

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

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

LIST OF DRAWINGS

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General Plan	3
Abutment Repair	4,5
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CORNISH and HIRAM YORK and OXFORD COUNTIES HIRAM BRIDGE OVER OSSISPEE RIVER BRIDGE ST. \ RIVER RD. BRIDGE REHAB 23166.00 PROJECT LENGTH 0.050 mi. BRIDGE NO. 5087

UTILITIES

Central Maine Power
Charter Communications
Consolidated Communications
Cornish Sewer District

TRAFFIC DATA

Current (2020) AADT	510
Future (2040) AADT	560
DHV - % of AADT	12
Design Hour Volume	67
Heavy Trucks (% of AADT)	8
Heavy Trucks (% of DHV)	1
Directional Distribution (% of DHV)	53
18 kip Equivalent P 2.0	18
18 kip Equivalent P 2.5	17
Design Speed (mph)	30

MAINTENANCE OF TRAFFIC

Bridge will be closed during construction with traffic detoured.

MATERIALS

Concrete: Class "A"

Reinforcing:
Plain Reinforcing Steel ASTM A615, Grade 60

BASIC DESIGN STRESSES

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

PROJECT LOCATION	Hiram Bridge (#5087) over Ossipee River 0.16 Miles North of Route 25 Lat./Long. 43°48'43.9" N 70°48'11.4" W
PROGRAM AREA	Highway-Bridge Traditional
OUTLINE OF WORK	Bridge Rehabilitation

WIN 023166.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED: _____ DATE: 12-30-22
COMMISSIONER: _____
CHIEF ENGINEER: _____

RECEIVED
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
12-30-22

SIGNATURE: _____ P.E. NUMBER: 12-18-22 DATE: _____

PROJECT INFORMATION	
PROGRAM	BRIDGE
PROJECT MANAGER	BRIAN NICHOLS
DESIGNER	ERIN BREWER
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

CORNISH and HIRAM
HIRAM BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 14

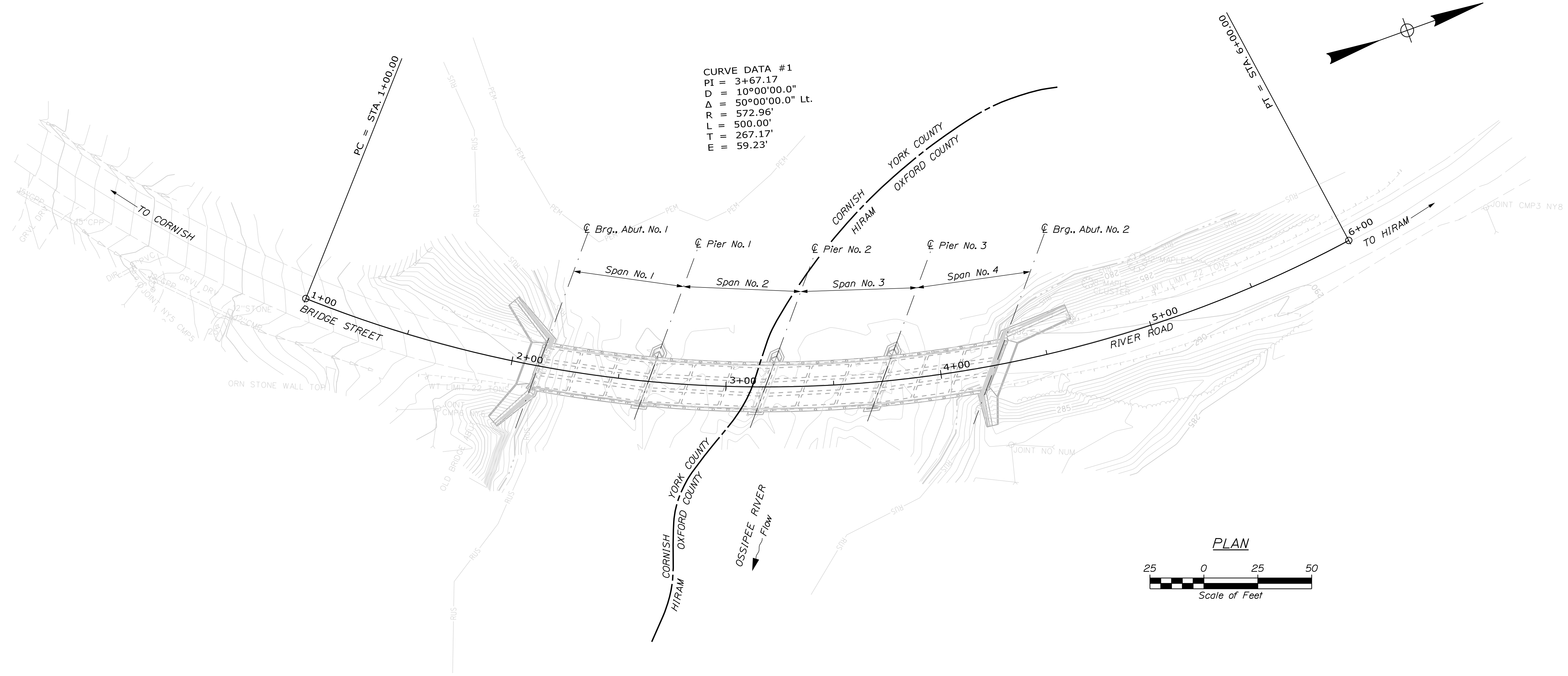
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 Username: Brian.Nichols
 Date: 12/19/2022

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	2	CY
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	8	CY
502.23	STRUCTURAL CONCRETE PIERS	1	CY
502.71	BRIDGE DRAIN EXTENSIONS	4	EA
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	1200	LB
503.13	REINFORCING STEEL, PLACING	1200	LB
518.60	REPAIR OF VERTICAL SURFACES < 8 IN.	270	SF
518.61	REPAIR OF VERTICAL SURFACES >= 8 IN.	2	CY
518.70	REPAIR OF OVERHEAD SURFACES < 8 IN.	170	SF
520.2021	JOINT SEAL - POUR IN PLACE	3	EA
526.301	PORTABLE CONCRETE BARRIER, TYPE I (60 LF)	1	LS
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	80	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	80	HR
631.172	TRUCK - LARGE (INCLUDING OPERATOR)	20	HR
639.19	FIELD OFFICE TYPE B	1	EA
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	20	EA
652.34	CONE	40	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGER	120	HR
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

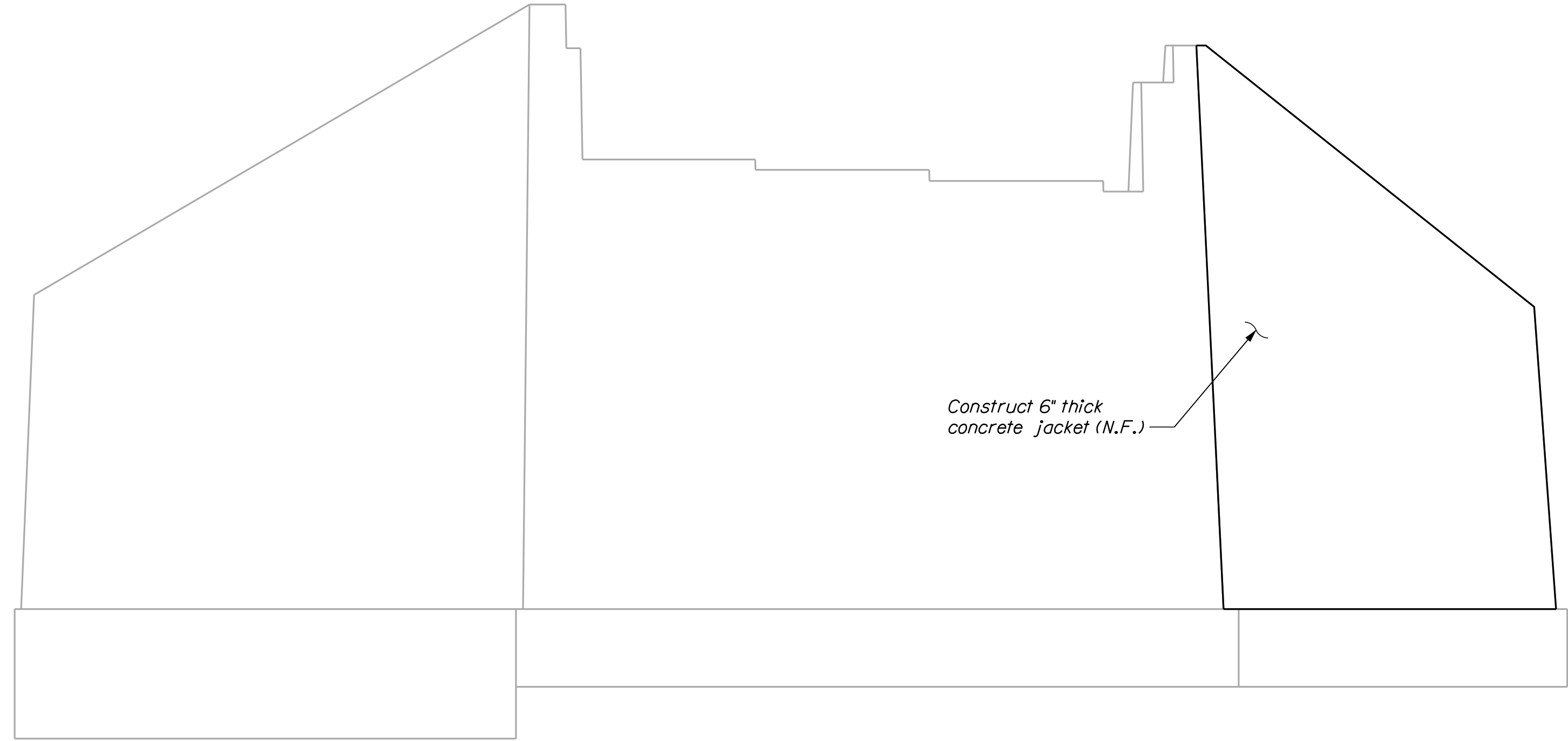
- For easements, construction limits, and right of way lines, refer to the Right of Way Map.
- All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
- Project information referred to below may be accessed at the following MaineDOT web address: <http://www.maine.gov/mdot/contractors/>
- 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.
- 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:
 - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
 - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
 - 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.
- Repair locations shown on the plans are approximate. Actual limits of repair will be determined in the field by the Resident.
- 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.
- The Contractor may need to remove existing vegetation or soil to access the Work. Payment will not be made directly and will be considered incidental to the Contract.
- Abutment No. 1 concrete jacketing and Pier No. 1 Nose cap repair shall be paid for under the following Items:
 - 202.12, Removing Existing Structural Concrete
 - 502.21, Structural Concrete Abutments and Retaining Walls
 - 502.23, Structural Concrete Piers
 - 503.12, Reinforcing Steel, Fabricated and Delivered
 - 503.13, Reinforcing Steel, Placing
- All other repair work shown shall be paid for under their respective Section 518 Items.
- Removing of deteriorated concrete in preparation of the Abutment No. 1 jacketing and Pier No. 1 nose cap repair, shall be done in accordance with Standard Specification Section 518.03.

