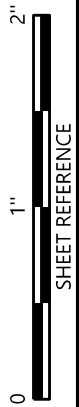


\\bvrms002\BridgesStandard\Special\Bridges Standard DGN Files\StandardsBooks\Bridg\2021 StandardsBook\bg1.dgn
PLOTTED: 18-Sep-20 at 09:23



1.

SPECIFICATIONS: CURRENT ALABAMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2.

DESIGN LOADING: H _____ AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
3.

CONCRETE SURFACE FINISH: CLASS 3 SURFACE FINISH SHALL APPLY TO THIS BRIDGE SITE.
4.

WASHING: ALL SPILLED CONCRETE AND SPLASHES SHALL BE WASHED OFF STRUCTURAL STEEL BY WATER HOSE IMMEDIATELY AFTER SLAB IS POURED.
5.

PILING: MAXIMUM DESIGN LOADING PER PILE: IN ABUTMENTS _____TONS
IN BENTS _____TONS
6.

CLEARANCE (RAILROAD): VERTICAL CLEARANCE SHALL BE MAINTAINED ABOVE HIGH POINT OF RAIL WITHIN THE CONFINES OF THE STRUCTURE. HORIZONTAL CLEARANCE SHALL BE MAINTAINED WITH RESPECT TO CENTERLINE OF RESPECTIVE TRACKS. SEE SPECIAL PROVISION FOR CONSTRUCTION CLEARANCE REQUIREMENTS, ETC.
7.

WIDENING AND/OR RAISING BRIDGE: ALL DIMENSIONS SHOWN ARE APPROXIMATE ONLY AND SHALL BE VERIFIED PRIOR TO SUBMITTING SHOP DRAWINGS AND ORDERING MATERIAL THAT COULD BE AFFECTED BY THE FIELD SURVEY RESULTS.
8.

OMITTED
9.

PAINT SYSTEM No. ____ SHALL BE USED ON ALL SHOP AND FIELD PAINTING.
10.

PILE ENCASEMENTS: ALL CONCRETE AND REINFORCEMENT IN PILE ENCASEMENTS SHALL BE PAID FOR AS "CU. YDS. BRIDGE SUBSTRUCTRE CONCRETE"; AND "POUNDS STEEL REINFORCEMENT."
11.

OMITTED
12.

RIPRAP: THE RIPRAP APRON LENGTH AS REQUIRED ON SPECIAL DRAWING NUMBER RR-610 SHALL BE ____ FEET AT THE BEGINNING OF THE BRIDGE AND ____ FEET AT THE END OF THE BRIDGE.
13.

TRAFFIC PROTECTION: THE BRIDGE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN TRAFFIC PROTECTION DURING CONSTRUCTION OF THE OVERPASS. ALL PROTECTORS SHALL BE ADEQUATELY FRAMED AND COVERED WITH 3/8" (MINIMUM), EXTERIOR GRADE PLYWOOD OR APPROVED EQUAL STRENGTH MATERIAL. THE VERTICAL CLEARANCE SHALL BE THE MAXIMUM OBTAINABLE BUT NOT LESS THAN 14'-0" UNLESS OTHERWISE SHOWN ON THE PLANS. THE EXACT VERTICAL CLEARANCE IS TO BE DETERMINED AFTER THE PROTECTORS HAVE BEEN DESIGNED. THE CONTRACTOR SHALL SUBMIT SKETCHES OF THE PROTECTION TO THE ENGINEER PRIOR TO CONSTRUCTION. ADDITIONALLY, TRAFFIC PROTECTION SHALL EXTEND 5'-0" INSIDE THE LIMITS OF REMOVAL OF EXISTING BRIDGE BEING WIDENED. SEE BRIDGE SPECIAL PROJECT DRAWING TP-1 FOR FURTHER DETAILS.

THE CONTRACTOR SHALL NOTIFY THE STATE MAINTENANCE ENGINEER IN MONTGOMERY, FIVE (5) DAYS IN ADVANCE WHEN RESTRICTED VERTICAL CLEARANCE WILL BE EFFECTIVE AND ALSO THE DATE THE RESTRICTION IS REMOVED.

PAYMENT FOR TRAFFIC PROTECTION SHALL BE A SUBSIDIARY OBLIGATION OF PAY ITEM 510-C AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY FOR CONSTRUCTION AND REMOVAL OF SAME.
14.

WELDED STUDS: ALL STUDS ON BEAMS AND GIRDERS SHALL BE ALIGNED WITH MAIN TRANSVERSE REINFORCING BARS. ANY GALVANIZING REQUIRED SHALL BE DONE AFTER STUD WELDING IS COMPLETED.
15.

ALL BRIDGE DECK JOINTS SHALL BE SEALED IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING I-131 WITH SILICONE.
16.

POURING CURBS, RAILS AND SIDEWALKS: ALL SLAB CONCRETE SHALL BE POURED PRIOR TO POURING ANY CURBS, RAILS OR SIDEWALKS ON ANY SIMPLE SPAN, OR CONTINUOUS UNIT.
17.

THE EXISTING GIRDERS SHALL NOT BE DAMAGED IN ANY WAY DUE TO THE REMOVAL OF THE BRIDGE DECK. THE CONTRACTOR SHALL NOT USE ANY REMOVAL EQUIPMENT LARGER THAN A 70 POUND HAND HELD PAVEMENT BREAKER. THE HAMMER SIZE SHALL BE LIMITED TO 35 POUNDS WHEN WORKING WITHIN 6" OF THE BREAKLINE OR EDGE OF GIRDER. CARE SHALL BE TAKEN NOT TO DAMAGE THE CONCRETE AND STEEL REINFORCEMENT TO BE RETAINED. WHERE THE DECK IS BEING REMOVED BETWEEN GIRDERS FOR ARMOR JOINT REPLACEMENT, THE CONSTRUCTION JOINT SHALL BE TAPERED TOWARD THE BREAKOUT AREA TO PREVENT SPALLS ON THE UNDERSIDE OF THE SLAB. THE CONTRACTOR SHALL REPAIR CONCRETE SPALLS AND DAMAGED STEEL REINFORCEMENT, AT NO ADDITIONAL COST TO THE PROJECT, BY A METHOD APPROVED BY THE ENGINEER. ALL PLAN ELEVATIONS AND DIMENSIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR AND ANY NECESSARY ADJUSTMENTS MADE PRIOR TO ORDERING MATERIAL. FIELD VERIFIED ELEVATIONS AND DIMENSIONS SHALL BE SUBMITTED TO THE BRIDGE ENGINEER PRIOR TO SUBMITTAL OF GIRDER SHOP DRAWINGS.
18.

SHOP DRAWINGS: STRUCTURAL STEEL DETAILS SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY, AND ARE NOT GUARANTEED BY THE STATE TO BE ENTIRELY COMPLETE AND CORRECT. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CORRECT SHOP DRAWINGS AND DETAIL DIMENSIONS TO FIT THE STRUCTURE. ATTENTION IS CALLED TO SECTION 105, PARTICULARLY ARTICLE 105.02; AND ARTICLE 836.14 OF THE SPECIFICATIONS.
19.

COLUMN REINFORCING BARS: WHEN THE CAP IS NOT MORE THAN TWO (2) INCHES WIDER ON EACH SIDE OF THE COLUMN, THE FOLLOWING SHALL APPLY: COLUMN BARS SHALL BE TIED TO THE TOP FEW COLUMN HOOPS IN A MANNER THAT WILL ALLOW COLUMN BARS TO CLEAR CAP REINFORCING AND BE LOCATED INSIDE OF CAP REINFORCING.
20.

MANDATORY NOTCH TOUGHNESS REQUIREMENTS FOR STRUCTURAL STEEL: MEMBERS AS SPECIFIED IN SECTION 836.01 (b)1 OF CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST. A MEMBER SHALL BE ORDERED WITH ADDITIONAL LENGTH SO THE CONTRACTOR CAN FURNISH THE BUREAU OF MATERIALS AND TESTS AN EIGHTEEN (18) INCH SAMPLE FOR CHECK TESTING.
21.

PRESTRESSED CONCRETE GIRDERS WITH POURED-IN-PLACE DECK:

(A) SHOP DRAWINGS: SHOP DRAWINGS SHALL BE SUBMITTED AND SHALL SHOW A COMPLETE DETENSIONING SCHEDULE THAT WILL MINIMIZE TENSION IN THE CONCRETE DURING RELEASE OF THE STRANDS. DETAILED CONCRETE STRESSES DURING EACH OPERATION OF DETENSIONING SHALL BE SUBMITTED WITH THE DRAWINGS. THE SHOP DRAWINGS SHALL SHOW COMPLETE GIRDER DETAILS INCLUDING SHIELDING AND ALL REINFORCING AND STRUCTURAL STEEL.

(B) FORMS: ALL GIRDERS SHALL BE CAST ON CONCRETE FLOORED PALLETS AND IN METAL FORMS.

(C) FINISH: THE ENTIRE TOP OF THE GIRDERS SHALL BE SCRUBBED TRANSVERSELY TO A FULL MAGNITUDE OF APPROXIMATELY 1/4" AT THE TIME OF INITIAL SET TO REMOVE ALL LAITANCE AND TO PROVIDE A ROUGHENED SURFACE. THE USE OF A MEMBRANE CURING COMPOUND SHALL NOT BE PERMITTED ON THE TOP OF THE TOP FLANGE OF PRESTRESSED GIRDERS.

(D) OMITTED

(E) SCARIFYING: GIRDER SIDES AT EDGE BEAMS/END WALLS SHALL BE SCARIFIED FOR BONDING AFTER GIRDERS HAVE BEEN ERECTED AND FORM LINES HAVE BEEN ESTABLISHED.

(F) ACCESSORIES ENCASED IN GIRDERS FOR USE IN ATTACHING TEMPORARY BRACING WILL BE CONSIDERED ON GIRDER DETAILS SUBMITTED FOR APPROVAL. AFTER TEMPORARY BRACING IS REMOVED, ANY HOLES THAT EXIST SHALL BE GROUTED AND SURFACE RUBBED TO A NEAT FINISH.

(G) INSERTS ENCASED IN TOP OF EXTERIOR GIRDERS FOR USE IN FORMING OVERHANG WILL BE CONSIDERED ON GIRDER DETAILS SUBMITTED FOR APPROVAL.
22.

CONCRETE PEDESTALS MAY BE POURED CONCURRENTLY WITH THE CAP OR POURED SEPARATELY IF A TYPE II EPOXY ADHESIVE IS APPLIED TO THE CONSTRUCTION JOINT JUST PRIOR TO POURING THE PEDESTALS.
23.

ANCHOR BOLTS WELLS ARE REQUIRED FOR THE PLACEMENT OF ANCHOR BOLTS. SEE SECTION 508.03(d)2e OF THE STANDARD SPECIFICATIONS FOR FURTHER REQUIREMENTS.
24.

THE FINAL BRIDGE DECK FINISH BEHIND THE SCREED SHALL BE OBTAINED BY BURLAP DRAG TO MATCH THE EXISTING DECK FINISH.
25.

YEAR OF COMPLETION AND REFERENCE MARK: THE YEAR OF COMPLETION OF THIS STRUCTURE, AND THE PERMANENT REFERENCE MARK, AS SHOWN ON STANDARD DRAWING I-131 ARE REQUIRED FOR THIS STRUCTURE.
26.

DRILLED SHAFTS: EXTERIOR SURFACES OF PERMANENT CASINGS FOR DRILLED SHAFTS SHALL BE COATED (PRIMER COAT ONLY) FROM THE TOP OF THE CASING DOWN TO _____.
27.

METAL STAY-IN-PLACE FORMS: THIS STRUCTURE HAS BEEN DESIGNED TO ALLOW THE USE OF METAL STAY-IN-PLACE FORMS AT THE CONTRACTOR'S OPTION. SEE SUB-ARTICLE 501.03(I) OF THE SPECIFICATIONS FOR NECESSARY DETAILS AND REQUIREMENTS. NO FIELD WELDING WILL BE PERMITTED ON STRUCTURAL STEEL MEMBERS UNLESS OTHERWISE NOTED ON THE BRIDGE DRAWINGS. THE CONTRACTOR SHALL EXERCISE CARE WHEN INSTALLING STAY-IN-PLACE FORMS TO INSURE THAT NO FIELD WELDS OR ARCS STRIKES OCCUR ON THE STRUCTURAL STEEL MEMBERS.
28.

SUBSURFACE INVESTIGATION: GENERAL SOIL STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON AN ENGINEERING INTERPRETATION OF ALL AVAILABLE SUBSURFACE INFORMATION BY THE GEOTECHNICAL SECTION OF THE BUREAU OF MATERIALS AND TESTS OR FOUNDATION CONSULTANTS AND MAY NOT NECESSARILY REFLECT THE ACTUAL VARIATION IN SUBSURFACE CONDITIONS BETWEEN BORINGS AND SAMPLES. DETAILED DATA AND FIELD INTERPRETATION OF CONDITIONS ENCOUNTERED IN INDIVIDUAL BORINGS ARE SHOWN ON THE BORING LOGS.

THE OBSERVED WATER LEVELS AND CONDITIONS INDICATED ON THE SOIL PROFILE AND BORING LOGS ARE AS RECORDED AT THE TIME OF EXPLORATION. THESE WATER LEVELS AND CONDITIONS MAY VARY CONSIDERABLY, WITH TIME, ACCORDING TO THE PREVAILING CLIMATE , RAINFALL OR OTHER FACTORS AND ARE OTHERWISE DEPENDENT ON THE DURATION OF AND THE METHODS USED IN THE EXPLORATION PROGRAM.

SOUND ENGINEERING JUDGMENT WAS EXERCISED IN PREPARING THE SUBSURFACE INFORMATION PRESENTED HEREIN. THIS INFORMATION WAS PREPARED AND IS INTENDED FOR STATE DESIGN AND ESTIMATE PURPOSES. ITS PRESENTATION ON THE PLANS OR ELSEWHERE IS FOR THE PURPOSE OF PROVIDING INTENDED USERS WITH ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. THIS SUBSURFACE INFORMATION IS PRESENTED IN GOOD FAITH AND IS NOT INTENDED AS A SUBSTITUTE FOR PERSONAL INVESTIGATION, INDEPENDENT INTERPRETATIONS OR JUDGMENT OF THE CONTRACTOR.
29.

FOUNDATION REPORT: ACCESS TO A FOUNDATION REPORT AND CORE BORINGS FOR THIS PROJECT CAN BE ARRANGED BY CONTACTING THE GEOTECHNICAL SECTION OF THE ALABAMA DEPARTMENT OF TRANSPORTATION.
30.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY AND POSITIONAL CORRECTNESS (PLUMBNESS, ALIGNMENT, ETC.) OF THE GIRDERS DURING ALL PHASES OF CONSTRUCTION. ANY TEMPORARY BRACING DEEMED NECESSARY BY THE CONTRACTOR TO INSURE THE ABOVE UNTIL CONSTR.IS COMPLETE SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE STATE. WORKING DRAWINGS FOR BRACING SHALL BE SUBMITTED IN ACCORDANCE WITH ARTICLE 501.03(I) OF THE STD. SPECS.

REFER TO BRIDGE PLANS FOR NOTE NUMBERS
APPLICABLE TO PROJECT AND FOR SPECIAL NOTES.

ALABAMA DEPARTMENT
OF TRANSPORTATION

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REVISIONS

BRIDGE GENERAL NOTES

BRIDGE STANDARD DRAWING

INDEX NO.

