

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



NEWRY
OXFORD COUNTY
BEAR RIVER BRIDGE
OVER
BEAR RIVER
ROUTE 2, 5, & 26
FEDERAL AID PROJECT NO. 2352500
PROJECT LENGTH 0.04 mi.
BRIDGE NO. 2055

Designed by:



500 Southborough Dr.
Suite 105B
South Portland, ME 04106

LIST OF DRAWINGS

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Bridge Approach and Joint Details	5
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SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Eighth Edition 2017 with 2018 Interim Revisions.

TRAFFIC DATA

Current (2018) AADT	4800
Future (2038) AADT	5760
DHV - % of AADT	9%
Design Hour Volume	518
Heavy Trucks (% of AADT)	19%
Heavy Trucks (% of DHV)	13%
Directional Distribution (% of DHV)	51%
18 kip Equivalent P 2.0	969
18 kip Equivalent P 2.5	923
Design Speed (mph)	50

MATERIALS

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

BASIC DESIGN STRESSES

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

UTILITIES

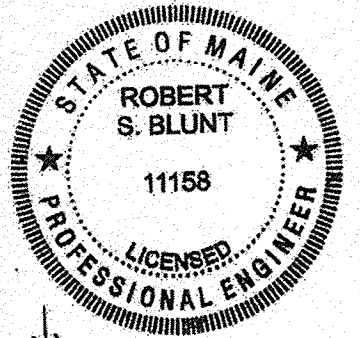
CMP
Oxford
Firstlight

MAINTENANCE OF TRAFFIC

One lane of alternating vehicular traffic with temporary signals on each approach.

PROJECT LOCATION:	Bear River Bridge (#2055) over Bear River. Located 0.07 of a mile south of Bear River Road. Bridge coordinates of Latitude 44°29'11.8" N Longitude 70°47'16.9" W
PROGRAM AREA:	Bridge Program
OUTLINE OF WORK:	Bridge Construction: Bridge wearing surface replacement and approach work.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
		12-10-2020
COMMISSIONER:		CHIEF ENGINEER:



	SIGNATURE
11158	P.E. NUMBER
November 20, 2020	DATE

PROJECT INFORMATION	BRIDGE
PROGRAM	BRIDGE
PROJECT MANAGER	JASON STETSON
DESIGNER	ROBERT S. BLUNT
CONSULTANT	VHB
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

