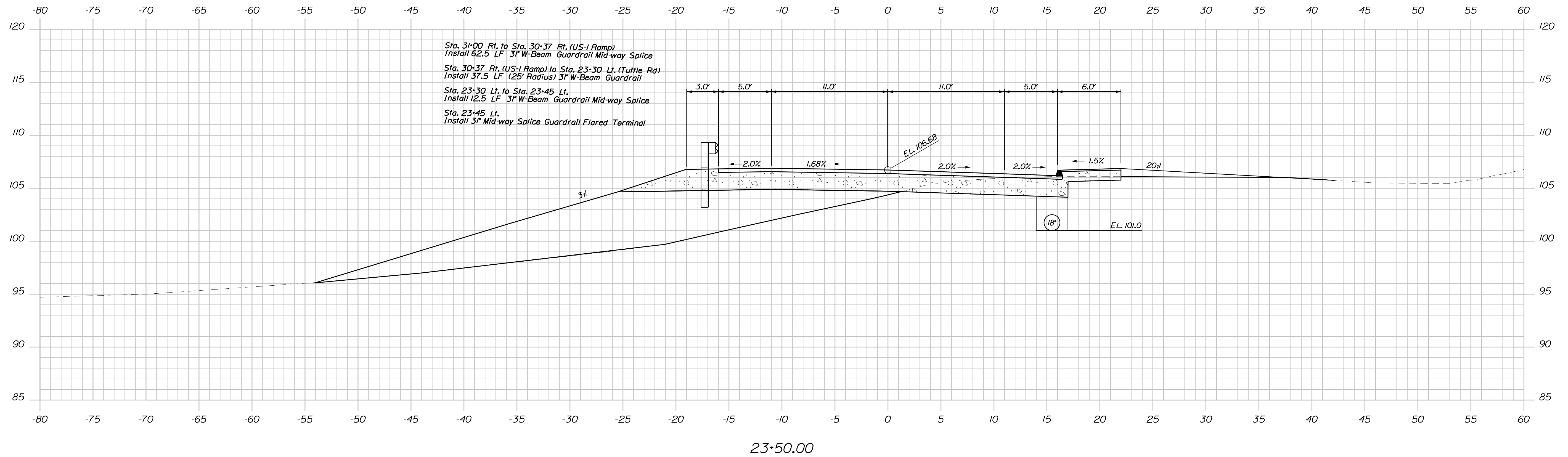
STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2516100	
BRIDGE NO. 5601	WIN
25161.00	
BRIDGE PLANS	

PROJ. MANAGER	Gerald Dostle	BY	DATE
DESIGN-DETAILED	GRS	GRS	03/2025
CHECKED-REVIEWED	SLM	SLM	03/2025
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
TUTTLE RD CROSS SECTIONS
(14 OF 21)

SHEET NUMBER
35
OF 88

Sta. 22+75.00 to Sta. 23+00.00

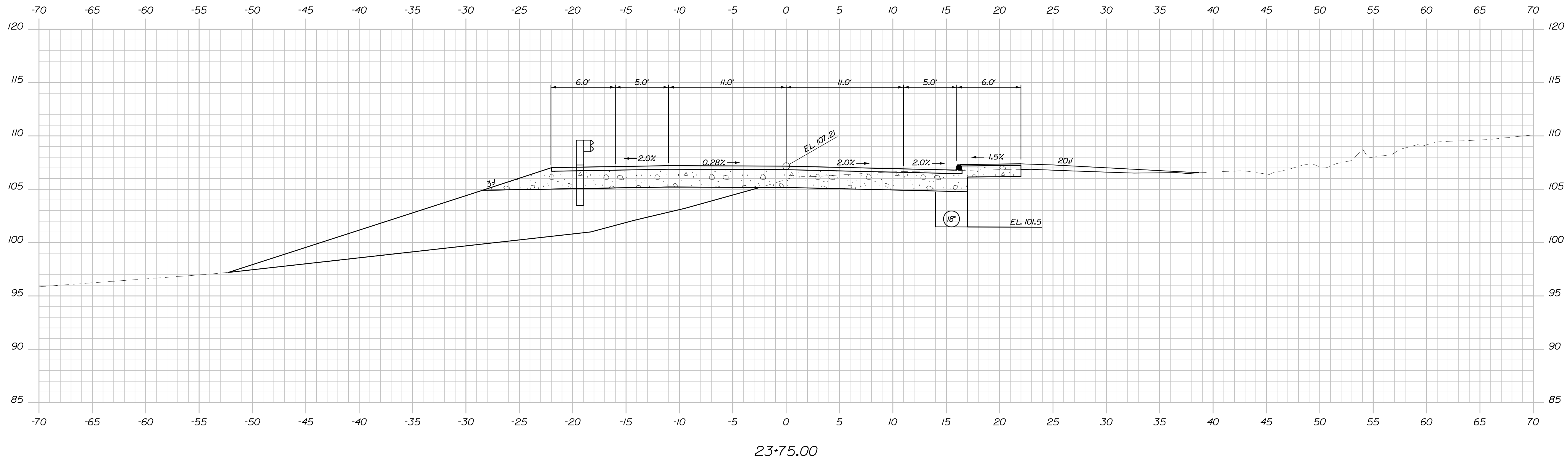
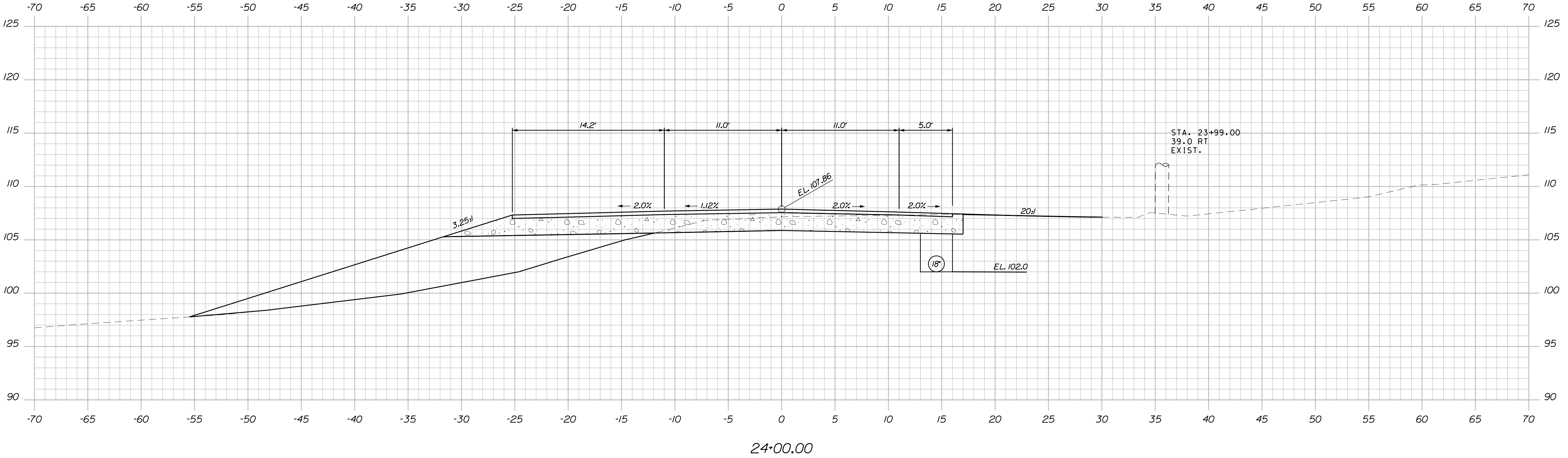


Date:5/25/2025

Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\037_Xsect (2).dgn



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2516100

WIN
25161.00
BRIDGE NO. 6601

BRIDGE PLANS

PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED	03/2025	GRS	03/2025
CHECKED-REVIEWED	03/2025	SLM	03/2025
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY

TUTTLE RD CROSS SECTIONS
(16 OF 21)

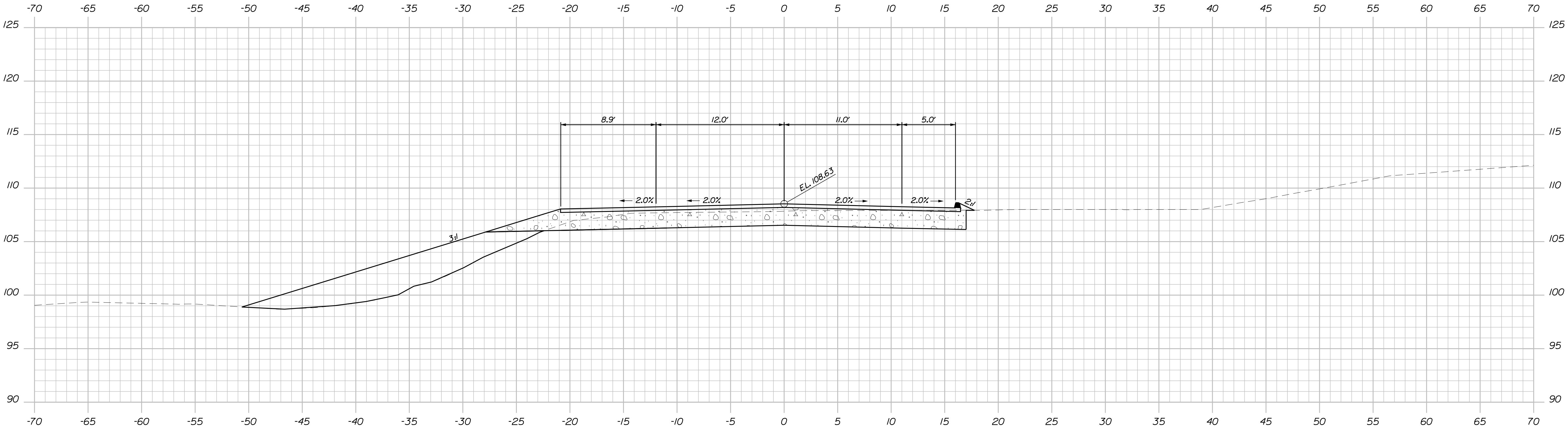
SHEET NUMBER
37
OF 88

Date:5/25/2025

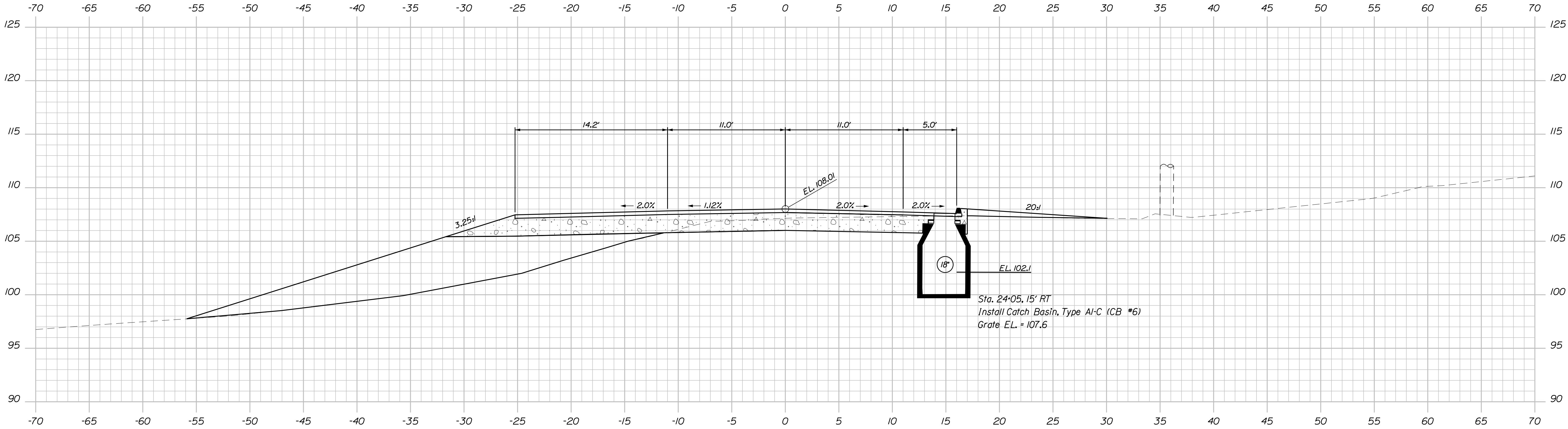
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Division: BRIDGE

Filename: ... \HIGHWAY\038_Xsect (2).dgn



24+25.00



24+05.00

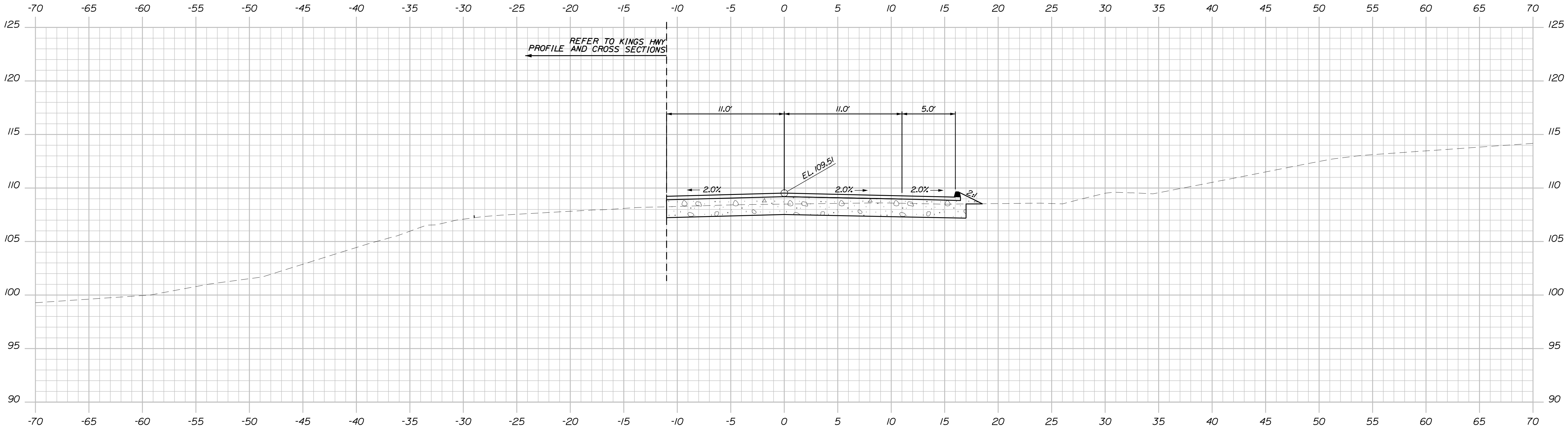
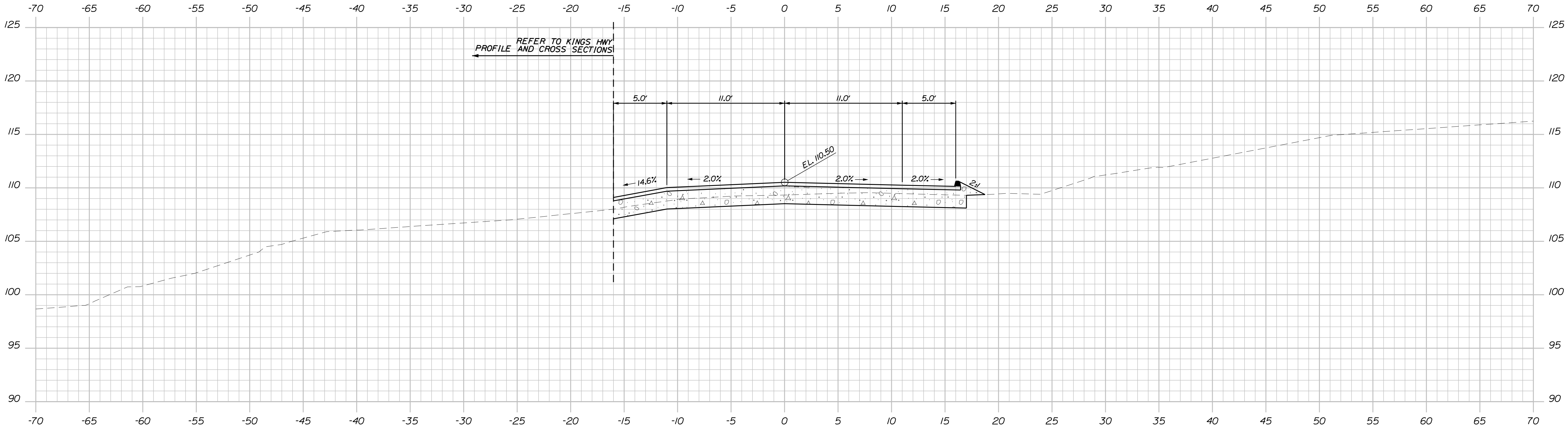
PROJ. MANAGER	Gerald Dostle	BY	DATE
DESIGN-DETAILED	GRS	GRS	03/2025
CHECKED-REVIEWED	SLM	SLM	03/2025
DESIGN-DETAILED			
DESIGNS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SIGNATURE			
P.E. NUMBER			
DATE			

Date:5/25/2025

Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\039_Xsect (2).dgn

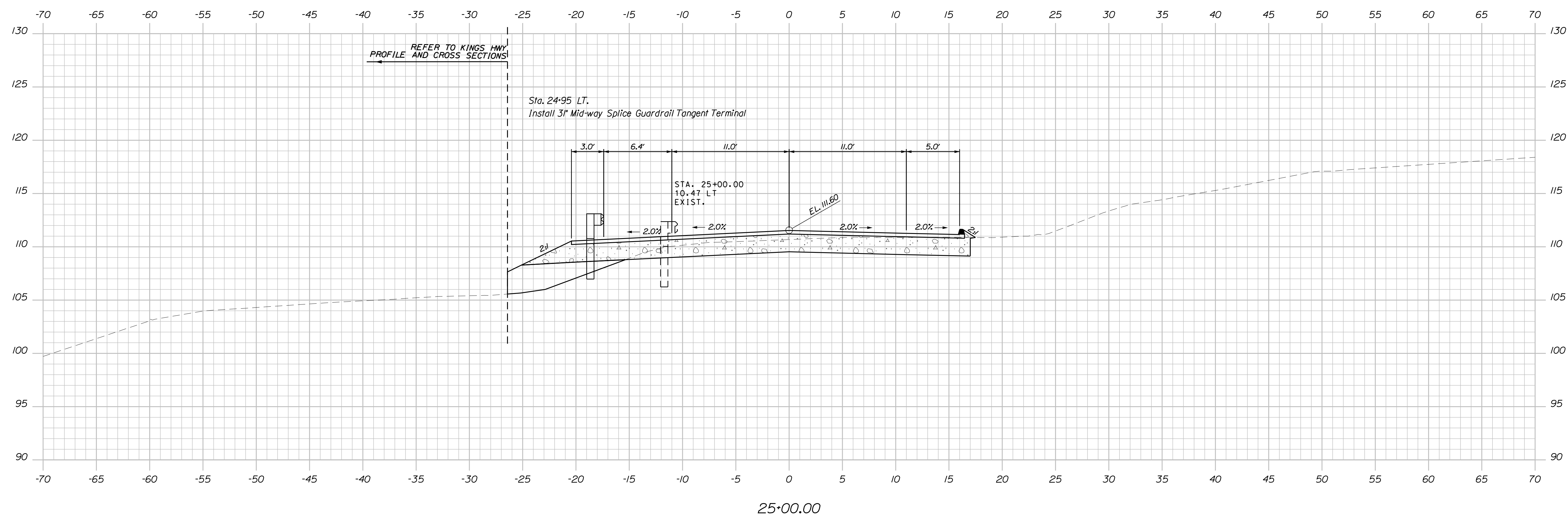
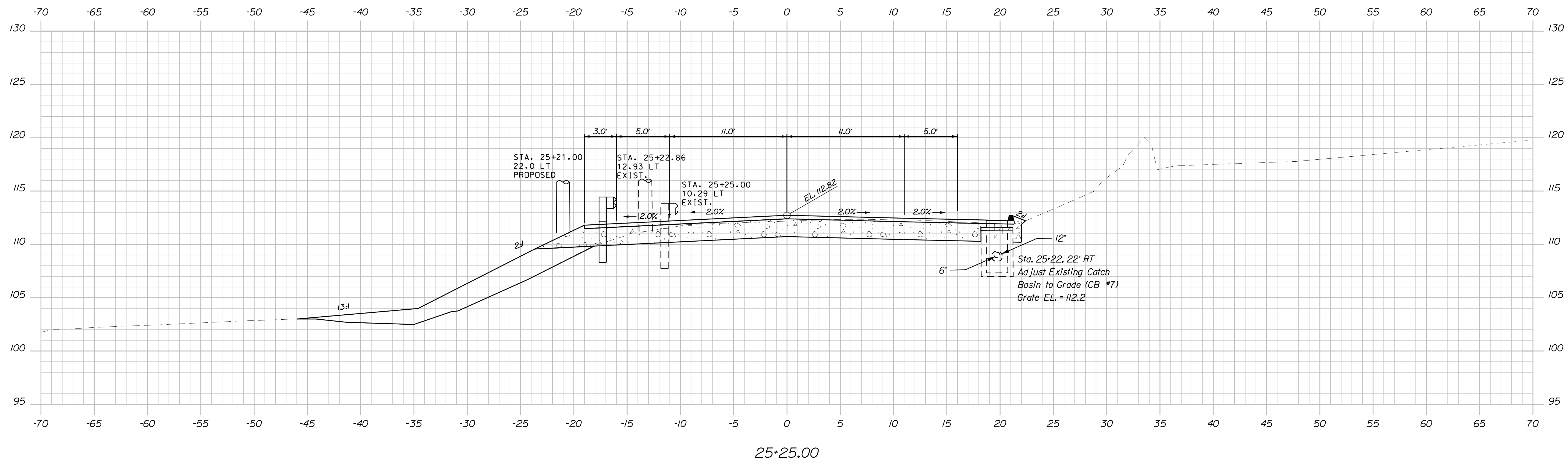


STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2516100	
	WIN	25161.00
	BRIDGE NO. 6601	BRIDGE PLANS

PROJ. MANAGER Gerald Dostle	BY GRS SLM	DATE 03/2025
		SIGNATURE
DESIGN-DETAILED CHECKED-REVIEWED DESIGNS-DETAILED	GRS SLM	P.E. NUMBER
		DATE
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY	TUTTLE RD CROSS SECTIONS (18 OF 21)
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SHEET NUMBER
39
OF 88



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
	2516100
BRIDGE NO. 5801	WIN 25161.00
BRIDGE PLANS	

PROJ. MANAGER	Gen'dl. Dist'dl.	BY	DATE
DESIGN-DETAILED	GRS		03/20/2025
CHECKED-REVIEWED	SLM		03/20/2025
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
			SIGNATURE
			P.E. NUMBER
			DATE

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY

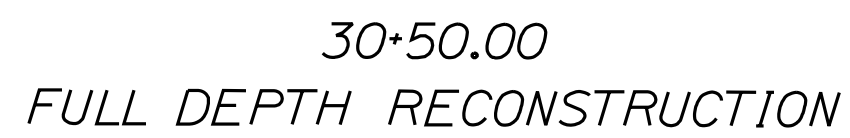
TUTTLE RD CROSS SECTIONS
(19 OF 21)

SHEET NUMBER

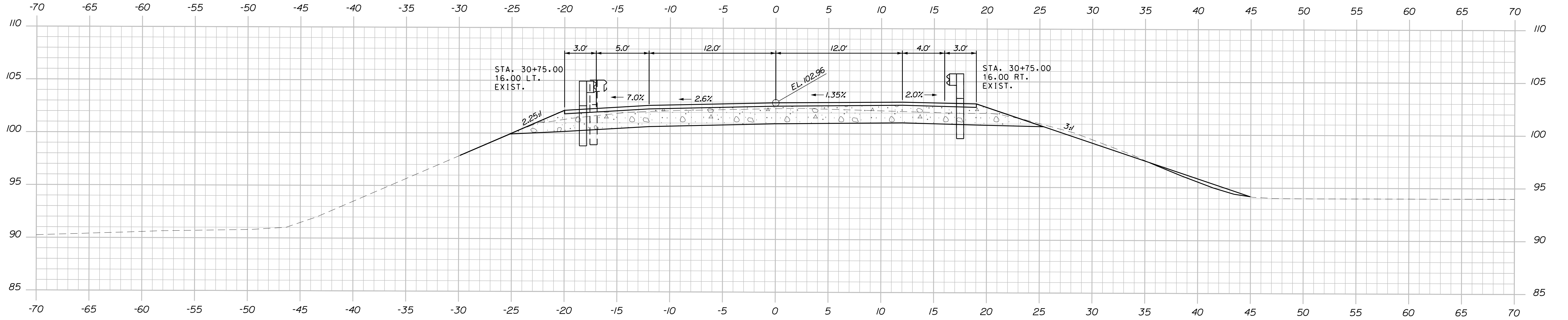
40

OF 88

Sta. 25+00.00 to Sta. 25+25.00

Sta. 30+50.00

Filename: ... \HIGHWAY\044_Xsect.dgn



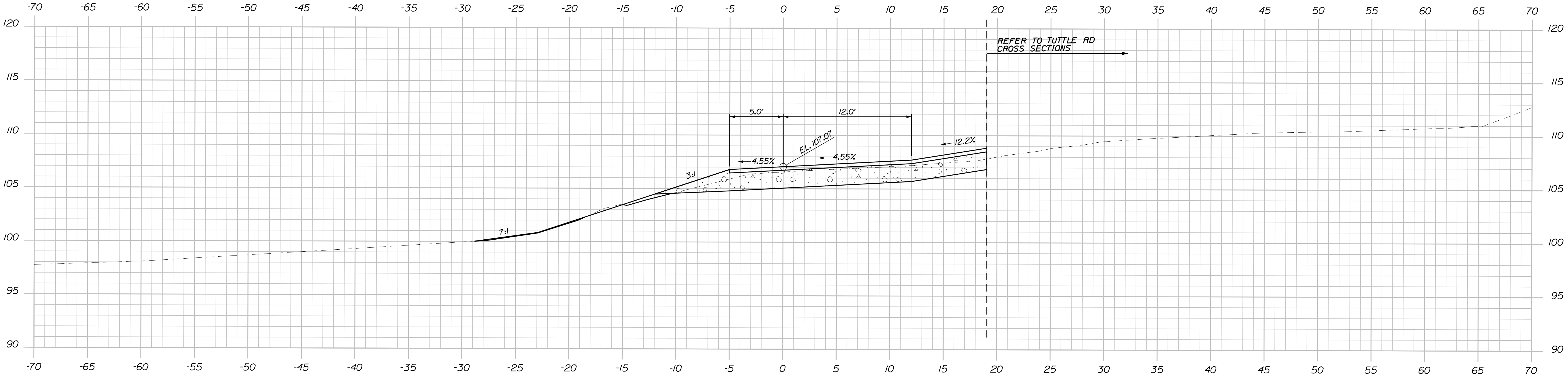
SHEET NUMBER						
44						
OF 88						
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY	PROJ. MANAGER	Gerd Dostle	BY	DATE		
	DESIGN-DETAILED	GRS		03/2025		
	CHECKED-REVIEWED	SLM	SLM	03/2025		
	DESIGN2-DETAILED2				SIGNATURE	
	DESIGN3-DETAILED3					
	REVISONS 1				P.E. NUMBER	
	REVISONS 2					
	REVISONS 3					
	REVISONS 4				DATE	
	FIELD CHANGES					
US ROUTE 1 RAMP CROSS SECTIONS (2 OF 2)						
STATE OF MAINE				BRIDGE NO. 5601		
DEPARTMENT OF TRANSPORTATION				2516100		
				WIN 25161.00		
				BRIDGE PLANS		

Date:5/25/2025

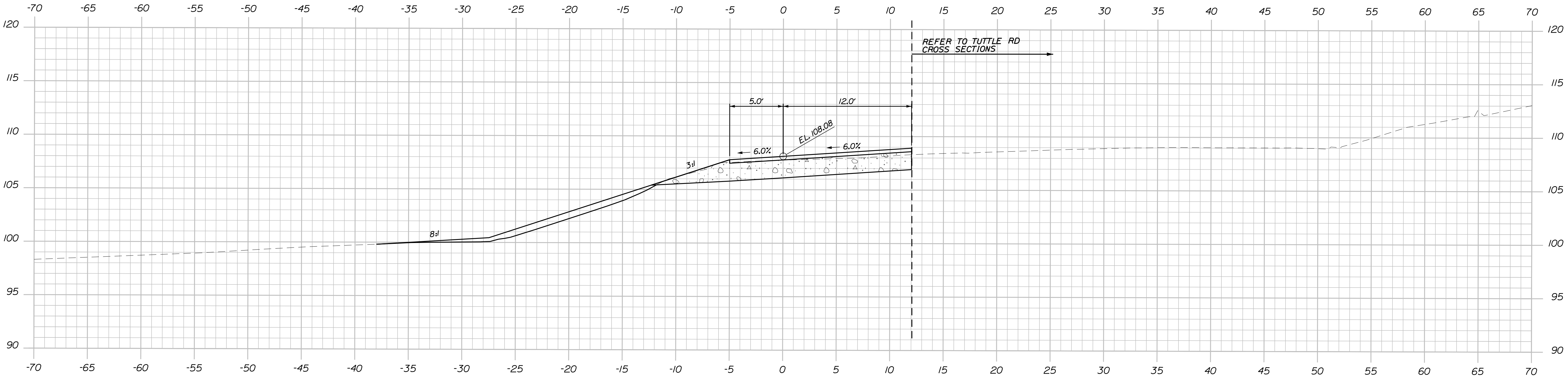
Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\045_Xsect.dgn



40+75.00



40+50.00
FULL DEPTH RECONSTRUCTION

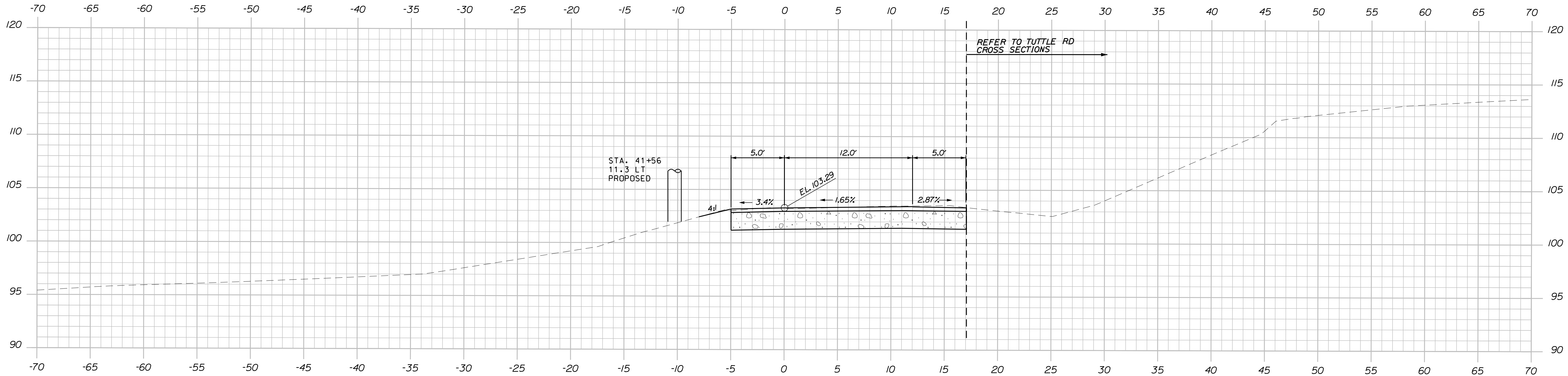
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2516100		WIN		25161.00		BRIDGE NO. 6601		BRIDGE PLANS		
	TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR		CUMBERLAND COUNTY		KINGS HIGHWAY		CROSS SECTIONS (1 OF 3)		
	SHEET NUMBER		45		OF 88						
PROJ. MANAGER		Gerald Dostle		BY		DATE		SIGNATURE		P.E. NUMBER	
DESIGN-DETAILED		GFS		GFS		03/2025		DATE		DATE	
CHECKED-REVIEWED		SLM		SLM		03/2025		DATE		DATE	
DESIGN-DETAILED								DATE		DATE	
REVISIONS 1								DATE		DATE	
REVISIONS 2								DATE		DATE	
REVISIONS 3								DATE		DATE	
REVISIONS 4								DATE		DATE	
FIELD CHANGES								DATE		DATE	

Date:5/25/2025

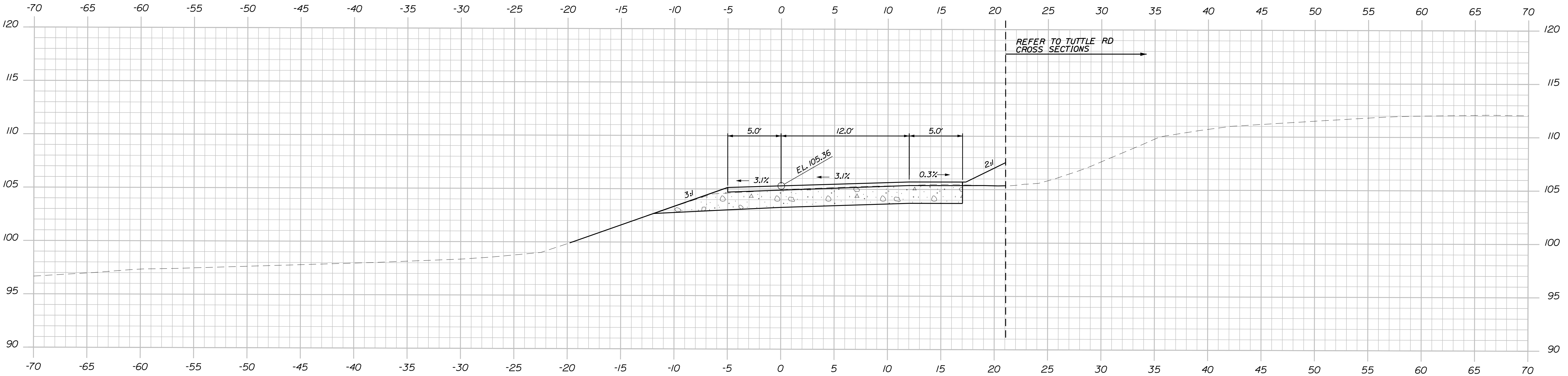
Username: common

Division: BRIDGE

Filename: ... \HIGHWAY\046_Xsect.dgn

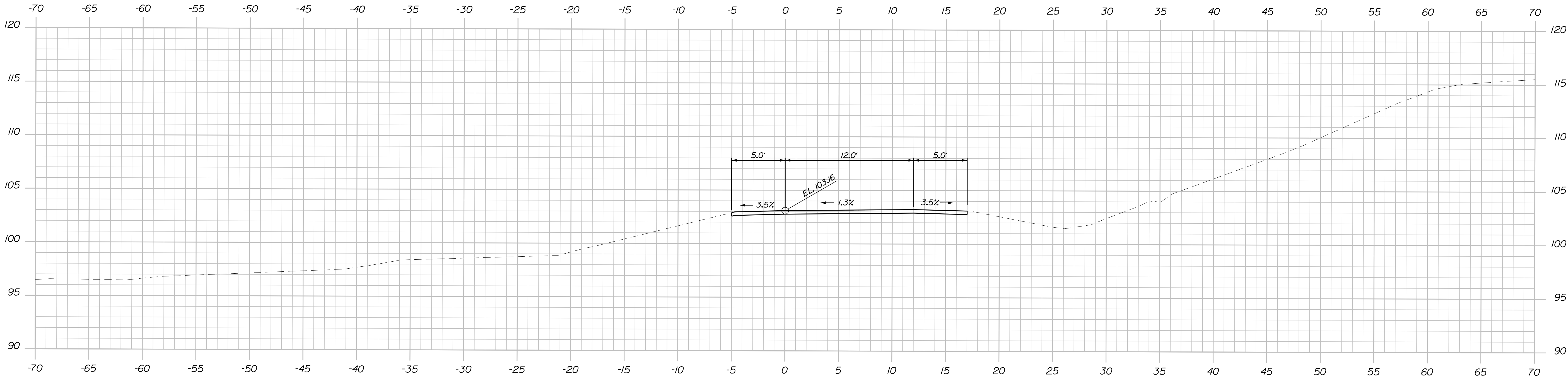


41+25.00
STA 41+22
END TRANSITION
BEGIN 1 1/2" MILL & OVERLAY



41+00.00
STA 40+97
END FULL DEPTH RECONSTRUCTION
BEGIN TRANSITION

STATE OF MAINE DEPARTMENT OF TRANSPORTATION					BRIDGE NO. 5801 WIN 25161.00 BRIDGE PLANS
	2516100				
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY KINGS HIGHWAY CROSS SECTIONS (2 OF 3)	PROJ. MANAGER	Gerold Dostile	BY	DATE	SIGNATURE P.E. NUMBER DATE
	DESIGN-DETAILED	GRS	GRS	03/2025	
	CHECKED-REVIEWED	SJM	SJM	03/2025	
	DESIGN-DETAILED02				
	DESIGN-DETAILED03				
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	REVISIONS 2				
	REVISIONS 3				
	REVISIONS 4				
	FIELD CHANGES				
SHEET NUMBER	46				OF 88



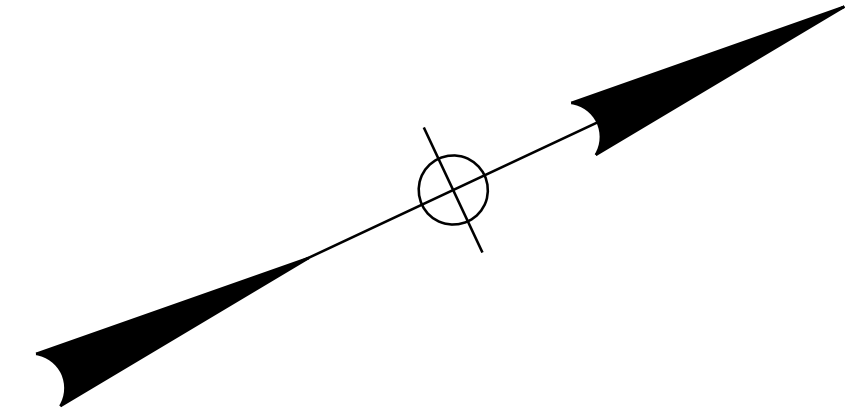
41+27.00
END 1/2" MILL & OVERLAY
MATCH EXISTING

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100
WIN
BRIDGE NO. 5801
25161.00
BRIDGE PLANS

PROJ. MANAGER	Gerald Dostie	BY	DATE
DESIGN-DETAILED	GRS	GRS	03/2025
CHECKED-REVIEWED	SLM	SLM	03/2025
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

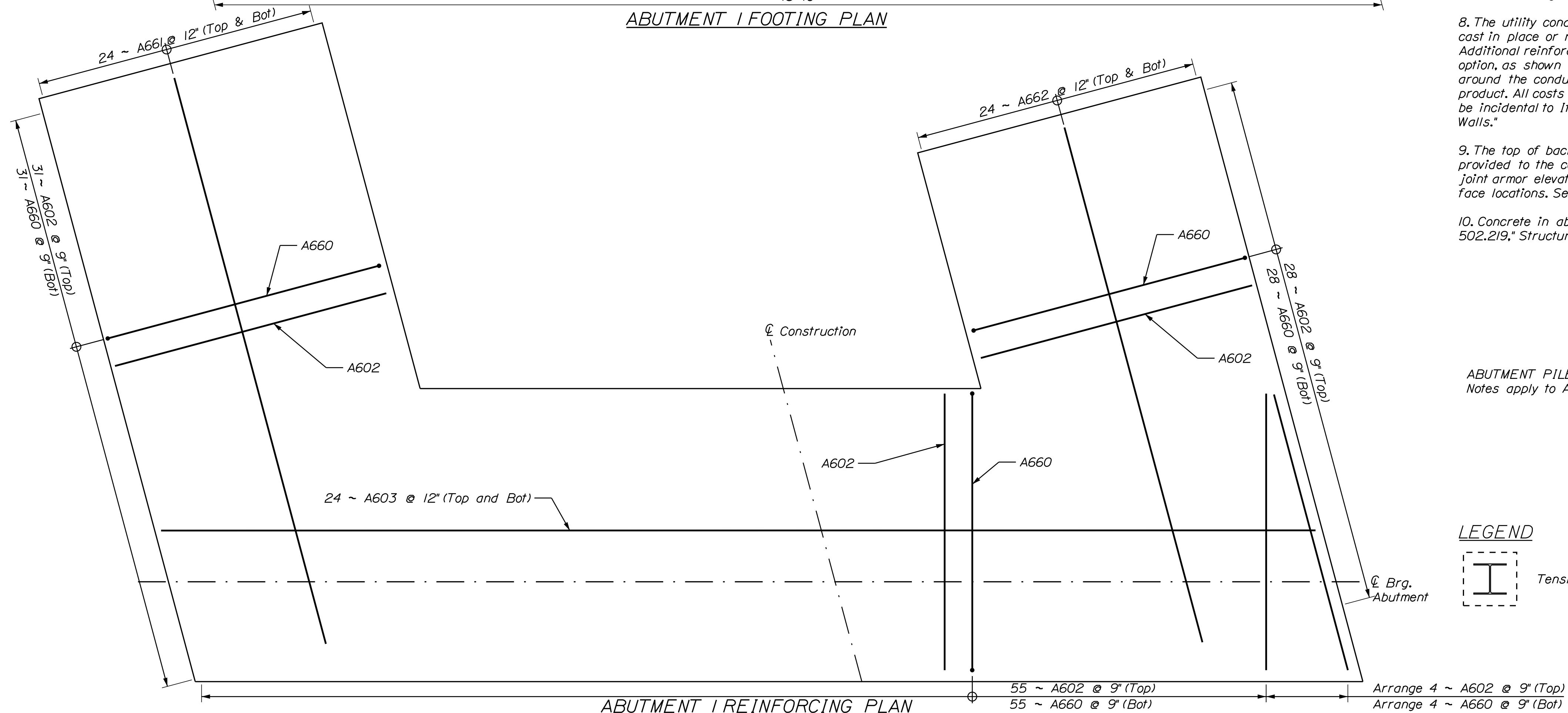
TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
KINGS HIGHWAY
CROSS SECTIONS (3 OF 3)

SHEET NUMBER
47
OF 88

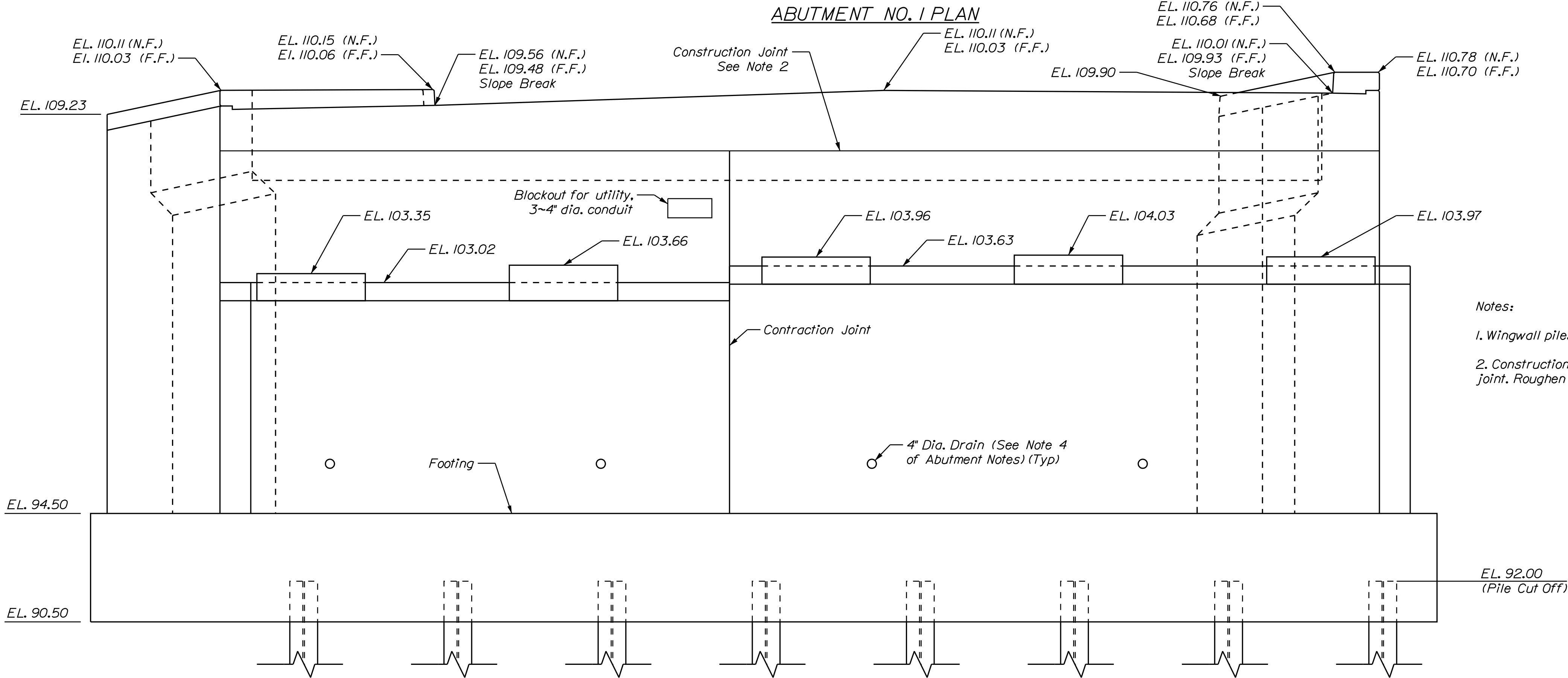
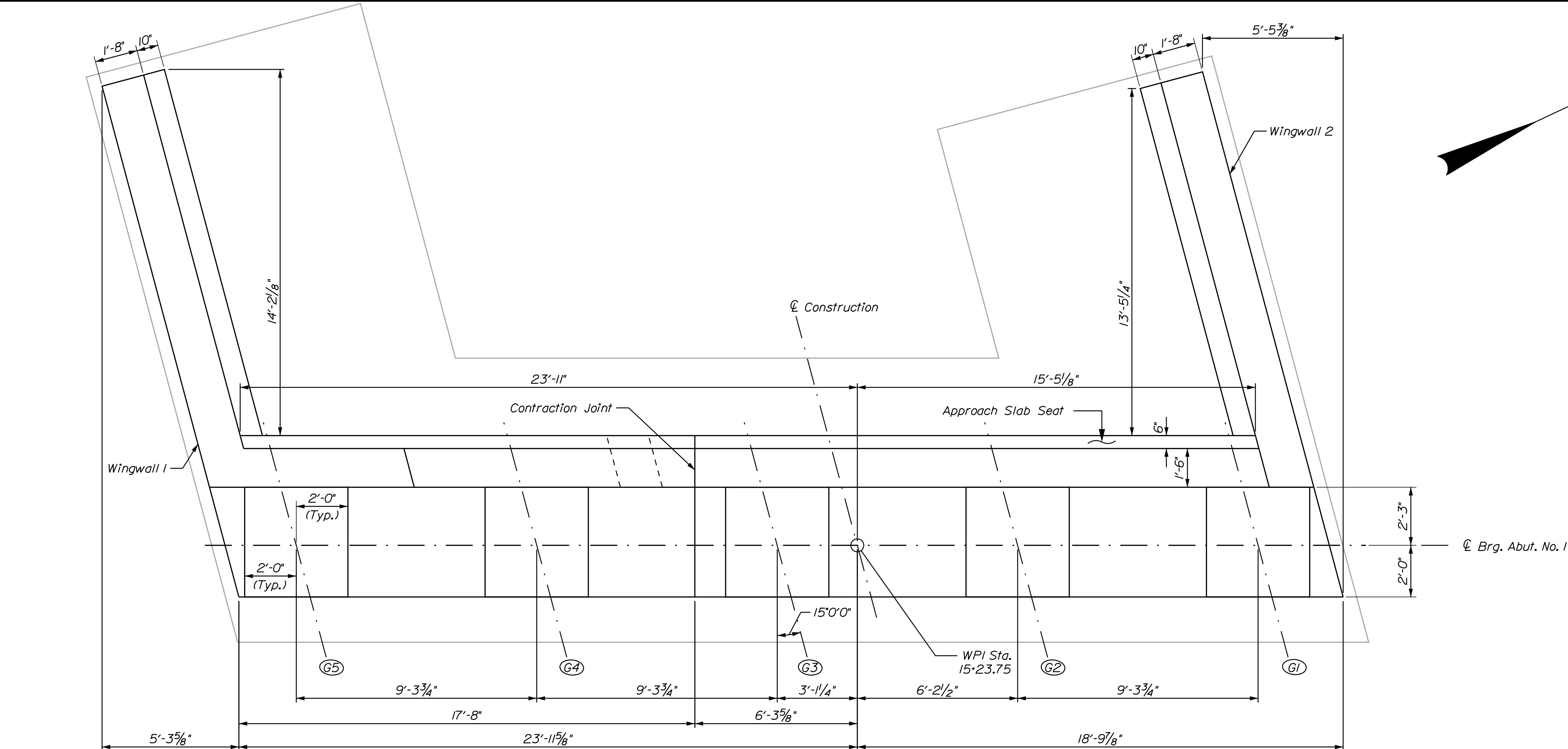


1. Structural Earth Excavation required more than 12 inches below the bottom of the structure will be paid for in accordance with Standard Specifications Section 206, Structural Excavation.
2. Abutments, wingwalls, and their footings shall be backfilled with Granular Borrow or lightweight fill, as shown in the plans. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.
3. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.
4. Place drains with a 4-inch diameter in the breastwall and wingwalls at 10 feet maximum spacing. The exact location will be determined by the Resident.
5. Construct French Drains behind the abutments and wingwalls in accordance with Standard Specifications Section 512, French Drains.
6. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
7. The concrete pedestal elevations shown are approximate. The actual elevations shall be adjusted to accommodate the bearings supplied by the Contractor. The elevations provided on the Plans assume overall bearing heights as described on the "Bearing Details" sheet.
8. The utility conduits passing through the abutment backwalls shall be either cast in place or run through a utility blockout, at the option of the Contractor. Additional reinforcing steel shall be provided around the utility conduit for either option, as shown in the reinforcing details. If blockouts are used, all voids around the conduits shall be fully grouted with a MaineDOT pre-approved product. All costs associated with construction of utility conduit blockouts shall be incidental to Item 502.219, "Structural Concrete, Abutments and Retaining Walls."
9. The top of backwall elevations provided in abutment elevation views are provided to the concrete finish grade at all far face locations and to the final joint armor elevation or concrete finish grade elevation as appropriate at near face locations. See Finger Joint Detail sheets for additional details.
10. Concrete in abutment, wingwalls, and footings will be paid under Item 502.219, "Structural Concrete, Abutments and Retaining Walls".

