

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD
Bridge Design Specifications 8th Edition 2017

DESIGN LOADING

Live Load: HL-93

TRAFFIC DATA

Current (2019) AADT	7660
Future (2039) AADT	8430
DHV - % of AADT	11.0
Design Hour Volume	927
Heavy Trucks (% of AADT)	3
Heavy Trucks (% of DHV)	3
Directional Distribution (% of DHV)	5.5
18 kip Equivalent P 2.0	91
18 kip Equivalent P 2.5	87
Design Speed (mph)	30

MATERIALS

Concrete:	
All Other	Class "A"
Reinforcing Steel	ASTM A 615/A 615M, Grade 60

BASIC DESIGN STRESSES

Concrete	f 'c = 4,000 psi
Reinforcing Steel	f y = 60,000 psi

FALMOUTH
CUMBERLAND COUNTY
PRESUMPCOT FALLS BRIDGE
ALLEN AVENUE EXTENSION
OVER
PRESUMPCOT RIVER
FEDERAL AID PROJECT NO. 2231000
PROJECT LENGTH 0.12 mi.
BRIDGE NO. 5669

LIST OF DRAWINGS

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MAINTENANCE OF TRAFFIC

Temporary signals to maintain one 12'-0" lane with alternating one-way traffic.

PROJECT LOCATION	Bridge is located on Allen Avenue Extension 1.51 miles south of intersection of Bucknam Road and Route 9. Latitude 43° 43' 1.04"N Longitude 70° 15' 52"W
PROGRAM AREA	Bridge Program
OUTLINE OF WORK	Bridge Rehabilitation

2231000

WIN 22310.00

FALMOUTH PRESUMPCOT BRIDGE	TITLE SHEET	SHEET NUMBER	
		1	
		OF 14	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE

COMMISSIONER: *[Signature]*

CHIEF ENGINEER: *[Signature]*

12/9/19

12-9-19

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	MACKENZIE KERSBERGEN
DESIGNER	ROBERT BLUNT
CONSULTANT	VHB
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE

COMMISSIONER: *[Signature]*

CHIEF ENGINEER: *[Signature]*

12/9/19

12-9-19

PROFESSIONAL ENGINEER

ROBERT S. BLUNT

11158

November 25, 2019

DATE

Date:12/4/2019

Username: PDonovan

Division: BRIDGE

Filename: \BRIDGE\MSTA\001_Title.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.12	Removing Existing Structural Concrete	1	CY
202.127	Removing of Existing Bituminous Pavement (1,400 SY)	1	LS
202.128	Removing of Existing Concrete Curbs & Sidewalks	1	LS
202.202	Removing Pavement Surface	500	SY
202.30	Removing Existing Concrete Wearing Surface (1,400 SY)	1	LS
203.20	Common Excavation	130	CY
304.10	Aggregate Subbase Course-Gravel	120	CY
403.210	Hot Mix Asphalt, 9.5mm Nominal Maximum Size	260	TON
403.211	Hot Mix Asphalt, 9.5mm Nominal Maximum Size (Shimming)	20	TON
403.213	Hot Mix Asphalt, 12.5mm Nominal Maximum Size (Base and Intermediate Base Course)	21	TON
409.15	Bituminous Tack Coat, Applied	112	GAL
502.25	Structural Concrete Superstructure Slab (200 CY)	1	LS
502.701	Bridge Drain Modification	8	EA
503.12	Reinforcing Steel, Fabricated and Delivered	32,900	LB
503.13	Reinforcing Steel, Placing	32,900	LB
508.13	Sheet Waterproofing Membrane (37 SY)	1	LS
508.14	High Performance Waterproofing Membrane (1,400 SY)	1	LS
514.06	Curing Box for Concrete Cylinders	1	EA
515.21	Protective Coating for Concrete Surfaces (2,450 SY)	1	LS
518.51	Repair of Upward Facing Surfaces- below Reinforcing Steel < 8 inches	26	SF
518.52	Repair of Upward Facing Surfaces > 8 inches	1	CY
518.60	Repair of Vertical Surfaces < 8 in	70	SF
518.61	Repair of Vertical Surfaces > 8 in	1	CY
518.80	Crack Repair	120	LF
520.232	Expansion Device - Asphaltic Plug Joint	68	LF
520.233	Expansion Device - Silicone Coated and Pre-Compressed Foam	24	LF
520.24	Bridge Joint Modification	11	EA
523.26	Expansion Bearing - Modification	2	EA
524.301	Temporary Structural Support - Roadway	1	LS
524.301	Temporary Structural Support - Bridge	1	LS
526.301	Temporary Concrete Barrier, Type I (400 LF)	1	LS
527.34	Work Zone Crash Cushions	2	U
627.733	4" White or Yellow Painted Pavement Marking Line	1,700	LF
629.05	Hand Labor, Straight Time	20	HR
631.12	All Purpose Excavator (Including Operator)	20	HR
631.172	Truck - Large (Including Operator)	20	HR
639.19	Field Office, Type B	1	EA
643.72	Temporary Traffic Signal	1	LS
652.312	Type III Barricades	4	EA
652.33	Drum	40	EA
652.34	Cone	25	EA
652.35	Construction Signs	213	SF
652.361	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	250	HR
652.41	Portable - Changeable Message Sign	2	EA
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.10	Mobilization	1	LS

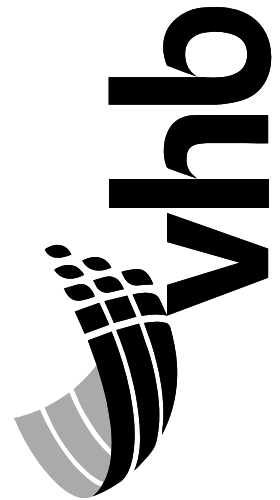
GENERAL CONSTRUCTION NOTES

1. The Right of Way information provided is from December 1992. The proposed work falls within the existing right of way and therefore an existing conditions right of way map was not developed as part of this project. The Contractor shall coordinate with the Town of Falmouth for access through the park at approximate Station 56+00, left.
2. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
3. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
4. Protective Coating for Concrete Surfaces shall be applied to all exposed concrete above observed mean high water surfaces excluding concrete T-walls.
5. Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>.
6. 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.
7. 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.
8. Prior to removing the existing wearing surface, the Contractor shall perform topographic survey to establish the existing Finish Grade elevations. The results of this survey shall be submitted to the Resident for review a minimum of 7 days prior to removal of the existing wearing surface. As shown in these Plans, the proposed Finish Grade elevations on the bridge shall be 2 1/2" higher than the existing Finish Grade elevations. Payment shall be incidental to related Contract Items.
9. Any disturbance or damage to existing ground and slopes shall be repaired to the preconstruction condition as directed by the Resident at no cost to the Department.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2231000

BRIDGE NO. 5669
WIN
22310.00
BRIDGE PLANS



PROJ. MANAGER	MAINTENANCE	BY	DATE
DESIGN-DETAILED	BGP/PRK	DPD	11/25/2018
CHECKED-REVIEWED	CTA	RSE/LNT	11/25/2018
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

PRESUMPCOT FALLS BRIDGE
OVER PRESUMPCOT RIVER
FALMOUTH CUMBERLAND COUNTY

ESTIMATED QUANTITIES
AND NOTES

SHEET NUMBER

2

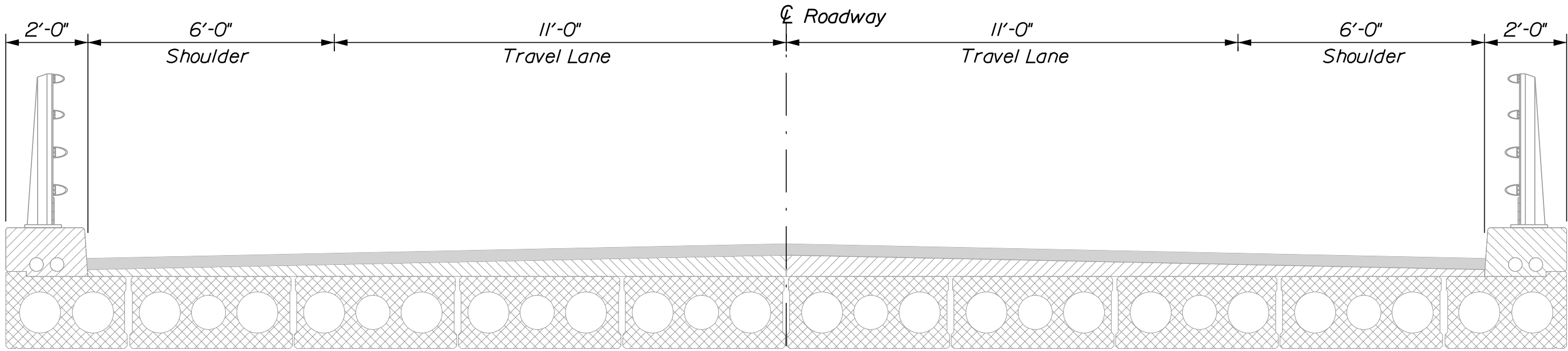
OF 14

Date:12/4/2019

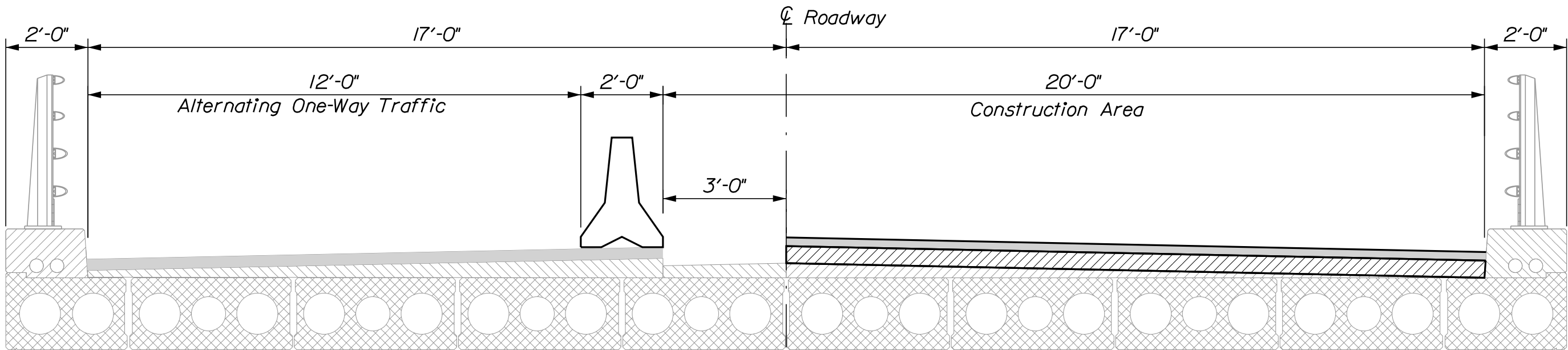
Username: PDonovan

Division: BRIDGE

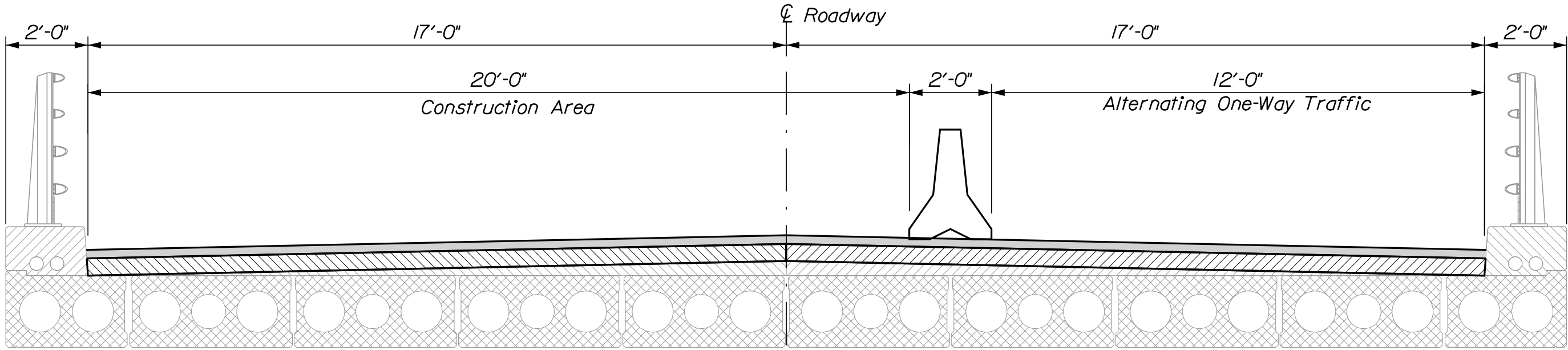
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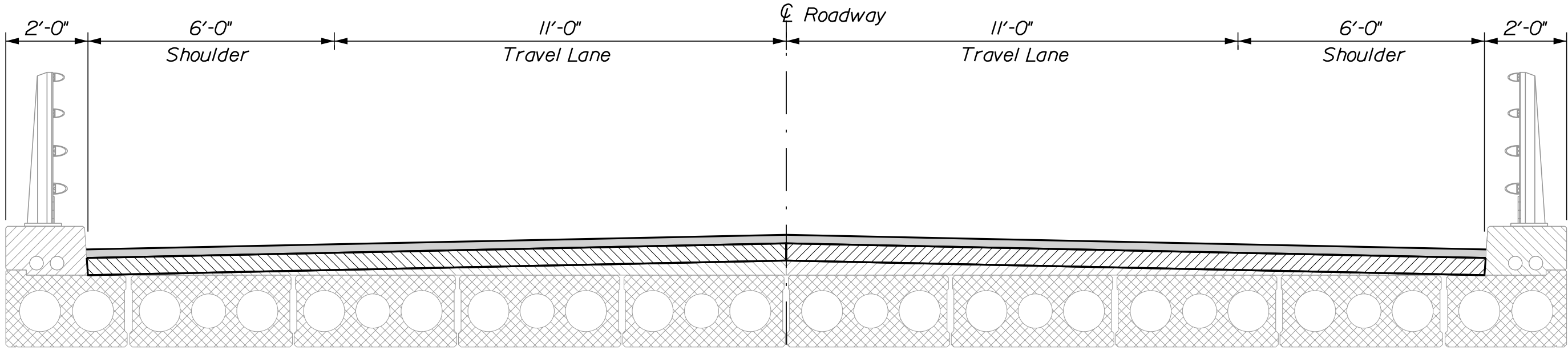
EXISTING
TRANSVERSE SECTION ~ APPROACH SPANS
(Spans 1, 2, 11, & 12 Shown, Spans 3 to 10 similar)
Scale: 1/2" = 1'-0"