NEWRY BEAR RIVER BRIDGE	TITLE SHEET
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SHEET NUMBER
1
OF 7

WIN 023525.00

2353500

Date:11/20/2020

Username: PDonovan
Division: BRIDGE

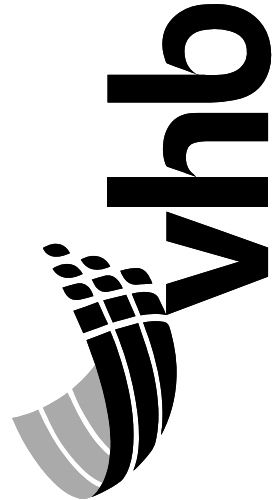
Filename: 001_Title Sheet.dgn

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.202	Removing Pavement Surface	100	SY
202.30	Removing Existing Concrete Wearing Surface (4I CY)	1	LS
203.20	Common Excavation	260	CY
304.10	Aggregate Subbase Course-Gravel	180	CY
403.208I	Hot Mix Asphalt - 12.5 mm (Polymer Modified)	36	TON
403.213I	Hot Mix Asphalt - 12.5 mm (base and intermediate course Polymer Modified)	130	TON
409.15	Bituminous Tack Coat, Applied	68	GAL
502.29	Structural Concrete Wearing Surface on Bridges (4I CY)	1	LS
502.29I	Saw Cut Grooving (3300 SF)	1	LS
502.70	Bridge Drains	2	EA
503.12	Reinforcing Steel, Fabricated and Delivered	6,500	LB
503.13	Reinforcing Steel, Placing	6,500	LB
508.13	Sheet Waterproofing Membrane (19 SY)	1	LS
515.2I	Protective Coating for Concrete Surfaces (610 SY)	1	LS
518.50	Repair of Upward Facing Surfaces- to Reinforcing Steel < 8 inches	150	SF
518.5I	Repair of Upward Facing Surfaces- below Reinforcing Steel < 8 inches	150	SF
519.60	Expansion Device - Asphaltic Plug Joint	95	LF
524.30I	Temporary Structural Support - Roadway	1	LS
526.30I	Temporary Concrete Barrier, Type I (300 LF)	1	LS
527.34	Work Zone Crash Cushions	2	UNIT
627.733	4" White or Yellow Painted Pavement Marking Line	2,200	LF
627.75	White or Yellow Pavement & Curb Marking	90	SF
627.77	Remove Existing Pavement Marking	950	SF
627.78	Temporary 4" Painted Pavement Marking Line, White or Yellow	2,600	LF
629.05	Hand Labor, Straight Time	10	HR
631.12	All Purpose Excavator (including operator)	10	HR
631.172	Truck-large (including operator)	10	HR
639.19	Field Office, Type B	0.5	EA
643.72	Temporary Traffic Signal: Bear River Bridge	1	LS
652.312	Type III Barricades	2	EA
652.33	Drum	50	EA
652.34	Cone	50	EA
652.35	Construction Signs	250	SF
652.36I	Maintenance of Traffic Control Devices	1	LS
652.38	Flaggers	240	HR
656.75	Temporary Soil Erosion and Water Pollution Control	1	LS
659.10	Mobilization	1	LS

GENERAL CONSTRUCTION NOTES

1. Dimensions and details shown in these plans have been obtained from limited field measurements and may not accurately reflect actual field conditions. Accordingly, the Contractor shall take field measurements of all existing components impacted by the proposed work to ensure consistency with the proposed work. Any discrepancies in dimensions, character or extent of the existing features that affect the proposed work shall be brought to the attention of the Resident before advancing the work.
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 the concrete wearing surface, bridge concrete curbs, including inside faces, top and outside faces, and exterior T-Beam fascia.
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. Payment for this survey work will be considered incidental.
9. Any disturbance or damage to existing ground and slopes beyond what is shown in these plans shall be repaired to the preconstruction condition as directed by the Resident at no cost to the Department.
10. There is an existing utility conduit mounted to the south fascia of the bridge that continues through the backwalls and into the approach sections at each end. The Contractor shall use caution to not disturb or damage the conduit when excavating, backfilling and working around it. Any damage to the existing conduit shall be repaired at the Contractor's expense, as directed by the Utility and the Resident.
11. The bridge deck evaluation report of the existing bridge may be accessed at the MaineDOT web address. The report contains visual inspection information and deck core data of the bridge. There is no assurance that the information or data is a true representation of the conditions of the entire deck.
12. Temporary pavement ramps shall be constructed to meet the following criteria: For roadways with speed limits equaling or exceeding 50 mph, temporary ramps shall be constructed at a length of eight feet per inch of transition depth. For roadways with speed limits less than 50 mph, temporary ramps shall be constructed at a length of four feet per inch of transition depth. Materials, placement, maintenance, and removal shall be incidental to contract items.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		
	2352500	WIN
	BRIDGE NO. 2055	23525.00
BRIDGE PLANS		



