

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

2014 MaineDOT Standard Specifications with updates and
the 2014 MaineDOT Standard Details with Updates.

TRAFFIC DATA

Current (2015) AADT.....1,268



EAGLE LAKE
AROOSTOOK COUNTY
US Route 11
OVER
FISH RIVER
BRIDGE NO. 2597
BRIDGE REHABILITATION
WR ~ 36776
WIN ~ 25440.00

LIST OF DRAWINGS

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MATERIALS

Concrete:
All concrete..... Class "LP"

Reinforcing Steel.....ASTM A 615/A 615M, Grade 60

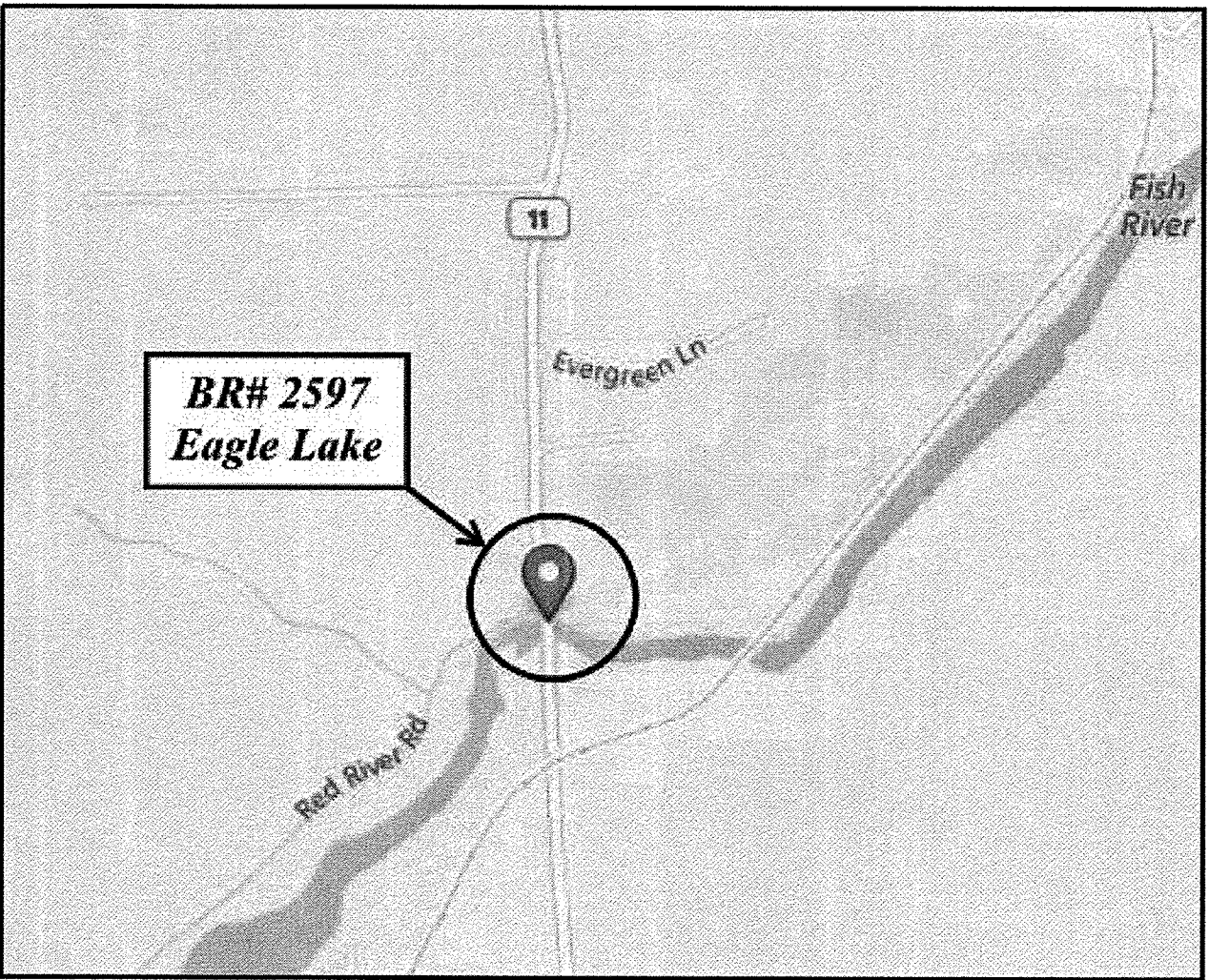
Structural Steel:
All Material (except as noted).....AASHTO M 270M/M 270 Grade 36
High Strength Bolts.....ASTM F3125, Grade 325, Type 3

BASIC DESIGN STRESSES

Concrete..... f 'c = 5000 psi

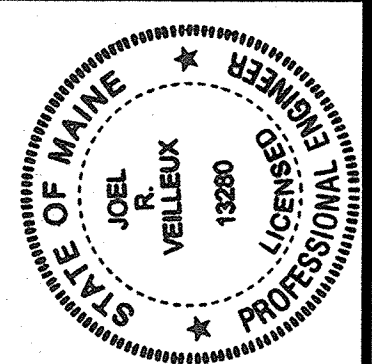
Reinforcing Steel..... f y = 60,000 psi

Structural Steel:
ASTM A 709, Grade 36..... F y = 36,000 psi
ASTM F3125, Grade A325, Type 3..... F μ = 120,000 psi



PROJECT LOCATION	Nadeau Bridge over the Fish River in Eagle Lake Lat./Long. 47°0'51.77" N 68°36'17.03" W
PROGRAM AREA	Bridge and Structure Maintenance
OUTLINE OF WORK	Bridge Rehabilitation.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		APPROVED	DATE
		COMMISSIONER:	
		CHIEF ENGINEER:	