PHASE 1
TRANSVERSE SECTION ~ APPROACH SPANS
(Spans 1, 2, 11, & 12 Shown, Spans 3 to 10 similar)
Scale: 1/2" = 1'-0"



PHASE 2
TRANSVERSE SECTION ~ APPROACH SPANS
(Spans 1, 2, 11, & 12 Shown, Spans 3 to 10 similar)
Scale: 1/2" = 1'-0"



FINAL
TRANSVERSE SECTION ~ APPROACH SPANS
(Spans 1, 2, 11, & 12 Shown, Spans 3 to 10 similar)
Scale: 1/2" = 1'-0"



STATE OF MAINE	
DEPARTMENT OF TRANSPORTATION	
2231000	
WIN	BRIDGE PLANS
BRIDGE NO. 5699	22310.00

PROJ. MANAGER	MARKETING	BY	DATE
DESIGN-DETAILED	BGP/IRK	DPD	11/25/2018
CHECKED-REVIEWED	CTA	RSLINT	11/25/2018
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

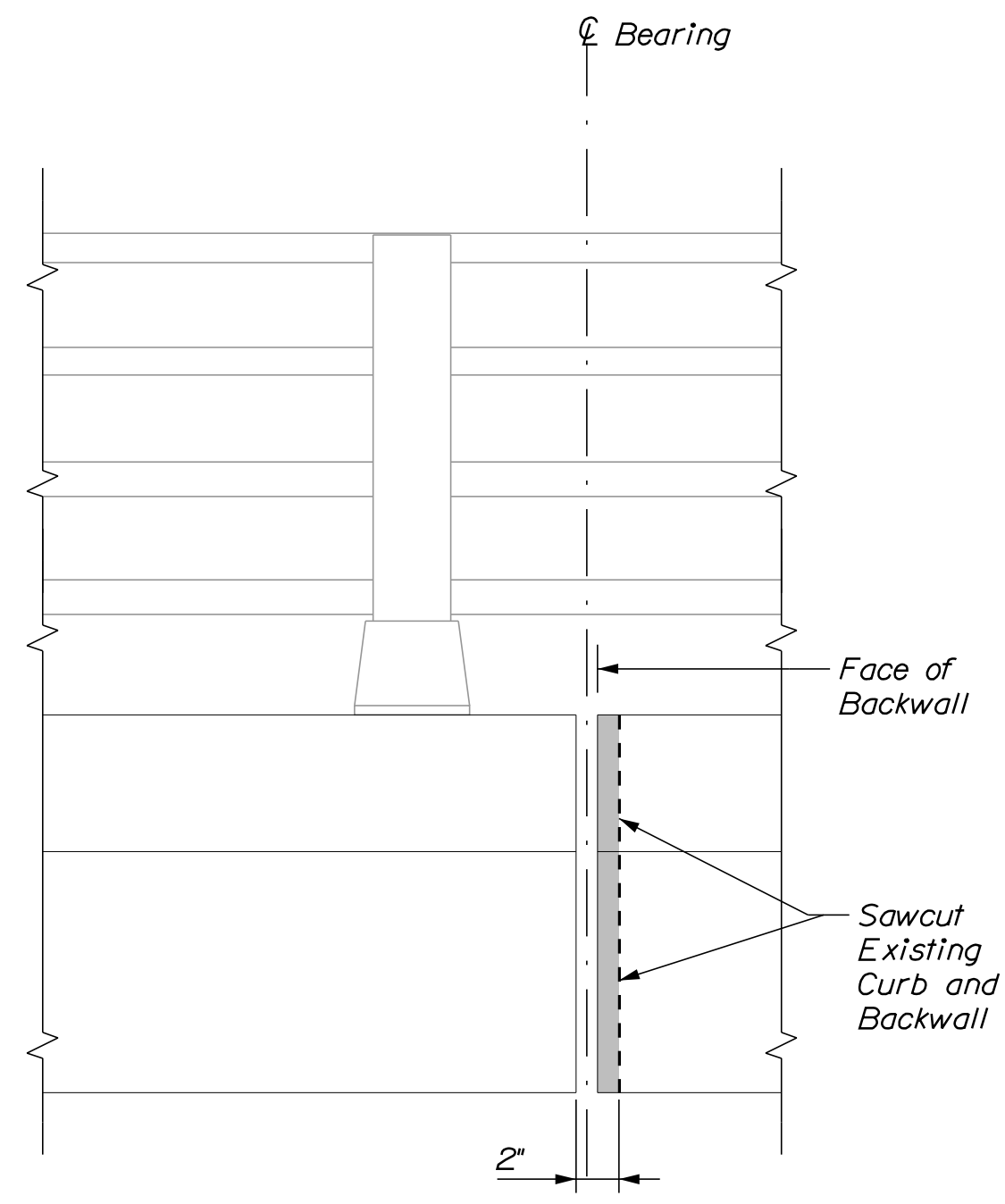
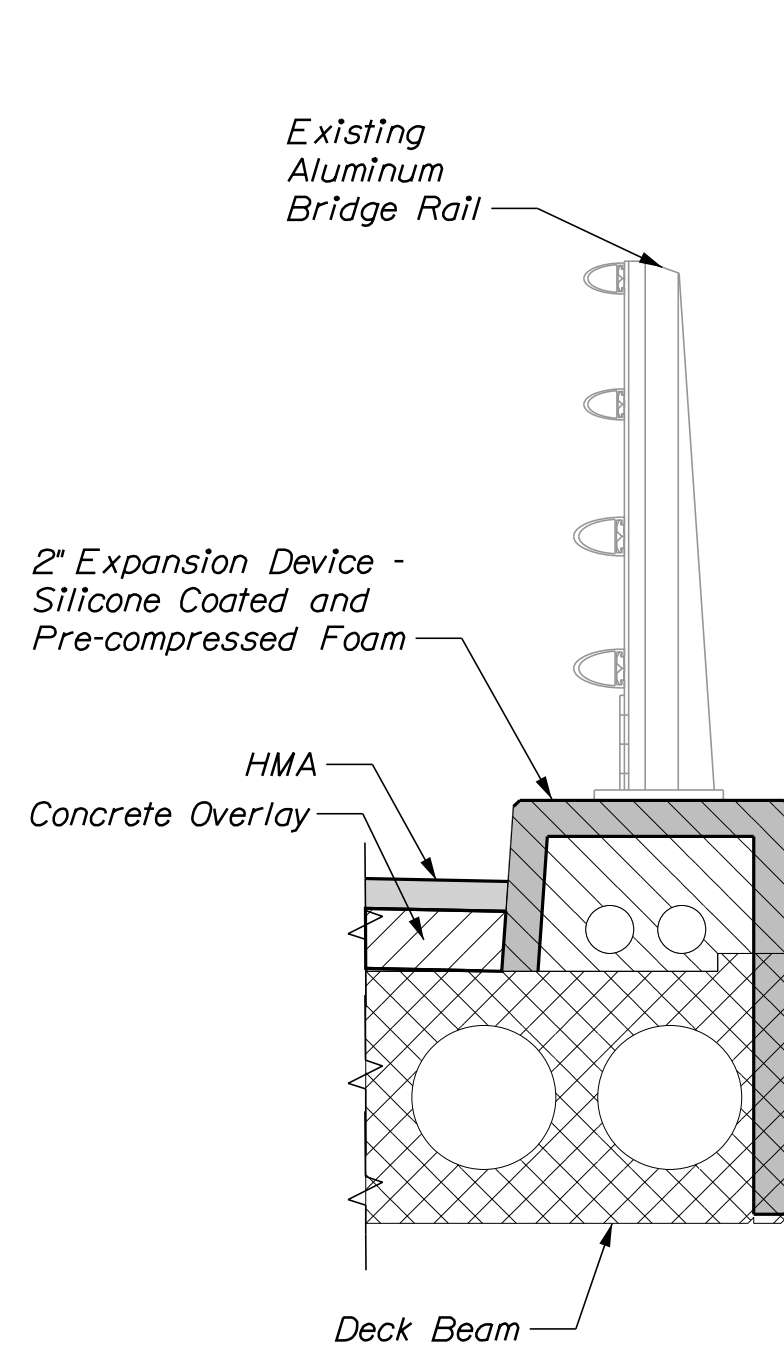
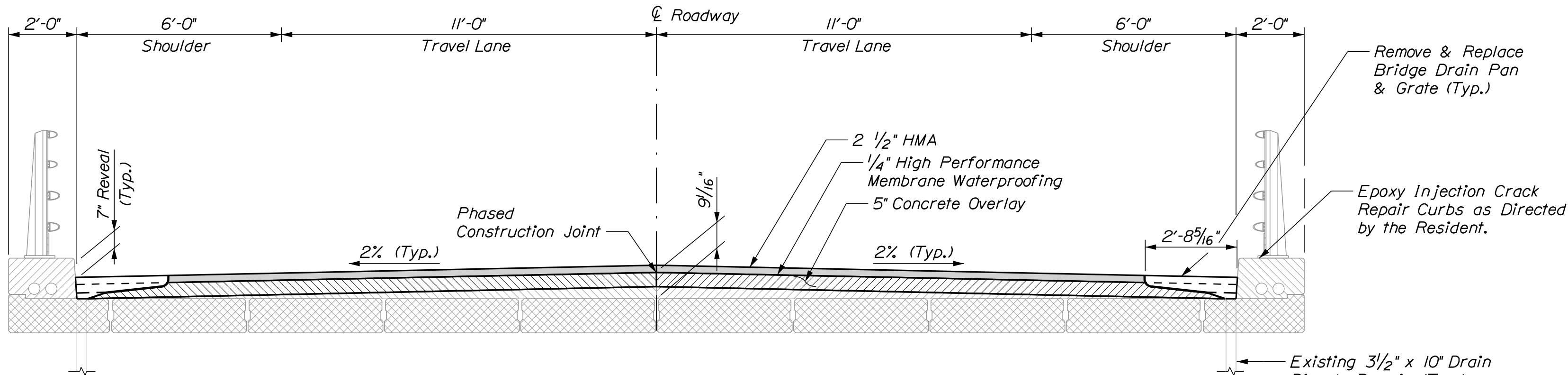
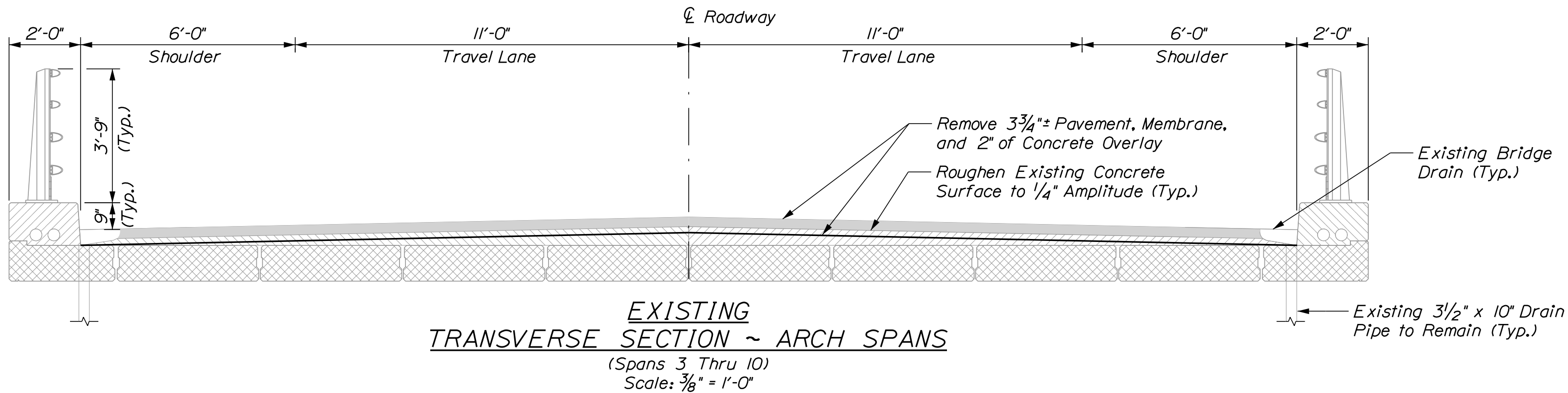
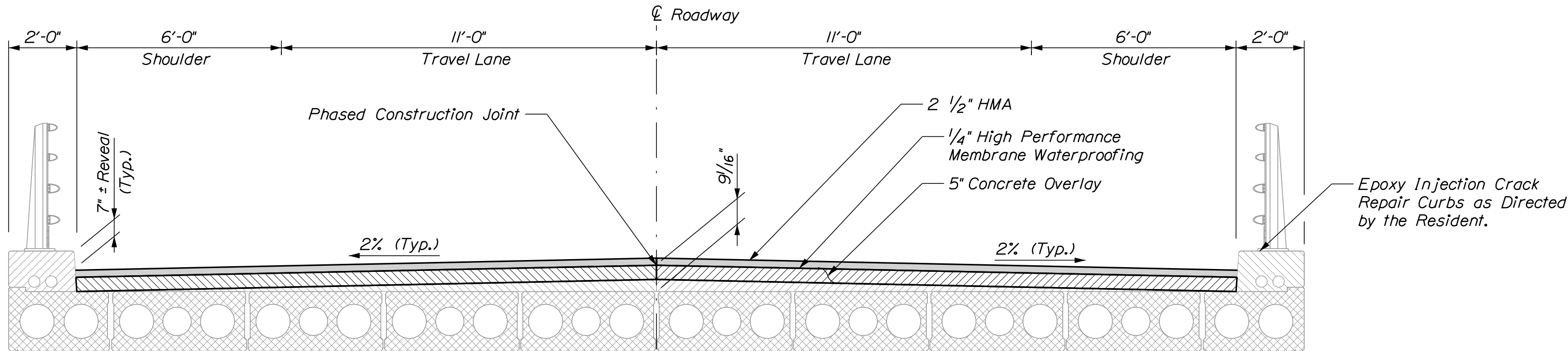
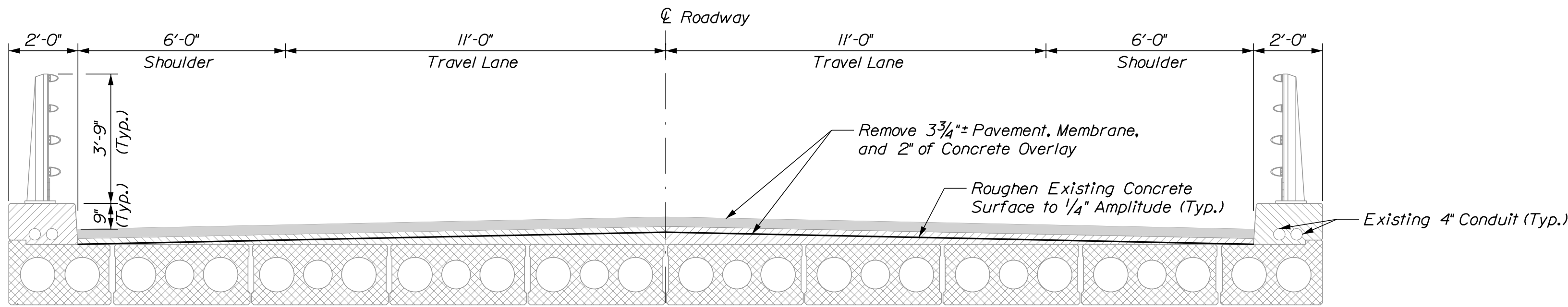
PRESUMPCOT FALLS BRIDGE OVER PRESUMPCOT RIVER FALMOUTH CUMBERLAND COUNTY	
PHASED CONSTRUCTION SECTIONS AT BRIDGE	