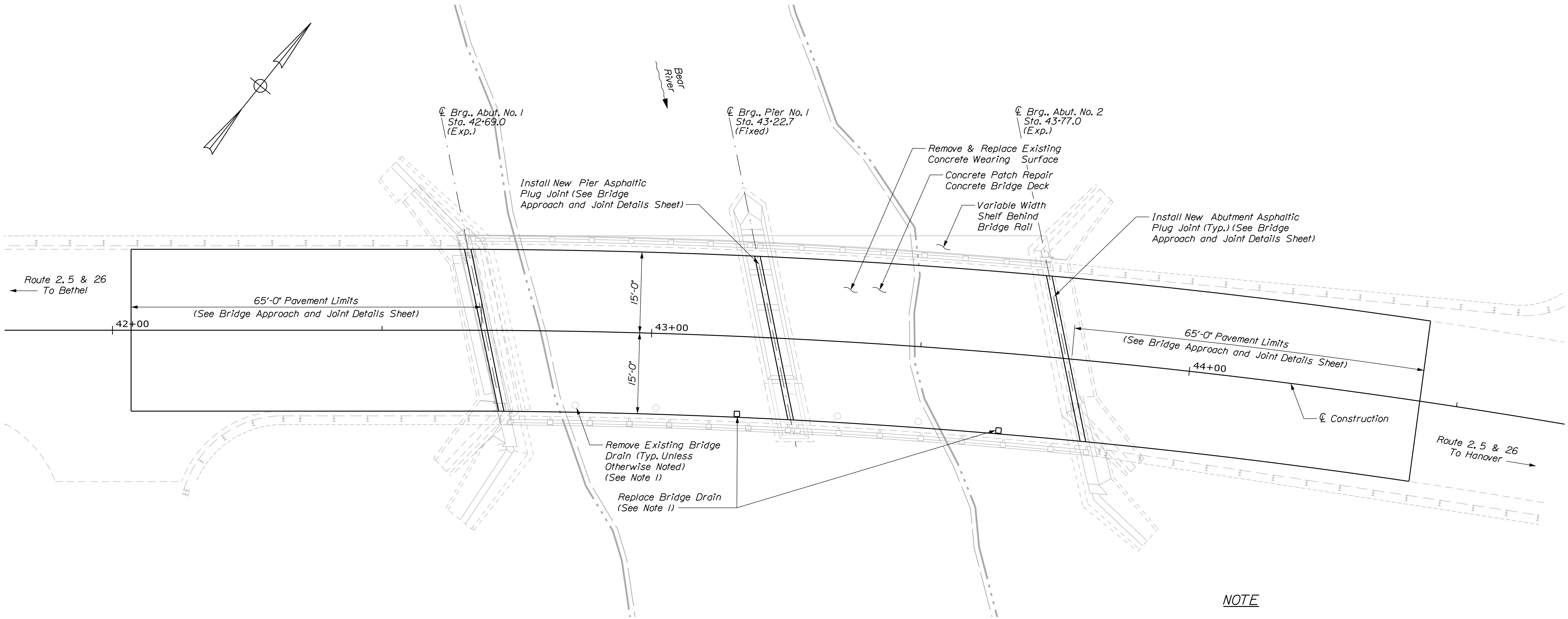
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DESIGN-DETAILED	WEB	DPD	DPD	11/20/20
CHECKED-REVIEWED	GME	RSB	RSB	11/20/20
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