FHWA APPROVED
9-18-17

BGN-1

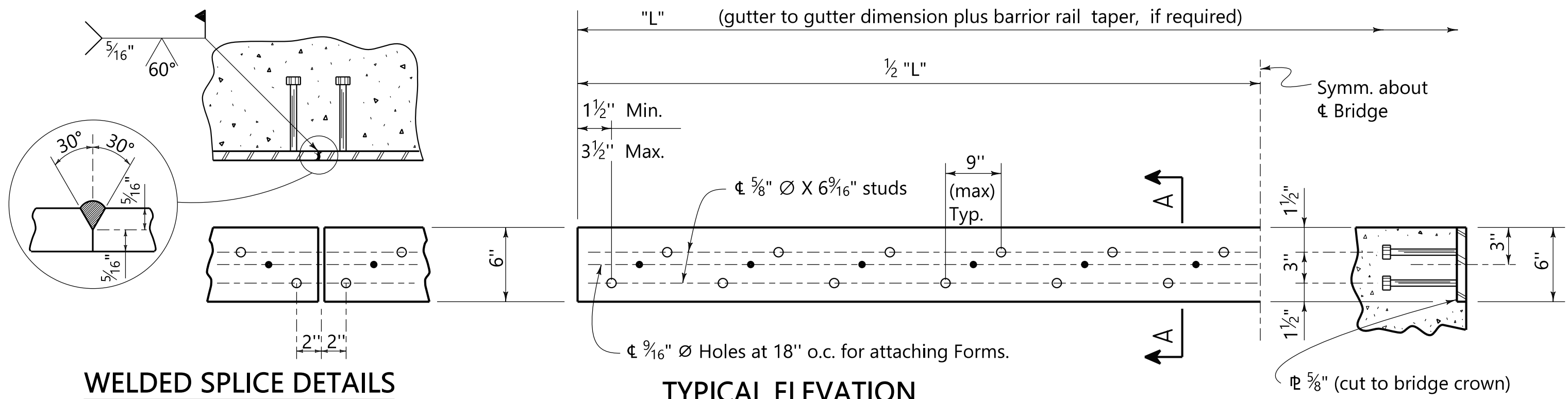
SHEET
1 OF 1

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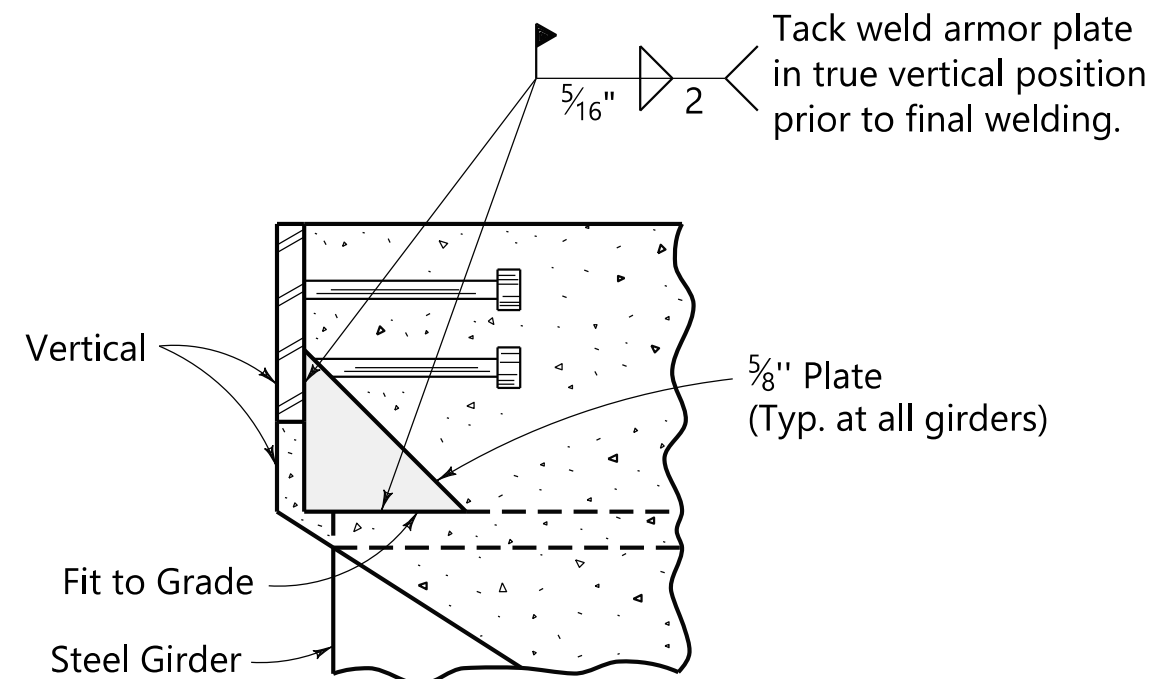
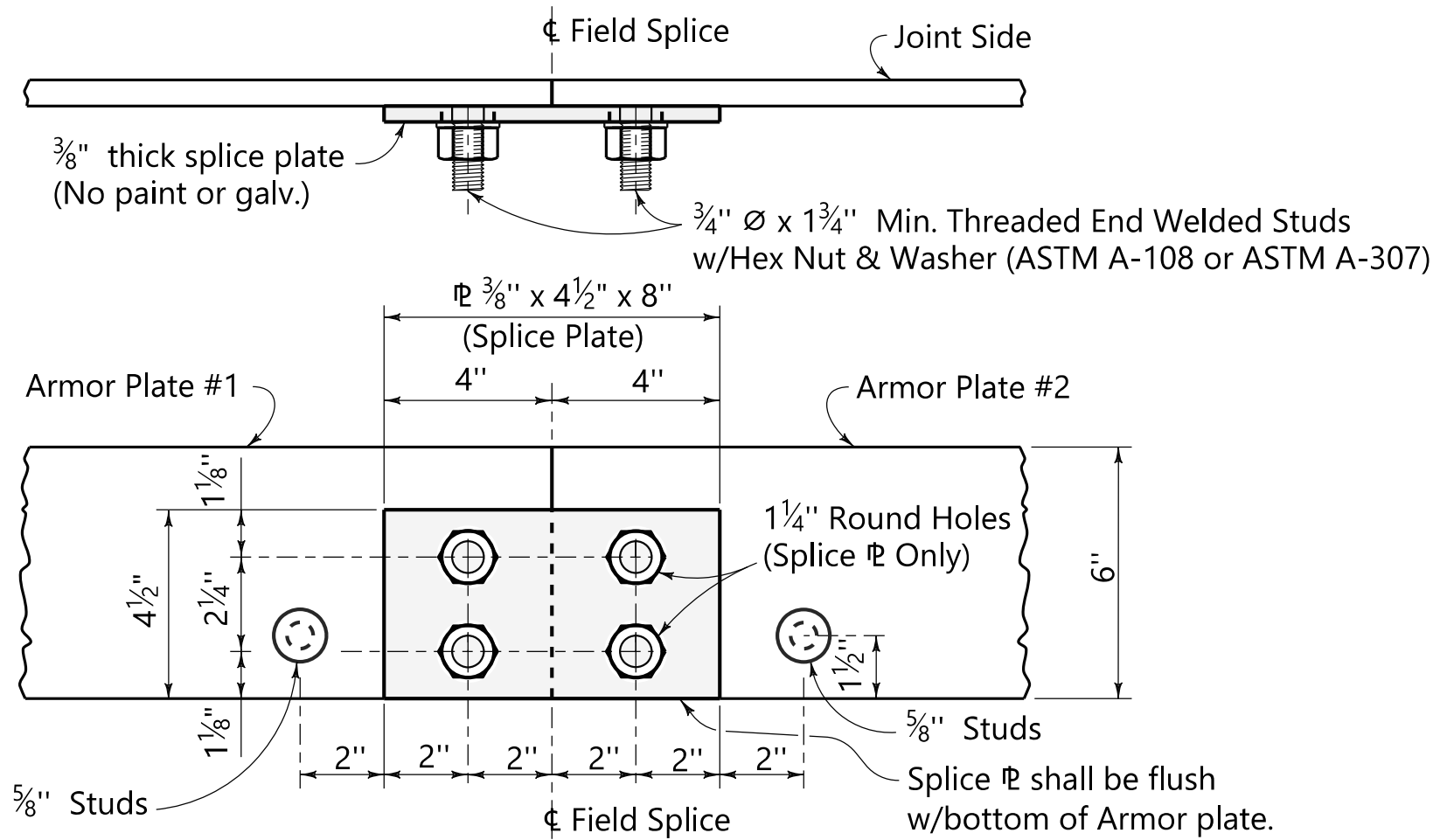
PLOTTED: 11-SEP-2019

2"
1"
0
SHEET REFERENCE



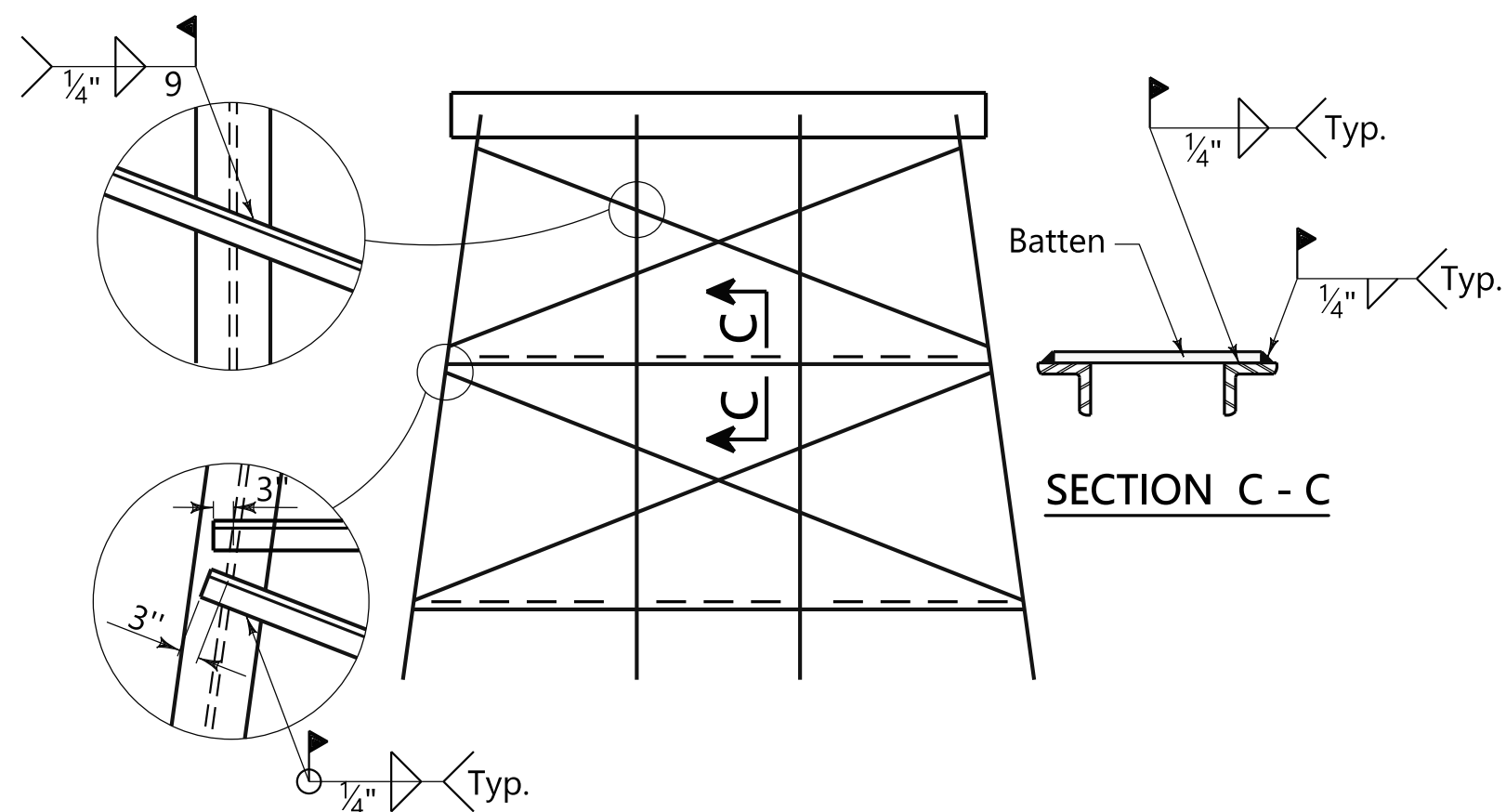
SECTION A - A

NOTE: Any burrs on roadway edge of ϕ shall be ground smooth.



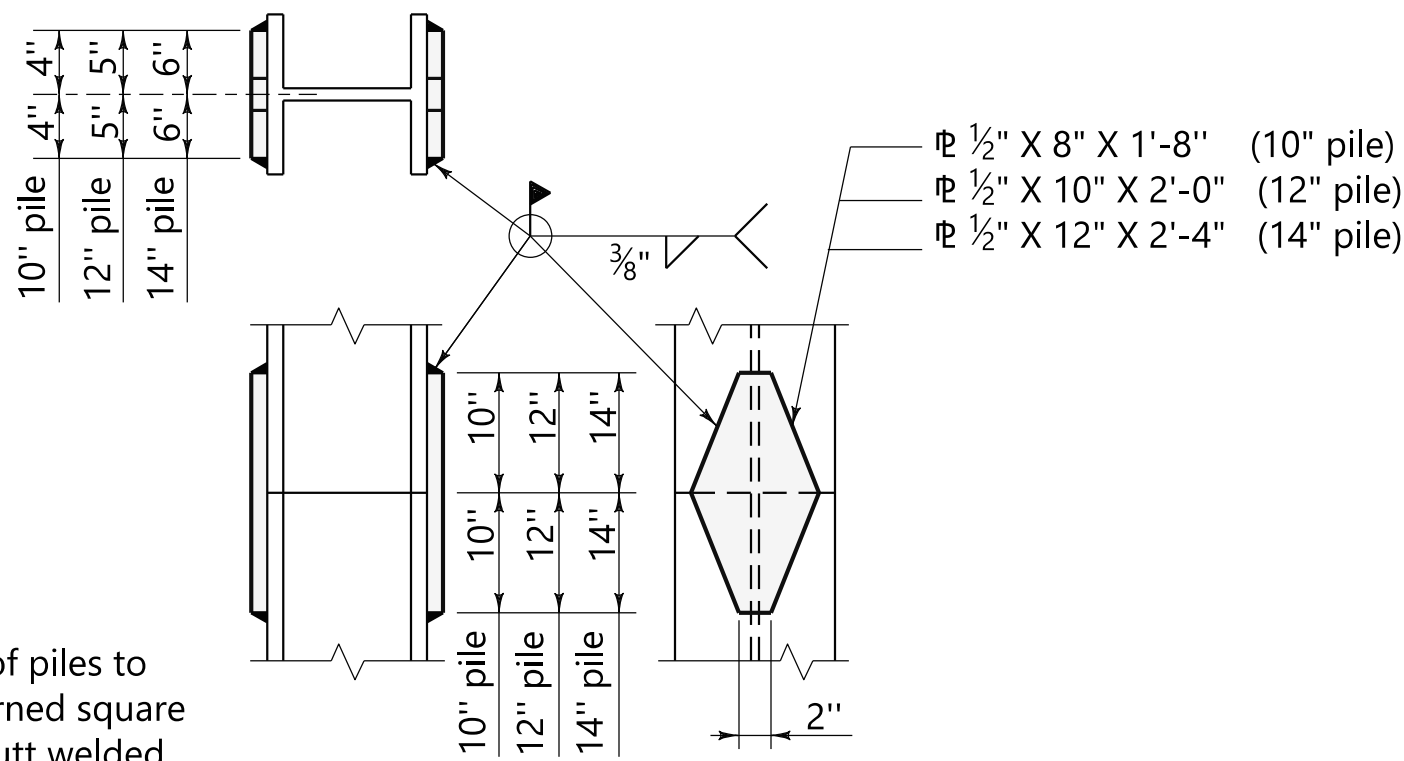
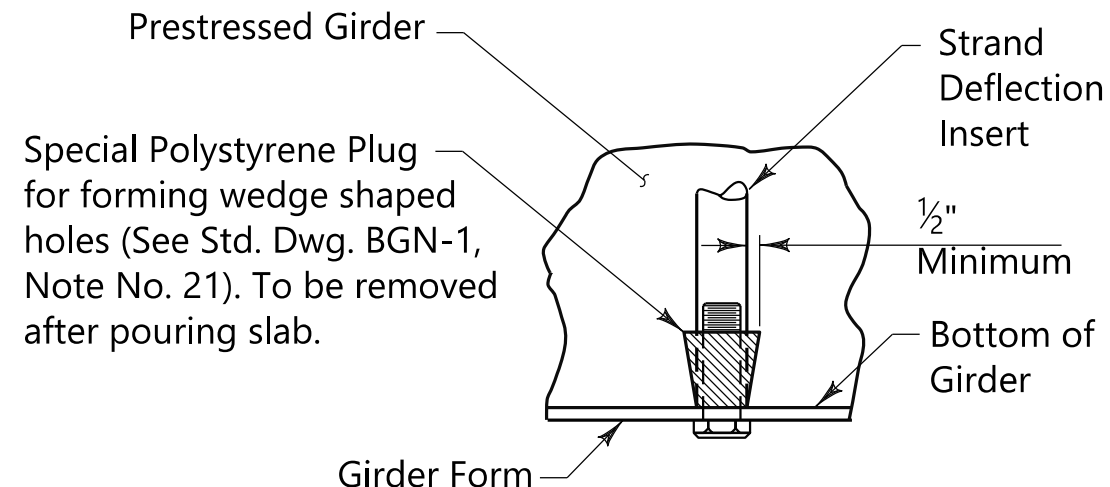
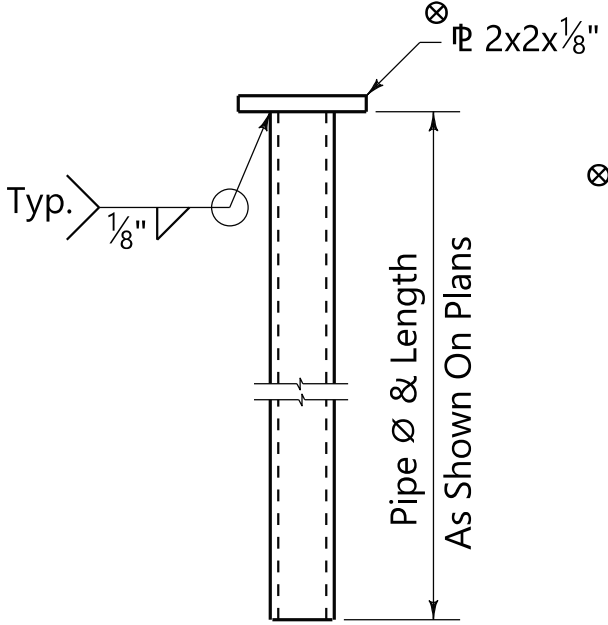
BRIDGE JOINT ARMOR PLATE

NOTE: Shop drawings as required by ALDOT Standard Specifications for pay item 508-A are required for Bridge Joint Armor Plate.



PIPE SLEEVE

NOTE: Shop drawings as required by ALDOT Standard Specifications for pay item 508-A are required for Pipe Sleeve.



NOTE: At the contractor's option, a Pre-Fabricated H-Pile Splicer may be used in lieu of the splice shown. The contractor shall furnish the manufacturer's Splicer details and recommendations for installation to the Construction Engineer for approval. Pile splice plates may be cut from pile cut-off. Pile splices shall only be used below grade. Pile splices shall not be used in the free standing length of pile above grade in pile bents.

FIELD WELDING

The following field welds may be made by an electric arc welder who demonstrates to the project engineer that he is a proficient welder.

- Pile cap plates and pile cap channel to piles.
- Field splices in bridge joint armor plates.

This welder is not required to have a qualification card issued by the Alabama Department Of Transportation. All other field welds shall be performed by welders who have current Alabama Department Of Transportation welders qualification cards. No field welding will be permitted on steel girders or steel caps unless otherwise noted on the bridge drawings or approved in writing by the Bridge Engineer.