 Tension Pile - For Details, See Sheet Abutment No. 1 Reinforcing



LEGEND
 N.F. - Near Face
 F.F. - Far Face



STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

2516100

WIN

BRIDGE NO. 5601

BRIDGE PLANS

DESIGN-DETAILED

CHECKED-REVIEWED

DESIGN-DETAILED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

DATE

03/2025

03/2025

SIGNATURE

P.E. NUMBER

DATE

TUTTLE ROAD BRIDGE

INTERSTATE 295, RTE US 1 & MCRR

CUMBERLAND CUMBERLAND COUNTY

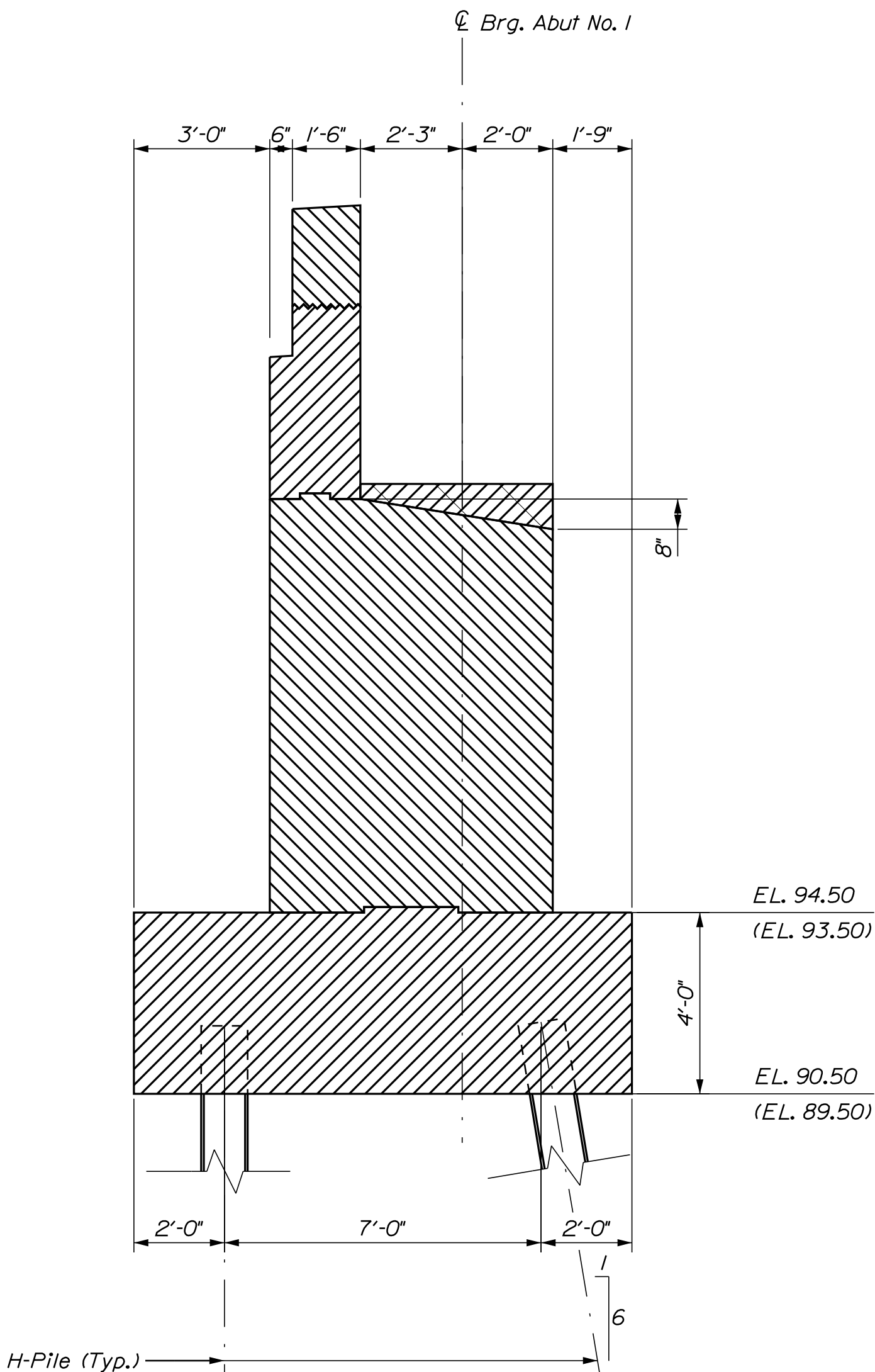
ABUTMENT NO. 1

PLAN AND ELEVATION

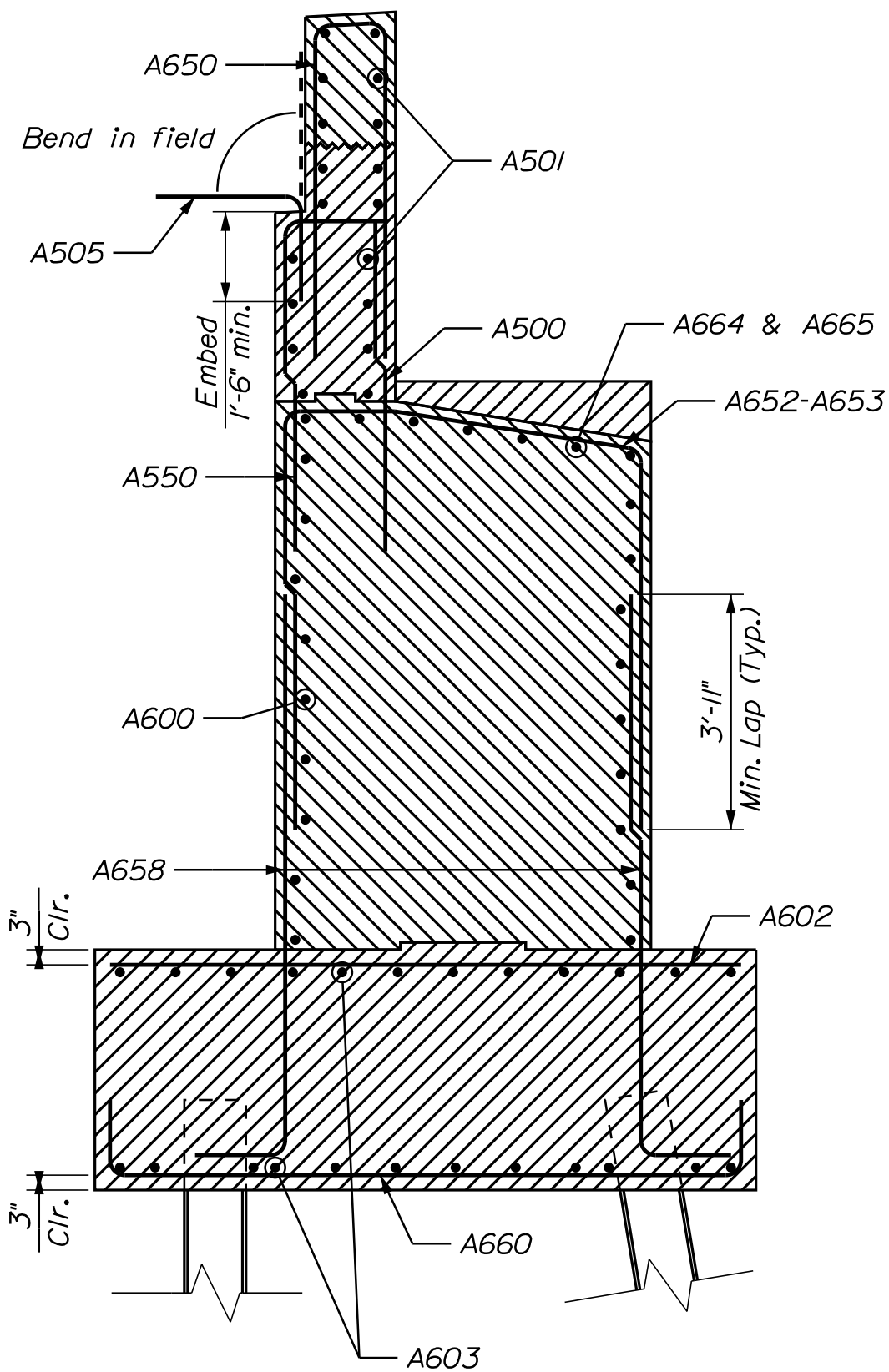
SHEET NUMBER

49

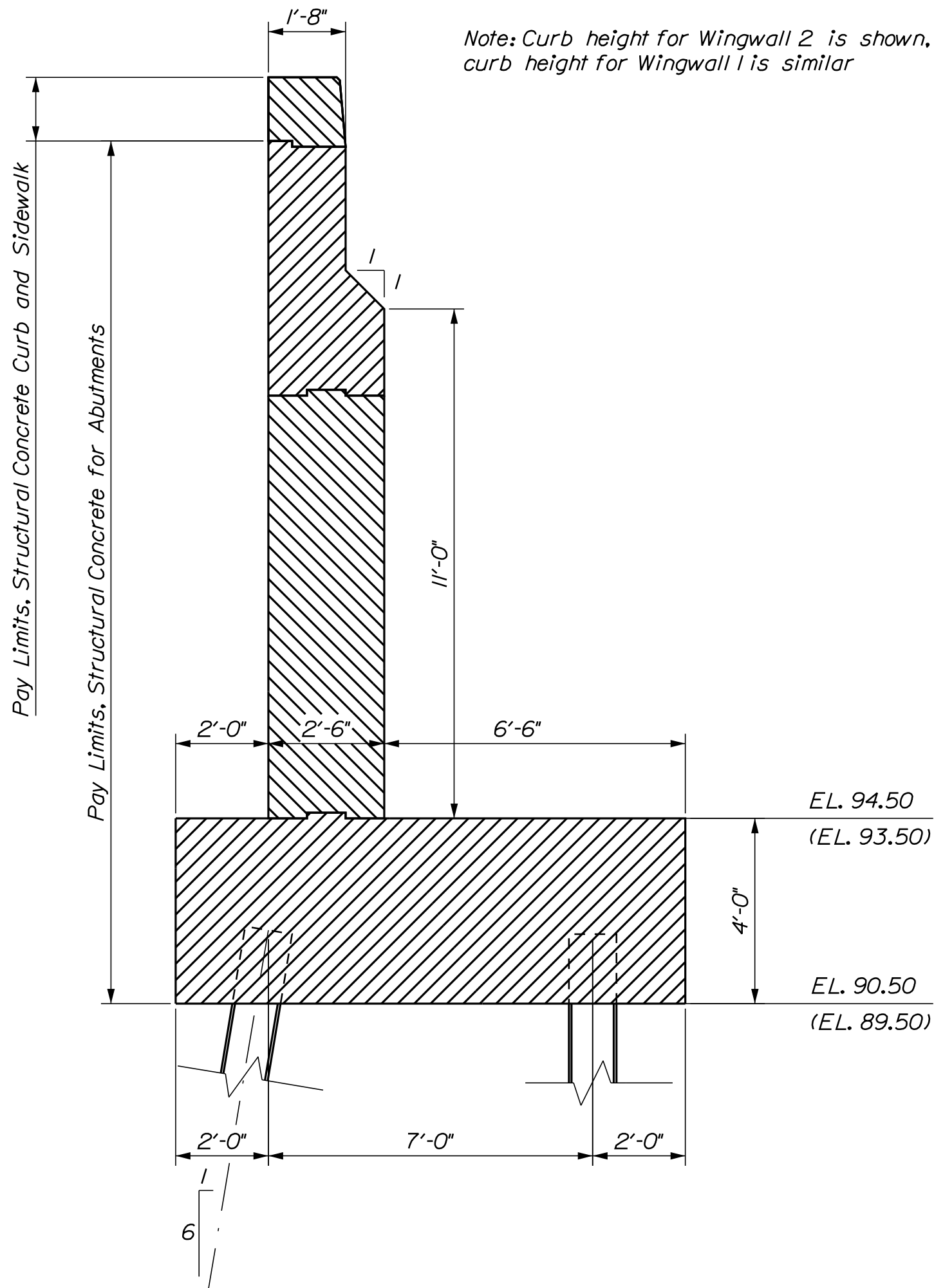
OF 88



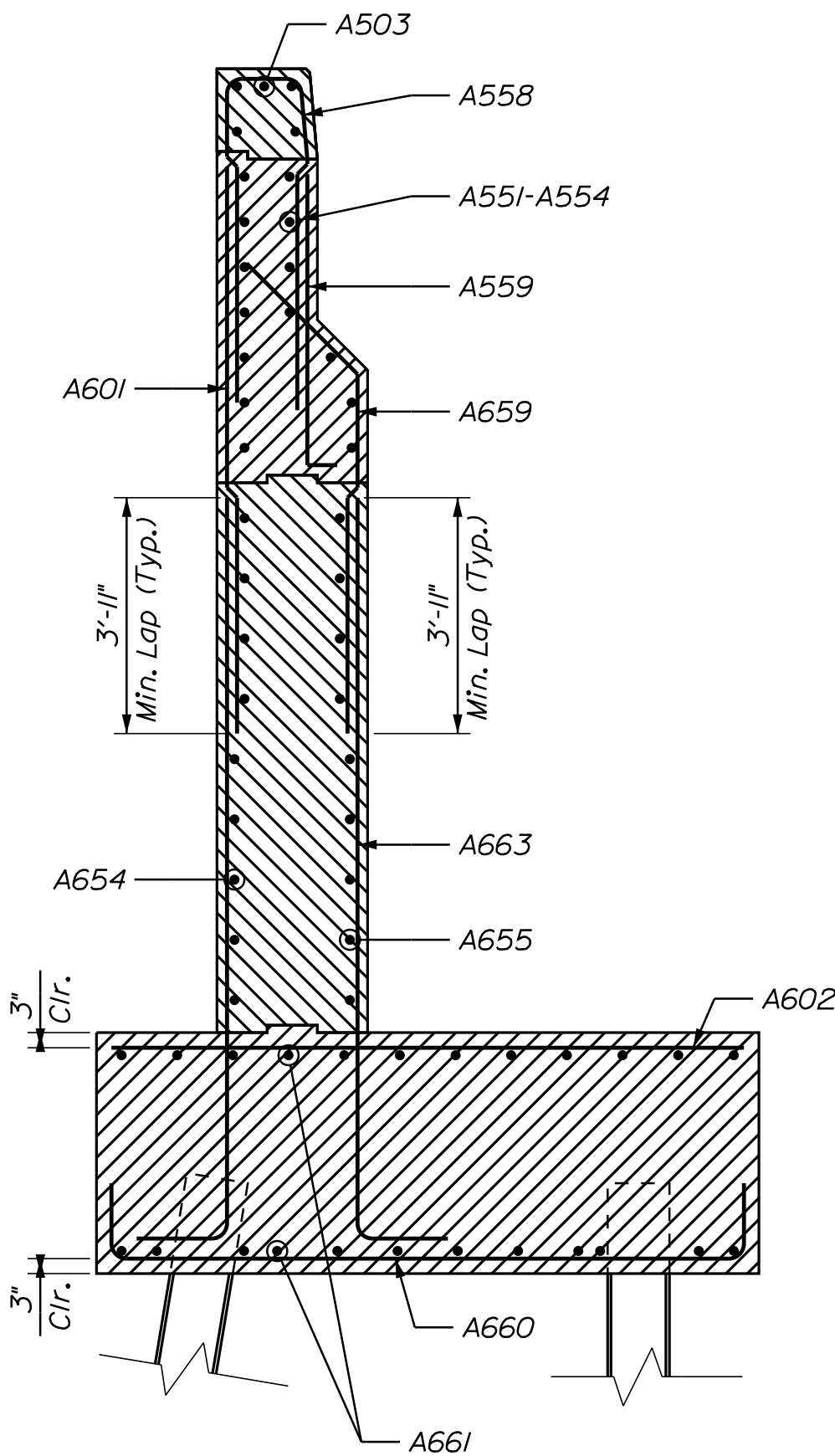
ABUTMENT NO. 1
SECTION
Abutment No. 2 Similar (in Parenthesis)



ABUTMENT NO. 1
REINFORCING SECTION
Abutment No. 2 Similar

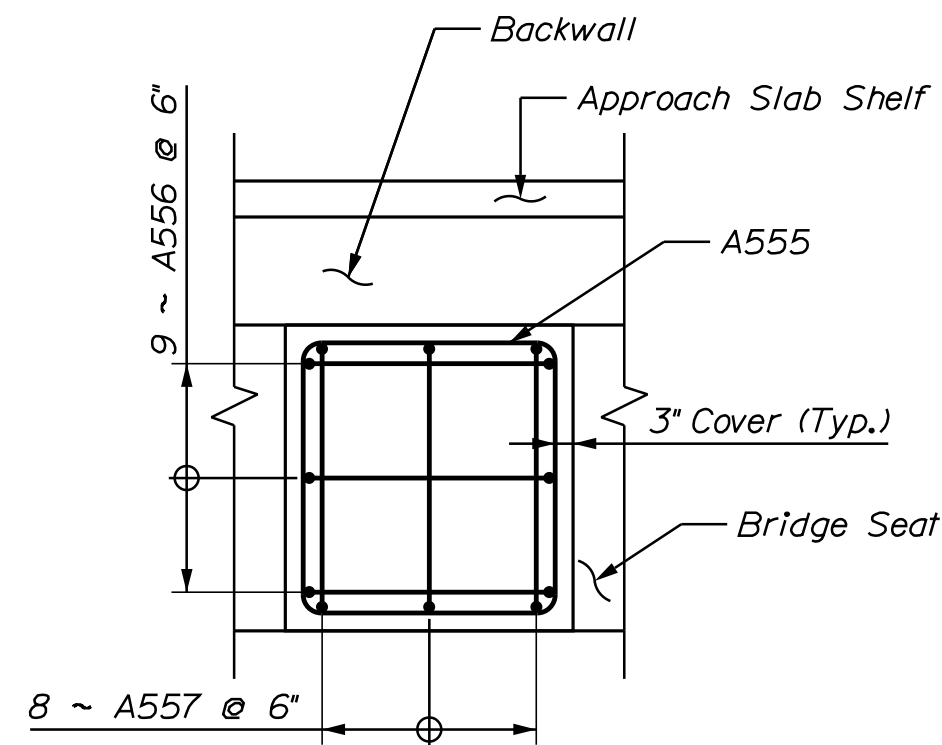


ABUTMENT NO. 1
WINGWALL SECTION
Abutment No. 2 Similar (in Parenthesis)

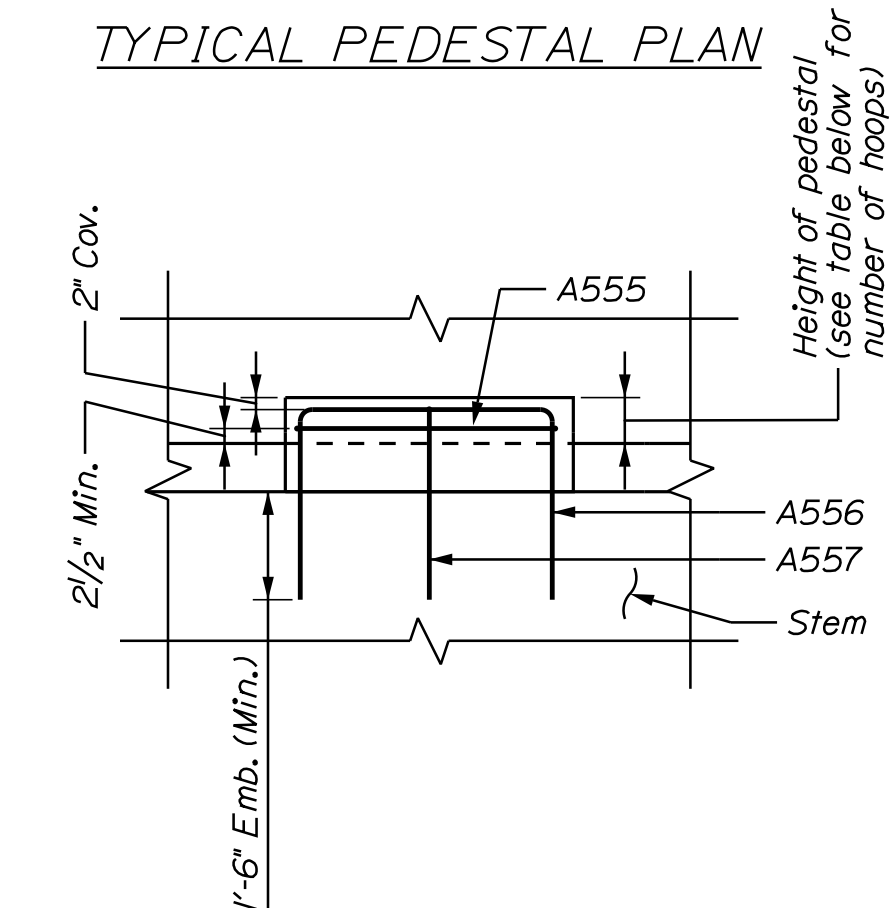


ABUTMENT NO. 1
WINGWALL REINFORCING SECTION
Abutment No. 2 Similar
Wingwall 1 shown, wingwall 2 similar

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
2516100		WIN	
BRIDGE NO. 5601		25161.00	
BRIDGE PLANS			
TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR	
CUMBERLAND COUNTY		ABUTMENT SECTIONS	
SHEET NUMBER		50	
OF 88			
PROJ. MANAGER	BY	DATE	SIGNATURE
CHECKED-REVIEWED	CT	03/2025	
DESIGNED-DETAILED	RF	03/2025	
DESIGNED-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
P.E. NUMBER		DATE	



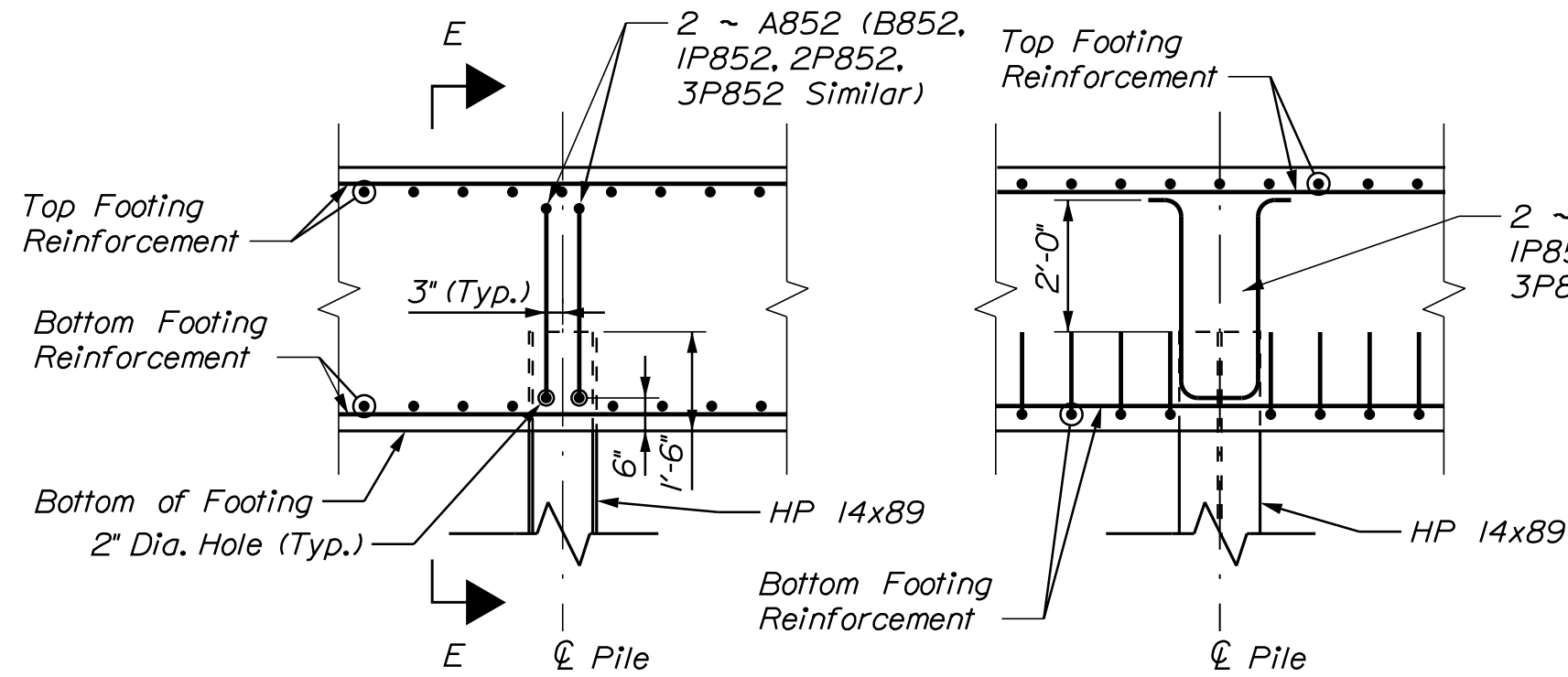
TYPICAL PEDESTAL PLAN



TYPICAL PEDESTAL ELEVATION

PEDESTAL HEIGHT	NUMBER OF HOOPS
4" TO 6"	1
6" TO 8"	2
8" TO 11"	3
11" TO 14"	4
14" TO 17"	5
17" TO 20"	6

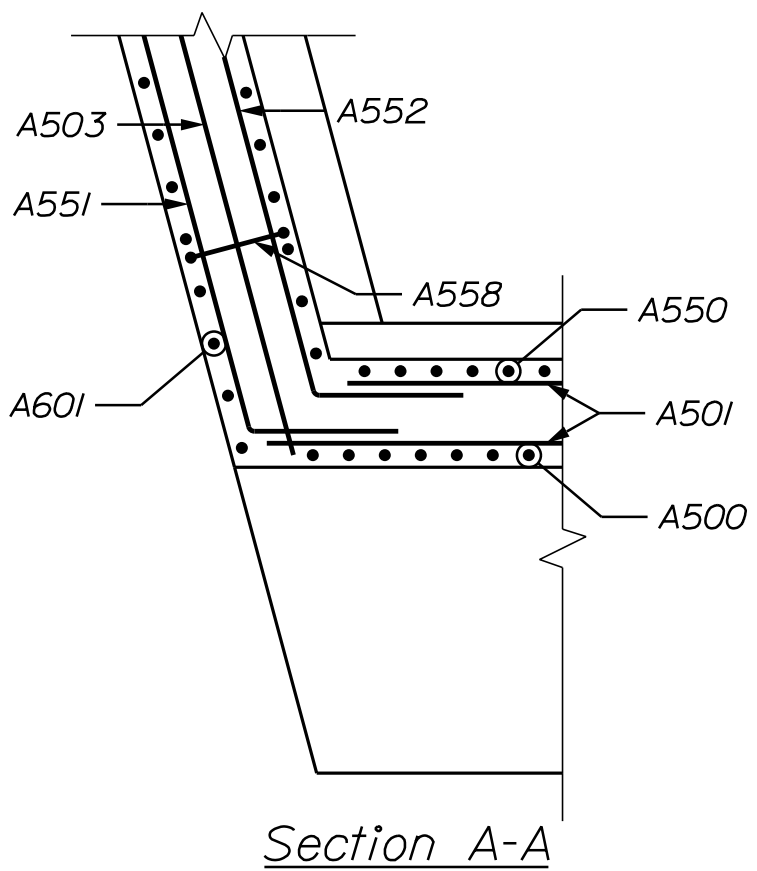
Height to be calculated at the back face of the pedestal



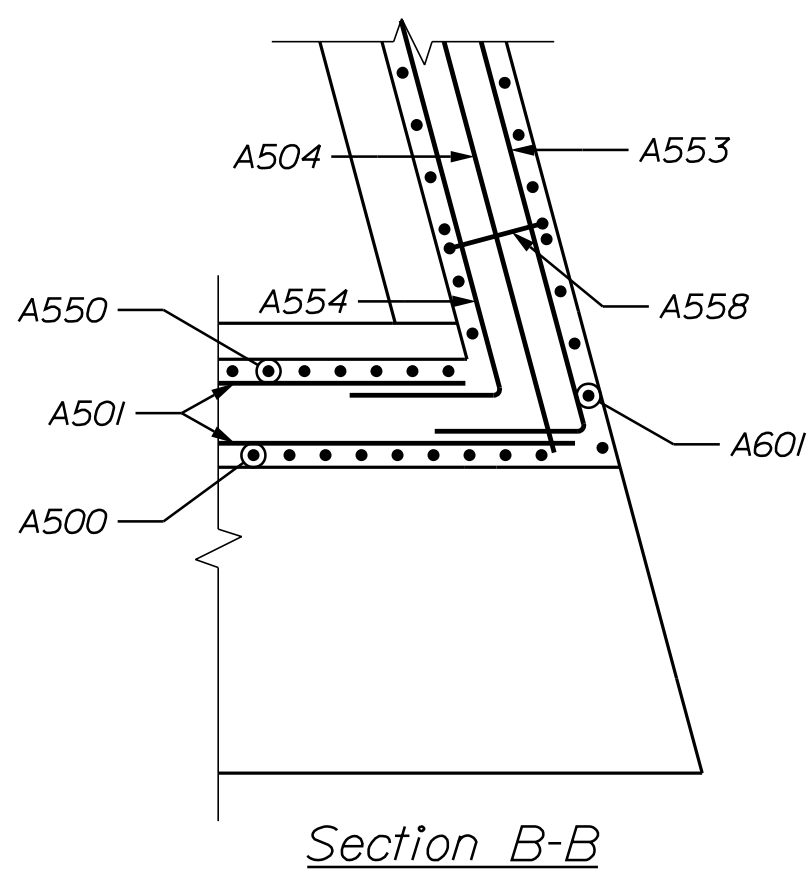
Elevation

Section E-E

Tension Pile Detail
N.T.S.



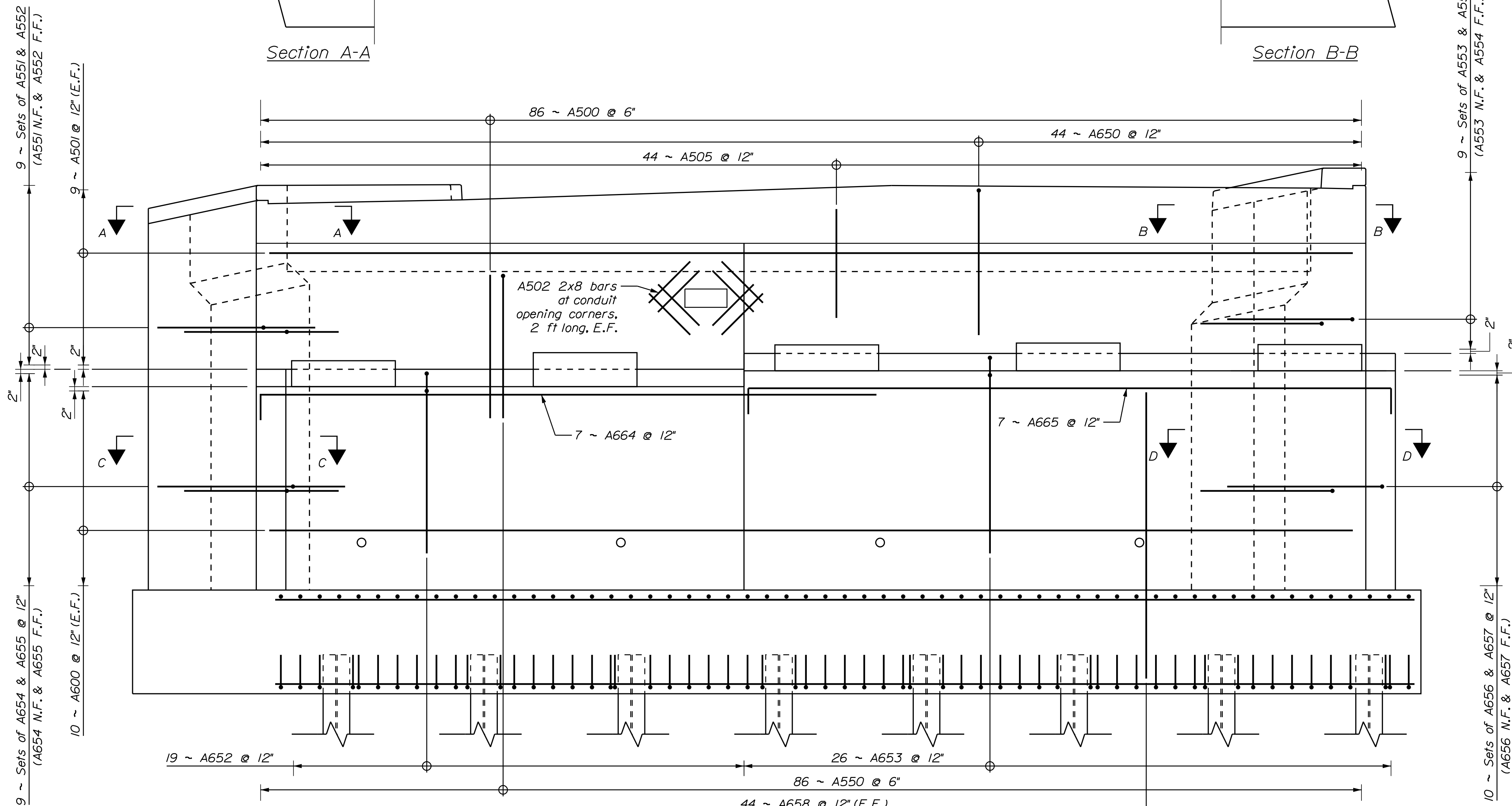
Section A-A



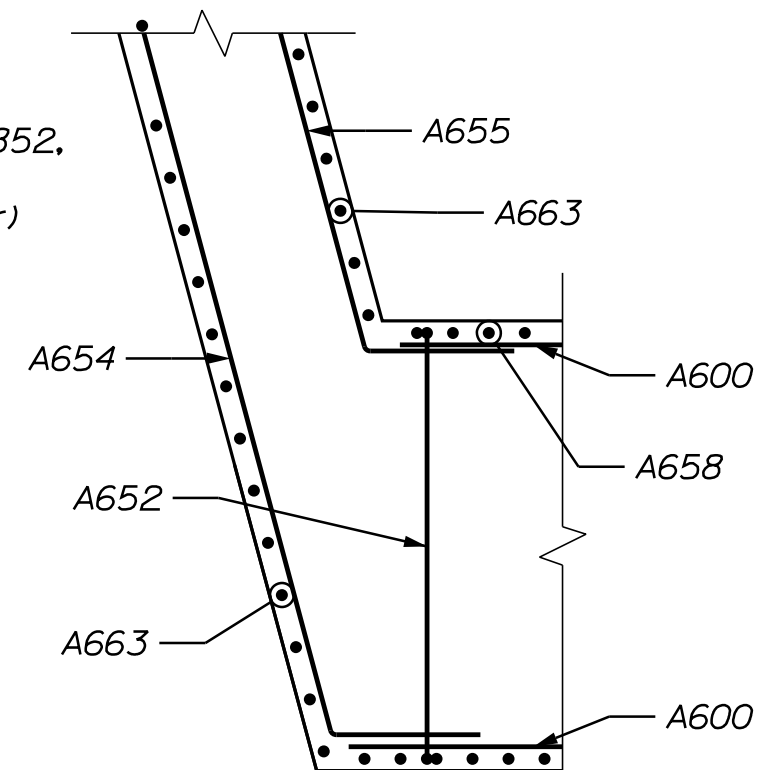
Section B-B

LEGEND

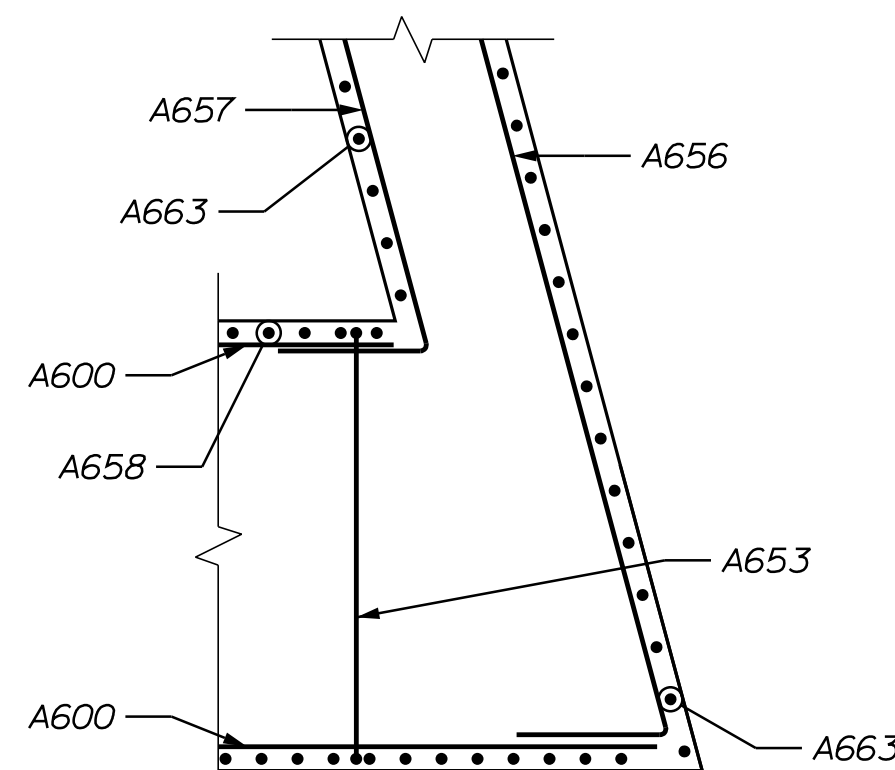
N.F. - Near Face
F.F. - Far Face
E.F. - Each Face



ABUTMENT NO. 1 REINFORCING
(Wingwall reinforcement not shown for clarity)

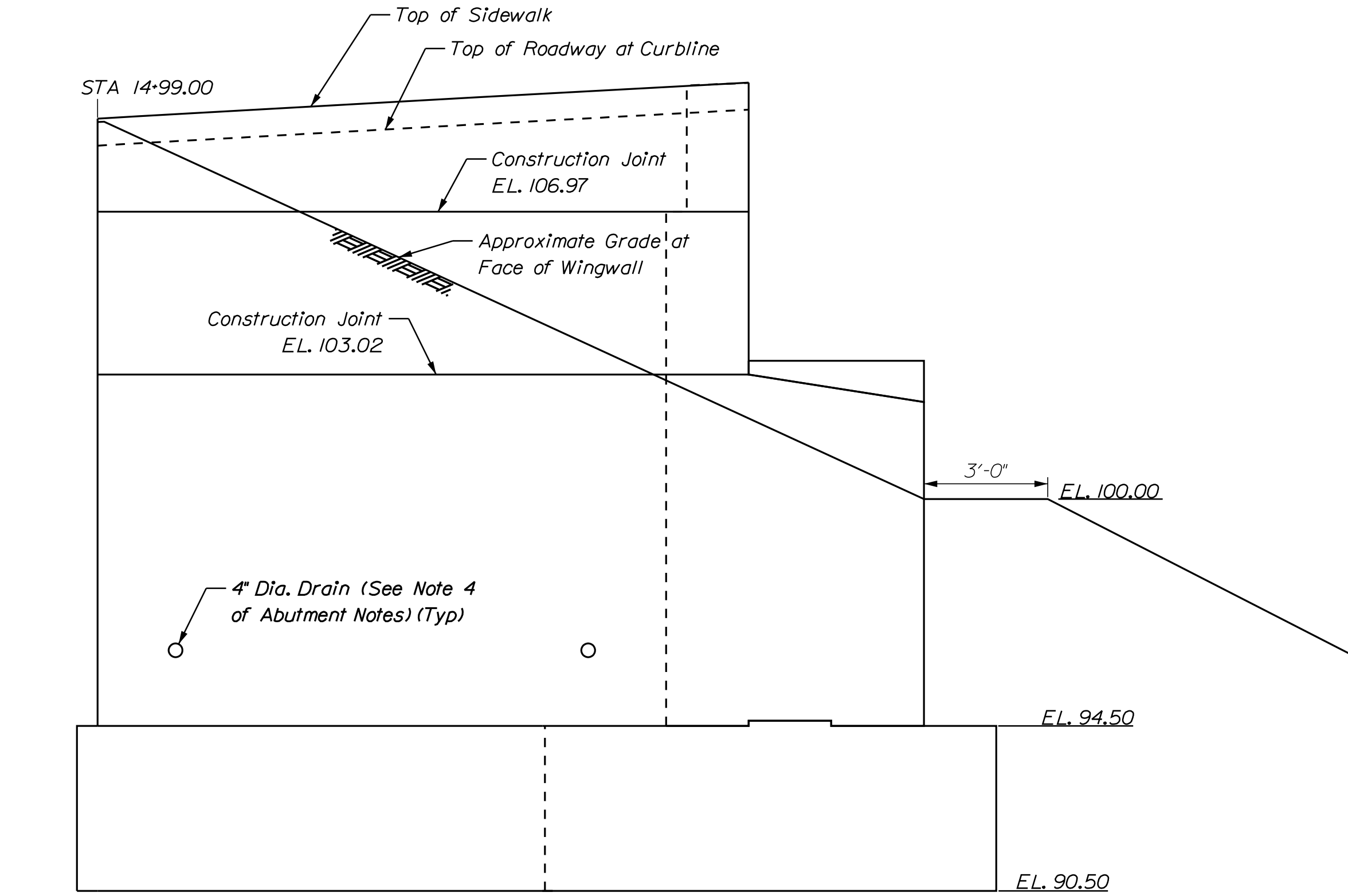


Section C-C

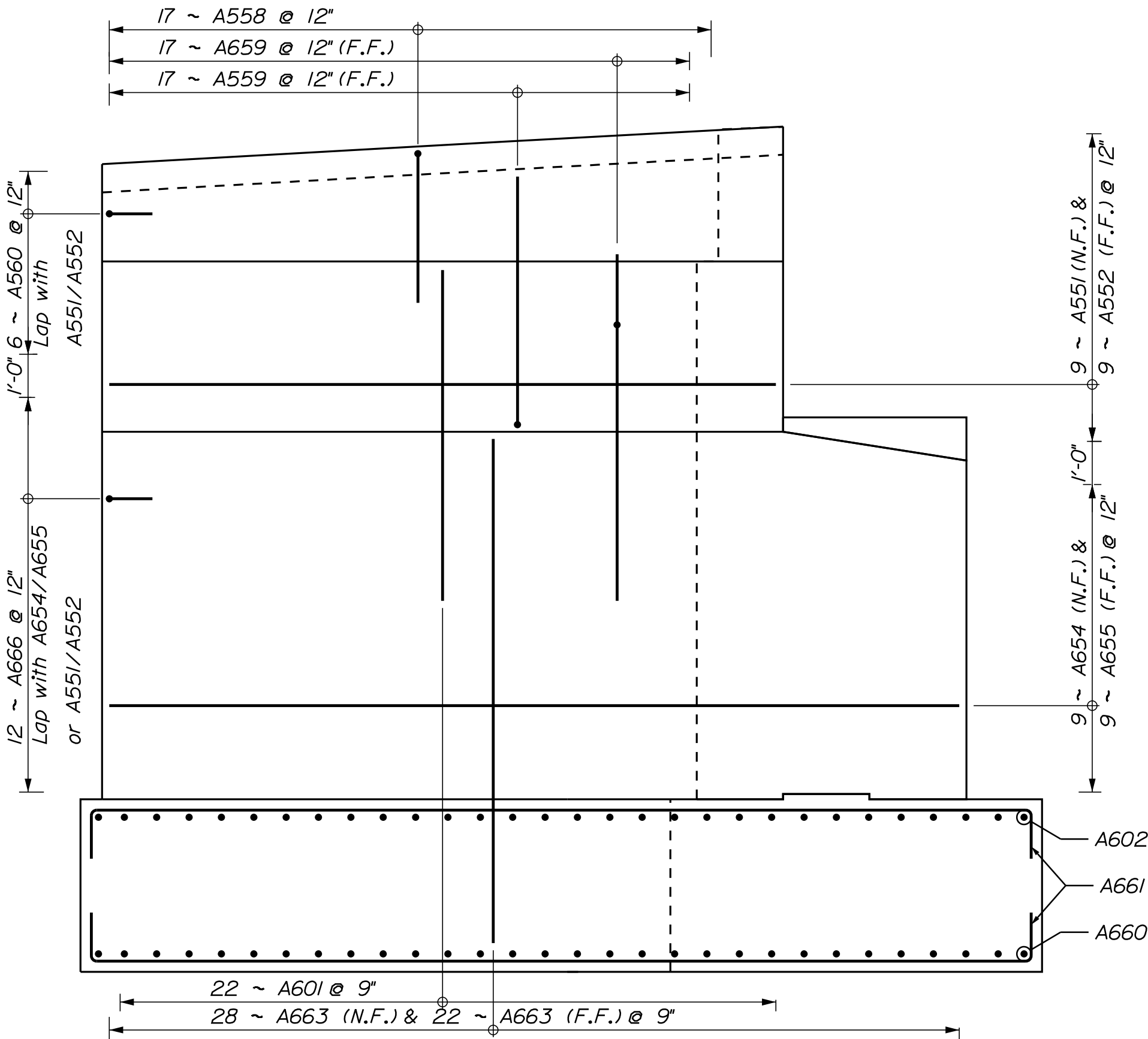


Section D-D

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		2516100		BRIDGE NO. 5801		WIN 25161.00		BRIDGE PLANS	
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY		ABUTMENT NO. 1 REINFORCING		SHEET NUMBER 51		OF 88			
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE			
CHECKED-REVIEWED	03/2025	CT	03/2025						
DESIGNED-DETAILED		RF							
DESIGNED-DETAILED									
REVISIONS 1									
REVISIONS 2									
REVISIONS 3									
REVISIONS 4									
FIELD CHANGES									



WINGWALL 1



WINGWALL 1

(Abutment Backwall and Sidewalk reinforcement not shown for clarity)

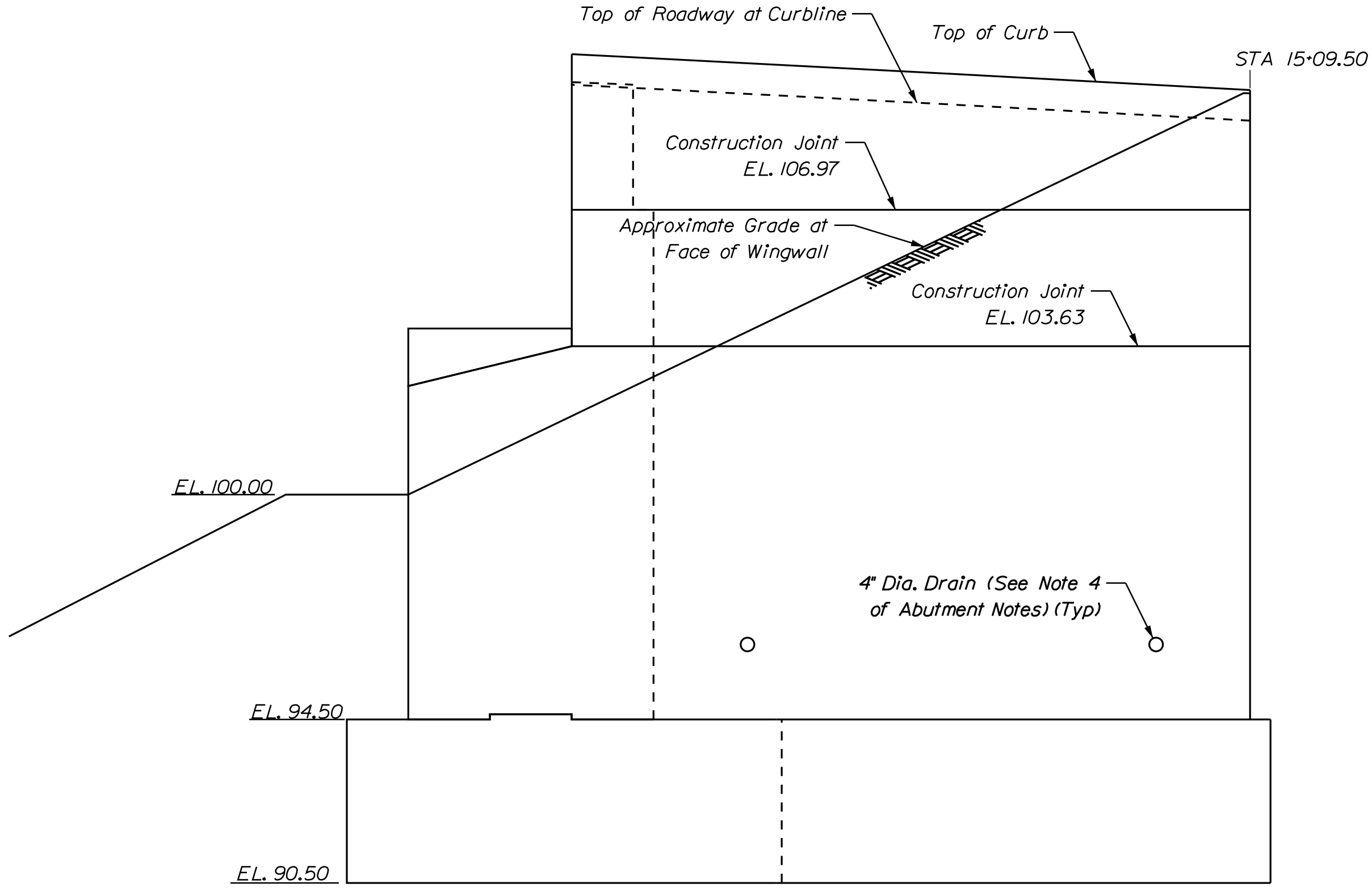
LEGEND

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F.F. - Far Face

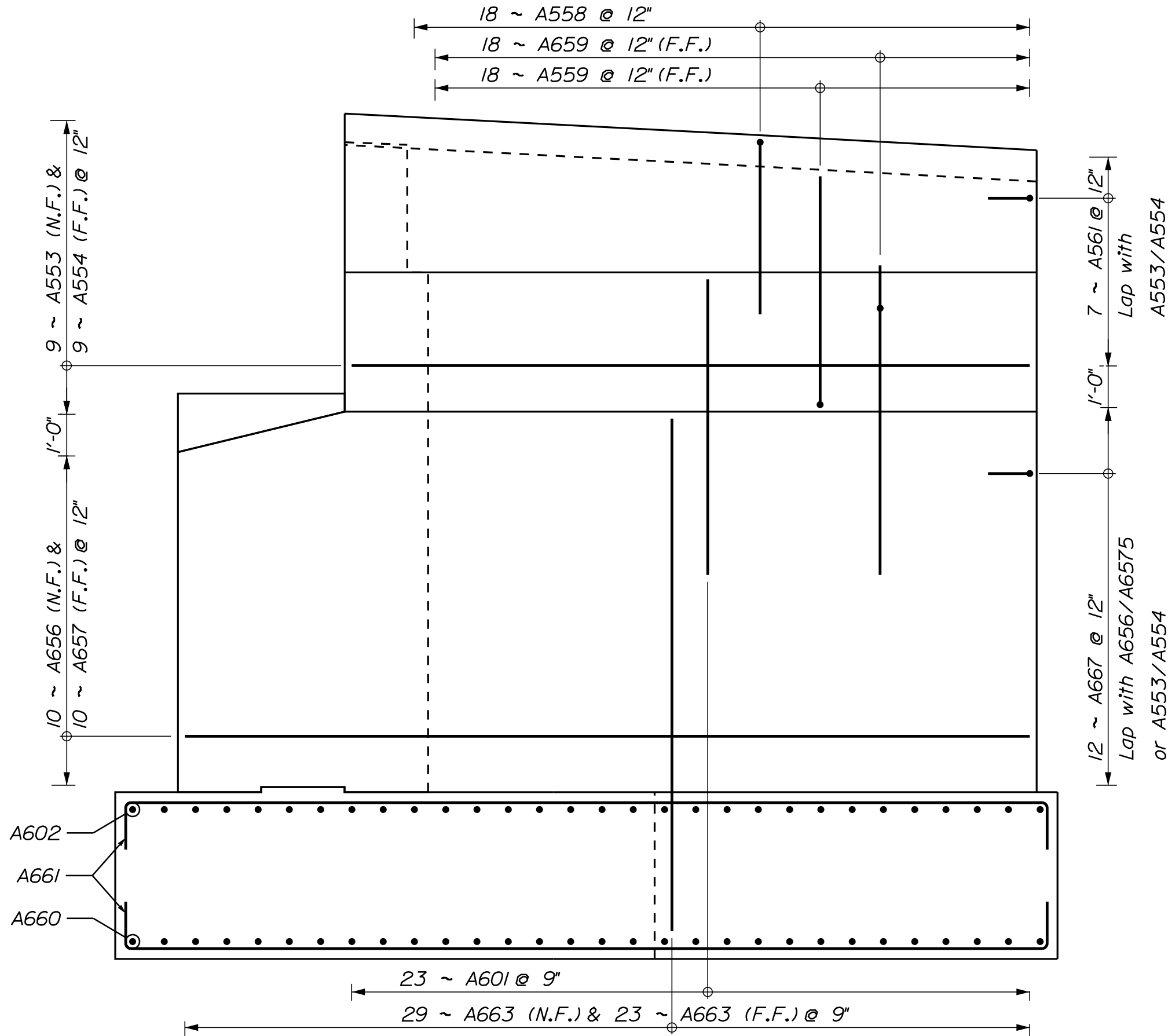
Note: Abutment and Wingwall piles not shown.