NEWRY ME BEAR RIVER BRIDGE OVER BEAR RIVER	OXFORD COUNTY	ESTIMATED QUANTITIES AND NOTES

SHEET NUMBER

2

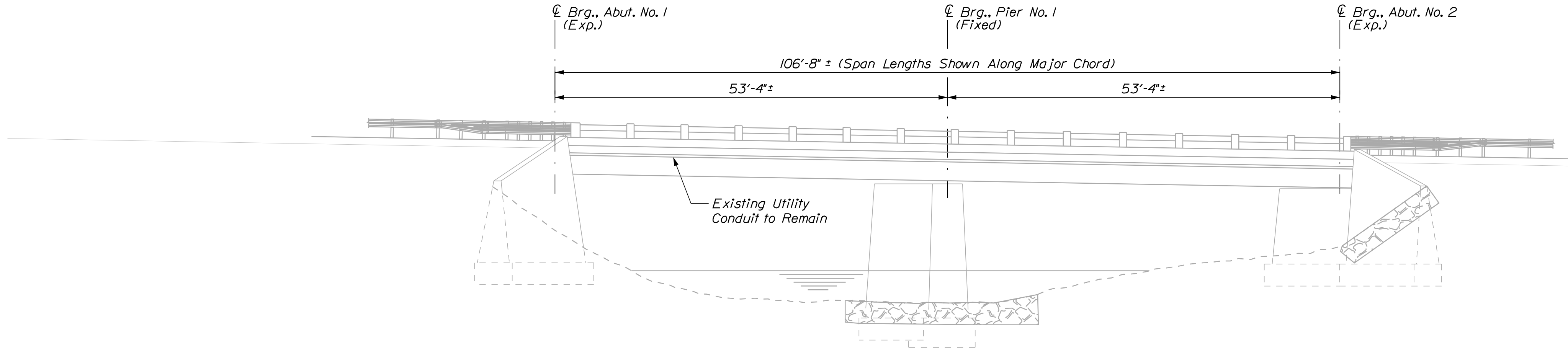
OF 7



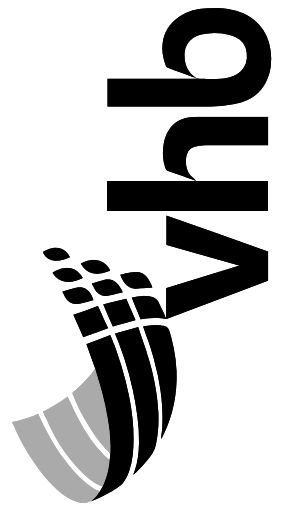
PLAN
Scale: 1" = 10'-0"

NOTE

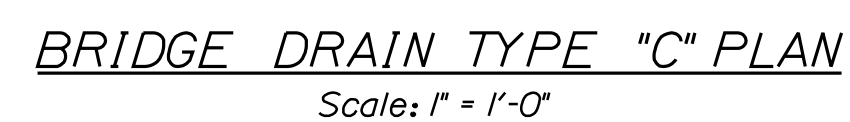
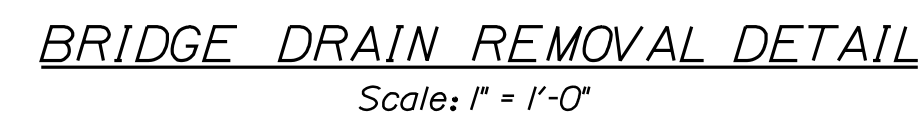
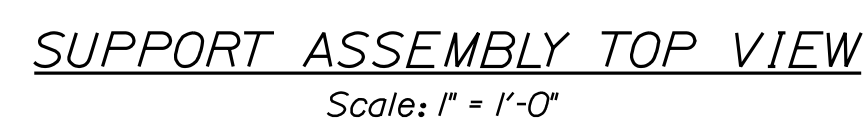
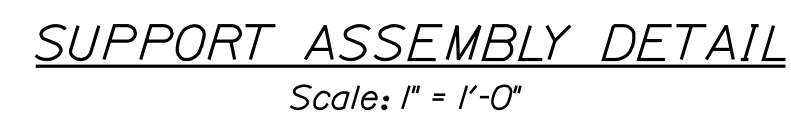
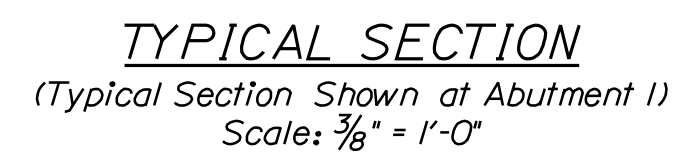
1. Replace select bridge drains as shown on the plans. All remaining bridge drains shall be removed and the deck shall be patched in accordance with Section 518.



