

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Bearing Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Tenth Edition 2024.

DESIGN LOADING

Live Load _____ HL - 93

MATERIALS

Concrete: _____ Class "A"
Repairs _____

Structural Steel: _____
All Material (except as noted) _____ ASTM A709, Grade 50 (painted)
High Strength Bolts _____ ASTM F3125, Grade A325, Type 1

BASIC DESIGN STRESSES

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

Structural Steel: _____ F y = 50,000 psi
ASTM A709, Grade 50 _____
ASTM F3125, Grade A325 _____ F μ = 120,000 psi

NEW SHARON
FRANKLIN COUNTY
SANDY RIVER BRIDGE
OVER
SANDY RIVER
ROUTE 27, 134, & US-2
FEDERAL AID PROJECT NO. 2714600
BRIDGE NO. 5724

LIST OF DRAWINGS

Title Sheet	1
Estimated Quantities & General Notes	2
General Plan	3
Existing Bridge Sections	4
Abutment Repairs	5
Pier Repairs	6
Pier No. 1 & 4 Bridge Seat Plan	7
Bearing Details	8
Steel Repair Details	9

UTILITIES

Fidium _____ FirstLight
Central Maine Power _____ New Sharon Water District

TRAFFIC DATA

Current (2023) AADT	8,510
Future (2043) AADT	9,360
DHV - % of AADT	9
Design Hour Volume	842
Heavy Trucks (% of AADT)	13
Heavy Trucks (% of DHV)	8
Directional Distribution (% of DHV)	57
18 kip Equivalent P 2.0	1311
18 kip Equivalent P 2.5	1248
Design Speed (mph)	40

MAINTENANCE OF TRAFFIC

Maintain one lane of alternating one way traffic on the bridge using temporary traffic signals.

PROJECT LOCATION	Sandy River Bridge (#5724) over Sandy River. Located 0.05 of a mile east of Starks Road.
OUTLINE OF WORK	Bridge Rehabilitation

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
COMMISSIONER: <i>[Signature]</i>		5-1-26
CHIEF ENGINEER: <i>[Signature]</i>		5-29-26

<i>[Signature]</i> SIGNATURE	13532 P.E. NUMBER	05/21/2026 DATE
13532 Taylor PROFESSIONAL ENGINEER		

PROJECT INFORMATION	BRIDGE	PROGRAM
PROJECT MANAGER	C. GUY	DESIGNER
HOYLE TANNER	HOYLE TANNER	CONSULTANT
PROJECT RESIDENT		CONTRACTOR
PROJECT COMPLETION DATE		

NEW SHARON SANDY RIVER BRIDGE	TITLE SHEET
----------------------------------	-------------

SHEET NUMBER
1
OF 9

WIN 27146.00

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	100	LB
503.13	REINFORCING STEEL, PLACING	100	LB
504.70	STRUCTURAL STEEL FABRICATED AND DELIVERED (400 LB)	1	LS
504.71	STRUCTURAL STEEL ERECTION (400 LB)	1	LS
506.9102	ZINC RICH COATING SYSTEM (SHOP APPLIED)	1	LS
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	40	SY
518.50	REPAIR OF UPWARD FACING SURFACES - TO REINFORCING STEEL < 8 INCHES	20	SF
518.51	REPAIR OF UPWARD FACING SURFACES - TO BELOW RE STEEL < 8 INCHES	10	SF
518.52	REPAIR OF UPWARD FACING SURFACES >= 8"	3	CY
518.60	REPAIR OF VERTICAL SURFACES < 8 IN.	110	SF
518.61	REPAIR OF VERTICAL SURFACES >= 8 IN.	5	CY
518.70	REPAIR OF OVERHEAD SURFACES < 8 IN.	66	SF
523.52	BEARING INSTALLATION	10	EA
523.5402	LAMINATED ELASTOMERIC BEARINGS, EXPANSION	10	EA
524.30	TEMPORARY STRUCTURAL SUPPORT - ABUTMENT REPAIRS	3	EA
524.301	TEMPORARY STRUCTURAL SUPPORT - BEARING REPLACEMENT	1	LS
524.301	TEMPORARY STRUCTURAL SUPPORT - STEEL REPAIRS	1	LS
526.301	PORTABLE CONCRETE BARRIER TYPE I (500 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	2	UN
610.09	HAND LAID RIPRAP	45	CY
610.18	STONE DITCH PROTECTION	20	CY
613.319	EROSION CONTROL BLANKET	560	SY
615.07	LOAM	31	CY
618.14	SEEDING METHOD NUMBER 2	5	UN
619.12	MULCH	5	UN
619.14	EROSION CONTROL MIX	31	CY
620.58	EROSION CONTROL GEOTEXTILE	60	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	300	LF
627.77	REMOVING PAVEMENT MARKINGS	300	SF
627.78	TEMPORARY 4" WHITE OR YELLOW PAINT PAVEMENT MARKING LINE	600	LF
629.05	HAND LABOR, STRAIGHT TIME	160	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	20	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	20	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	20	HR
631.122	MINI ALL-PURPOSE EXCAVATOR (INCLUDING OPERATOR)	40	HR
631.171	TRUCK - SMALL (INCLUDING OPERATOR)	40	HR
639.19	FIELD OFFICE TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	400	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
652.38	FLAGGER	350	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMPORARY SOIL EROSION & WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. For right of way lines, refer to the General Plan.
2. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
3. 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.
4. Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
5. 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, as directed by the Resident. Payment will be made under the appropriate Contract items.
6. Protective Coating for Concrete Surfaces shall be applied to concrete repair areas.
7. Project information referred to below may be accessed at the following MaineDOT web address: <https://www.maine.gov/dot/doing-business/bid-opportunities>
8. 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.
9. 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.
10. The existing bridge components to be removed 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 repairing the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge components are 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 components will be considered incidental to the structural steel erection pay item.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Federal Project No. 2714600
WIN 27146.00

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

C. GUY
M. MURPHY
D. TAYLOR

BY
S. ALLARD
D. TAYLOR

DATE
03/2026
03/2026

SIGNATURE

P.E. NUMBER

DATE

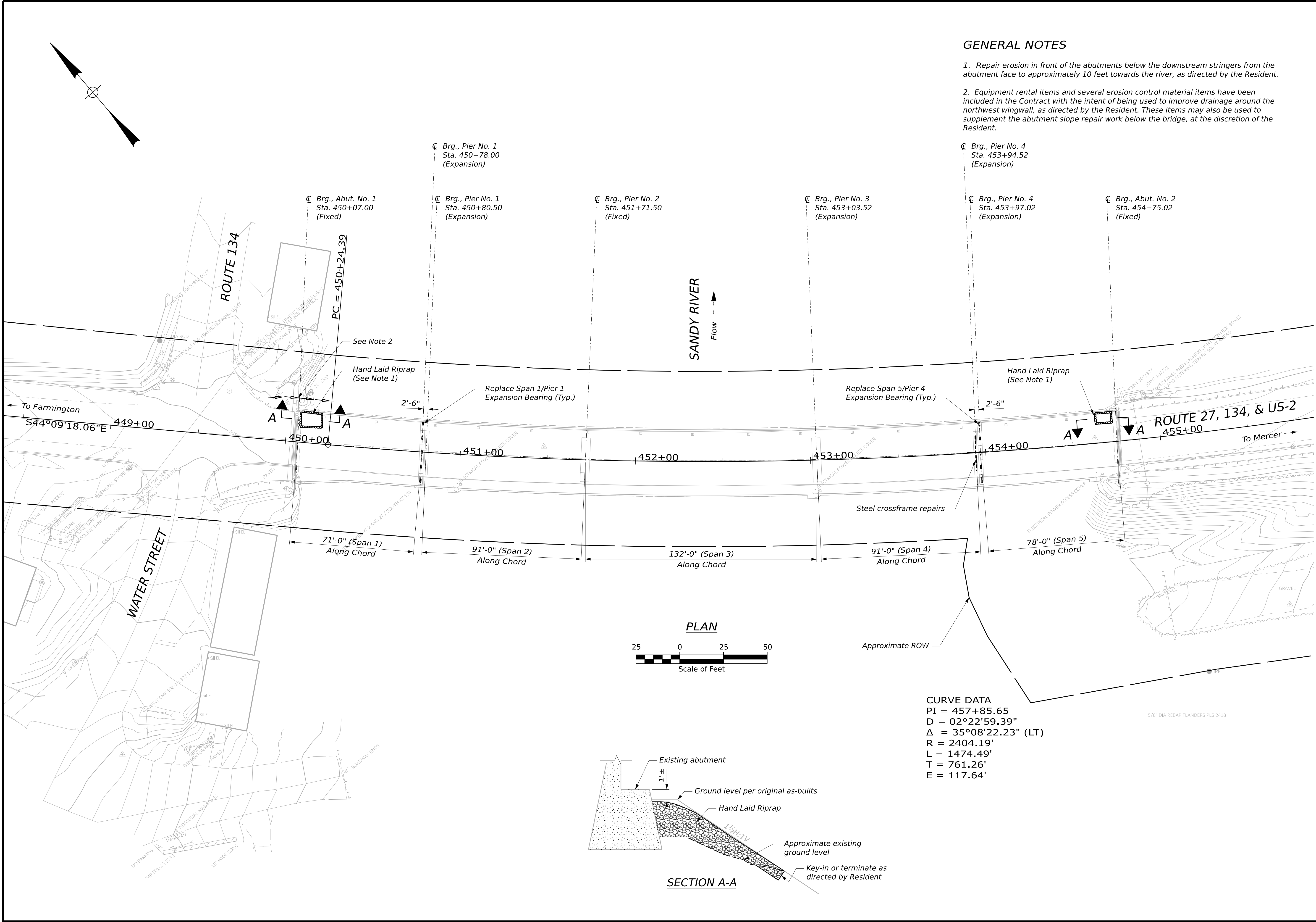
SANDY RIVER BRIDGE NO. 5724
CROSSING SANDY RIVER
NEW SHARON