SHEET NUMBER
4
OF 14

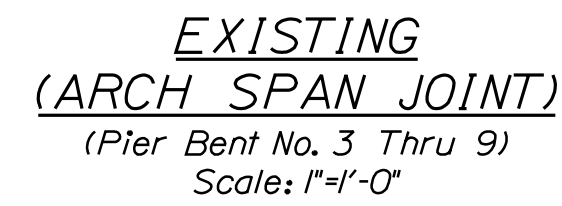
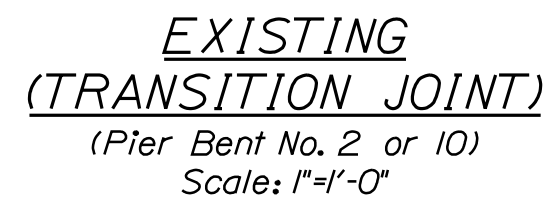
Date:12/4/2019

Username: PDonovan

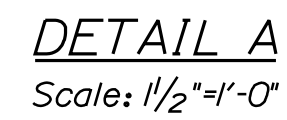
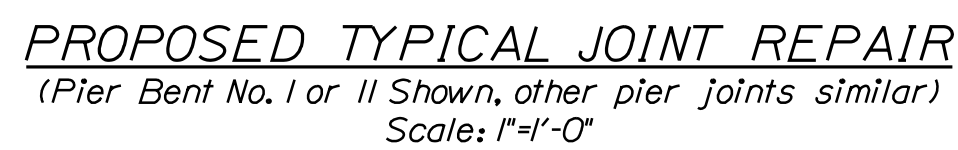
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PROJ. MANAGER	DATE	BY	DATE
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CHECKED-REVIEWED	11/25/2018	RSBLINT	11/25/2018
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



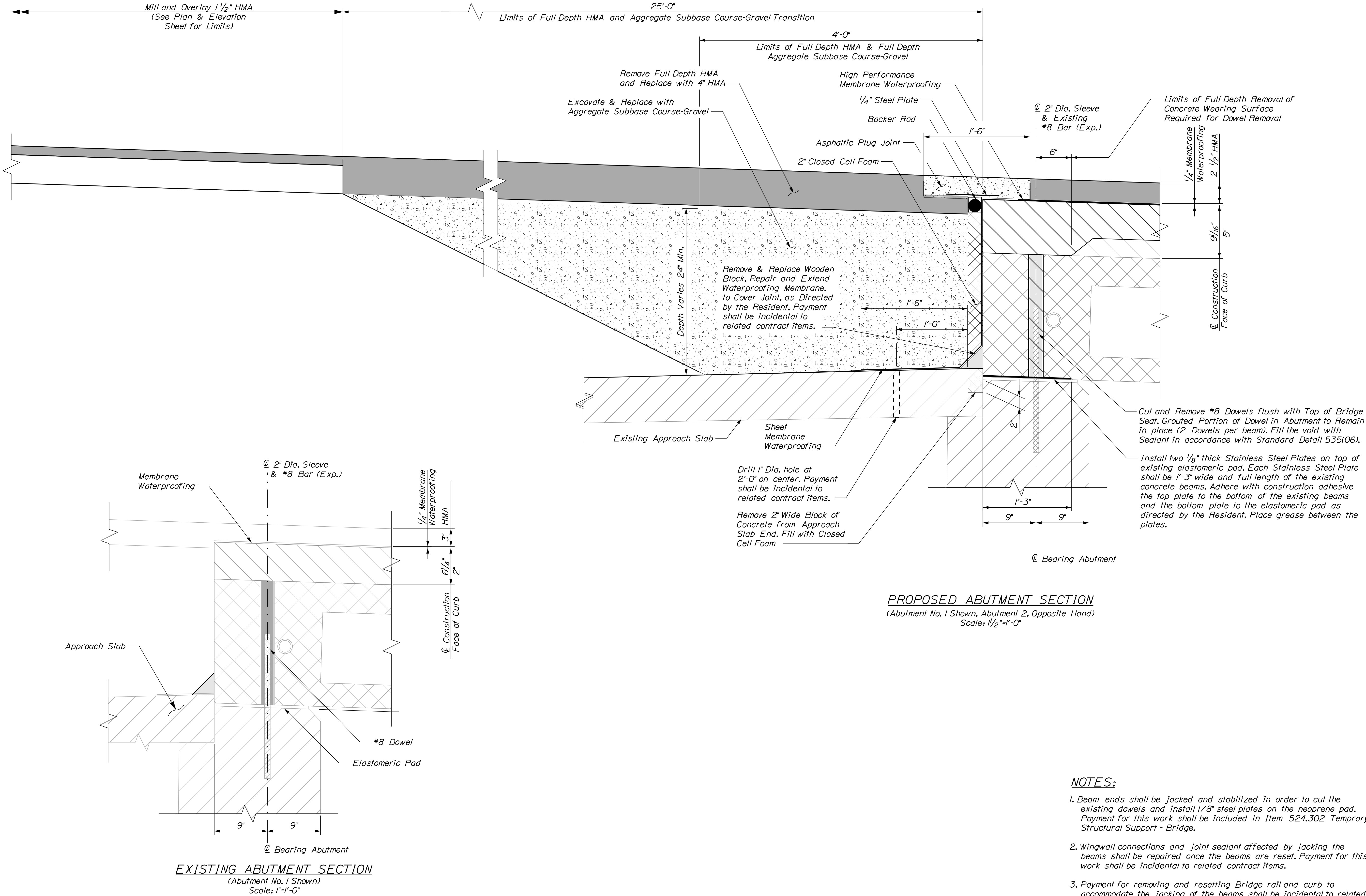
1. Payment for joint related work will be under Pay Item No. 520.24, Bridge Joint Modification. See Special Provision 520 for additional information.