Joel R. Velleux
SIGNATURE
13280
P.E. NUMBER
3-7-2019
DATE

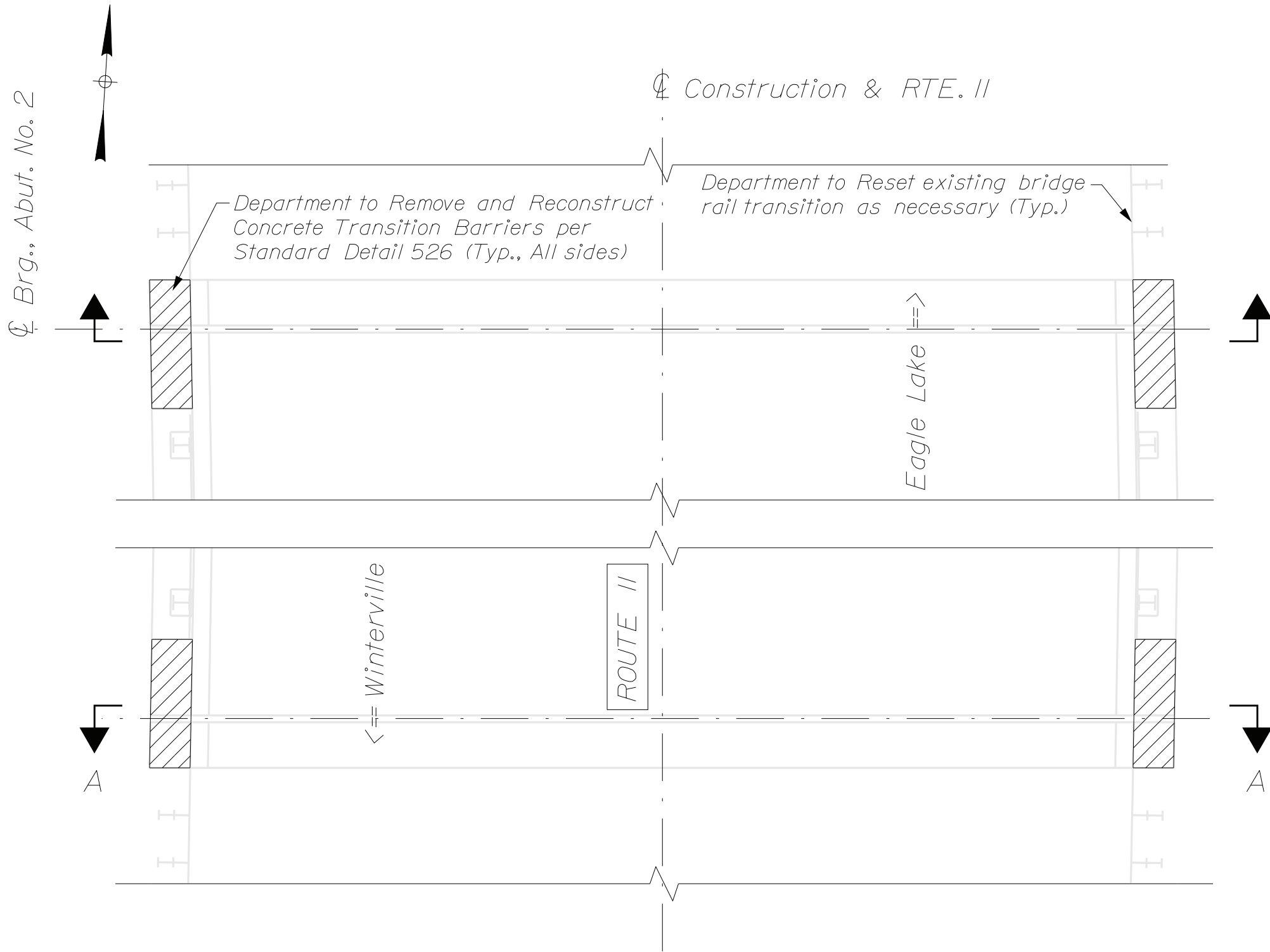
PROJECT INFORMATION	
PROGRAM	Bridge & Structure Maintenance
PROJECT MANAGER	Joe Tedford
DESIGNER	G. Libby
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

EAGLE LAKE Route 11 over Fish River	TITLE SHEET
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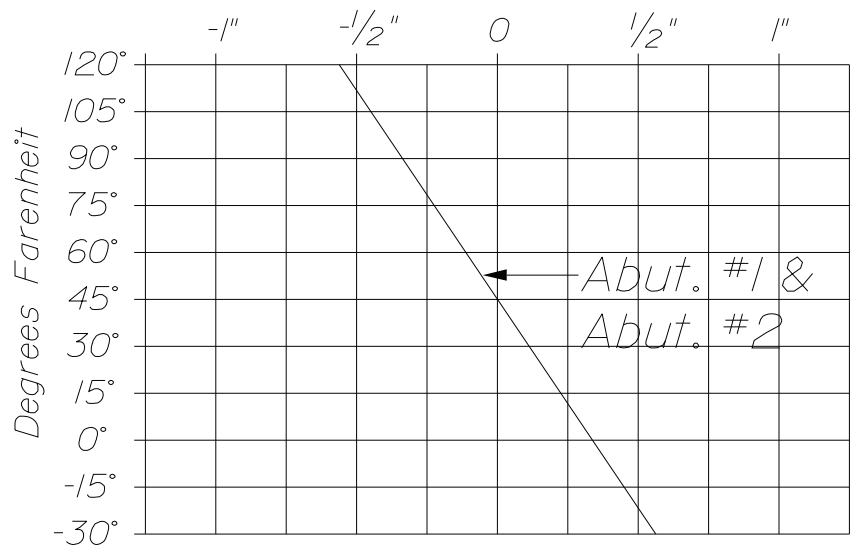
SHEET NUMBER
1
OF 5

WIN 25440.00

25440.00



ARMORED JOINT REPLACEMENT PLAN
(2 ~ Maine Joints ~ One - South, One - North)



SEAL ADJUSTMENT CHART

Notes:
~ This joint was designed for 2" opening at 45°.

JOINT OPENING NOTES:

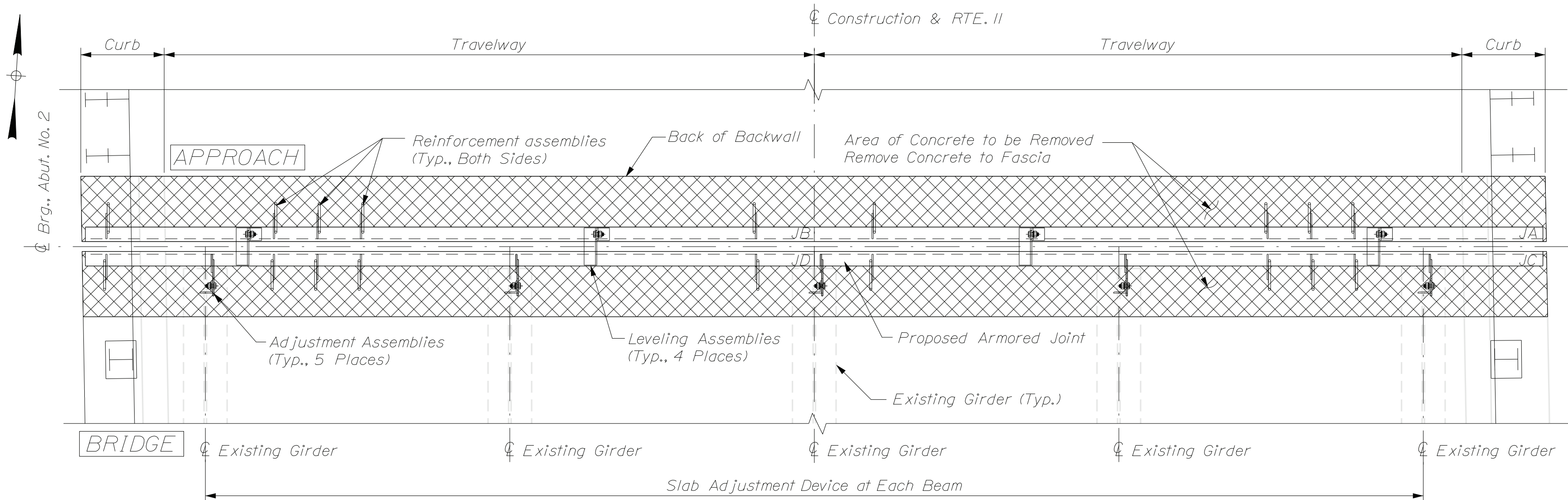
The Expansion Device shall be set to an opening of 2" in the Fabrication Shop. The joint opening shall be adjusted for temperature in the field at the time of installation using the following formula:

$$0.00008 \times "D" \times "\Delta T" = \text{Adjustment (in inches)}$$

"D" is the distance in feet between the backwall and the nearest fixed bearing (for joints at abutments) or between the fixed bearings at either side of the expansion joint (for joints or piers).