HIRAM BRIDGE OSSIPPEE RIVER CORNISH and HIRAM YORK and OXFORD COUNTIES ESTIMATED QUANTITIES & GENERAL CONSTRUCTION NOTES	STATE OF MAINE DEPARTMENT OF TRANSPORTATION 023166.00 WIN 023166.00 BRIDGE NO. 5087 BRIDGE PLANS																																
SHEET NUMBER <div style="font-size: 2em; font-weight: bold; margin: 10px 0;">2</div> OF 14	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">PROJ. MANAGER</td> <td style="width: 25%;">BY</td> <td style="width: 25%;">DATE</td> <td style="width: 25%;"></td> </tr> <tr> <td>CHECKED-DETAILED</td> <td>M. CRITCHLOW</td> <td>OCT 2022</td> <td>SIGNATURE</td> </tr> <tr> <td>DESIGNS-DETAILED</td> <td>B. NICHOLS</td> <td>NOV 2022</td> <td>P.E. NUMBER</td> </tr> <tr> <td>REVISIONS 1</td> <td></td> <td></td> <td>DATE</td> </tr> <tr> <td>REVISIONS 2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>REVISIONS 3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>REVISIONS 4</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">FIELD CHANGES</td> </tr> </table>	PROJ. MANAGER	BY	DATE		CHECKED-DETAILED	M. CRITCHLOW	OCT 2022	SIGNATURE	DESIGNS-DETAILED	B. NICHOLS	NOV 2022	P.E. NUMBER	REVISIONS 1			DATE	REVISIONS 2				REVISIONS 3				REVISIONS 4				FIELD CHANGES			
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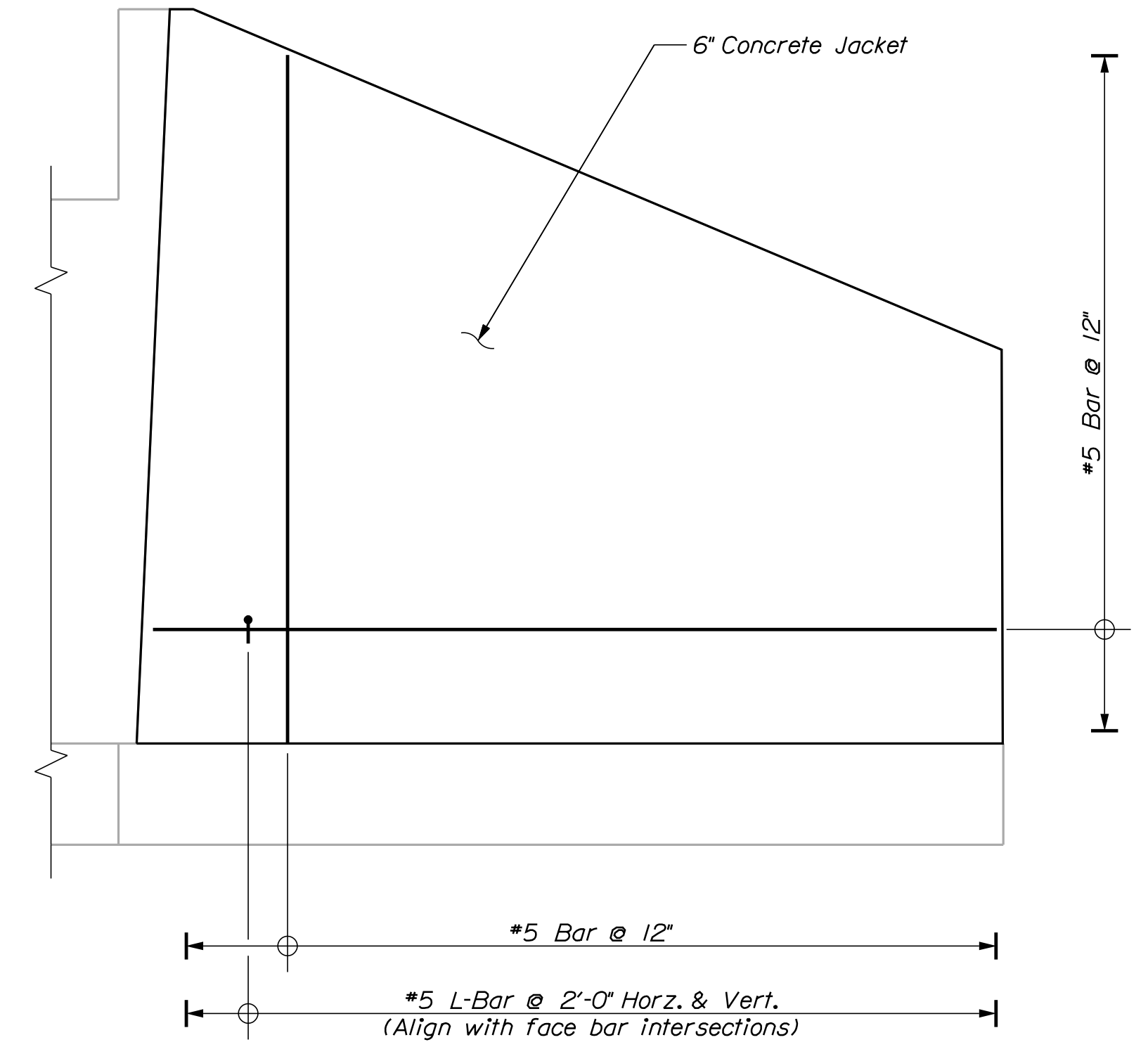


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DESIGN-DETAILED	E. BREWER	M. RITCHIE	OCT 2022
CHECKED-REVIEWED	G. CUSTAFSON	B. NICHOLS	NOV 2022
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

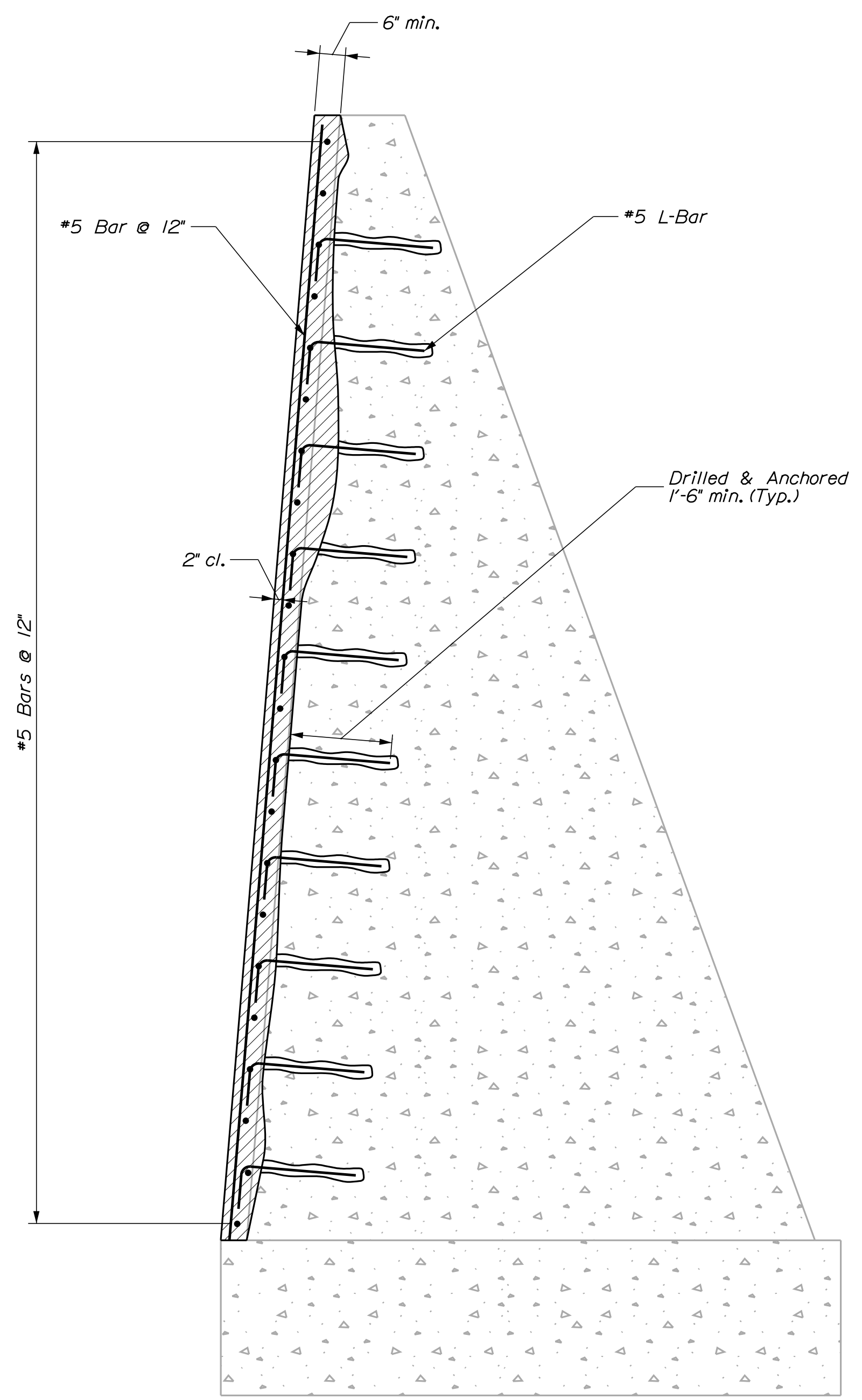
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ABUTMENT NO. 1 ELEVATION



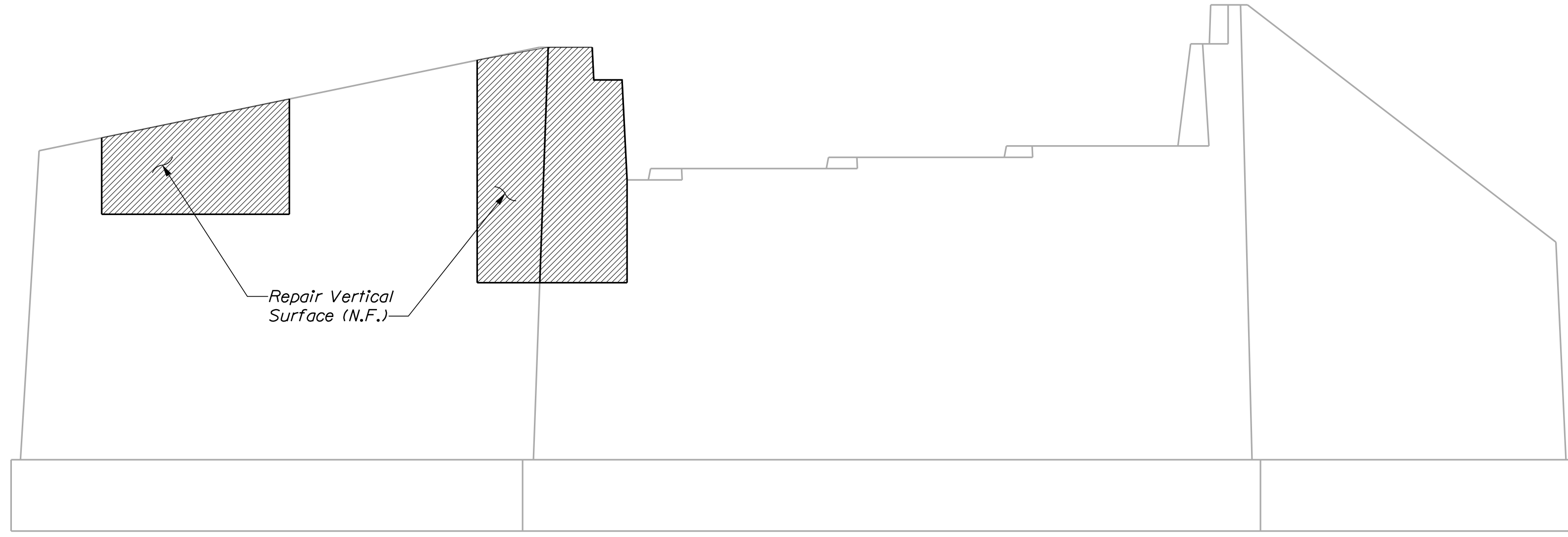
UPSTREAM WING ELEVATION



UPSTREAM WING SECTION

LEGEND
 N.F. = Near Face
 F.F. = Far Face
 E.F. = Each Face

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		023166.00		WIN		023166.00		BRIDGE NO. 5087		BRIDGE PLANS			
HIRAM BRIDGE				OSSIPPEE RIVER				CORNISH and HIRAM YORK and OXFORD COUNTIES				ABUTMENT REPAIR			
PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES	BY	DATE	SIGNATURE	P.E. NUMBER	DATE	
	E. BREWER	M. CRITCHLOW	B. NICHOLS							B. NICHOLS	OCT 2022				
	G. CUSTAFSON										NOV 2022				
SHEET NUMBER															
4															
OF 14															