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REVISIONS

STANDARD DETAILS

BRIDGE STANDARD DRAWING

FHWA APPROVED
9-18-17

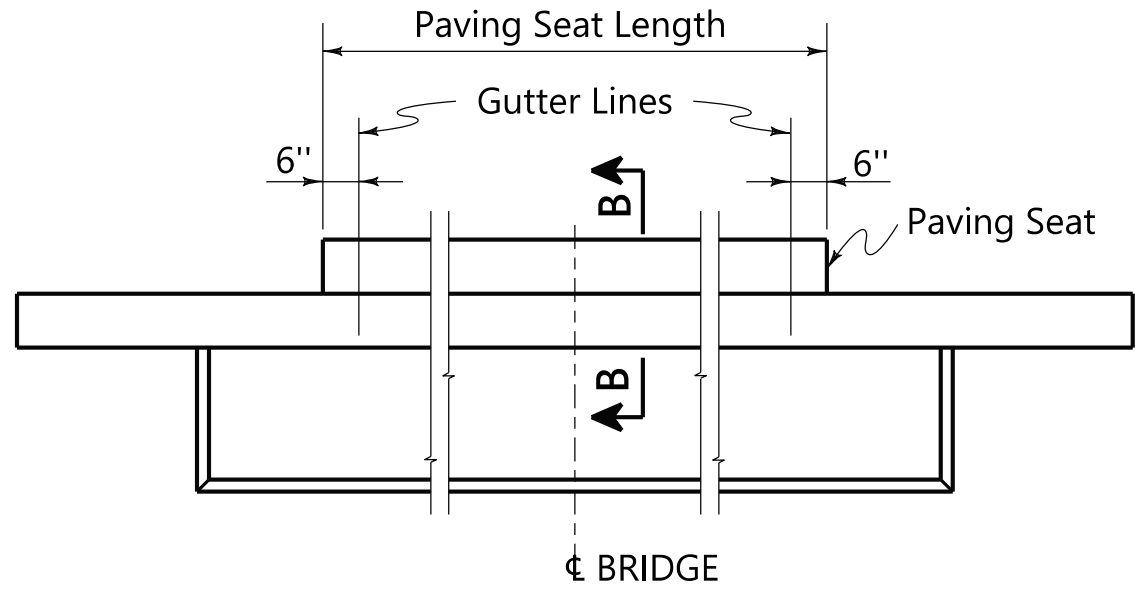
I-131

SHEET
1 OF 8

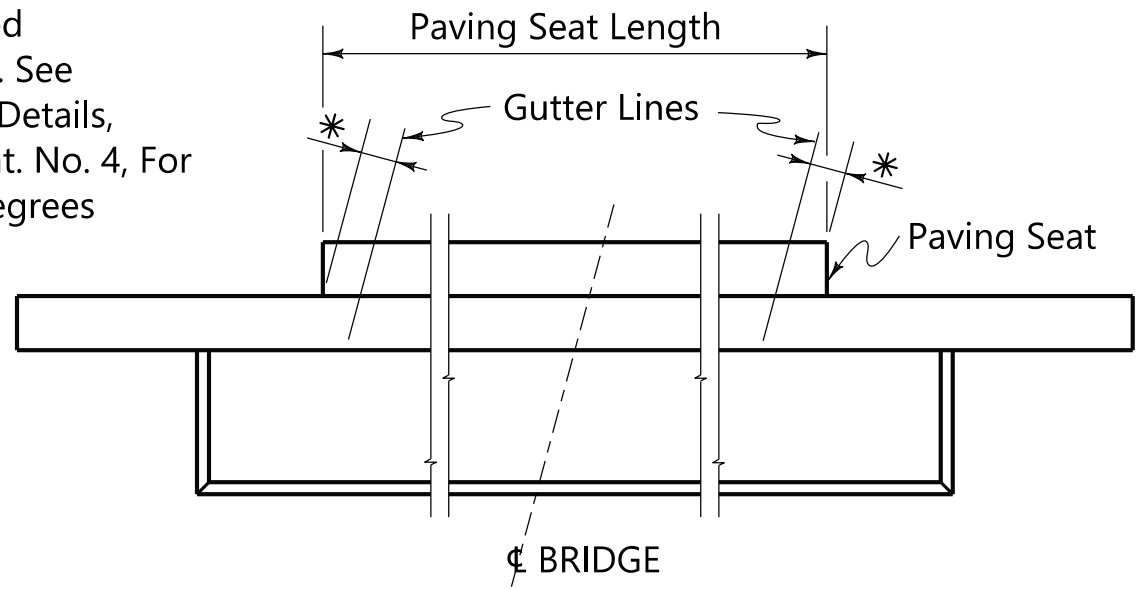
INDEX NO.

51004

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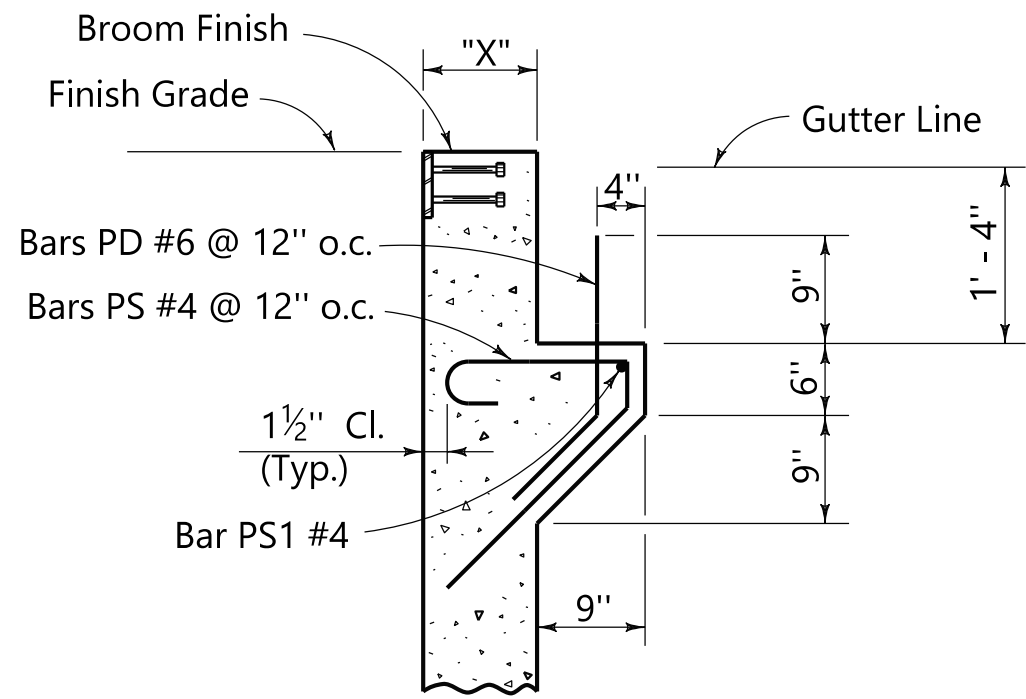


ABUTMENT PLAN - NO SKEW

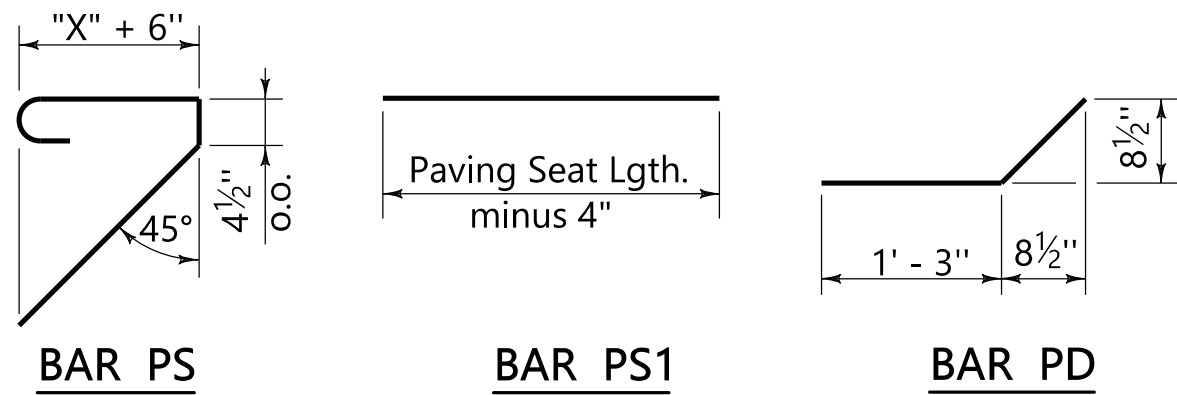


ABUTMENT PLAN - ON SKEW

* NOTE: 6 " For Bridges Skewed
Less Than 15 Degrees. See
Barrier Rail Extension Details,
On Std. Dwg. I-131 Sht. No. 4, For
Bridges Skewed 15 Degrees
And Greater.



SECTION B - B



BAR PS

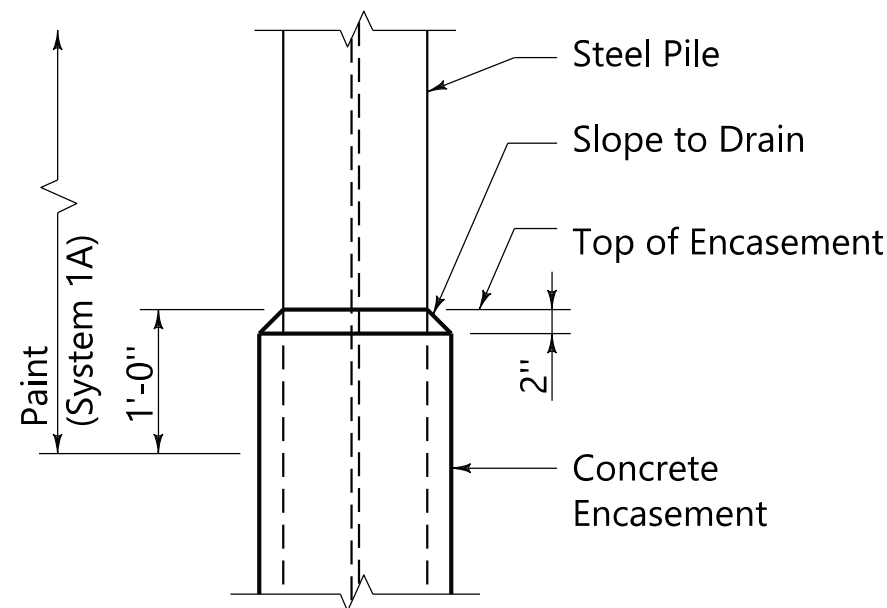
BAR PS1

BAR PD

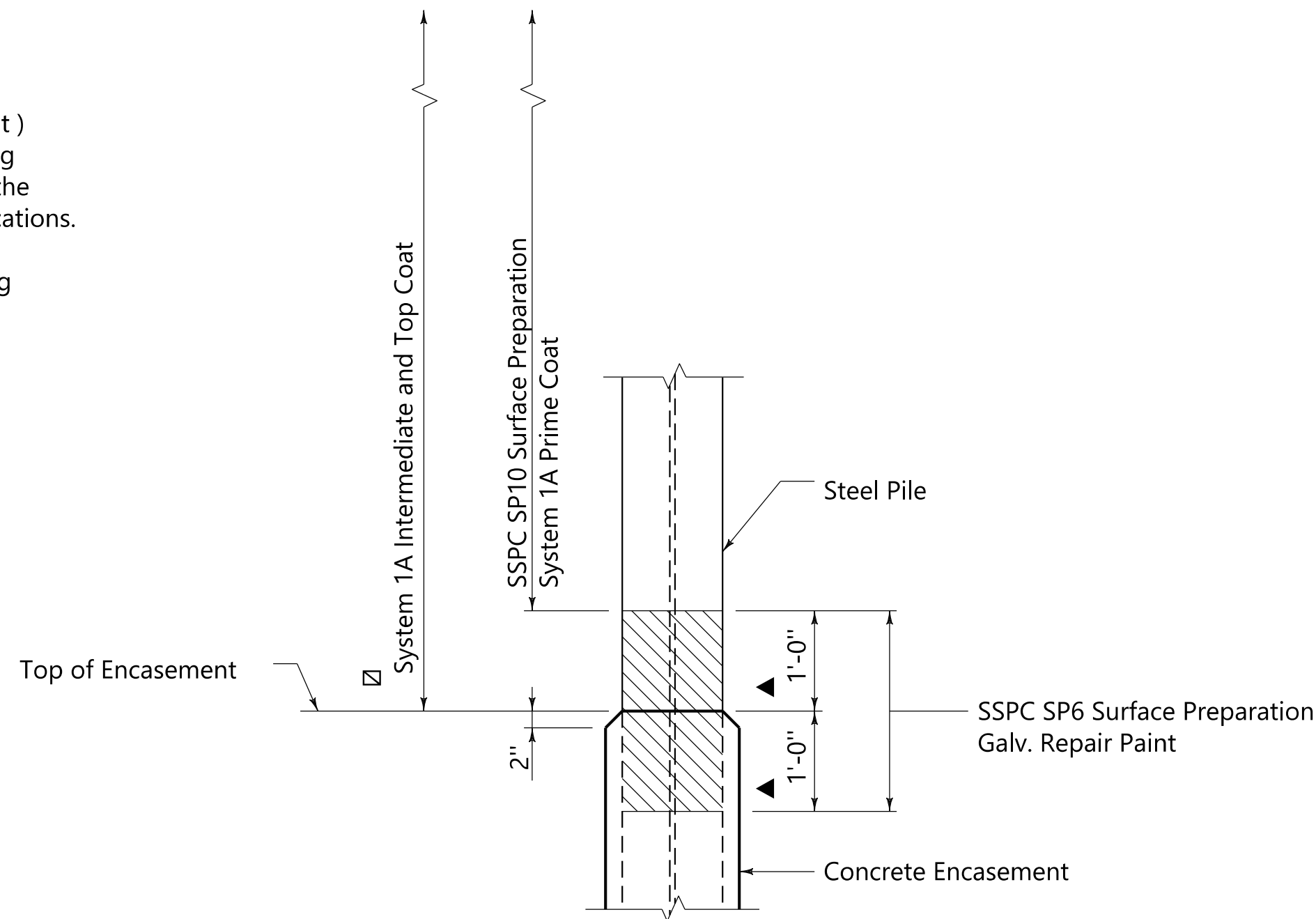
PAVING SEAT DETAILS

PILE PAINTING DETAIL NOTES

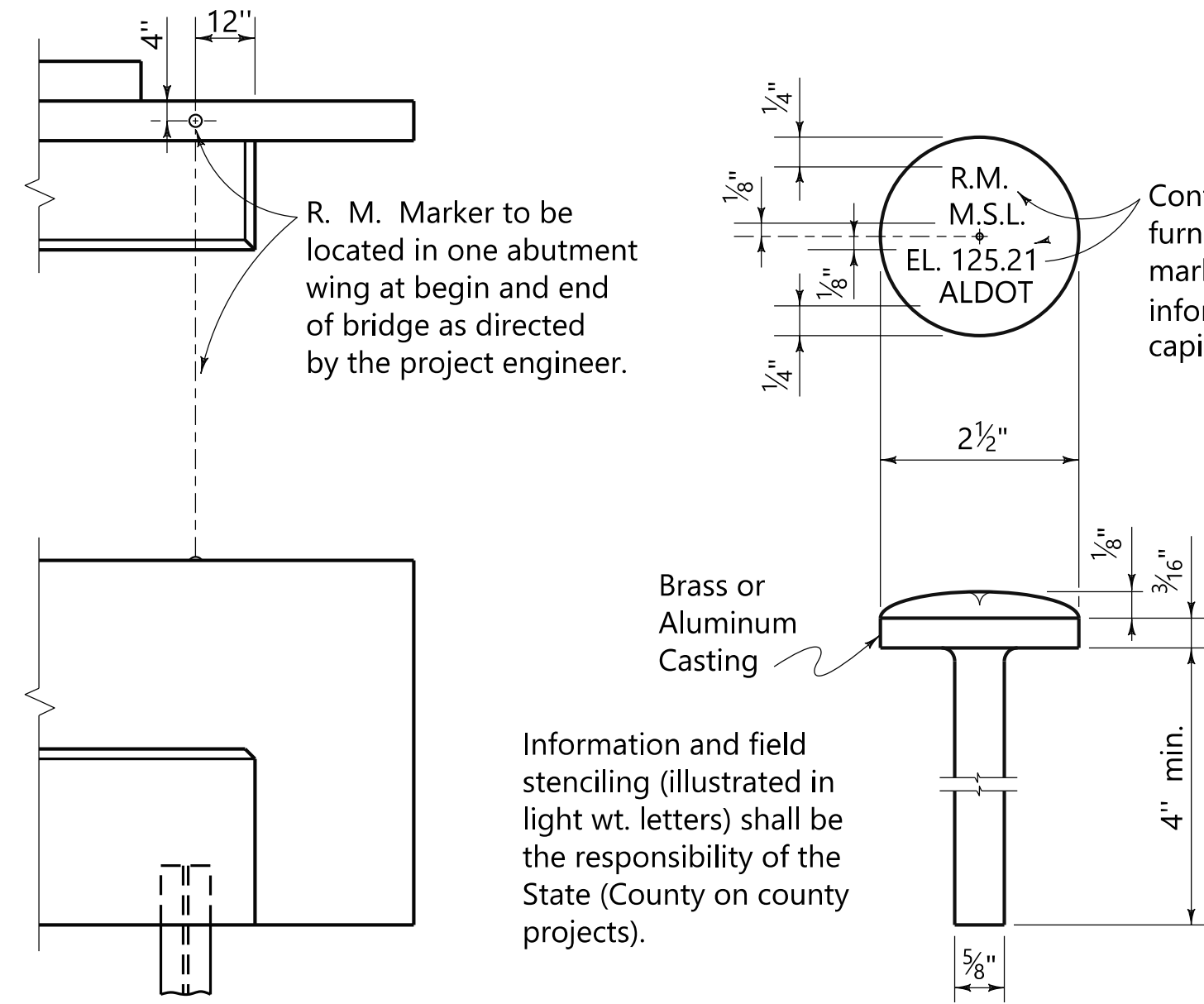
- 1. The System 1A Intermediate and Top Coat may be omitted whenever Concrete Encasement extends to within 6" from bottom of cap.
- 2. Hatched Surface (1'-0" above & below top of encasement) shall receive a SSPC SP6 Surface Preparation prior to being coated with an approved Galv. Repair Paint that satisfies the requirements of sub-article 855.15 of the Standard Specifications.
- 3. Surface Peparation and Painting for Pile and Sway Bracing shall be Field Applied.