ABUTMENT NO. 1
WINGWALL ELEVATIONS

ABUTMENT NO. 1
WINGWALL REINFORCING



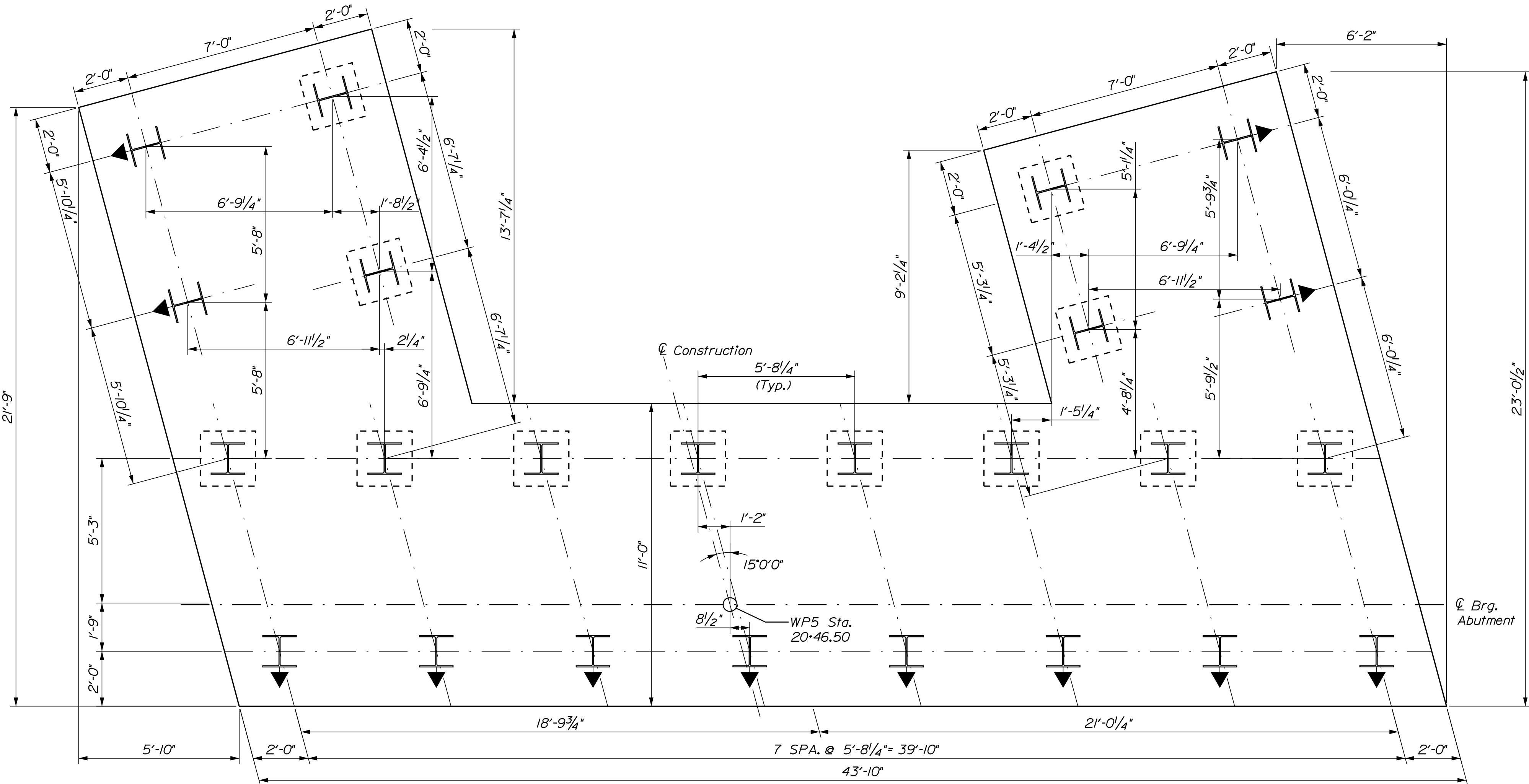
WINGWALL 2



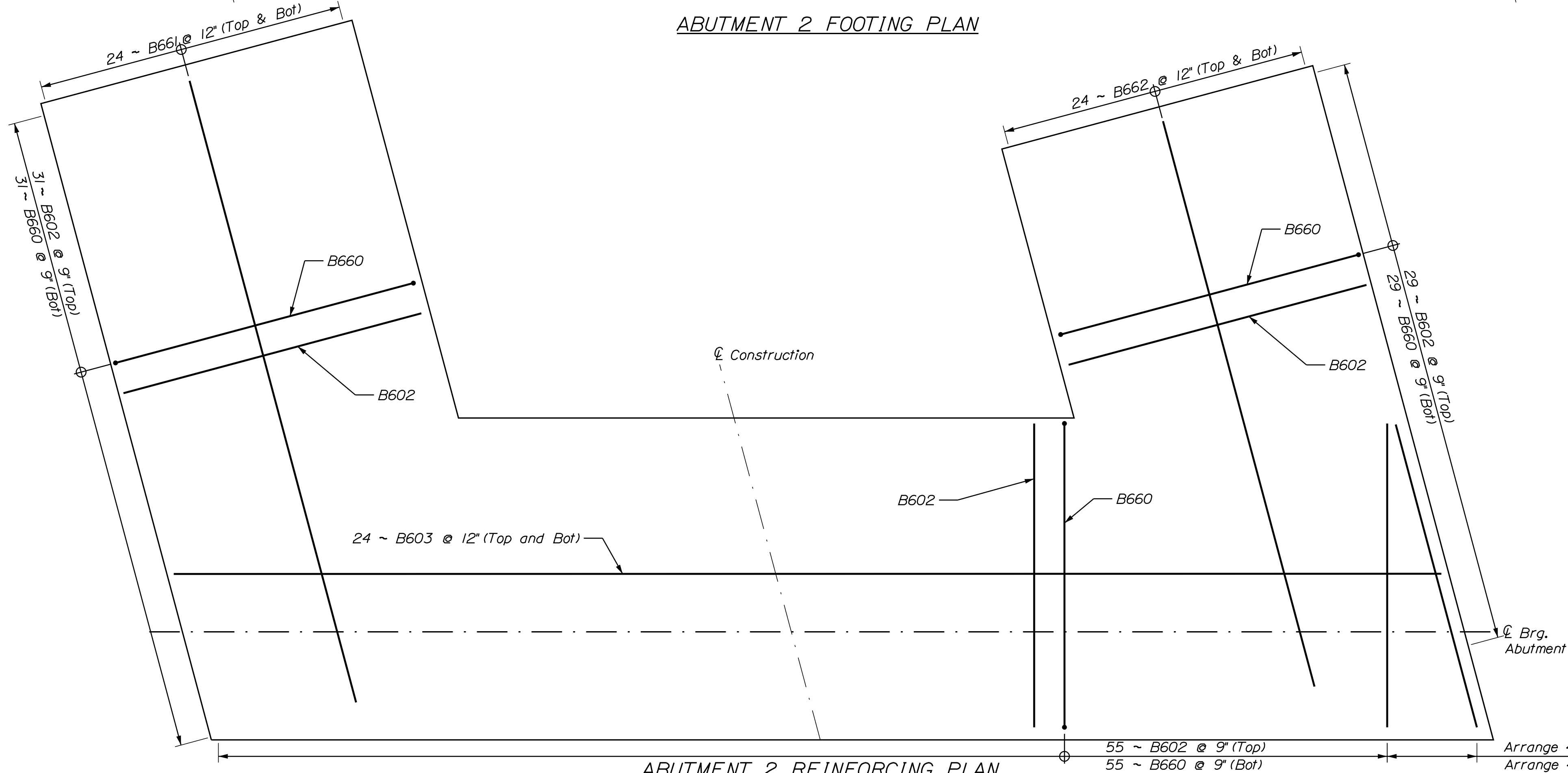
WINGWALL 2

(Abutment Backwall and Curb reinforcement not shown for clarity)

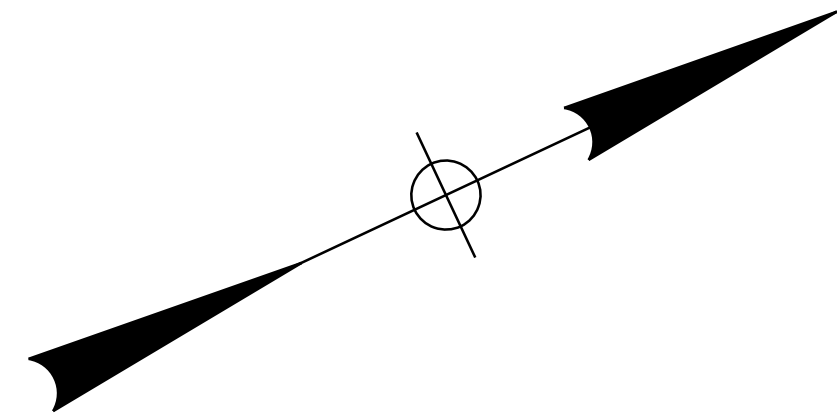
STATE OF MAINE				DEPARTMENT OF TRANSPORTATION			
				2516100			
				WIN 25161.00			
				BRIDGE NO. 6601			
				BRIDGE PLANS			
TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR		CUMBERLAND COUNTY		ABUTMENT NO. 1 WINGWALL ELEVATION & REINFORCING	
SHEET NUMBER		52		OF 88			
PROJ. MANAGER		BY		DATE		SIGNATURE	
DESIGN-DETAILED		CNU		03/2025			
CHECKED-REVIEWED		RF		03/2025			
DESIGN-DETAILED		KZS				P.E. NUMBER	
DESIGN-DETAILED						DATE	
REVISIONS 1							
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							



ABUTMENT 2 FOOTING PLAN



ABUTMENT 2 REINFORCING PLAN



ABUTMENT PILE NOTES

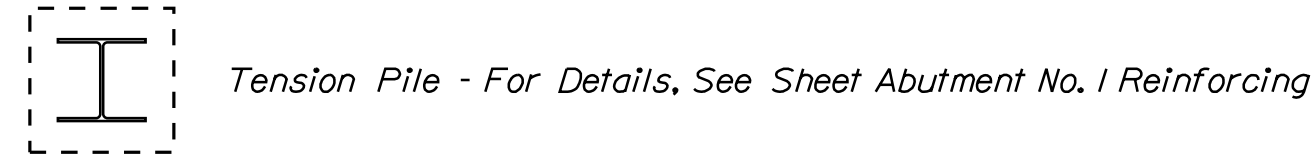
- The maximum factored pile load at Abutment No. 1 is 388 kips (including III kips allowed for downdrag) at the Strength Limit State. The maximum factored pile load at Abutment No. 2 is 326 kips (including 63 kips allowed for downdrag) at the Strength Limit State.
- Piles shall be driven to the required resistance on or within bedrock in accordance with Standard Specification Section 501.
- Estimate of piles required:

Abutment No. 1: 24 - HP 14 x 89 @ 45 feet
Abutment No. 2: 24 - HP 14 x 89 @ 33 feet

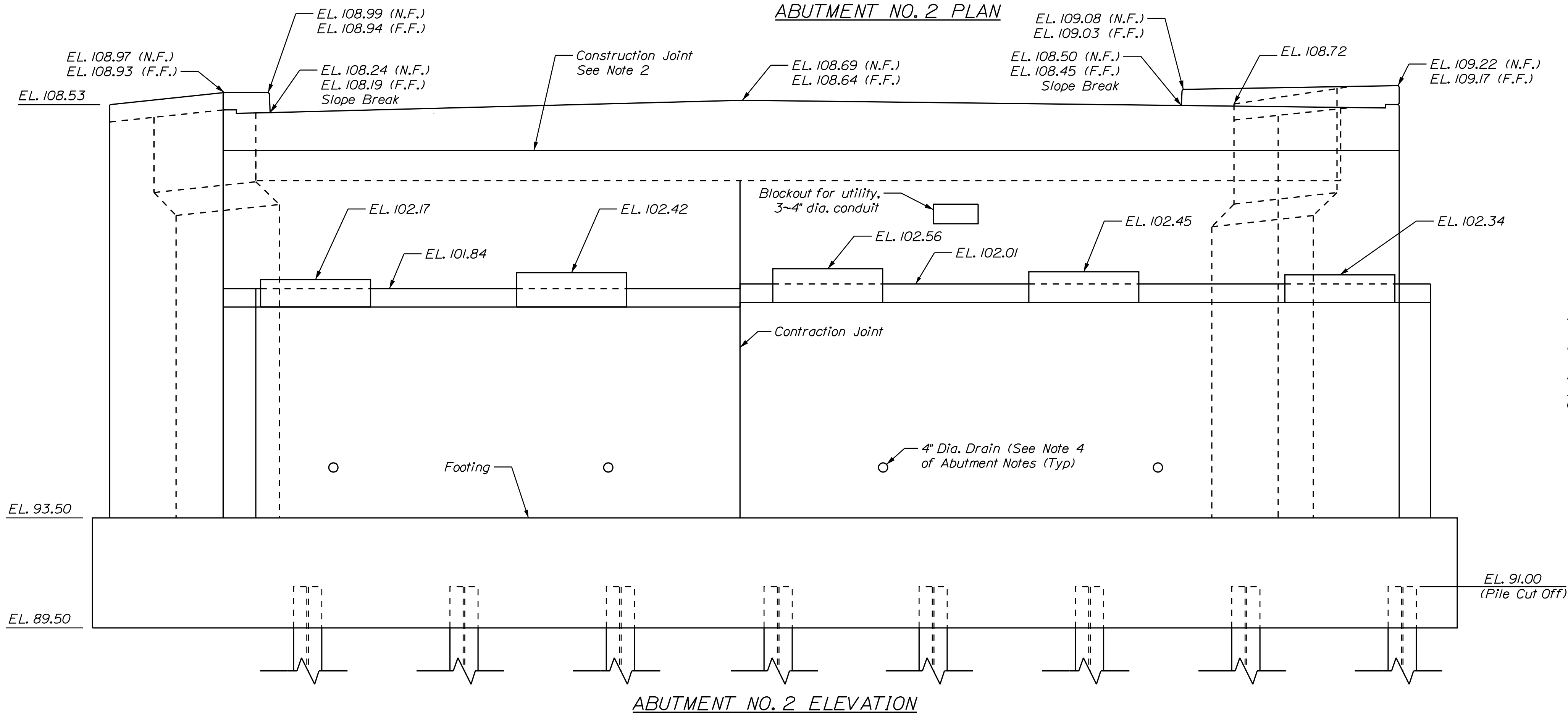
The order lengths of the piles shall include an additional 5 feet of length for each test pile to accommodate dynamic pile testing equipment.
- Top of rock varies across the project site; anticipate adjustments to the pile tip elevation. The pile lengths given include approximately 5 feet of additional length to account for variable bedrock.
- H-pile material shall be ASTM A572, Grade 50.
- H-pile splices shall be in accordance with Standard Detail 501(03). Pile splices are not permitted within upper 15 feet of piles.
- Moderate to severe driving conditions are anticipated. All piles shall be equipped with a pile tip in accordance with Standard Specifications Subsections 501.048, Prefabricated Pile Tips and 711.10 H-Beam Piles, Spliced and Tips. To mitigate damage to the piles, the refusal criteria of 10 blows per 0.5 inches shall be implemented.
- Piles marked with an arrow shall be battered 2 inches/foot in the direction of the arrow.
- The top of any pile driven its full length into the ground shall not vary from the plan location by more than 4 inches. The orientation of piles shall be within 10 degrees of the orientation shown on the plans. A driving frame/template is recommended to keep piles within allowable tolerances.
- The Contractor shall perform and submit a wave equation analysis for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times Fy. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system.
- The Contractor shall perform two (2) dynamic load test(s) per abutment, with 24-hour (minimum) restrike tests to confirm the nominal resistance of the piles. The required nominal resistance for the pile is the factored axial pile load divided by a resistance factor of 0.65 per LRFD Specifications. One dynamic test shall be performed on the first production plumb pile driven at each abutment and the second test shall be at a pile location selected by the Resident or on the first production battered pile.
- Proposed H-piles at each substructure should be driven in a sequence beginning from south to north and initially driven with low energy (short stroke) as necessary to mitigate risk to the existing Tuttle Road Bridge.

ABUTMENT NOTES on Abutment No. 1 Pile and Footing Plan and Notes apply to Abutment No. 1 and Abutment No. 2.

LEGEND



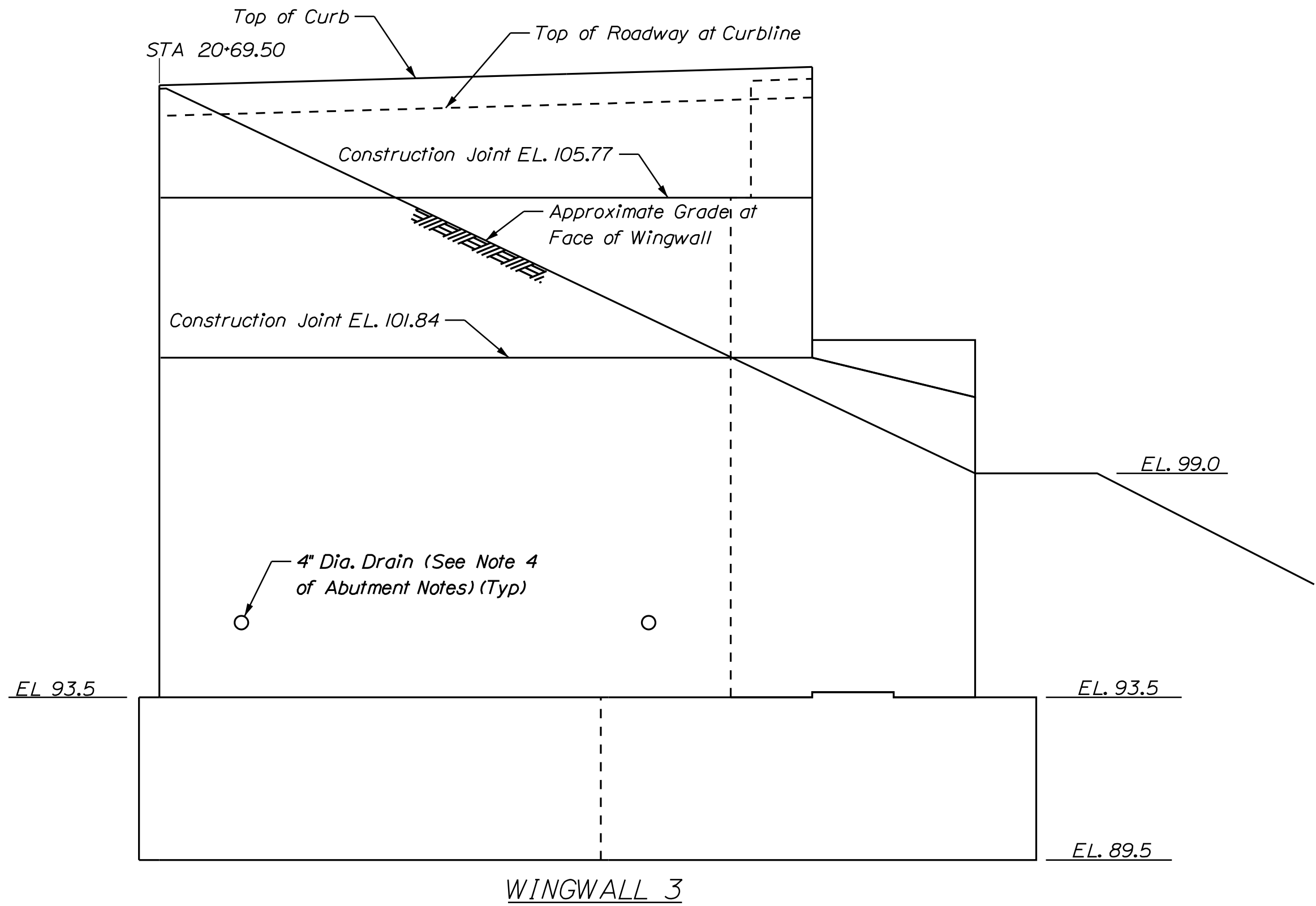
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2516100		BRIDGE NO. 6601		BRIDGE PLANS	
TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR		CUMBERLAND COUNTY		ABUTMENT 2 PILE & FOOTING		PLAN & NOTES	
SHEET NUMBER		53		OF 88					
PROJ. MANAGER		Gerald Dostle		BY		DATE			
DESIGN-DETAILED		AS		CT		03/2025		SIGNATURE	
CHECKED-REVIEWED		AG		RF		03/2025		P.E. NUMBER	
DESIGN-DETAILED								DATE	
REVISIONS 1									
REVISIONS 2									
REVISIONS 3									
REVISIONS 4									
FIELD CHANGES									



Notes:

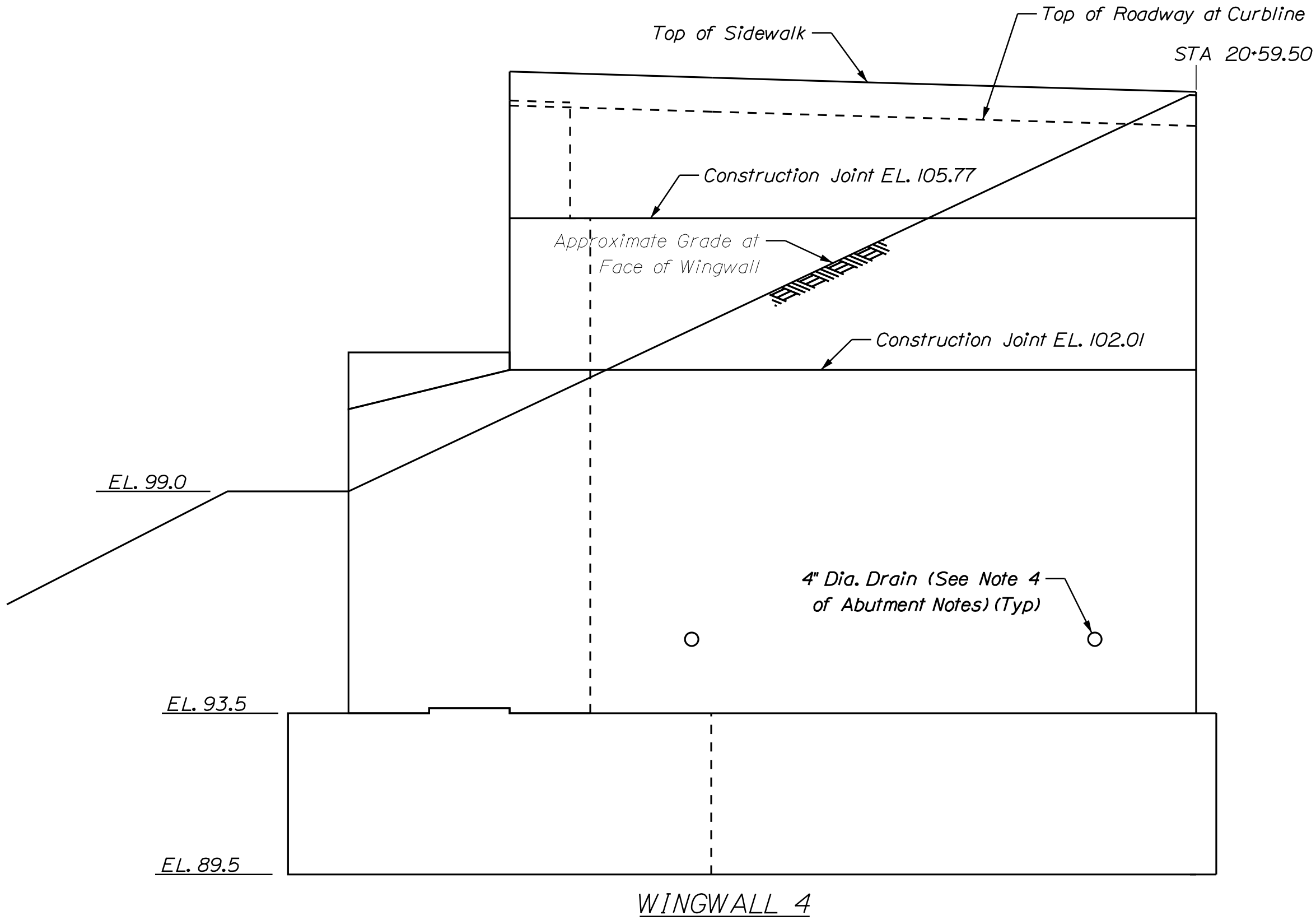
1. Wingwall piles not shown.
2. Construction joint for setting bridge joint. Roughen surface to $\frac{1}{4}$ " profile (min.).

54 OF 88		SHEET NUMBER	TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY				PROJ. MANAGER		Gerold Dostie	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2516100 WIN 25161.00 BRIDGE NO. 5801 BRIDGE PLANS
			DESIGN-DETAILED		FF	CI	03/20/05					
			CHECKED-REVIEWED		RF	RF	03/20/05					
			DESIGN2-DETAILED2				SIGNATURE					
			DESIGN3-DETAILED3				P.E. NUMBER					
ABUTMENT NO. 2 PLAN AND ELEVATION			REVISIONS 1									
			REVISIONS 2									
			REVISIONS 3									
			REVISIONS 4									
			FIELD CHANGES							DATE		



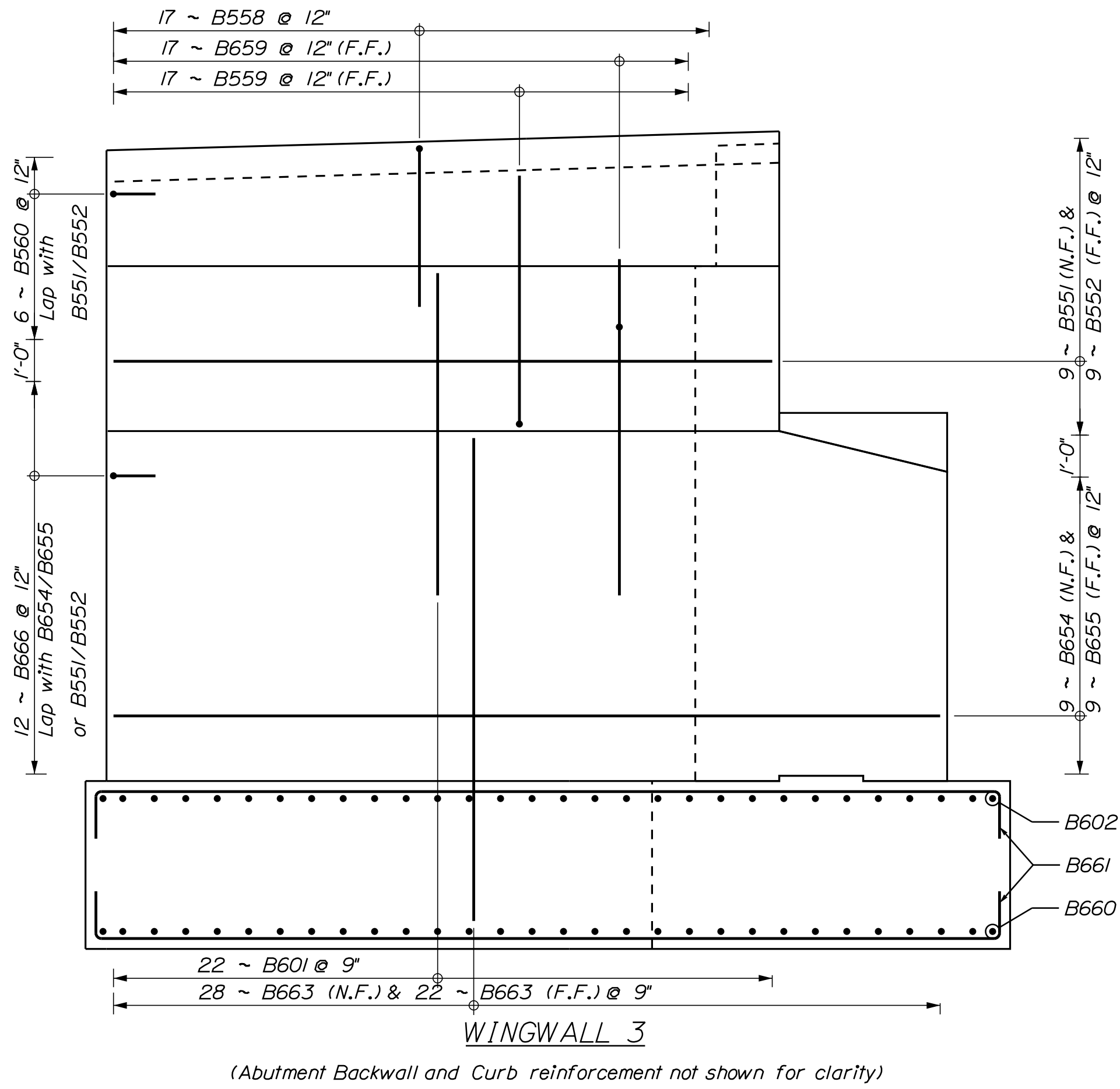
LEGEND

N.F. - Near Face
F.F. - Far Face

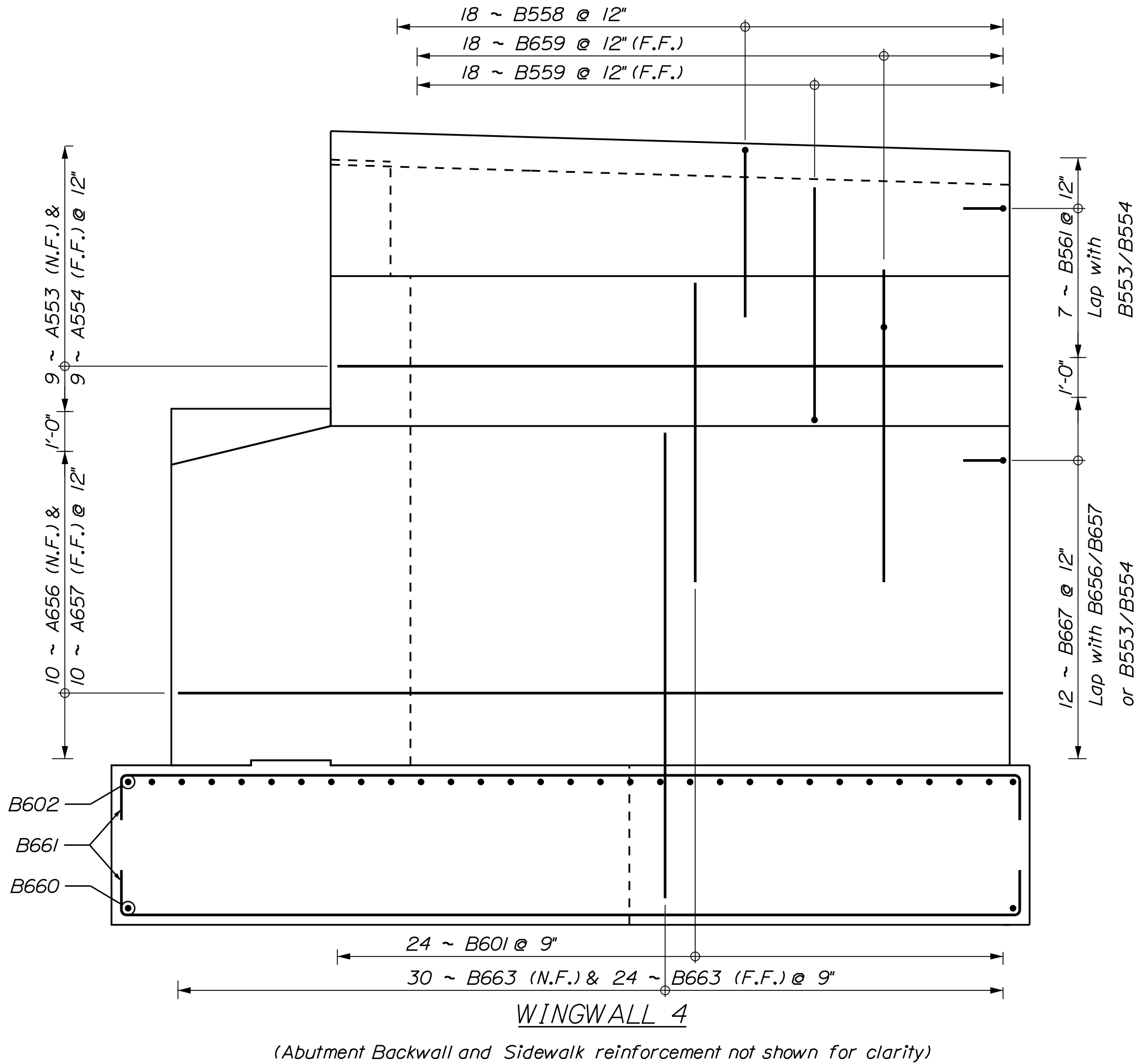


Note: Abutment and Wingwall piles not shown.

ABUTMENT NO. 2
WINGWALL ELEVATIONS



ABUTMENT NO. 2
WINGWALL REINFORCING



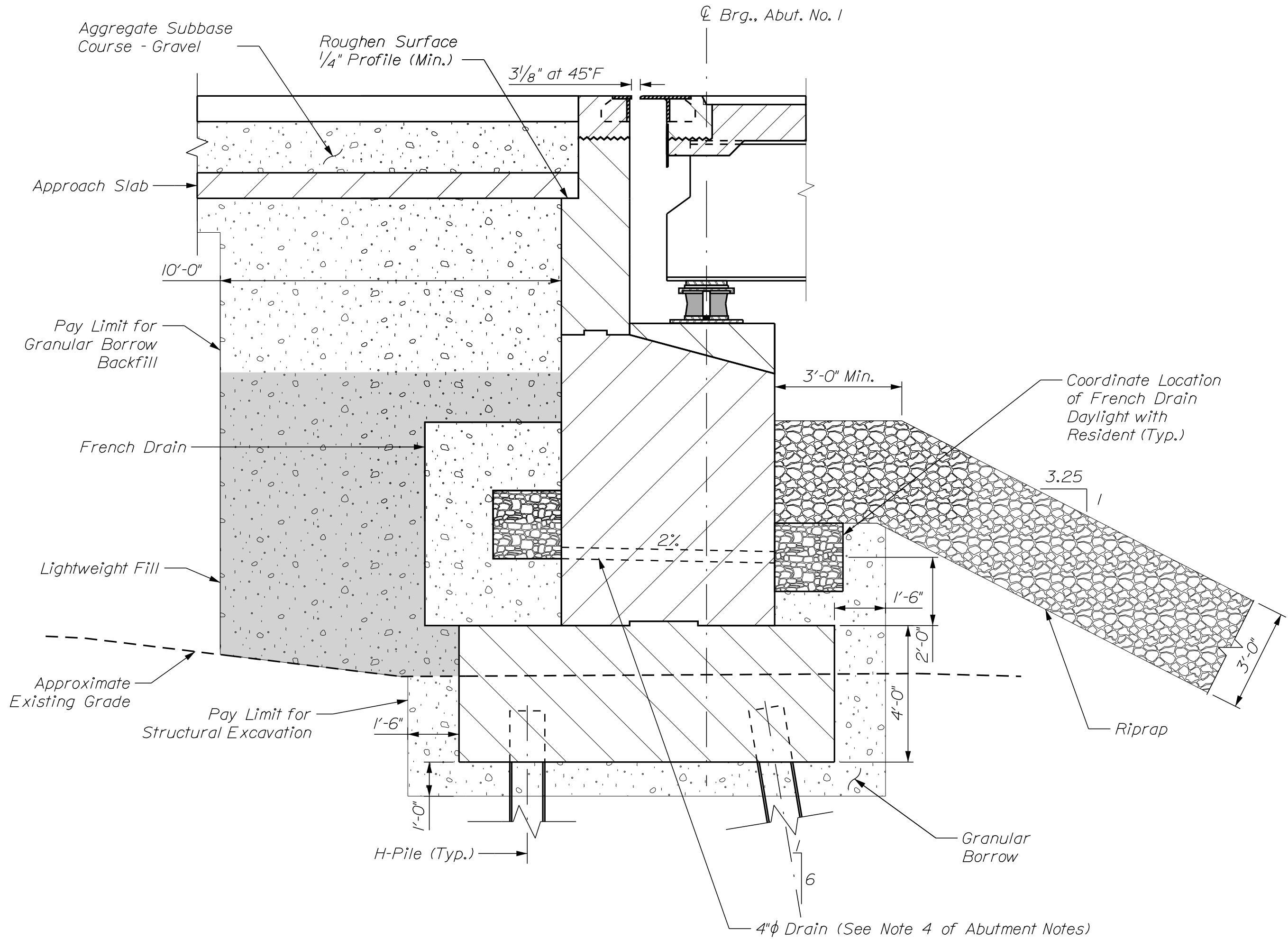
SHEET NUMBER										TUTTLE ROAD BRIDGE										PROJ. MANAGER	Gerald Dostie	BY	DATE	STATE OF MAINE																																																									
56										INTERSTATE 295, RTE US 1 & MCRR										DESIGN-DETAILED	RF	CNU	03/2025	DEPARTMENT OF TRANSPORTATION																																																									
																																		CUMBERLAND COUNTY										CHECKED-REVIEWED	KZS	RF	03/2025	SIGNATURE																																	
																																																										ABUTMENT NO. 2 WINGWALL										DESIGN-DETAILED02				P.E. NUMBER									
OF 88										REVISIONS 1					DATE	BRIDGE NO. 5601										WIN										25161.00										BRIDGE PLANS																																			

Date:5/25/2025

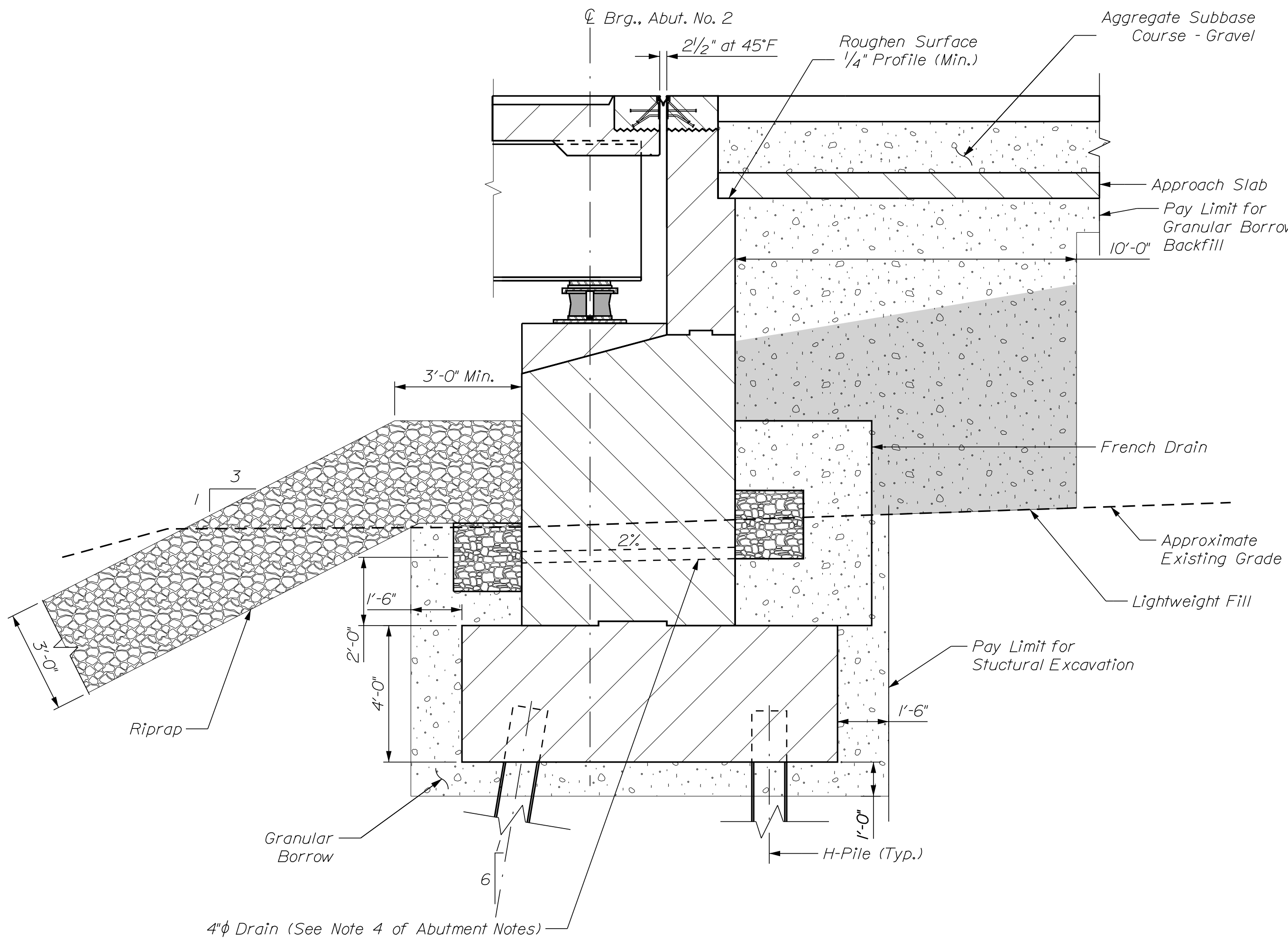
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Division: BRIDGE

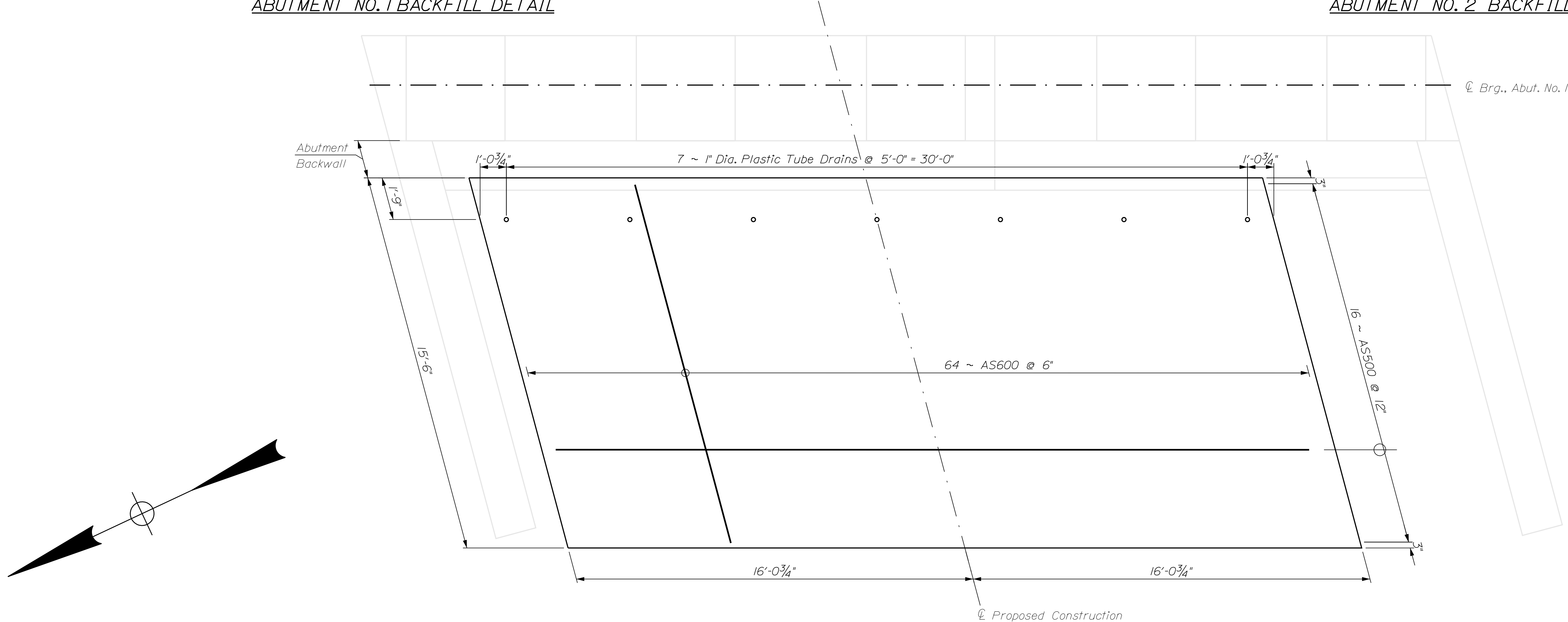
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ABUTMENT NO. 1 BACKFILL DETAIL



ABUTMENT NO. 2 BACKFILL DETAIL



APPROACH SLAB PLAN

Abutment No. 1 Shown, Abutment No. 2 Opposite Hand

STATE OF MAINE	2516100	BRIDGE NO. 5601	WIN	25161.00	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION					

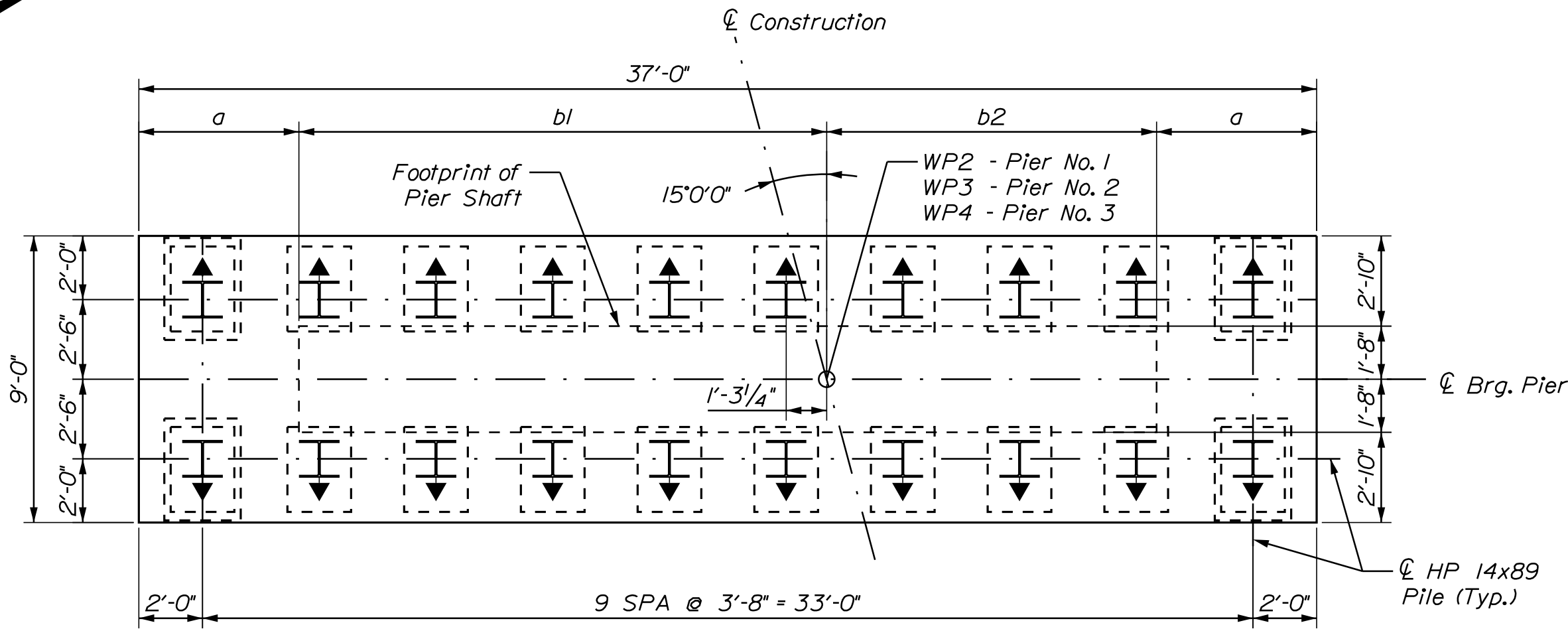
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CHECKED-REVIEWED	RF	DATE	03/2025	P.E. NUMBER	
DESIGN-DETAILED				DATE	
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

TUTTLE ROAD BRIDGE	ABUTMENT DETAILS
INTERSTATE 295, RTE US 1 & MCRR	
CUMBERLAND CUMBERLAND COUNTY	

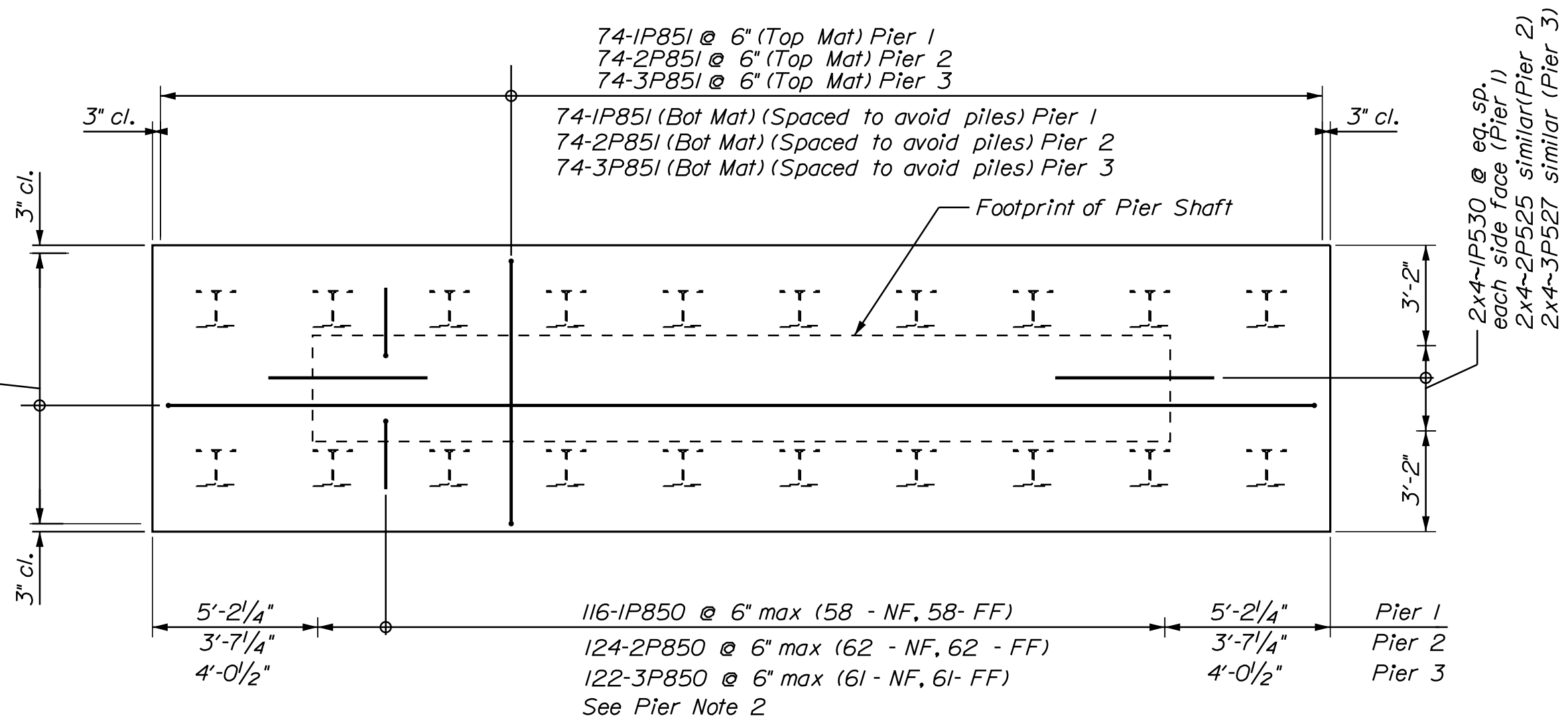
SHEET NUMBER	57
OF 88	

	a	b1	b2
Pier. No. 1	5'-0 1/4"	16'-7"	10'-4 1/4"
Pier. No. 2	3'-5 1/4"	18'-2"	11'-11 1/2"
Pier. No. 3	3'-10 1/2"	17'-8 3/4"	11'-6 1/4"

10~1P654 @ 12" (Top Mat)
10~1P654 (Bot Mat Spaced to avoid piles) Pier 1
10~2P654 @ 12" (Top)
10~2P654 (Bot Mat Spaced to avoid piles) Pier 2
10~3P654 @ 12" (Top)
10~3P654 (Bot Mat Spaced to avoid piles) Pier 3



PIER FOOTING PLAN



PIER FOOTING REINFORCING

PIER PILE NOTES

1. The maximum factored pile loads at the Strength Limit State are:

Pier No. 1: 295 kips
Pier No. 2: 306 kips
Pier No. 3: 311 kips

2. Piles shall be driven to the required resistance on or within bedrock in accordance with Standard Specification Section 501.

3. Estimate of piles required:

Pier No. 1: 20 - HP 14 x 89 @ 37 feet
Pier No. 2: 20 - HP 14 x 89 @ 49 feet
Pier No. 3: 20 - HP 14 x 89 @ 47 feet

The order lengths of the piles shall include an additional 5 feet of length for each test pile to accommodate dynamic pile testing equipment.

4. Top of rock varies across the project site; anticipate adjustments to the pile tip elevation. The pile lengths given include approximately 5 feet of additional length to account for variable bedrock.

5. H-pile material shall be ASTM A572, Grade 50.

6. H-pile splices shall be in accordance with Standard Detail 501(03). Pile splices are not permitted within upper 15 feet of piles.

7. Moderate to severe driving conditions are anticipated. All piles shall be equipped with a pile tip in accordance with Standard Specifications Subsections 501.048, Prefabricated Pile Tips and 711.10 H-Beam Piles, Spliced and Tips. To mitigate damage to the piles, the refusal criteria of 10 blows per 0.5 inches shall be implemented.

8. Piles marked with an arrow shall be battered 2 inches/foot in the direction of the arrow.

9. The top of any pile driven its full length into the ground shall not vary from the plan location by more than 4 inches. The orientation of piles shall be within 10 degrees of the orientation shown on the plans. A driving frame/template is recommended to keep piles within allowable tolerances.

10. The Contractor shall perform and submit a wave equation analysis for review and acceptance by the Resident. The maximum allowable driving stress is 0.90 times Fy. The submittal analyses shall include the proposed stopping criteria based on the wave equation analysis and the proposed driving system.

11. The Contractor shall perform two (2) dynamic load test(s) per pier, with 24-hour (minimum) restrike tests to confirm the nominal resistance of the piles. The required nominal resistance for the pile is the factored axial pile load divided by a resistance factor of 0.65 per LRFD Specifications. The dynamic test shall be performed on the first two (2) production piles driven at each pier preferably located at either ends of the pier in the transverse direction.