ELEVATION
Scale: 1" = 10'-0"



PROJ. MANAGER	JASON	STATION	DATE
DESIGN-DETAILED	WEB	11/20/20	
CHECKED-REVIEWED	OME	11/20/20	
DESIGN-DETAILED	OME		
DESIGN-DETAILED	OME		
REVISIONS	1		
REVISIONS	2		
REVISIONS	3		
REVISIONS	4		
FIELD CHANGES			



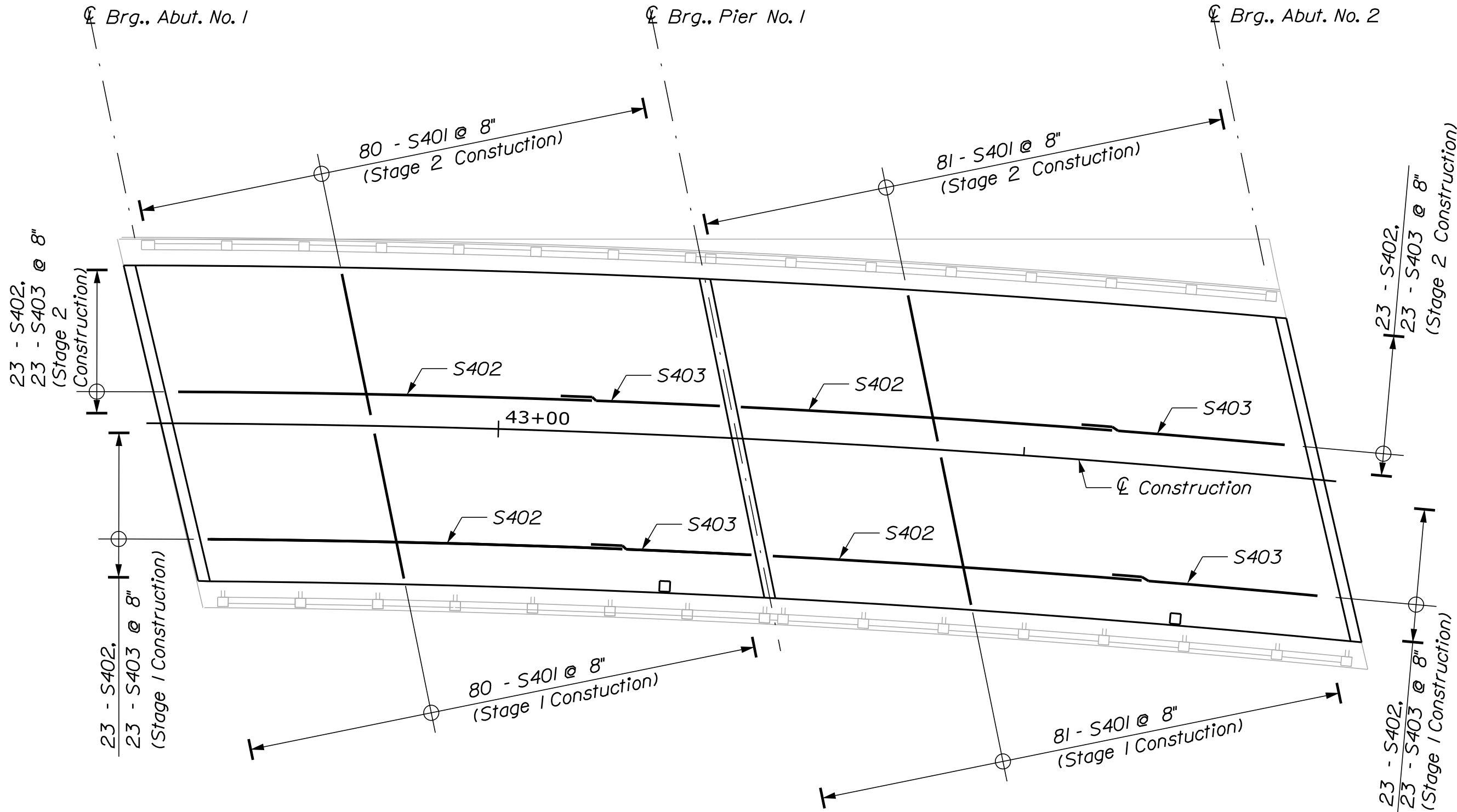
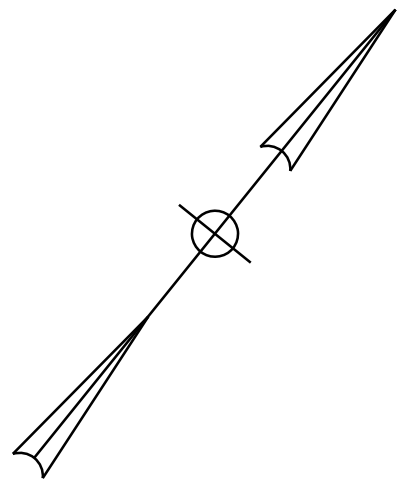
1. *For additional bridge drain details not shown see the Standard Details.*
2. *The Contractor shall saw cut longitudinal grooves in the proposed wearing surface in accordance with the Standard Specification.*
3. *Protective Coating for Concrete Surfaces shall not be applied to the bridge rail unless directed by the Resident.*
4. *The Contractor may place concrete for the deck repair areas concurrently with wearing surface with approval of the Resident.*