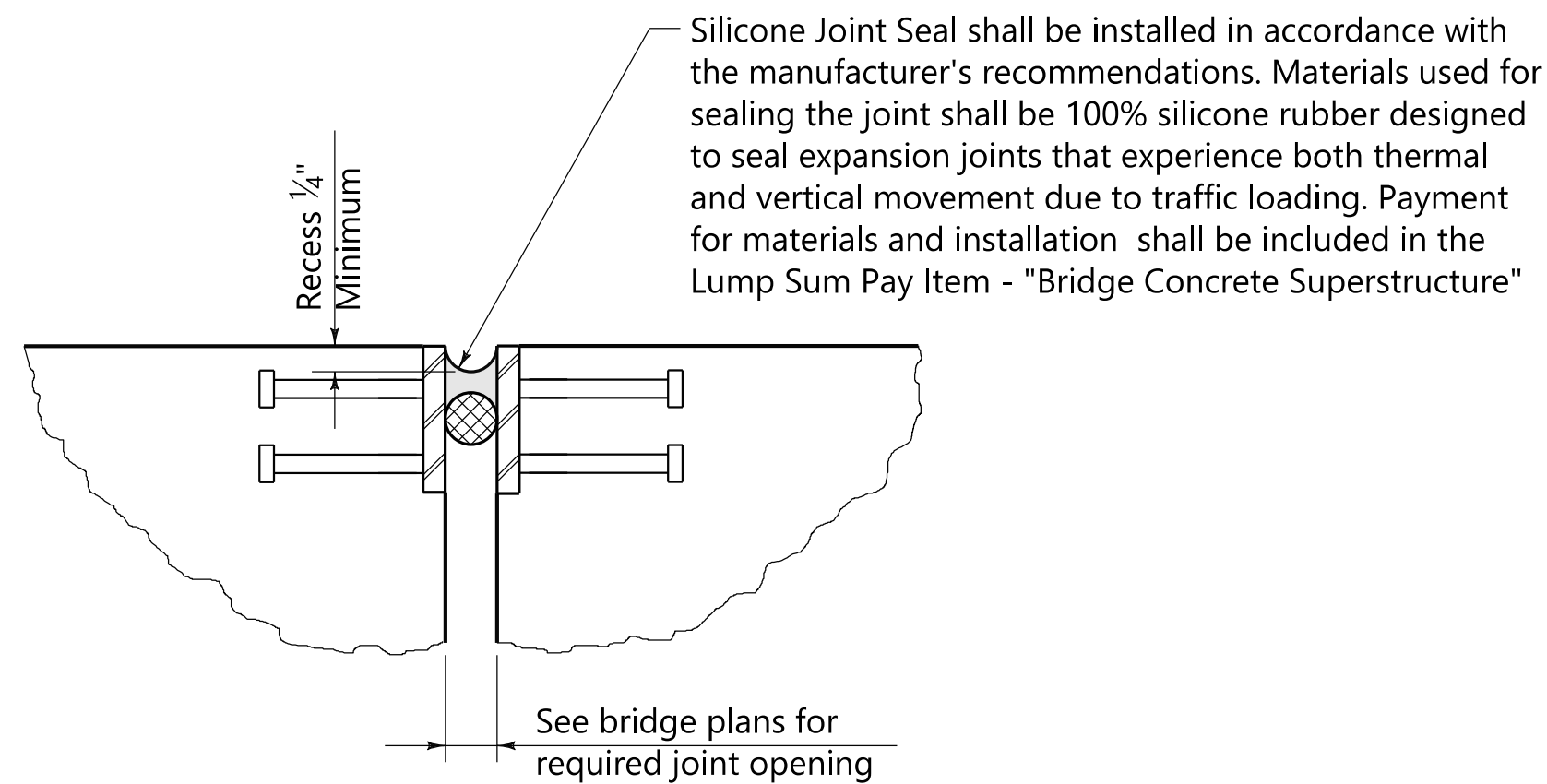
PILE PAINTING DETAIL
(OPTION "A")



PILE PAINTING DETAIL
(OPTION "B")

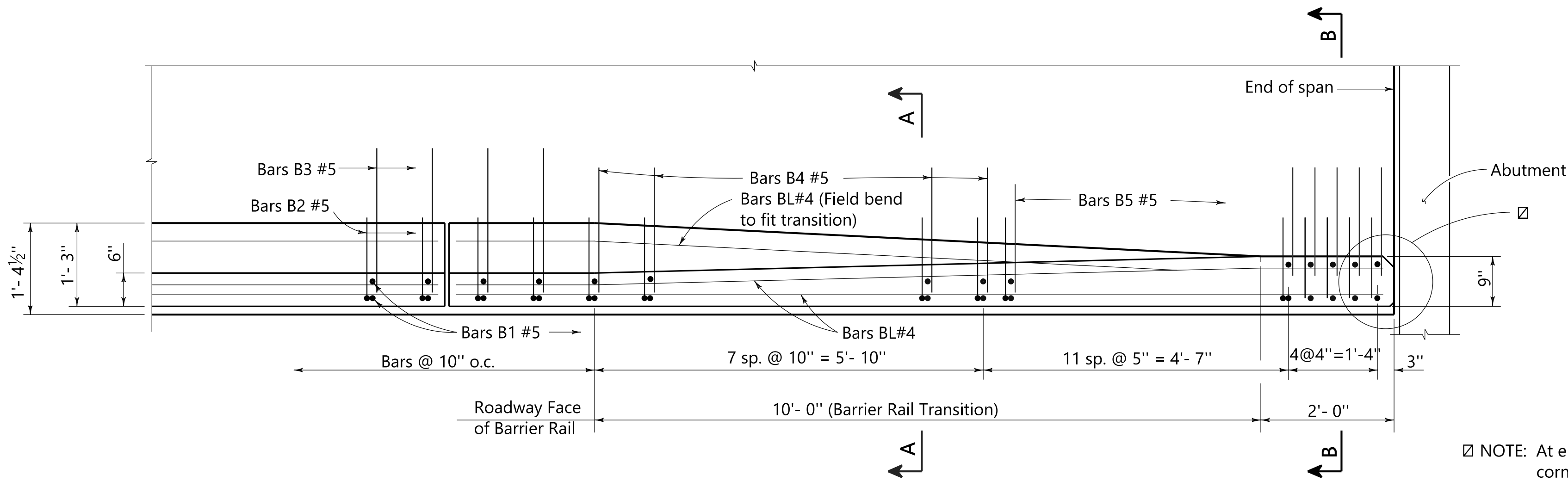


PERMANENT REFERENCE MARK DETAIL

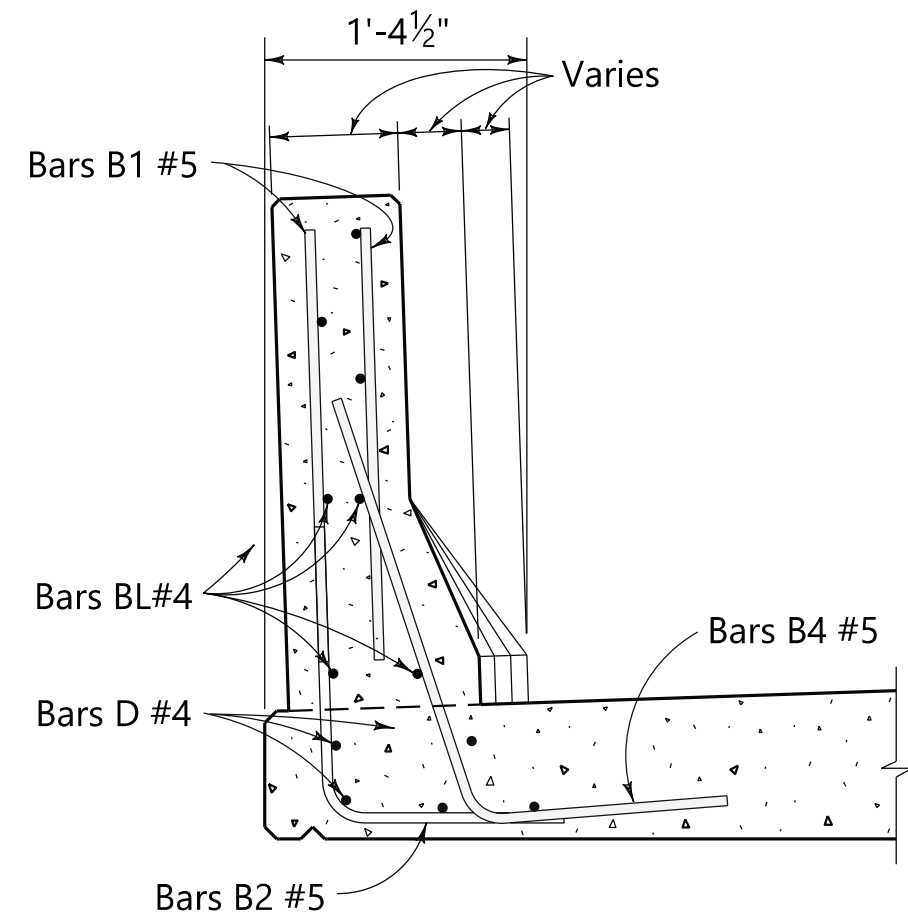


JOINT SEAL DETAIL

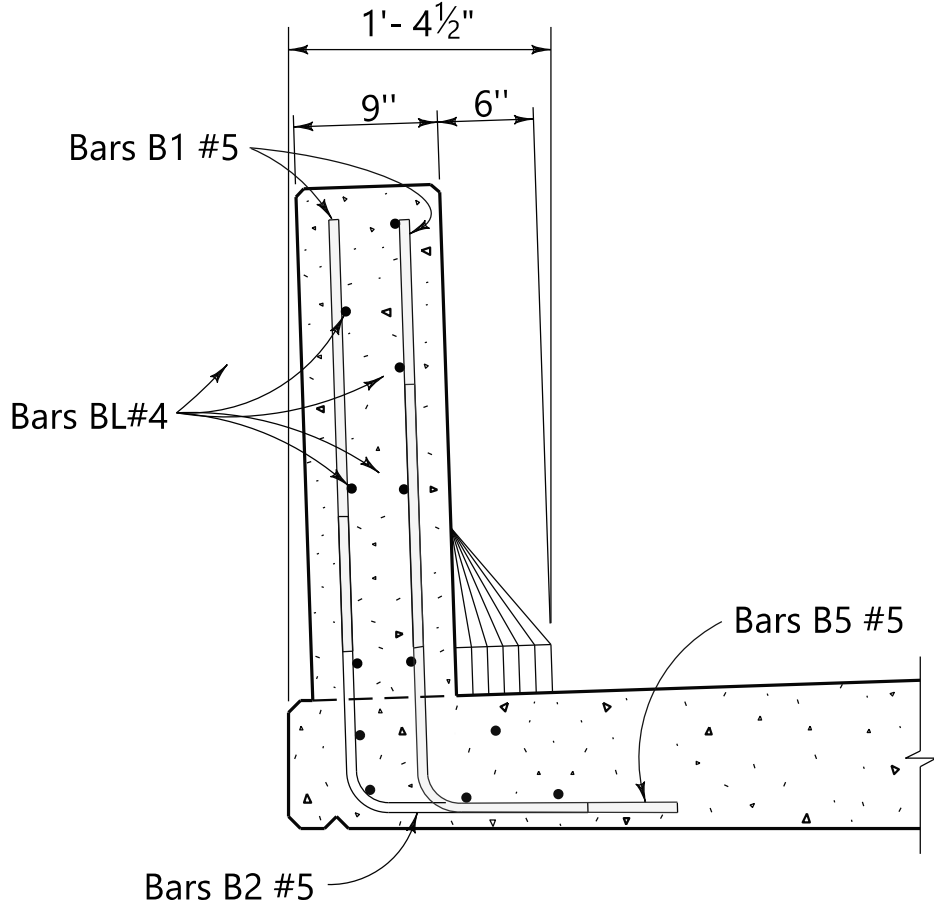
REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER
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PART PLAN - BARRIER RAIL

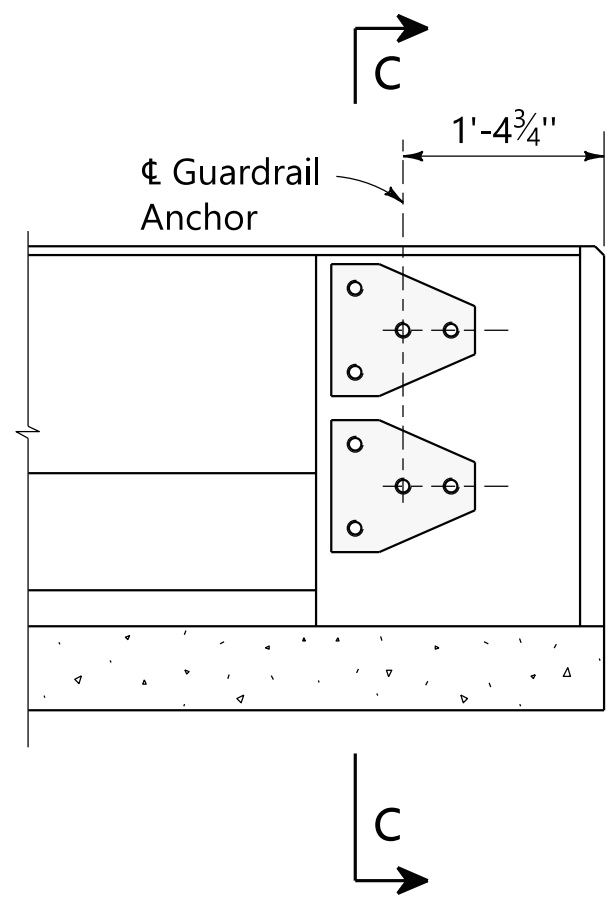


SECTION A-A

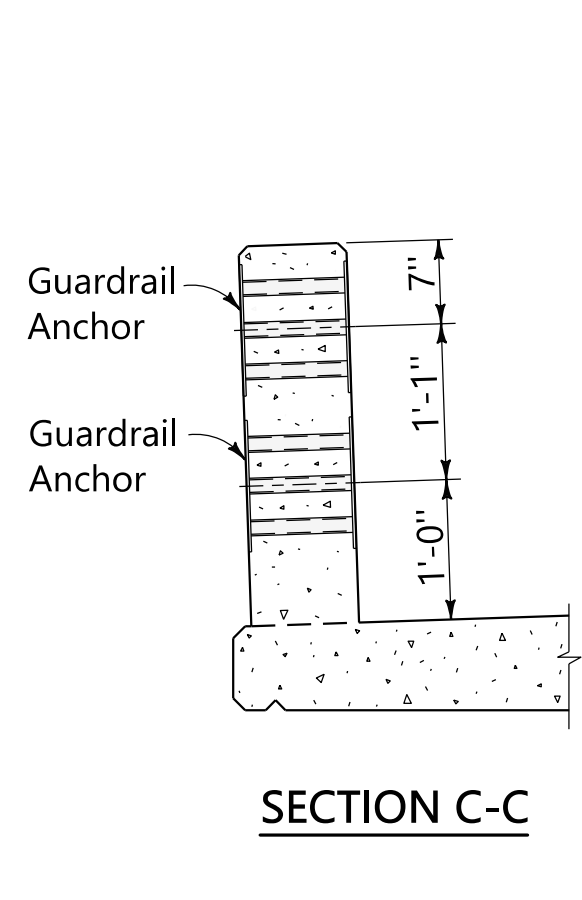


SECTION B-B

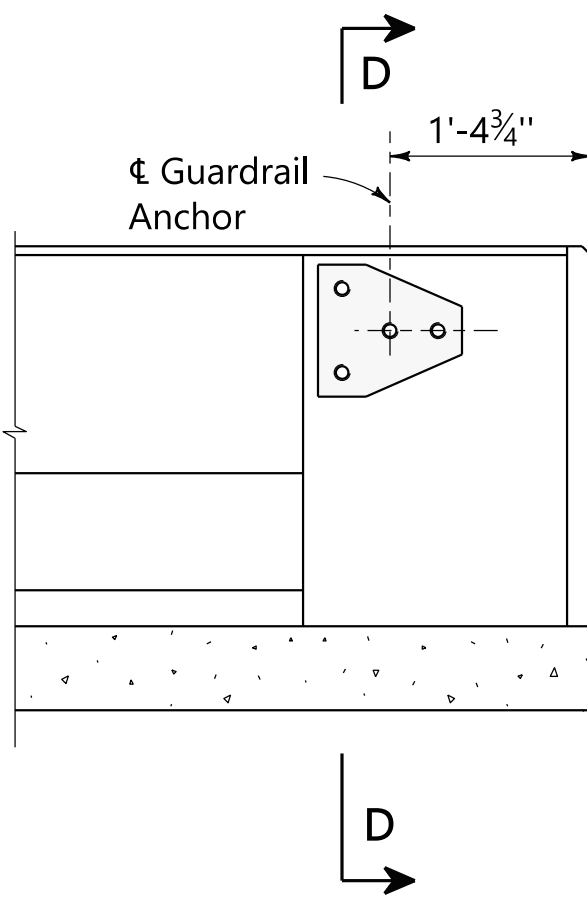
NOTE: Bars BL #4 shall be placed continuously and cut at joint locations to provide for two inch (2") end cover. Field bend Bars BL #4 to fit transition. Bars BL #4 shall be spliced twenty-four (24) diameters.