ESTIMATED QUANTITIES &
GENERAL NOTES

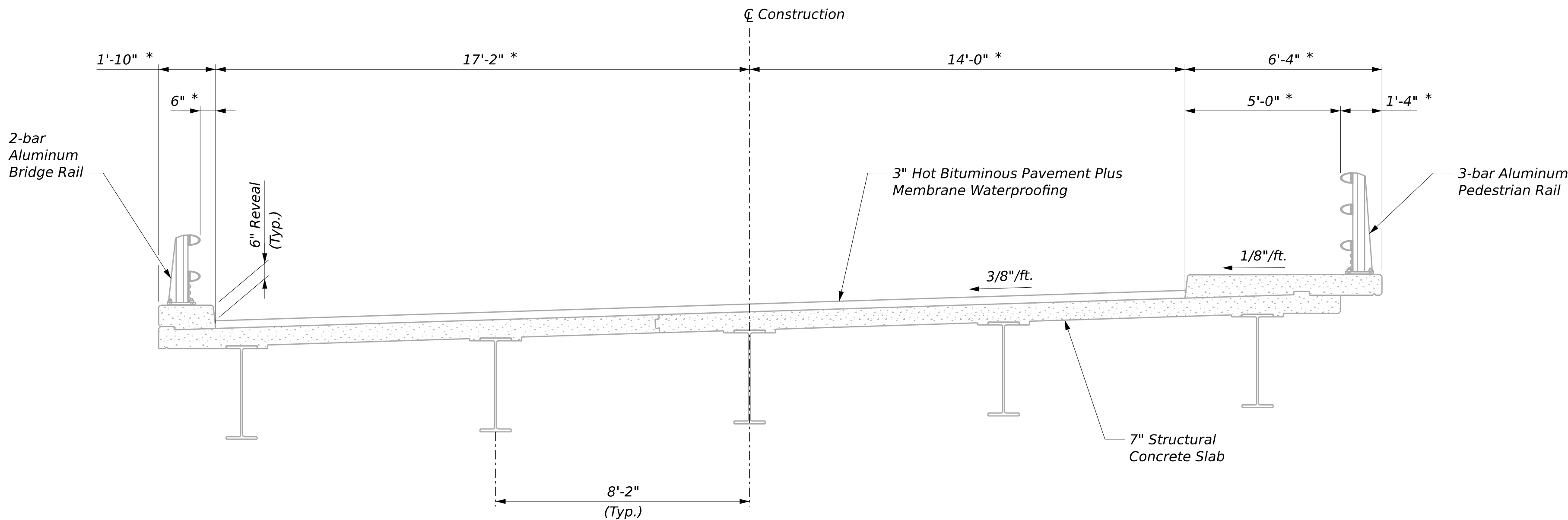
SHEET NUMBER

2
OF 9

Filename: P:\MaineDOT\24_923402_00-Sandy-River-Brdg-Ph-I\2-CADD\27146_00\BRIDGE\GenNotes_Quantities.dgn

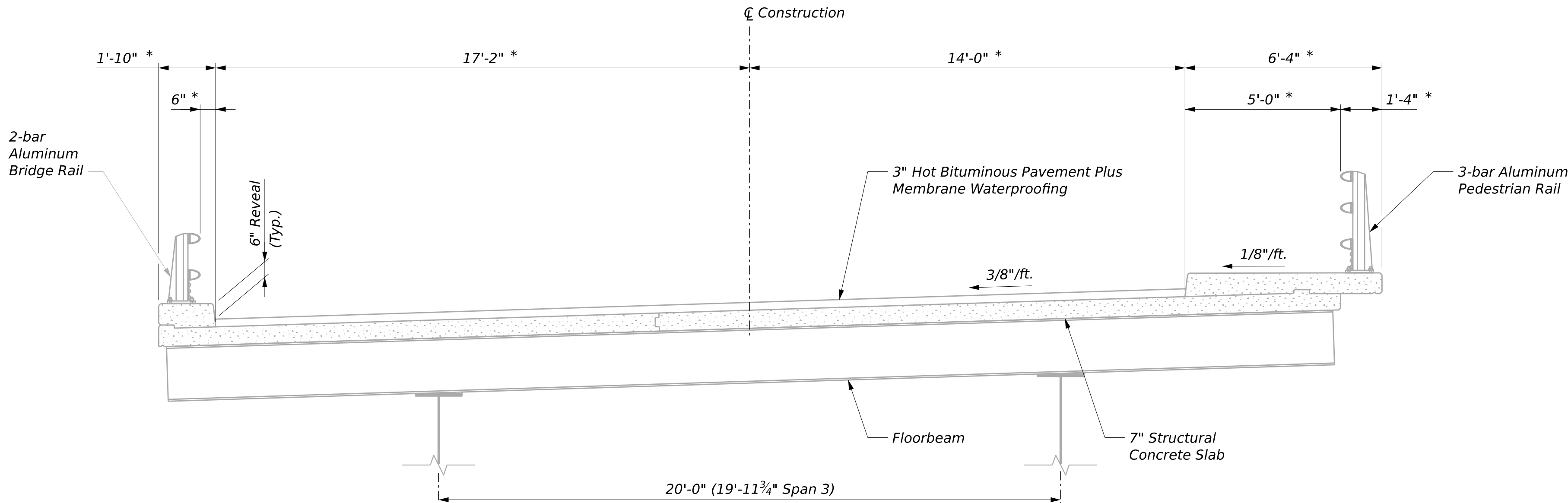


STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
Federal Project No. 2714600		WIN 27146.00	
SANDY RIVER BRIDGE NO. 5724 CROSSING SANDY RIVER NEW SHARON		GENERAL PLAN	
SHEET NUMBER		3	
OF		9	
PROJ. MANAGER	C. GUY	BY	S. GUY
DESIGN-REVIEWED	M. MURPHY	DATE	03/2026
DESIGN-REVIEWED	D. TAYLOR	SIGNATURE	
DESIGN-REVIEWED	D. TAYLOR	P.E. NUMBER	
REVISIONS 1		DATE	
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			



EXISTING TRANSVERSE SECTION - SPANS 1 & 5

* Dimensions shown are radial to the centerline of construction.



EXISTING TRANSVERSE SECTION - SPANS 2, 3 & 4

* Dimensions shown are radial to the centerline of construction.