Date:12/4/2019

Username: PDonovan

Filename: ... \BRIDGE\MSTA\007_Typ_Det_03.dgn
Division: BRIDGE



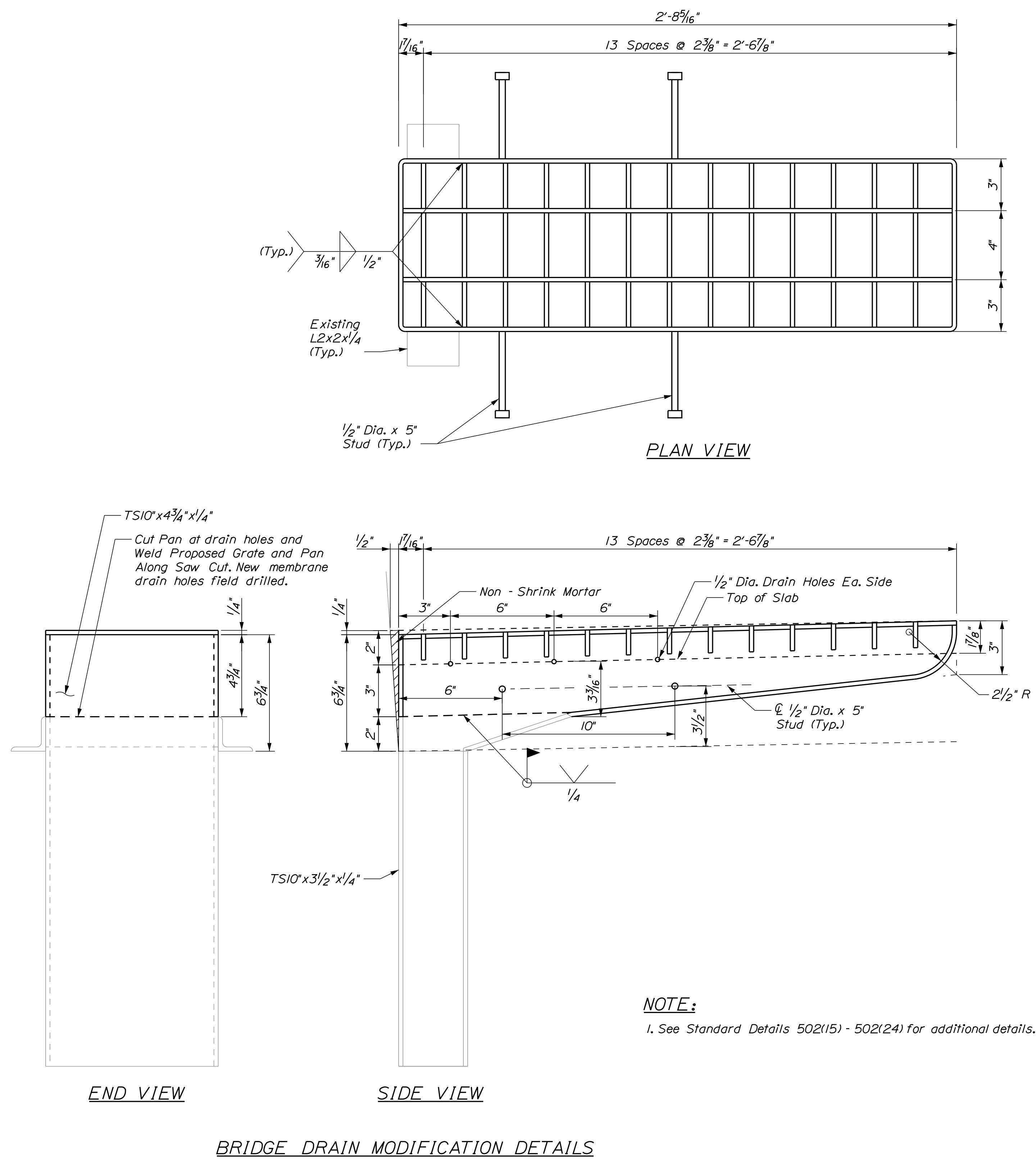
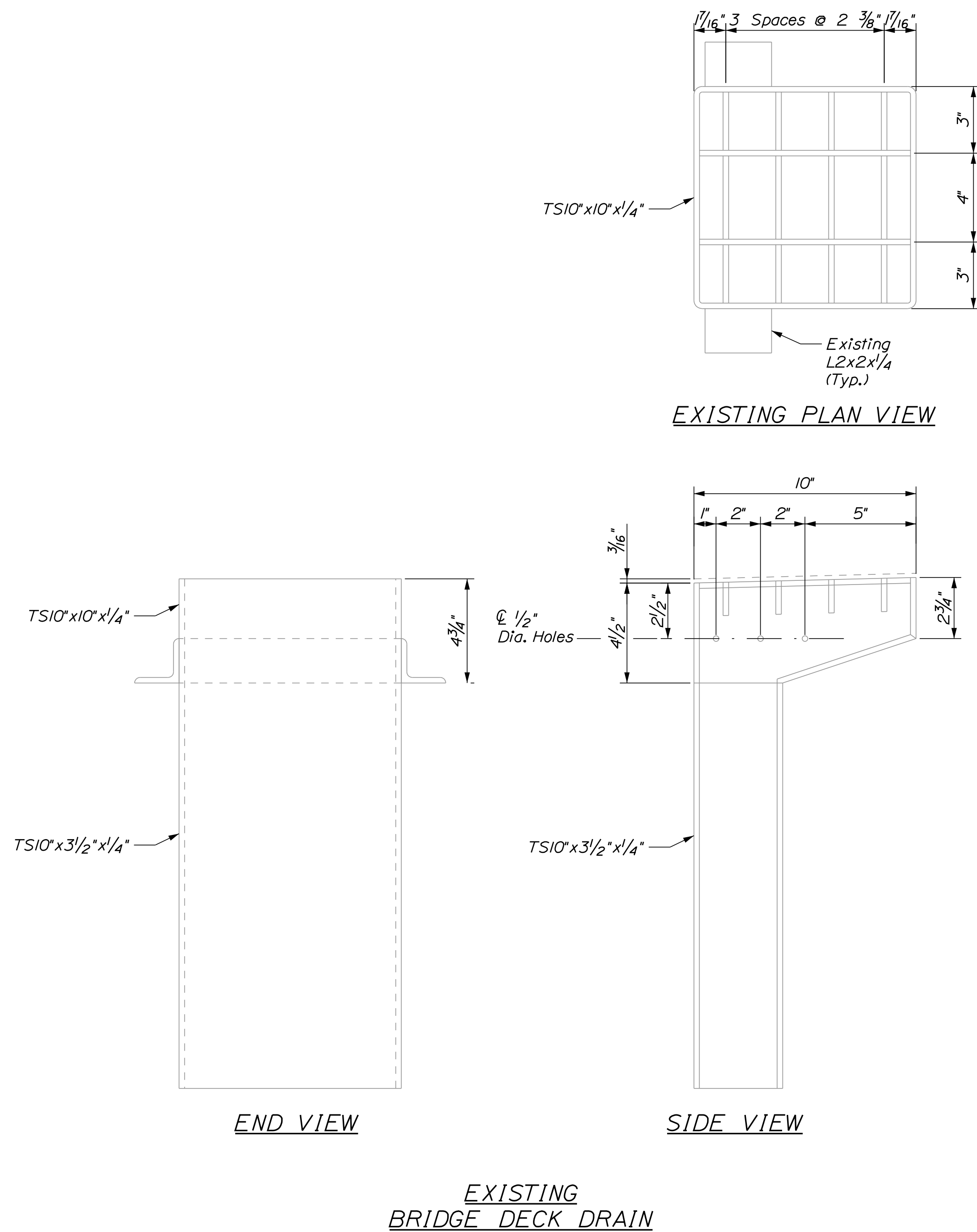
PRESUMPCOT FALLS BRIDGE OVER PRESUMPCOT RIVER FALMOUTH CUMBERLAND COUNTY				PROJ. MANAGER MACKENZIE KERSBERGEN		BY	DATE
TYPICAL SUBSTRUCTURE SECTIONS (2 OF 2)				DESIGN-DETAILED	BGP/IRK	DPD	11/25/2018
				CHECKED-REVIEWED	CTA	RSL/INT	11/25/2018
				DESIGN2-DETAILED2			
				DESIGN3-DETAILED3			
				REVISIONS 1			
				REVISIONS 2			
				REVISIONS 3			
				REVISIONS 4			
				FIELD CHANGES			

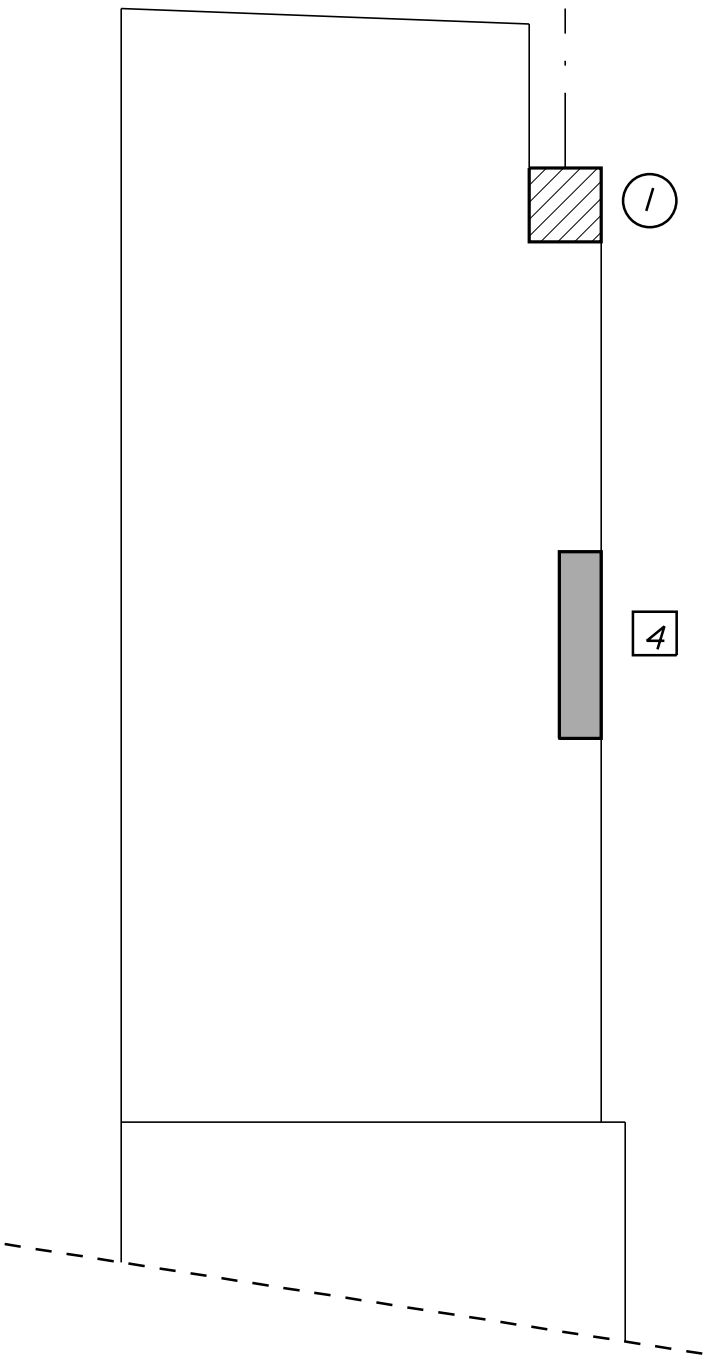
STATE OF MAINE		
DEPARTMENT OF TRANSPORTATION		
2231000		
BRIDGE NO. 5699		
WIN		
22310.00		
BRIDGE PLANS		

OF 14

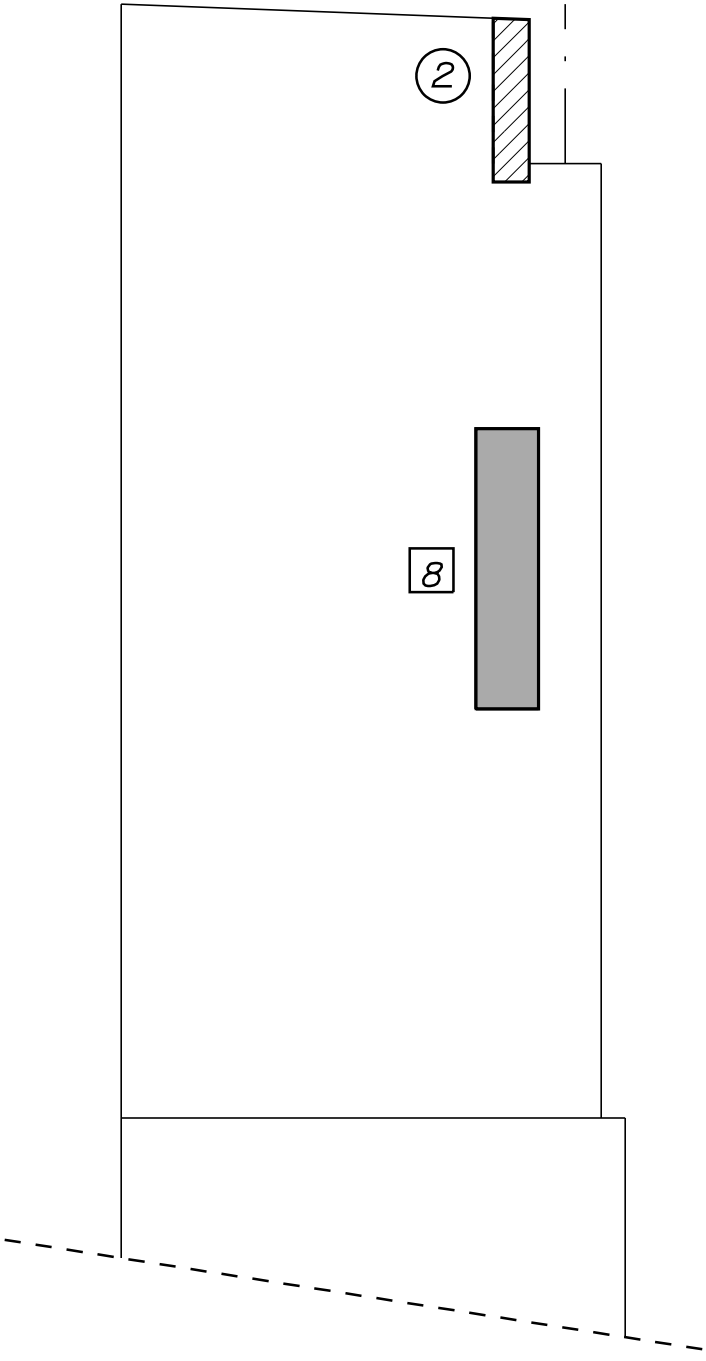
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SHEET NUMBER