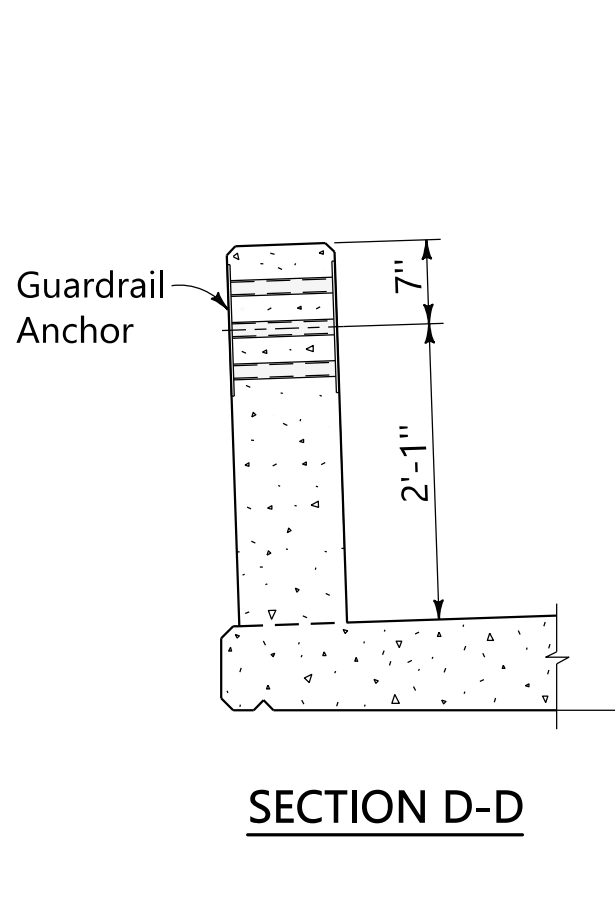
PART ELEVATION - BARRIER RAIL
(DOUBLE ANCHOR)



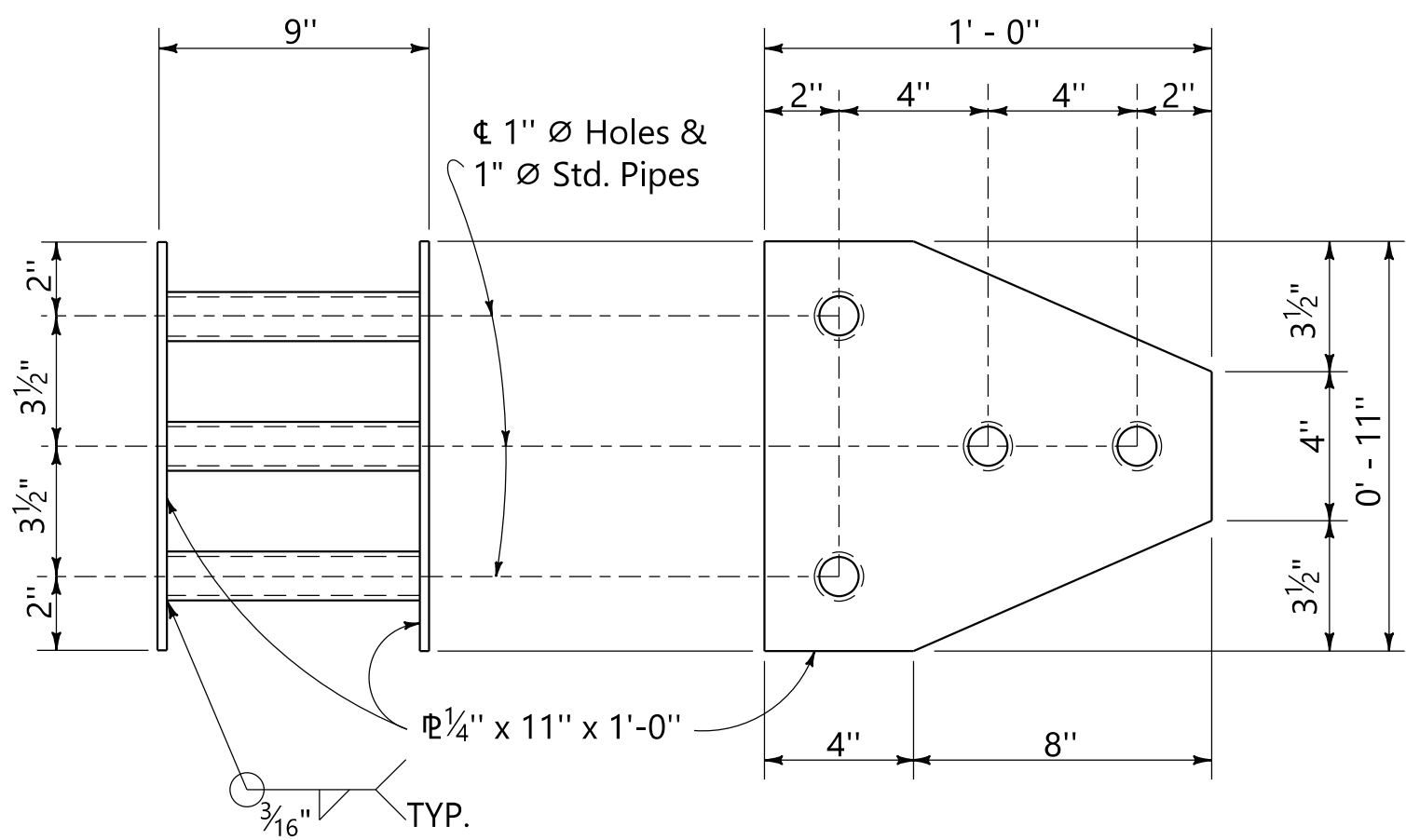
SECTION C-C



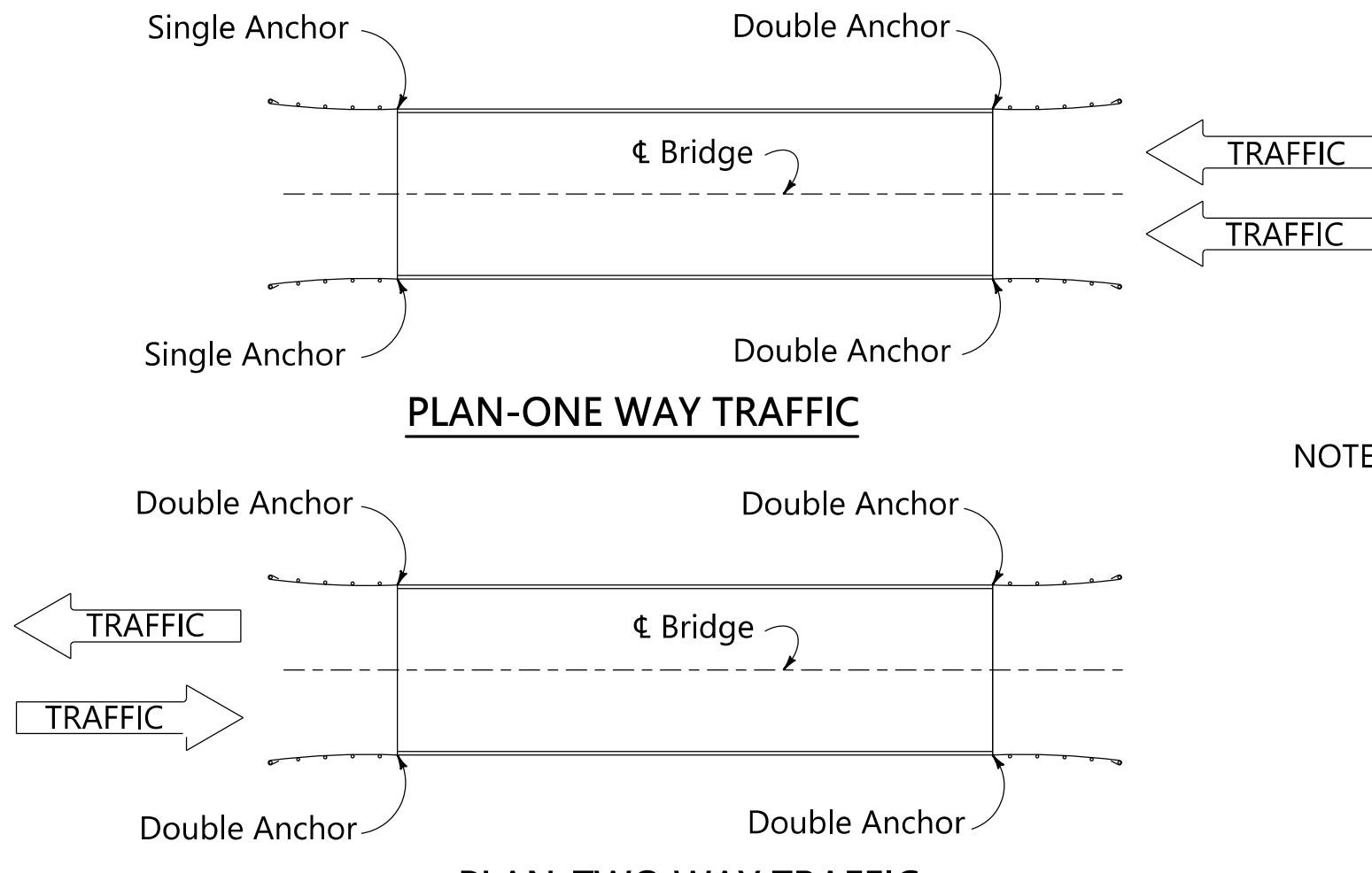
PART ELEVATION - BARRIER RAIL
(SINGLE ANCHOR)



SECTION D-D



GUARDRAIL ANCHOR DETAIL



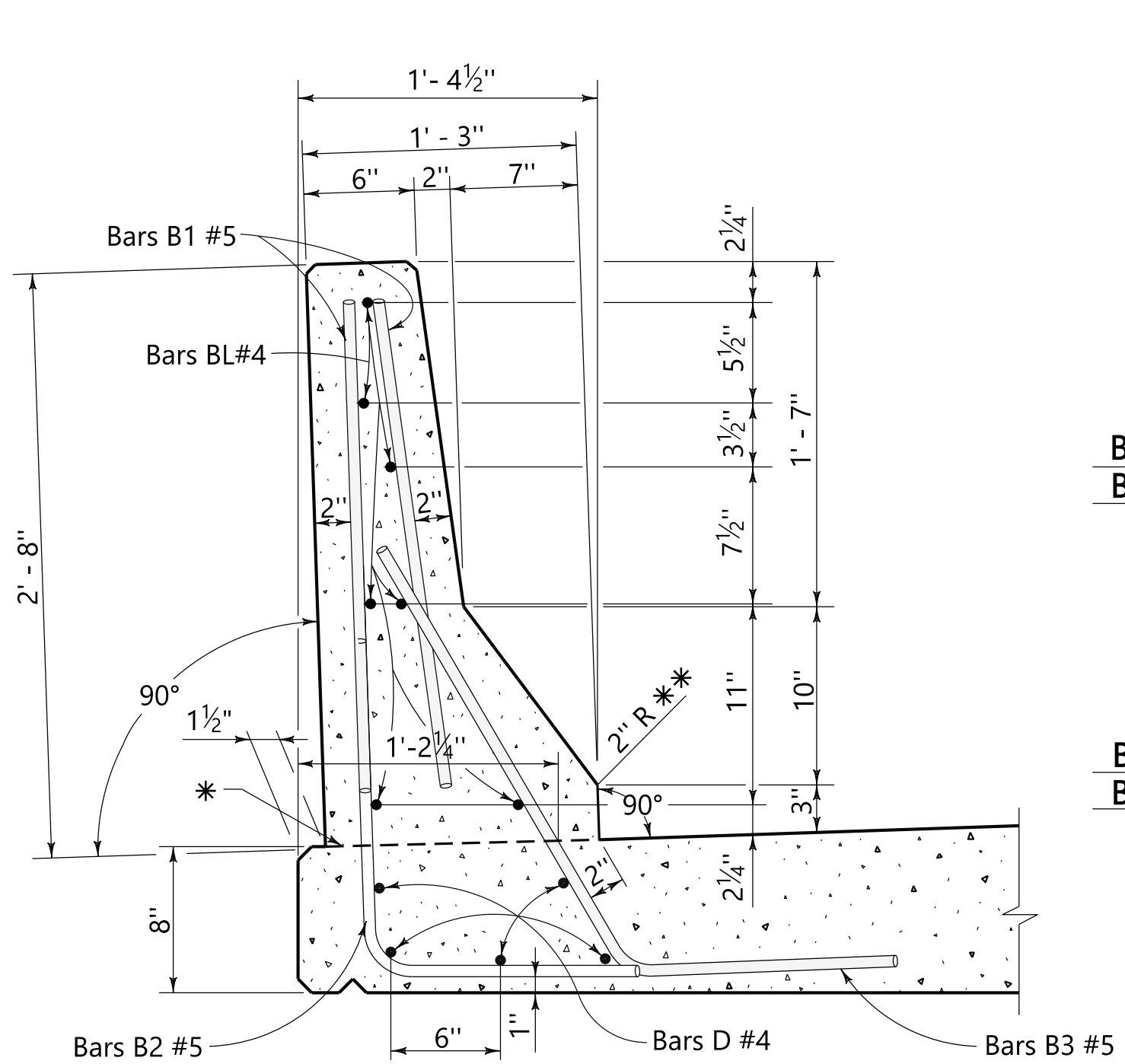
PLAN-ONE WAY TRAFFIC

PLAN-TWO WAY TRAFFIC

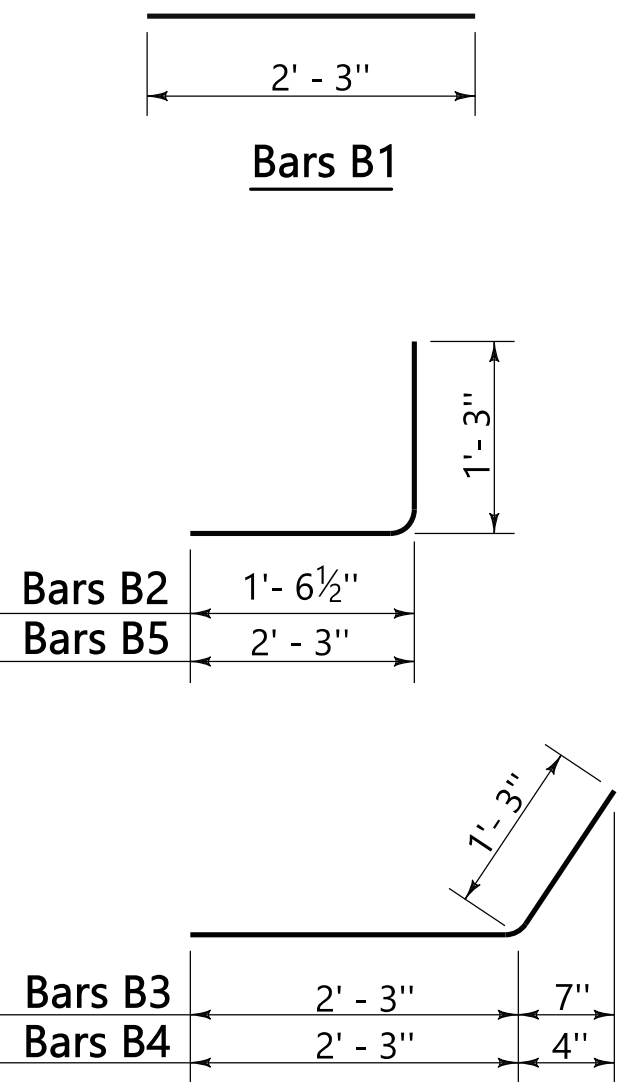
▲ GUARDRAIL ANCHOR LOCATIONS

NOTE: Guardrail Anchors are required at both ends of all bridges, as shown. Plates shall be ASTM A 36 steel. Pipe material shall be one inch (1") Ø ASTM A 53 schedule 40. Galvanize complete Guardrail Anchor after fabrication in accordance with AASHTO M 111. Attach securely to forms to assure the exposed faces are flush with concrete faces of Barrier Rail. Cost of Guardrail Anchors shall be included in pay item 508-A, Lbs. Structural Steel. Shop drawings as required by ALDOT Standard Specifications for pay item 508-A are required for Guardrail Anchors.

▲ Guardrail Anchor shall be cast with Bridge Barrier Rail.