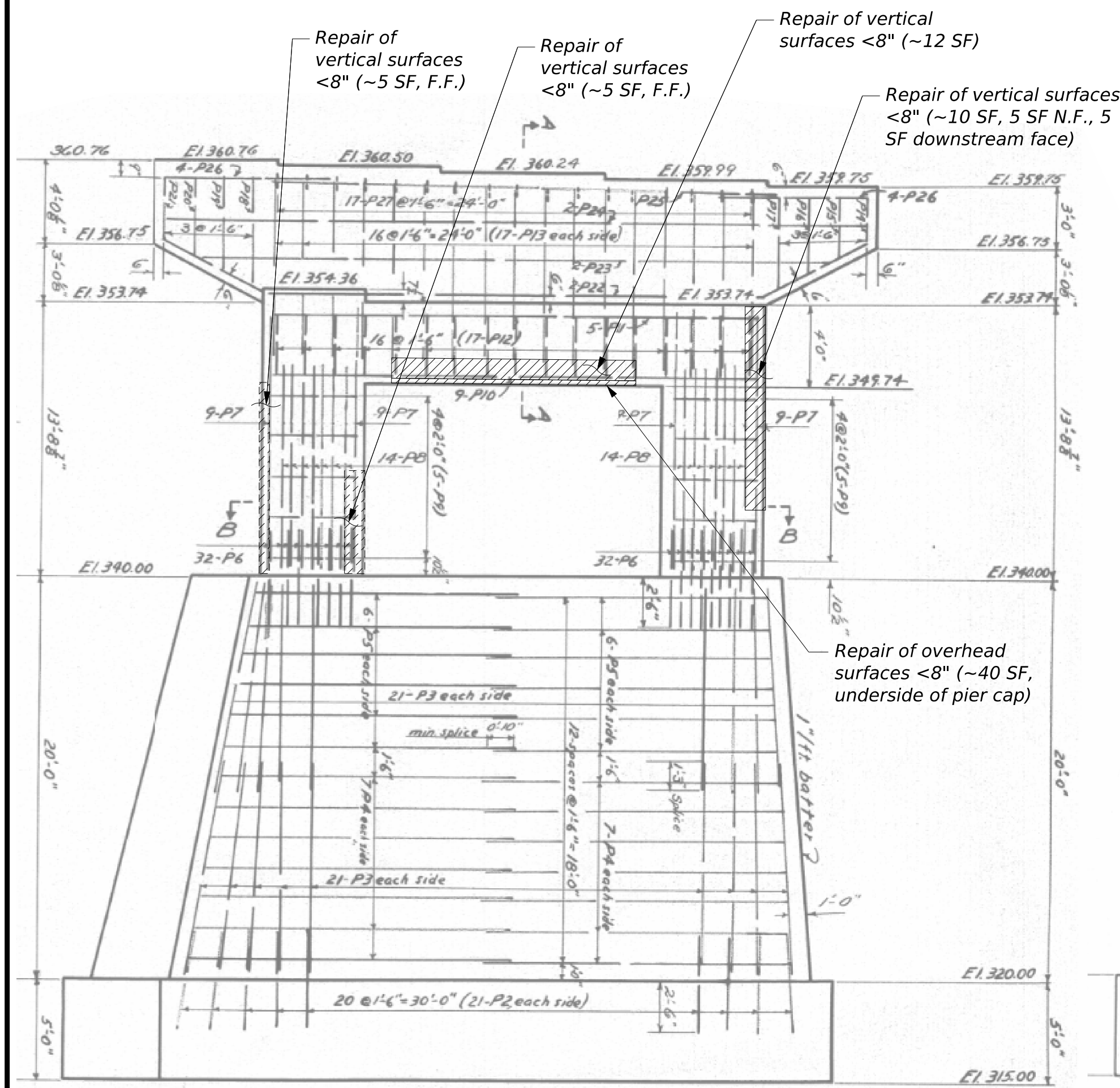
STATE OF MAINE DEPARTMENT OF TRANSPORTATION Federal Project No. 2714600 WIN 27146.00						
	PROJ. MANAGER	C. GUY	BY	DATE	SIGNATURE	P.E. NUMBER
	DESIGN-DETAILED	M. MURPHY	S. ALLARD	03/2026		
SANDY RIVER BRIDGE BRIDGE NO. 5724 CROSSING SANDY RIVER NEW SHARON EXISTING BRIDGE SECTION	CHECKED-REVIEWED	D. TAYLOR	D. TAYLOR	03/2026		
	DESIGN-DETAILED					
	DESIGN-DETAILED					
	REVISIONS 1					
	REVISIONS 2					
SHEET NUMBER 4 OF 9	REVISIONS 3					
	REVISIONS 4					
	FIELD CHANGES					

1. The quantity of concrete repairs on these drawings are based on visual inspection. Actual repair areas shall be determined by the Contractor and Resident during construction.
2. The Department must approve changes in quantity beyond what is shown.
3. No repairs are anticipated at Pier 3.
4. All broken or corroded reinforcing bars shall be supplemented in accordance with Standard Specification Section 518.04. Supplemental reinforcing shall maintain a clear cover of 3" minimum.
5. Repair areas are shown over graphics from the original 1956 plans for locating purposes. Modifications made since, including the 1987 rehabilitation project, are not shown.
6. All Abutment No. 1 bridge seat repairs, including any upward facing surfaces, shall be paid for under Item 518.61, Repair of Vertical Surfaces ≥ 8 Inches.

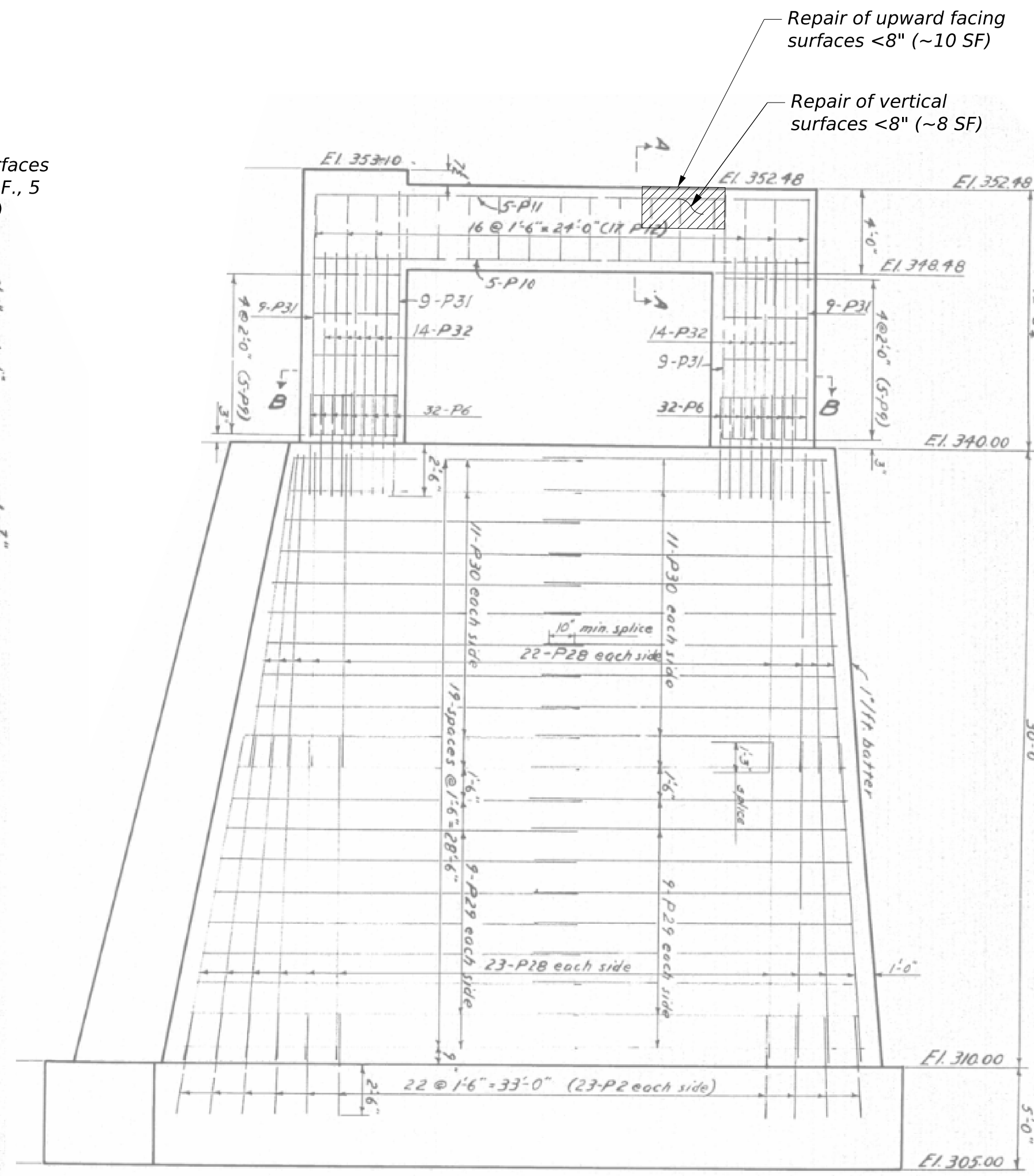
Concrete Repairs:



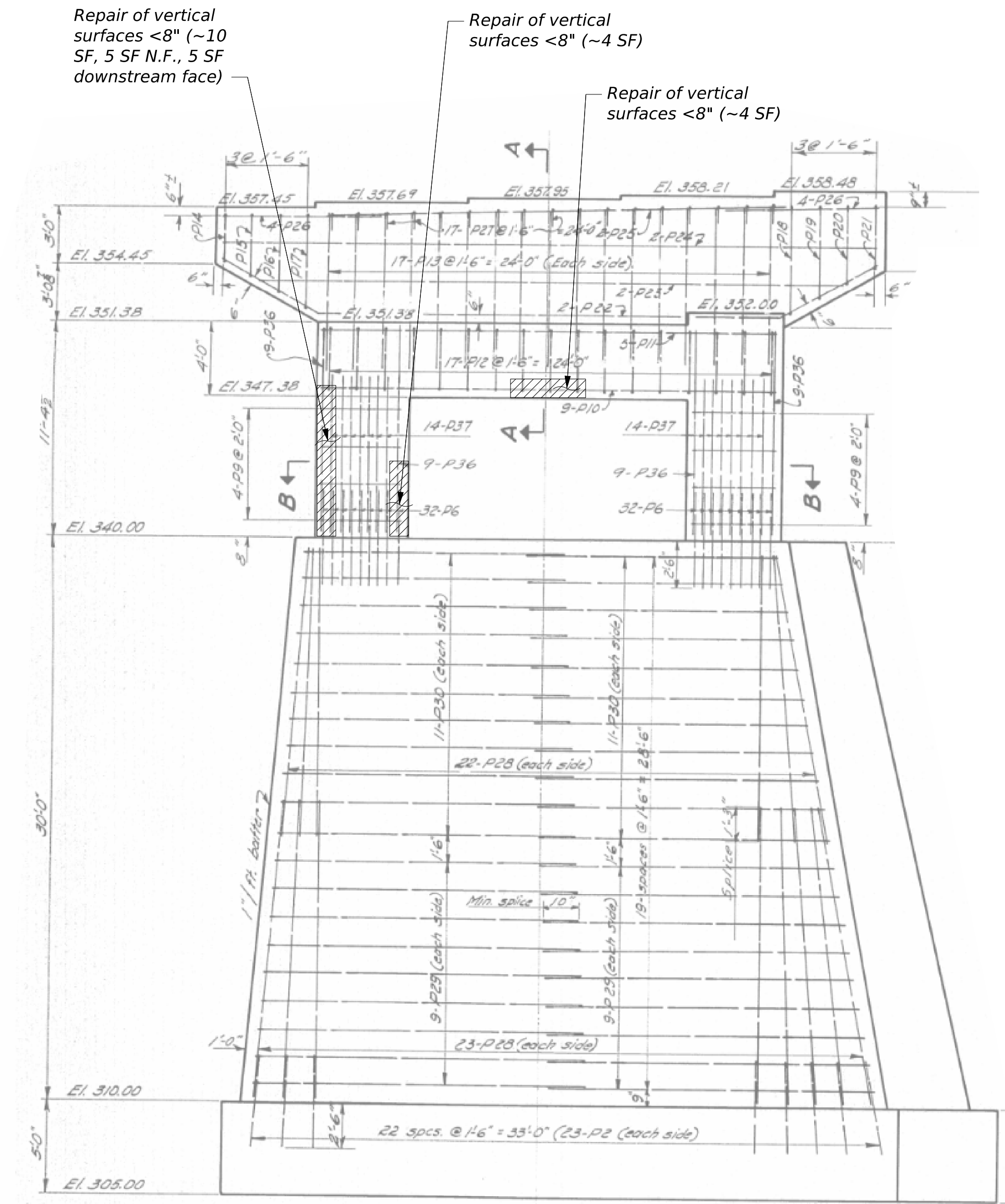
Date: 5/21/2026



PIER NO. 1 ELEVATION



PIER NO. 2 ELEVATION

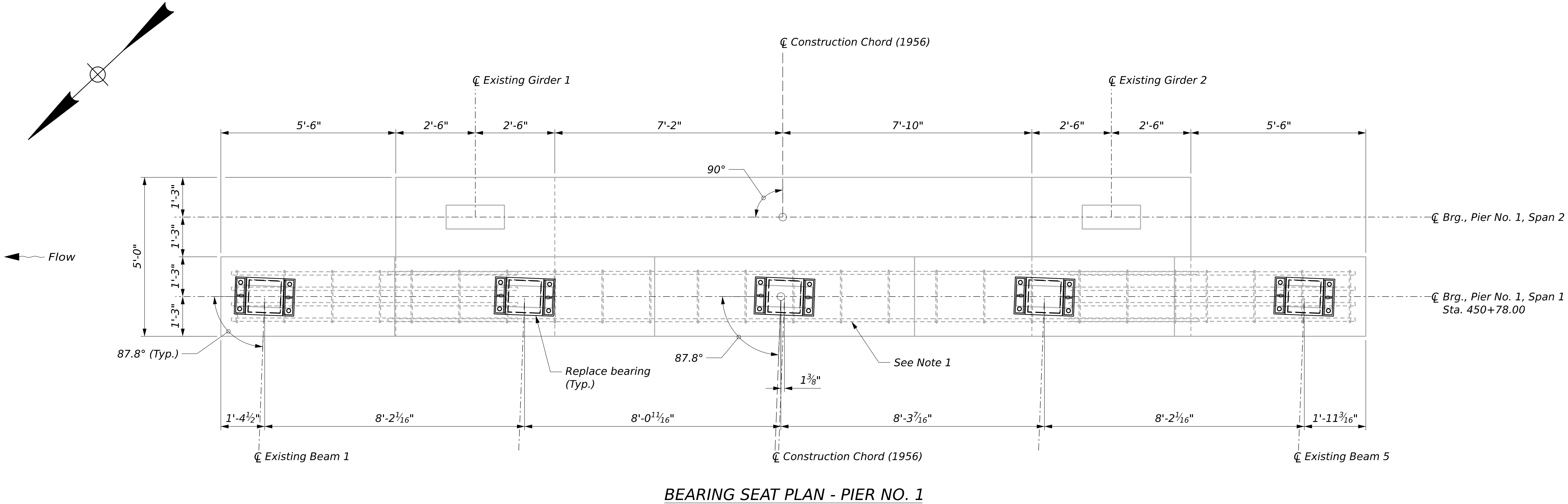
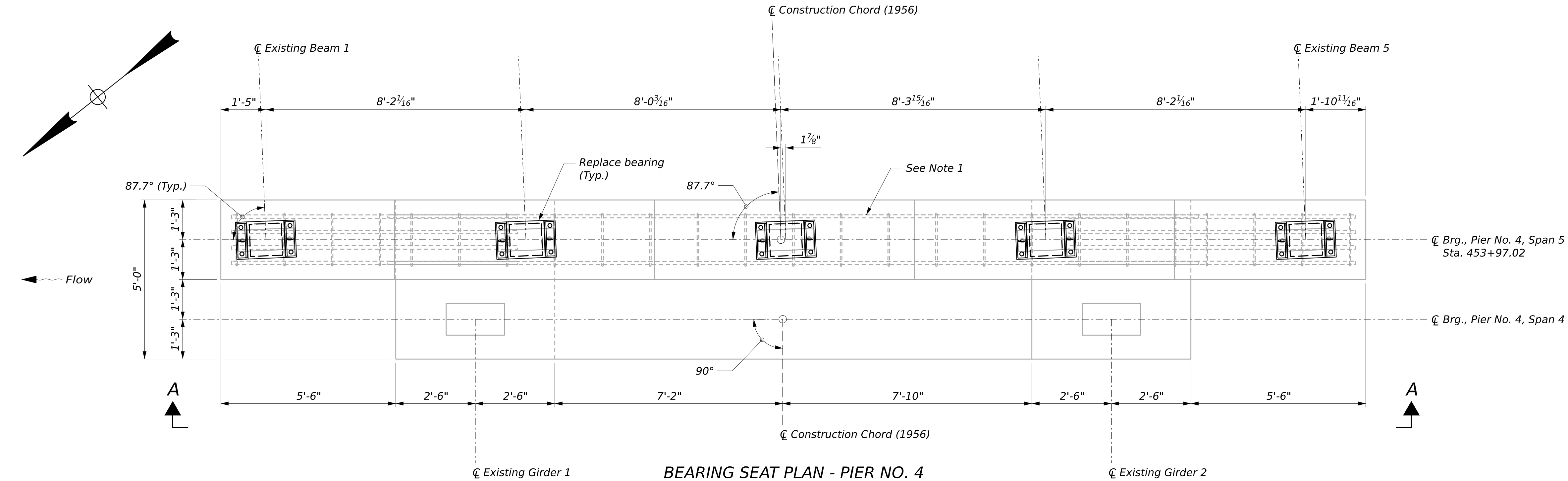