12. Proposed H-piles at each substructure should be driven in a sequence beginning from south to north and initially driven with low energy (short stroke) as necessary to mitigate risk to the existing Tuttle Road Bridge.

PIER NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches in the stem and 3 inches in the footing unless otherwise noted.

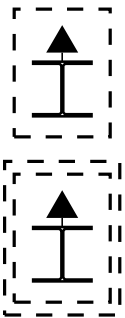
2. Rotate horizontal leg of bar IP850, 2P850, 3P850 up to 45 degrees to avoid piles.

3 The concrete pedestal elevations shown are approximate. The actual elevations shall be adjusted to accommodate the bearings supplied by the Contractor. The elevations provided on the Plans assume overall bearing heights as described on the "Bearing Details" sheet.

PIER DESIGN CRITERIA

- Critical AASHTO Load Combination - Strength I Limit State.
- Wind: 120 mph or 0.059 ksf.

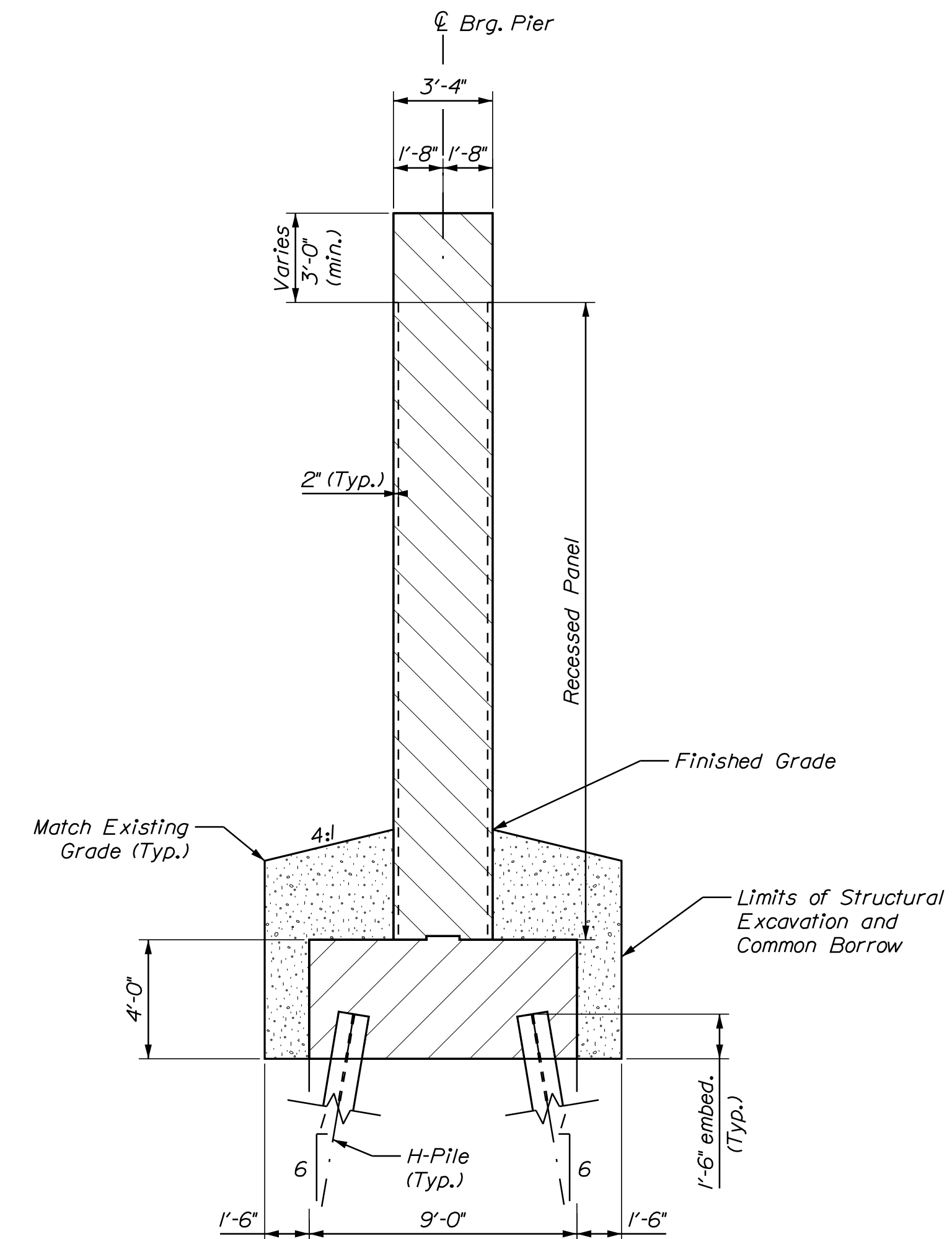
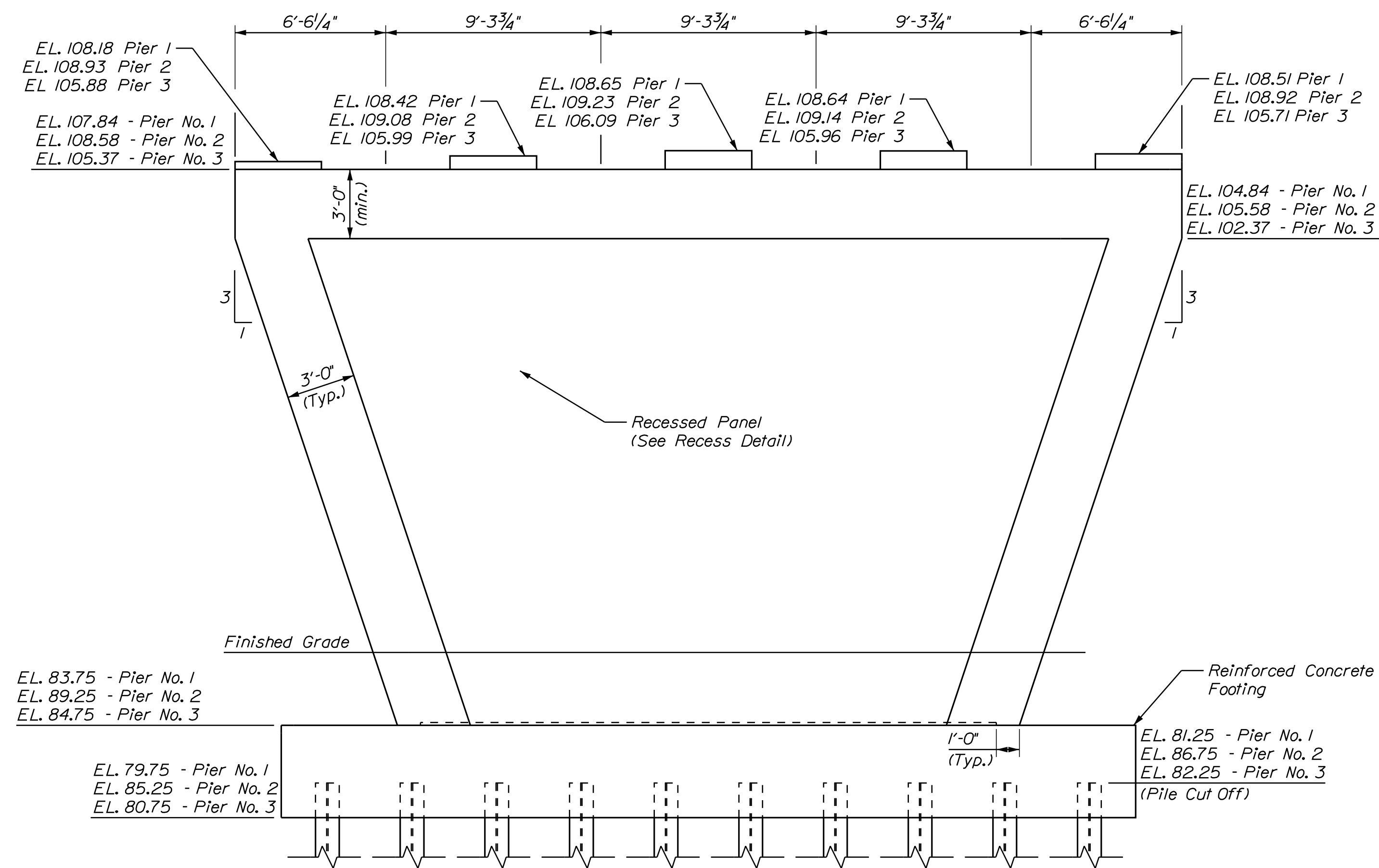
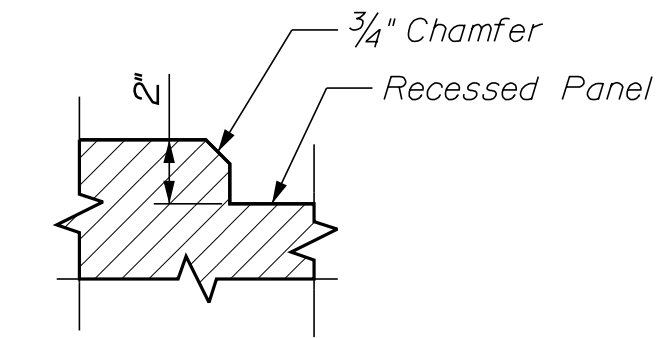
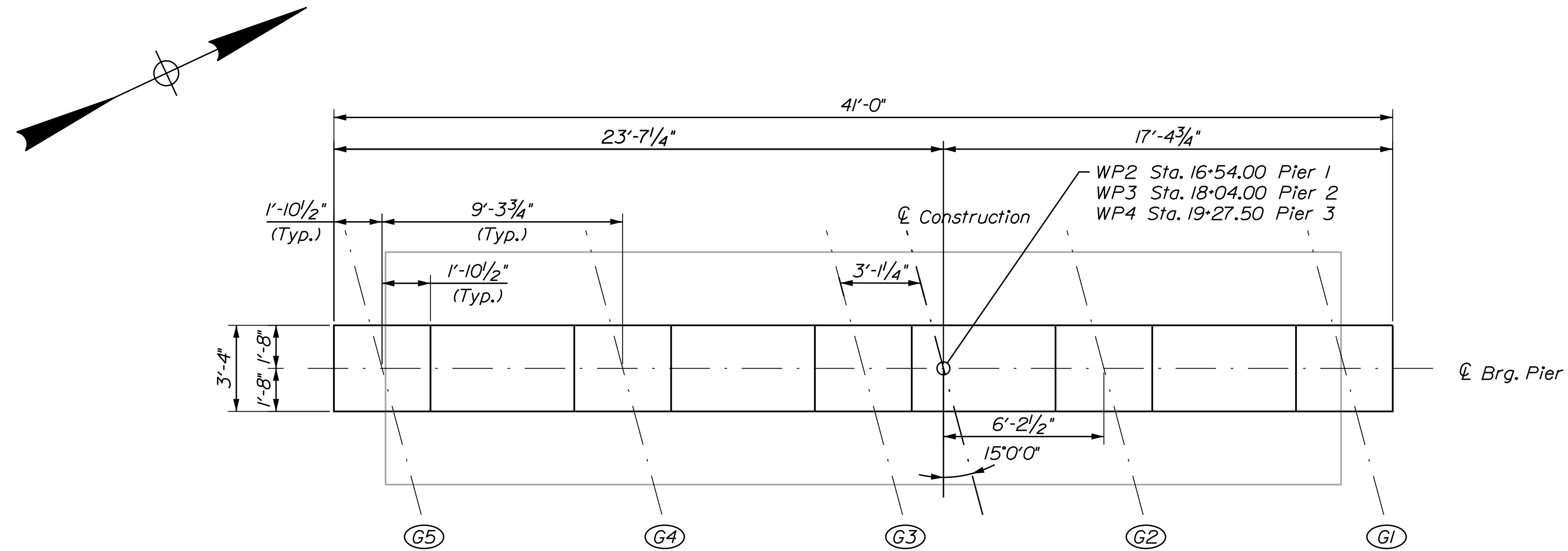
LEGEND



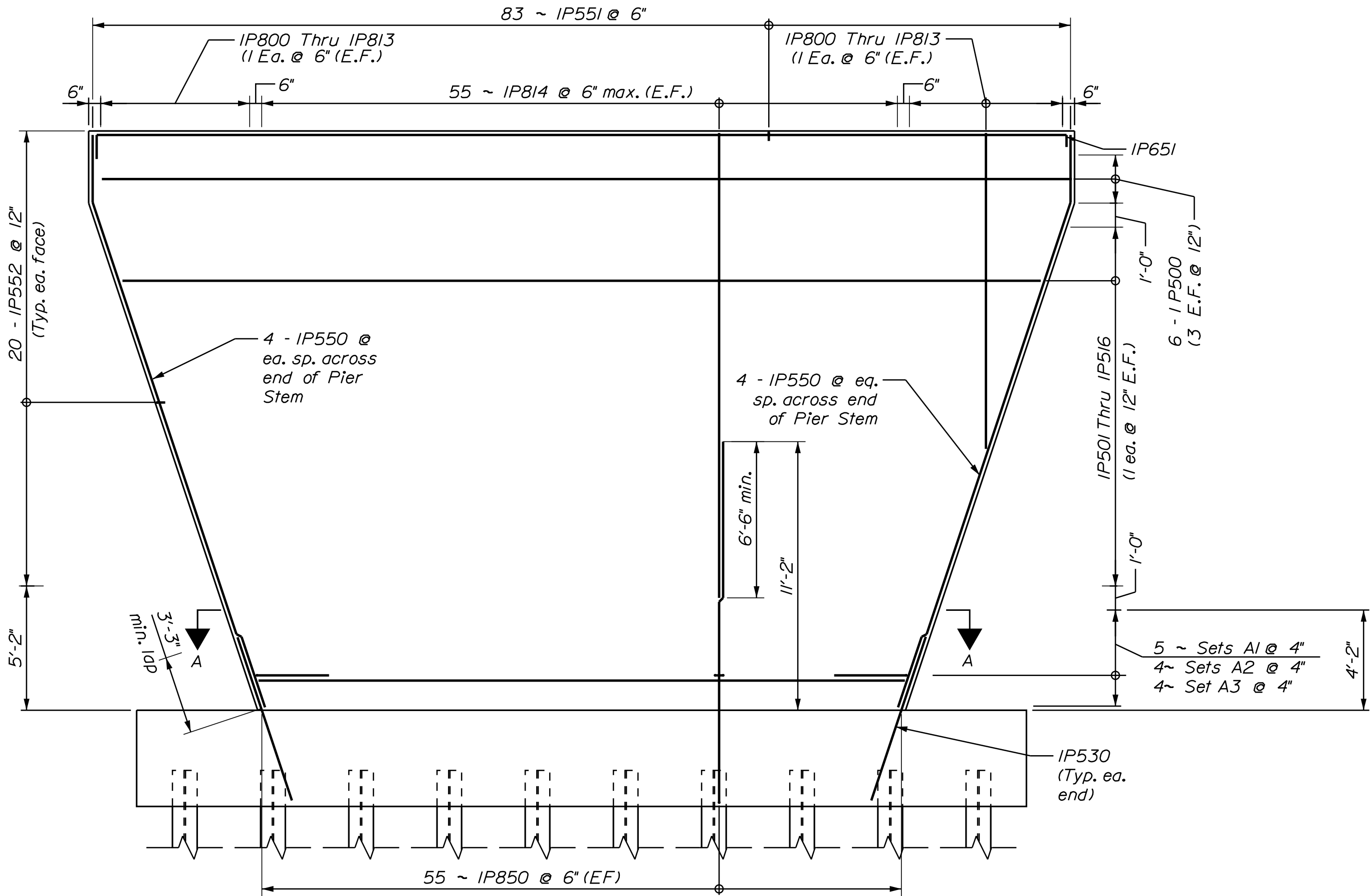
Tension Pile, Pier 3 Only - For Details, See Drawing Abutment No. 1 Reinforcing

Tension Pile, Pier 1, 2, and 3 - For Details, See Drawing Abutment No. 1 Reinforcing

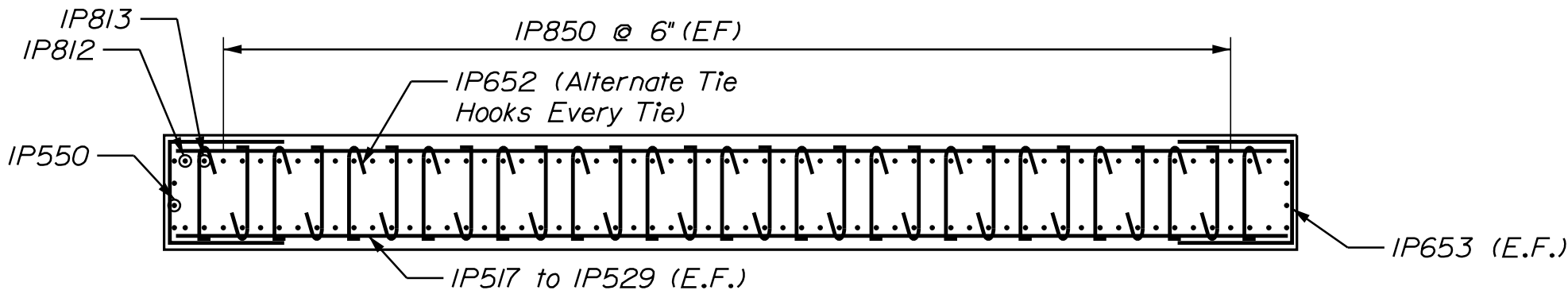
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2516100	WIN 25161.00	BRIDGE NO. 5601	BRIDGE PLANS
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY				
PIER FOOTING & NOTES				
SHEET NUMBER 58 OF 88				



Pier 1 Shown, Pier 2 and 3 Similar

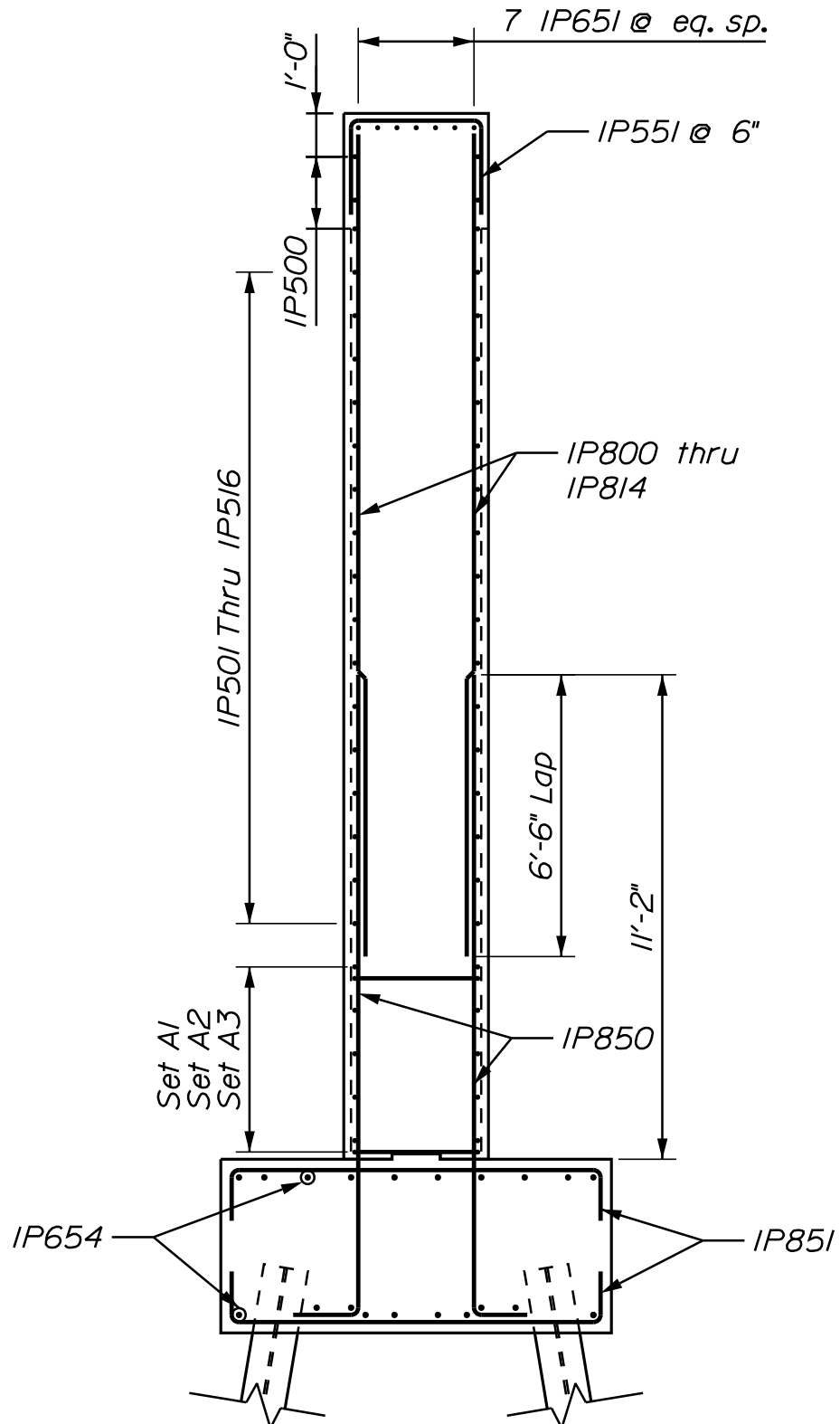


PIER 1 ELEVATION REINFORCING

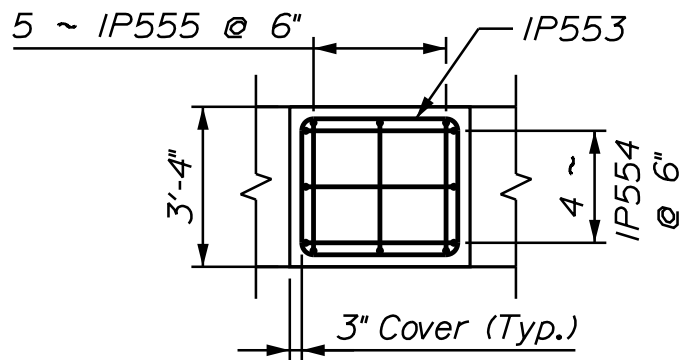


SECTION A-A

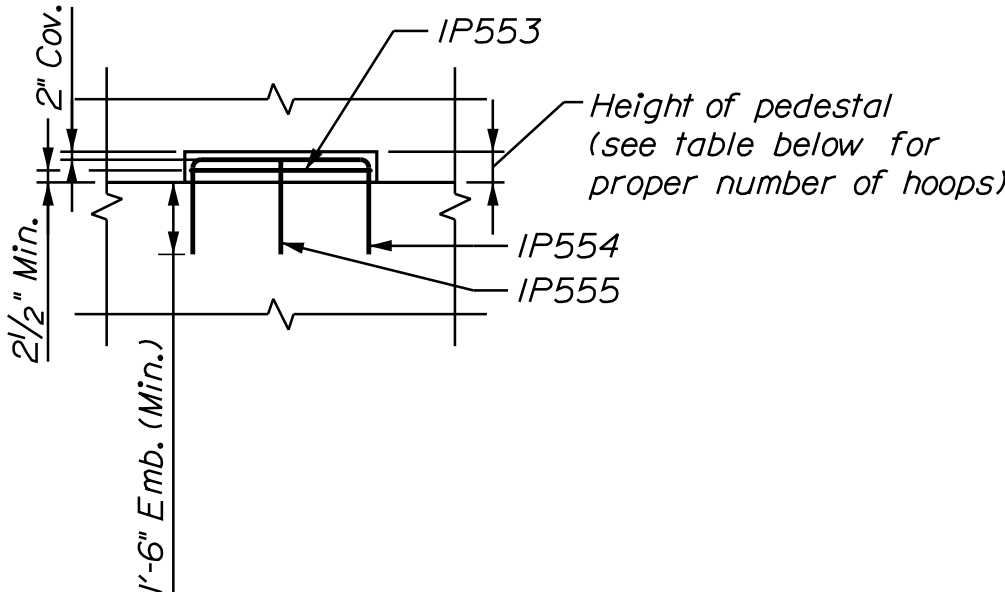
- Set A1
2 x IP517 thru IP521
2 x IP653
29 x IP652
- Set A2
2 x IP522 thru IP525
2 x IP653
28 x IP652
- Set A3
2 x IP526 thru IP529
2 x IP653
27 x IP652



PIER SECTION REINFORCING



TYPICAL PEDESTAL PLAN
Pier 2 Similar (2P553 / 2P554 / 2P555)
Pier 3 Similar (3P553 / 3P554 / 3P555)



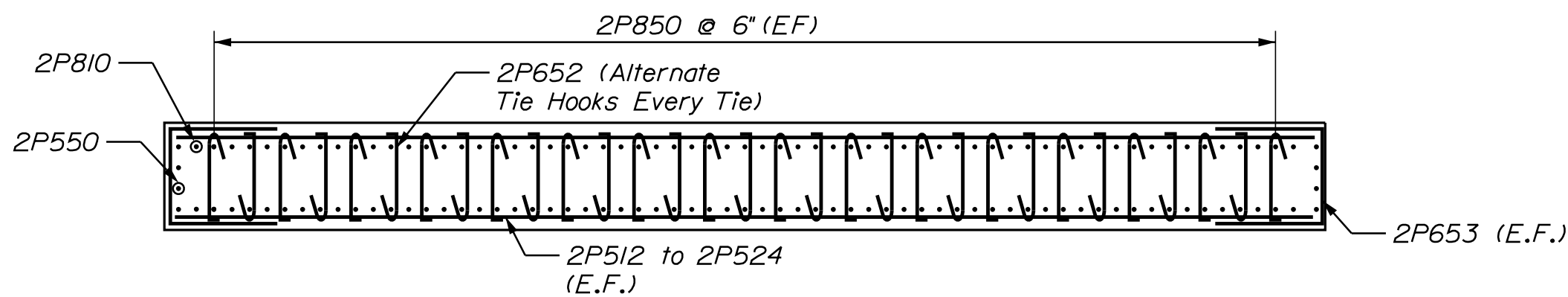
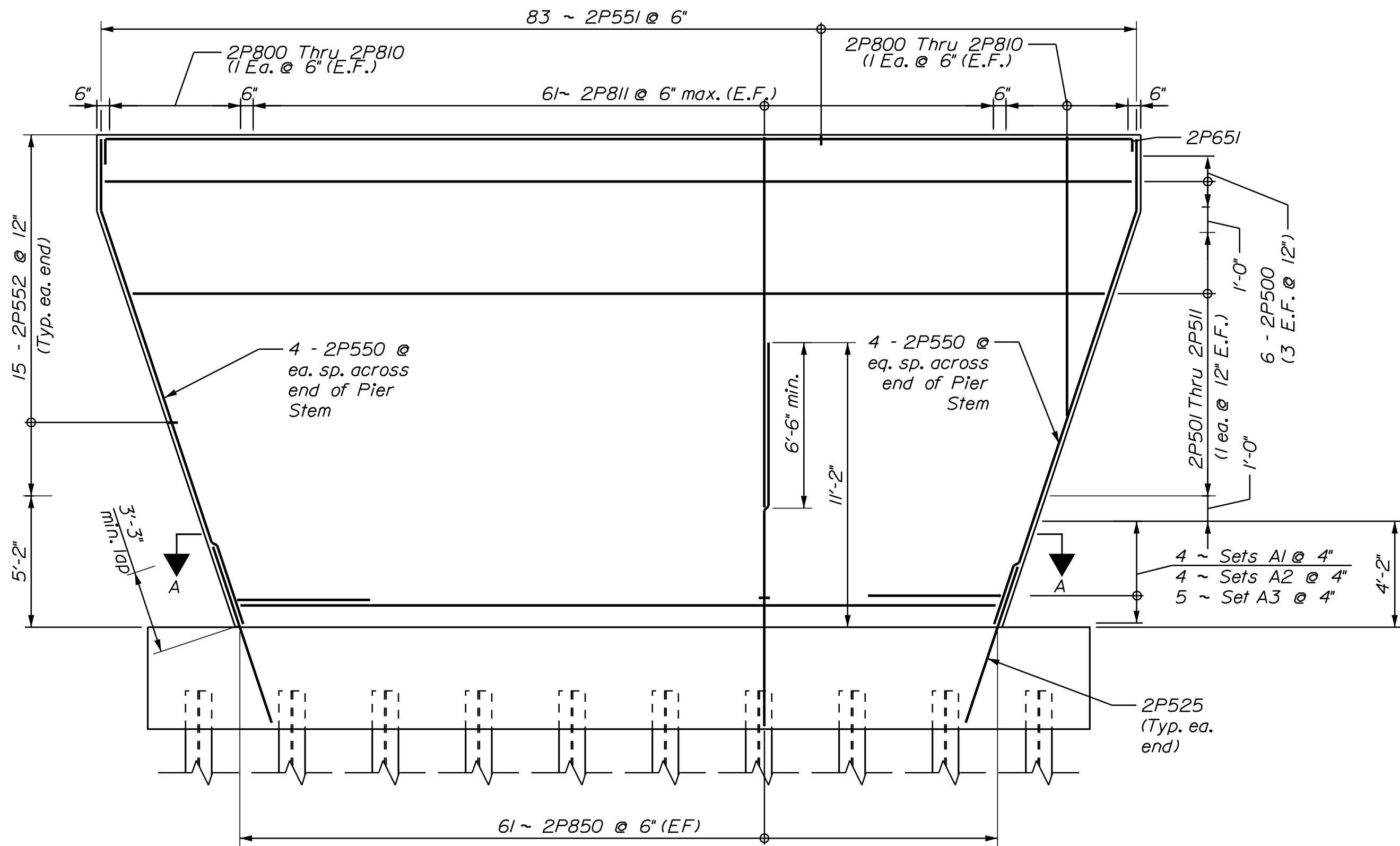
TYPICAL PEDESTAL ELEVATION
Pier 2 Similar (2P553 / 2P554 / 2P555)
Pier 3 Similar (3P553 / 3P554 / 3P555)

PEDESTAL HEIGHT	NUMBER OF HOOPS
4" TO 6"	1
6" TO 8"	2
8" TO 11"	3
11" TO 14"	4
14" TO 17"	5
17" TO 20"	6

Height to be calculated at the back face of the pedestal

LEGEND
E.F. - Each Face

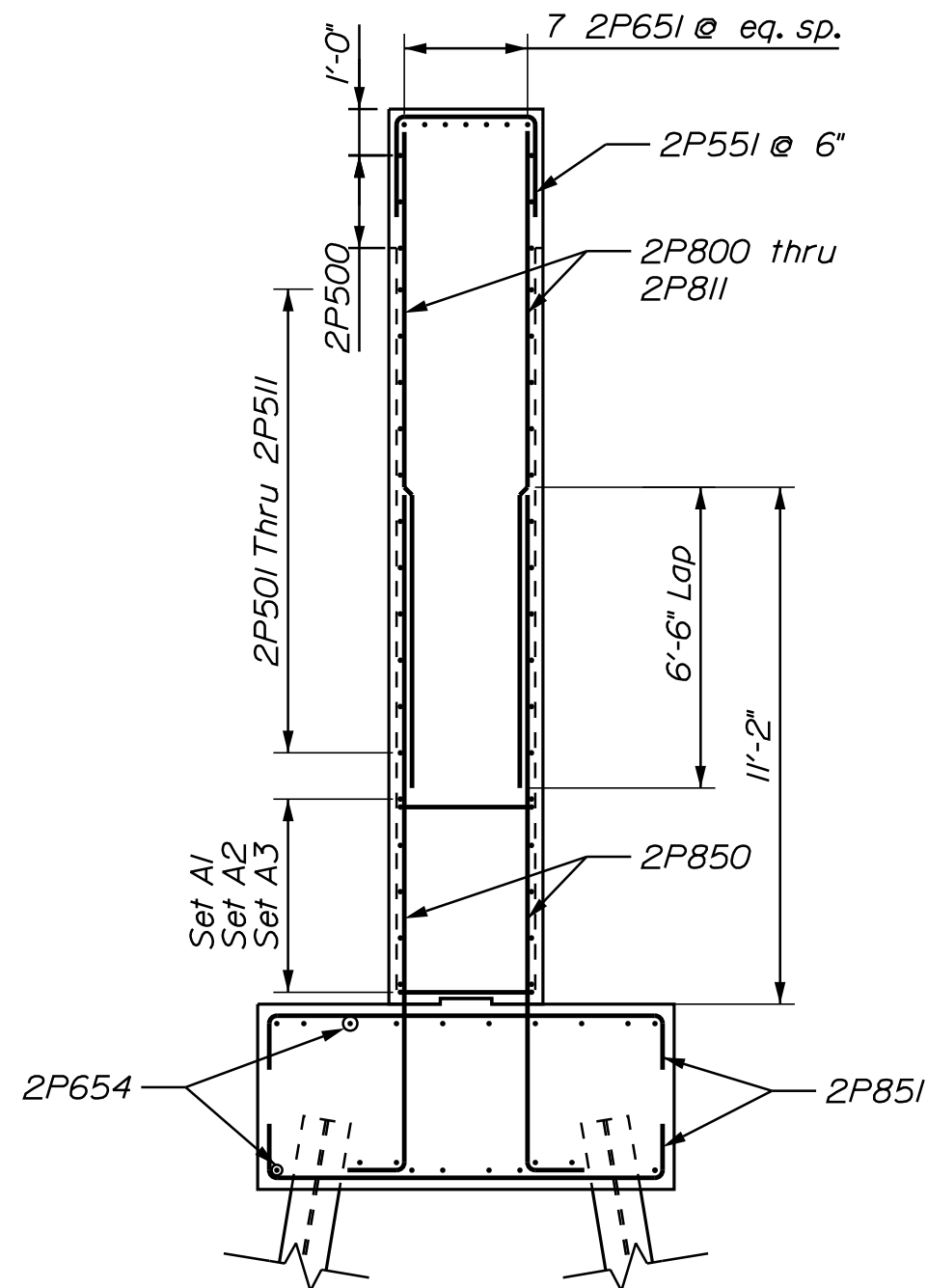
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	DATE				BY	PROJ. MANAGER	DESIGN-DETAILED				CHECKED-REVIEWED				DESIGN-DETAILED				CHECKED-REVIEWED						
	03/2025				CNJ	Gerald Dostie	FF	RF	RF	RF	RF	RF	RF	RF	RF	RF	RF	RF	RF						
	SIGNATURE				P.E. NUMBER				DATE				FIELD CHANGES				REVISIONS								
2516100		WIN		25161.00		BRIDGE NO. 5601		BRIDGE PLANS		TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY															
PIER 1 REINFORCING										SHEET NUMBER															
60										OF 88															



Set A1
2 x 2P512 thru 2P515
2 x 2P653
33 x 2P652

Set A2
2 x 2P516 thru 2P519
2 x 2P653
32 x 2P652

Set A3
2 x 2P520 thru 2P24
2 x 2P653
31x 2P652



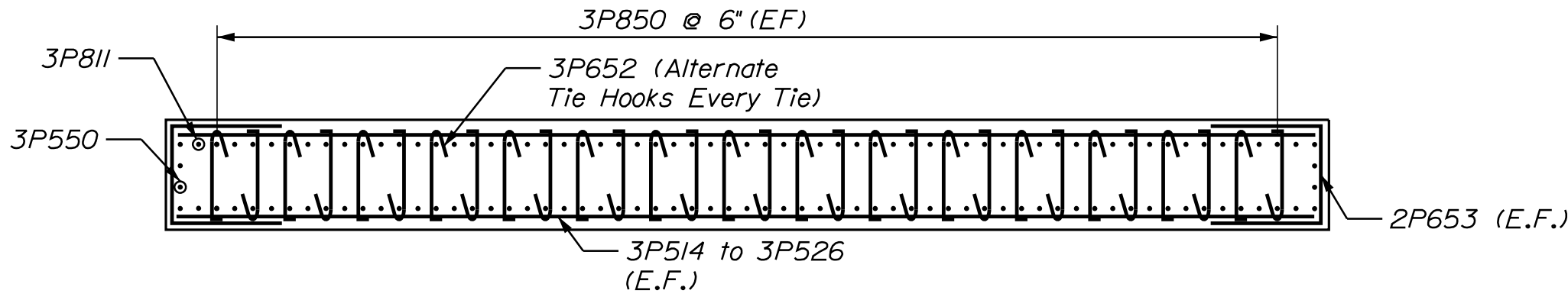
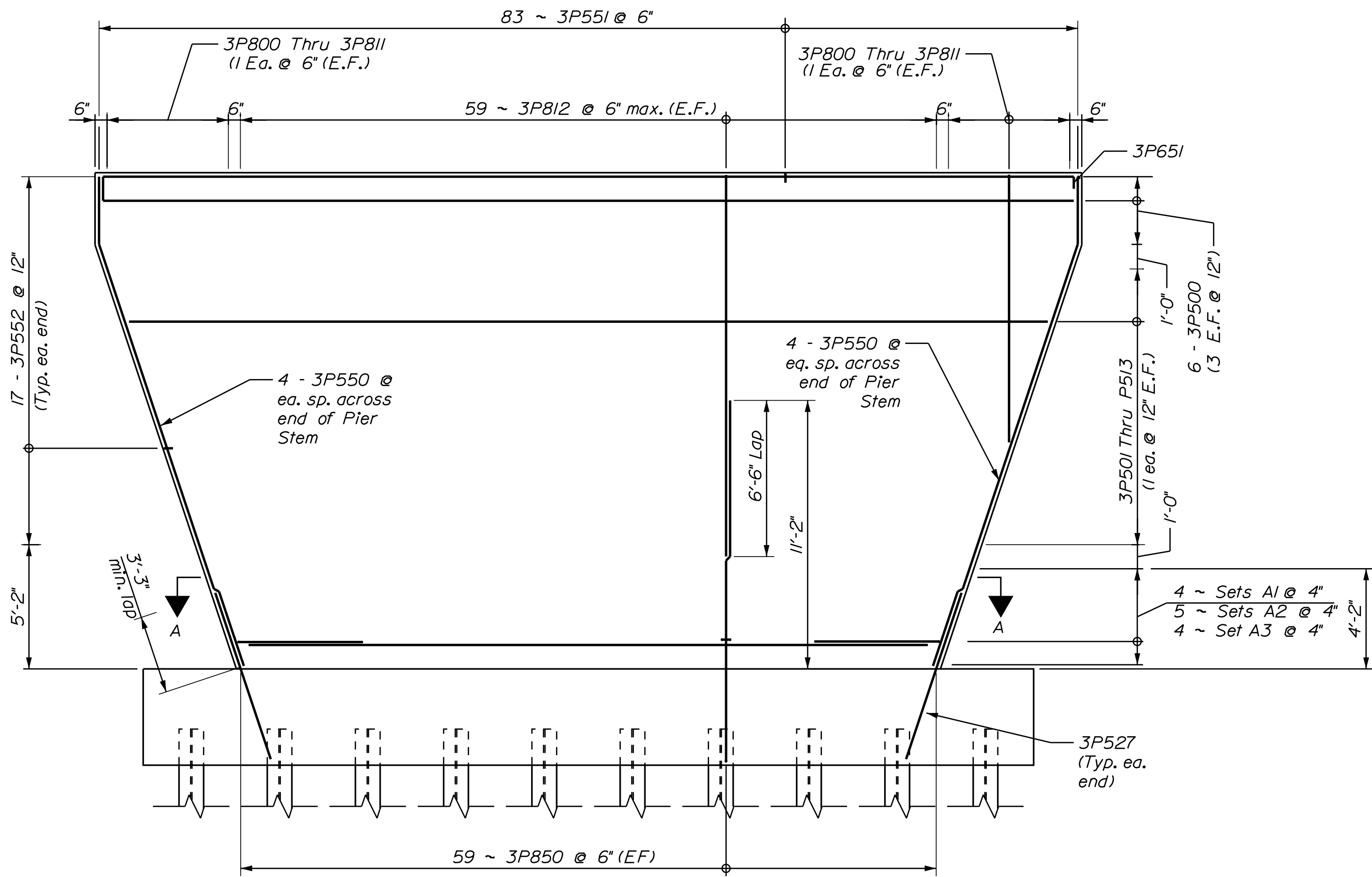
LEGEND
E.F. - Each Face

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY
PIER 2 REINFORCING

SHEET NUMBER
61
OF 88

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100
WIN
BRIDGE NO. 5801
BRIDGE PLANS
25161.00

PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DATE	BY	DATE	SIGNATURE
Gerald Dostie	FF	RF	03/2025	CNJ	03/2025	
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

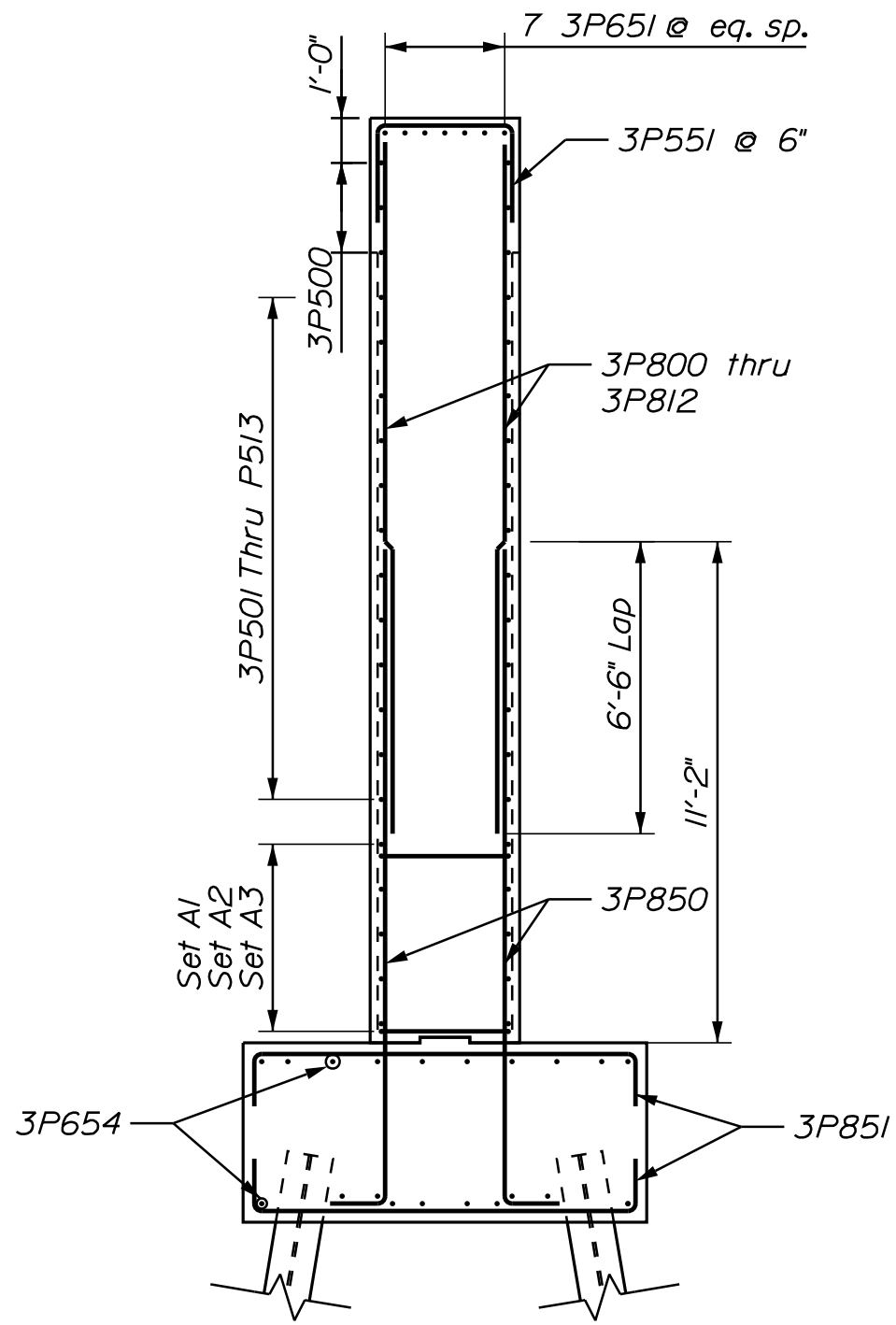


Set A1
2 x 3P514 thru 3P517
2 x 3P653
32 x 3P652

Set A2
2 x 3P518 thru 3P522
2 x 3P653
31 x 3P652

Set A3
2 x 3P523 thru 3P26
2 x 3P653
30x 3P652

LEGEND
E.F. - Each Face



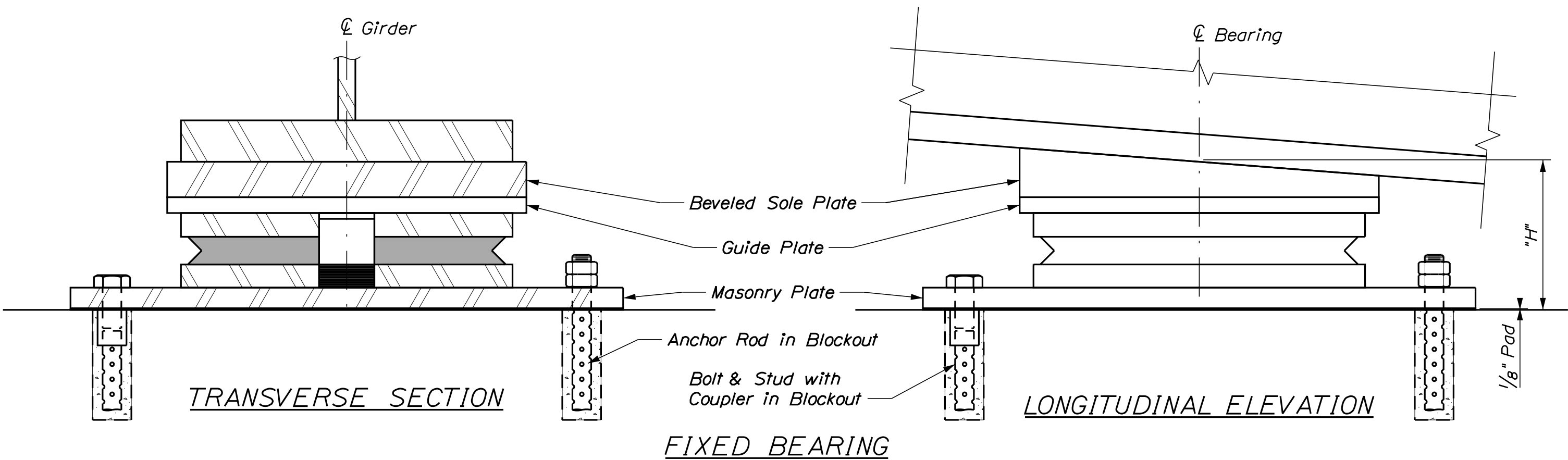
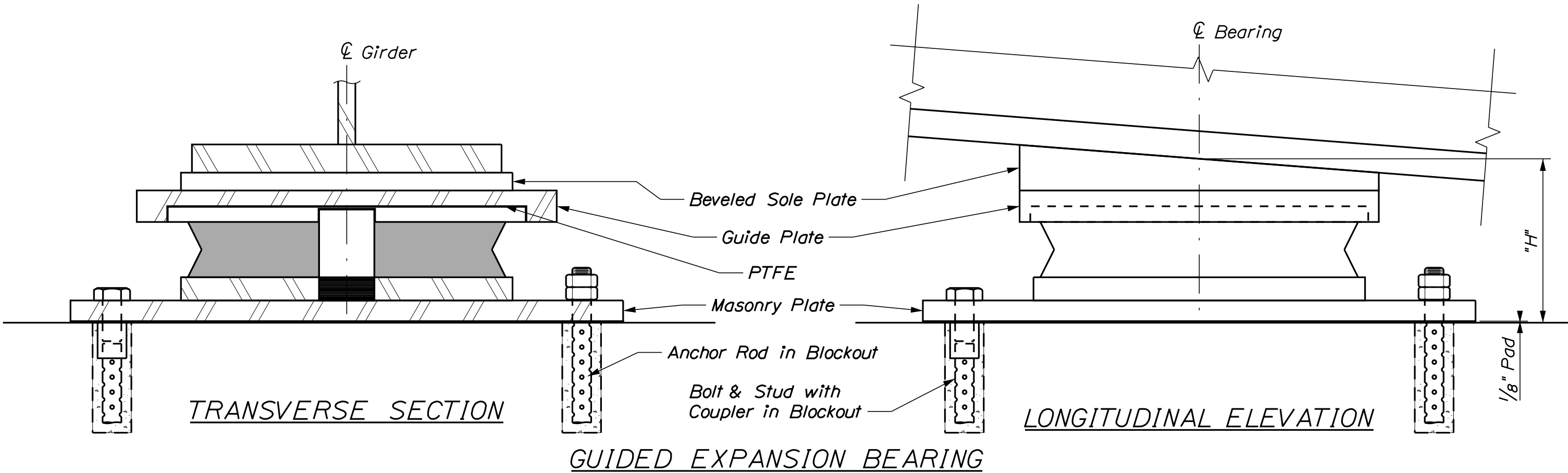
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	P.E. NUMBER			
	DATE			
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY		PROJ. MANAGER	Gerald Dostle	BY
PIER 3 REINFORCING		DESIGN-DETAILED	LF	CNJ
		CHECKED-REVIEWED	RF	RF
		DESIGN-DETAILED		
		REVISIONS 1		
		REVISIONS 2		
SHEET NUMBER		REVISIONS 3		
62		REVISIONS 4		
OF 88		FIELD CHANGES		
BRIDGE PLANS		BRIDGE NO. 5601	WIN	25161.00
2516100				

Date:5/25/2025

Username: common

Division: BRIDGE

Filename: ... \BRIDGE\063_Bearings.dgn



DISC BEARING NOTES

1. The actual dimension "H" shall be the responsibility of the Contractor. Dimensions and sizes of plates not shown are dependent on design loads, capacity, and the manufacturer of the bearings. The shop drawings, prepared by the manufacturer, shall provide all pertinent bearing information. The final bearing pedestal elevations shall be determined by the Contractor and submitted with the shop drawings for approval prior to construction of the substructure units.
2. Masonry plates shall be placed on 1/8" thick preformed pads in accordance with the specifications.
3. All steel, unless otherwise specified, shall meet the requirements of ASTM A709, Grade 50.
4. Bearing anchorage shall be either Anchor Rod with double nuts and washers in breakout, or Bolt & Stud with Coupler in breakout, at the Contractor's option, both options shown in details.
5. Anchorage spacing shall be coordinated with the bearing manufacturer.
6. Anchor bolts shall meet the requirements of ASTM F3125 Grade A325, Type I.
7. Anchor rods shall meet the requirements of ASTM F1554, Grade 55 or 105 and shall be swaged on the embedded portion of the rod.
8. Heavy hex nuts for anchor rods shall meet the requirements of ASTM A563, Grade D or DH.
9. Anchor bolts, rods, washers, and nuts shall be galvanized to ASTM A153 or ASTM B695, Class 50, Type I. Payment for galvanizing will be considered incidental to the disc bearing pay items.
10. Payment for Coatings for Disc Bearings will be considered incidental to Item 523.5552 Pot or Disc Bearings, Expansion and Item 523.5551 Pot or Disc Bearings, Fixed.
11. The abbreviation "PTFE" indicates polytetrafluoroethylene.
12. All PTFE, including guide and restraint surfaces, shall be unfilled.
13. PTFE minimum bearing pressure shall be 1 ksi under total service loading and 3 ksi under total strength loading.
14. Average compressive stresses on the disc shall be computed using the minimum plan area of the unstressed disc, excluding the area of any holes.
15. The design temperature range shall be 150°F (-30°F to 120°F).
16. Design of the sole plates, including weld to the girder, and masonry plates is the responsibility of the Bearing Manufacturer. Payment for these shall be made under Item 523.5551, Pot or Disc Bearings, Fixed or Item 523.5552, Pot or Disc Bearings, Expansion as applicable.
17. Sole plate shall be beveled according to the grade defined at each substructure location in the Sole Plate Bevel Table.
18. Strength Limit State rotations shown in the Disc Bearing Design Table include an allowance for uncertainties of 0.01 radians, as defined in AASHTO LRFD Bridge Design Specifications, 9th Edition 2020.
19. Anchor rods shall be installed to a minimum of 18 inches into the substructure units, below the bottom of the pedestals.
20. Bearings shall be designed with a thermal load factor of 1.2, which is included in the total longitudinal movement provided in the table.
21. Longitudinal horizontal forces do not include friction forces at expansion bearings.
22. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points upstation. All marks shall be permanent and shall be visible after the bearing is installed. Bearings shall be restrained during transit.
23. Bearing installation shall be in strict conformance with the Standard Specifications and the manufacturer's recommendations.
24. In the Disc Bearing Setting Corrections Table, a negative value for Dimension "X" indicates a direction away from the fixed bearing. A positive value for Dimension "X" indicates a direction toward the fixed bearing.
25. Bearings stiffeners at Pier No. 3 shall be in line with the centerline of bearing at 45°F ± 10°F at the time of welding.
26. Temperatures shown in the Disc Bearing Setting Corrections Table are those of the steel girders and not necessarily the ambient air temperature.