TYPICAL SECTION - THRU RAIL

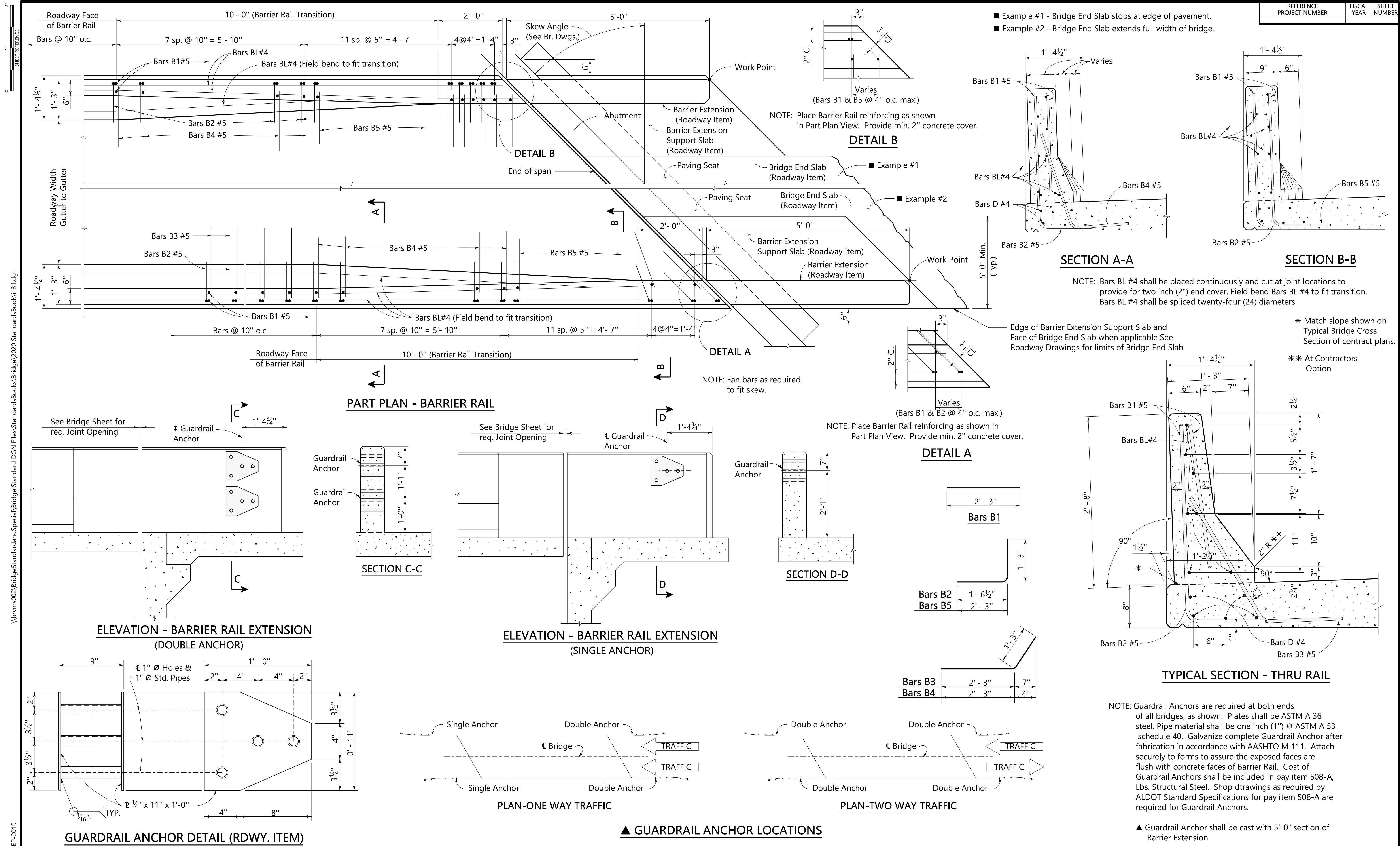


* Match slope shown on Typical Bridge Cross Section of contract plans.

** At Contractors Option.

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PLOTTED: 11-SEP-2019



ALABAMA DEPARTMENT
OF TRANSPORTATION

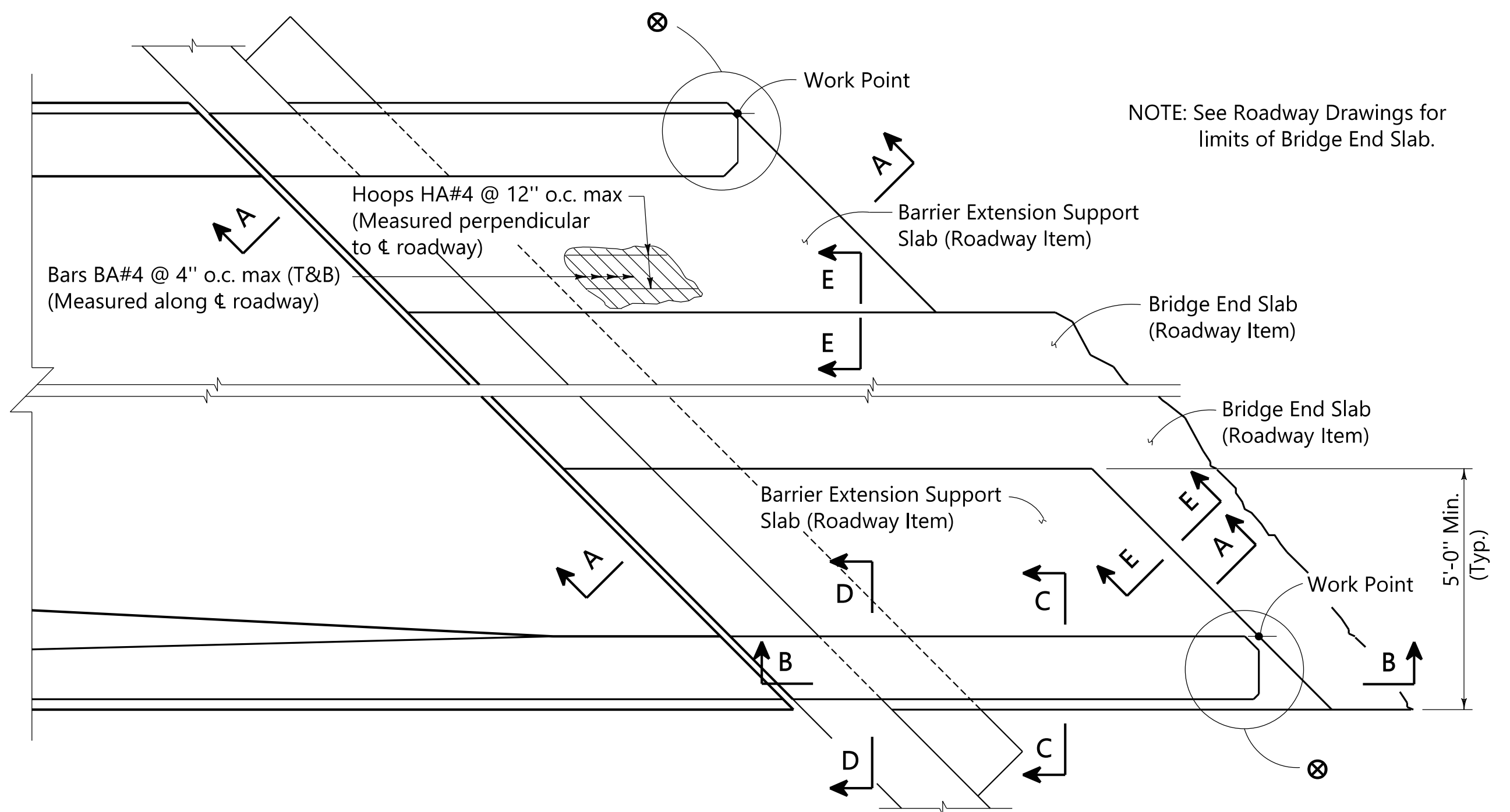
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REVISIONS

BARRIER RAIL EXTENSION
FOR BRIDGES SKEWED
15 DEGREES AND GREATER

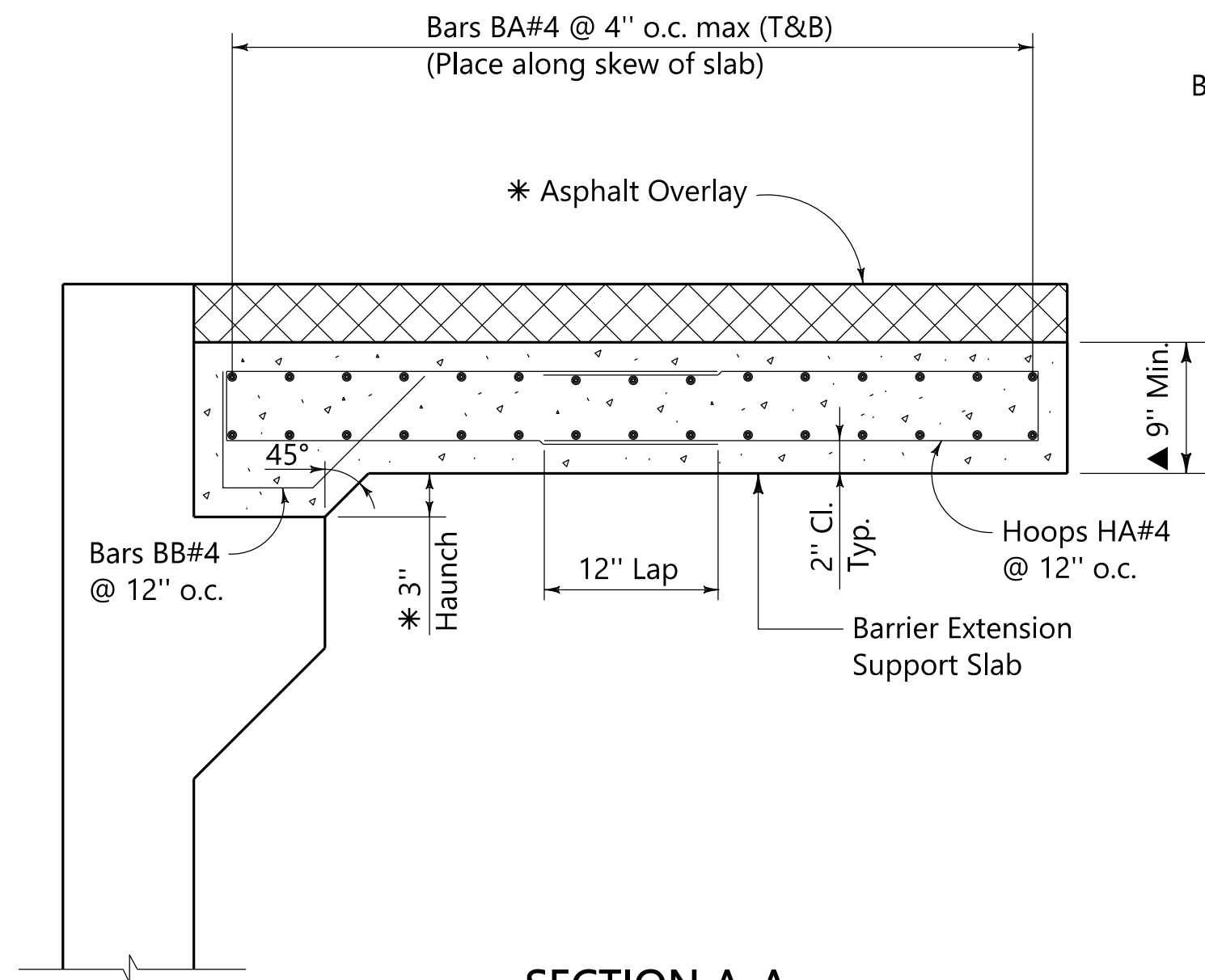
BRIDGE STANDARD DRAWING		INDEX NO.	
FHWA APPROVED 9-18-17	I-131	SHEET 4 OF 8	51007

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER
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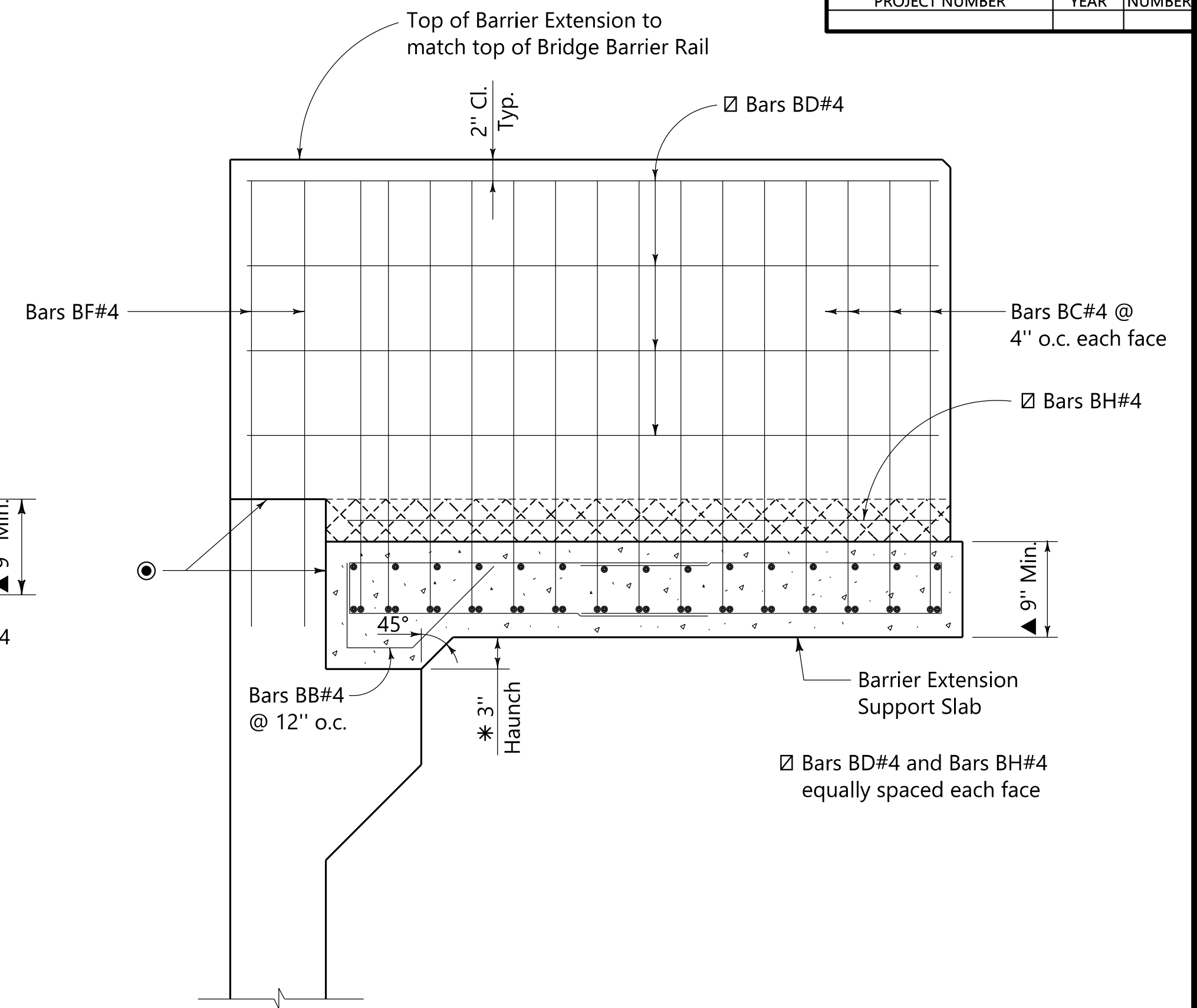


PLAN - BARRIER EXTENSION &
BARRIER EXTENSION SUPPORT SLAB

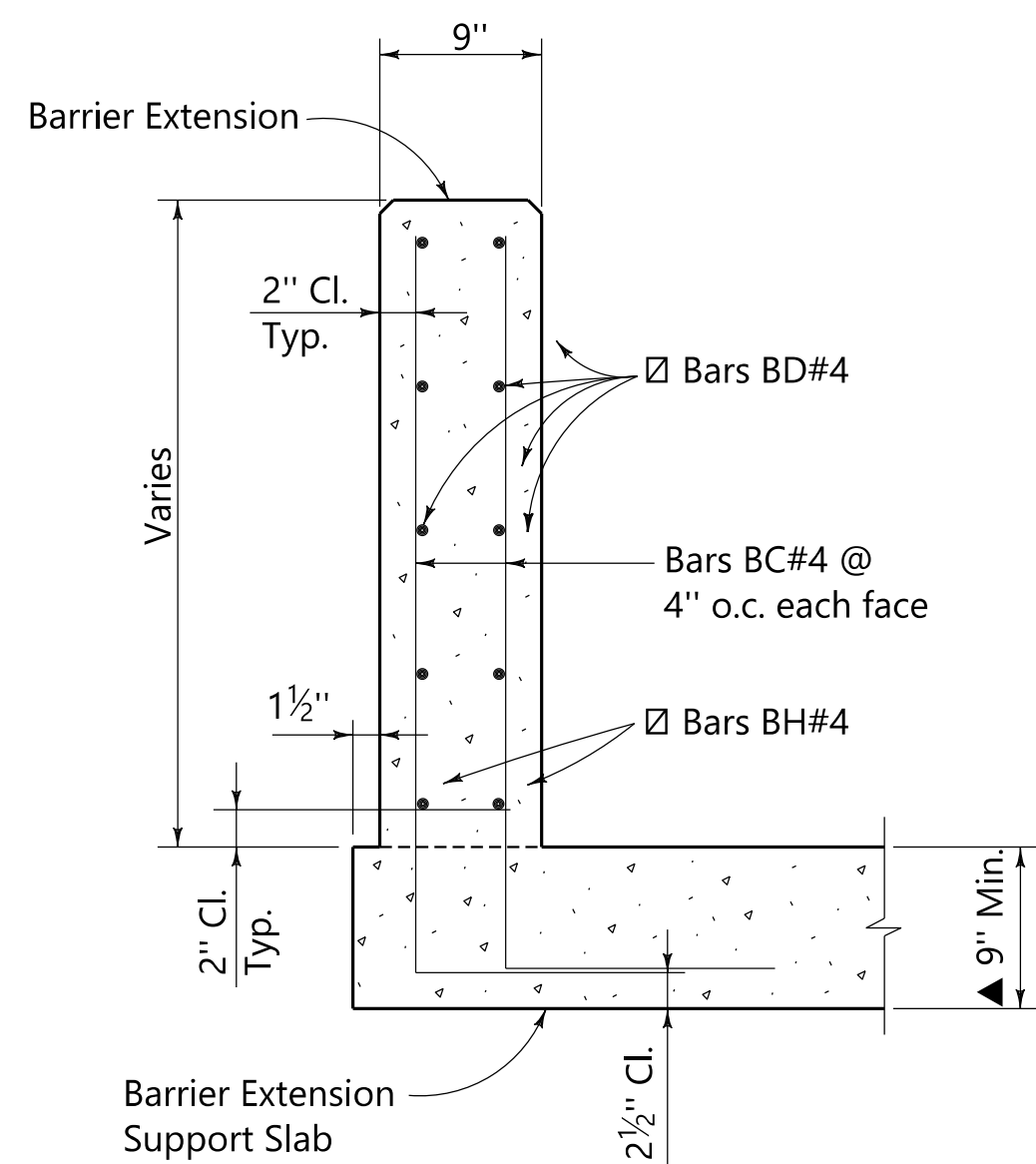
⊗ NOTE: At end of Barrier Extension, chamfer corner of inside face 2" and corner of outside face 3/4".