PIER NO. 4 ELEVATION

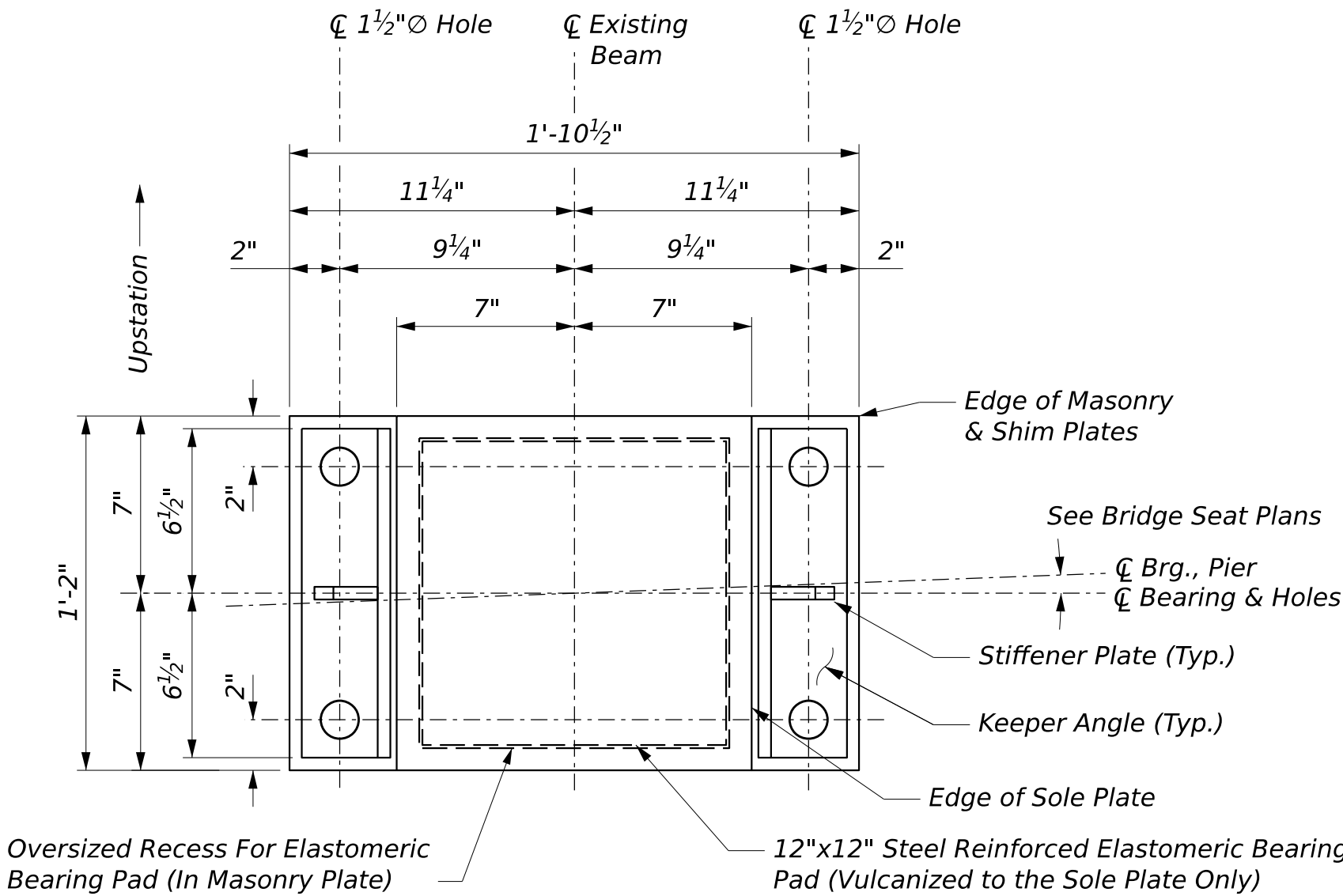
SHEET NUMBER 6 OF 9	SANDY RIVER BRIDGE NO. 5724 CROSSING SANDY RIVER NEW SHARON	PROJ. MANAGER C. GUY DATE	BY S. ALLARD 03/2026	STATE OF MAINE DEPARTMENT OF TRANSPORTATION Federal Project No. 2714600 WIN 27146.00
		DESIGN-DETAILED CHECKED-REVIEWED SIGNATURE	DATE	
		DESIGN-DETAILED DESIGN-DETAILED P.E. NUMBER	DATE	
		REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES	DATE	
		PIER REPAIRS	DATE	

REHABILITATION NOTES

1. The proposed bearing anchor rods have been located to avoid existing reinforcing, as interpreted from the existing plans, but this may not represent as-built conditions. The Contractor shall locate existing reinforcing steel by non-destructive methods prior to drilling new anchor rods, or other method approved by the Resident. This work shall be incidental to Item 523.52.
2. Existing bearings shall be removed and existing bridge seats shall be cleaned. Existing anchor rods shall be cut and removed to 1/2" minimum below the bridge seat surface and patched with an approved grout. This work shall be incidental to Item 523.52.
3. Dimensions and layout shown are based on available as-built drawings. Contractor shall field verify all dimensions prior to any related work.