DISC BEARING DESIGN TABLE																
Location	Bearing Type	Design Loads Per Bearing (kips)					Design Loads Per Bearing Line (kips)						Dim "H" (in.) (See Note 1)	Design Rotation		Total Long. Movement (in.)
		Vertical					Horizontal							Strength	Service	
		Strength	Extreme Event	Service			Strength		Extreme		Service					
		Total Load	Total Load	Dead Load *	Max. Live Load **	Min. Live Load **	Long.	Trans.	Long.	Trans.	Long.	Trans.		Rotation (radians)	Rotation (radians)	
Abutment 1, G1-G5	Guided Expansion	352	116	90	135	-18	0	36	0	145	0	18	9	0.0154	0.0131	5.7
Pier 1, G1-G5	Guided Expansion	879	311	318	269	-17	0	89	0	390	0	42	9	0.0137	0.0121	3.8
Pier 2, G1-G5	Guided Expansion	782	292	258	258	-36	0	85	0	365	0	41	9	0.0136	0.0120	1.7
Pier 3, G1-G5	Fixed	782	264	265	253	-32	106	74	300	330	84	35	9	0.0131	0.0117	0
Abutment 2, G1-G5	Guided Expansion	351	116	89	135	-15	0	33	0	144	0	16	9	0.0144	0.0125	1.7

* Tabulated Dead Loads include DC1, DC2, and DW loads.
** Tabulated Live Loads include IM loading and multiple presence factors.

DISC BEARING SETTING CORRECTIONS TABLE						
	Dimension "X" (inches)					
	15 °F	30 °F	45 °F	60 °F	75 °F	90 °F
Abut. No. 1	15/16	1/2	0	-1/2	-15/16	-17/16
Pier No. 1	5/8	5/16	0	-5/16	-5/8	-15/16
Pier No. 2	5/16	1/8	0	-1/8	-5/16	-1/16
Pier No. 3	0	0	0	0	0	0
Abut. No. 2	1/4	1/8	0	-1/8	-1/4	-1/16

SOLE PLATE BEVEL (%)					
	Abut. No. 1	Pier No. 1	Pier No. 2	Pier No. 3	Abut. No. 2
G1	5.05	2.02	-1.47	-3.03	-2.98
G2	5.11	2.08	-1.42	-3.03	-3.02
G3	5.16	2.13	-1.36	-3.03	-3.03
G4	5.22	2.19	-1.30	-3.03	-3.03
G5	5.28	2.25	-1.25	-3.03	-3.03

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100

BRIDGE NO. 6601
WIN
25161.00
BRIDGE PLANS

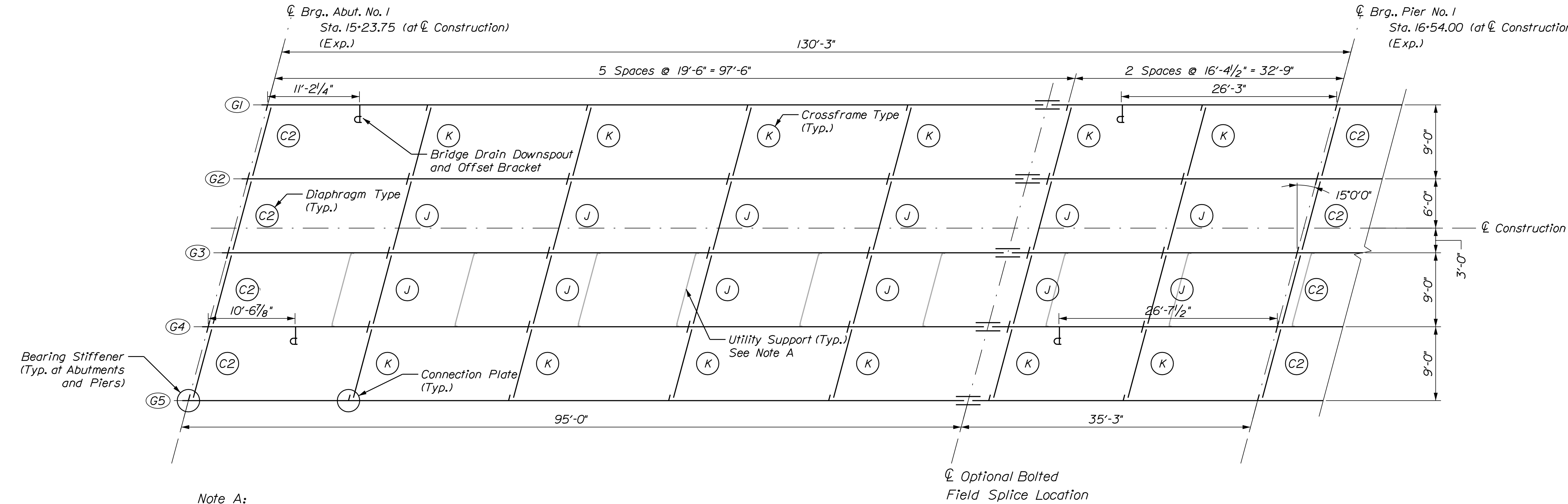
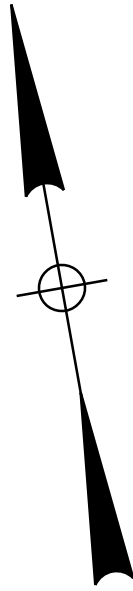
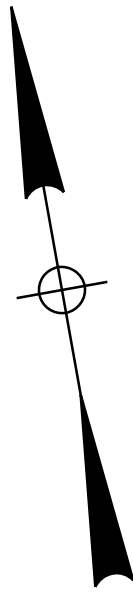
TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND COUNTY

BEARING DETAILS

SHEET NUMBER

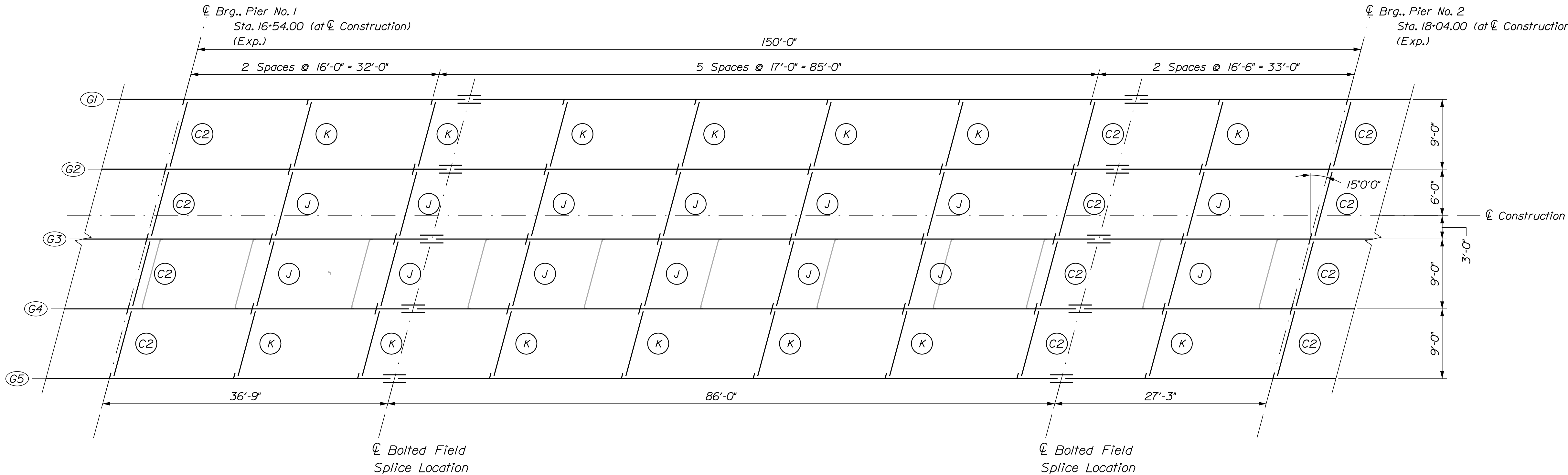
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Note A:
See Utility Support Plan and Detail
Sheets for layout and dimensions

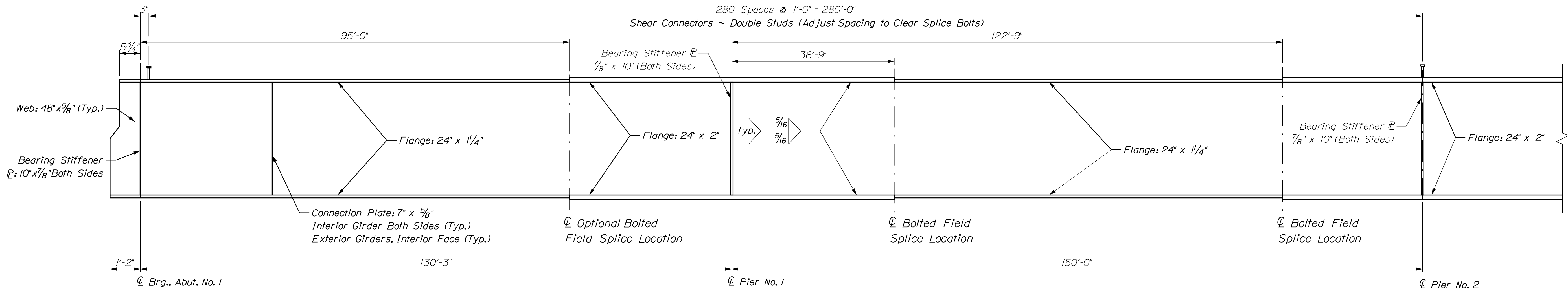
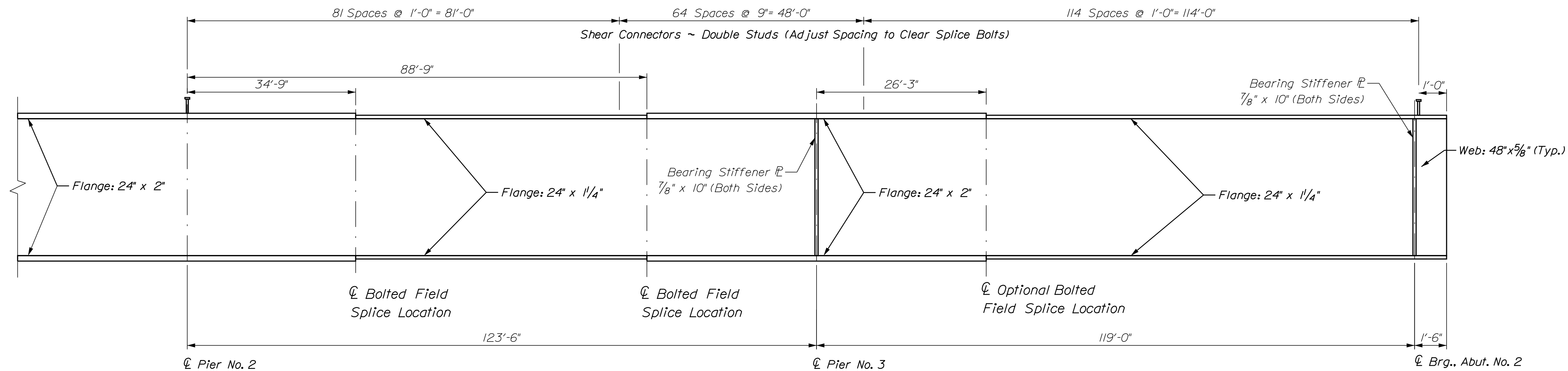
FRAMING PLAN
Span No. 1



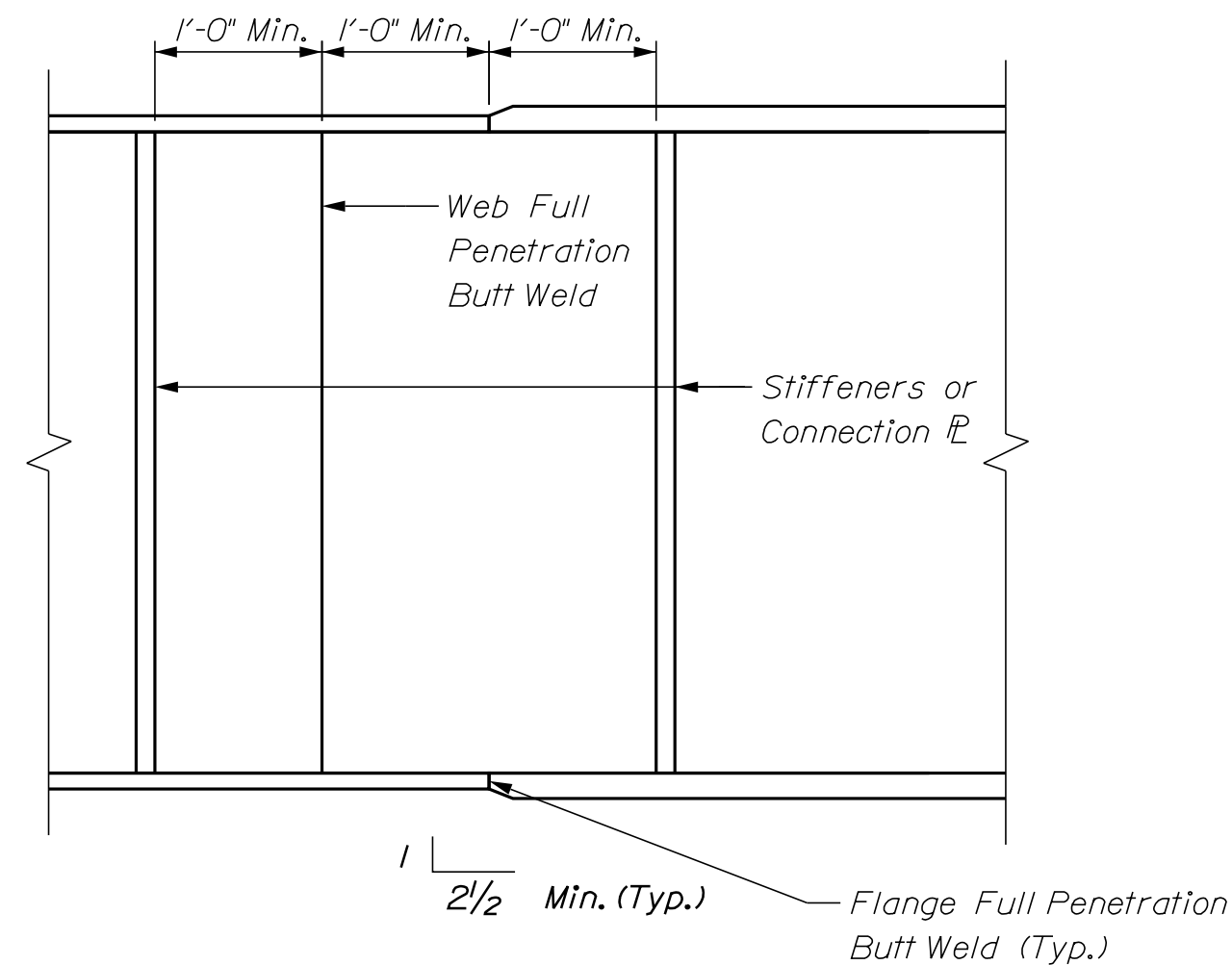
FRAMING PLAN
Span No. 2

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2516100		WIN		BRIDGE NO. 6601		BRIDGE PLANS	
TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR		CUMBERLAND CUMBERLAND COUNTY		FRAMING PLAN		SPAN NO. 1 & 2		SHEET NUMBER	
03/2025		03/2025		SIGNATURE		P.E. NUMBER		DATE		64	
03/2025		03/2025		DATE		DATE		DATE		OF 88	

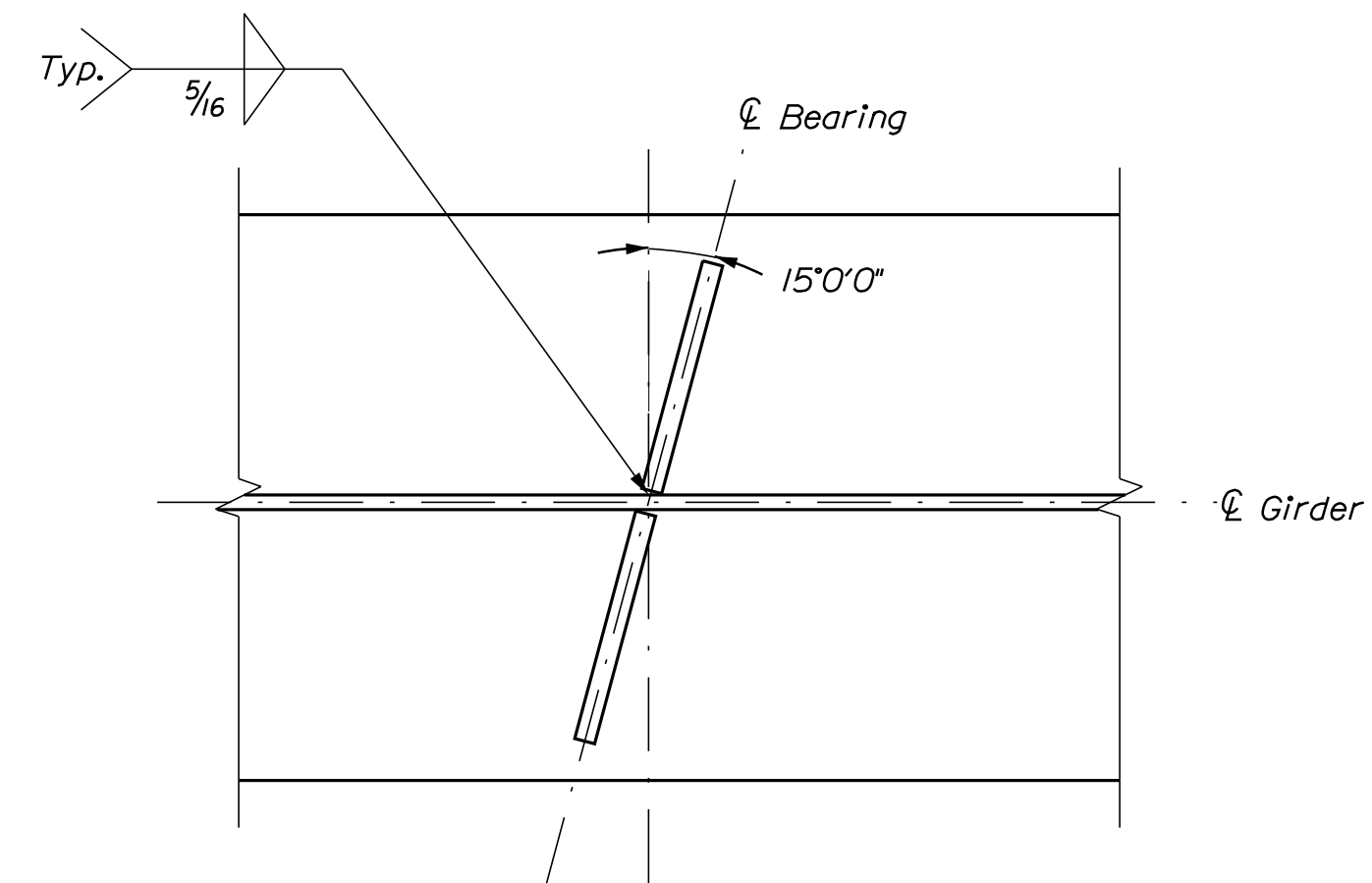
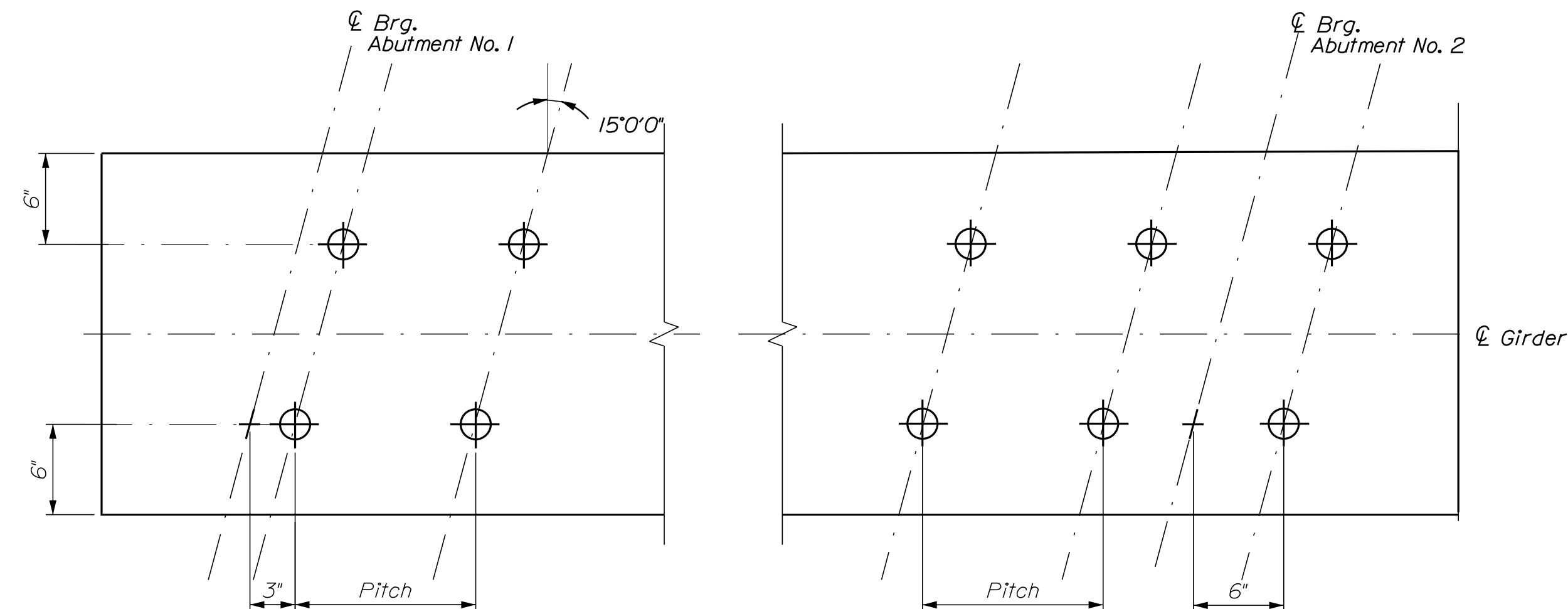


GIRDER ELEVATIONGIRDER ELEVATION

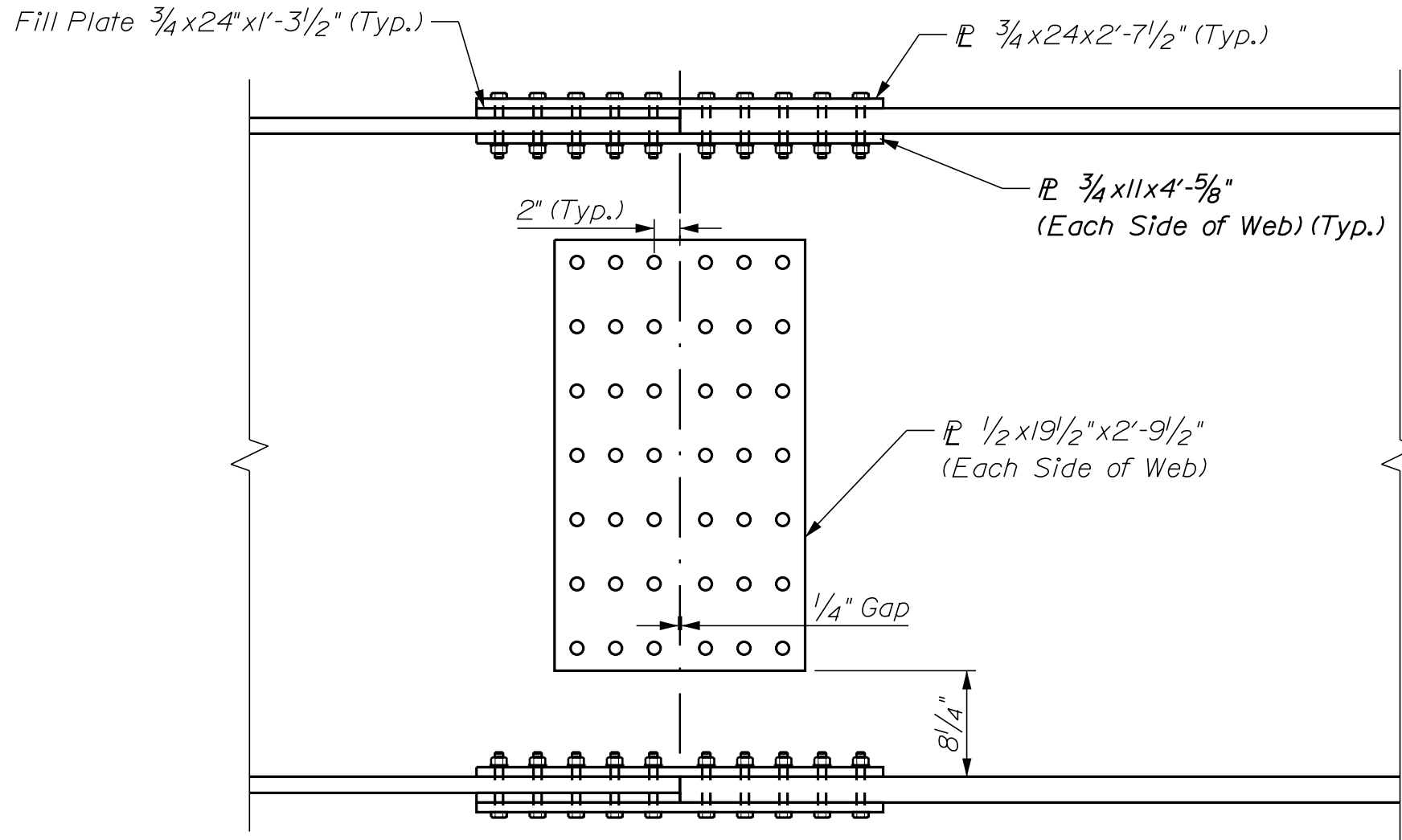
N.T.S
1,080 Studs per Girder (5,400 Studs Total)



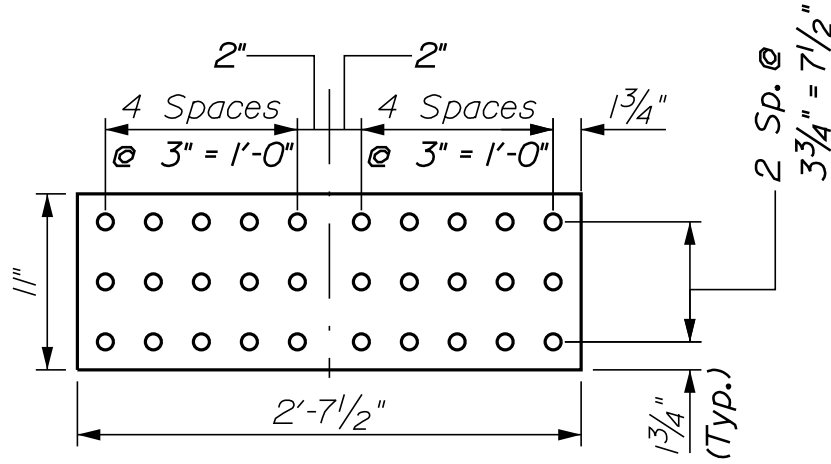
WELDED SPLICE TRANSITION
N.T.S



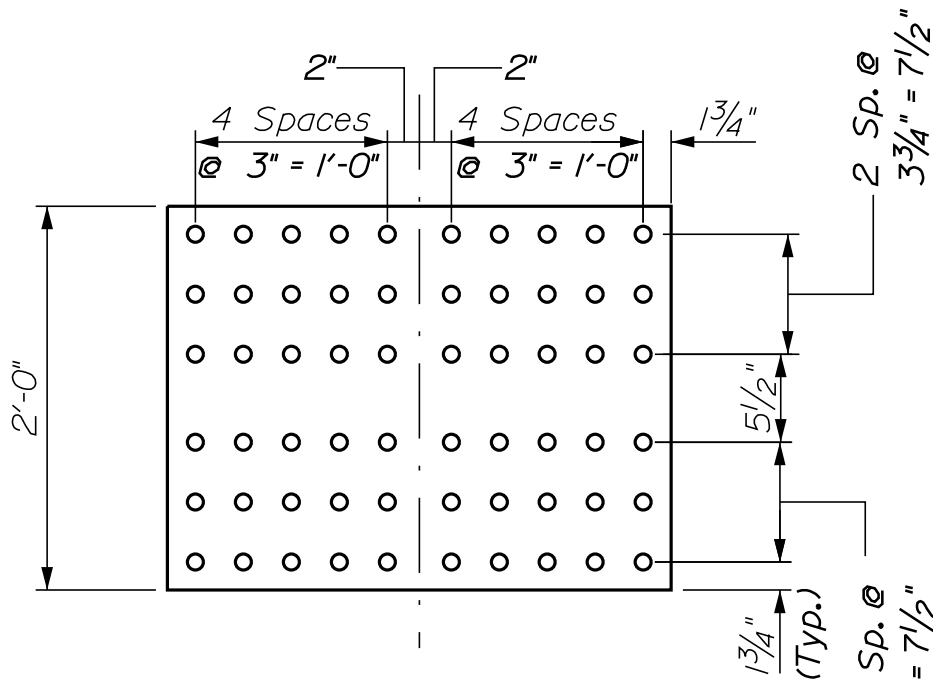
BEARING STIFFENERS



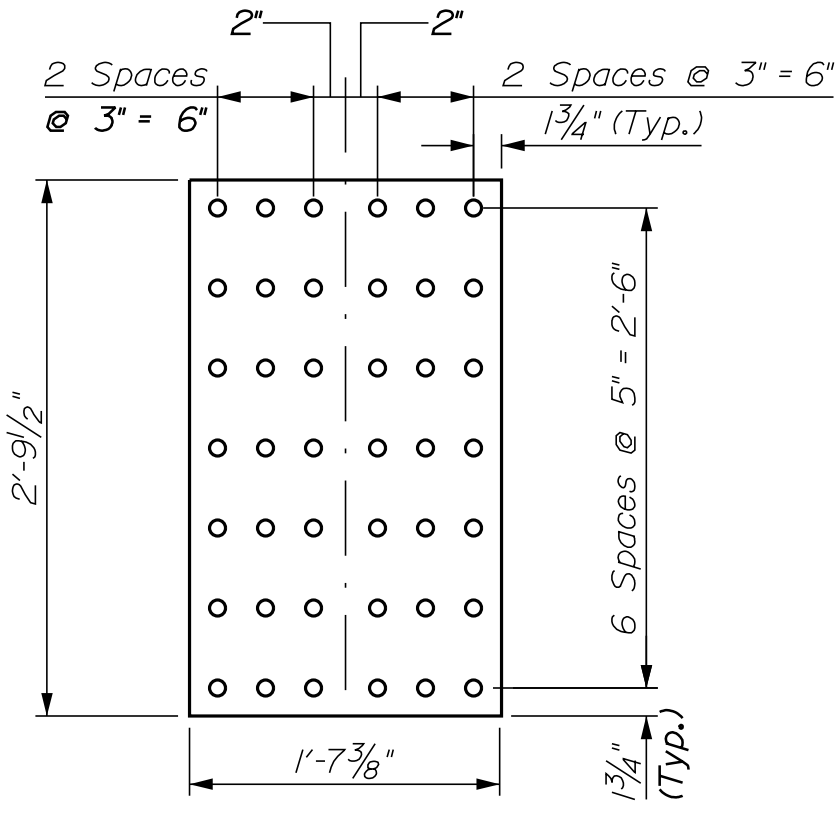
ELEVATION



INNER FLANGE PLATE



OUTER FLANGE PLATE



WEB PLATE

STRUCTURAL STEEL NOTES

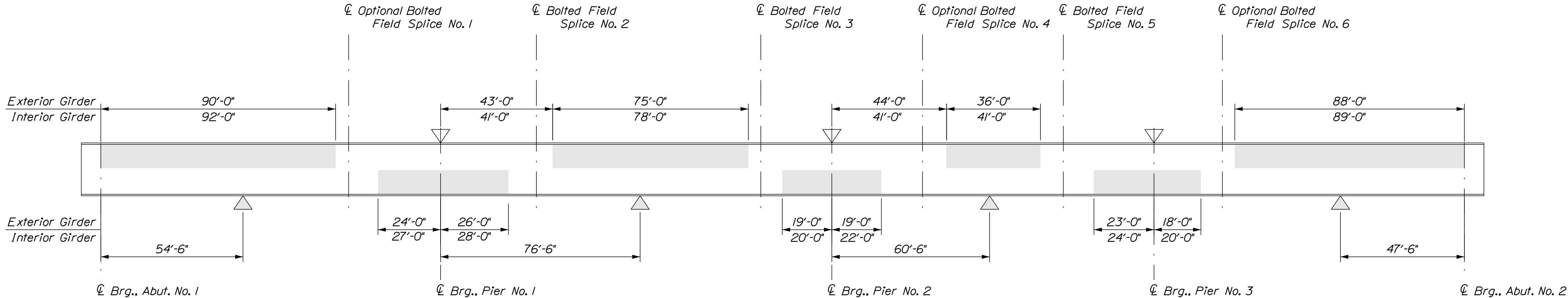
1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.
2. No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet or 10 percent of the span length (whichever is greater) from the points of maximum negative moment or maximum positive moment. Butt weld splices in flanges shall be not less than 1 foot from transverse butt welds in the web plates and no transverse web or flange butt welds shall be located within 1 foot of other transverse welds (e.g. connection plates to web welds) on either flange or web. No transverse butt weld splices will be allowed in areas of stress reversal.
3. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be at least 20 feet in length unless otherwise shown on the Plans.
4. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.
5. Intermediate crossframe or diaphragm connection plates may be either plumb or normal to the top flange.
6. Filler plates may be steel conforming to the requirements of ASTM A709, Grade 36.
7. Provide a drip bar on the high side of each pier and abutment on all girders in accordance with Standard Detail 504(10).
8. Structural steel was designed with a vertical construction load of 50 lb/sf and a lateral wind velocity during construction of 70 mph.
9. All bolts, nuts, and washers shall be hot dip galvanized in accordance with ASTM A153.
10. Bolted field splice connections shall be made using 7/8 inch ASTM F3125, Grade A325 Type A high strength bolts. Bolt hole size shall be 15/16 inch diameter. Field splice bolt threads shall be excluded from the shear plane.
11. The splice was designed with a Class B slip coefficient.
12. Repairs to the Thermal Spray Coating that modify the surface roughness in the area of the faying surfaces shall not be performed without the approval of the Fabrication Engineer.
13. Ends of girder webs shall be vertical under full dead load.
14. At the Contractor's option, the Diaphragms and Cross Frames may be Hot-Dipped Galvanized in accordance with Standard Specifications Section 506, Shop Applied Protective Coating, as approved by the Resident. Payment will be considered incidental to Item 506.9104, Thermal Spray Coating (Shop Applied), no separate payment will be made.

TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY				PROJ. MANAGER		Gerold Dostle	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION
GIRDER ELEVATION				DESIGN-DETAILED	CNJ	CNJ	03/2025		
				CHECKED-REVIEWED	LNH	LNH	03/2025		
				DESIGN2-DETAILED2			SIGNATURE		
				DESIGN3-DETAILED3					2516100
				REVISIONS 1					P.E. NUMBER
				REVISIONS 2					
				REVISIONS 3					
				REVISIONS 4					WIN
				FIELD CHANGES					DATE
									BRIDGE NO. 5801
									25161.00
									BRIDGE PLANS

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SHEET NUMBER



GIRDER STRESS DIAGRAM

▽ Maximum Negative Moment △ Maximum Positive Moment
Shaded areas are always in compression.
Other areas are in tension or have stress reversal.

BOTTOM OF SLAB ELEVATION - SPAN NO. 1											
Girder	℄ Brg., Abut. No. 1	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Pier No. 1
G1	109.20	109.91	110.57	111.17	111.71	112.18	112.59	112.95	113.26	113.54	113.80
G2	109.25	109.99	110.66	111.28	111.83	112.31	112.72	113.08	113.39	113.67	113.93
G3	109.19	109.93	110.62	111.24	111.79	112.28	112.70	113.06	113.38	113.67	113.94
G4	108.89	109.63	110.32	110.95	111.45	112.01	112.44	112.81	113.14	113.43	113.71
G5	108.58	109.32	110.01	110.64	111.21	111.71	112.15	112.54	112.88	113.19	113.48

BOTTOM OF SLAB ELEVATION - SPAN NO. 3											
Girder	℄ Brg., Pier No. 2	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Pier No. 3
G1	114.22	114.01	113.78	113.52	113.23	112.89	112.51	112.13	111.74	111.37	111.00
G2	114.43	114.23	114.01	113.76	113.47	113.14	112.77	112.38	112.00	111.62	111.25
G3	114.52	114.33	114.12	113.88	113.59	113.27	112.90	112.52	112.13	111.75	111.39
G4	114.38	114.19	113.99	113.75	113.47	113.16	112.79	112.41	112.02	111.64	111.28
G5	114.23	114.05	113.85	113.62	113.35	113.04	112.68	112.30	111.92	111.54	111.17

BOTTOM OF SLAB ELEVATION - SPAN NO. 2											
Girder	℄ Brg., Pier No. 1	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Pier No. 2
G1	113.80	114.09	114.35	114.56	114.72	114.81	114.81	114.75	114.62	114.44	114.22
G2	113.93	114.23	114.50	114.73	114.90	114.99	115.01	114.95	114.82	114.65	114.43
G3	113.94	114.25	114.53	114.76	114.94	115.04	115.07	115.02	114.90	114.73	114.52
G4	113.71	114.02	114.31	114.56	114.74	114.78	114.89	114.84	114.73	114.57	114.38
G5	113.48	113.80	114.09	114.34	114.53	114.65	114.69	114.66	114.56	114.41	114.23

BOTTOM OF SLAB ELEVATION - SPAN NO. 4											
Girder	℄ Brg., Pier No. 3	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Abut. No. 2
G1	111.00	110.67	110.34	110.02	109.70	109.36	109.00	108.62	108.23	107.82	107.40
G2	111.25	110.92	110.61	110.29	109.97	109.63	109.28	108.90	108.50	108.08	107.65
G3	111.39	111.06	110.74	110.42	110.10	109.77	109.41	109.03	108.63	108.21	107.78
G4	111.28	110.95	110.63	110.32	110.00	109.66	109.30	108.92	108.52	108.11	107.68
G5	111.17	110.84	110.52	110.20	109.87	109.53	109.17	108.80	108.40	107.99	107.57

TABLE OF DEFLECTIONS ~ GIRDER 1 & 5 (Inches)																					
	℄ Brg. Abut. No. 1	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Pier 1	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Pier 2
Steel Dead Load	0.00	0.25	0.46	0.60	0.66	0.64	0.54	0.38	0.22	0.07	0.00	0.06	0.21	0.38	0.52	0.58	0.56	0.45	0.29	0.12	0.00
Concrete Dead Load	0.00	0.63	1.16	1.52	1.67	1.61	1.36	0.98	0.56	0.20	0.00	0.07	0.34	0.67	0.95	1.08	1.03	0.81	0.49	0.19	0.00
Superimposed Dead Load	0.00	0.27	0.50	0.65	0.71	0.68	0.57	0.41	0.23	0.08	0.00	0.06	0.22	0.40	0.56	0.63	0.61	0.50	0.32	0.14	0.00

TABLE OF DEFLECTIONS ~ GIRDER 1 & 5 (Inches)																					
	℄ Brg. Pier 2	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Pier 3	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Abut. No. 2
Steel Dead Load	0.00	-0.02	0.01	0.05	0.09	0.10	0.09	0.05	0.01	-0.02	0.00	0.09	0.22	0.35	0.47	0.54	0.55	0.49	0.37	0.20	0.00
Concrete Dead Load	0.00	-0.02	0.03	0.11	0.18	0.20	0.15	0.07	-0.02	-0.07	0.00	0.22	0.53	0.85	1.14	1.31	1.33	1.20	0.91	0.49	0.00
Superimposed Dead Load	0.00	-0.03	-0.02	0.01	0.04	0.06	0.04	0.01	-0.02	-0.03	0.00	0.11	0.25	0.40	0.53	0.61	0.61	0.55	0.42	0.22	0.00

TABLE OF DEFLECTIONS ~ GIRDER 2 TO 4 (Inches)																					
	℄ Brg. Abut. No. 1	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Pier 1	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Pier 2
Steel Dead Load	0.00	0.26	0.47	0.62	0.68	0.65	0.55	0.39	0.22	0.07	0.00	0.06	0.22	0.39	0.54	0.61	0.58	0.47	0.30	0.12	0.00
Concrete Dead Load	0.00	0.78	1.44	1.88	2.07	1.99	1.68	1.22	0.70	0.26	0.00	0.08	0.40	0.80	1.13	1.29	1.23	0.95	0.57	0.22	0.00
Superimposed Dead Load	0.00	0.26	0.47	0.62	0.68	0.65	0.54	0.39	0.22	0.07	0.00	0.06	0.21	0.38	0.53	0.60	0.58	0.47	0.31	0.13	0.00

TABLE OF DEFLECTIONS ~ GIRDER 2 TO 4 (Inches)																					
	℄ Brg. Pier 2	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Pier 3	0.1 x Span	0.2 x Span	0.3 x Span	0.4 x Span	0.5 x Span	0.6 x Span	0.7 x Span	0.8 x Span	0.9 x Span	℄ Brg. Abut. No. 2
Steel Dead Load	0.00	-0.02	0.01	0.05	0.09	0.10	0.09	0.05	0.01	-0.02	0.00	0.09	0.22	0.36	0.48	0.55	0.56	0.50	0.38	0.21	0.00
Concrete Dead Load	0.00	-0.02	0.05	0.16	0.24	0.26	0.20	0.09	-0.02	-0.08	0.00	0.27	0.64	1.05	1.39	1.60	1.63	1.47	1.11	0.60	0.00
Superimposed Dead Load	0.00	-0.03	-0.02	0.01	0.04	0.05	0.04	0.01	-0.02	-0.03	0.00	0.10	0.24	0.38	0.50	0.57	0.58	0.52	0.39	0.21	0.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100

WIN
25161.00

BRIDGE NO. 6601
BRIDGE PLANS

PROJ. MANAGER
Gerald Dostle

BY
CT

DATE
03/2025

CHECKED-REVIEWED
FF

DESIGNS-DETAILED
RF

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

SIGNATURE
03/2025

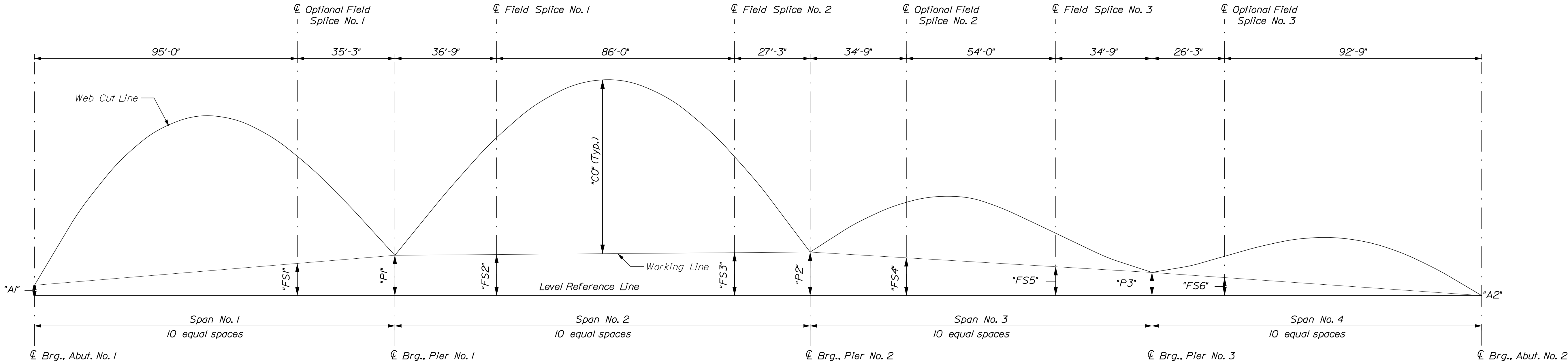
P.E. NUMBER

DATE

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND COUNTY

STRUCTURAL STEEL DETAILS

SHEET NUMBER
68
OF 88



CAMBER DIAGRAM (BY SPAN)

TABLE OF CAMBER ORDINATES - SPAN NO. 1 "CO" (Inches)											
Girder	℄ Brg., Abut. No. 1	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Pier No. 1
G1	0.00	3.28	5.91	7.75	8.73	8.84	8.15	6.74	4.79	2.48	0.00
G2	0.00	3.42	6.17	8.09	9.10	9.21	8.45	6.96	4.92	2.53	0.00
G3	0.00	3.42	6.16	8.08	9.10	9.20	8.45	6.96	4.92	2.53	0.00
G4	0.00	3.42	6.17	8.09	9.10	9.21	8.45	6.96	4.92	2.53	0.00
G5	0.00	3.28	5.91	7.75	8.73	8.84	8.15	6.74	4.79	2.48	0.00

TABLE OF CAMBER ORDINATES - SPAN NO. 2 "CO" (Inches)											
Girder	℄ Brg., Pier No. 1	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Pier No. 2
G1	0.00	3.02	5.79	8.04	9.56	10.15	9.73	8.35	6.12	3.27	0.00
G2	0.00	3.03	5.84	8.17	9.73	10.35	9.92	8.49	6.20	3.30	0.00
G3	0.00	3.02	5.84	8.16	9.73	10.34	9.92	8.49	6.20	3.30	0.00
G4	0.00	3.03	5.84	8.17	9.73	10.35	9.92	8.49	6.20	3.30	0.00
G5	0.00	3.02	5.79	8.04	9.56	10.15	9.73	8.35	6.12	3.27	0.00

TABLE OF CAMBER ORDINATES - SPAN NO. 3 "CO" (Inches)											
Girder	℄ Brg., Pier No. 2	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Pier No. 3
G1	0.00	1.40	2.53	3.31	3.64	3.44	2.78	2.01	1.22	0.51	0.00
G2	0.00	1.43	2.63	3.46	3.84	3.69	3.02	2.17	1.31	0.54	0.00
G3	0.00	1.47	2.70	3.57	3.99	3.87	3.21	2.31	1.41	0.59	0.00
G4	0.00	1.50	2.77	3.67	4.12	4.04	3.40	2.46	1.50	0.64	0.00
G5	0.00	1.54	2.81	3.73	4.19	4.14	3.55	2.59	1.60	0.70	0.00

TABLE OF CAMBER ORDINATES - SPAN NO. 4 "CO" (Inches)											
Girder	℄ Brg., Pier No. 3	0.1 Span	0.2 Span	0.3 Span	0.4 Span	0.5 Span	0.6 Span	0.7 Span	0.8 Span	0.9 Span	℄ Brg., Abut. No. 2
G1	0.00	0.41	0.99	1.61	2.17	2.45	2.49	2.24	1.69	0.91	0.00
G2	0.00	0.46	1.10	1.79	2.41	2.73	2.78	2.49	1.88	1.02	0.00
G3	0.00	0.46	1.10	1.79	2.41	2.73	2.77	2.49	1.88	1.02	0.00
G4	0.00	0.46	1.10	1.79	2.41	2.73	2.78	2.49	1.89	1.02	0.00
G5	0.00	0.41	0.99	1.61	2.17	2.45	2.49	2.24	1.69	0.91	0.00

CAMBER DIAGRAM DIMENSIONS (Feet)											
Girder	"A1"	"FS1"	"P1"	"FS2"	"FS3"	"P2"	"FS4"	"FS5"	"P3"	"FS6"	"A2"
G1	1.80	5.16	6.40	6.50	6.74	6.82	5.91	4.51	3.60	2.81	0.00
G2	1.60	5.01	6.28	6.40	6.69	6.78	5.88	4.50	3.60	2.81	0.00
G3	1.41	4.87	6.16	6.30	6.63	6.74	5.86	4.48	3.60	2.81	0.00
G4	1.21	4.73	6.03	6.19	6.58	6.70	5.83	4.47	3.60	2.81	0.00
G5	1.01	4.58	5.90	6.09	6.52	6.66	5.80	4.46	3.60	2.81	0.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2516100

BRIDGE NO. 5601
WIN
25161.00
BRIDGE PLANS

TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBERLAND CUMBERLAND COUNTY

STRUCTURAL STEEL CAMBER

PROJ. MANAGER
Gerald Dostle

BY
CT
RF

DATE
03/2025
03/2025

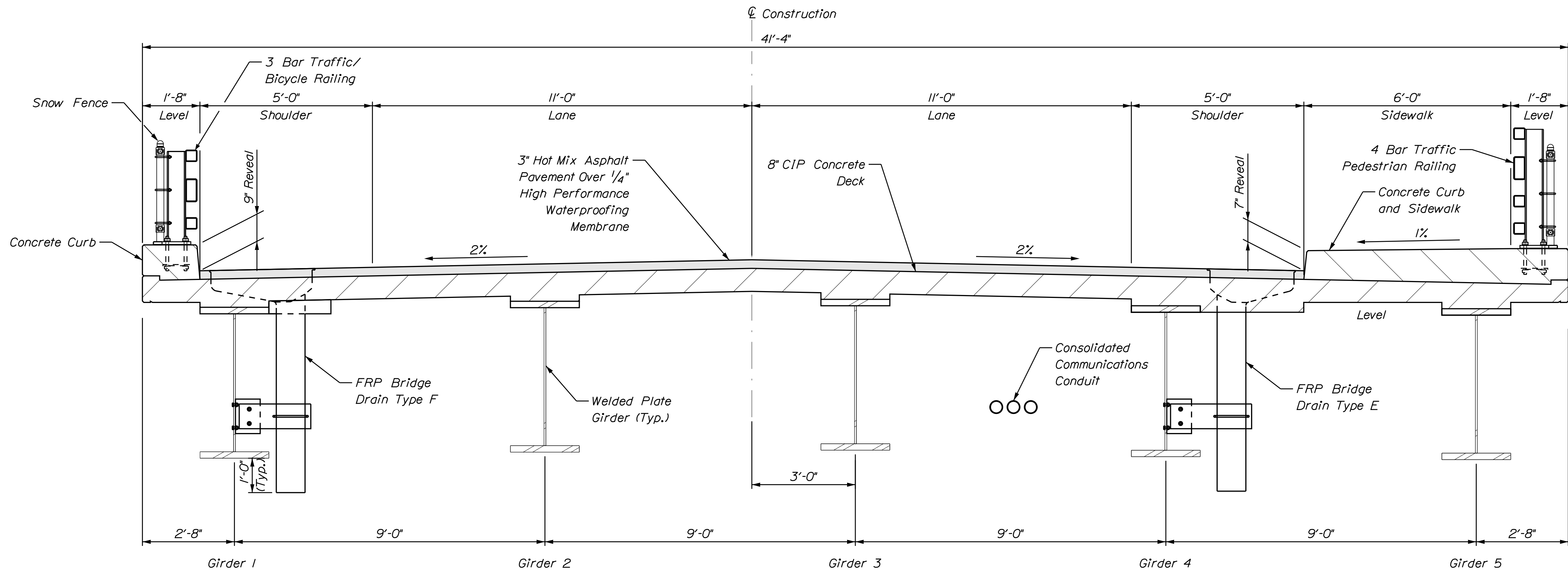
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CHECKED-REVIEWED
DESIGN-DETAILED
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REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

SIGNATURE
P.E. NUMBER
DATE

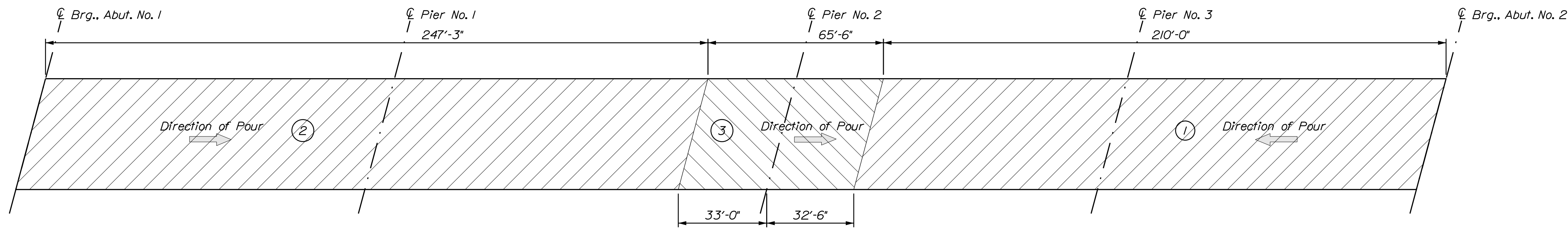
SHEET NUMBER

69

OF 88



PROPOSED SECTION

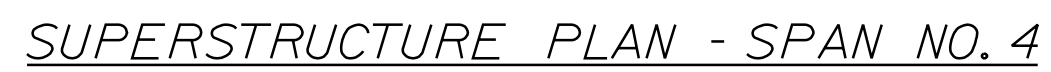
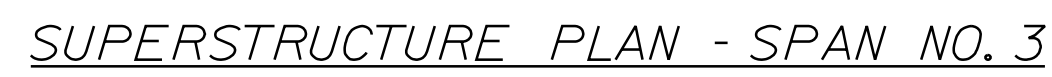


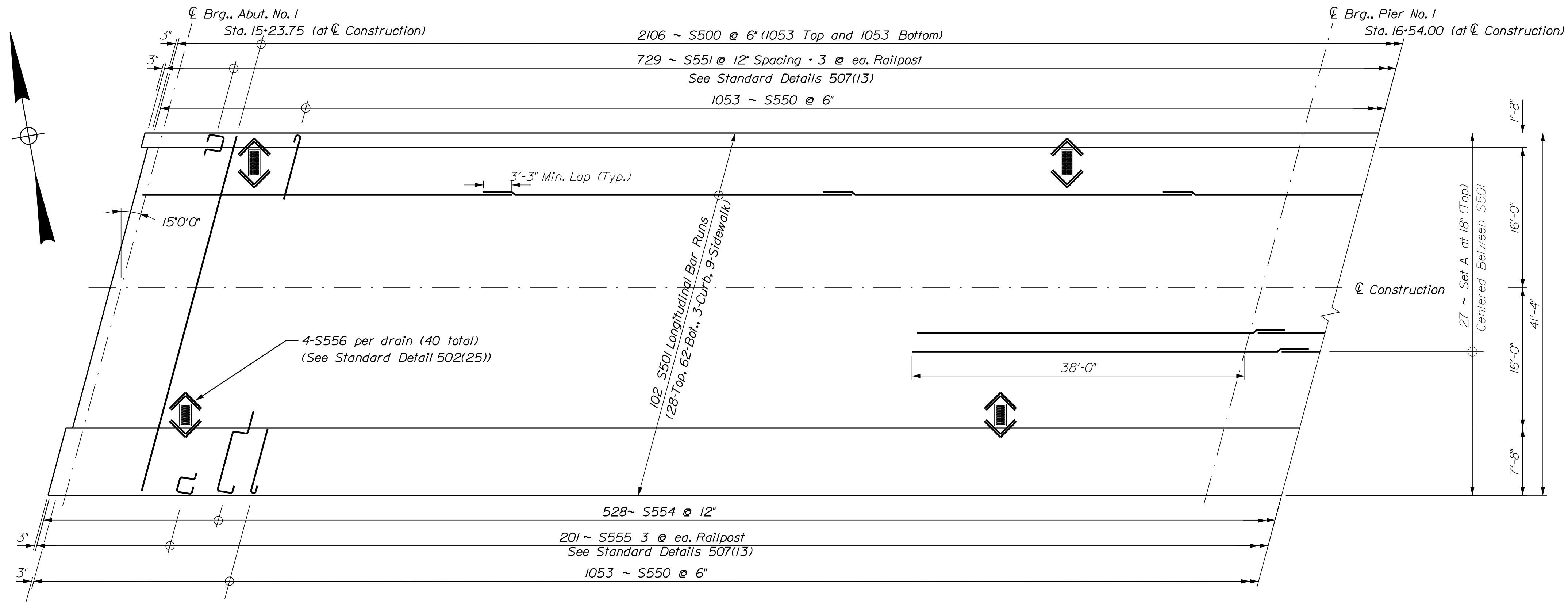
DECK PLACEMENT SEQUENCE

SUPERSTRUCTURE NOTES

1. The theoretical blocking used for design of the structure is 4.5 inch at the centerline of bearing of the abutments and piers. Refer to Standard Detail 502(03) for blocking details.
2. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
3. Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.
4. The superstructure slab concrete shall be placed in accordance with the Deck Placement Sequence shown on this sheet. Concrete in a placement shall be kept plastic one complete span behind the span being placed. A minimum of 5 days shall elapse between successive partial placements. The superstructure slab concrete placement sequence shall be approved by the Resident.
5. Precast Concrete Deck Panels are not allowed on this project.
6. The gland seal to be furnished shall have minimum Movement Rating(s) as follows:
Abutment No. 2 = 1.5 inches
7. Additional reinforcing steel around the bridge drains shall be as shown. Flare transverse reinforcing bars to clear drains. Cut one transverse bar if necessary (top and bottom).

TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY SUPERSTRUCTURE SECTION AND NOTES	SHEET NUMBER				70				OF 88			
	PROJ. MANAGER		Gerold Dostie		BY		DATE		STATE OF MAINE DEPARTMENT OF TRANSPORTATION 2516100 WIN 25161.00 BRIDGE NO. 5801 BRIDGE PLANS			
	DESIGN-DETAILED		CT		CT		03/2025					
	CHECKED-REVIEWED		RF		RF		03/2025					
	DESIGN2-DETAILED2						SIGNATURE					
	DESIGN3-DETAILED3						P.E. NUMBER					
	REVISIONS 1								DATE			
	REVISIONS 2											
	REVISIONS 3											
	REVISIONS 4											
FIELD CHANGES												

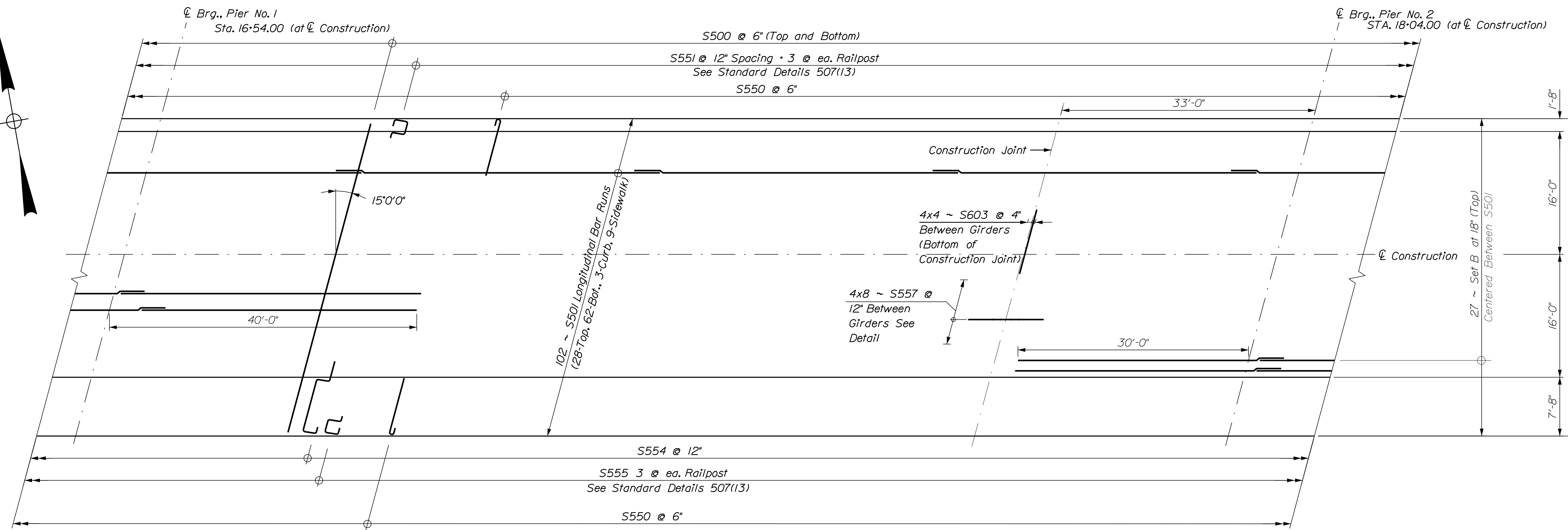




DECK REINFORCING PLAN - SPAN NO. 1

Alternate position of bars S502 within the longitudinal bar run in order to stagger splice locations.

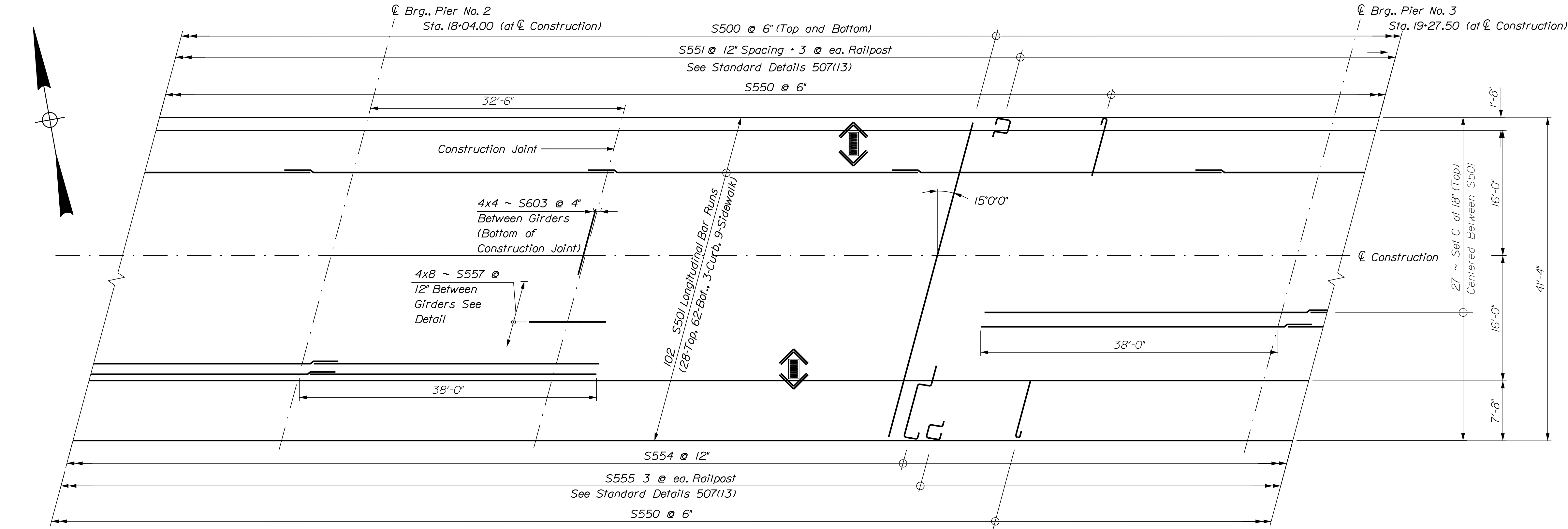
Set A:
S600 and S503 equally spaced between S501 Bars



DECK REINFORCING PLAN - SPAN NO. 2

Alternate position of bars S502 within the longitudinal bar run in order to stagger splice locations.

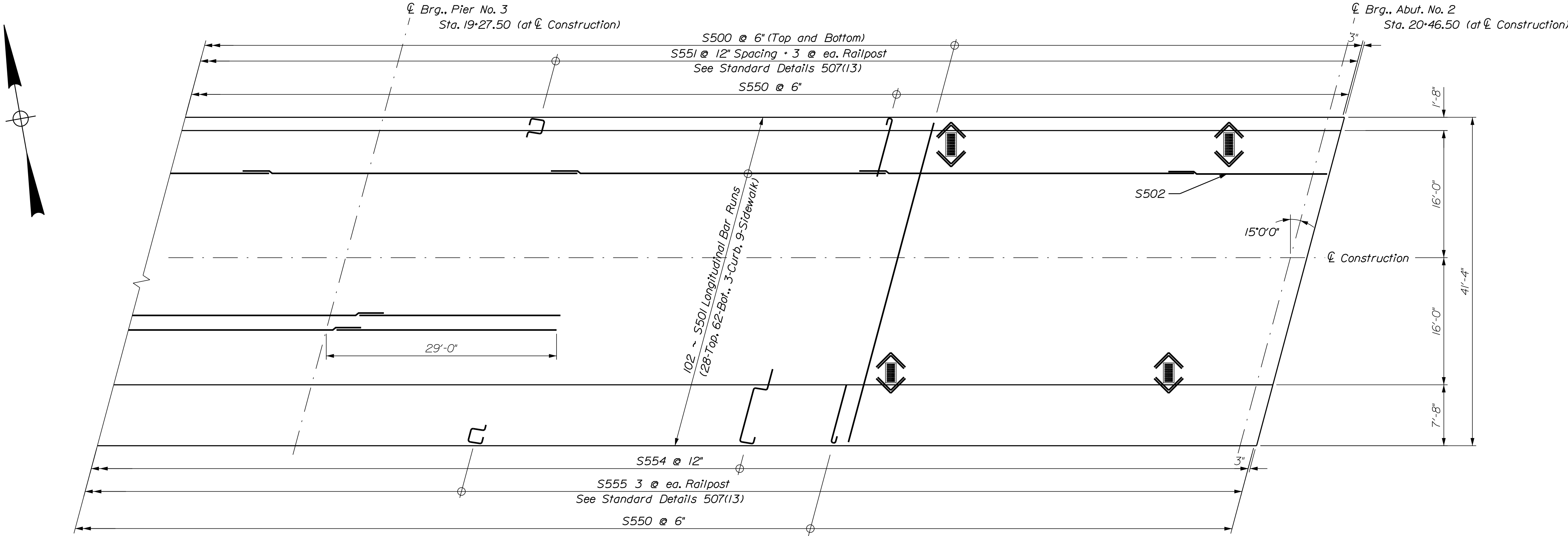
Set B:
S60I and S504 equally spaced between S50I Bars



DECK REINFORCING PLAN - SPAN NO. 3

Alternate position of bars S502 within the longitudinal bar run in order to stagger splice locations.

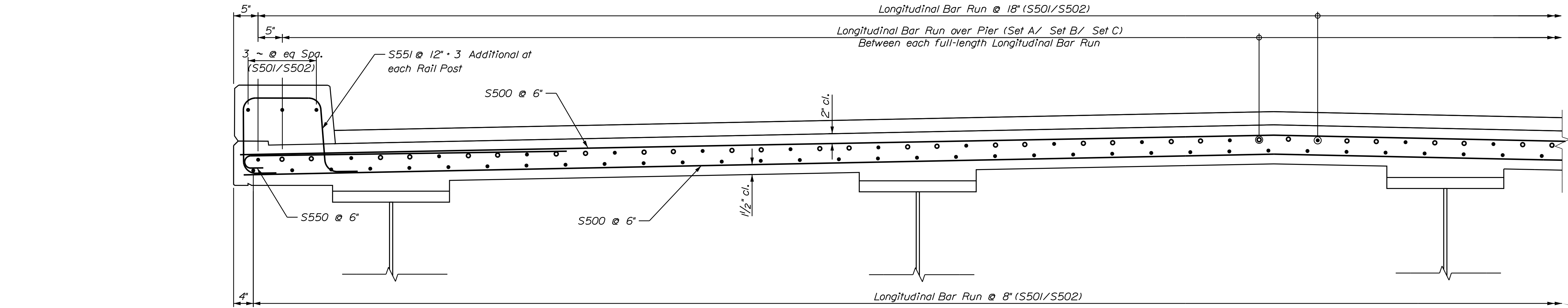
Set C:
S602 and S505 equally spaced between S501 Bars



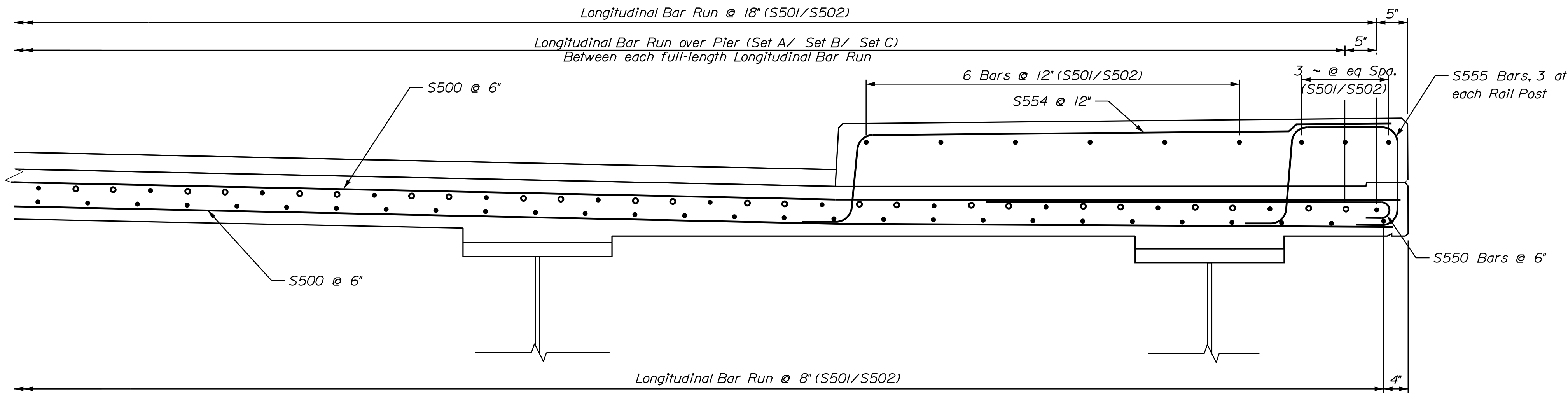
DECK REINFORCING PLAN - SPAN NO. 4

Alternate position of bars S502 within the longitudinal bar run in order to stagger splice locations.

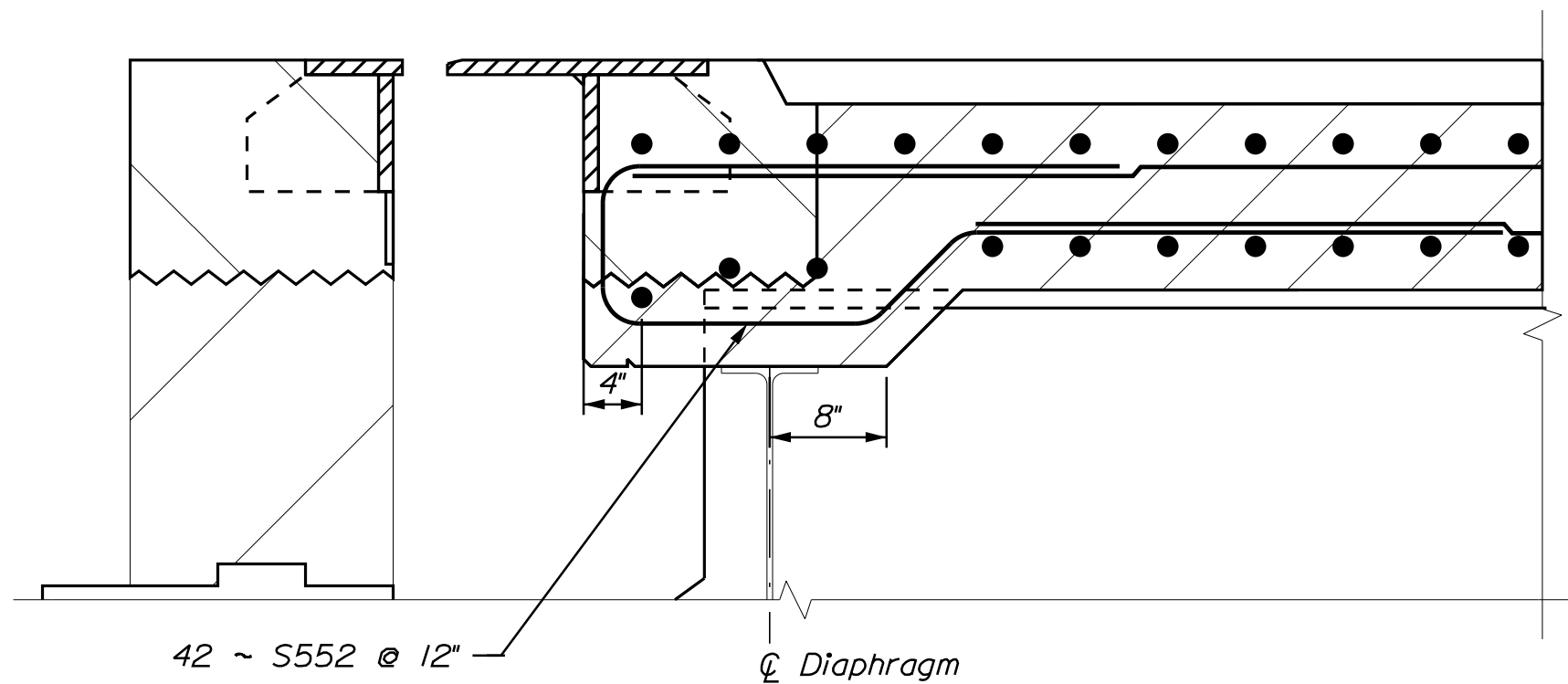
SHEET NUMBER										TUTTLE ROAD BRIDGE										STATE OF MAINE																			
74										INTERSTATE 295, RTE US 1 & MCRR										DEPARTMENT OF TRANSPORTATION																			
																														CUMBERLAND CUMBERLAND COUNTY									
OF 88										DECK REINFORCING PLAN 2										2516100																			
										SIGNATURE										BRIDGE NO. 5801																			
										P.E. NUMBER										WIN																			
										DATE										25161.00																			
										FIELD CHANGES										BRIDGE PLANS																			



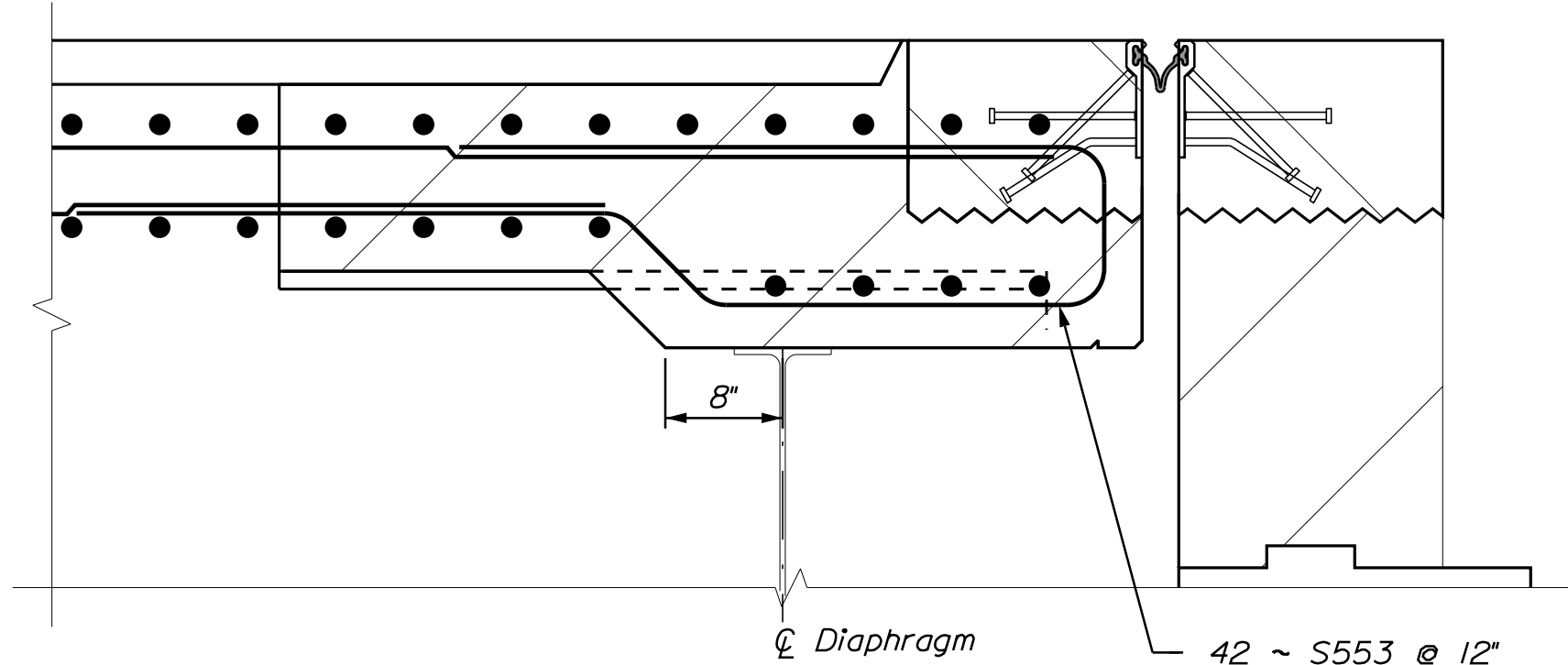
PARTIAL DECK REINFORCING SECTION



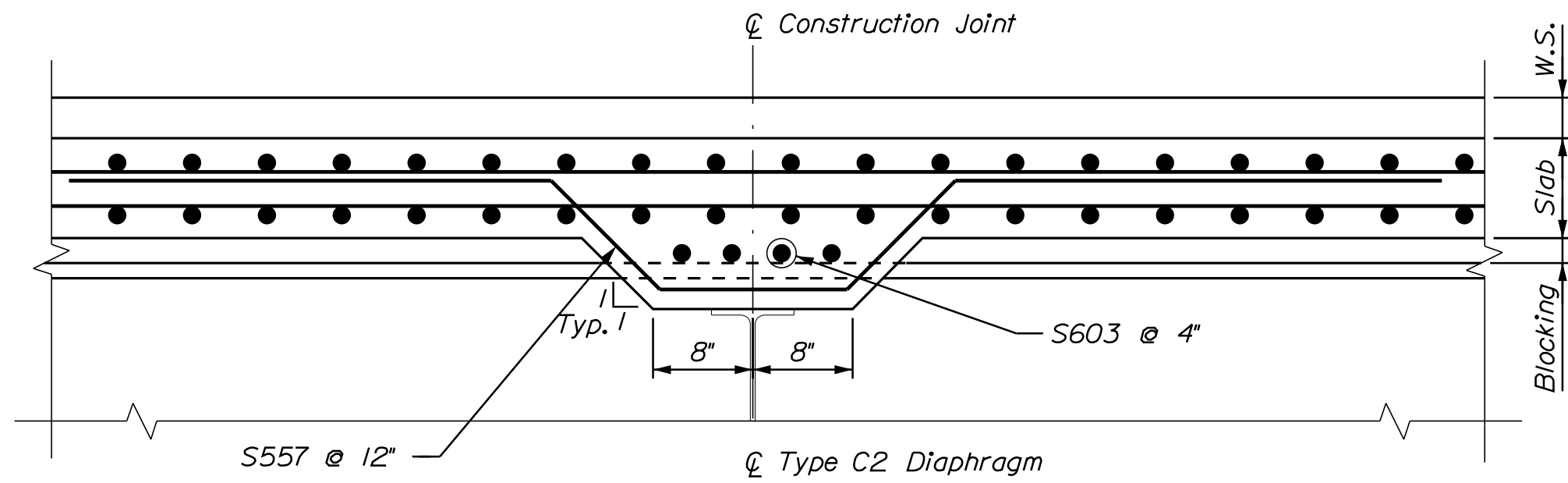
PARTIAL DECK REINFORCING SECTION



DECK END DETAIL ABUT NO. 1

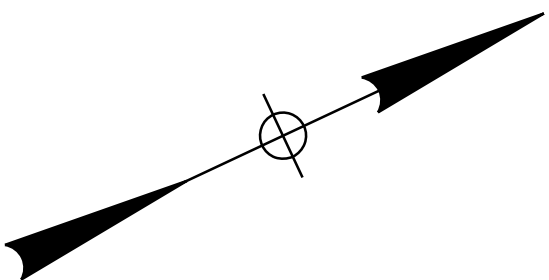


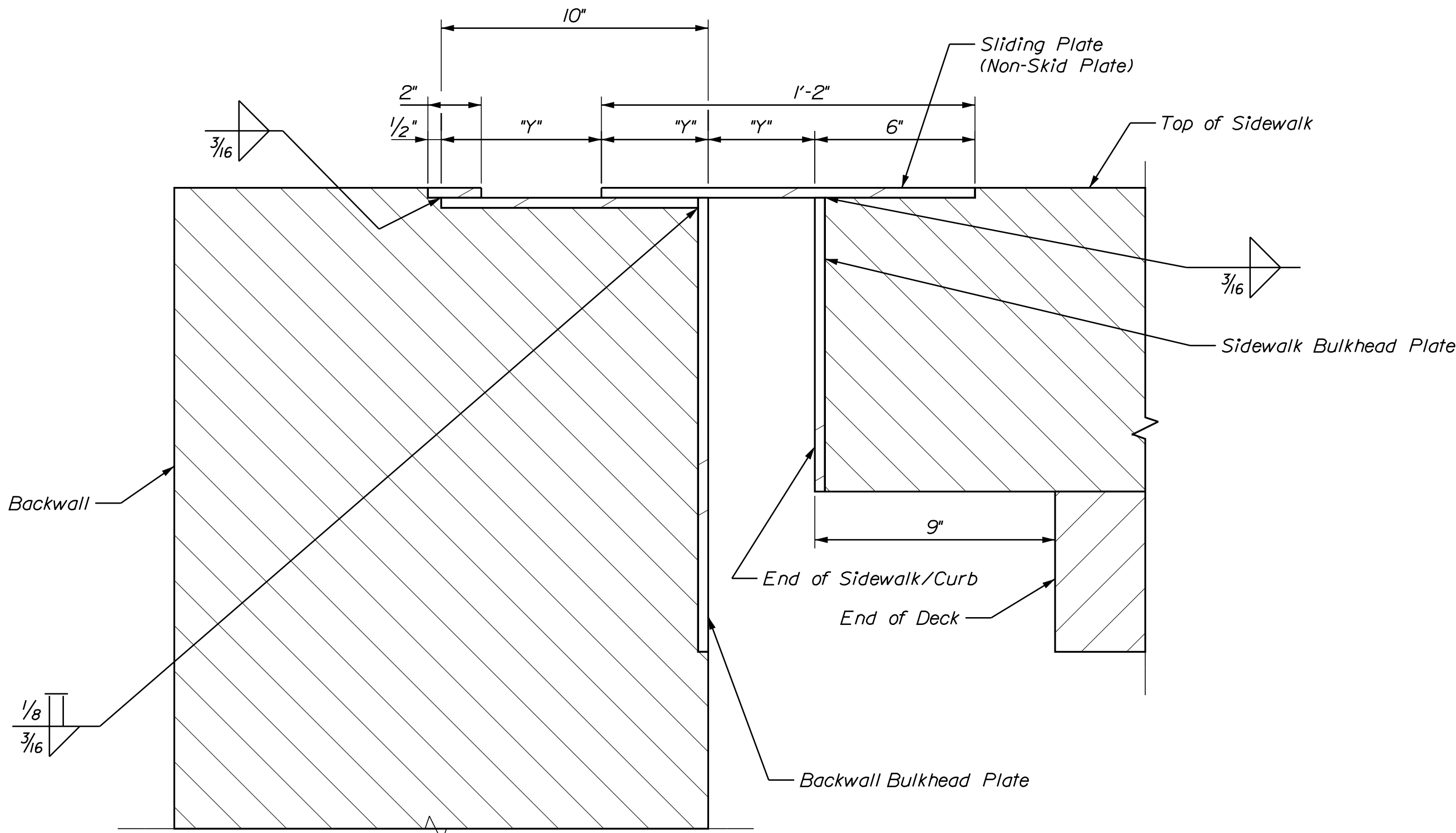
DECK END DETAIL ABUT NO. 2



LONGITUDINAL SECTION AT CONSTRUCTION JOINT

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		2516100		BRIDGE NO. 6601		WIN		25161.00		BRIDGE PLANS	
TUTTLE ROAD BRIDGE		INTERSTATE 295, RTE US 1 & MCRR		CUMBERLAND COUNTY		DECK REINFORCING SECTIONS		SHEET NUMBER		75		OF 88	
PROJ. MANAGER	Gerald Dostie	BY	CNU	DATE	03/2025	SIGNATURE		P.E. NUMBER		DATE			
CHECKED-REVIEWED	CNU	RF	03/2025										
DESIGNS-DETAILED	RF												
DESIGNS-DETAILED													
REVISIONS 1													
REVISIONS 2													
REVISIONS 3													
REVISIONS 4													
FIELD CHANGES													

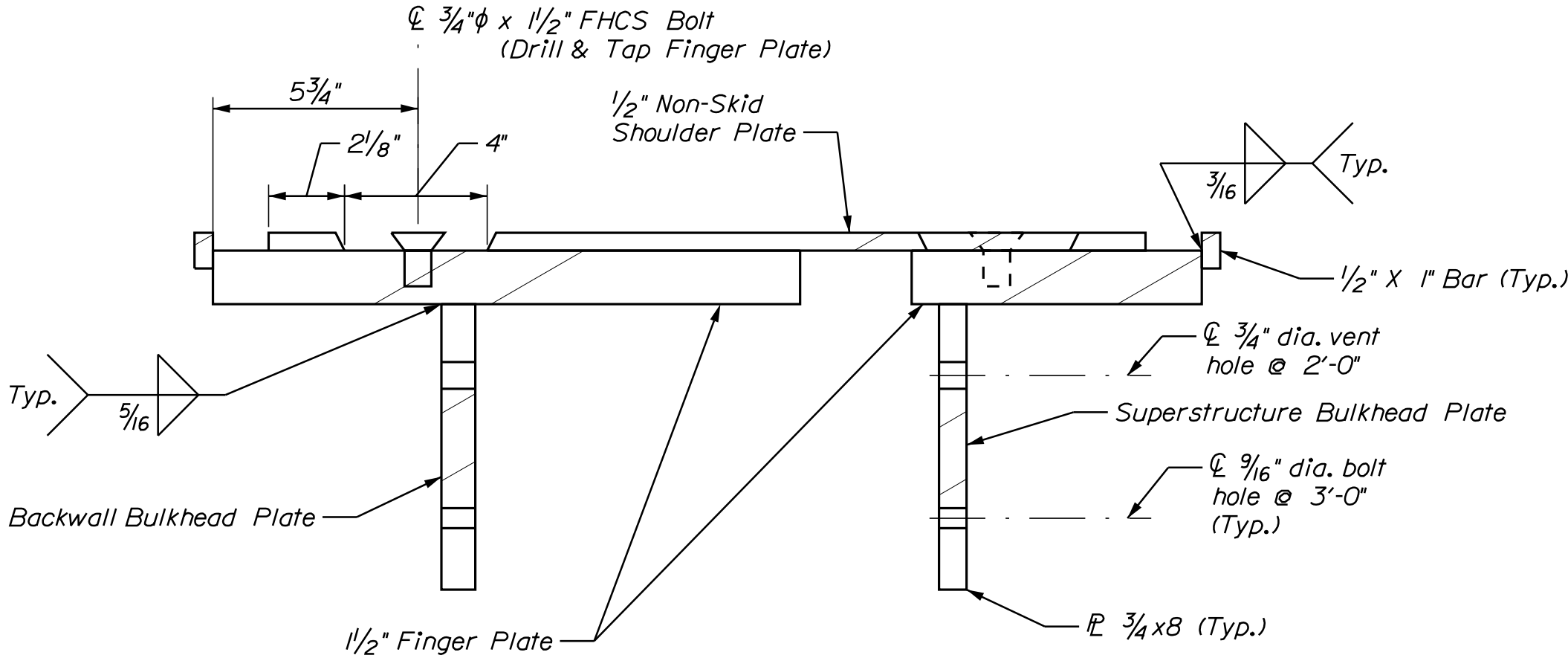




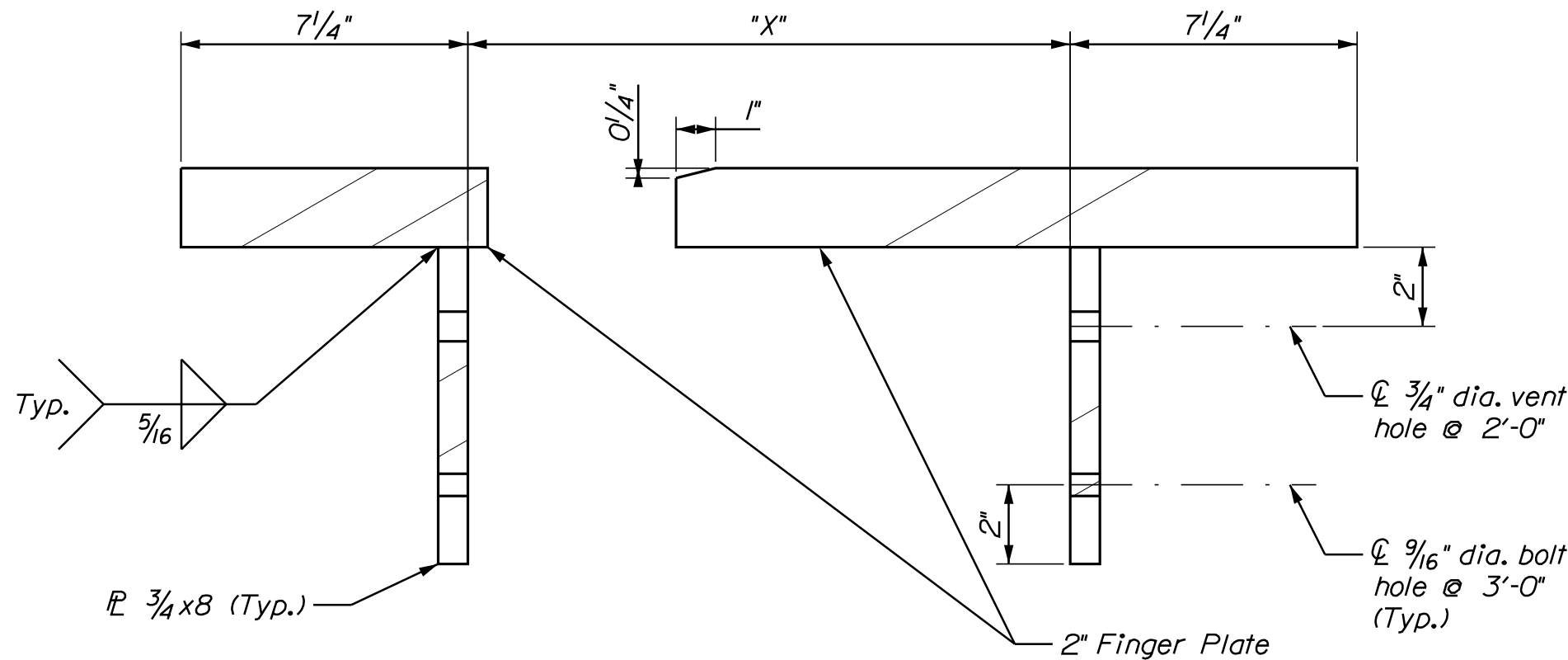
TYPICAL SIDEWALK SECTION
Southeast Expansion Dam Shown, Other Locations Similar
All Plates 3/8" Thick

NOTES:

1. See sheet "Finger Joint Layout" for Finger Joint Plan and Finger Joint Elevation.
2. See sheet "Finger Joint Details I" for Sliding Shoulder Plate Details and Finger Joint Cutting Details.
3. Anchor Studs and Adjustment devices shall be installed on finger joint and bulkhead plates in accordance with STD 52(101), 52(104), 52(105), 52(109), & 52(110).
4. Finger joint materials and fabrication shall be in accordance with STD 52(112), and Specifications Section 521.
5. Countersunk bolts shown in Shoulder Plate Details shall be secured in the final position with a threadlocker material, as approved by the Resident. Countersunk bolts shall be secured such that the shoulder plate is allowed to slide with thermal movements and the head of the bolt does not project above the top surface of the plate.
6. Sidewalk expansion dams are detailed and shall be fabricated for the neutral 45°F condition. "X" and "Y" Dimensions shall be adjusted for the ambient temperature at the time of installation. Detail "E" as shown in STD 52(110) will be applicable to all locations with overlapping sliding plates in the sidewalk expansion dams, as detailed in the Plans.
7. Unless noted otherwise, all exposed corners for plates in the sidewalk expansion dam assembly and sliding shoulder plate assembly shall be chamfered 1/4".
8. Only standard details specifically referenced shall be consulted during fabrication and installation. In the event of a discrepancy between referenced details and the Plans, the Plans shall take precedence.



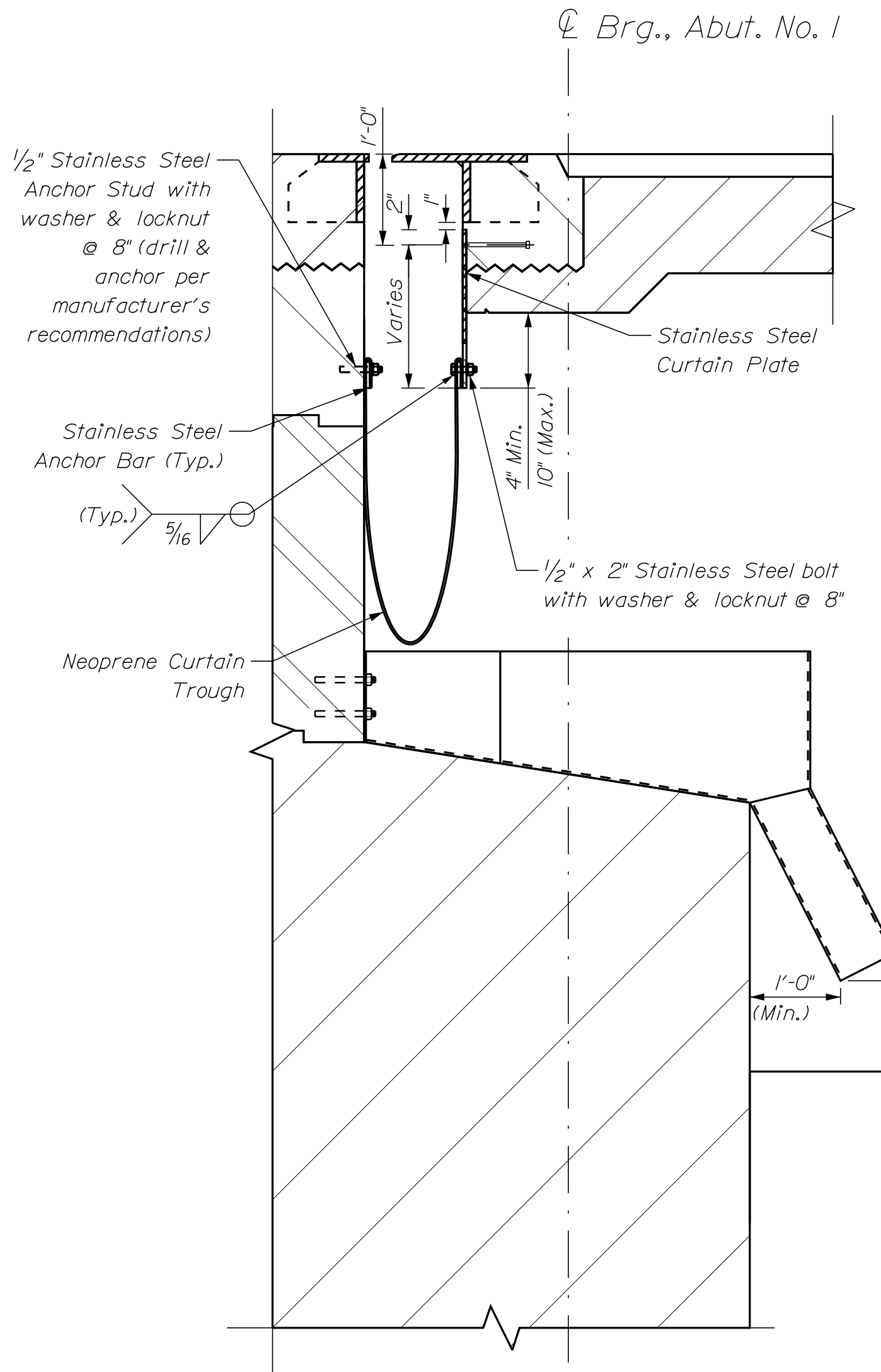
SLIDING SHOULDER PLATE
TYPICAL SECTION
(All measurements along angle of finger)



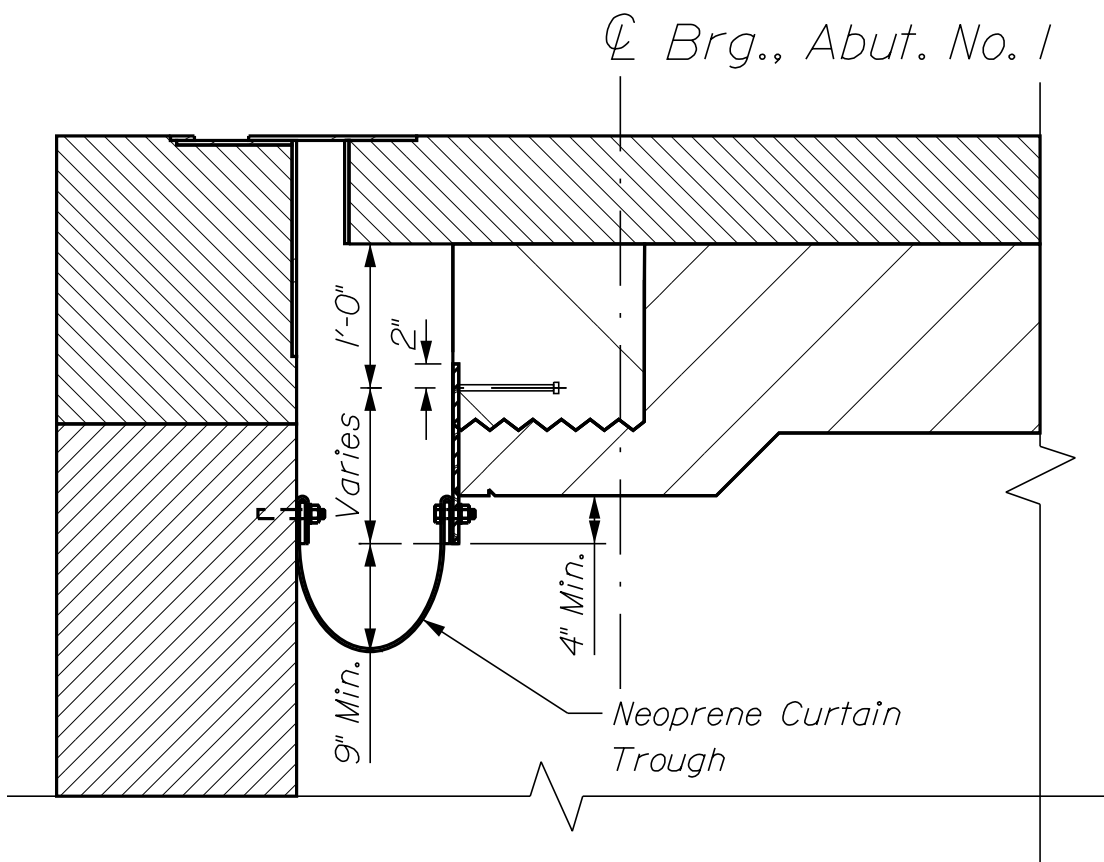
TYPICAL FINGER JOINT SECTION
(All measurements normal to end of deck and bulkhead plates)

ABUTMENT NO. 1 FINGER JOINT SETTING TABLE		
TEMPERATURE (°F)	DIMENSION "X"	DIMENSION "Y"
5	1'-2 5/16"	5 5/16"
15	1'-2"	5"
25	1'-1 5/8"	4 5/8"
35	1'-1 1/16"	4 5/16"
45	1'-1"	4"
55	1'-0 11/16"	3 11/16"
65	1'-0 3/8"	3 3/8"
75	1'-0"	3"
85	11 1/16"	2 11/16"

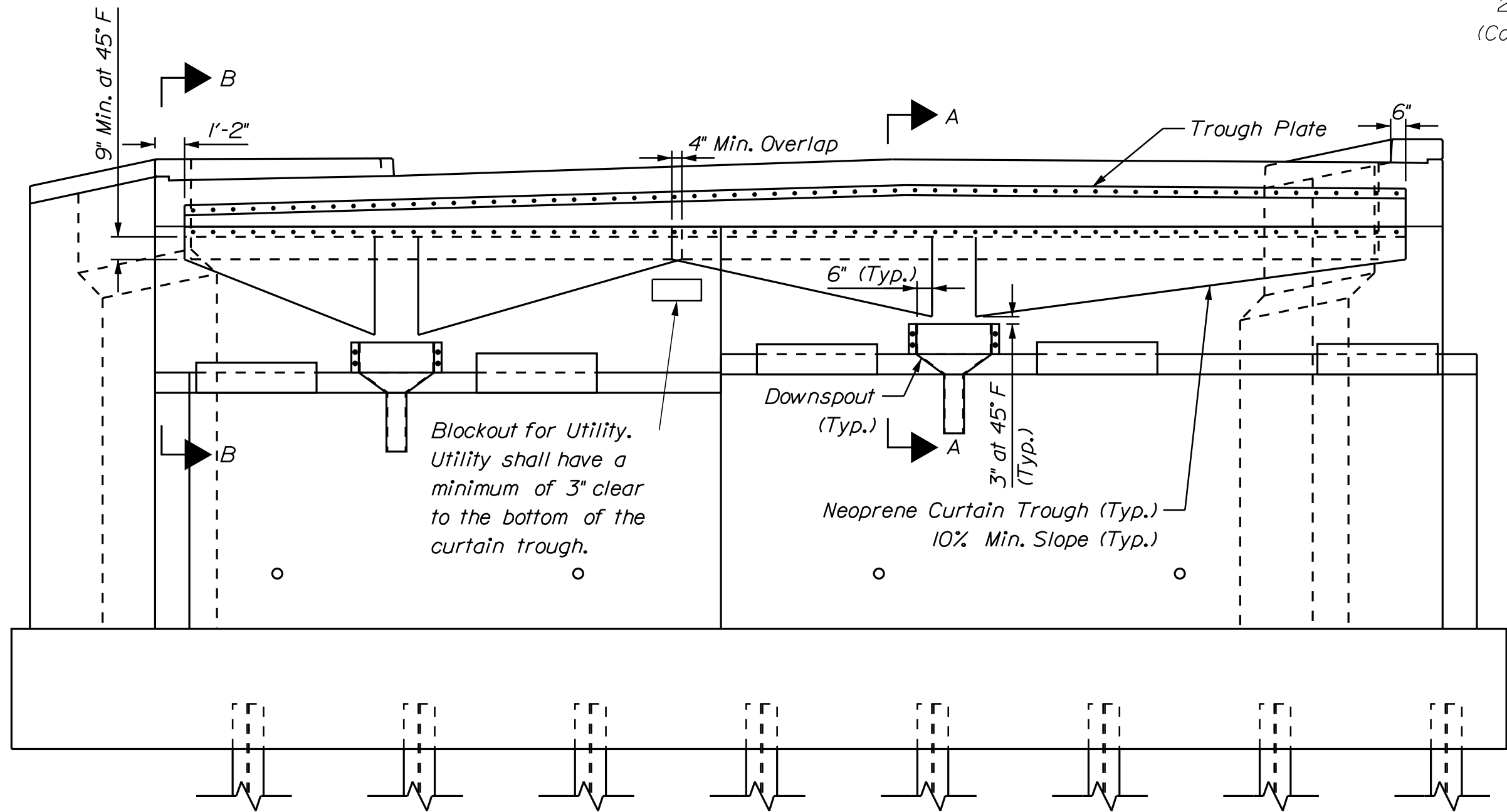
STATE OF MAINE DEPARTMENT OF TRANSPORTATION					
	2516100				
	WIN	25161.00	BRIDGE NO. 6601		
TUTTLE ROAD BRIDGE INTERSTATE 295, RTE US 1 & MCRR CUMBERLAND CUMBERLAND COUNTY		PROJ. MANAGER	Gerald Dastie	BY	DATE
		DESIGN-DETAILED	CT	CT	03/2025
		CHECKED-REVIEWED	KZS	KZS	03/2025
		DESIGN-DETAILED			
		REVISIONS 1			
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FINGER JOINT DETAILS 2		SIGNATURE			
		P.E. NUMBER			
SHEET NUMBER 78 OF 88		DATE			