"ΔT" is the difference between the temperature of the bridge girders and 45°F.

A structure temperature above 45°F will result in a smaller joint opening.



ARMORED JOINT REPLACEMENT PLAN
(Northern Joint (Abutment #2) ~ As Drawn, Southern Joint (Abutment #1) ~ Rotate 180°)

SCOPE OF WORK:

Replace expansion joint armor, concrete headers, joint seals and Reconstruct Concrete Transition Barriers at Abutment #1 and Abutment #2. Clean and paint beam ends. Joint armor to be fabricated and supplied by others. All other work to be completed by the Department. New joint seals shall be Watson Bowman Acme WAB0 WA - 300 or D.S. Brown Delastic CV - 3000. Install seals in accordance with manufacturer's recommendations. Project Manager - Region 5 Bridge Transportation Operation Manager (TOM): Joe Tedford

GENERAL CONSTRUCTION NOTES:

- The existing bridge plans may be accessed at the following MaineDOT web address:
<http://www.maine.gov/mdot/contractors/>
The plans are reproductions of the original drawings as prepared for construction of the bridge. It is very unlikely that the plans will show any construction field change or any alterations which may have been made to the bridge during it's life span.
- Dimensions shown are from existing plans and may differ from actual field dimensions.
Field verify all dimensions prior to installation.
- The top of the concrete slab where concrete has been removed or rehabilitated shall be prepared to a suitable surface to receive membrane waterproofing as directed by the Region Bridge TOM.
- Any necessary reconstruction of the existing bridge rail and the removal and replacement of curb concrete shall be as approved by the Region Bridge TOM.
- Existing Concrete curb which requires removal in order to install the armored joints and seal shall be carefully and neatly cut off and removed to sound concrete as required. Concrete shall be placed to the limits shown on the plans.
- Fabricate and deliver the expansion joint to Region 5, Presque Isle Bridge Maintenance Lot at 33 Spruce Street in Presque Isle, Maine. Contact for delivery arrangements is Joe Tedford at 207-592-3576 or Joseph.Tedford@maine.gov.
- Field paint beam ends in accordance with the Bridge Maintenance Manual. The coating limits are to be at the discretion of the Region Bridge TOM.
- Seal existing and new concrete surfaces in accordance with the Bridge Maintenance Manual. The coating limits are to be at the discretion of the Region Bridge TOM.

CONCRETE SLAB NOTES

- The existing concrete shall be removed so as not to damage existing vertical and horizontal steel in the parapets or the longitudinal and transverse reinforcing steel in the superstructure. Any damaged reinforcing steel shall be replaced at the discretion of the Region Bridge TOM.
- Existing reinforcing steel to remain shall be cleaned as directed by the Region Bridge TOM prior to placing new concrete.
- All rebar splices shall be 18" minimum.
- Reinforcing steel shall have a minimum 2" of cover unless otherwise noted.
- All adjustment angles shall be welded after final position adjustments are made.
- Concrete removal limits depend on the existing bridge and may not match what is shown here. Refer to existing bridge plans and field measurements. Limits may be reduced with the approval of the Region Bridge TOM.