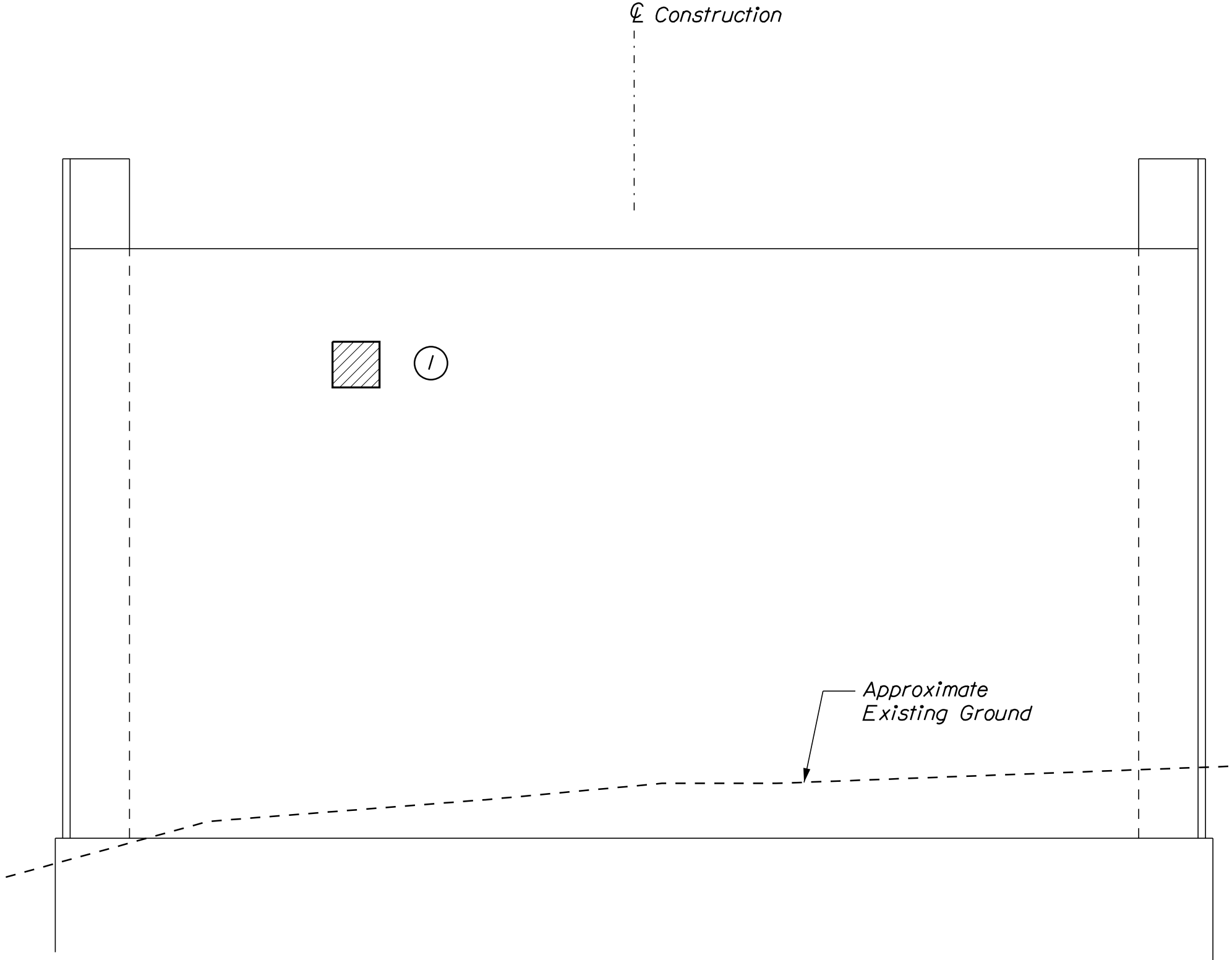




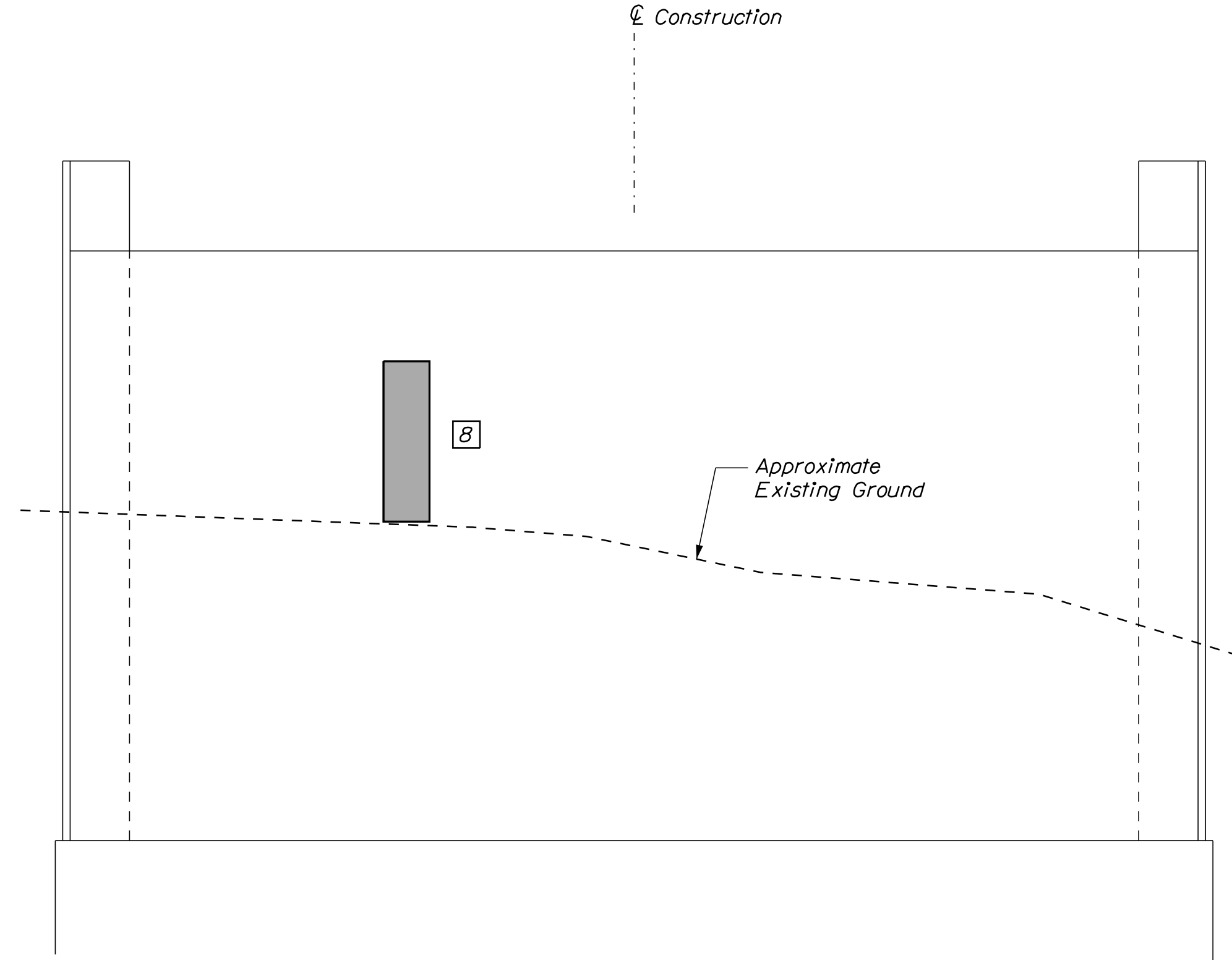
SE WINGWALL ELEVATION
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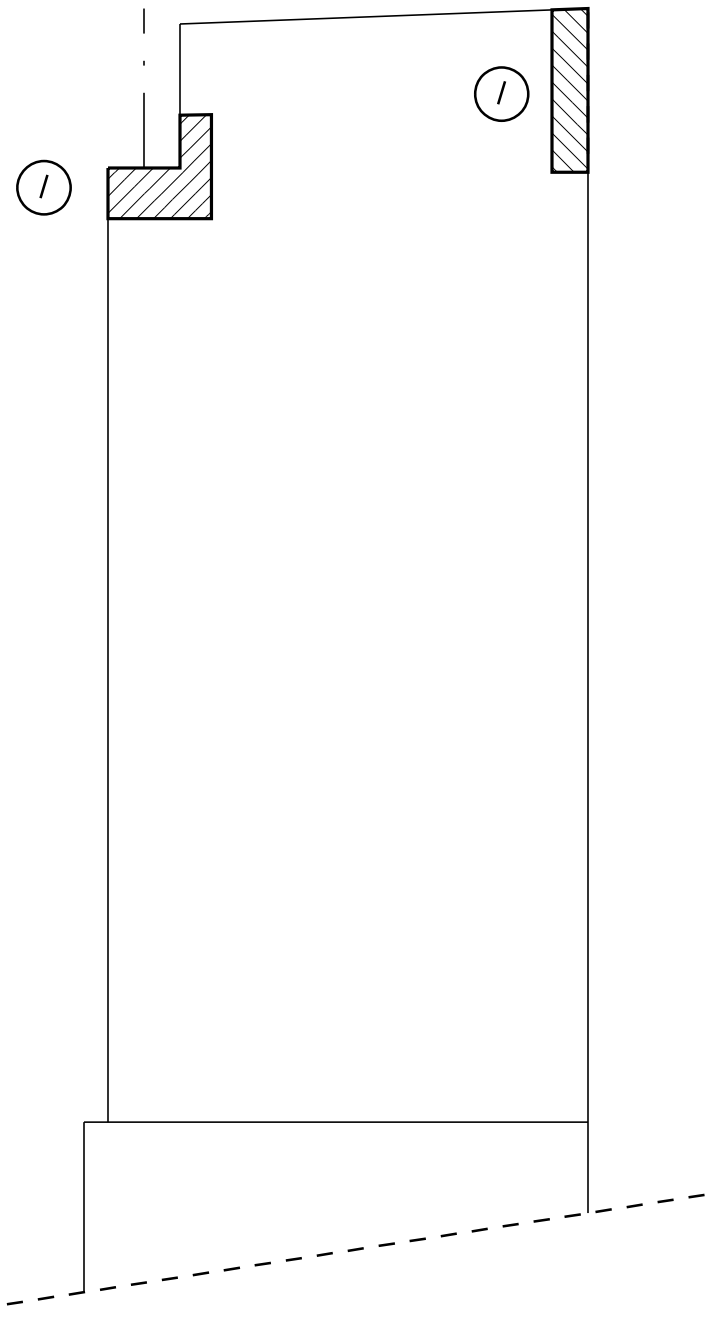
NW WINGWALL ELEVATION
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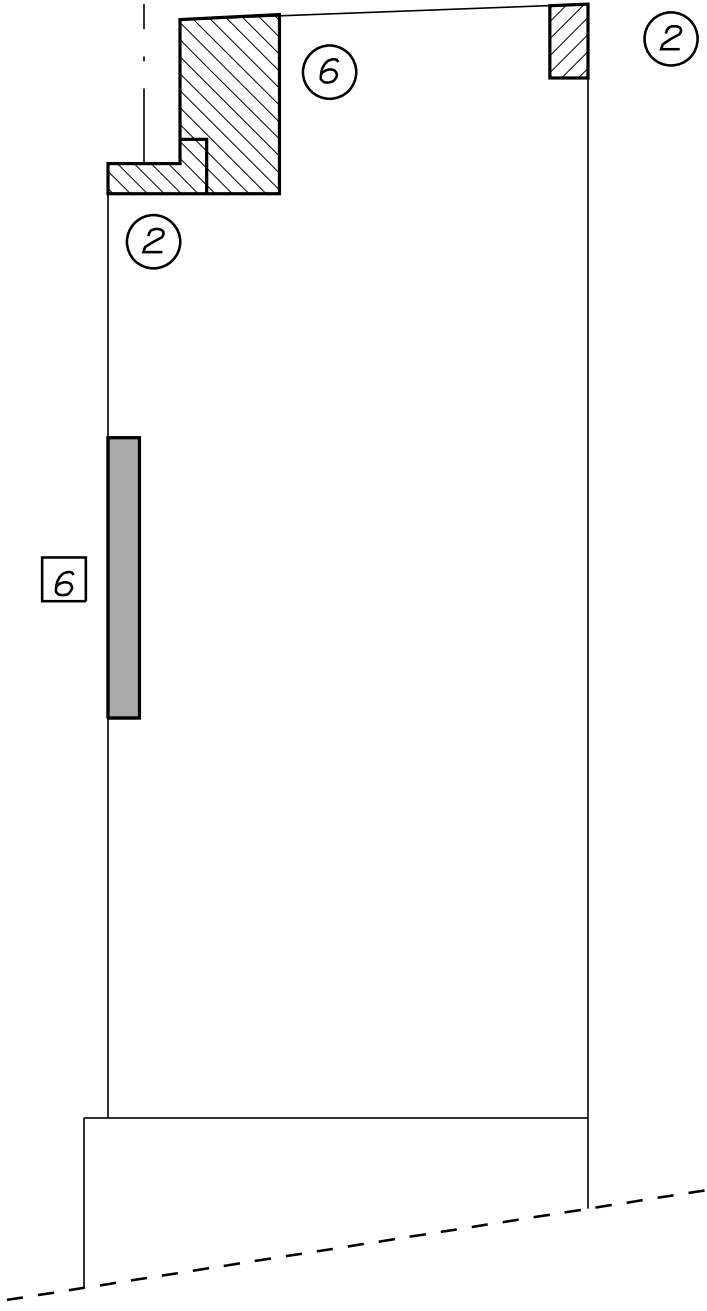
ABUTMENT NO. 1 ELEVATION
Scale: 1/4" = 1'-0"



ABUTMENT NO. 2 ELEVATION
Scale: 1/4" = 1'-0"



SW WINGWALL ELEVATION
Scale: 1/4"=1'-0"



NE WINGWALL ELEVATION
Scale: 1/4"=1'-0"