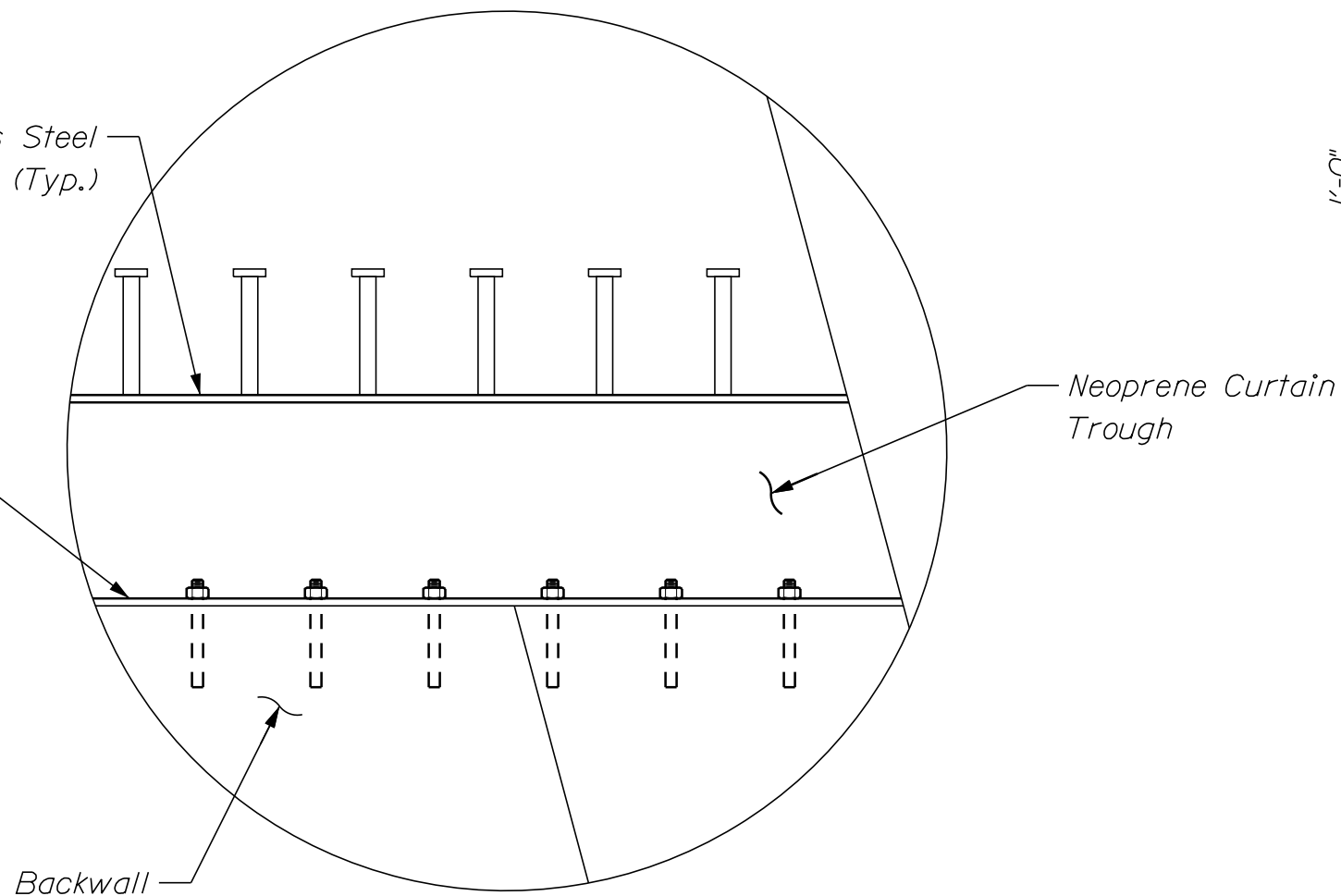
TROUGH SECTION A-A
(Girder and bearing not shown for clarity)



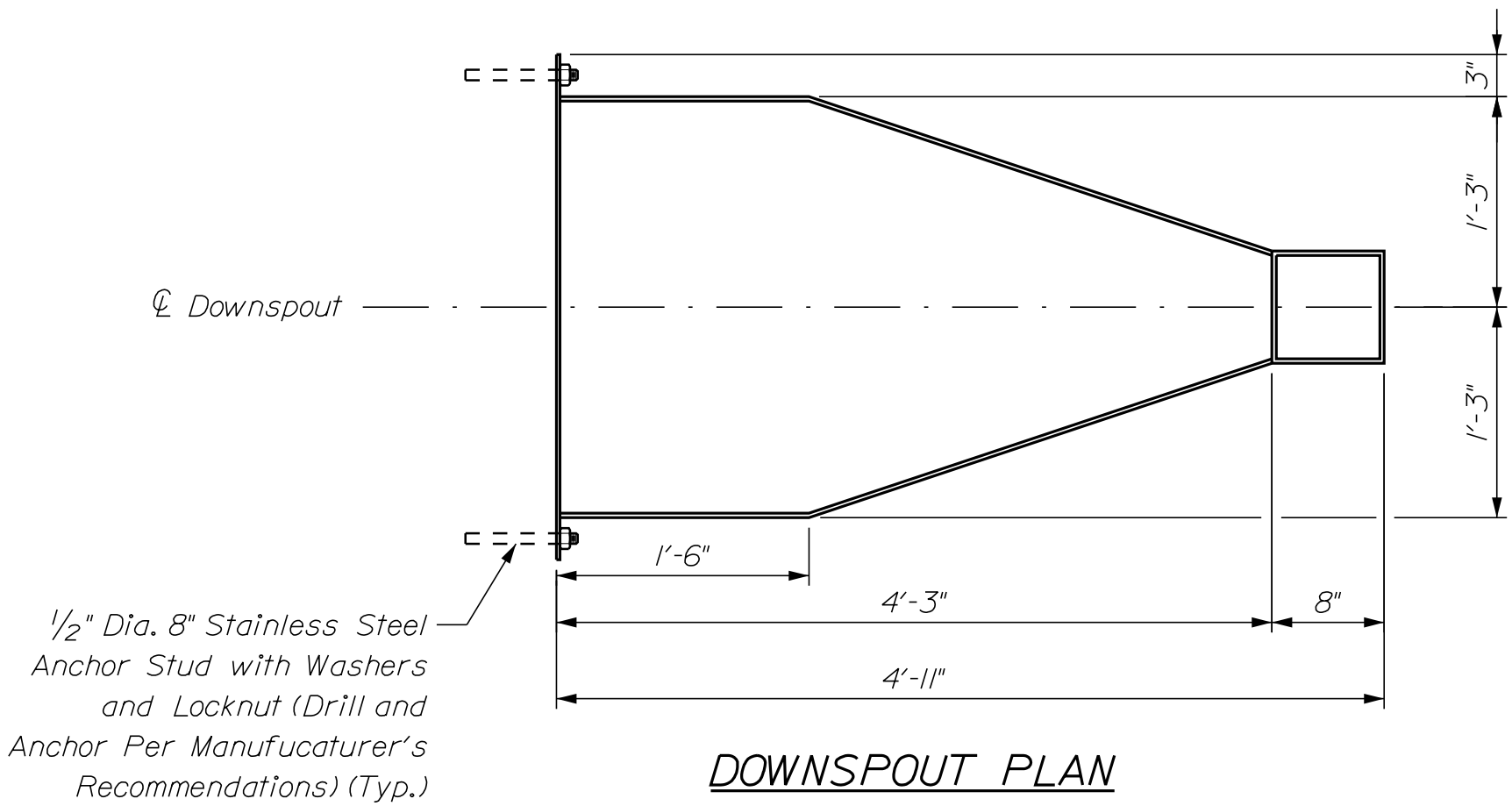
TROUGH SECTION B-B



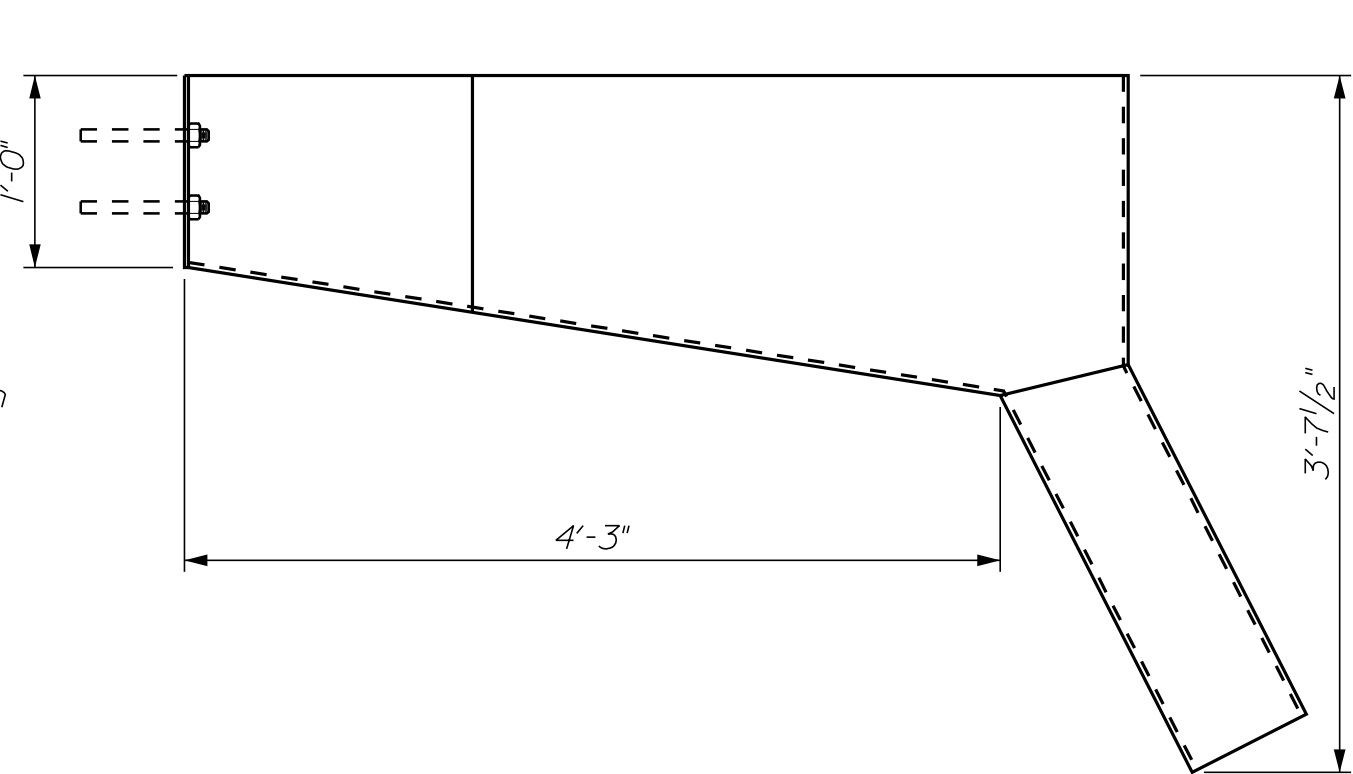
TROUGH ELEVATION



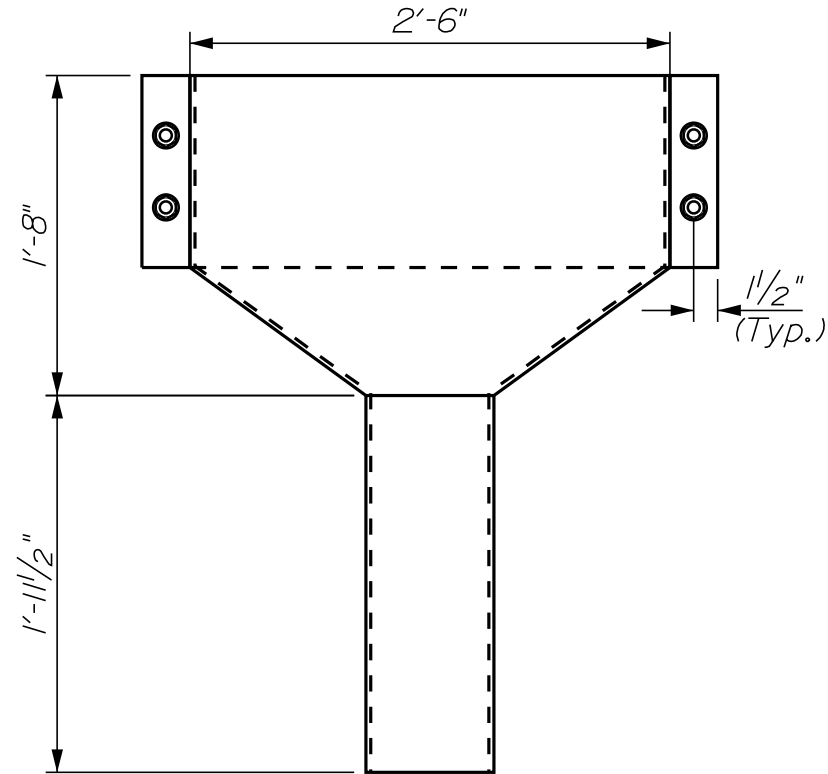
TROUGH END DETAIL
(Finger Joint not show for clarity)



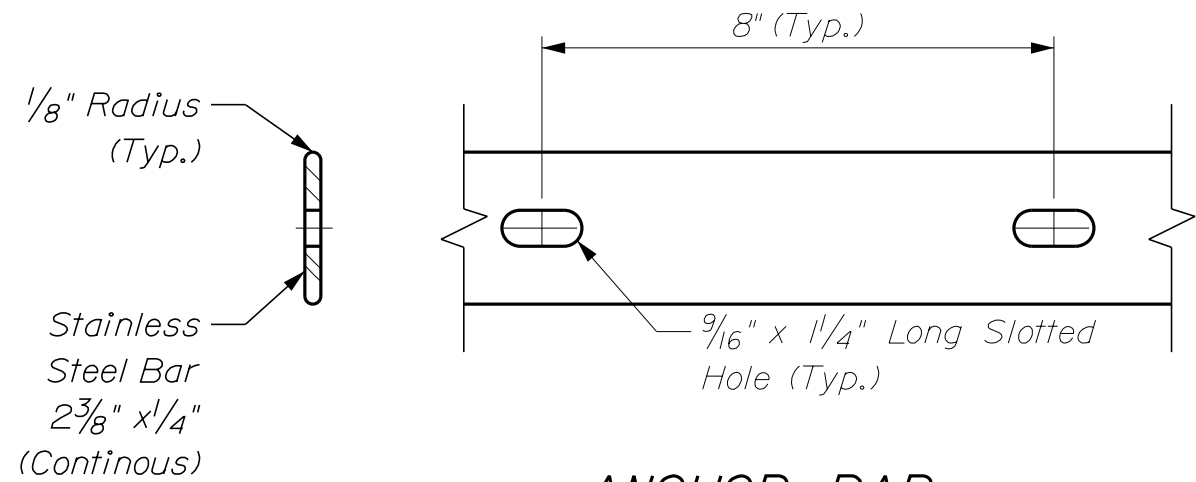
DOWNSPOUT PLAN



DOWNSPOUT SIDE ELEVATION



DOWNSPOUT ELEVATION



ANCHOR BAR

DOWNSPOUT NOTES:

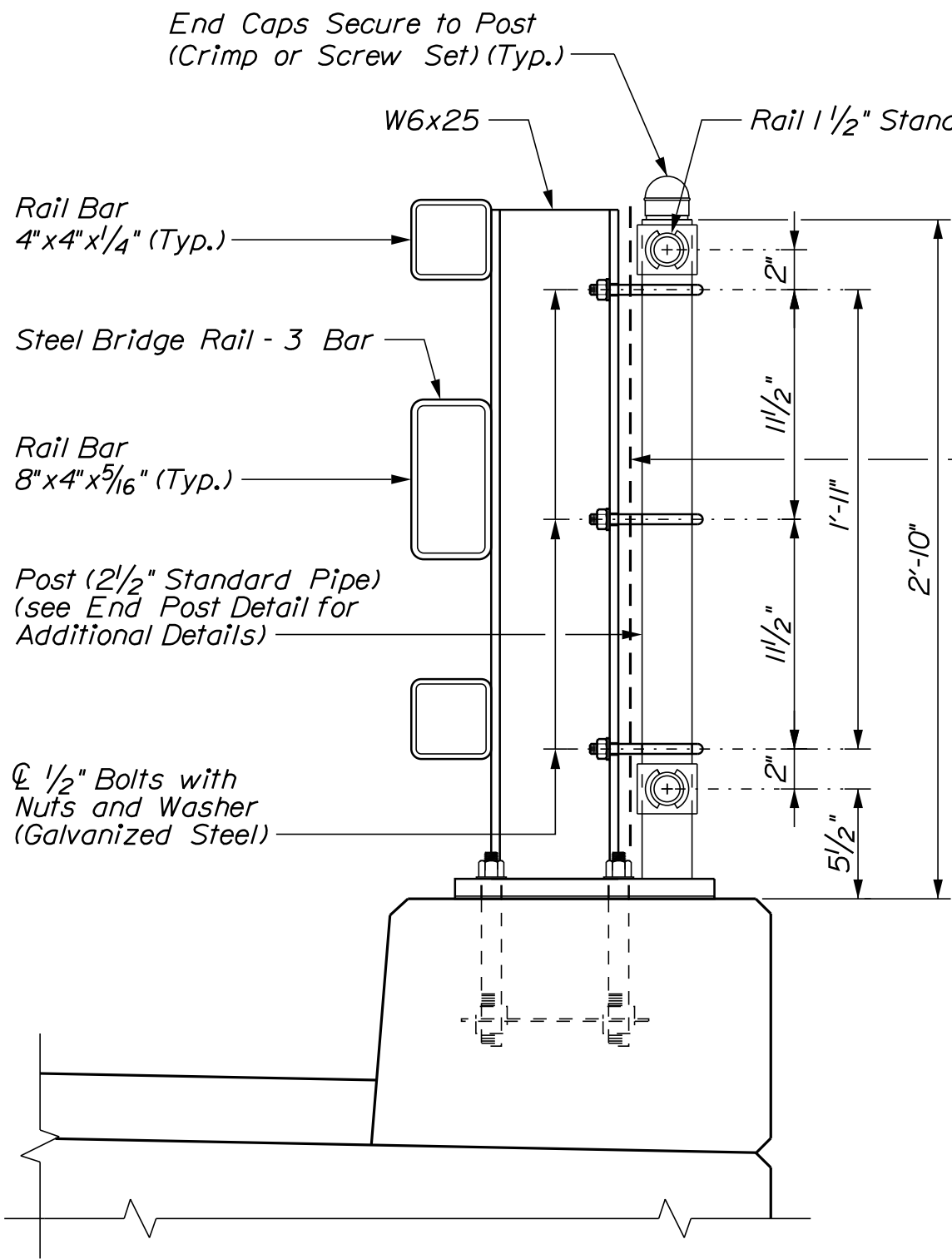
1. The exact position of the downspout shall be determined in the field and shall be coordinated with Curtain Trough Details.
2. All plates and bars shall conform to ASSHTO M270 Grade 36 and shall be galvanized in accordance with AASHTO M111 (ASTM 123) after fabrication.
3. Brackets shall be galvanized in accordance with AASHTO M111 (ASTM 123) after fabrication.
4. All rods and related hardware shall be ASTM A307 and shall be galvanized in accordance with AASHTO M 232 (ASTM A153).
5. At Contractor's option, alternate downspout details and locations may be submitted to the Resident for approval.
6. Any place where the galvanizing has been removed from the downspout either by cutting, burning, welding, placing, or any other means shall be repaired to the requirements of ASTM A780 and Annexes A1, A2 or A3.
7. Downspout shall be fabricated using FRP composite material. Material and fabrication shall be in accordance with Special Provision 502, Fiber Reinforced Polymer Bridge Drains and Downspouts.

STATE OF MAINE				DEPARTMENT OF TRANSPORTATION			
TUTTLE ROAD BRIDGE				2516100			
INTERSTATE 295, RTE US 1 & MCRR				WIN			
CUMBERLAND COUNTY				BRIDGE NO. 6601			
EXPANSION JOINT TROUGH				BRIDGE PLANS			
SHEET NUMBER				79			
				OF 88			

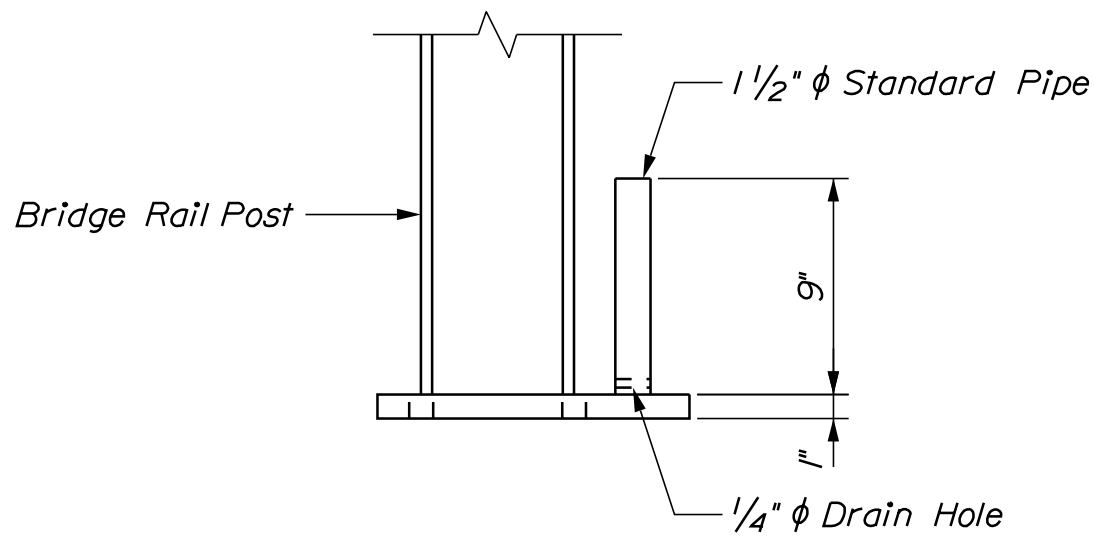
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Username: common

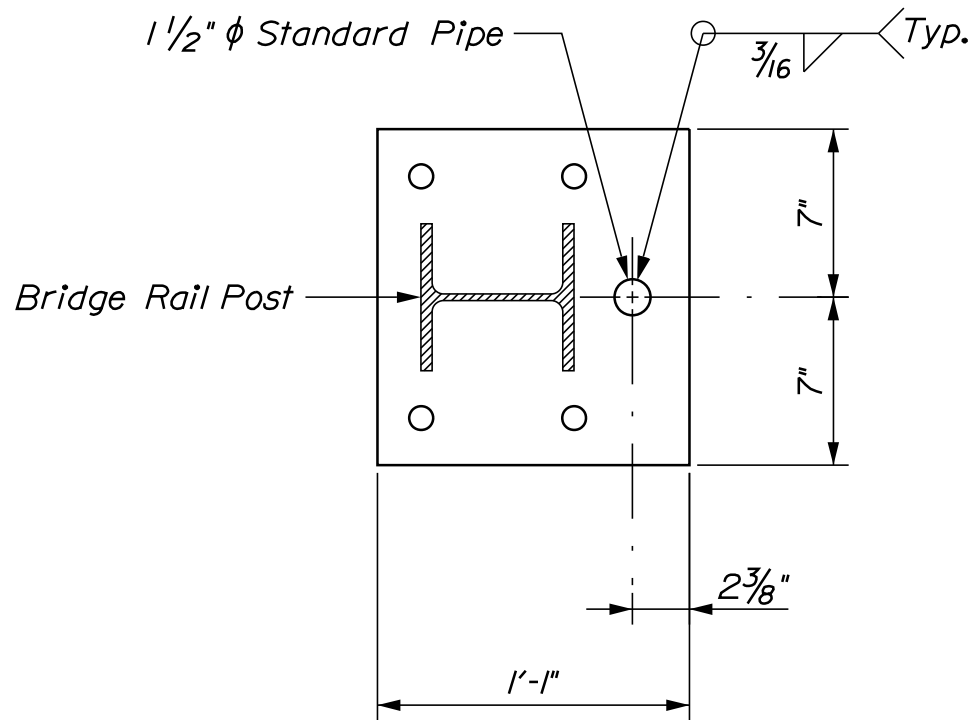
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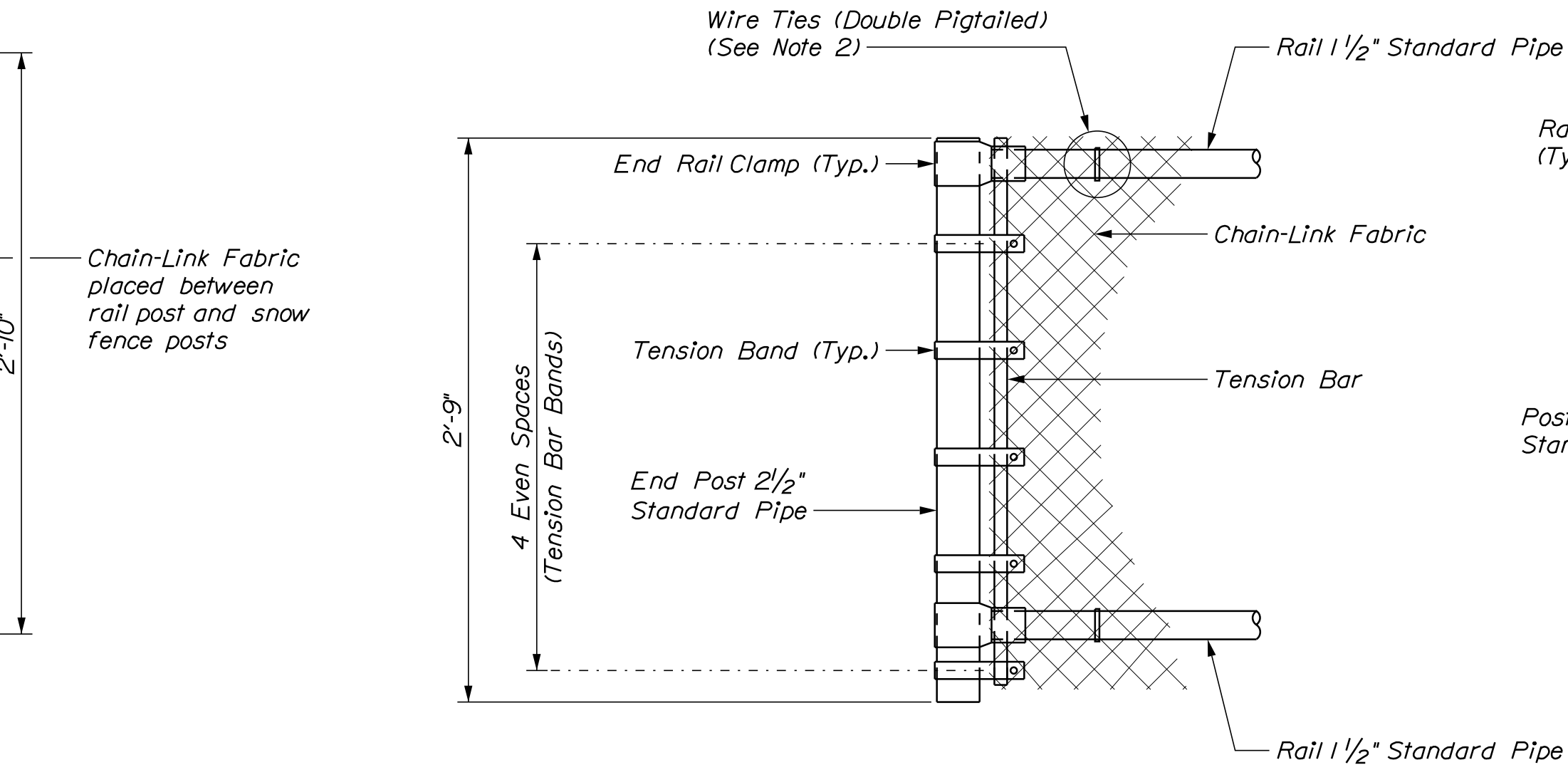
SNOW FENCE CONNECTION DETAIL



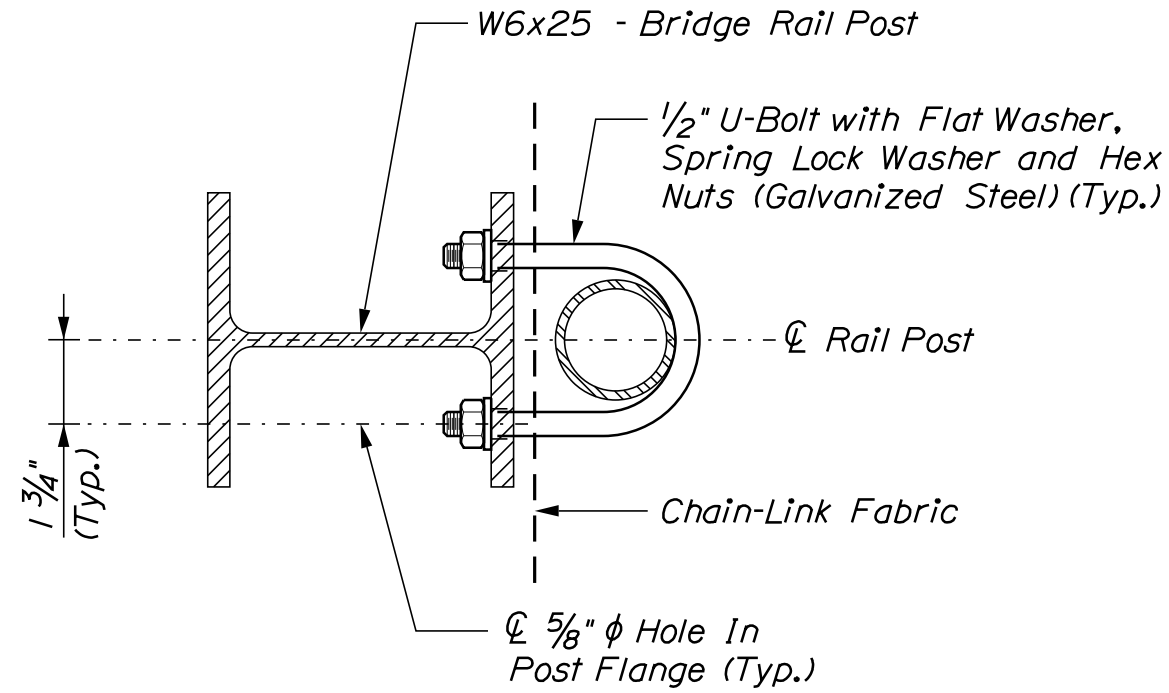
MODIFIED BASE PLATE ELEVATION



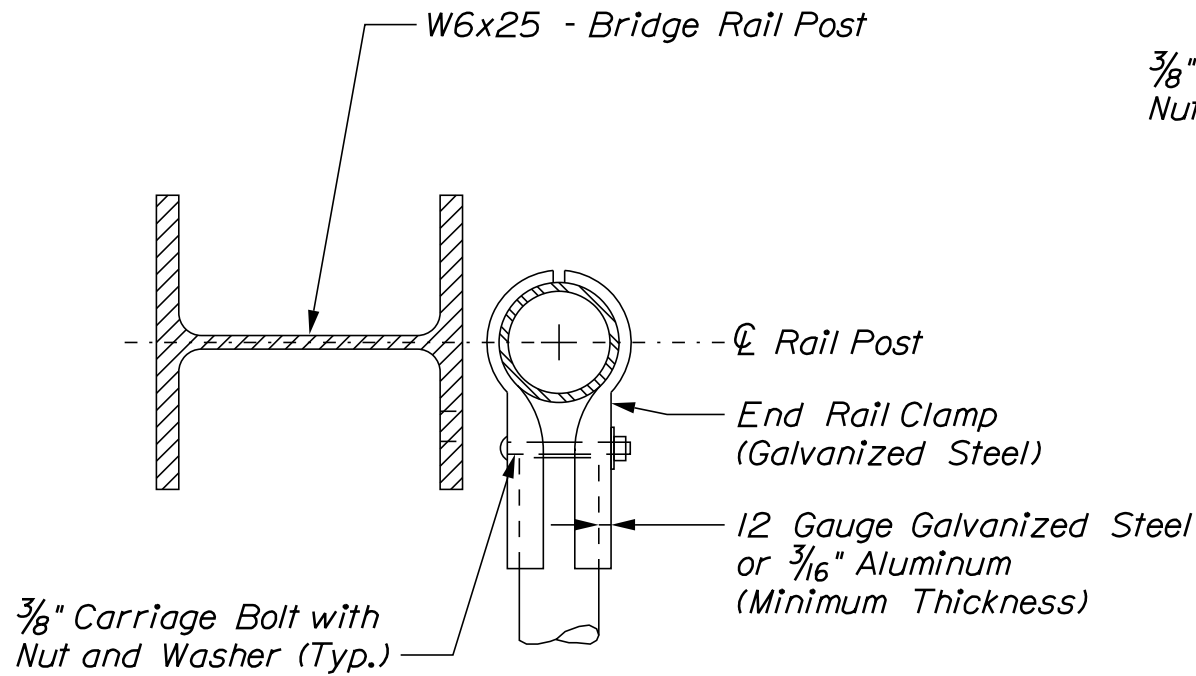
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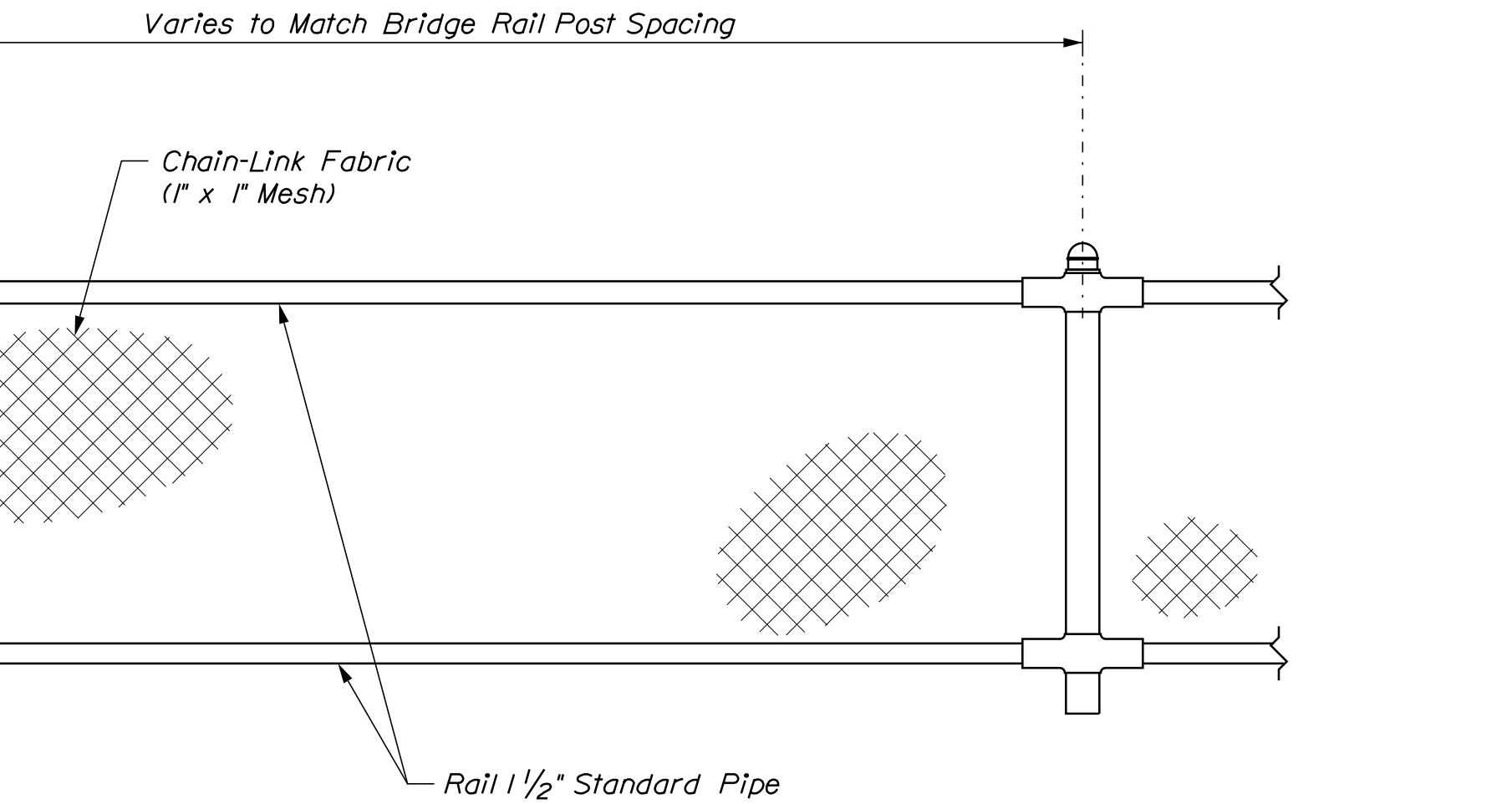
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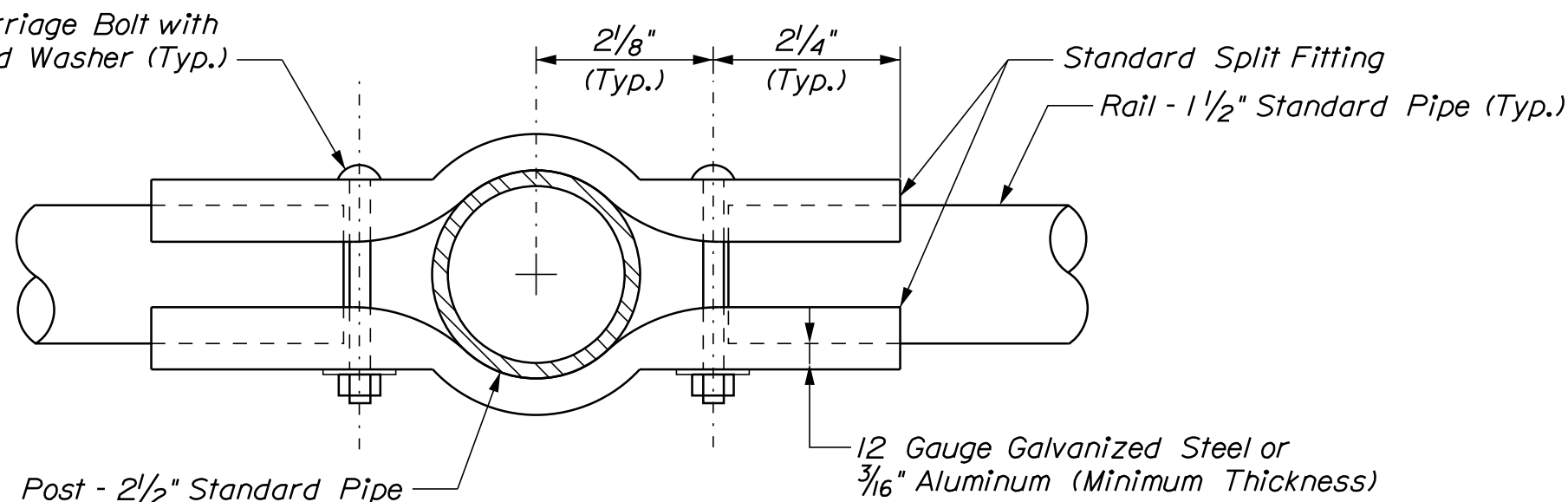
U-BOLT CONNECTION DETAIL
(At Interior Post)



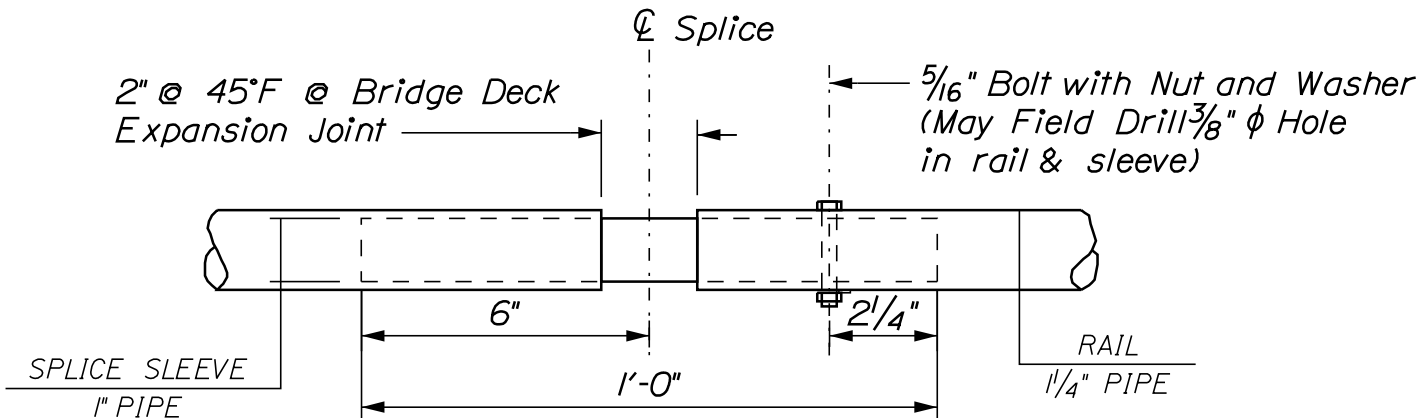
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(U-Bolt Not Shown)



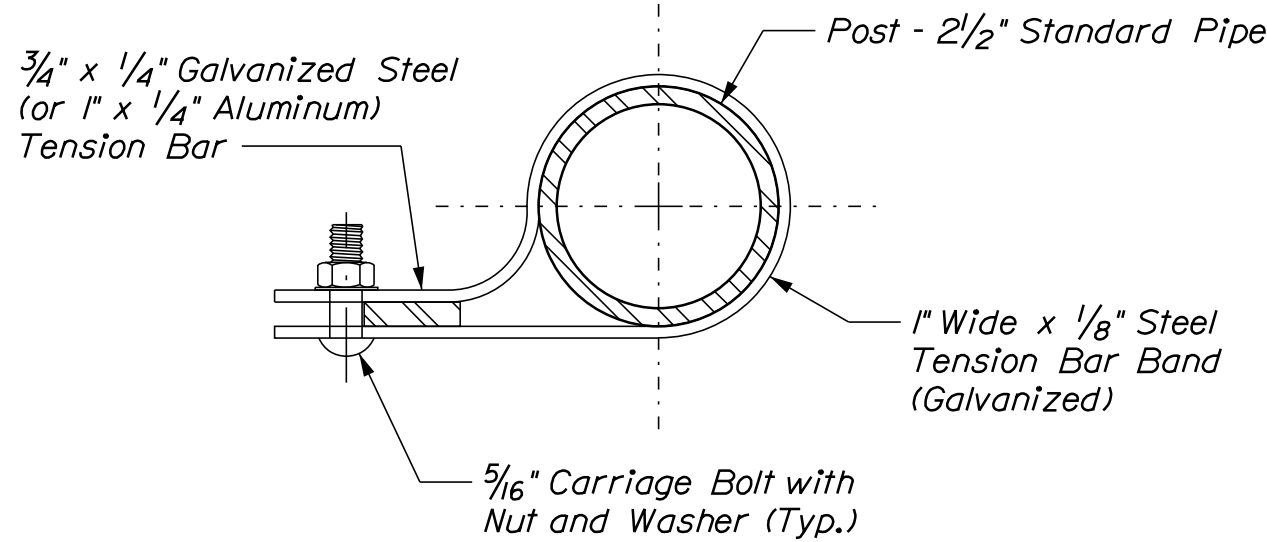
ELEVATION - SNOW FENCE



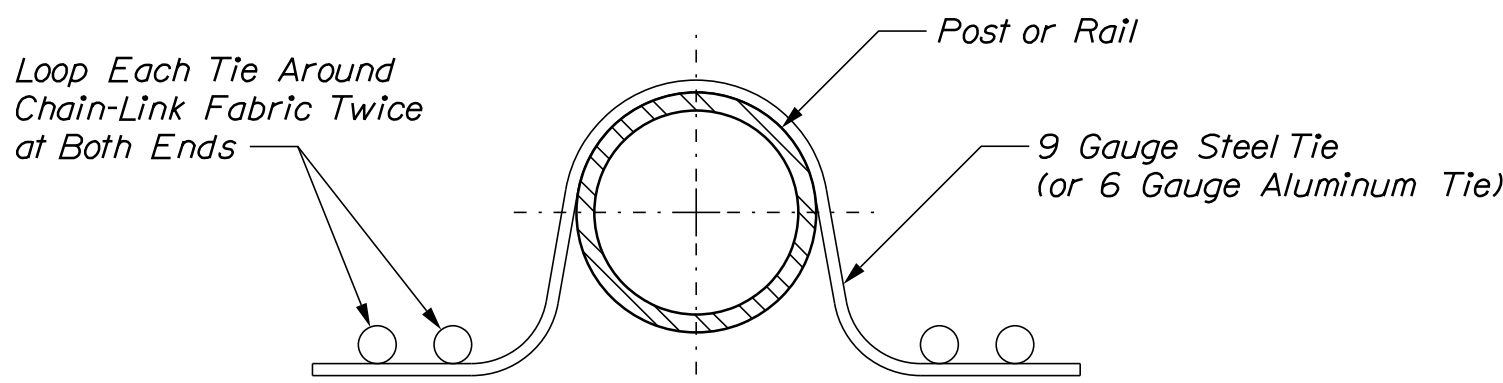
RAIL CLAMP DETAIL



RAIL SPLICE DETAIL
Scale: 3" = 1'-0"



TENSION BAND DETAIL



DOUBLE PIGTAILED TIE

SNOW FENCE NOTES

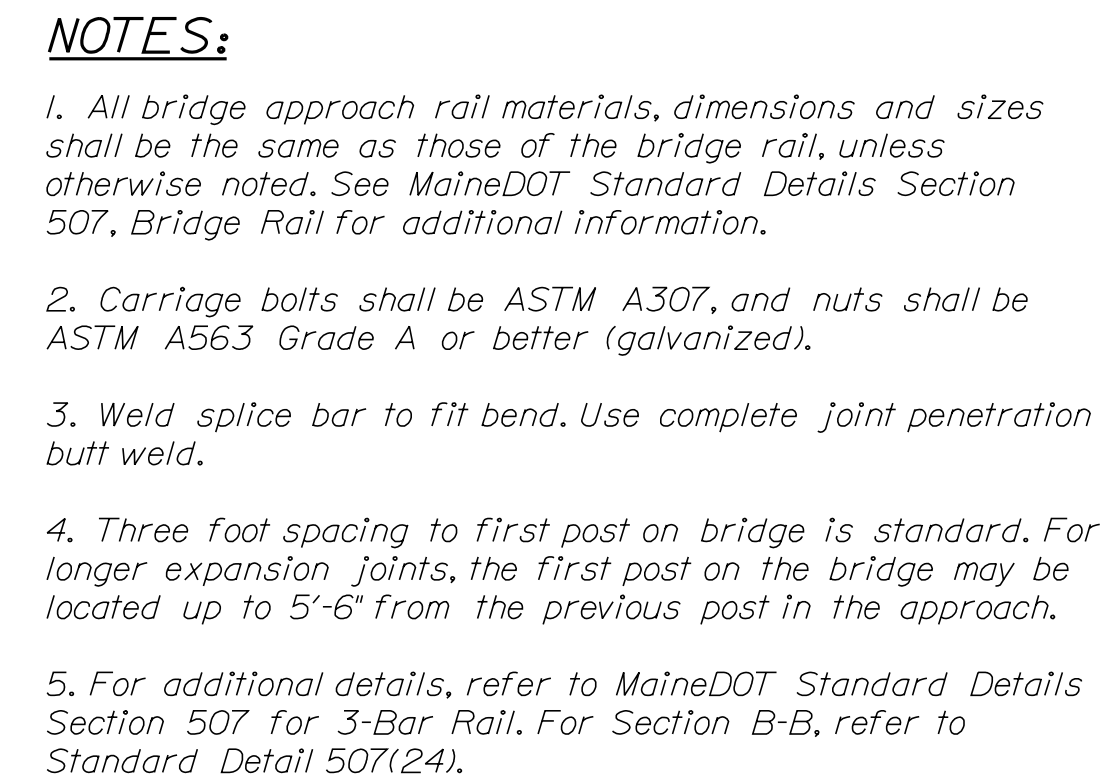
- Chain-Link fence shall conform to Section 710.03 and Special Provision Section 607. The size of wire mesh (fabric) shall be 1".
- Post and rail pipe shall be hot-dip galvanized steel conforming to the specifications. All pipe shall be schedule 40, standard weight. Nominal pipe sizes are shown.
- Tension bars, bar bands and end rail clamps shall be steel or aluminum alloy conforming to AASHTO M181 (ASTM F626). Steel components shall be hot-dip galvanized in accordance with AASHTO M111 (ASTM A123) or AASHTO M232 (ASTM A153) as applicable.
- All bolts and nuts shall be steel conforming to ASTM A307 and ASTM A563 grade A respectively. Washers shall be hardened steel commercial type A plain and shall meet the dimensional requirements of ANSI B18.22. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M111 (ASTM A123) or AASHTO M232 (ASTM A153) as applicable.
- Rail may be field cut (sawn) to fit post spacing. Galvanized rail, cut or drilled as allowed.
- Payment for the modified base plate will be considered incidental to related Contract items.