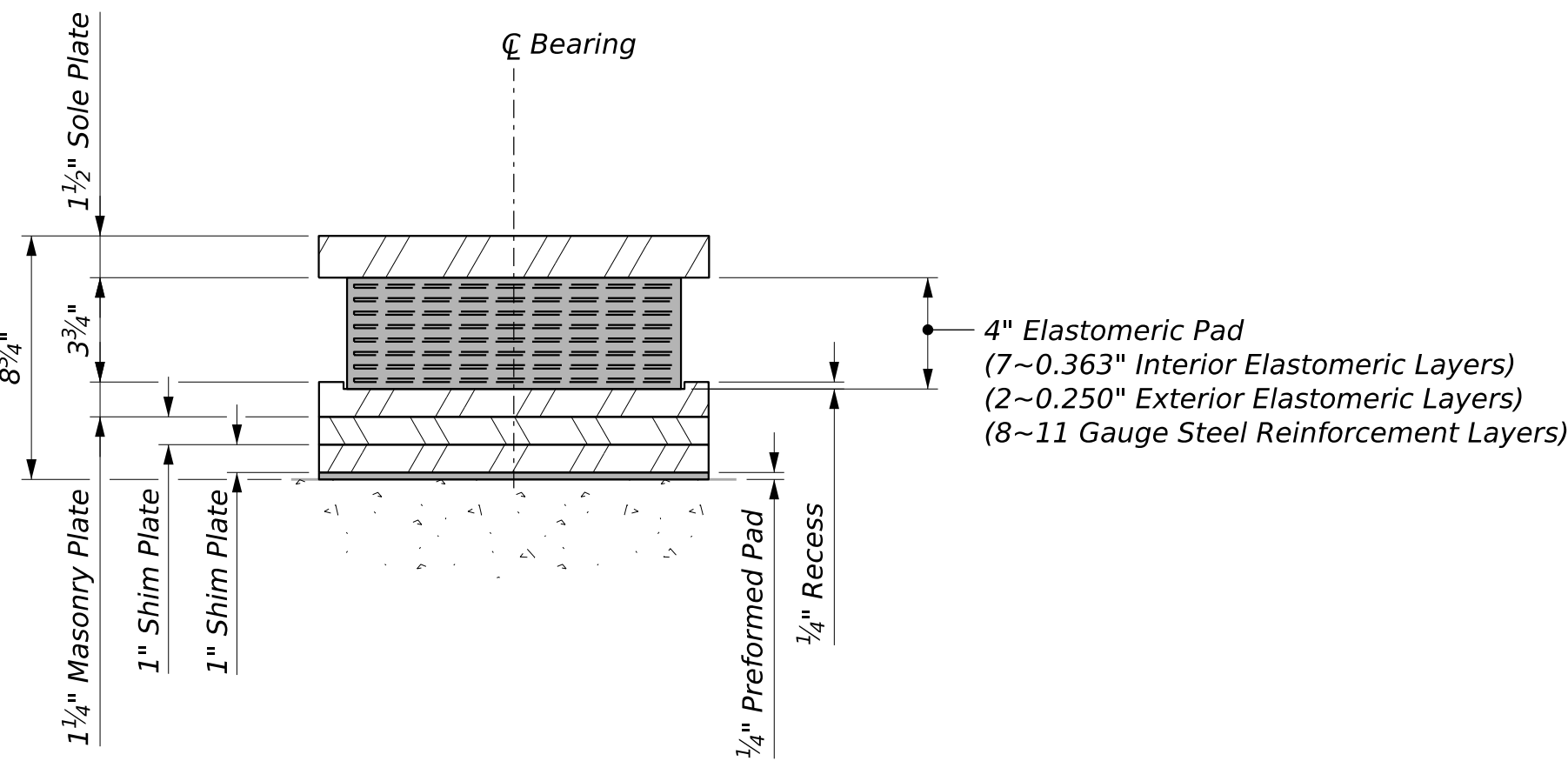


STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 2714600		WIN 27146.00	
SANDY RIVER BRIDGE NO. 5724		CROSSING SANDY RIVER		NEW SHARON		PIER NO. 1 & 4	
PROJ. MANAGER		C. GUY		BY		DATE	
DESIGN-DETAILED		M. MURPHY		S. ALLARD		03/2026	
CHECKED-REVIEWED		D. TAYLOR		D. TAYLOR		03/2026	
DESIGN-DETAILED							
DESIGN-DETAILED							
REVISIONS 1							
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							
SHEET NUMBER		7		OF		9	



ELASTOMERIC BEARING PLAN

(5 Assemblies Required at Pier 1, Span 1)
(5 Assemblies Required at Pier 4, Span 5)