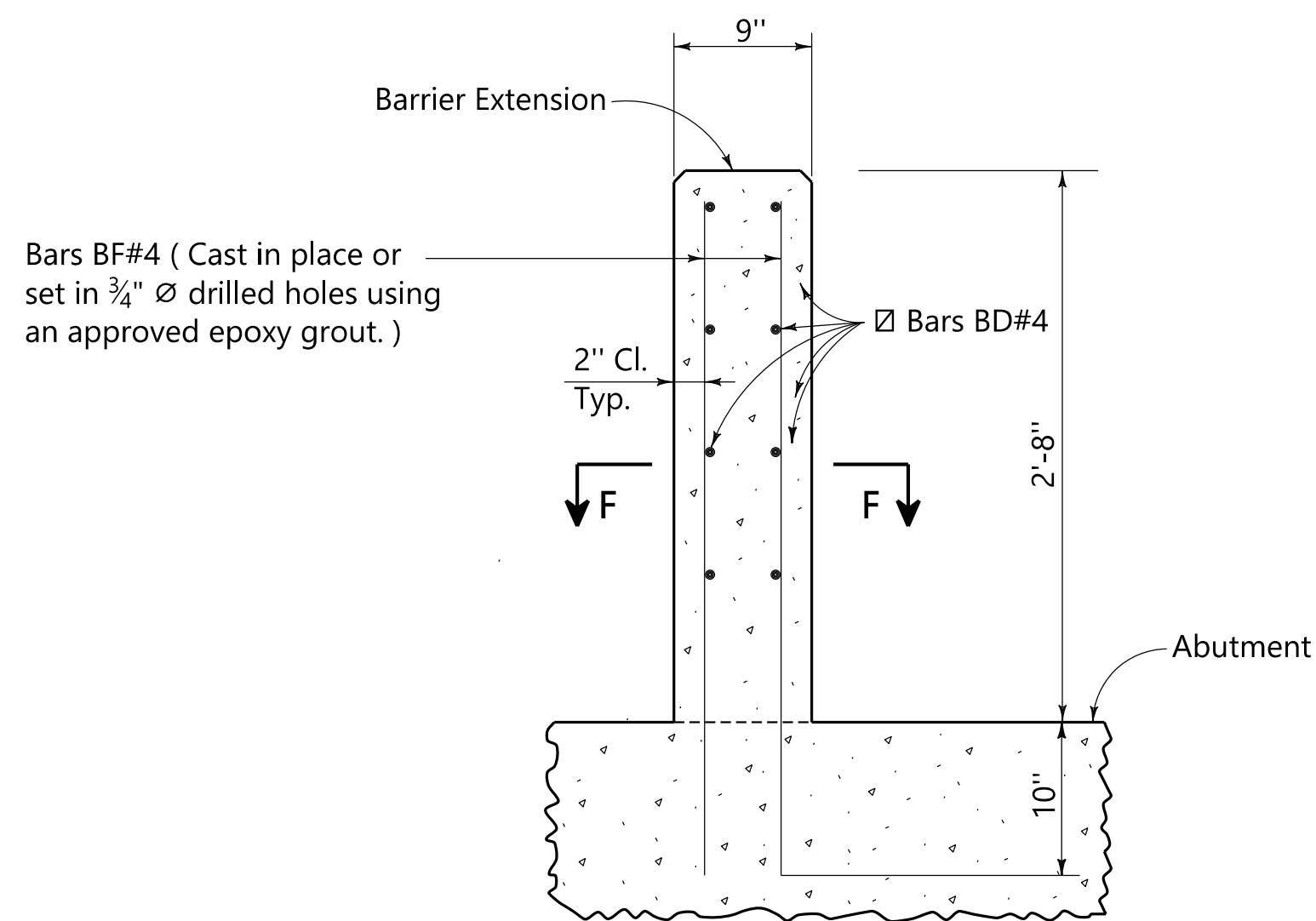
SECTION A-A



SECTION B-B

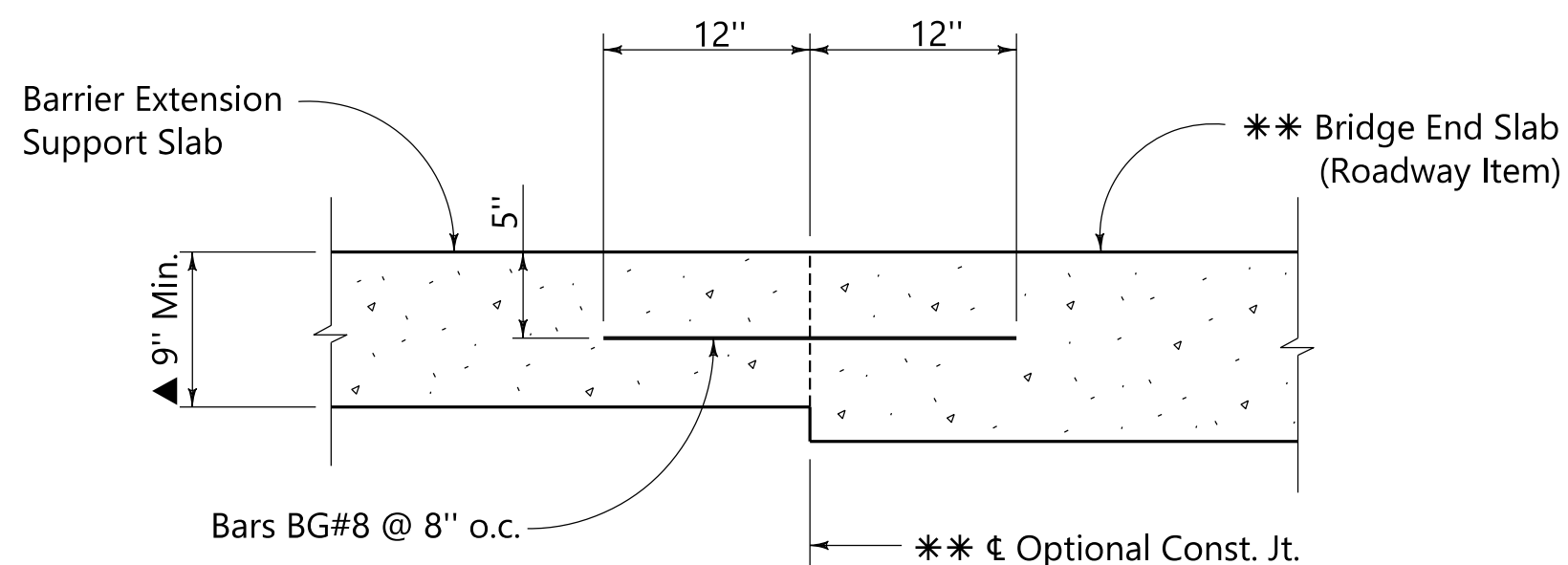


SECTION C-C



SECTION D-D

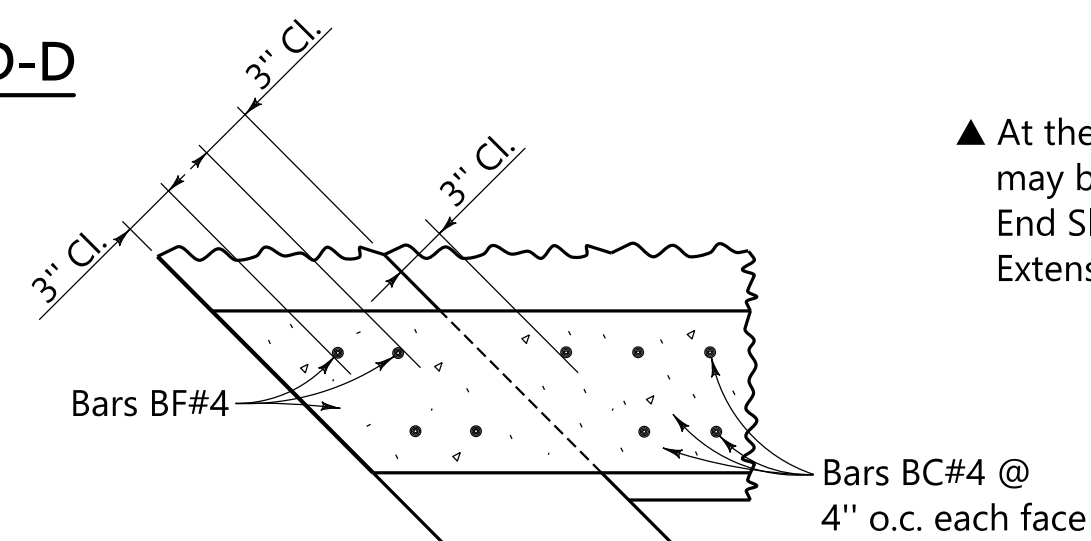
- * The 3" haunch depth may be adjusted as necessary to accommodate thickness of asphalt overlay as required by roadway drawings. When no overlay material is required, top of Barrier Extension Support Slab shall be constructed flush with finished grade of roadway.
- Scarify surface of backwall that will be in contact with Barrier Extension and apply an approved Type II Epoxy Adhesive to scarified surface just prior to pouring Barrier Extension concrete.



SECTION E-E

** When Barrier Extension Support Slab is poured continuous with Bridge End Slab, Bars BG#8 may be omitted and Bars BA#4 extended 1'-0" into Bridge End Slab. When these pours are made separate, Bars BG#8 may be cast with first pour or installed in drilled 1/4" Ø dowel holes using an approved epoxy grout. When no Bridge End Slab is required, Barrier Extension Support Slab shall extend full width of roadway.

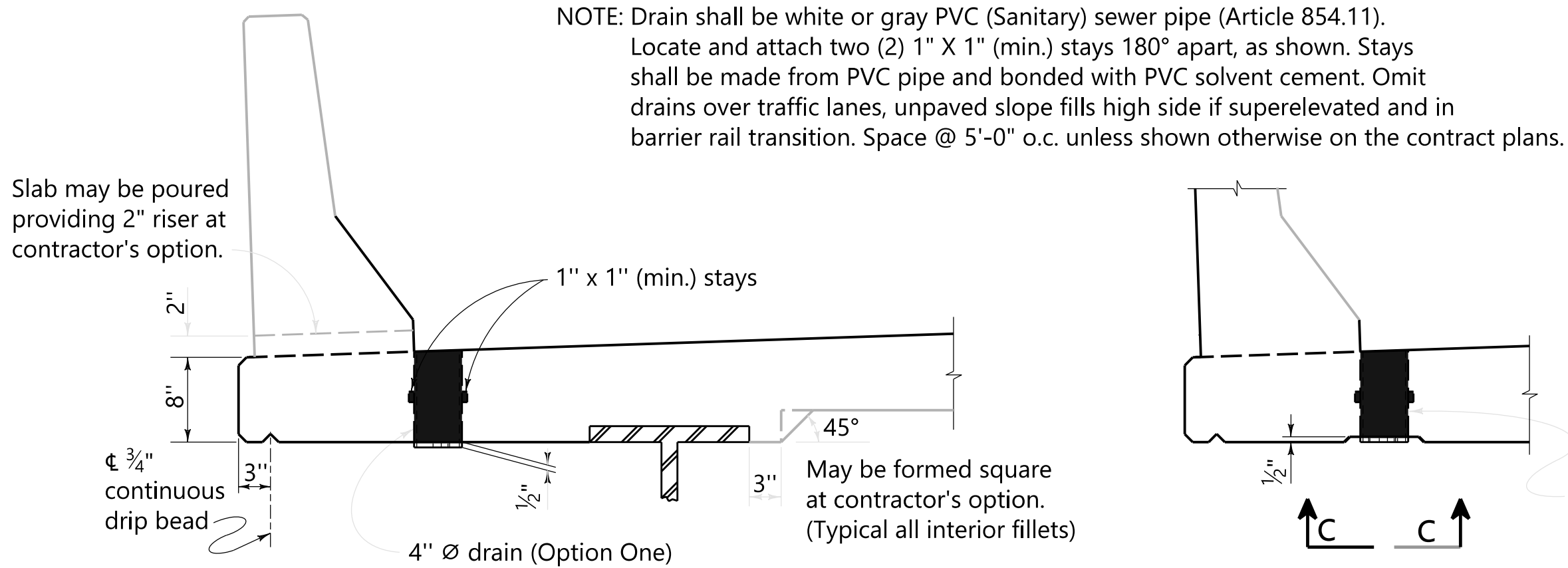
▲ At the contractor's option, the Barrier Support Slab may be poured to the same thickness as the Bridge End Slab. Pay quantities are based on a 9" thick Barrier Extension Support Slab.



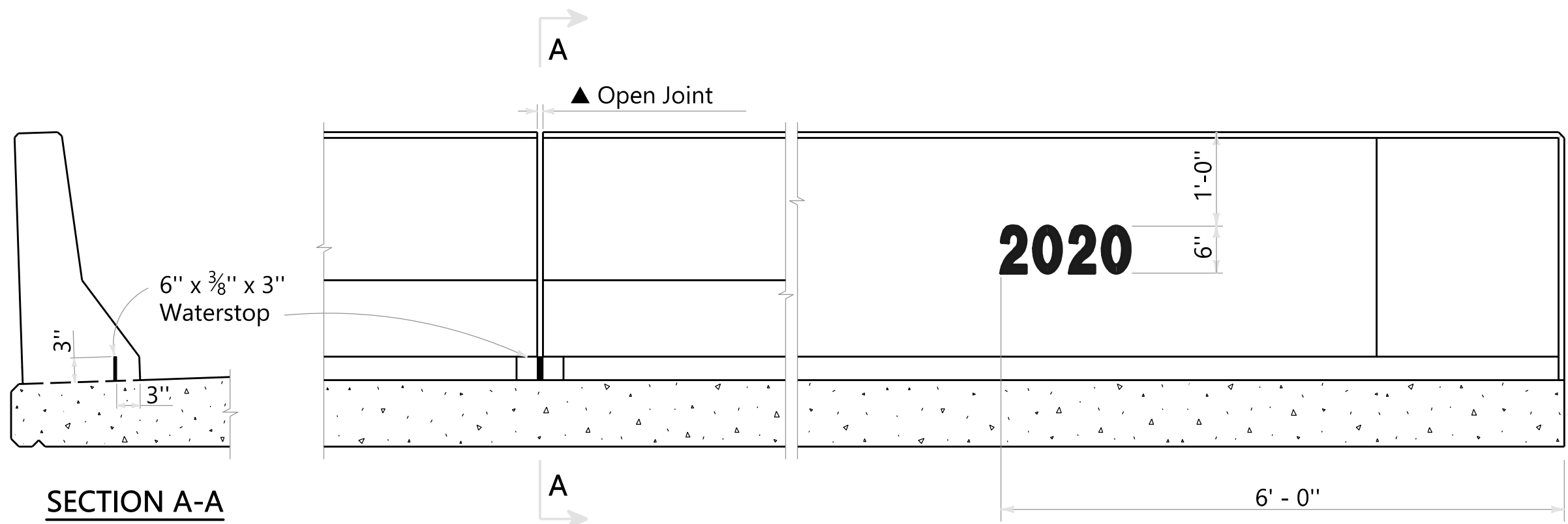
SECTION F-F

NOTE:
Concrete for Barrier Extension shall have a minimum 28 day compressive strength of 4000 psi. Reinforcing steel for Barrier Extension Support Slab shall be Gr. 60. Concrete Quantities and Reinforcing Quantities for the Barrier Extension and Barrier Extension Support Slab are included in pay item 450-B Reinforced Cement Concrete Bridge End Slab. (Roadway Item).

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER



MISCELLANEOUS SLAB DETAILS



WATERSTOP DETAIL

NOTE: Open joints in barrier rail to be sealed with a 6"x3/8" x 3" waterstop, except as noted below. Waterstop material shall conform to requirements of sub-article 832.05 (b) of the Standard Specifications. Waterstop shall be bonded to bridge deck with an approved adhesive meeting requirements of sub-article 832.03 (a) 2b of the Standard Specifications.

Waterstop not required on high side of sloped decks, when Class 3 surface finish is required, or when joint opening is saw cut per sub-article 510.03(j) of the Standard Specifications.

Cost of waterstops shall be included in pay item "Bridge Concrete Superstructure".