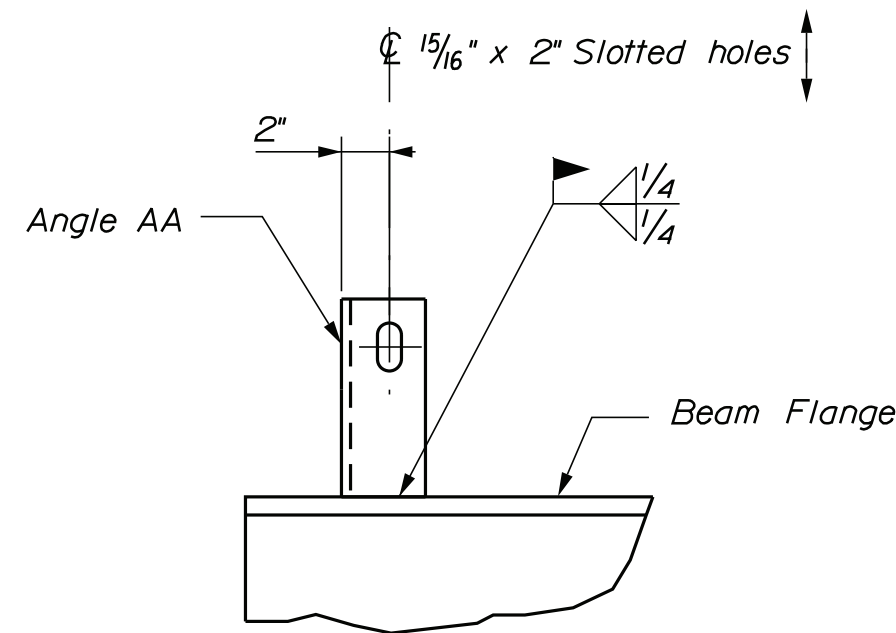
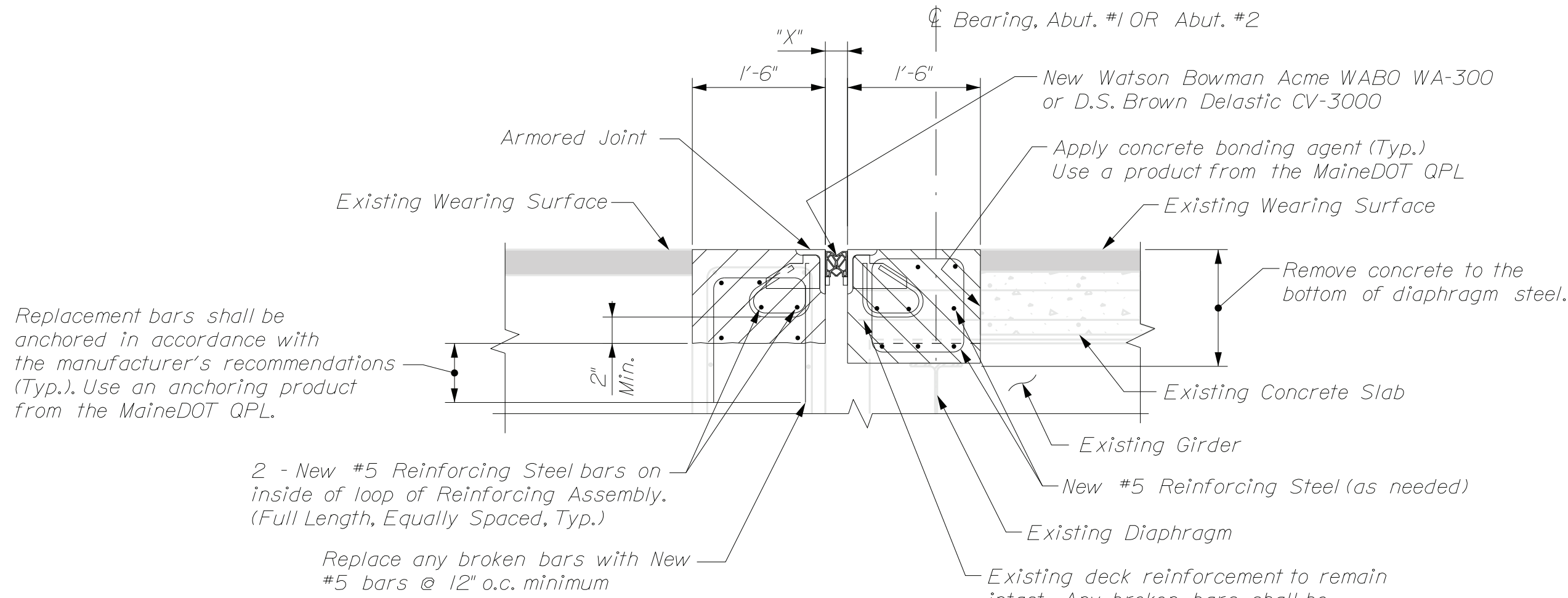
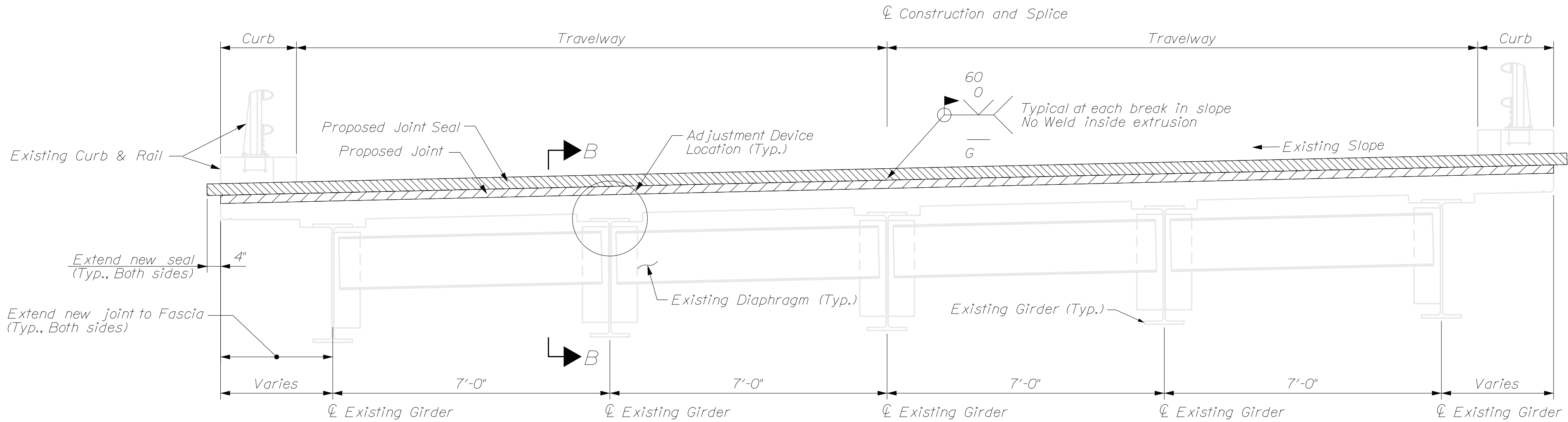
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	25440.00		BRIDGE NO. 2597		BRIDGE JOINT PLANS	
NADEAU BRIDGE FISH RIVER EAGLE LAKE	AROOSTOOK	ARMORED JOINT PLANS	PROJ. MANAGER	Joe Tedford	BY	DATE
			CHECKED-DETAILED	G. Libby	G. Libby	FEB 2019
			DESIGNED-REVIEWED	J. Villoux	J. Villoux	
			DESIGNS DETAILLED			
			REVISIONS 1			
SHEET NUMBER	2	OF 5	REVISIONS 2			
			REVISIONS 3			
			REVISIONS 4			
			FIELD CHANGES			

Date:2/21/2019

Username: gerald.libby

Division: BRIDGE

Filename: ... \CADD\003_Joint_Sections.dgn



NOTE:
Installation Details for MaineDOT
Crew Personnel

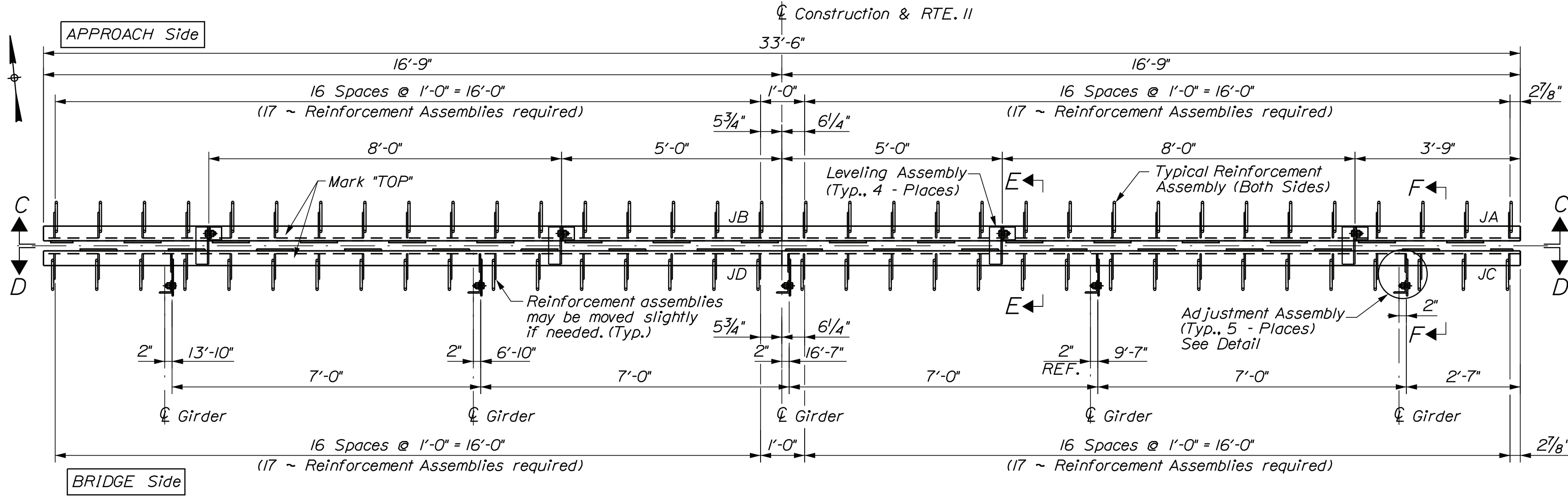
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BRIDGE NO. 2597				DATE			
WIN 25440.00				BRIDGE JOINT PLANS			
NADEAU BRIDGE FISH RIVER EAGLE LAKE							
AROOSTOOK							
PROJ. MANAGER		Joe Treford		BY		DATE	
DESIGN-DETAILED		C. Libby		FEB 2019			
CHECKED-REVIEWED		J. Velleux					
DESIGN2-DETAILED2							
DESIGN3-DETAILED3							
REVISIONS 1							
REVISIONS 2							
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FIELD CHANGES							
ARMORED JOINT PLANS							
SHEET NUMBER				3			
OF 5							