KEY

= Repair of Vertical Surfaces

= Limit of Crack Repair

*

= Square Foot Area of Repair

#

= Linear Feet of Crack Repair

STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

2231000

BRIDGE NO. 5669

WIN

22310.00

BRIDGE PLANS

vhb

PROJ. MANAGER

DESIGN-DETAILED

CHECKED-REVIEWED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

MARKET

BGP/IRK

DESIGN-DETAILED

DESIGN-DETAILED

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

BY

DPD

RSBLINT

DATE

11/25/2018

11/25/2018

PRESUMPCOT FALLS BRIDGE

OVER PRESUMPCOT RIVER

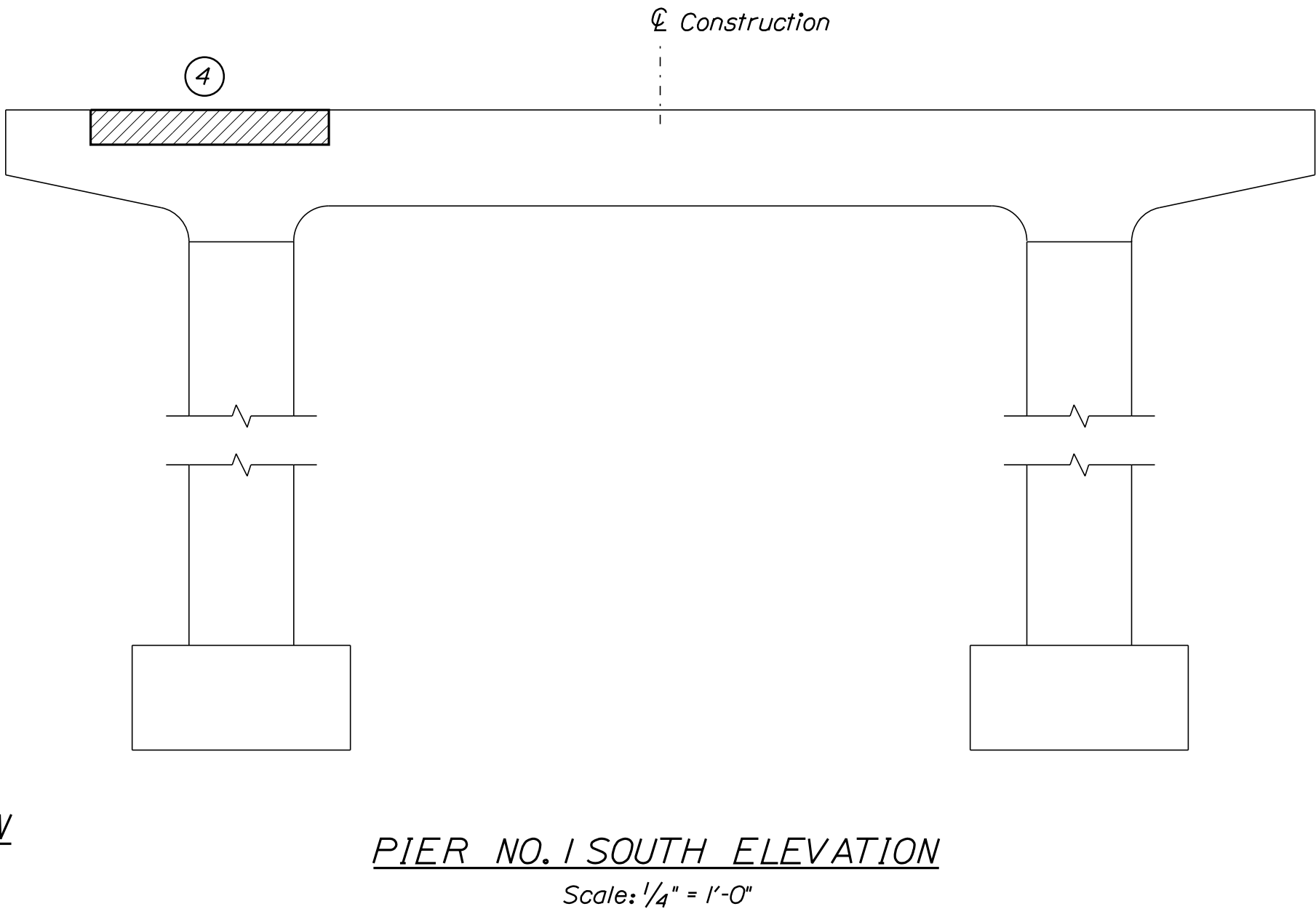
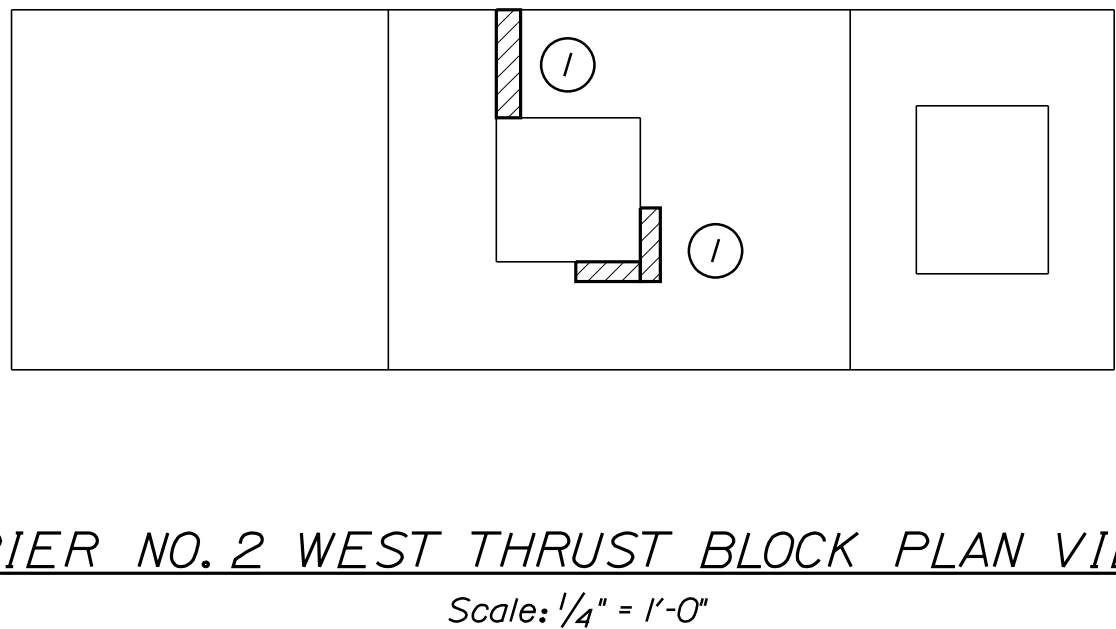
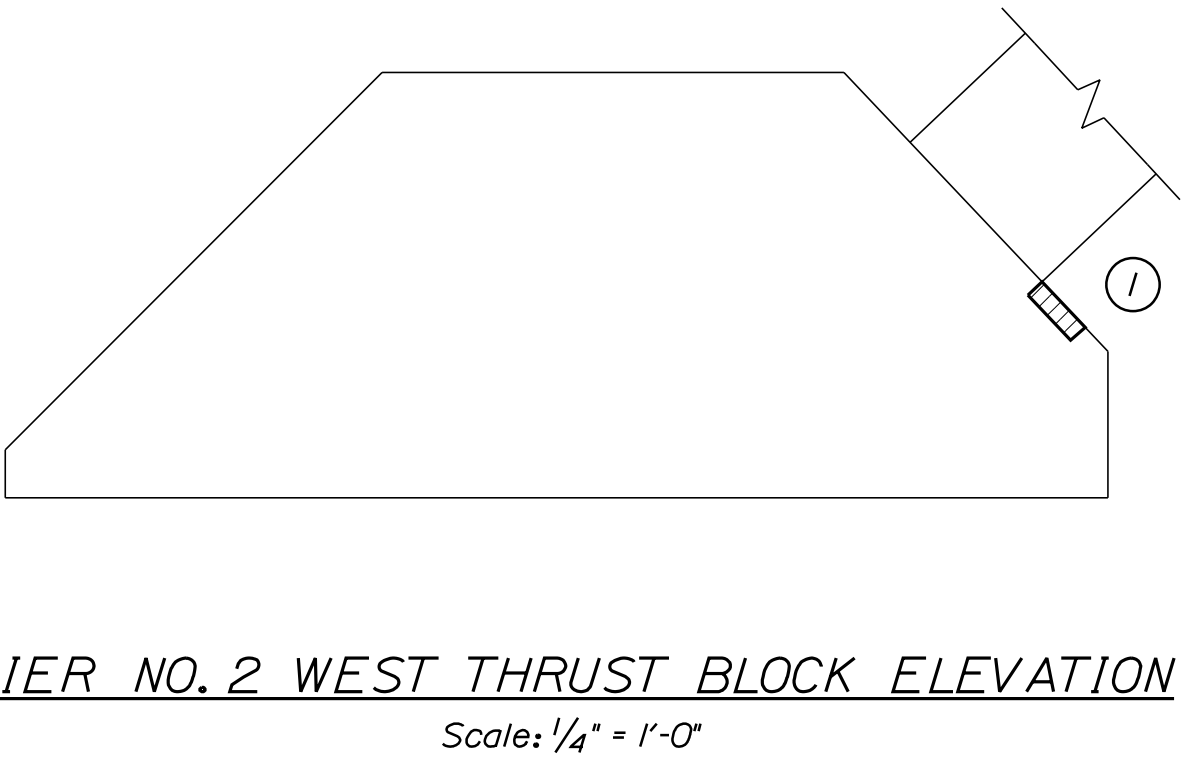
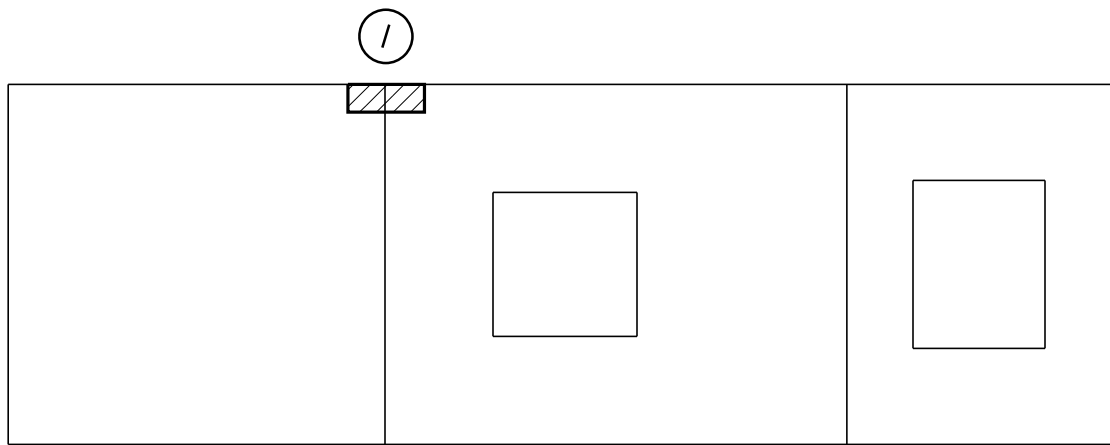
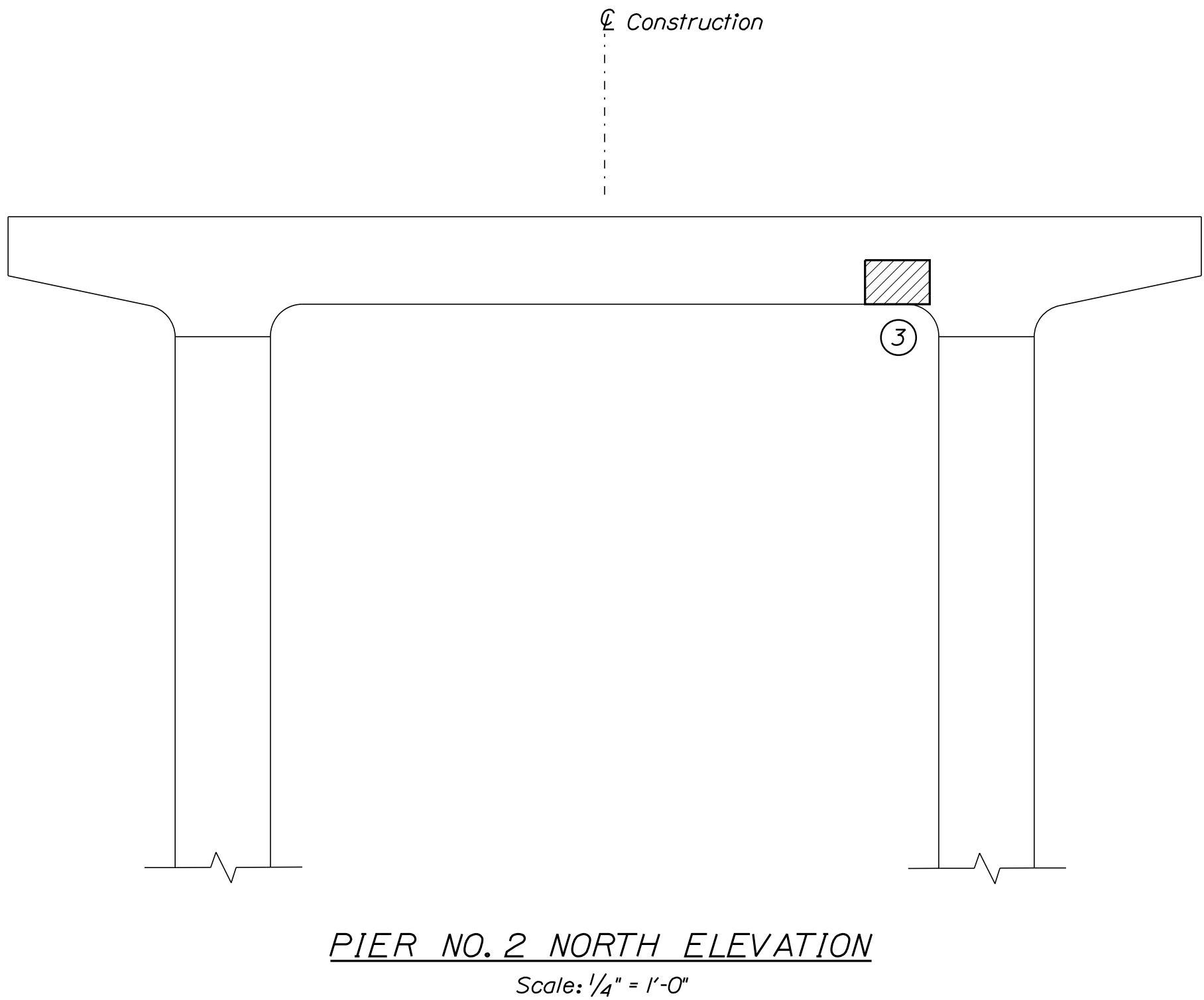
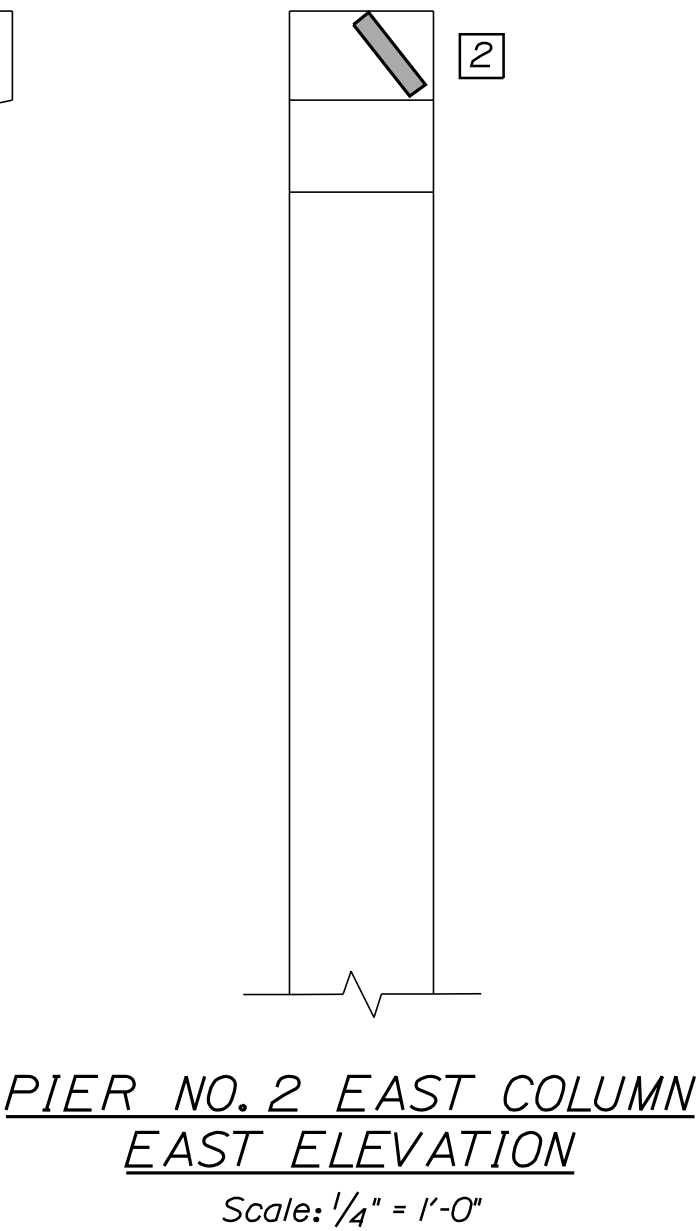
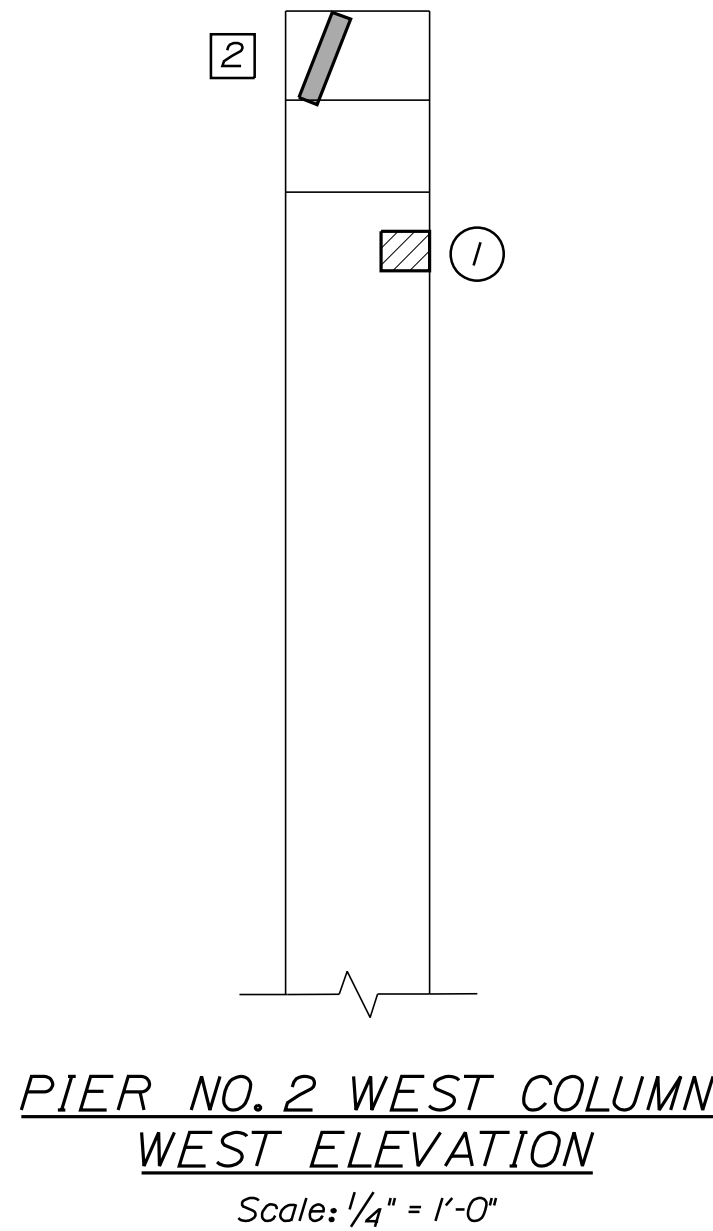
FALMOUTH CUMBERLAND COUNTY