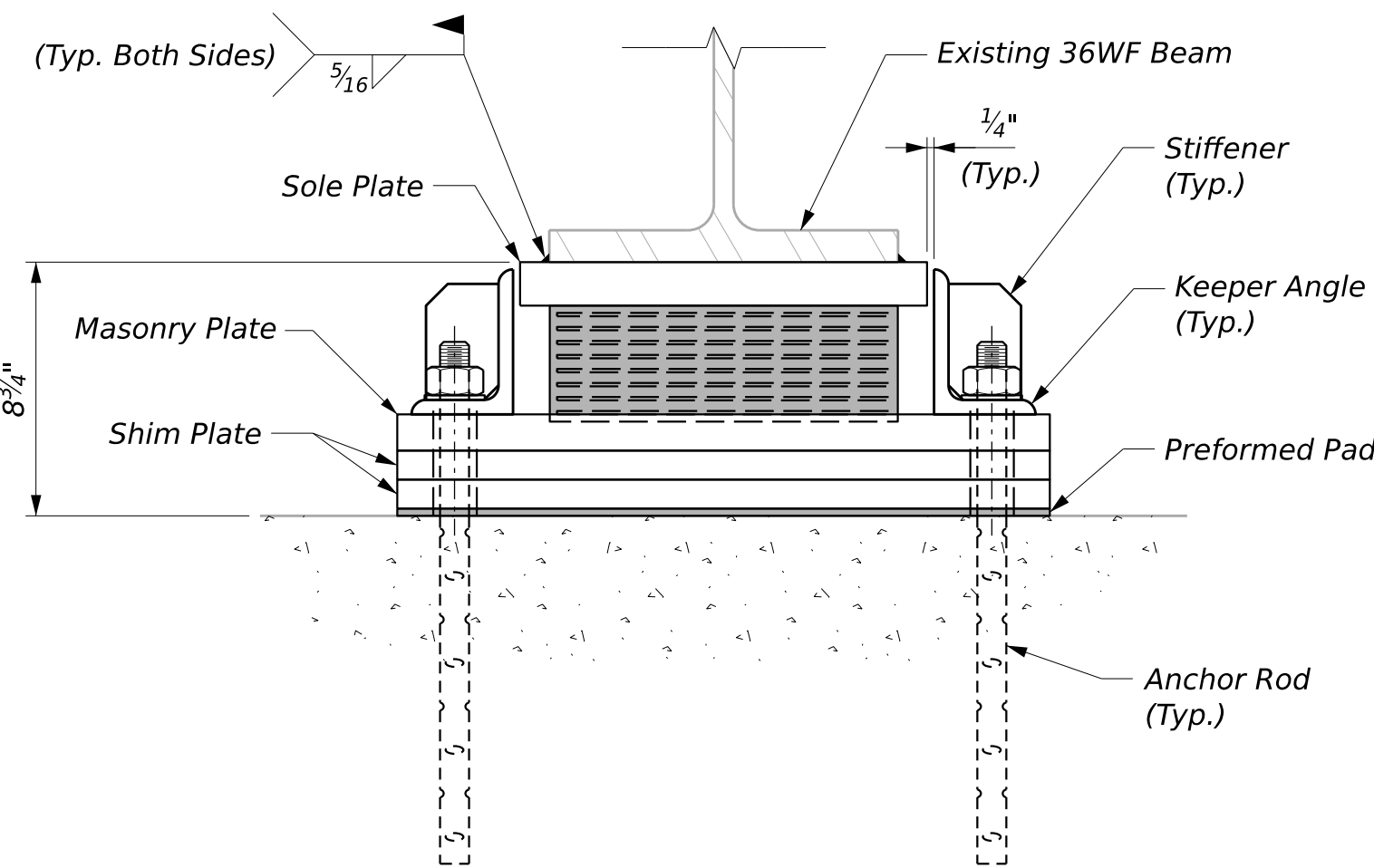


ELASTOMERIC BEARING SECTION

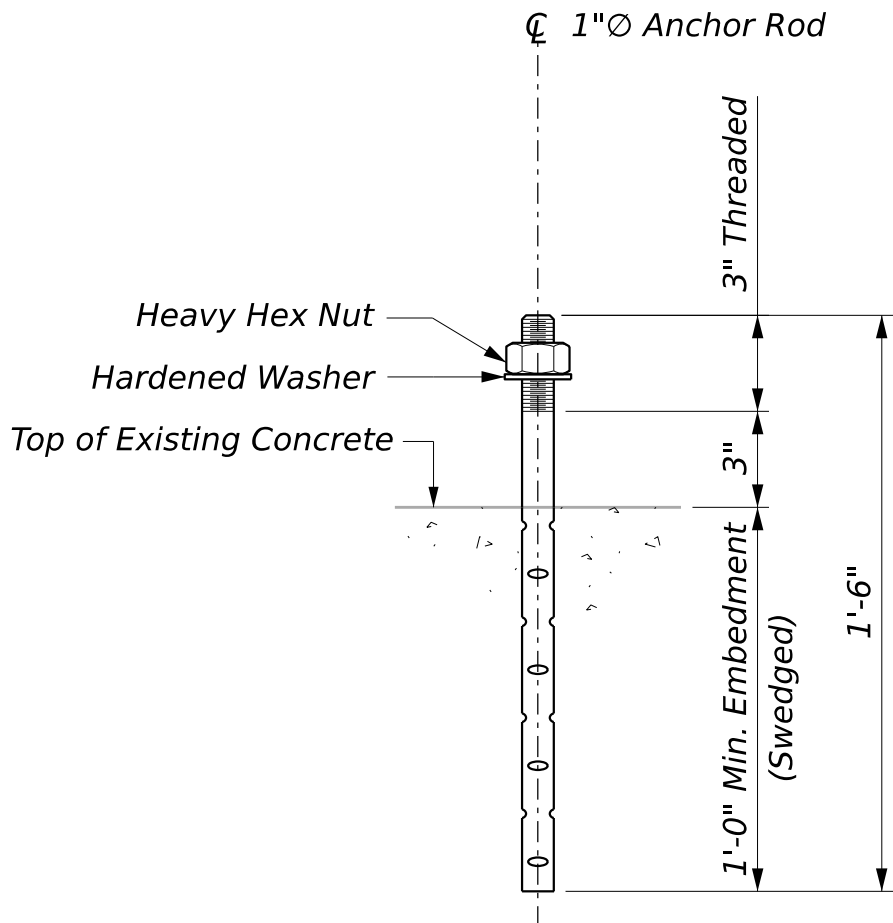
ELASTOMERIC BEARING NOTES

- The shear modulus of the elastomer shall be 112 psi.
- Vulcanization of the elastomer to the steel plates shall be done during the primary mold process. Sole plate shall be vulcanized to the elastomer.
- Masonry plates, shim plates, sole plates, and keeper angles shall meet the requirements of ASTM A709, Grade 50. Anchor rods shall meet the requirements of ASTM F1554, Grade 105 and shall be swaged on the embedded portion of the rod.
- Masonry plates, shim plates, and keeper angles shall be galvanized in accordance with Section 506. Sole plates for steel superstructures shall be treated in the same manner as the structural steel. Anchor rods, washers, and nuts shall be galvanized to ASTM A153 or ASTM B695, Class 50, Type 1.
- 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 covered during shipping and at any time prior to installation that the bearings may be exposed to sunlight.
- All necessary precautions shall be taken to protect bearing components from field weld flash and spatter. Heat from welding operations shall be controlled such that steel adjacent to the elastomer does not exceed 200° F. The temperature shall be verified by the use of temperature indicating crayons or other suitable means.
- Upset the threads on the anchor rods after assembly of the bearing.
- The "Bearing Design Load" for each bearing as noted in Standard Specifications, subsection 523.23.4, is 132 kips. This is the total load for the Service I load combination, without impact.

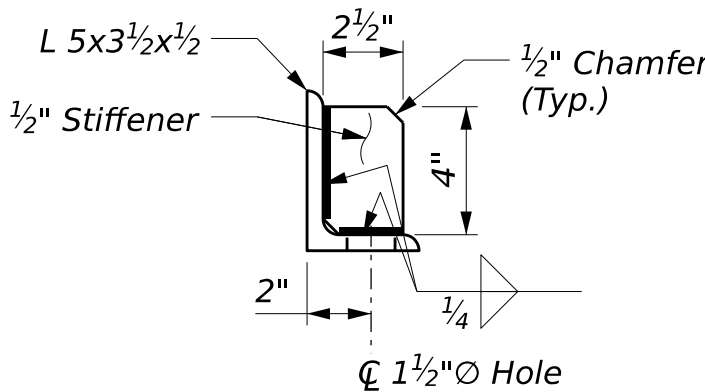
BEARING DESIGN CRITERIA	
Unfactored Dead Load (kips)	56.1
Unfactored Live Load (kips)	76.4
Max. Longitudinal Displ. (in.)	0.91