Date:2/21/2019

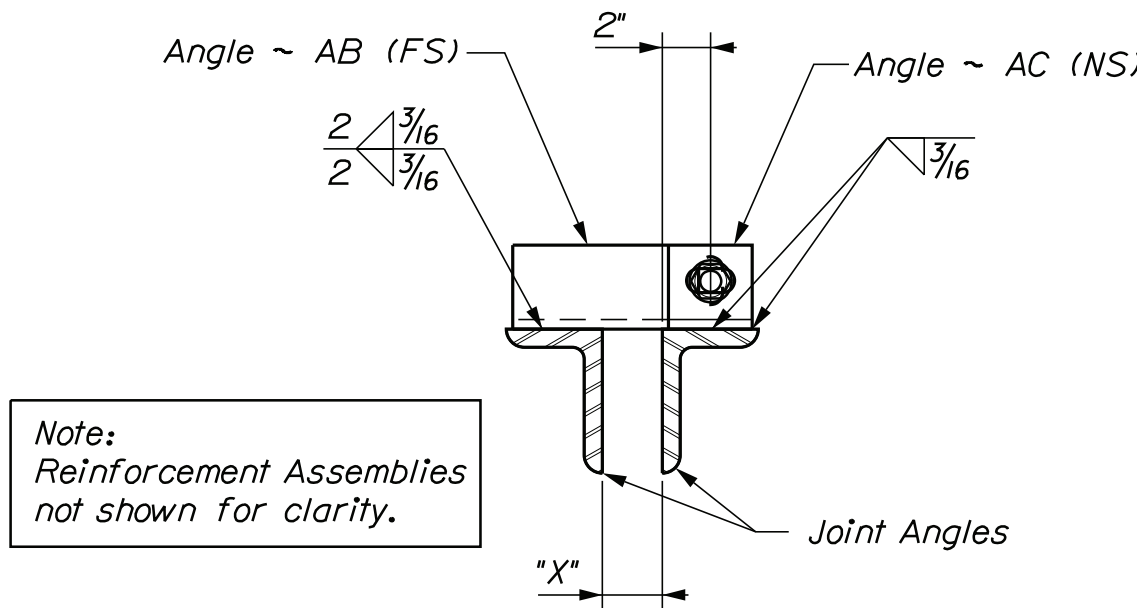
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Division: BRIDGE

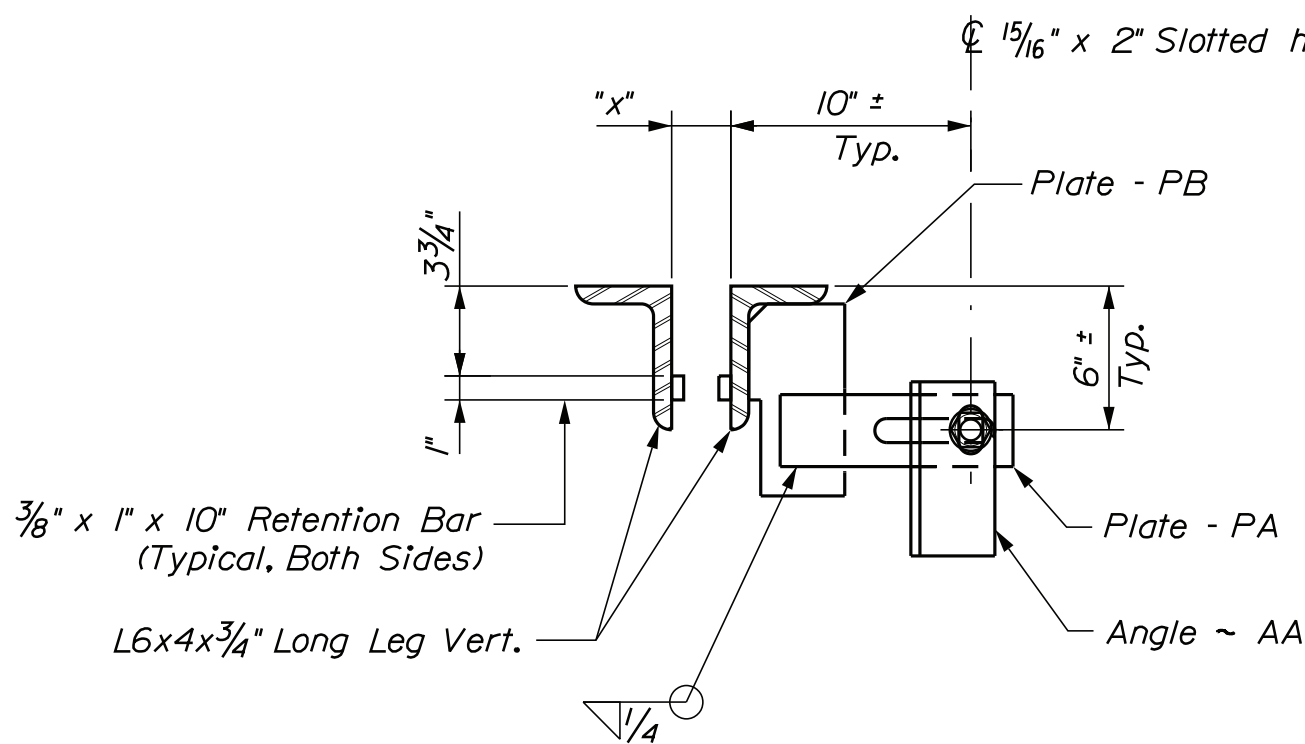
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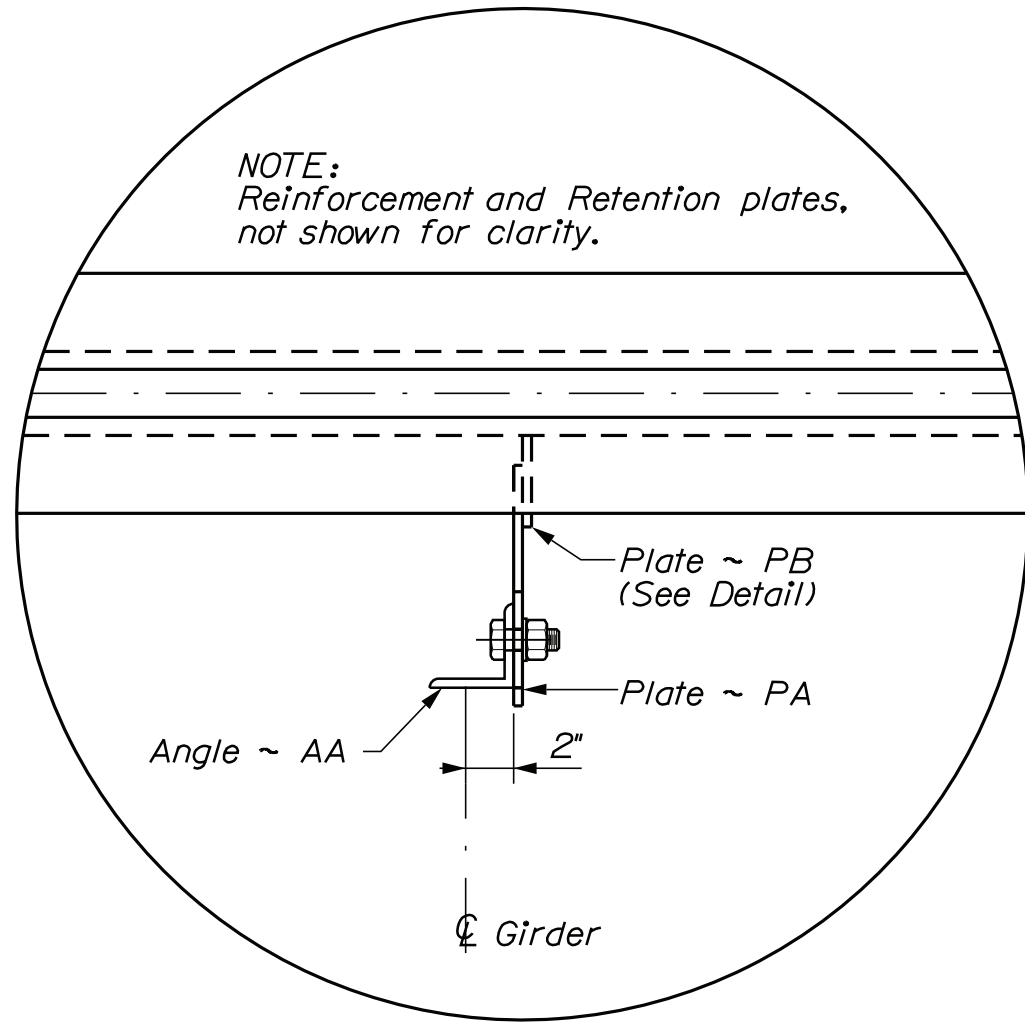
MAINE JOINT LAYOUT PLAN
(Two Joints Required)
For Abutment #2 ~ As Drawn
For Abutment #1 ~ Rotate 180°