ABUTMENT REPAIRS AND MODIFICATIONS

SHEET NUMBER

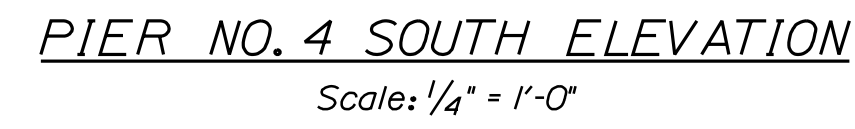
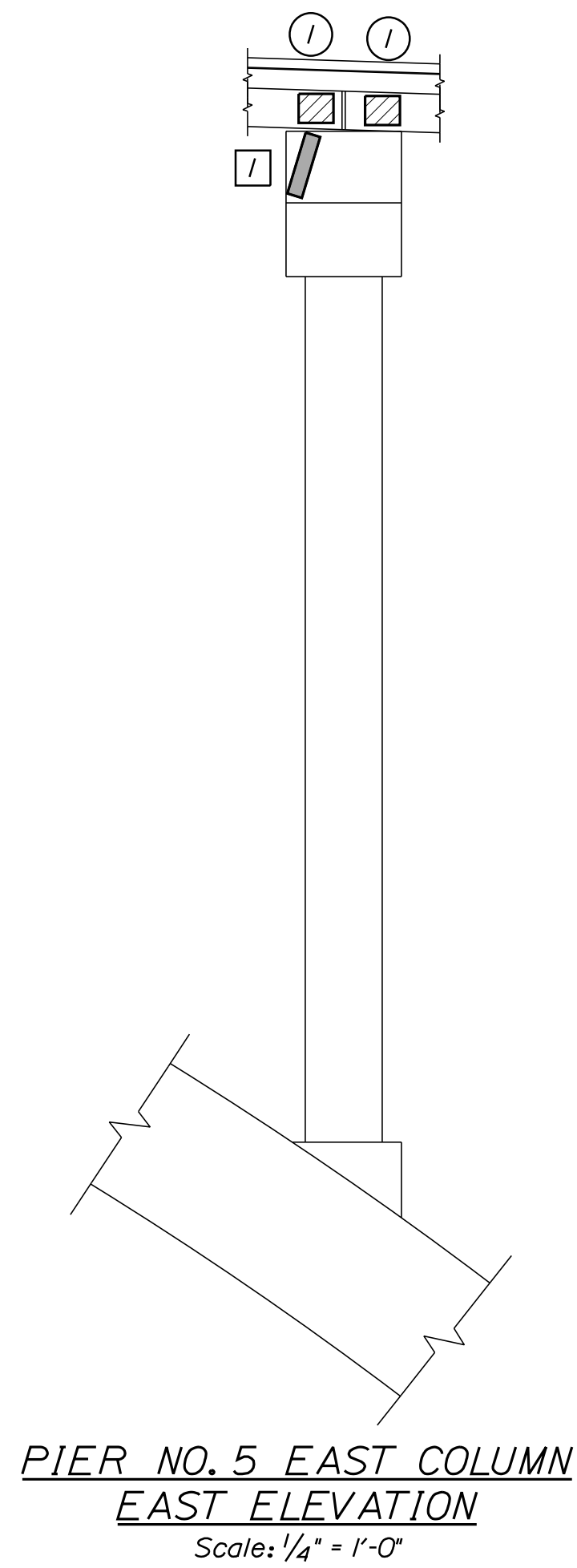
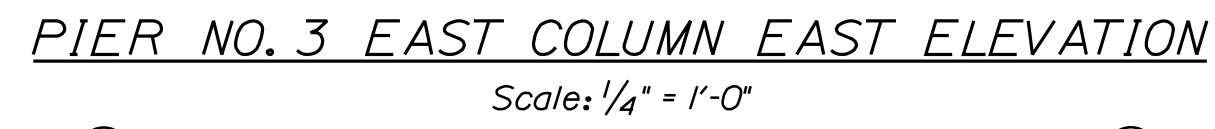
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OF 14



- KEY
- = Repair of Vertical Surfaces
 - = Limit of Crack Repair
 - = Square Foot Area of Repair
 - = Linear Feet of Crack Repair

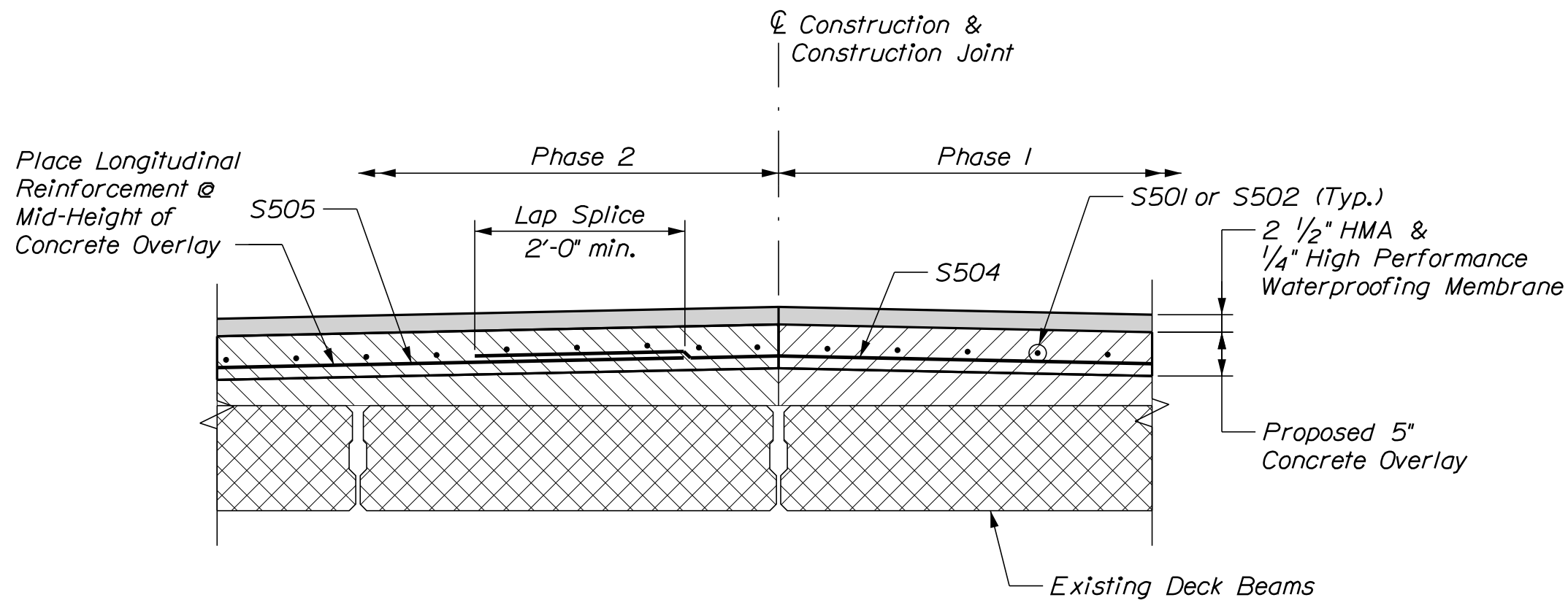
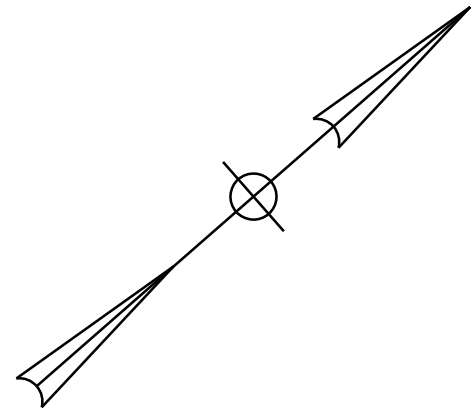
STATE OF MAINE DEPARTMENT OF TRANSPORTATION				2231000		BRIDGE PLANS	
				WIN 22310.00		BRIDGE NO. 5669	
PRESUMPCOT FALLS BRIDGE OVER PRESUMPCOT RIVER FALMOUTH CUMBERLAND COUNTY		PIER REPAIRS AND MODIFICATIONS (1 OF 2)		SHEET NUMBER		11	
OF 14		DESIGN-DETAILED CHECKED-REVIEWED CTA DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES		PROJ. MANAGER MCKENZIE KESSEBGEN		BY DPD RSLUNT	
						DATE 11/25/2018 11/25/2018	