ABUTMENT NO. 2 ELEVATION
Flow →

LEGEND

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

SHEET NUMBER

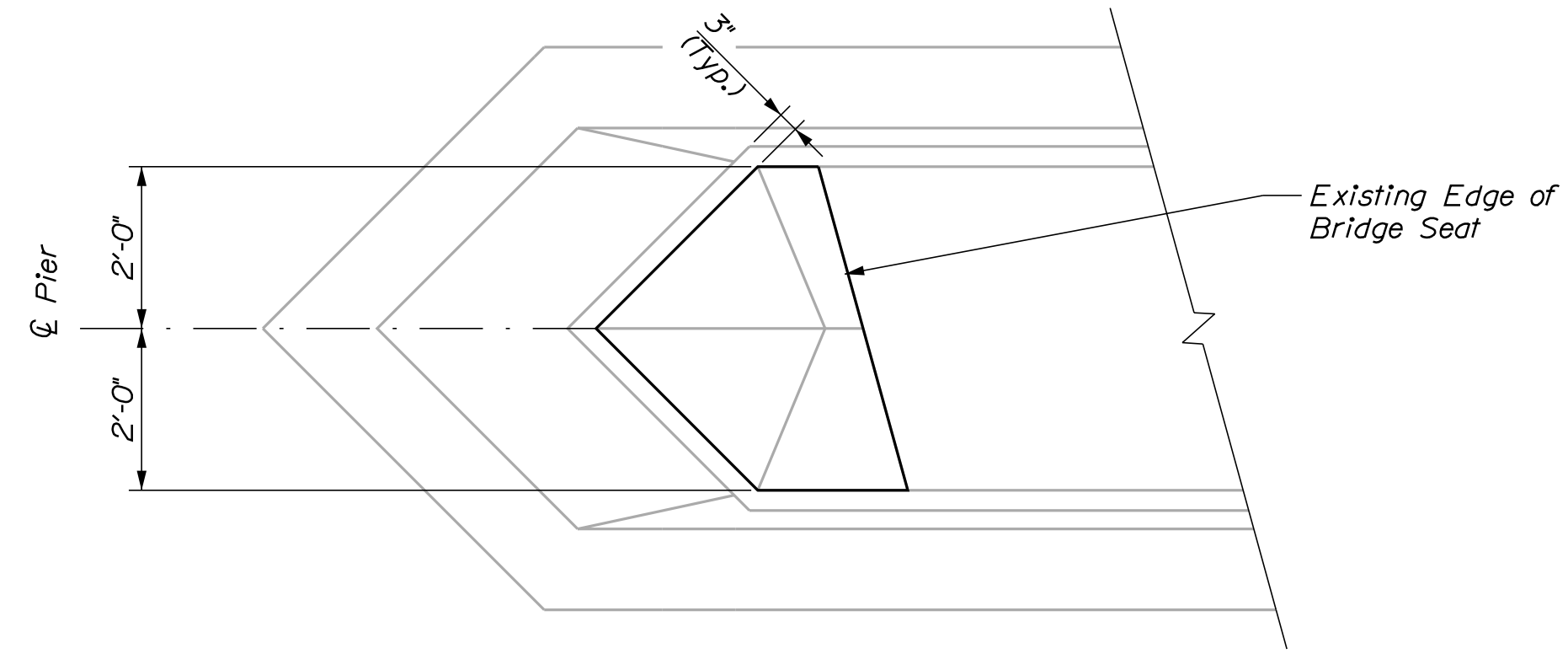
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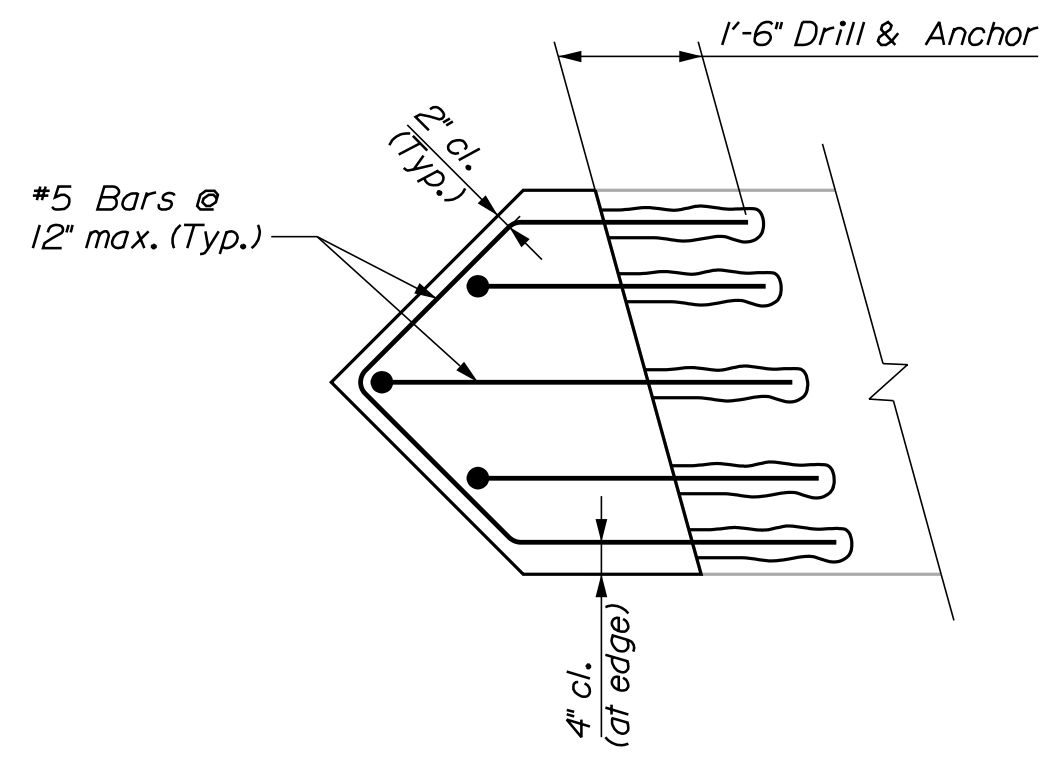
HIRAM BRIDGE
OSSIPPEE RIVER
CORNISH and HIRAM YORK and OXFORD COUNTIES
ABUTMENT NO. 2 REPAIR

PROJ. MANAGER	B. NICHOLS	BY	DATE
DESIGN-DETAILED	E. BREWER	M. CRITCHLOW	OCT 2022
CHECKED-REVIEWED	G. CUSTAFSON	B. NICHOLS	NOV 2022
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REVISIONS 2			DATE
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REVISIONS 4			
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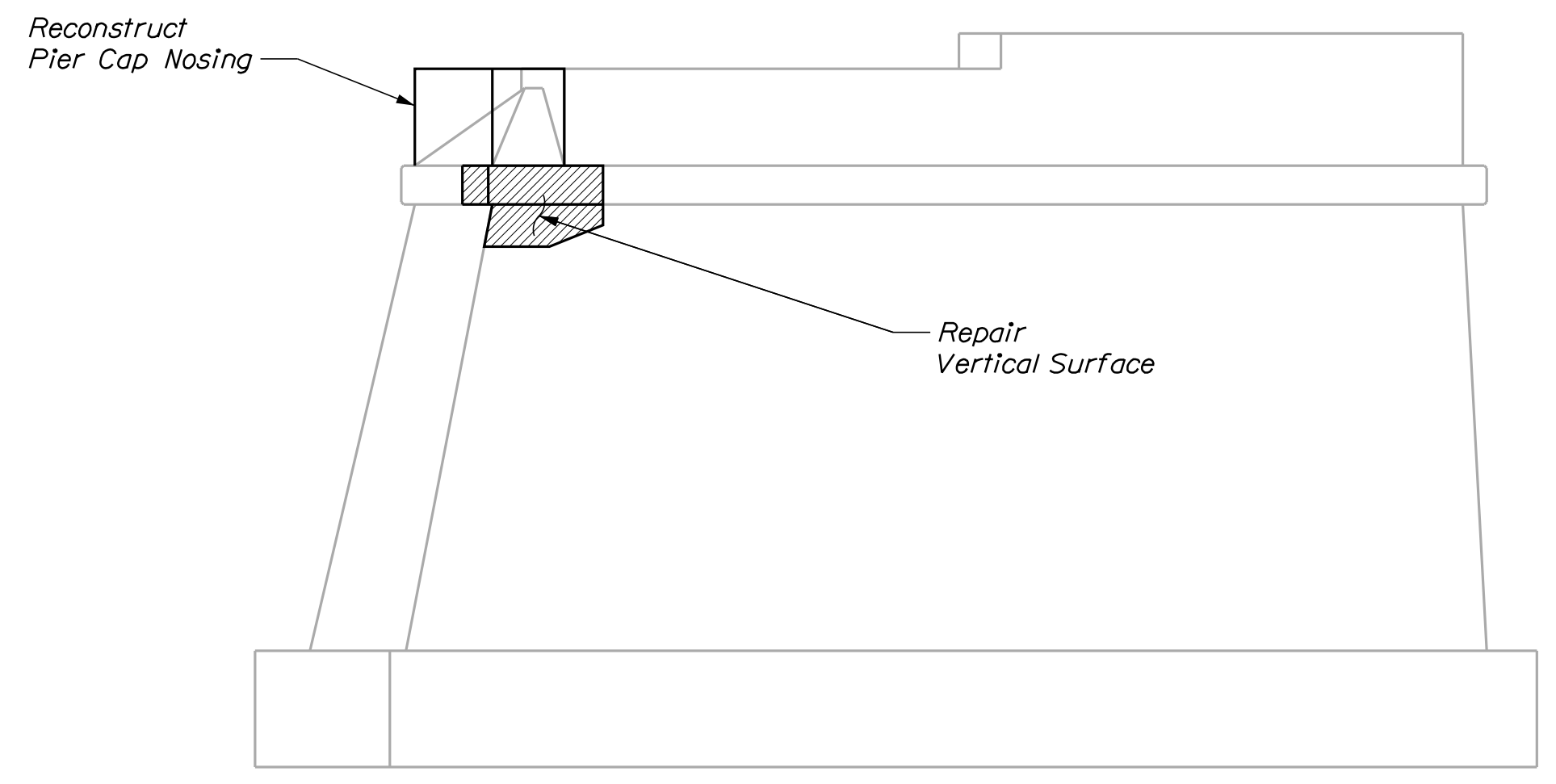
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DEPARTMENT OF TRANSPORTATION
023166.00
BRIDGE NO. 5087
WIN
023166.00
BRIDGE PLANS