SECTION E - E
(Typical Leveling Assembly)



SECTION F - F
(Reinforcement Assembly Not Shown for Clarity)



ADJUSTMENT ASSEMBLY DETAIL
For Abutment #2 - As Drawn,
For Abutment #1 - Rotate 180°

HEAVY DUTY JOINT NOTES

1. The Expansion Devices shall be fabricated to be installed normal to grade.
2. Prior to the installation of the seal the steel surfaces to recieve the adhesive shall be blasted clean and solvent washed per the seal manufacturer's instructions.
3. The joint armor shall be furnished and installed ungalvanized.

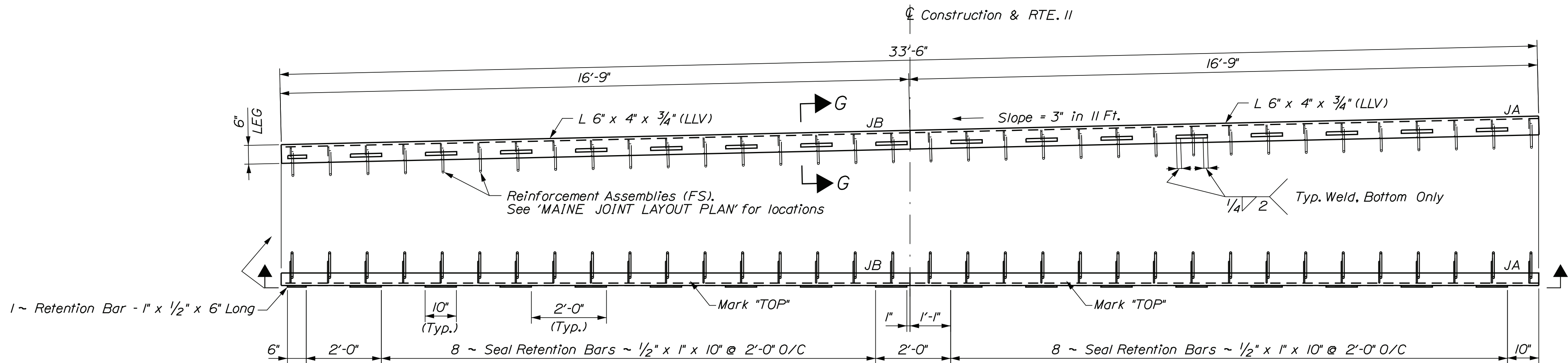
SHEET NUMBER				STATE OF MAINE			
4				DEPARTMENT OF TRANSPORTATION			
OF 5				25440.00			
NADEAU BRIDGE				BRIDGE NO. 2597			
FISH RIVER				WIN			
EAGLE LAKE				25440.00			
AROOSTOOK				BRIDGE JOINT PLANS			
ARMORED JOINT PLANS							
PROJ. MANAGER				BY			
DESIGN-Detailed				DATE			
CHECKED-Reviewed				SIGNATURE			
DESIGN2-Detailed				P.E. NUMBER			
DESIGN3-Detailed				DATE			
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REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							