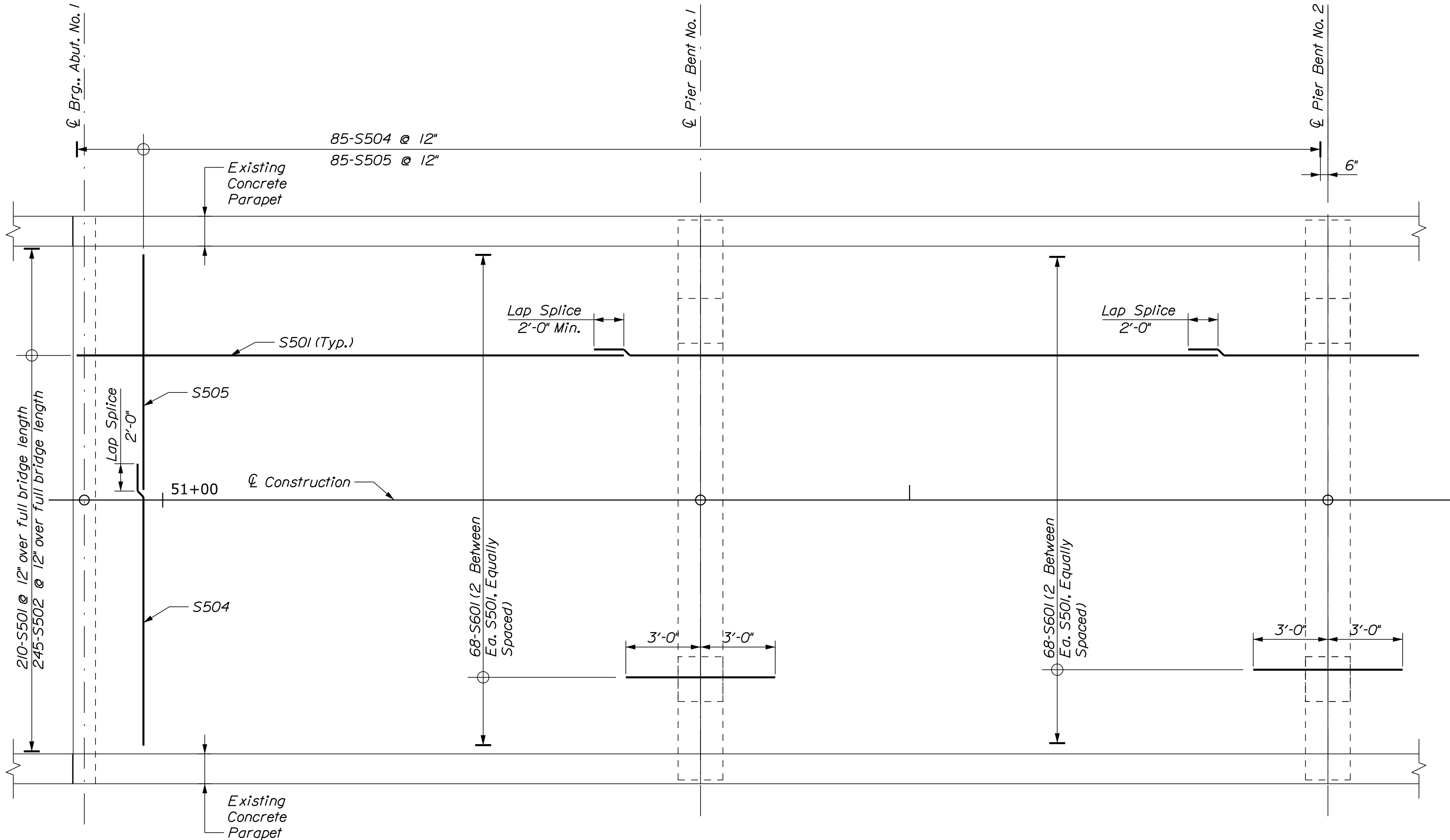
KEY

	= <i>Repair of Vertical Surfaces</i>
	= <i>Limit of Crack Repair</i>
	= <i>Square Foot Area of Repair</i>
	= <i>Linear Feet of Crack Repair</i>

SHEET NUMBER 12 OF 14	PRESUMPCOT FALLS BRIDGE OVER PRESUMPCOT RIVER FALMOUTH CUMBERLAND COUNTY				PROJ. MANAGER MORRISSEY	BY	DATE
					DESIGN-DETAILED BGP/ARK	DPD	11/25/2018
					CHECKED-REVIEWED CTA	RSBLUNT	11/23/2019
					DESIGN2-DETAILED D2		
					DESIGN3-DETAILED D3		
					REVISIONS 1		
					REVISIONS 2		
					REVISIONS 3		
					REVISIONS 4		
					FIELD CHANGES		
PIER REPAIRS AND MODIFICATIONS (2 OF 2)							
				STATE OF MAINE			
				DEPARTMENT OF TRANSPORTATION			
				2231000			
				BRIDGE NO. 5669			
				WIN			
				22310.00			
				BRIDGE PLANS			



REBAR LAP SPLICE DETAIL
Scale: 1" = 1'-0"



DECK PLAN
Scale: 3/16" = 1'-0"

NOTES:

1. Clear cover for reinforcement in the concrete overlay shall be 2" min. from vertical faces.
2. Reinforcement layout for spans 1-6 is shown on this sheet and sheet 14. Layout for reinforcement in spans 7-12 is opposite hand.

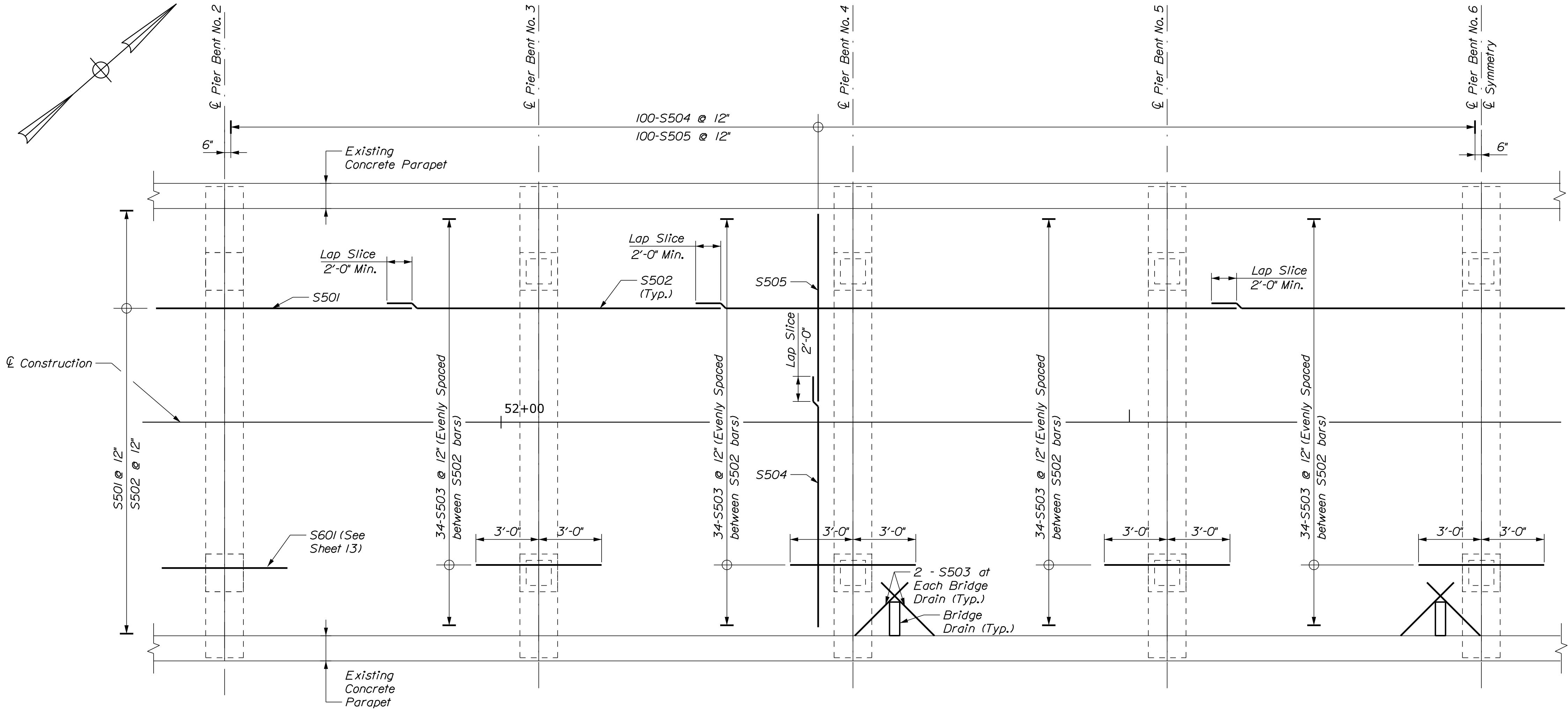
PRESUMPCOT FALLS BRIDGE
OVER PRESUMPCOT RIVER
FALMOUTH CUMBERLAND COUNTY
DECK REINFORCEMENT
PLAN (1 OF 2)

SHEET NUMBER
13
OF 14



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2231000
BRIDGE NO. 5699
WIN
22310.00
BRIDGE PLANS

PROJ. MANAGER	DESIGNED	CHECKED	DATE
MCKENZIE KESSEBORN	DPD	RSBLINT	11/25/2018
DESIGNED-DETAILED	BGP/IRK	RSBLINT	11/25/2018
CHECKED-REVIEWED	BGP/IRK	RSBLINT	11/25/2018
DESIGNED-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

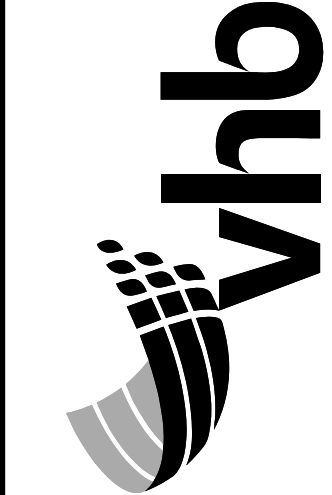


DECK PLAN
Scale: 3/16" = 1'-0"

REINFORCING SCHEDULE		
Mark	QTY.	LENGTH
S501	210	35'-0"
S502	245	27'-0"
S503	254	6'-0"
S504	370	19'-4"
S505	370	16'-6"
S601	272	6'-0"

NOTES:

1. Clear cover for reinforcement in the concrete overlay shall be 2" min. from vertical faces.
2. Reinforcement layout for spans 1-6 is shown on this sheet and Sheet 13. Layout for reinforcement in spans 7-12 is opposite hand.
3. Reinforcing schedule shown on this sheet includes required quantities for all spans.



PROJ. MANAGER	DATE	BY	DATE
MARKET KESSELEN	11/25/2018	DPD	11/25/2018
DESIGN-DETAILED		RSBLINT	11/25/2018
CHECKED-REVIEWED			
DESIGN-DETAILED			
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			