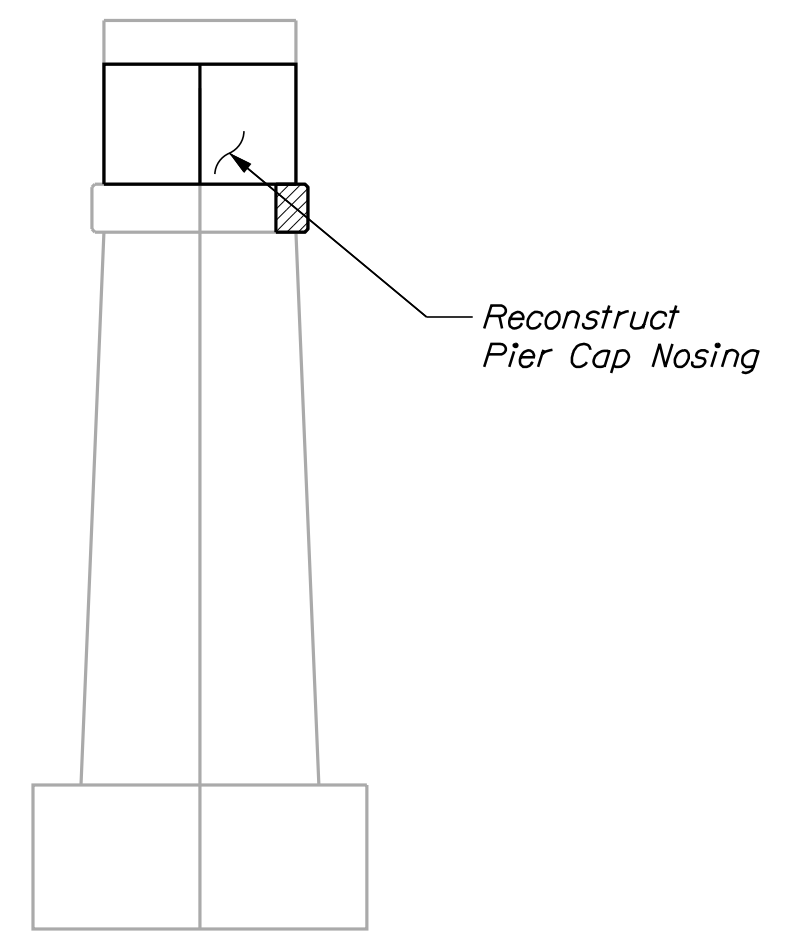
PIER NOSE REPAIR PLAN



PIER CAP NOSE REINFORCING

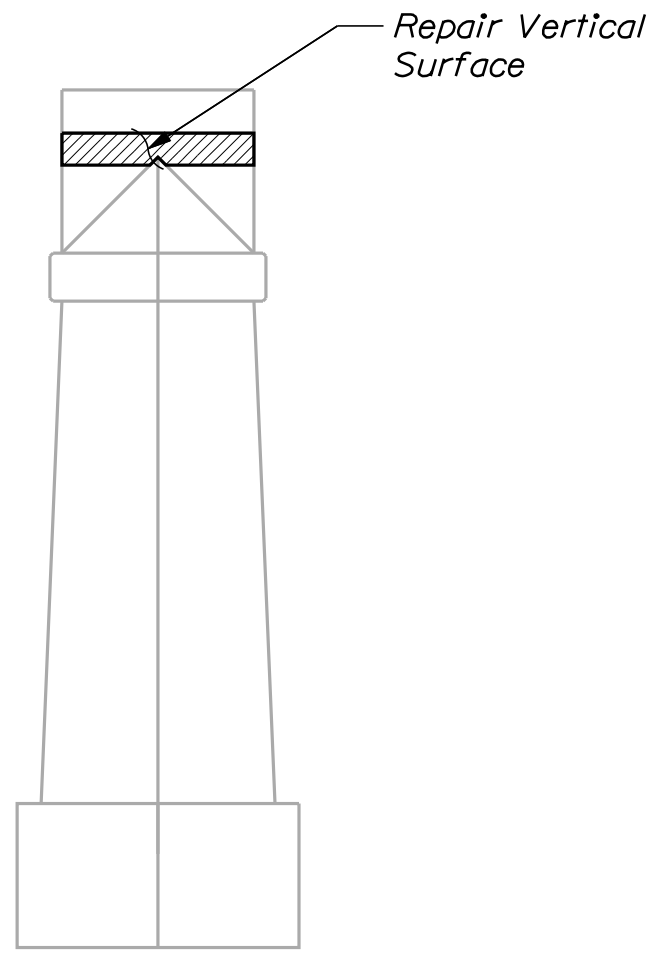


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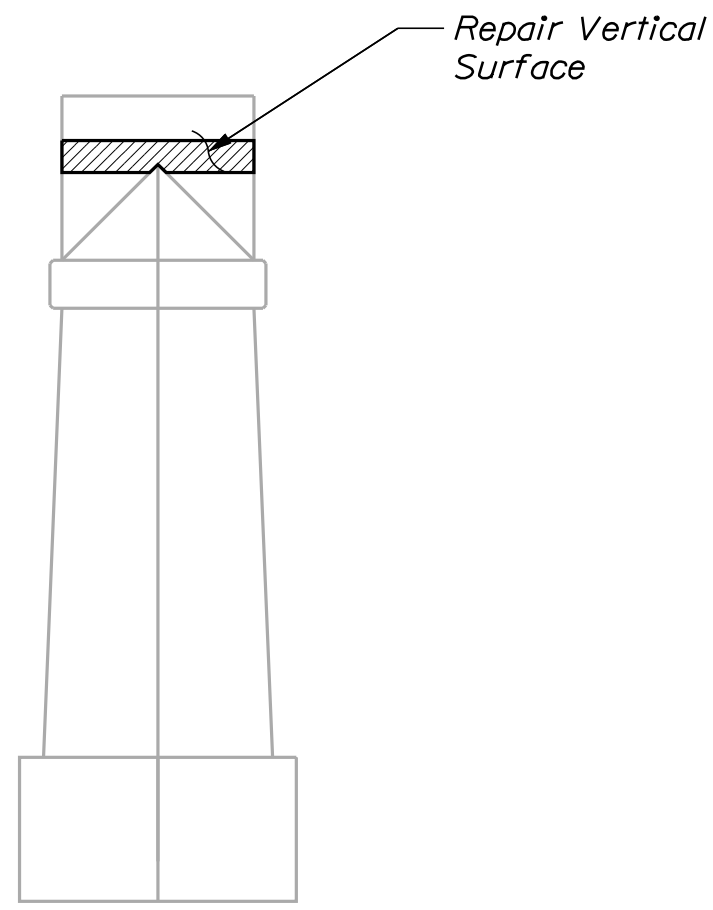


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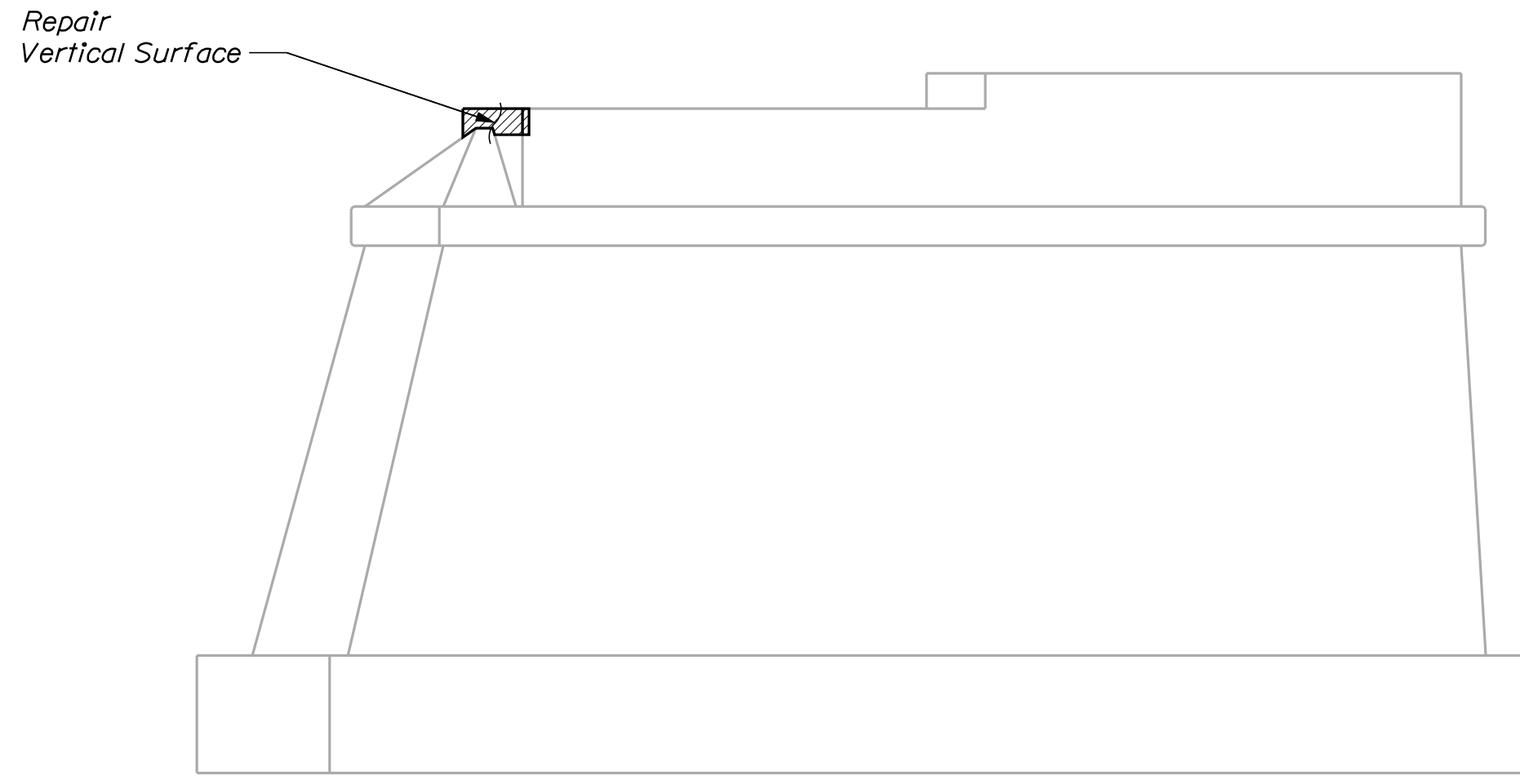
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REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					
HIRAM BRIDGE OSSIPPEE RIVER CORNISH and HIRAM YORK and OXFORD COUNTIES			PIER NO. 1 REPAIR		
SHEET NUMBER					
6					
OF 14					