ELASTOMERIC BEARING ELEVATION

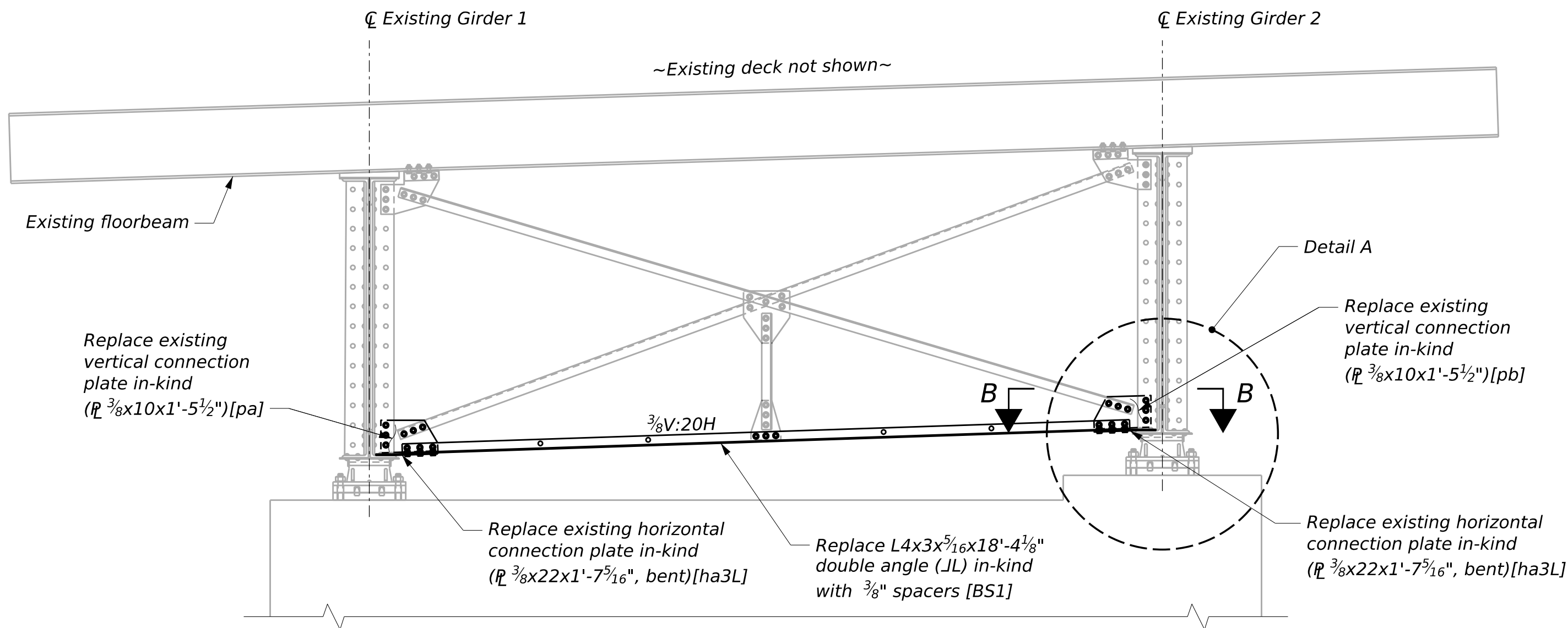


ANCHOR ROD DETAIL

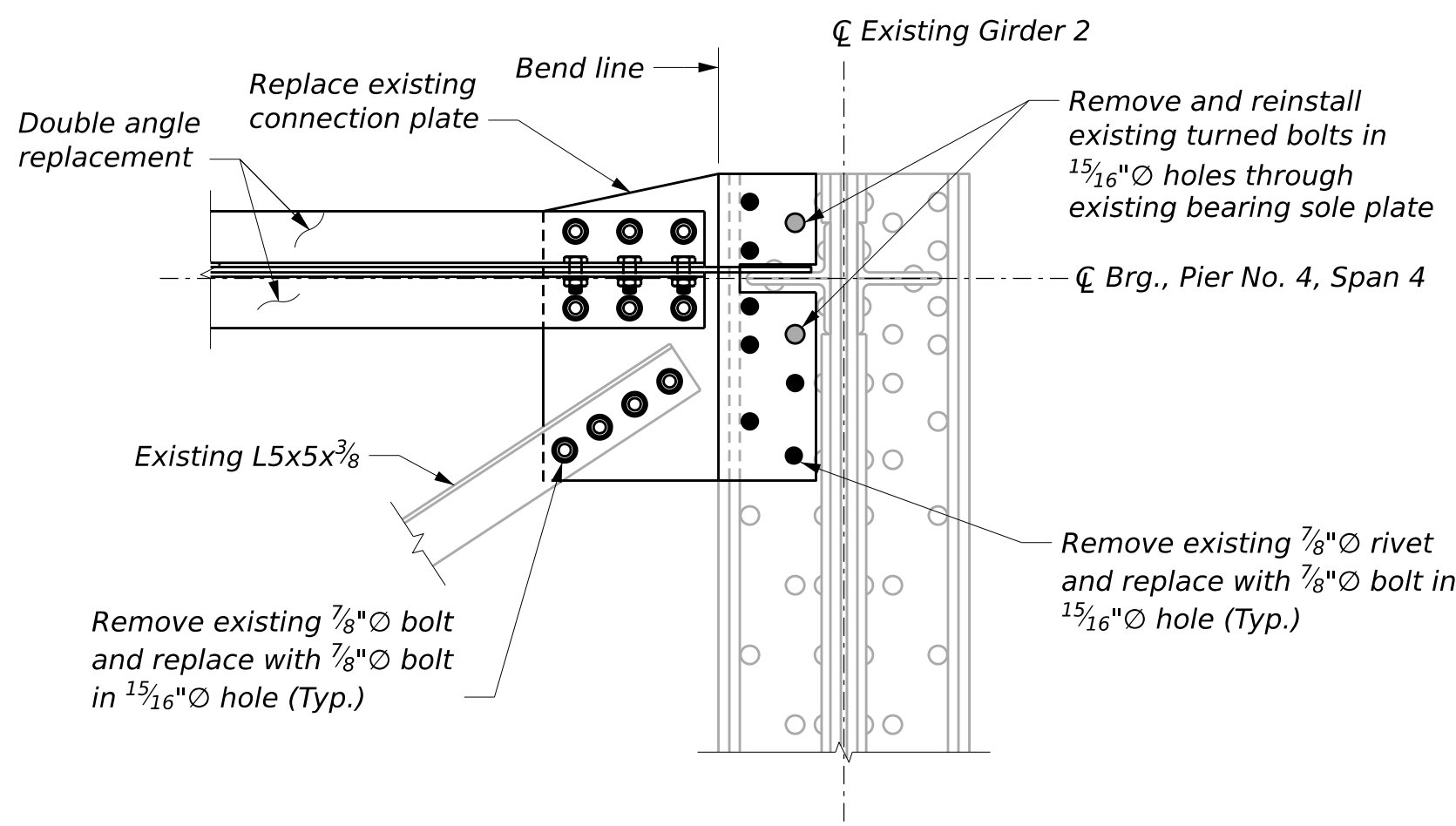


SECTION - KEEPER ANGLE

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		SIGNATURE		DATE	BY	C. GUY	SANDY RIVER BRIDGE BRIDGE NO. 5724 CROSSING SANDY RIVER NEW SHARON		SHEET NUMBER
Federal Project No. 2714600		P.E. NUMBER		DATE			BEARING DETAILS		8
WIN 27146.00									9

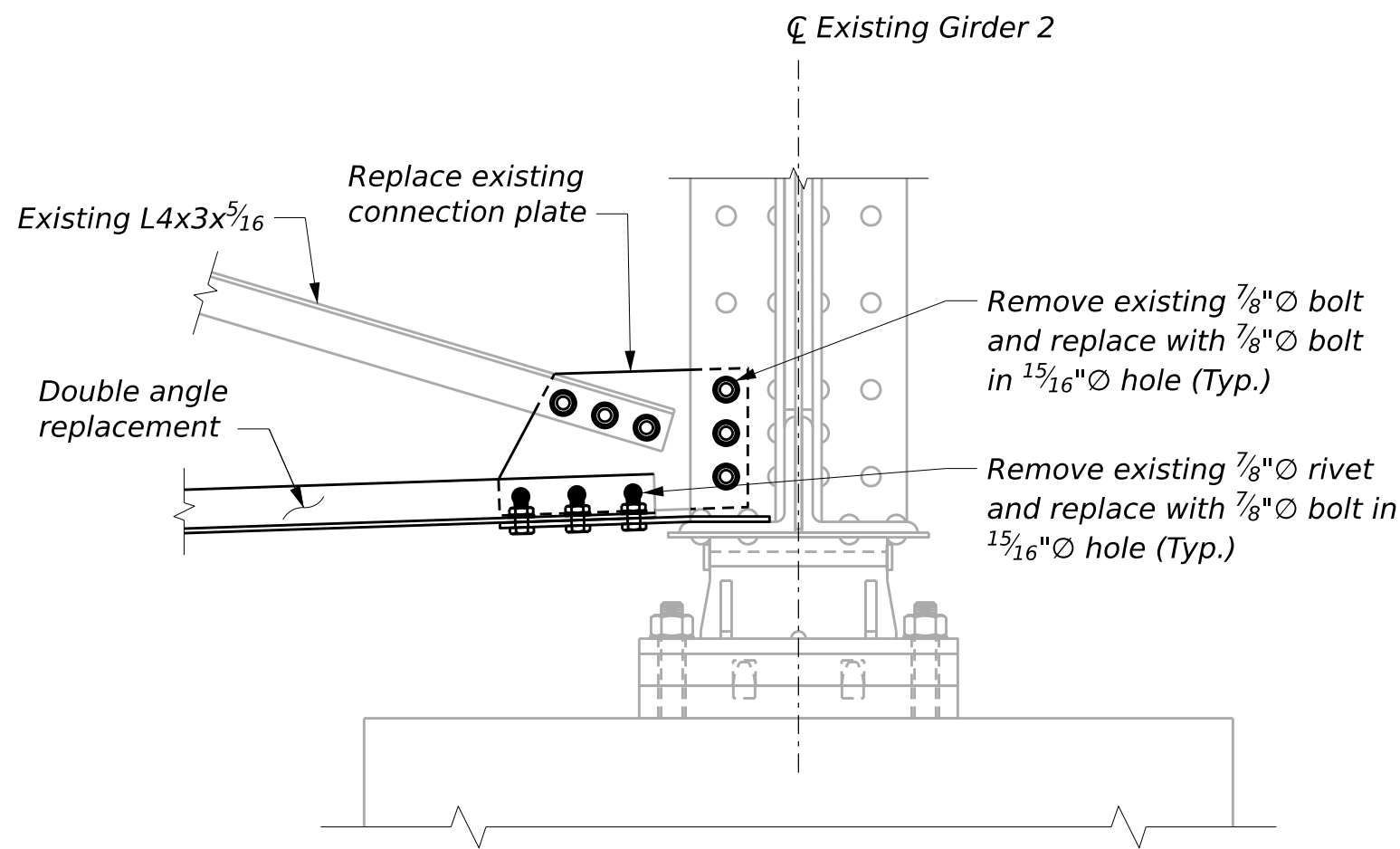


ELEVATION A-A - STEEL REPAIRS



SECTION B-B

(south bearing area shown, north side opposite hand)



DETAIL A

(south bearing area shown, north side opposite hand)

STEEL REPAIR NOTES

- For location of Elevation A-A, see Bearing Seat Plan - Pier No. 4 on Sheet 7.
- The steel repairs shown are to be in-kind component replacements. Refer to the original 1956 shop drawings for details not shown. Corresponding assembly marks to the original shop plans are indicated in brackets [] on Elevation A-A.
- Paint shall be shop applied and the top coat shall be SAE AMS-STD-595, Colors Used in Government Procurement, color 14272 to match the existing bridge. Field touch ups shall be per Section 506 and shall be considered incidental to Item 504.71.
- Temporary Structural Support shall be in place before steel repairs begin. See Special Provision 524.
- Existing steel removal and new steel installation, including rivets and bolts, shall be included in Item 504.71.
- Existing rivets and bolts shall be replaced with high strength bolts of the same size and shall be tensioned in accordance with Section 504.
- The Contractor shall field-verify all dimensions and hole locations prior to fabricating or drilling new steel components. Holes may be shop-drilled, field-drilled using existing components as a template, or a combination thereof.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 2714600		WIN 27146.00	
SANDY RIVER BRIDGE BRIDGE NO. 5724		CROSSING SANDY RIVER		NEW SHARON		STEEL REPAIR DETAILS	
PROJ. MANAGER		C. GUY		BY		DATE	
DESIGN-DETAILED		M. MURPHY		S. ALLARD		03/2026	
CHECKED-REVIEWED		D. TAYLOR		D. TAYLOR		03/2026	
DESIGN-DETAILED						SIGNATURE	
DESIGN-DETAILED						P.E. NUMBER	
REVISIONS 1						DATE	
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							
SHEET NUMBER		9		OF		9	