Date:2/21/2019

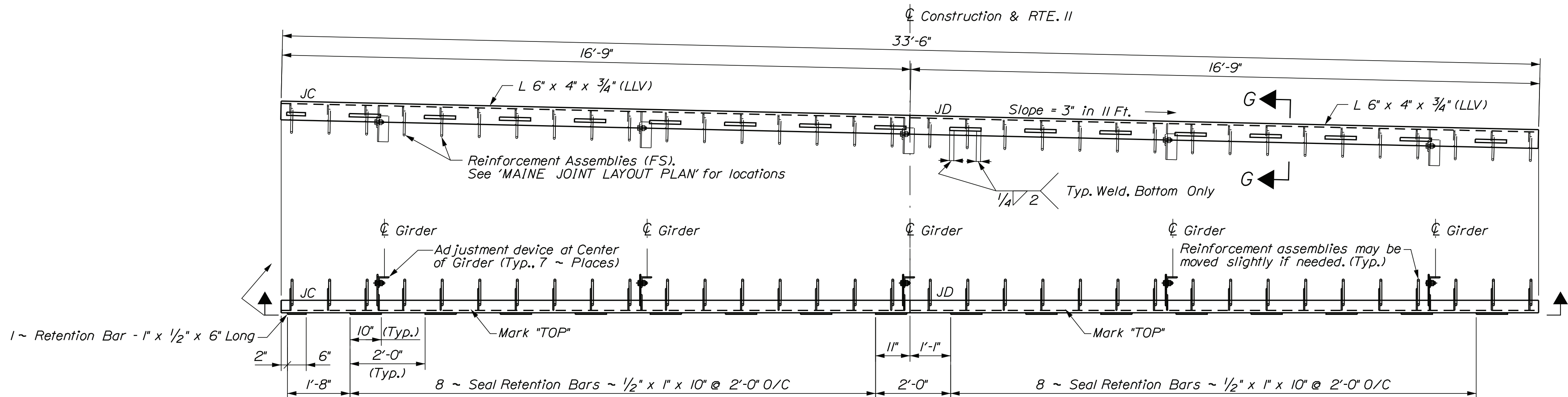
Username: gerold.libby

Division: BRIDGE

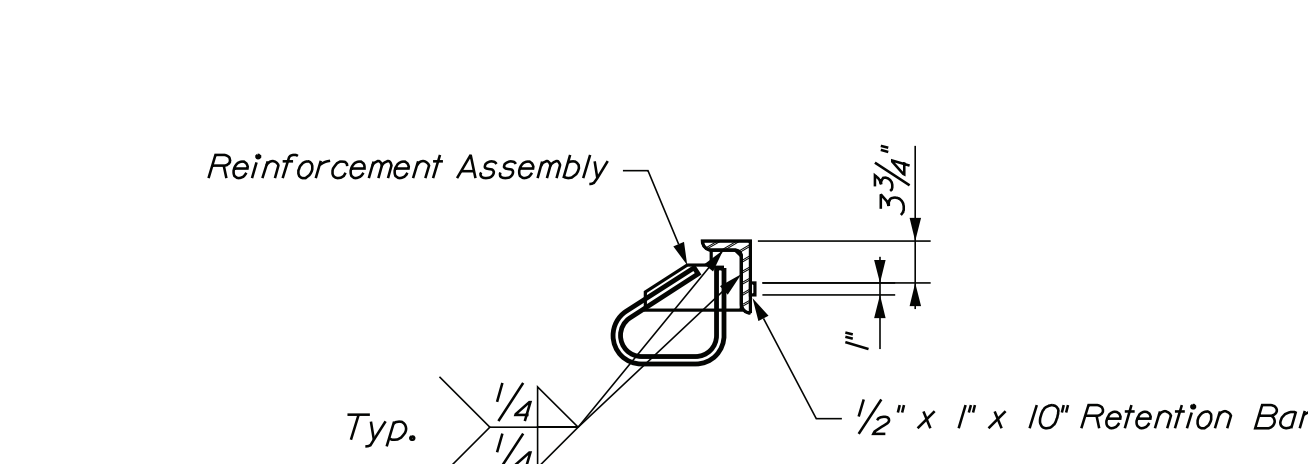
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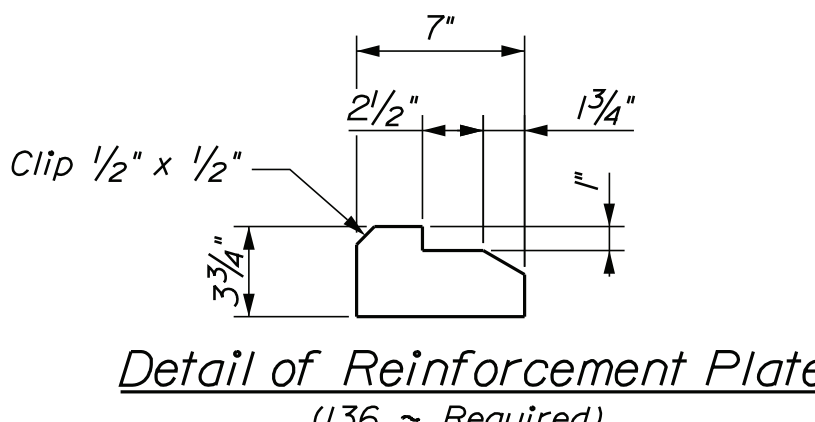
SECTION C - C



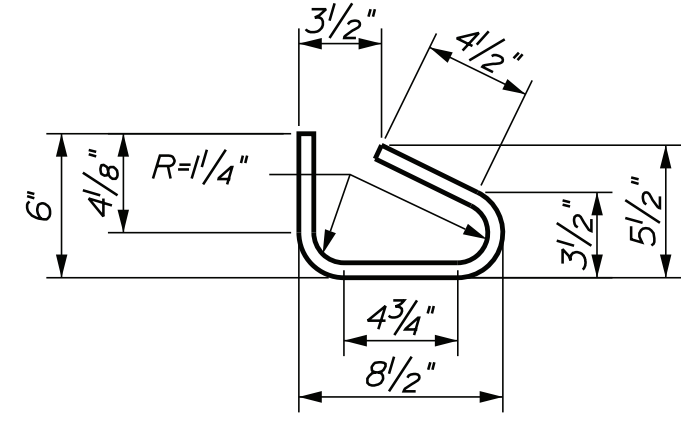
SECTION D - D



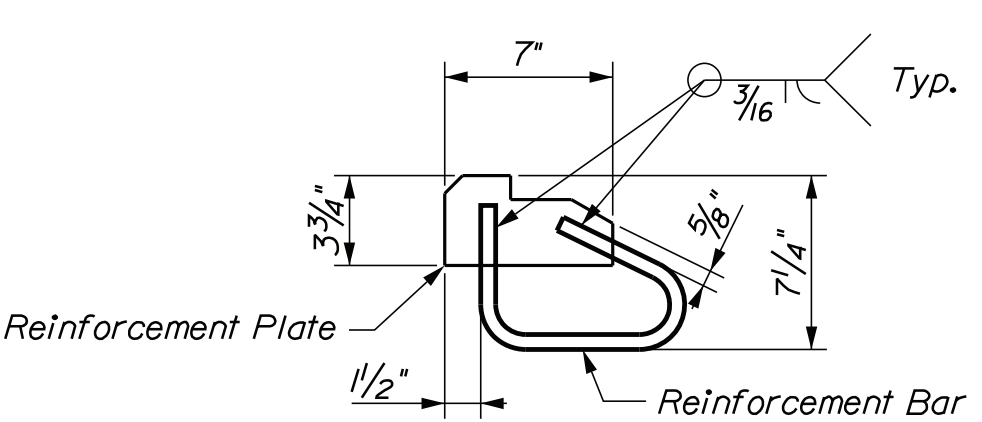
Section G - G



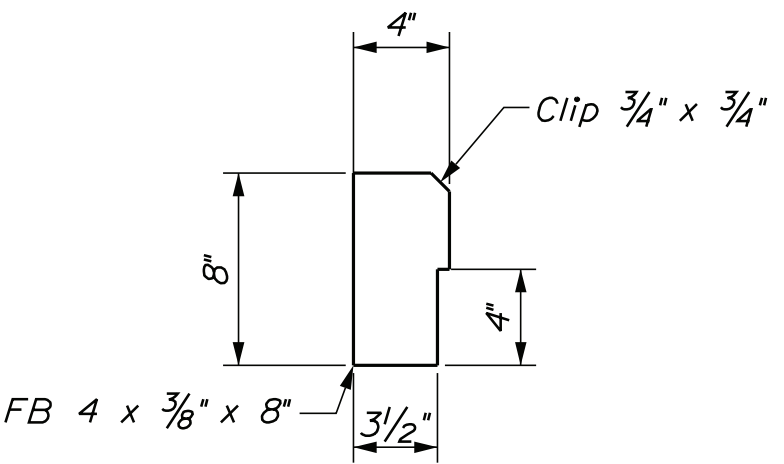
Detail of Reinforcement Plate
(136 ~ Required)