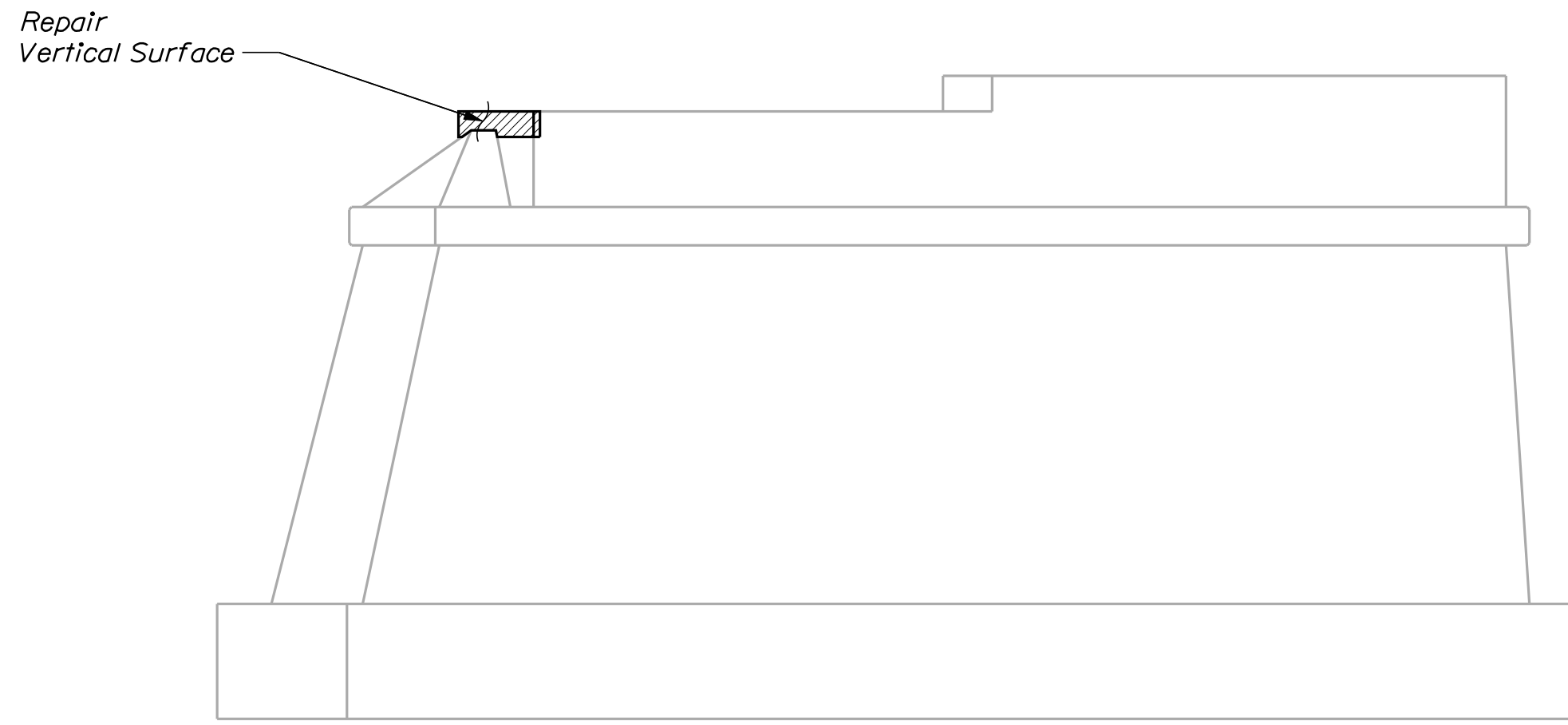
PIER NO. 2
NOSE ELEVATION



PIER NO. 3
NOSE ELEVATION



PIER NO. 2 ELEVATION
Flow →



PIER NO. 3 ELEVATION
Flow →

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

023166.00

BRIDGE NO. 5087 WIN 023166.00 BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	B. NICHOLS	BY	DATE
DESIGN-DETAILED	E. BREWER	M. CRITCHLOW	OCT 2022
CHECKED-REVIEWED	G. CUSTAFSON	B. NICHOLS	NOV 2022
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

HIRAM BRIDGE
OSSIPPEE RIVER
CORNISH and HIRAM YORK and OXFORD COUNTIES

PIERS NO. 2 & 3 REPAIR

SHEET NUMBER

2

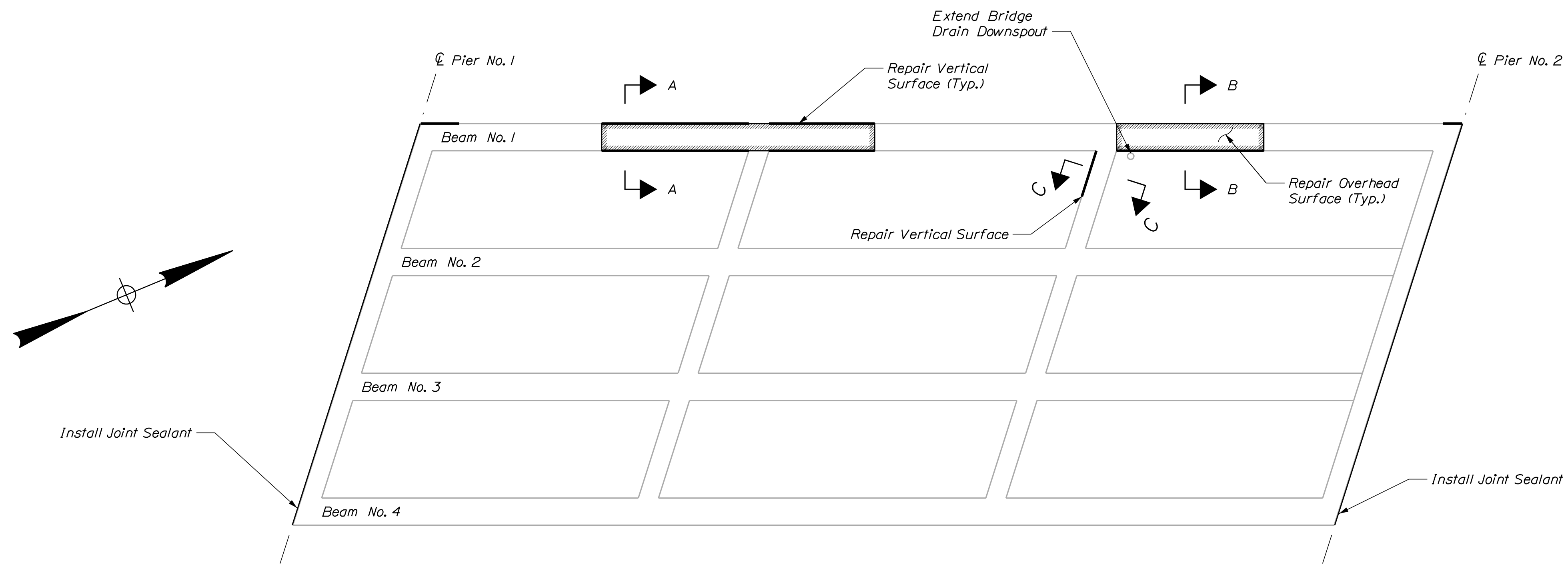
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Date: 12/19/2022

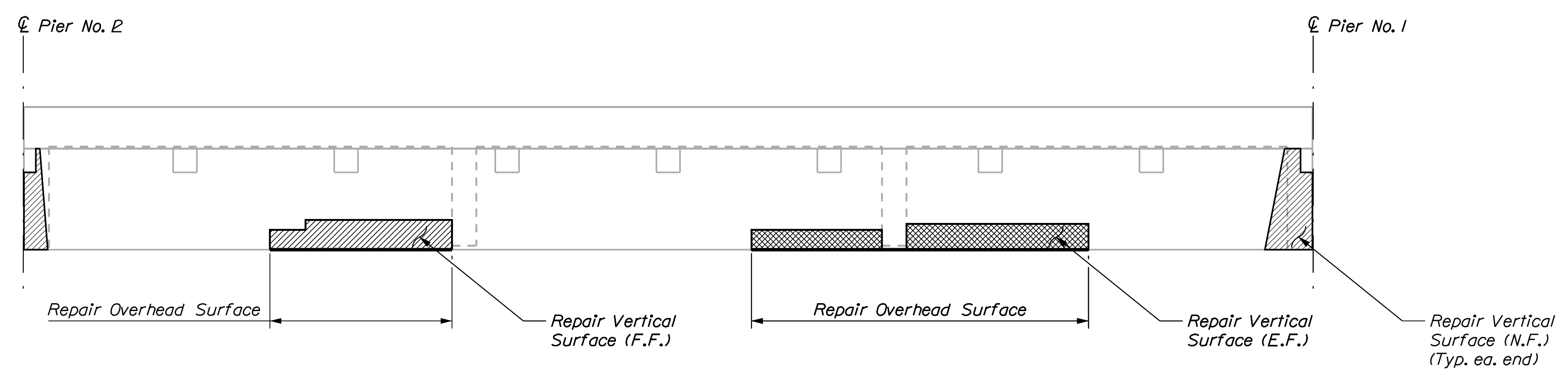
Username: Brian.Nichols

Division: BRIDGE

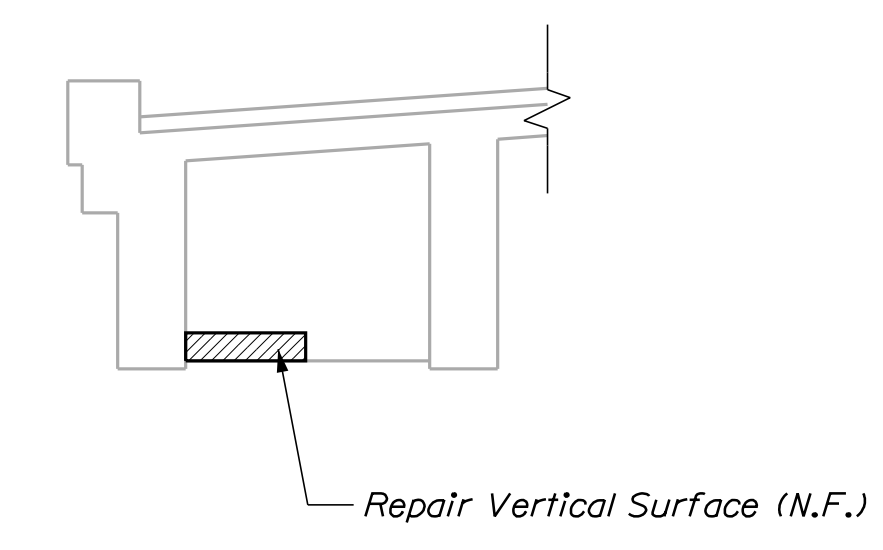
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SPAN NO. 2 REPAIR PLAN



BEAM NO. 1 ELEVATION
Looking Downstream



DIAPHRAGM ELEVATION
Looking Northerly

LEGEND

- N.F. = Near Face
- F.F. = Far Face
- E.F. = Each Face
- [Hatched Box] = Repair Overhead Surface
- [Cross-hatched Box] = Repair Each Face
- [Diagonal-hatched Box] = Repair One Face Only

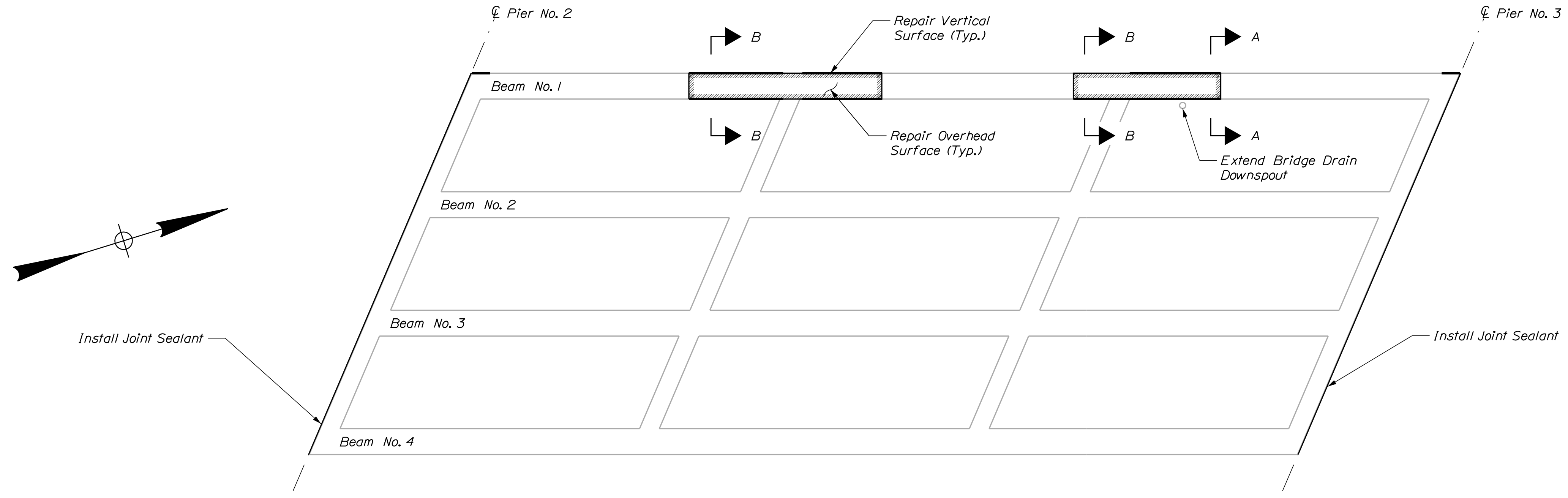
STATE OF MAINE	BRIDGE NO. 5087	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION	WIN	023166.00
	023166.00	