PROJ. MANAGER	JASON	STETSON	BY	DATE
DESIGN-DETAILED	MEB		DPD	11/20/20
CHECKED-REVIEWED	GME		RSB	11/20/20
DESIGN-DETAILED2				
DESIGN-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

NEWRY ME
BEAR RIVER BRIDGE
OVER BEAR RIVER
OXFORD COUNTY

TYPICAL SECTION

Filename: 005_Misc_Dt.dgn



PLAN
Scale: 1" = 10'-0"

Reinforcing Schedule		
Mark	Quantity	Length
S401	322	14'-8"
S402	92	40'-0"
S403	92	14'-1"

- NOTES**
1. Place S401 bars parallel to centerline bearing.
 2. Place S402/S403 bars parallel to centerline construction.
 3. Stagger laps of S402 and S403 bars by alternating S403 bars at end of each span.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2352500

BRIDGE NO. 2055WIN23525.00

BRIDGE PLANS

PROJ. MANAGER	JASON	STETSON	BY	DATE
DESIGN-DETAILED	WEB		DPD	11/20/20
CHECKED-REVIEWED	GME		RSB	11/20/20
DESIGN2-DETAILED2				
DESIGN3-DETAILED3				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

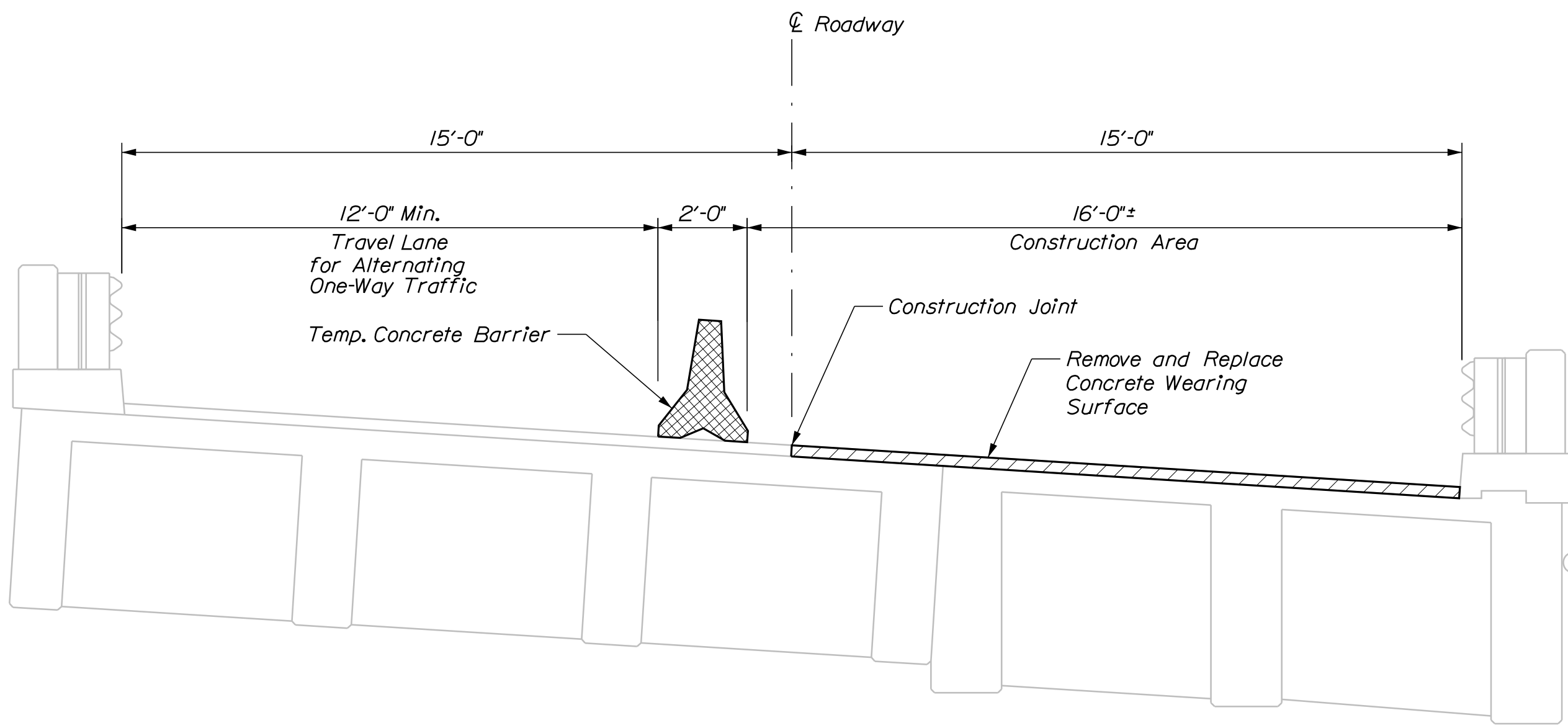
BEAR RIVER BRIDGE
OVER BEAR RIVER

NEWRY ME

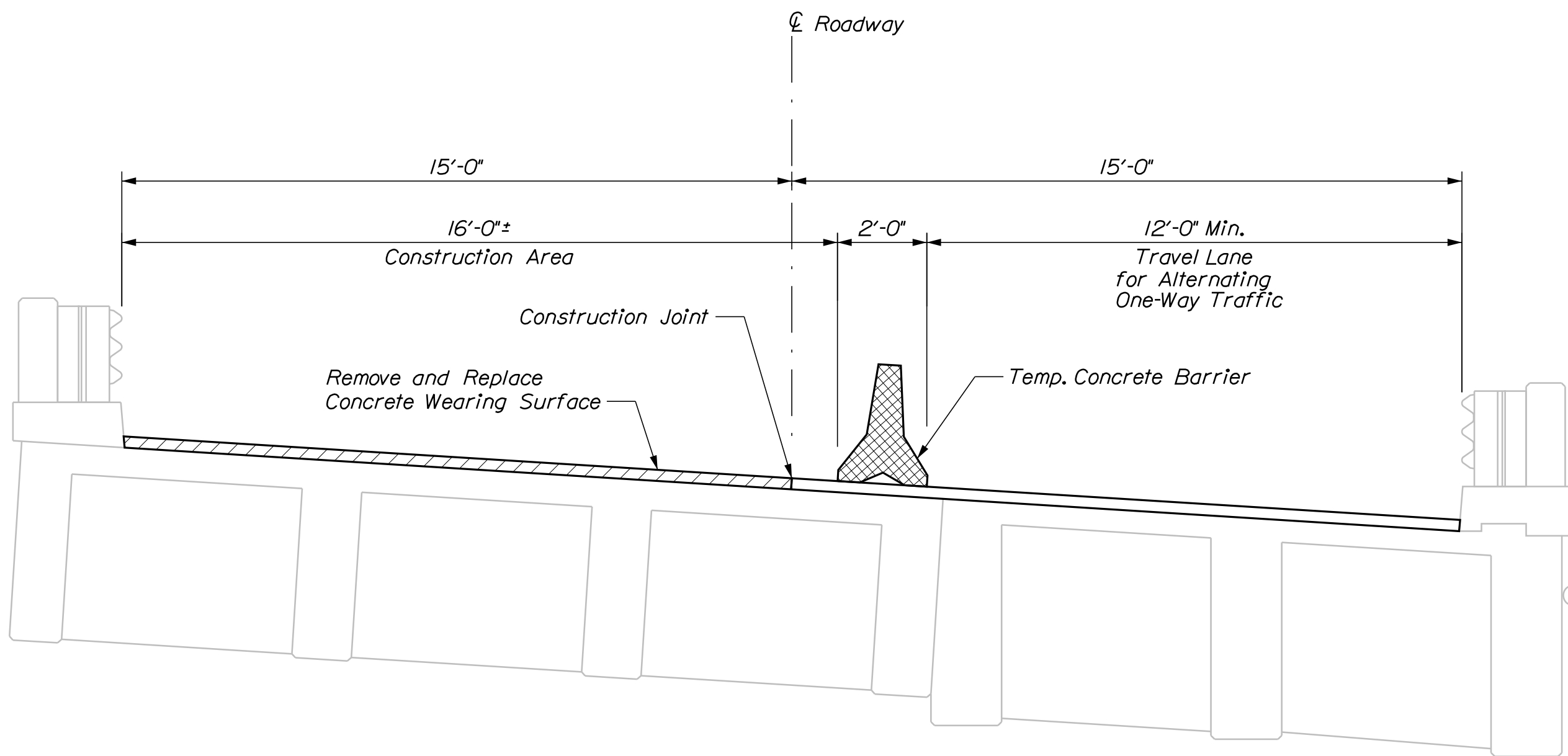
OXFORD COUNTY

OVERLAY REINFORCING PLAN

SHEET NUMBER
6
OF 7



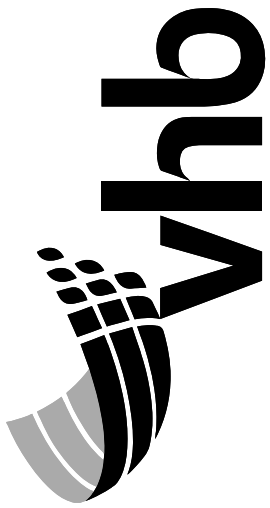
STAGE 1
(Typical Section Shown at Abutment 1)
Scale: 3/8" = 1'-0"



STAGE 2
(Typical Section Shown at Abutment 1)
Scale: 3/8" = 1'-0"

MAINTENANCE OF TRAFFIC NOTES

1. The replacement of the wearing surface, deck repairs, bridge drain removal and replacement on the Route 2, 5 & 26 bridge over Bear River (Bridge #2055) is proposed to be conducted in two phases. The traffic will be maintained along the bridge as alternating one-way traffic using temporary traffic signals.
2. All traffic control equipment and layouts shall conform to the latest edition of the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), Chapter 6. Temporary traffic signal equipment and design shall conform to the MUTCD, Chapter 4.
3. All traffic control signs, sign support structures, temporary signal equipment, channelizing devices, flashing arrow panels (FAP), and other traffic control equipment along the roadside shall meet or exceed NCHRP 350 test level 3 (TL-3) requirements regardless of where implemented on the project. If the equipment has been manufactured since 1999, the equipment shall meet Manual on Safety Hardware (MASH) requirements.
4. Any Contractor supplied traffic control signs, equipment, or devices found to be damaged or unserviceable shall be replaced at the Contractor's expense.



PROJ. MANAGER	JASON	STATION	DATE
DESIGN-DETAILED	WEB	DPD	11/20/20
CHECKED-REVIEWED	GME	RSB	11/20/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BEAR RIVER BRIDGE OVER BEAR RIVER	OXFORD COUNTY
NEWRY ME	STAGED CONSTRUCTION

SHEET NUMBER