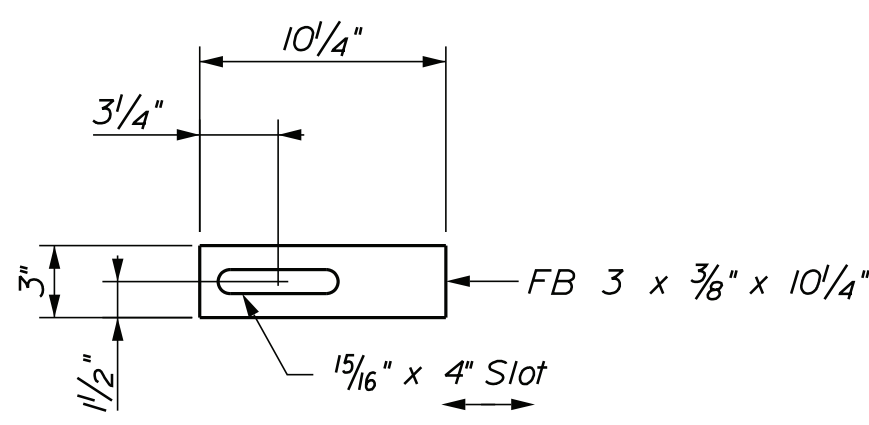
Detail of Bent Reinforcement Bar
NOTE: #5 Reinforcement Bar
(136 ~ Required)



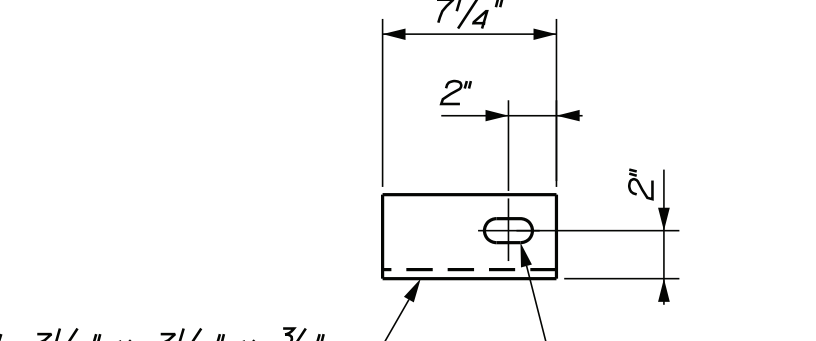
Typical Reinforcing Assembly Detail



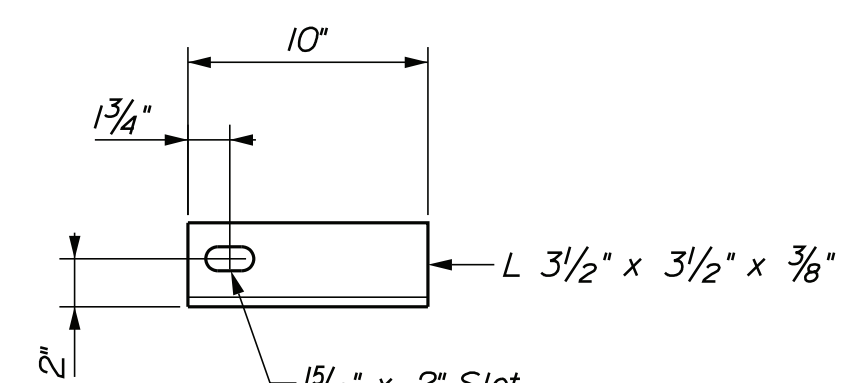
10 - Plates Mkd ~ PB
(No Holes)



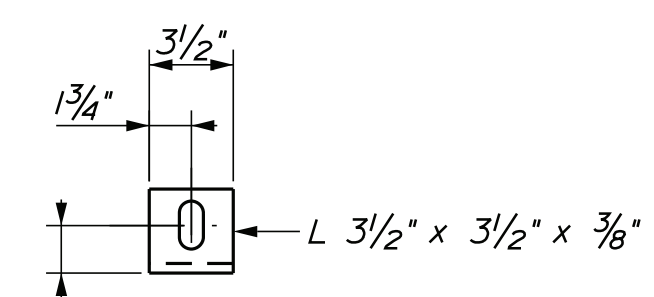
10 - Plates Mkd ~ PA



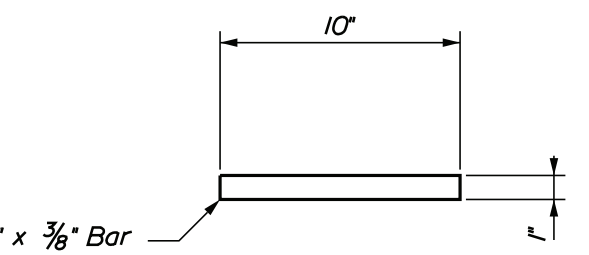
10 - Angles Mkd ~ AA



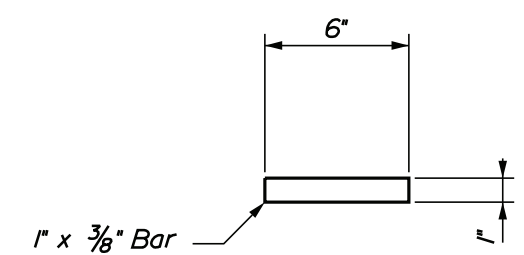
8 - Angles Mkd ~ AB



8 - Angles Mkd ~ AC



Detail of 10" Retention Bars
(64 ~ Required)



Detail of 6" Retention Bars
(4 ~ Required)

NOTE:
All Steel shall be Finished SSPC-SP6, Blast Clean
and ungalvanized.

OF 5		SHEET NUMBER		NADEAU BRIDGE FISH RIVER EAGLE LAKE		AROOSTOOK		PROJ. MANAGER DESIGN-DETAILED CHECKED-REVIEWED DESIGN2-DETAILED2 DESIGN3-DETAILED3 REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES		Joe Tedford G. Libby J. Velleux J. Velleux <	
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