DESIGN-DETAILED	DATE
BY	
CHECKED-REVIEWED	
DESIGN-DETAILED	
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REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

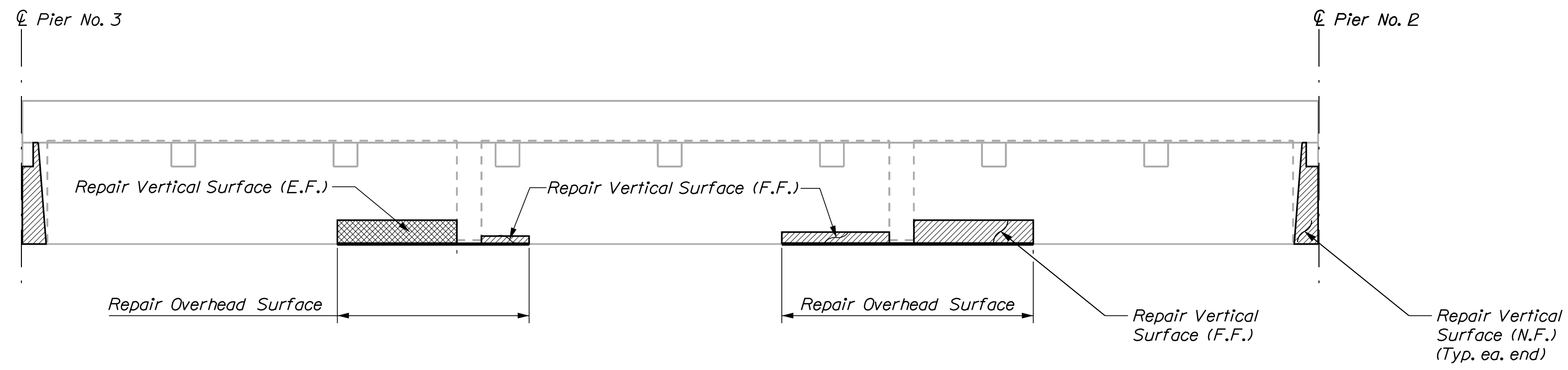
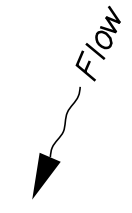
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P.E. NUMBER	
DATE	

HIRAM BRIDGE
 OSSIPEE RIVER
 CORNISH and HIRAM YORK and OXFORD COUNTIES
 SPAN 2 T-BEAM REPAIR

SHEET NUMBER
 9
 OF 14



SPAN NO. 3 REPAIR PLAN



BEAM NO. 1 ELEVATION
Looking Downstream

LEGEND

- N.F. = Near Face
- F.F. = Far Face
- E.F. = Each Face
- [Hatched Box] = Repair Overhead Surface
- [Cross-hatched Box] = Repair Each Face
- [Diagonal Hatched Box] = Repair One Face Only

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
023166.00
WIN
023166.00
BRIDGE NO. 5087
BRIDGE PLANS

SIGNATURE
P.E. NUMBER
DATE

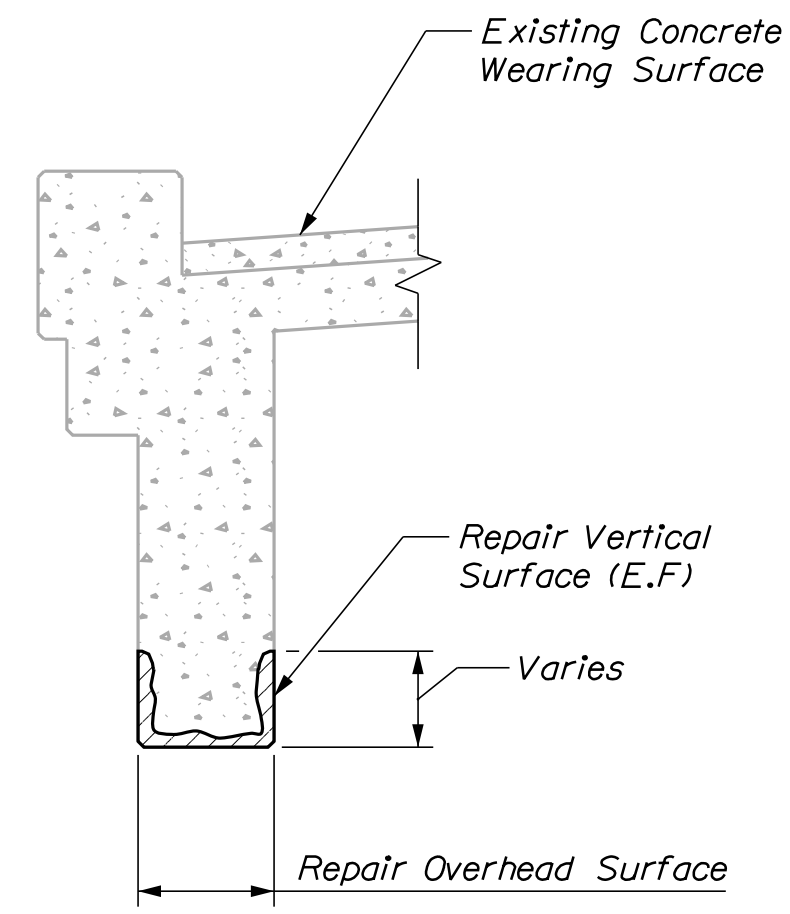
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DESIGN DETAILED	E. BREWER	M. CRITCHLOW	OCT 2022
CHECKED/REVIEWED	G. CUSTAFSON	B. NICHOLS	NOV 2022
DESIGN DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

HIRAM BRIDGE
OSSISPEE RIVER
CORNISH and HIRAM YORK and OXFORD COUNTIES
SPAN 3 T-BEAM REPAIR

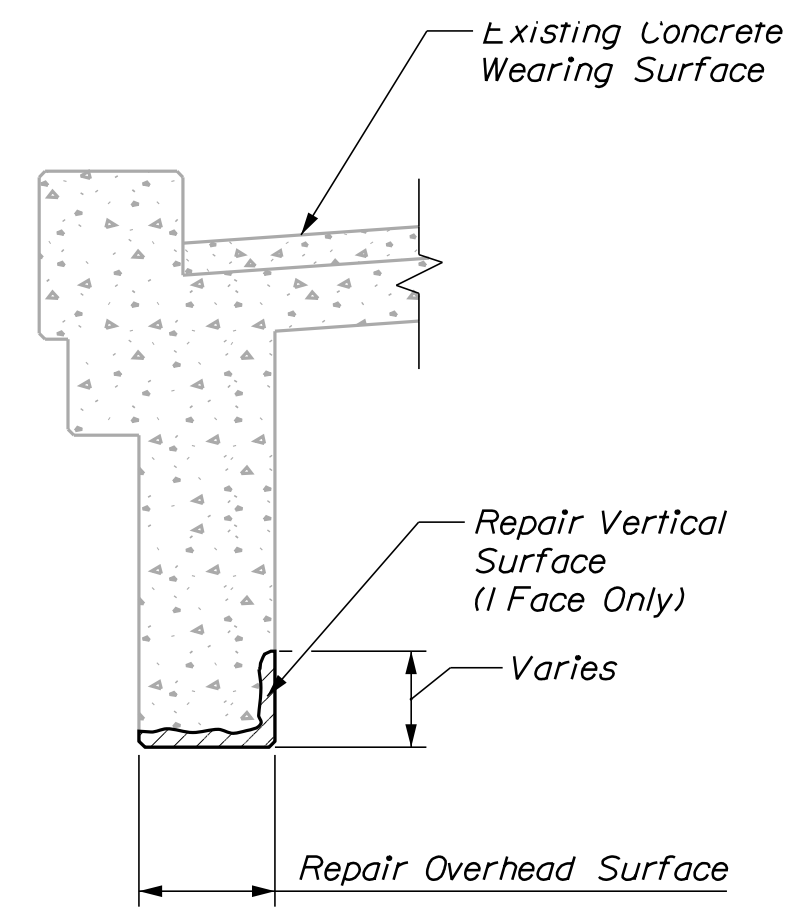
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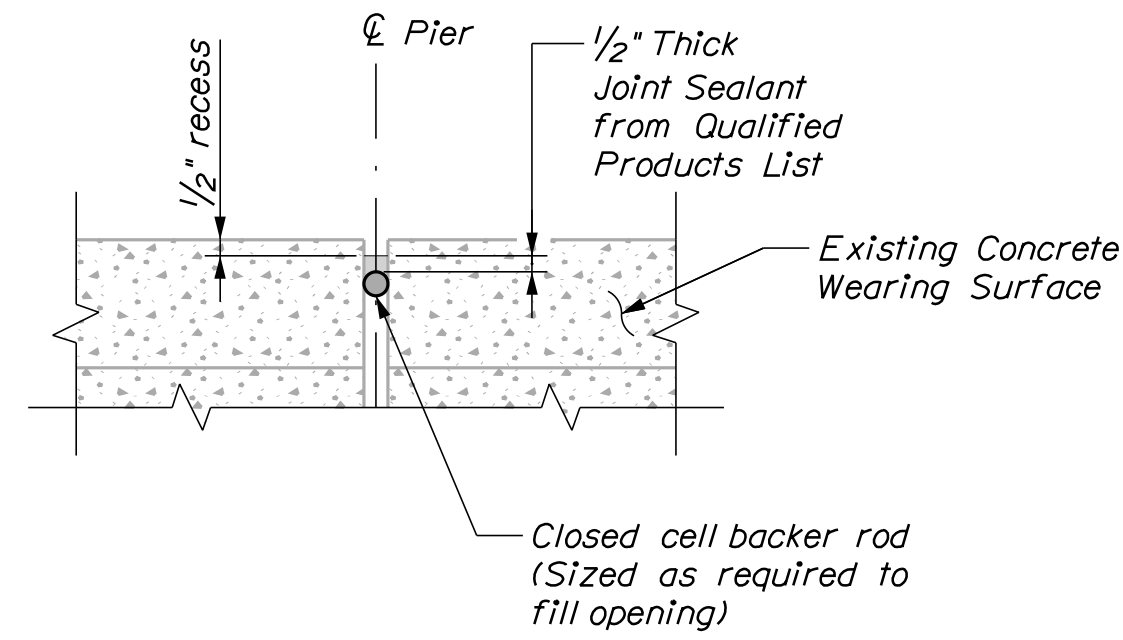
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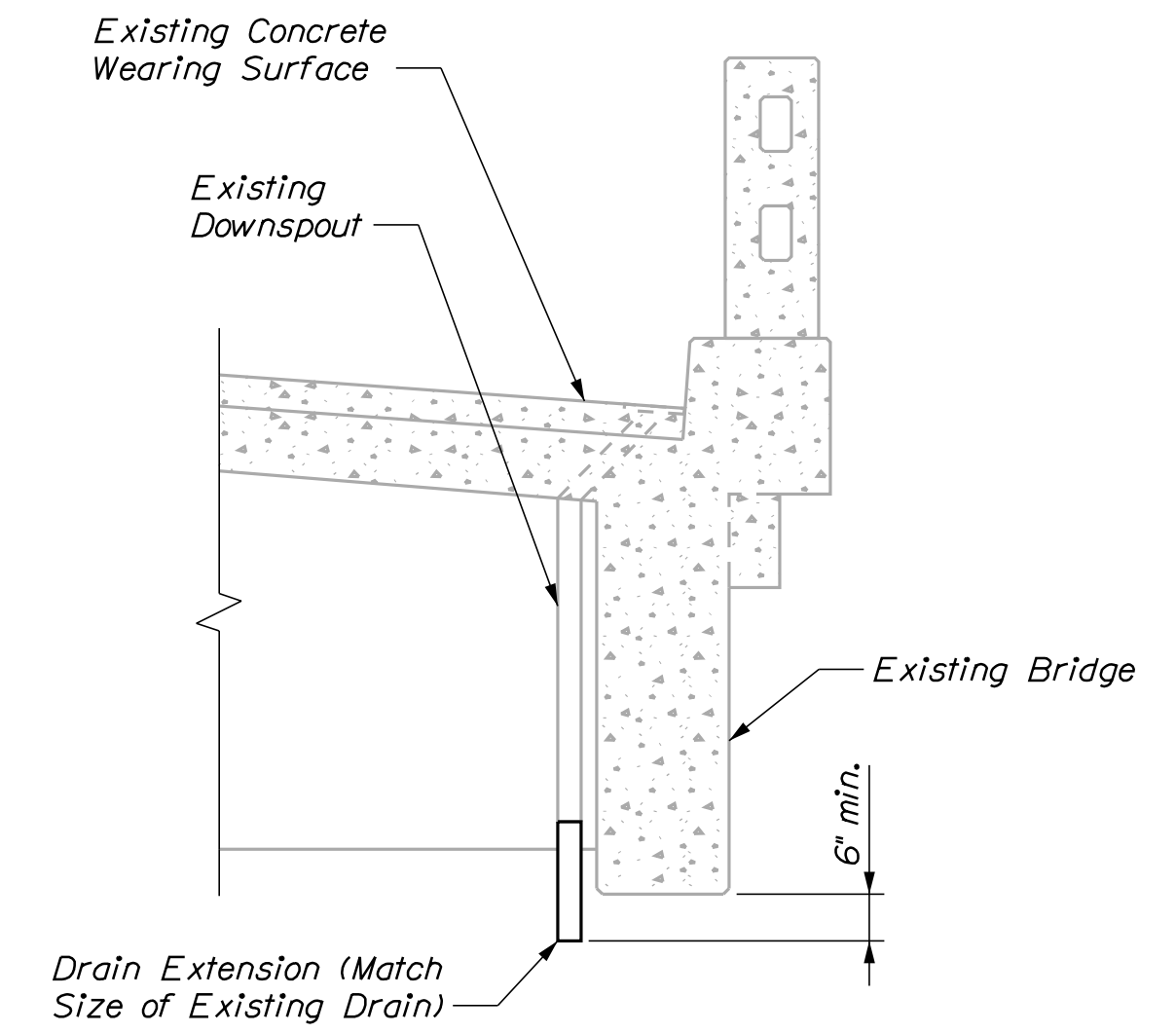
T-BEAM REPAIR
~SECTION "A-A"~