STATE OF MAINE	DEPARTMENT OF TRANSPORTATION
2516100	WIN
BRIDGE NO. 6601	25161.00
BRIDGE PLANS	

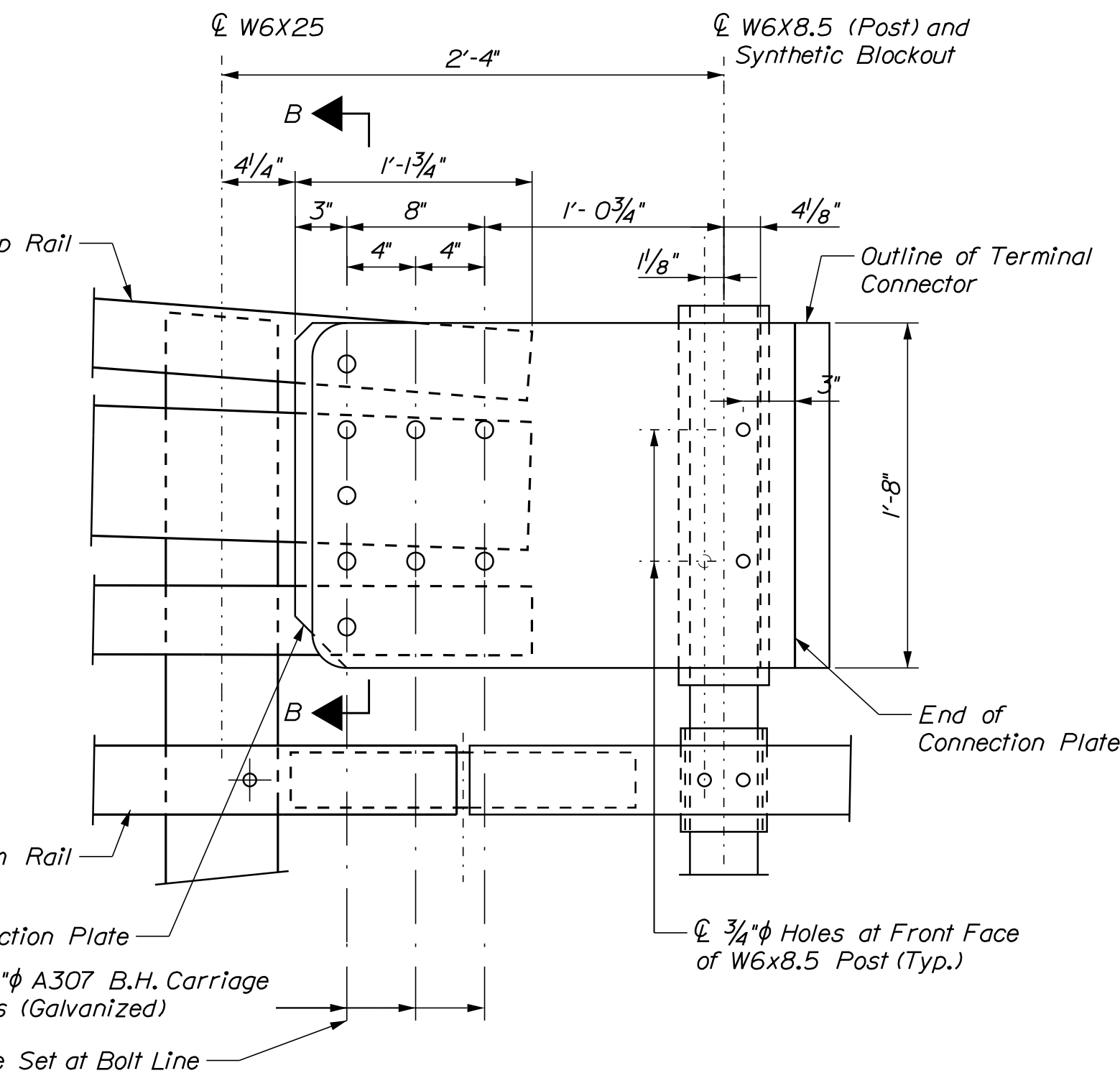
PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DATE	BY	DATE
Gerald Dostie	CNU	CNU	03/2025	CNU	03/2025
DESIGN-DETAILED	RF	RF			
DESIGN-DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

TUTTLE ROAD BRIDGE	INTERSTATE 295, RTE US 1 & MCRR	CUMBERLAND COUNTY
SNOW FENCE DETAILS		

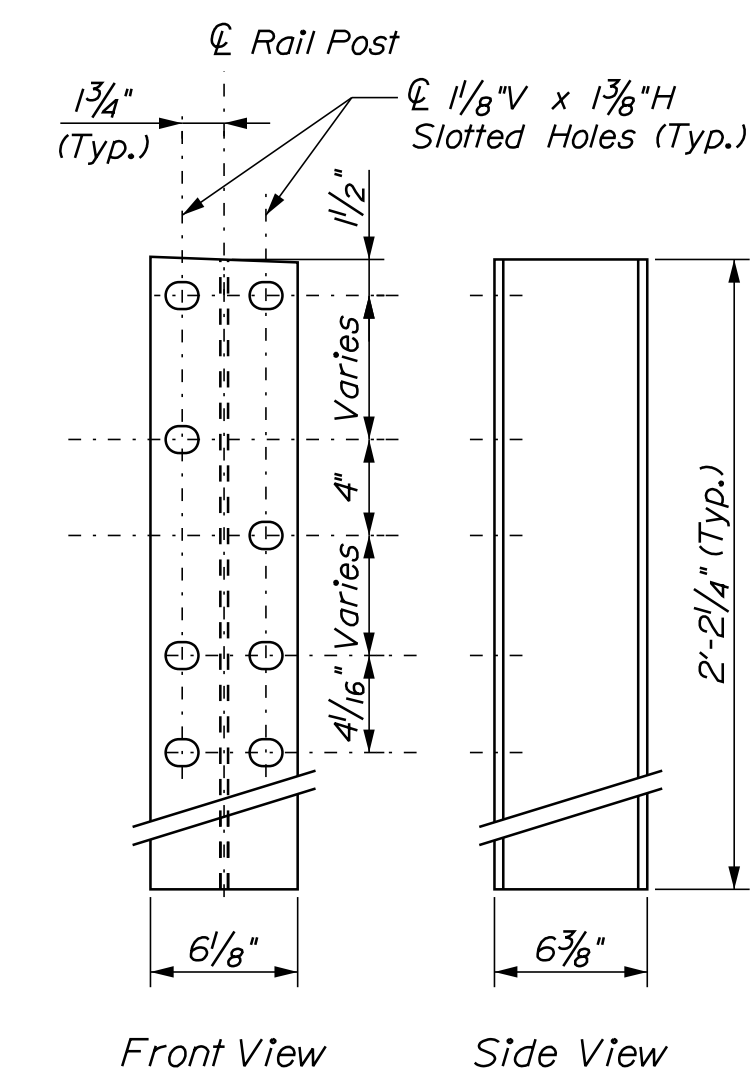
SHEET NUMBER
80
OF 88



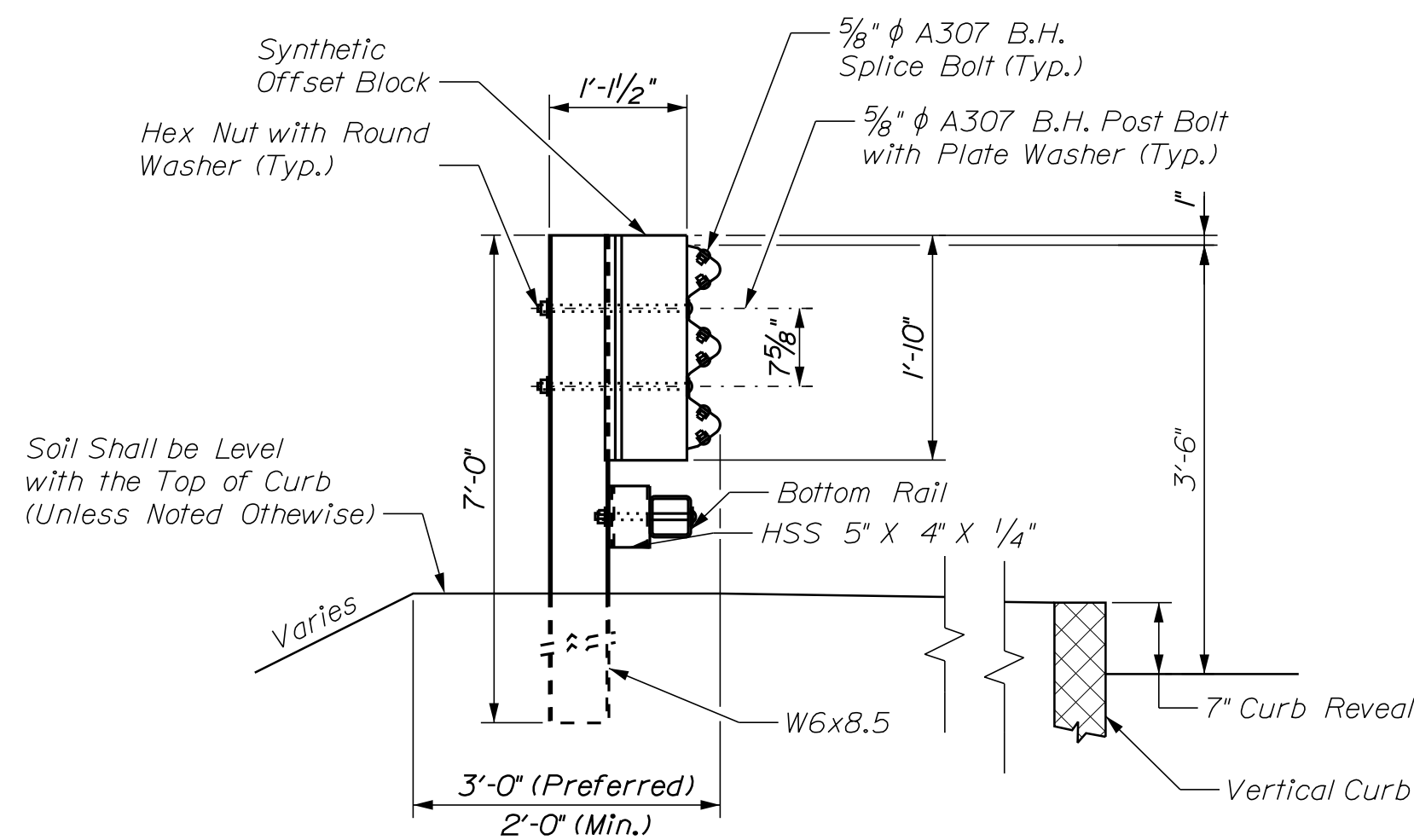
Splice Bar (Bent) See Note No. 3 (End splice to be paid under bridge rail item) (Typ)



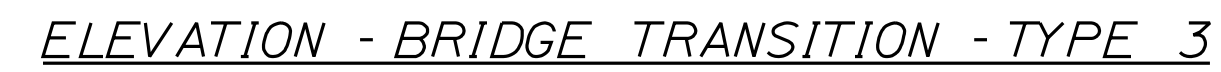
(Overlapping of Double nested Thrie-Beam not Shown for Clarity)



RAIL POST (W6x25)



SECTION A-A (POST RAIL ASSEMBLY)



1. See notes on Sheet 81.
2. The HSS bottom rail shall be fabricated in accordance with Section 507.

Date:5/25/2025

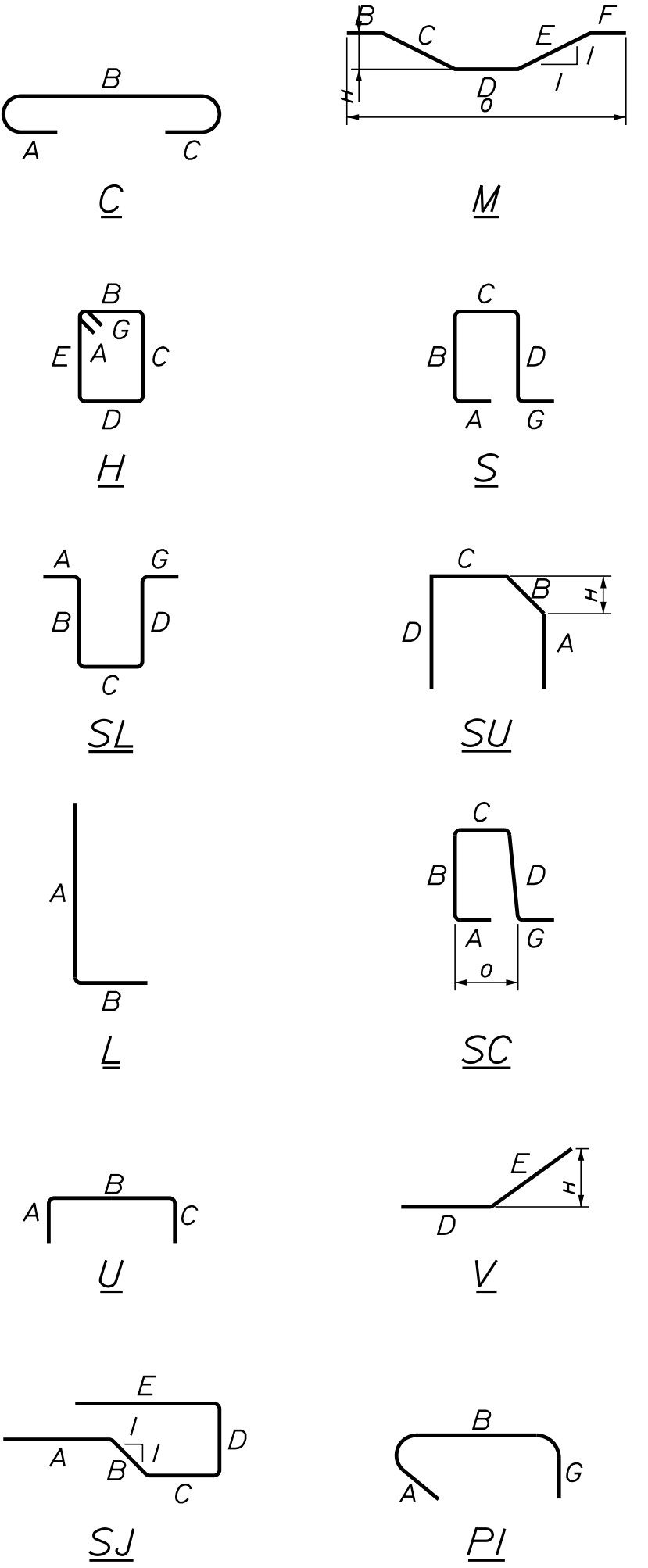
Username: common

Division: BRIDGE

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STRAIGHT BARS								BENT BARS																
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION		
PIER 2 (Low-Carbon Chromium)				SUPERSTRUCTURE (Low-Carbon Chromium)				PIER 2 (Low-Carbon Chromium)																
2P500	6	40'-8"	Pier 2 Stem Horizontal	S500	2106	42'-5"	Transverse Deck	2P550	8	19'-10"	V				2'-10"	17'-0"			5'-5"				End of Pier 2 Stem Vertical	
2P501	2	40'-0"	Pier 2 Stem Horizontal	S501	1326	42'-2"	Longitudinal Deck	2P551	83	8'-4"	U	2'-8"	3'-0"	2'-8"									Top of Pier 2 Stem Stirrup	
2P502	2	39'-4"	Pier 2 Stem Horizontal	S502	102	20'-0"	Longitudinal Deck	2P552	30	8'-8"	U	3'-0"	2'-8"	3'-0"									End of Pier 2 Stem Stirrup	
2P503	2	38'-8"	Pier 2 Stem Horizontal	S503	54	40'-7 1/2"	Longitudinal Deck over Pier 1	2P553	3	14'-0"	H	0'-5"	3'-6"	3'-1"	3'-6"	3'-1"		0'-5"					Pedestal Tie	
2P504	2	38'-0"	Pier 2 Stem Horizontal	S504	54	35'-7 1/2"	Longitudinal Deck over Pier 2	2P554	20	7'-3"	U	2'-0"	3'-3"	2'-0"									Pedestal Vertical Bar	
2P505	2	37'-4"	Pier 2 Stem Horizontal	S505	54	35'-1 1/2"	Longitudinal Deck over Pier 3	2P555	25	6'-10"	U	2'-0"	2'-10"	2'-0"									Pedestal Vertical Bar	
2P506	2	36'-8"	Pier 2 Stem Horizontal																					
2P507	2	36'-0"	Pier 2 Stem Horizontal	S600	54	40'-11 1/2"	Longitudinal Deck over Pier 1	2P651	7	42'-8"	U	1'-0"	40'-8"	1'-0"									Top of Pier 2 Stem	
2P508	2	35'-4"	Pier 2 Stem Horizontal	S601	54	35'-11 1/2"	Longitudinal Deck over Pier 2	2P652	415	4'-4"	PI	0'-8"	2'-8"					1'-0"					Pier 2 Seismic Tie	
2P509	2	34'-8"	Pier 2 Stem Horizontal	S602	54	35'-5 1/2"	Longitudinal Deck over Pier 3	2P653	26	13'-0"	U	5'-2"	2'-8"	5'-2"									End of Pier 2 Stem Stirrup Seismic	
2P510	2	34'-0"	Pier 2 Stem Horizontal	S603	32	9'-0"	Transverse at CJ																	
2P511	2	33'-4"	Pier 2 Stem Horizontal					2P850	122	16'-3"	L	14'-11"	1'-4"										Pier 2 Footing Dowel	
2P512	2	32'-6"	Pier 2 Stem Horizontal																					
2P513	2	32'-4"	Pier 2 Stem Horizontal					PIER 2 FOOTING (Plain Reinforcing)																
2P514	2	32'-1"	Pier 2 Stem Horizontal					2P654	20	38'-6"	U	1'-0"	36'-6"	1'-0"									Pier 2 Footing	
2P515	2	31'-10"	Pier 2 Stem Horizontal																					
2P516	2	31'-8"	Pier 2 Stem Horizontal					2P851	148	11'-2"	U	1'-4"	8'-6"	1'-4"									Pier 2 Footing	
2P517	2	31'-5"	Pier 2 Stem Horizontal					2P852	8	9'-10"	SL	1'-4"	3'-0"	1'-2"	3'-0"			1'-4"						Pile Tension Tie
2P518	2	31'-2"	Pier 2 Stem Horizontal																					
2P519	2	31'-0"	Pier 2 Stem Horizontal					PIER 3 (Low-Carbon Chromium)																
2P520	2	30'-9"	Pier 2 Stem Horizontal					3P550	8	21'-3"	V				2'-10"	18'-5"			5'-10"				End of Pier 3 Stem Vertical	
2P521	2	30'-6"	Pier 2 Stem Horizontal					3P551	83	8'-4"	U	2'-8"	3'-0"	2'-8"									Top of Pier 3 Stem Stirrup	
2P522	2	30'-4"	Pier 2 Stem Horizontal					3P552	34	8'-8"	U	3'-0"	2'-8"	3'-0"									End of Pier 3 Stem Stirrup	
2P523	2	30'-1"	Pier 2 Stem Horizontal					3P553	5	14'-0"	H	0'-5"	3'-6"	3'-1"	3'-6"	3'-1"		0'-5"					Pedestal Tie	
2P524	2	29'-10"	Pier 2 Stem Horizontal					3P554	20	7'-4"	U	2'-0 1/2"	3'-3"	2'-0 1/2"									Pedestal Vertical Bar	
2P525	8	7'-4"	Pier 2 Stem-Footing Bar					3P555	25	6'-11"	U	2'-0 1/2"	2'-10"	3'-0 1/2"									Pedestal Vertical Bar	
2P800	4	4'-2"	Pier 2 Stem Vertical					3P651	7	42'-8"	U	1'-0"	40'-8"	1'-0"									Top of Pier 3Stem	
2P801	4	5'-8"	Pier 2 Stem Vertical					3P652	403	4'-4"	PI	0'-8"	2'-8"					1'-0"					Pier 3 Seismic Tie	
2P802	4	7'-2"	Pier 2 Stem Vertical					3P653	26	13'-0"	U	5'-2"	2'-8"	5'-2"									End of Pier 3 Stem Stirrup Seismic	
2P803	4	8'-8"	Pier 2 Stem Vertical																					
2P804	4	10'-2"	Pier 2 Stem Vertical					3P850	118	16'-3"	L	14'-11"	1'-4"										Pier 3 Footing Dowel	
2P805	4	11'-8"	Pier 2 Stem Vertical																					
2P806	4	13'-2"	Pier 2 Stem Vertical					PIER 3 FOOTING (Plain Reinforcing)																
2P807	4	14'-8"	Pier 2 Stem Vertical					3P654	20	38'-6"	U	1'-0"	36'-6"	1'-0"									Pier 3 Footing	
2P808	4	16'-2"	Pier 2 Stem Vertical																					
2P809	4	17'-8"	Pier 2 Stem Vertical					3P851	148	11'-2"	U	1'-4"	8'-6"	1'-4"									Pier 3 Footing	
2P810	4	19'-2"	Pier 2 Stem Vertical					3P852	40	9'-10"	SL	1'-4"	3'-0"	1'-2"	3'-0"			1'-4"						Pile Tension Tie
2P811	122	14'-6"	Pier 2 Stem Vertical																					
								SUPERSTRUCTURE (Low-Carbon Chromium)																
PIER 3 (Low-Carbon Chromium)								S550	2106	5'-6"	C	0'-7"	4'-11"										Deck Overhang	
3P500	6	40'-8"	Pier 3 Stem Horizontal					S551	729	5'-8 1/2"	SC	0'-10"	1'-4"	1'-4"	1'-4"			0'-10"					Curb Stirrup	
3P501	2	40'-0"	Pier 3 Stem Horizontal					S552	42	9'-6"	SJ	3'-0"	0'-7"	1'-5"	1'-1"	3'-5"							Deck End Abut 1	
3P502	2	39'-4"	Pier 3 Stem Horizontal					S553	42	10'-5 1/2"	SJ	3'-0"	0'-7"	2'-4 1/2"	1'-1"	3'-5"							Deck End Abut 2	
3P503	2	38'-8"	Pier 3 Stem Horizontal					S554	528	11'-5"	SC	0'-10"	1'-3"	7'-4"	1'-2"			0'-10"					Sidewalk Strirup	
3P504	2	38'-0"	Pier 3 Stem Horizontal					S555	201	5'-6"	S	0'-10"	1'-3"	1'-4"	1'-3"			0'-10"					Curb Stirrup Sidewalk Side	
3P505	2	37'-4"	Pier 3 Stem Horizontal					S556	40	6'-0"	L	3'-0"	3'-0"										Drainage Bars	
3P506	2	36'-8"	Pier 3 Stem Horizontal					S557	64	10'-8"	M		3'-3"	1'-5"	1'-4"	1'-5"	3'-3"		1'-0"				Construction Joint	
3P507	2	36'-0"	Pier 3 Stem Horizontal																					
3P508	2	35'-4"	Pier 3 Stem Horizontal																					
3P509	2	34'-8"	Pier 3 Stem Horizontal																					
3P510	2	34'-0"	Pier 3 Stem Horizontal																					
3P511	2	33'-4"	Pier 3 Stem Horizontal																					
3P512	2	32'-8"	Pier 3 Stem Horizontal																					
3P513	2	32'-0"	Pier 3 Stem Horizontal																					
3P514	2	31'-8"	Pier 3 Stem Horizontal																					
3P515	2	31'-5"	Pier 3 Stem Horizontal																					
3P516	2	31'-3"	Pier 3 Stem Horizontal																					
3P517	2	31'-0"	Pier 3 Stem Horizontal																					
3P518	2	30'-9"	Pier 3 Stem Horizontal																					
3P519	2	30'-7"	Pier 3 Stem Horizontal																					
3P520	2	30'-4"	Pier 3 Stem Horizontal																					
3P521	2	30'-1"	Pier 3 Stem Horizontal																					

TYPE - BENDING DIAGRAMS



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2516100

WIN
25161.00

BRIDGE NO. 5601
BRIDGE PLANS

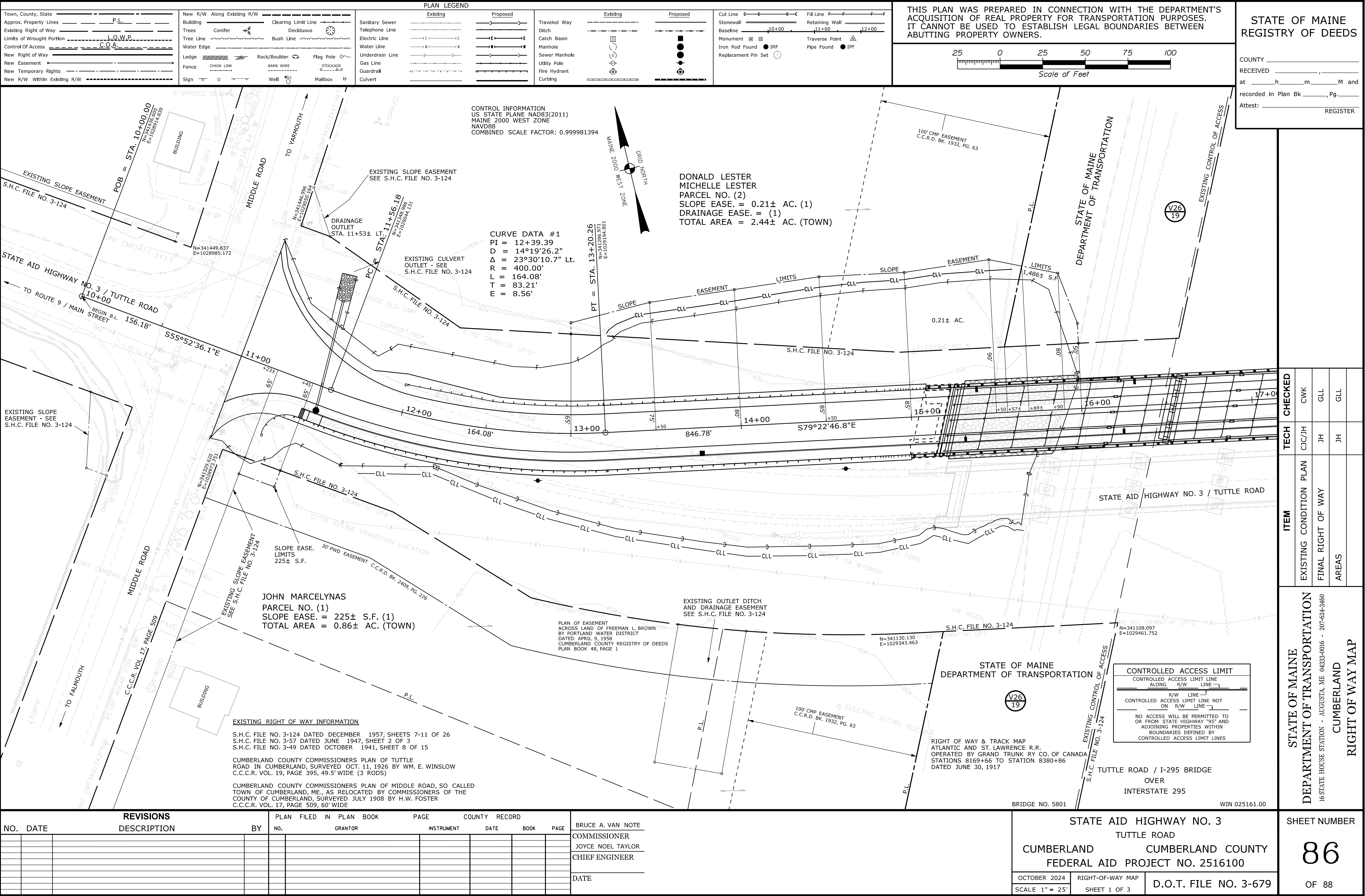
TUTTLE ROAD BRIDGE
INTERSTATE 295, RTE US 1 & MCRR
CUMBER

Date: 4/16/2025

Username: Jude.Hogan

Division: ROW

Filename: ...\\00\\ROW\\MSTA001_RWP\\PLAN1.dgn

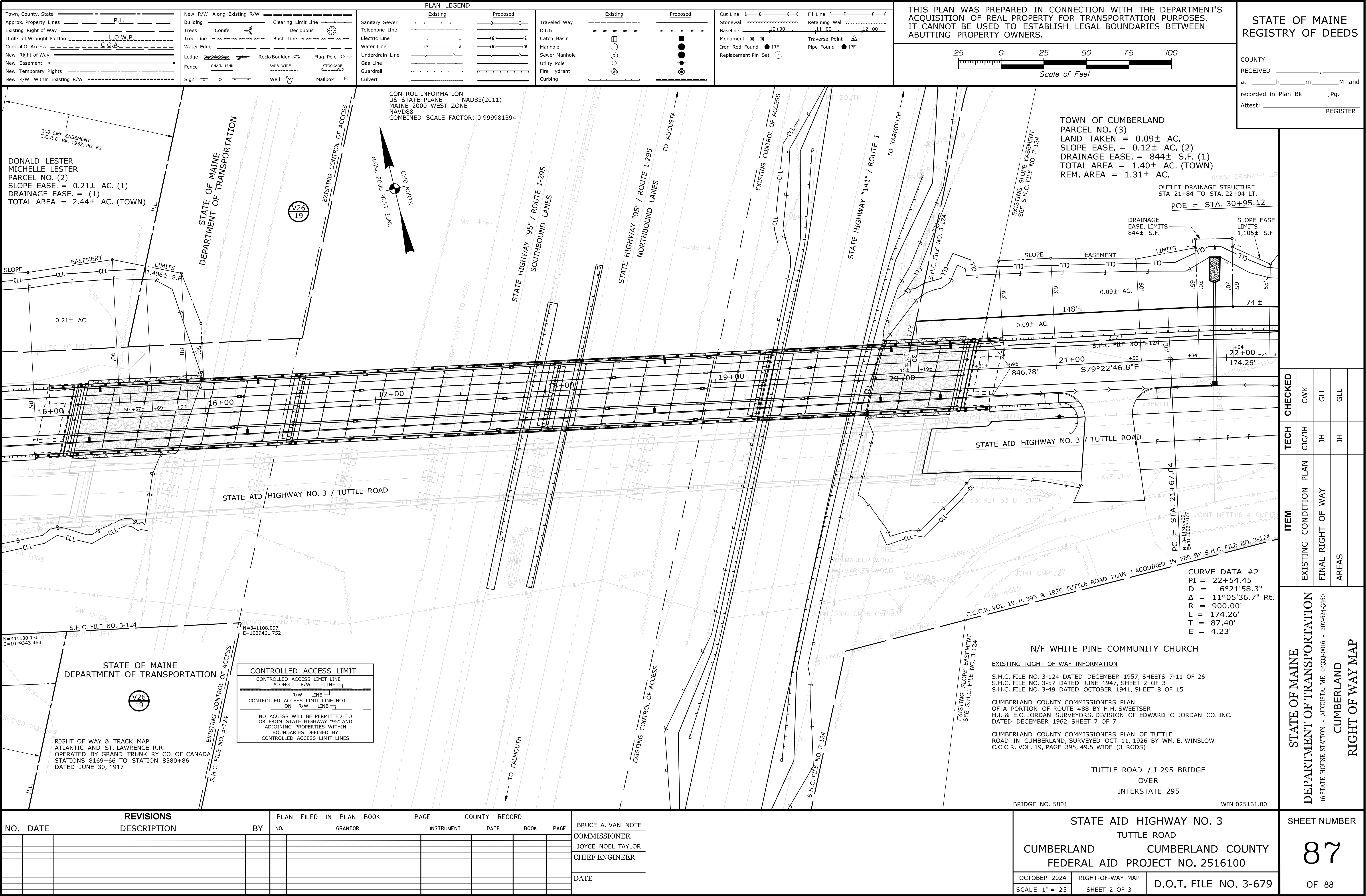


Date:4/16/2025

Username: Jude.Hogan

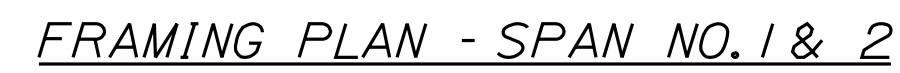
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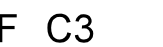
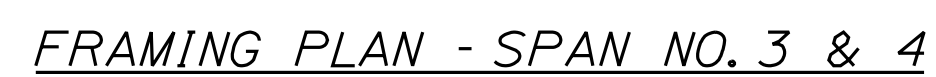


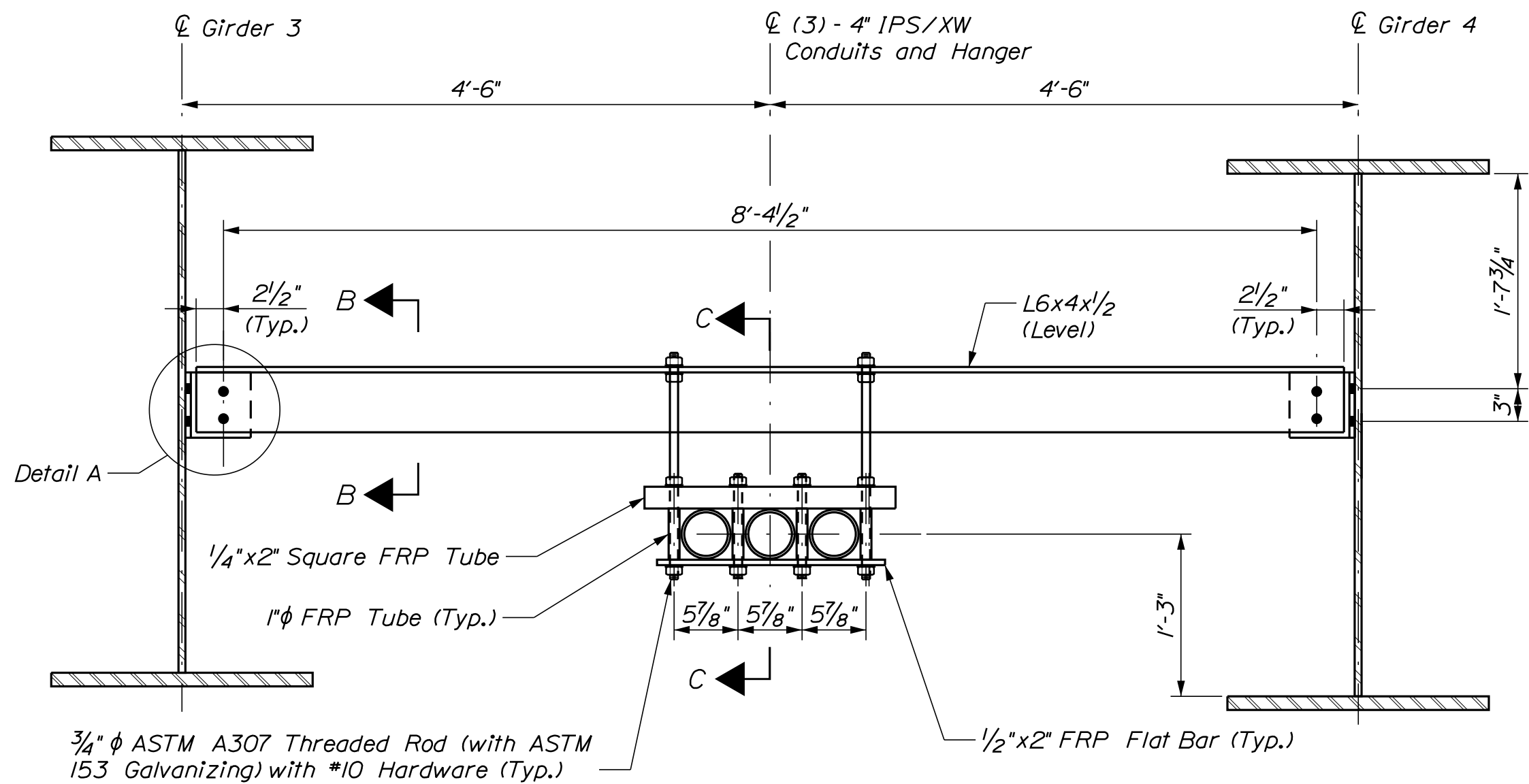
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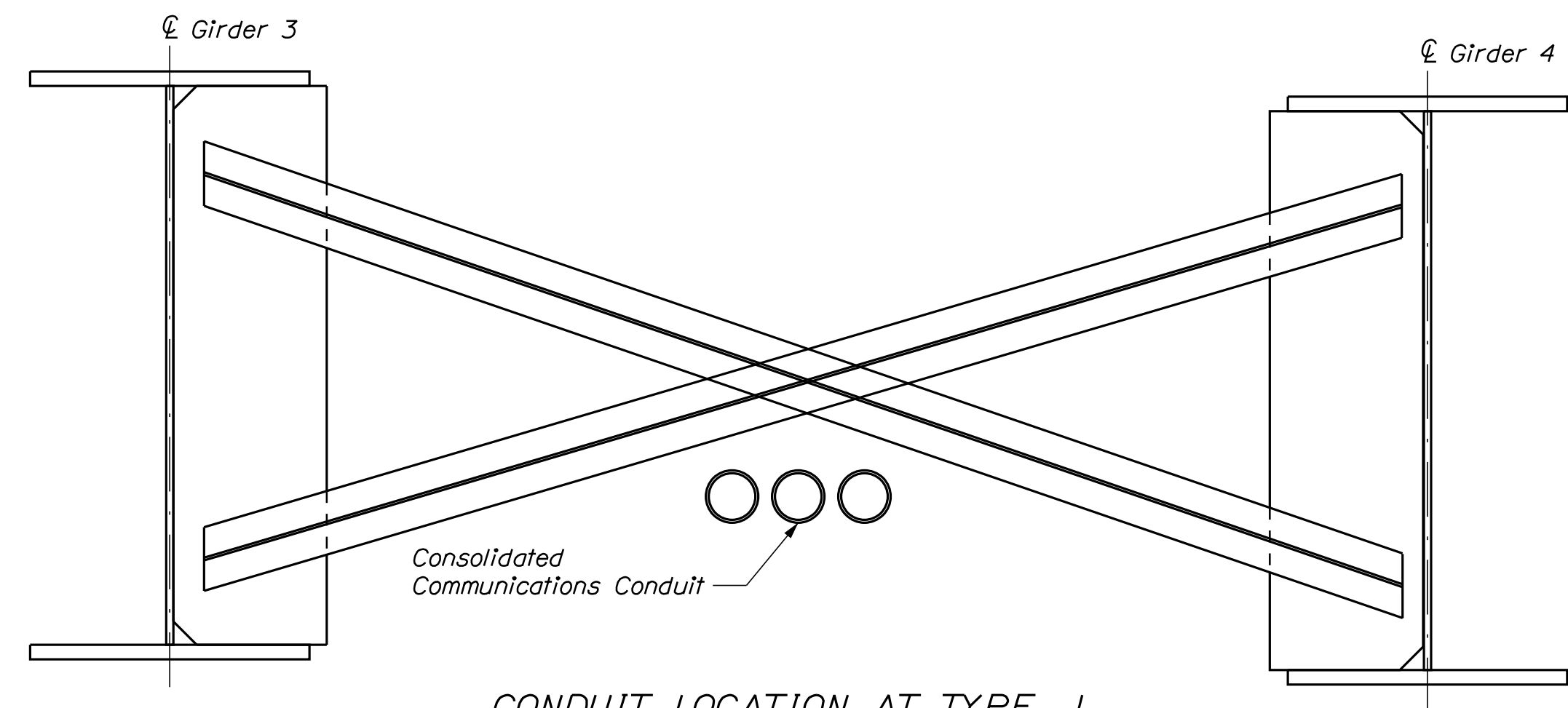


1. Dimensions are horizontal.
2. See Sheet C3 for Additional Details and Notes.

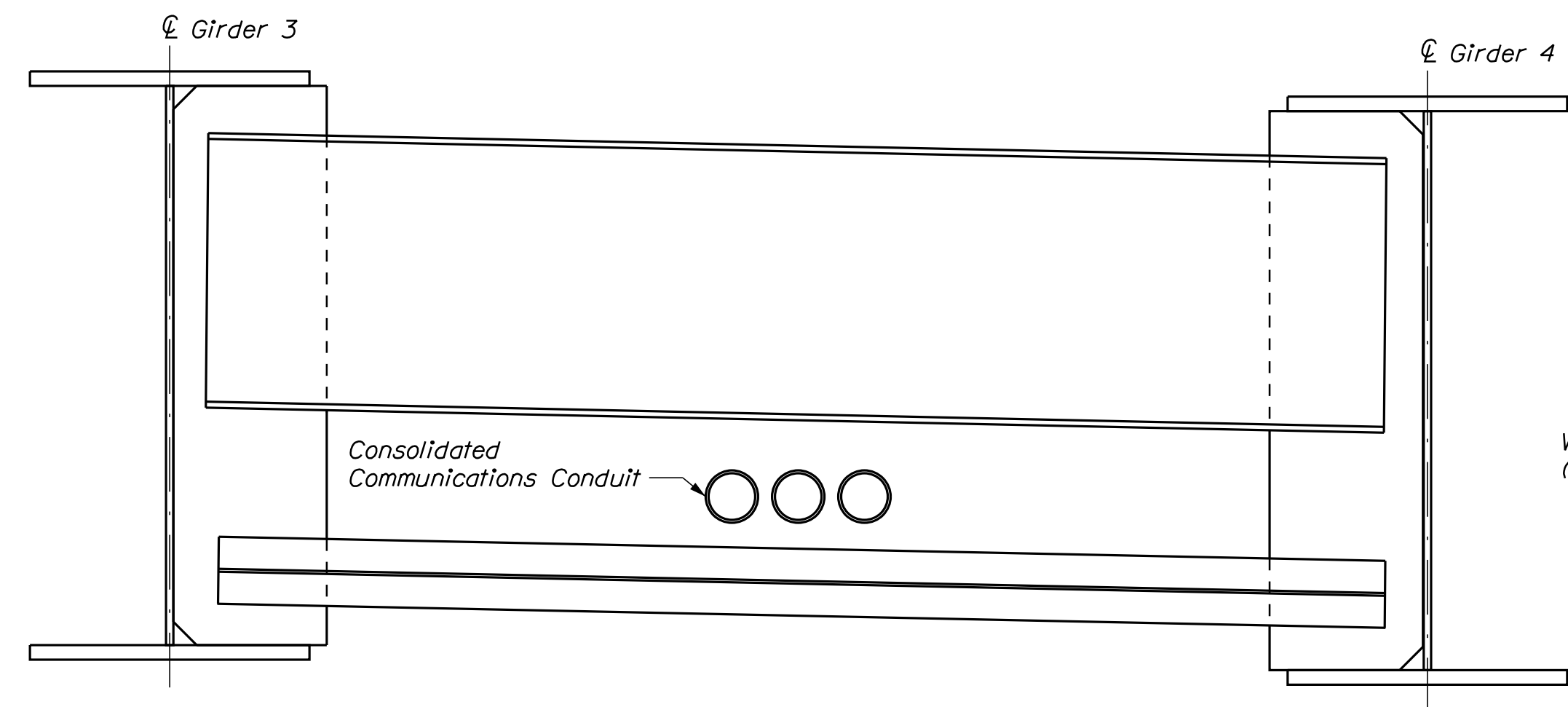




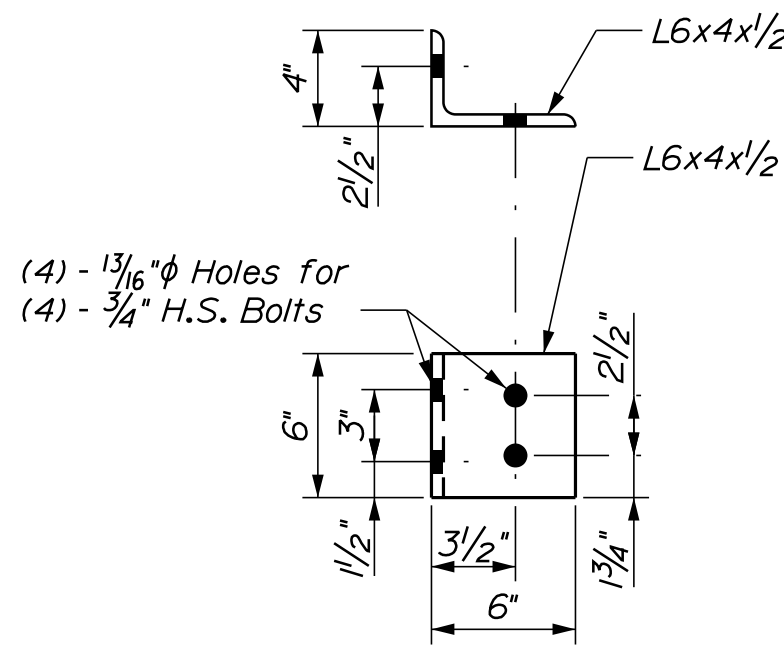
TYPICAL UTILITY SUPPORT



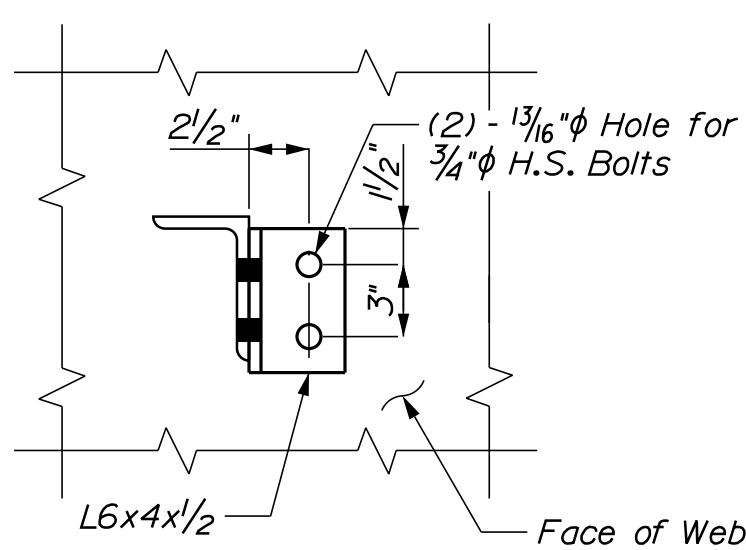
CONDUIT LOCATION AT TYPE J CROSS-FRAME



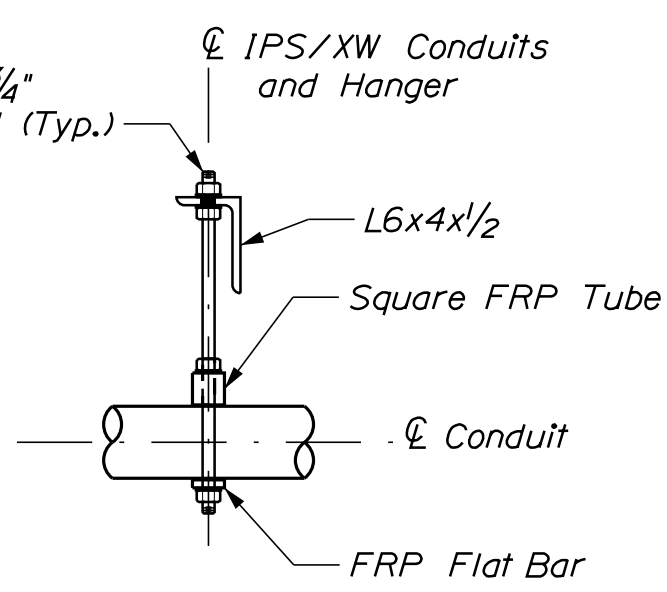
CONDUIT LOCATION AT TYPE C2 DIAPHRAGM



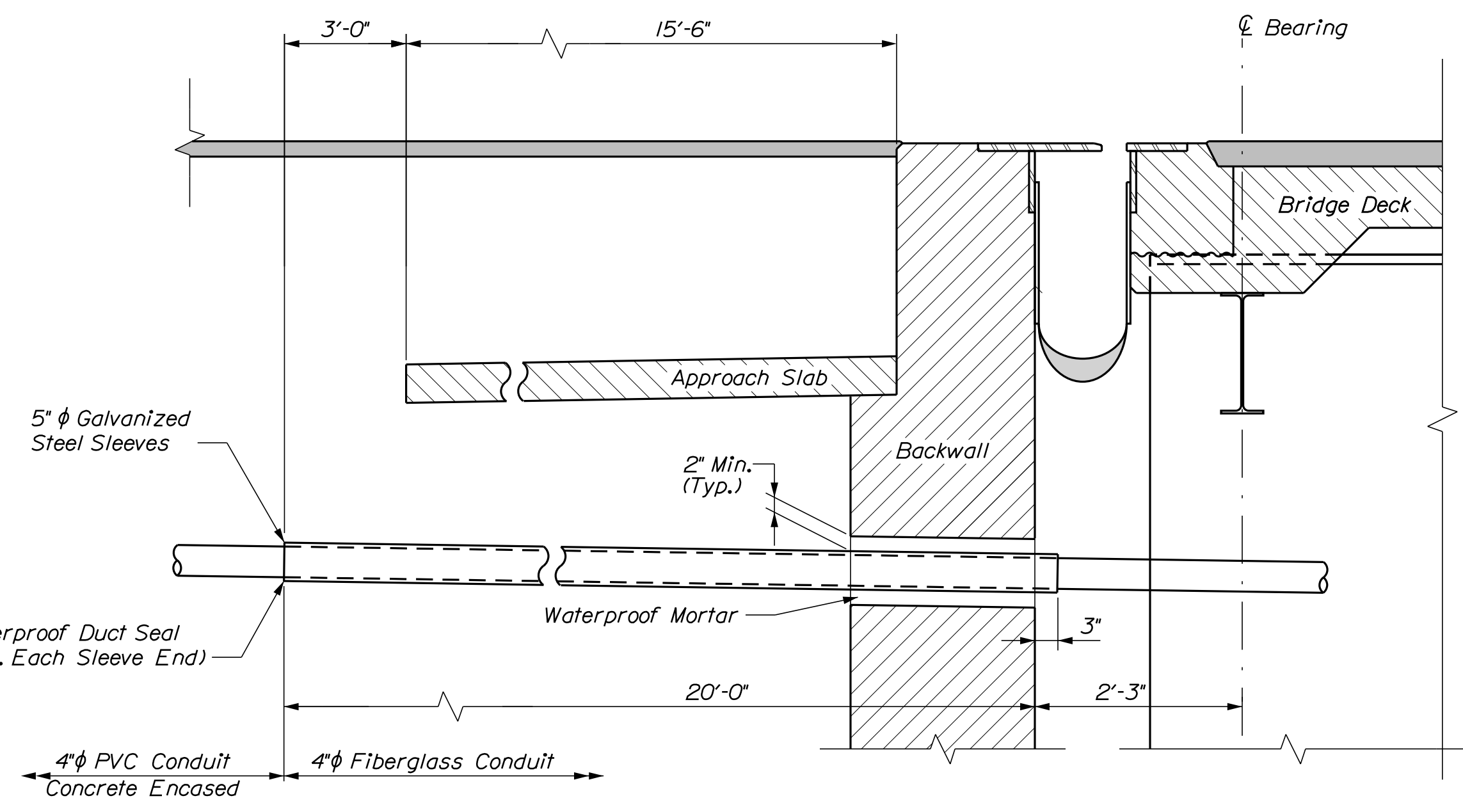
DETAIL "A"



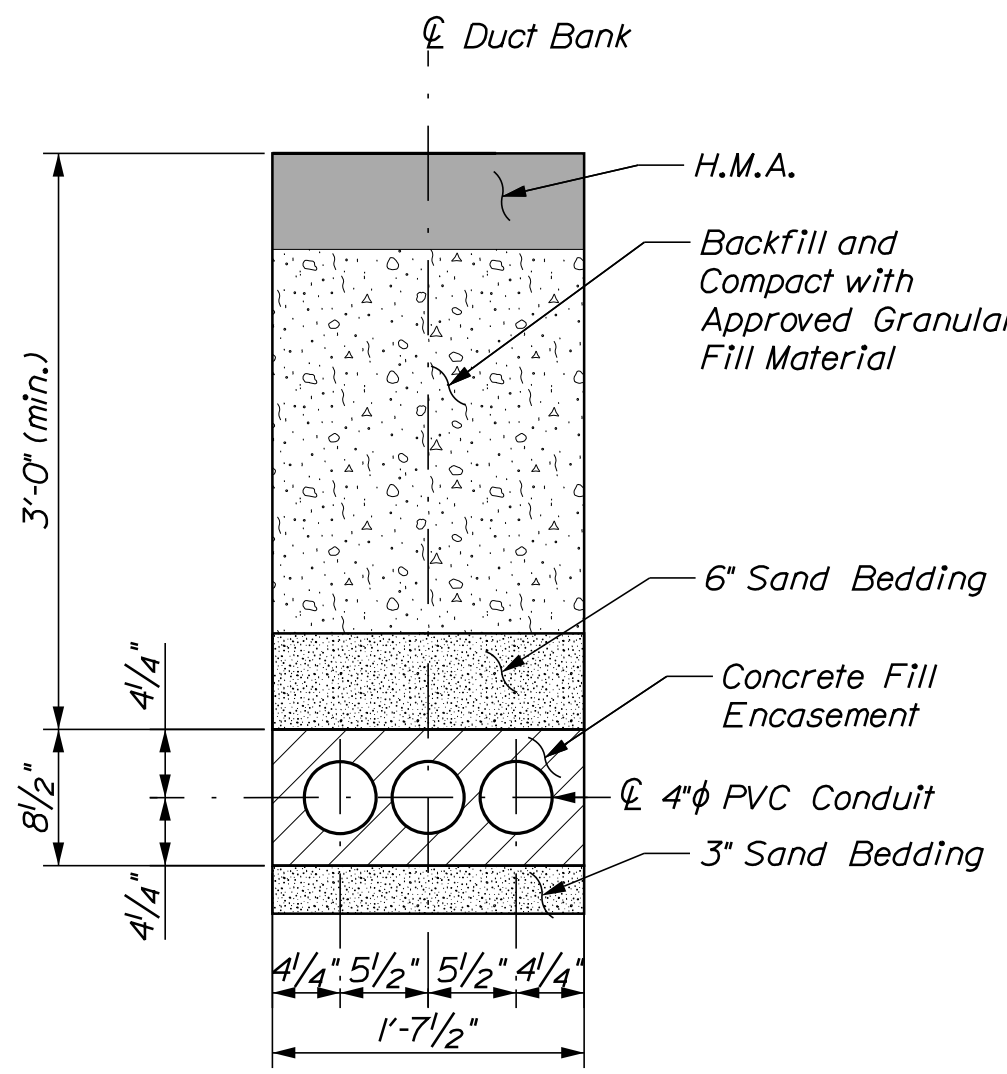
SECTION B-B



SECTION C-C



TYPICAL SECTION AT ABUTMENT
(Abutment No. 1 Shown, Abutment No. 2 Similar)



SECTION - APPROACH CONDUIT TRENCH

NOTES

1. Consolidated Communications fiberglass conduits stop 3 feet beyond ends of bridge approach slabs and shall be encased in concrete beyond this limit. After entering the concrete they shall be housed in 4" PVC conduits and sealed. Total Consolidated Communications run per conduit utility pole to utility pole is approximately 650 feet.
2. All conduits located under the bridge shall be run in free air and suspended by their individual rack assemblies and shall be of the type specified on the drawings.
3. All sleeves running through the abutment backwalls shall be cast-in-place or run through existing block-outs then sealed off with a waterproof mortar when completed.
4. Conduits run under the bridge shall have expansion joints as shown.
5. These drawings are based on available bridge design drawings. Contractor shall verify all dimensions before fabrication and installation of conduits and supports.
6. Fiberglass duct supports are designed for a maximum cable load of 8.0 lbs per foot per 4" duct and a duct self-weight of 2.4 lbs per foot and hanger weight of 14 lbs. The total unfactored conduit load at a support is 0.7 Kips maximum.
7. 4" straight couplings shall be installed as required.
8. All connections between duct sections, expansion joints, adapters and couplings are to be bonded. Refer to manufacturer's instructions for bonding procedures.
9. Cap the ends of the ducts if the underground portion of the work is not done at the same time as the bridge portion.
10. All attachment rods, spacer rods, nuts, lock and flat washers are to be Hot - Dipped Galvanized.
11. Hanger Assembly to be Set Level.
12. This design is for the express purpose for use on the bridge on Tuttle Road over I-295 in Cumberland, Maine.
13. See MaineDOT WIN 25161.00 Contract Plans for additional bridge and approach roadway details.



Stantec Consulting Services Inc.

2211 CONGRESS ST., PORTLAND, ME 04102

Tel. 207.887.3449 Fax 207.883.3376

CONSOLIDATED COMMUNICATIONS

BRIDGE NO. 6601

WIN 25161.00

BRIDGE PLANS

STATE OF MAINE		PROFESSIONAL ENGINEER	
SARAH J. WILLIAMS		No. 13582	
SIGNATURE		P.E. NUMBER	
DATE		DATE	
PROJ. MANAGER	DATE	BY	DATE
DESIGN-DETAILED	MAR 2025	KELI	MAR 2025
CHECKED-REVIEWED	MAR 2025	SJW	MAR 2025
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

TUTTLE ROAD BRIDGE

INTERSTATE 295, RTE 1 & MCRR

CUMBERLAND CUMBERLAND COUNTY

UTILITY SUPPORT DETAILS

SHEET NUMBER

C3

OF C3