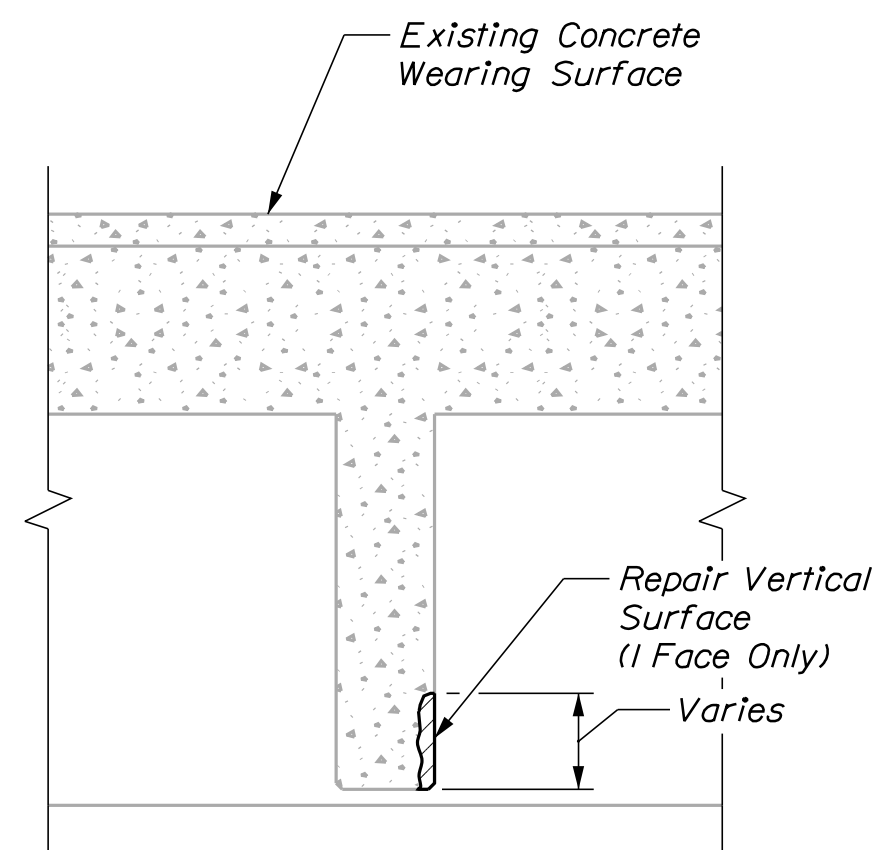
T-BEAM REPAIR
~SECTION "B-B"~



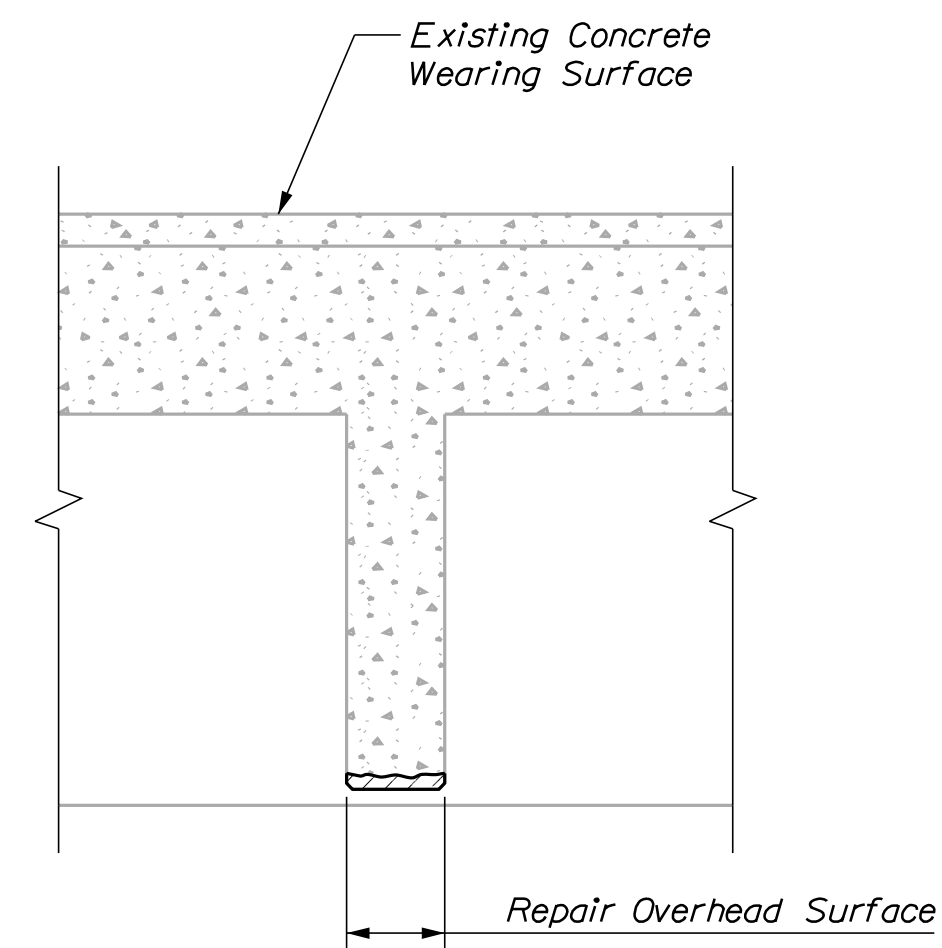
JOINT SEAL - POUR IN PLACE



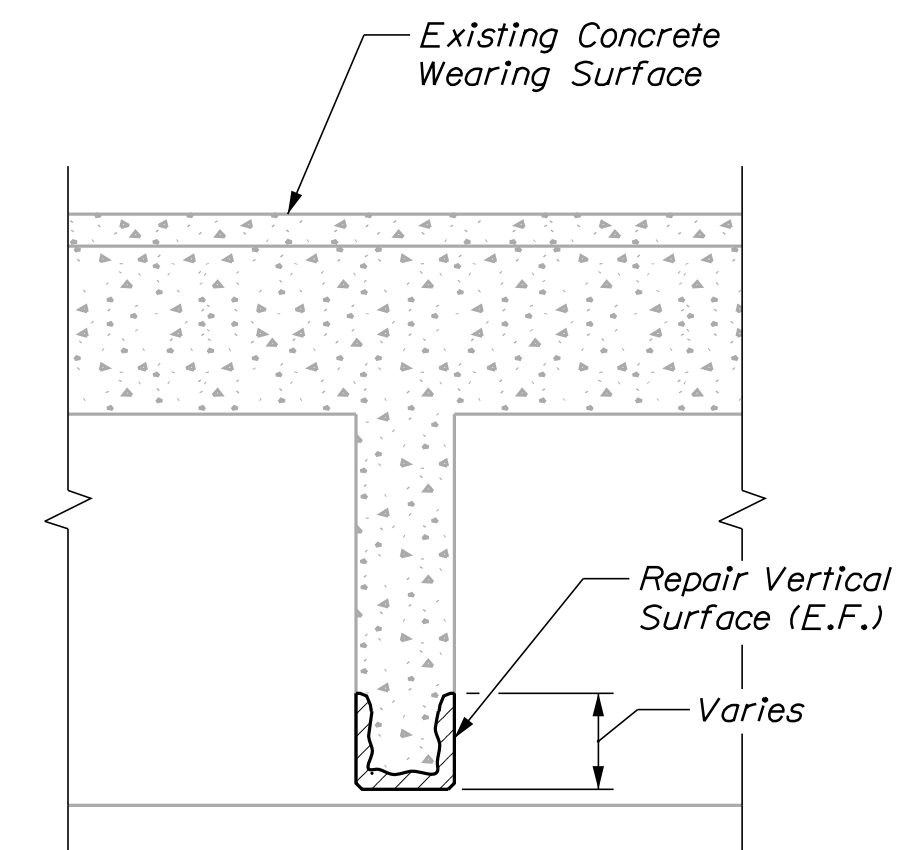
TYPICAL DRAIN EXTENSION



DIAPHRAGM REPAIR
~SECTION "C-C"~



DIAPHRAGM REPAIR
~SECTION "D-D"~



DIAPHRAGM REPAIR
~SECTION "E-E"~

Date: 12/19/2022

Username: Brian.Nichols

Division: BRIDGE

Filename: ... \012_Superstructure_det.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

023166.00

WIN

023166.00

BRIDGE NO. 5087

BRIDGE PLANS

SIGNATURE

DATE

OCT 2022

BY

M. BRITTON

DESIGN

DESIGN

DESIGN

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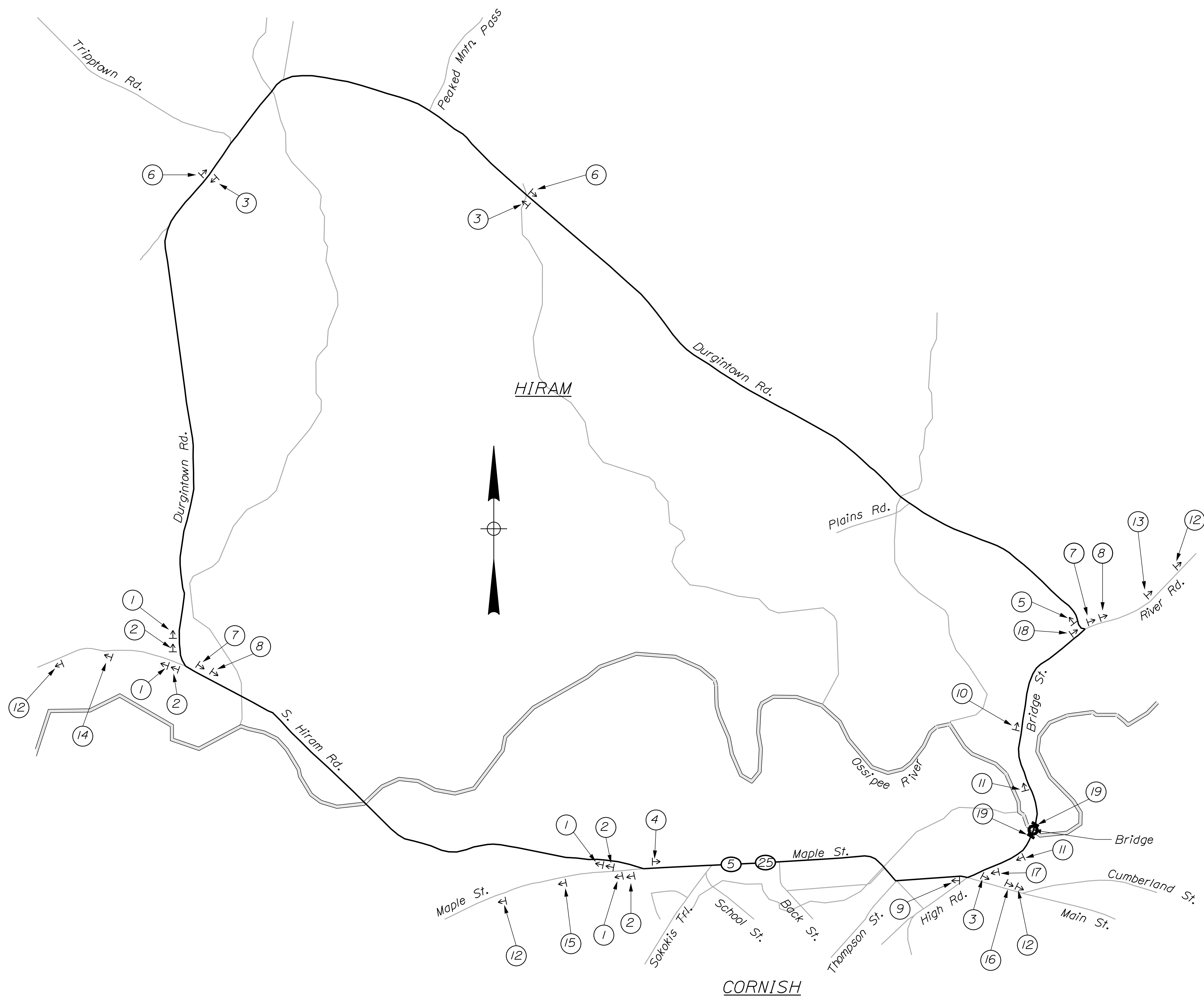
HIRAM BRIDGE
OSSIPPEE RIVER
CORNISH and HIRAM YORK and OXFORD COUNTIES

**SUPERSTRUCTURE
REPAIR DETAILS**

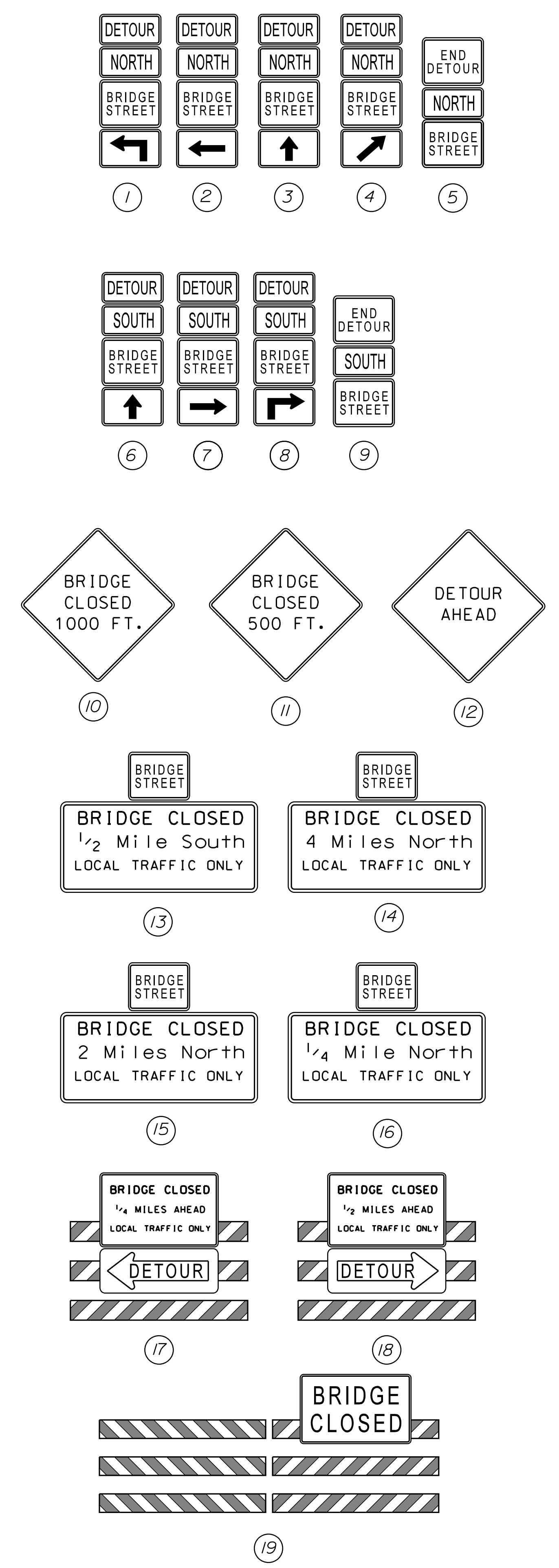
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OF 14



NOT TO SCALE



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		023166.00	
HIRAM BRIDGE		OSSISPEE RIVER		WIN 023166.00	
CORNISH and HIRAM		YORK and OXFORD COUNTIES		BRIDGE NO. 5087	
DETOUR MAP		SHEET NUMBER		HIERARCHY PLANS	
DESIGN-DETAILED	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
CHECKED-REVIEWED	E. BREWER	OCT 2022	M. RITCHIE		
DESIGN-DETAILED	G. CUSTAFSON	NOV 2022	B. NICHOLS		
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

Town, County, State _____
 Approx. Property Lines _____
 Existing Right of Way _____
 Limits of Wrought Portion _____
 Control Of Access _____
 New Right of Way _____
 New Easement _____
 New Temporary Rights _____
 New R/W Within Existing R/W _____

New R/W Along Existing R/W
 Building _____
 Trees Conifer _____
 Tree Line _____
 Water Edge _____
 Ledge _____
 Fence CHAIN LINK _____
 Sign _____

Clearing Limit Line _____
 Bush Line _____
 Rock/Boulder _____
 Barb Wire _____
 Well _____
 Sanitary Sewer _____
 Telephone Line _____
 Electric Line _____
 Water Line _____
 Underdrain Line _____
 Gas Line _____
 Guardrail _____
 Culvert _____

Proposed _____
 Existing _____
 Traveled Way _____
 Ditch _____
 Catch Basin _____
 Manhole _____
 Sewer Manhole _____
 Utility Pole _____
 Fire Hydrant _____
 Curbing _____

Cut Line _____
 Stonewall _____
 Baseline _____
 Monument _____
 Iron Rod Found _____
 Replacement Pin Set _____
 Fill Line _____
 Retaining Wall _____
 Traverse Point _____
 Pipe Found _____

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

Scale of Feet: 0, 25, 50, 75, 100

STATE OF MAINE
 REGISTRY OF DEEDS

COUNTY _____
 RECEIVED _____,
 at _____ h _____ m _____ M and
 recorded in Plan Bk _____, Pg. _____
 Attest: _____
 REGISTER

ROBERT M. BENSON
 CORNISH TAX MAP/LOT - U3/22
 Y.C.R.D. BOOK/PAGE - 4241/297
 POR - 4

THE TOWN OF CORNISH PURCHASED TWO PARCELS OF LAND IN THIS AREA FOR THE RELOCATION OF THE HIGHWAY OVER THE "NEW" BRIDGE. RESEARCH ON THE PRECISE LOCATION OF THESE PARCELS WAS NOT DONE FOR THIS PROJECT. SEE Y.C.R.D. BOOK/PAGE 822/441 & 841/68.

CURVE DATA #1
 PI = 3+67.17
 D = 10°00'00.0"
 Δ = 50°00'00.0" Lt.
 R = 572.96'
 L = 500.00'
 T = 267.17'
 E = 59.23'

CHARLENE BARTON
 JOHN BARTON
 HIRAM TAX MAP/LOT - R3/18
 O.C.R.D. BOOK/PAGE - 350/132
 POR - 6

JOHN M. HARMON
 CORNISH TAX MAP/LOT - U3/23
 Y.C.R.D. BOOK/PAGE - 14237/70
 POR - 3

JOHN BARTON
 HIRAM TAX MAP/LOT - R3/19
 O.C.R.D. BOOK/PAGE - 450/555
 POR - 5

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

BRIDGE NO. 5087

WIN 023166.00

HIRAM BRIDGE
 OVER
 OSSISPEE RIVER

REVISIONS			PLAN FILED IN PLAN BOOK				PAGE COUNTY RECORD				
NO.	DATE	DESCRIPTION	BY	NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	NO.	RECORD

BRUCE A. VAN NOTE
 COMMISSIONER
 JOYCE NOEL TAYLOR
 CHIEF ENGINEER

DATE _____

OFFICE USE ONLY
 PLAN NOT TO BE RECORDED

TOWNWAY
 RIVER ROAD/BRIDGE STREET
 HIRAM/CORNISH OXFORD/YORK COUNTIES
 BRIDGE REHAB 23166.00

MARCH 2022
 SCALE 1" = 25'

RIGHT-OF-WAY MAP
 SHEET 1 OF 1

SHEET NUMBER
 14
 OF 14

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	JH	CWK
FINAL RIGHT OF WAY AREAS		

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
 HIRAM/CORNISH
 RIGHT OF WAY MAP

Date: 12/19/2022

Username: Brian.Nichols

Division: BRIDGE

Filename: ... \00\ROW\MSTA\001_RWPLAN1.dgn