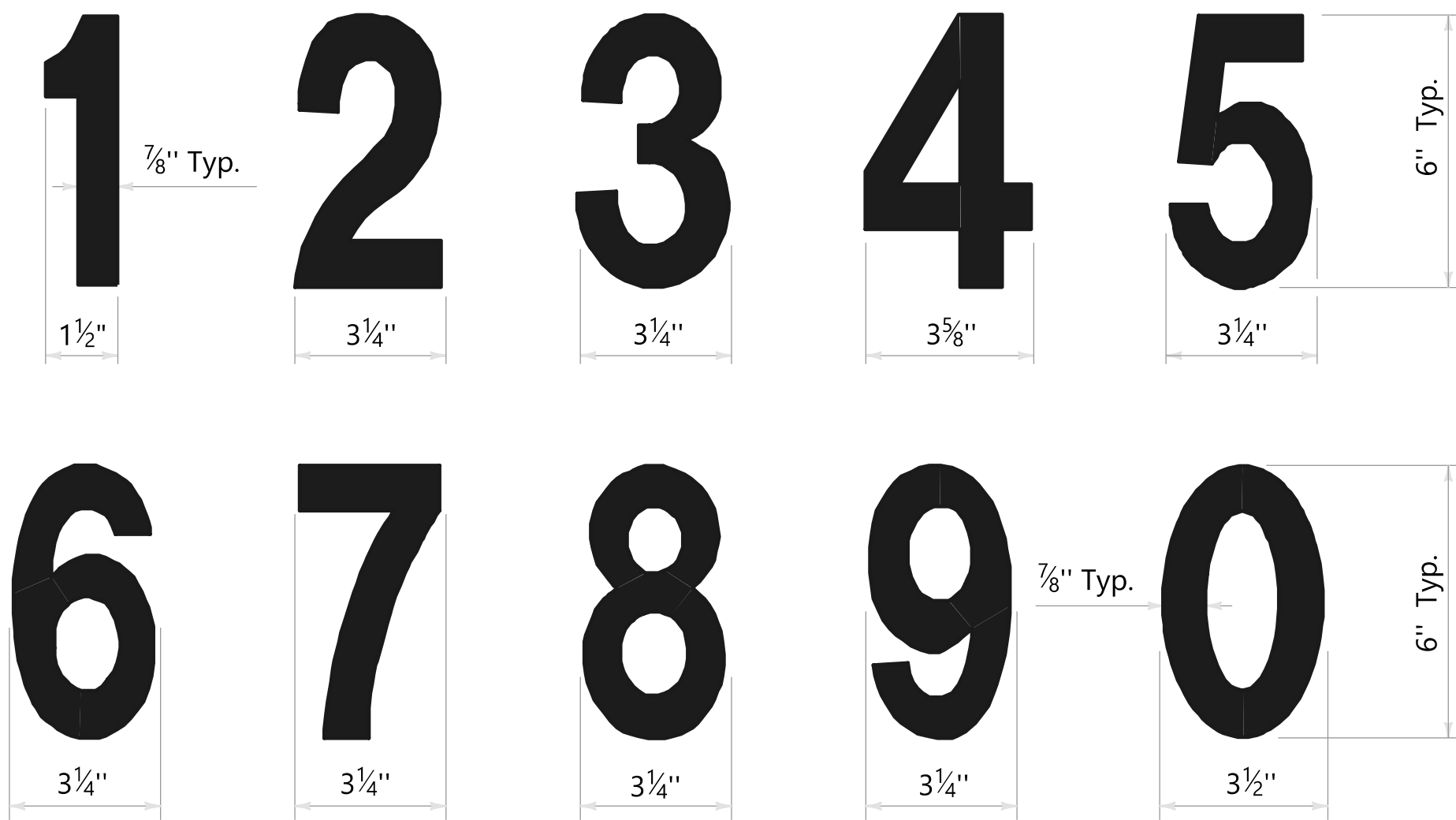
NOTE: The year of completion of bridge shall be constructed on the inside face of barrier rail at begin and end, as shown. Numerals to be similar to those shown on this sheet.

Numerals may be constructed of suitable material and attached to forms in order to cast six inch (6") high by three-eighths inch (3/8") deep indentations in concrete. Edges of numerals should have inward bevel to facilitate removal of forms.

Upon approval of the engineer, the contractor may use preformed, black, six inch (6") high by three-eighths inch (3/8") minimum depth numerals that are permanently embedded within the barrier rail so the face of the numerals are flush with concrete face. Edges of numerals to have outward bevel to insure permanent embedment.

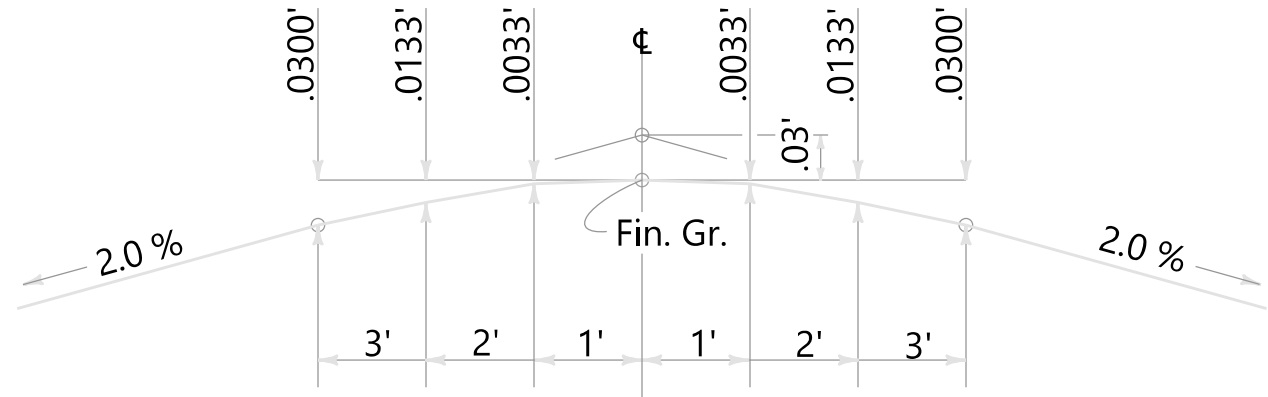
Cost of numerals shall be included in pay item "Bridge Concrete Superstructure".

PART ELEVATION - BARRIER RAIL

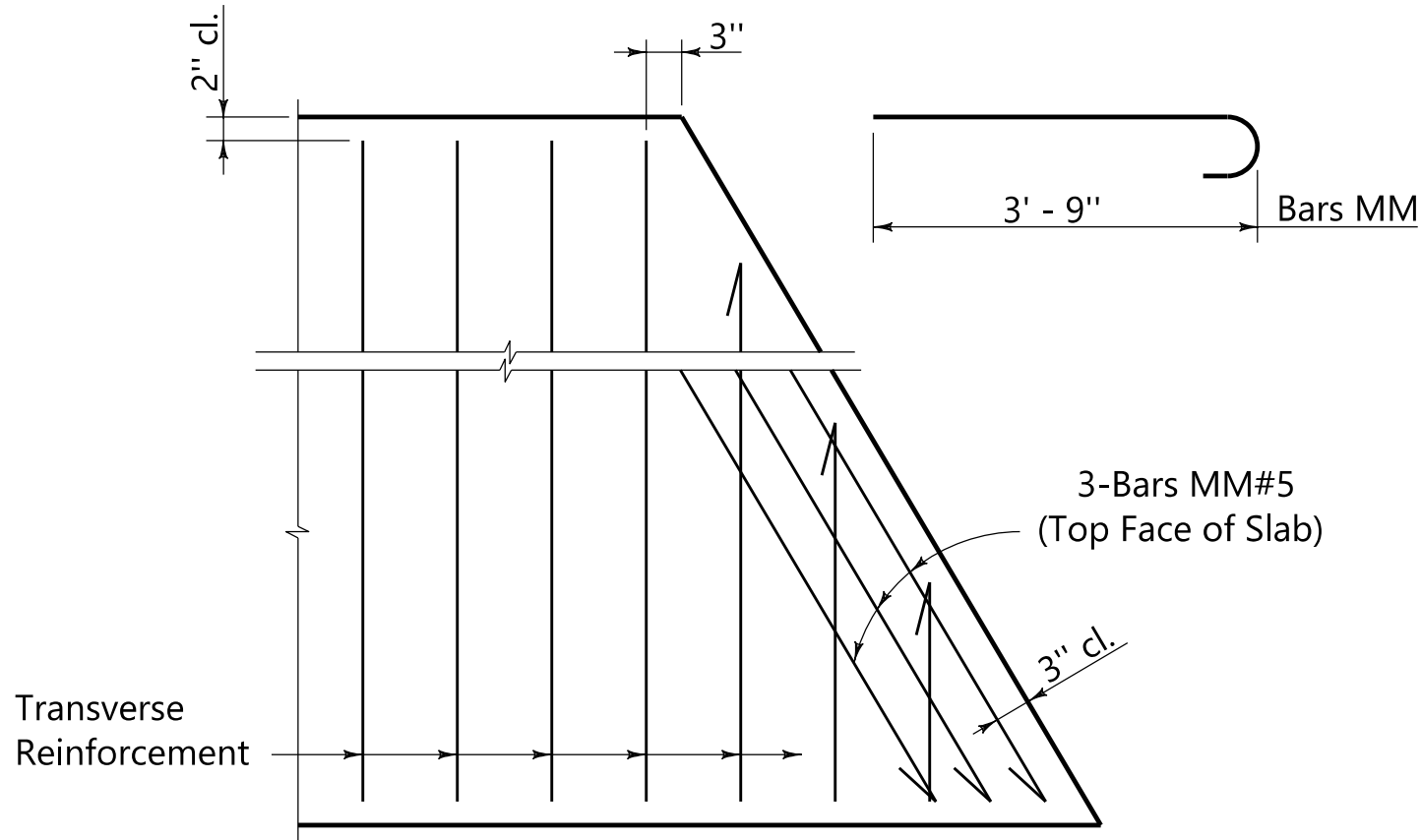


NUMERAL DETAIL

YEAR OF COMPLETION



6' PARABOLIC CROWN ORDINATES WITH 2.0 % SIDE SLOPE

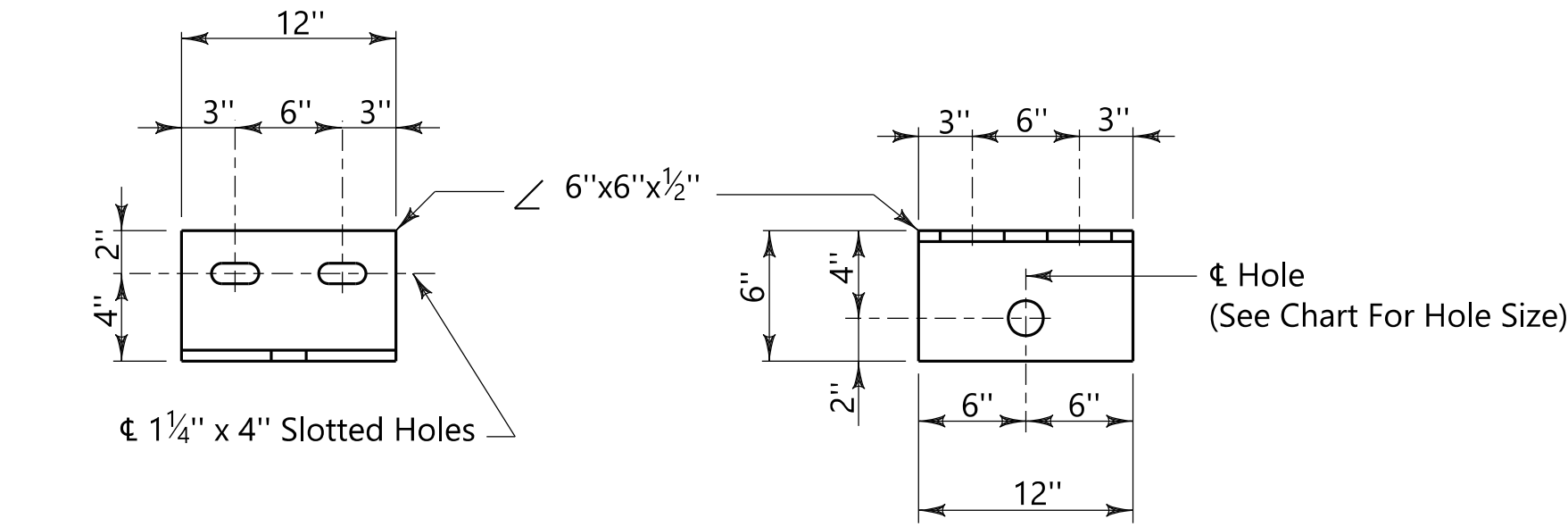


SPAN REINFORCEMENT DETAIL

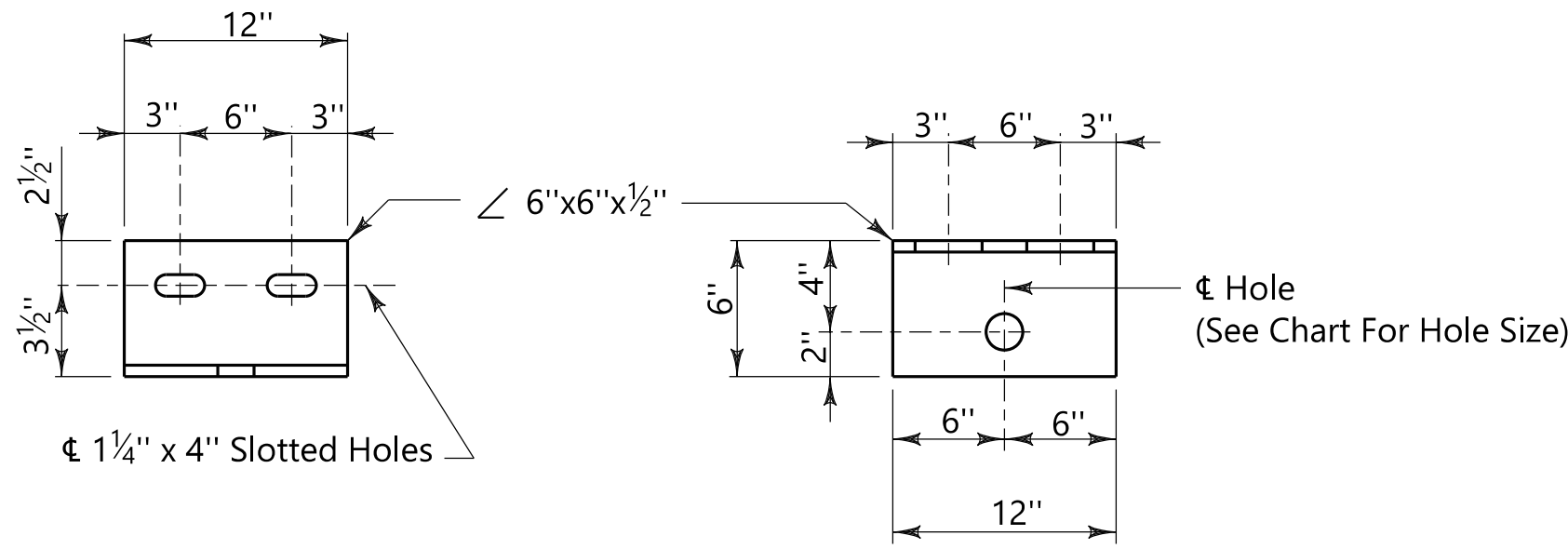


TYPICAL SPACING

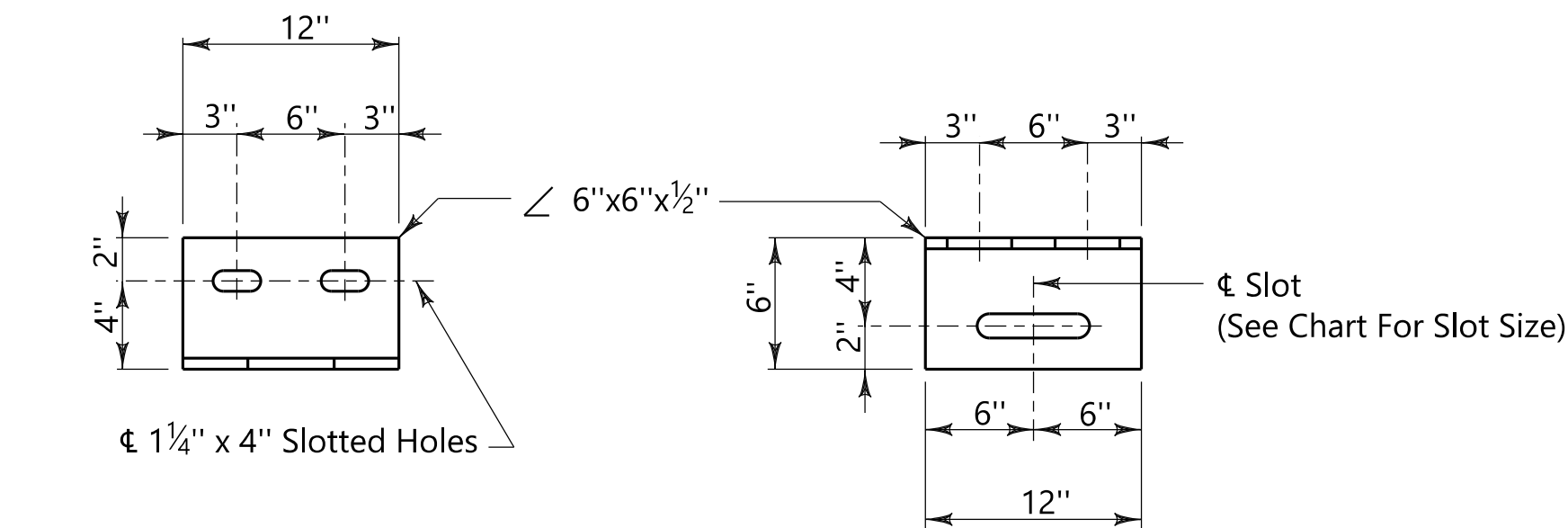
REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER



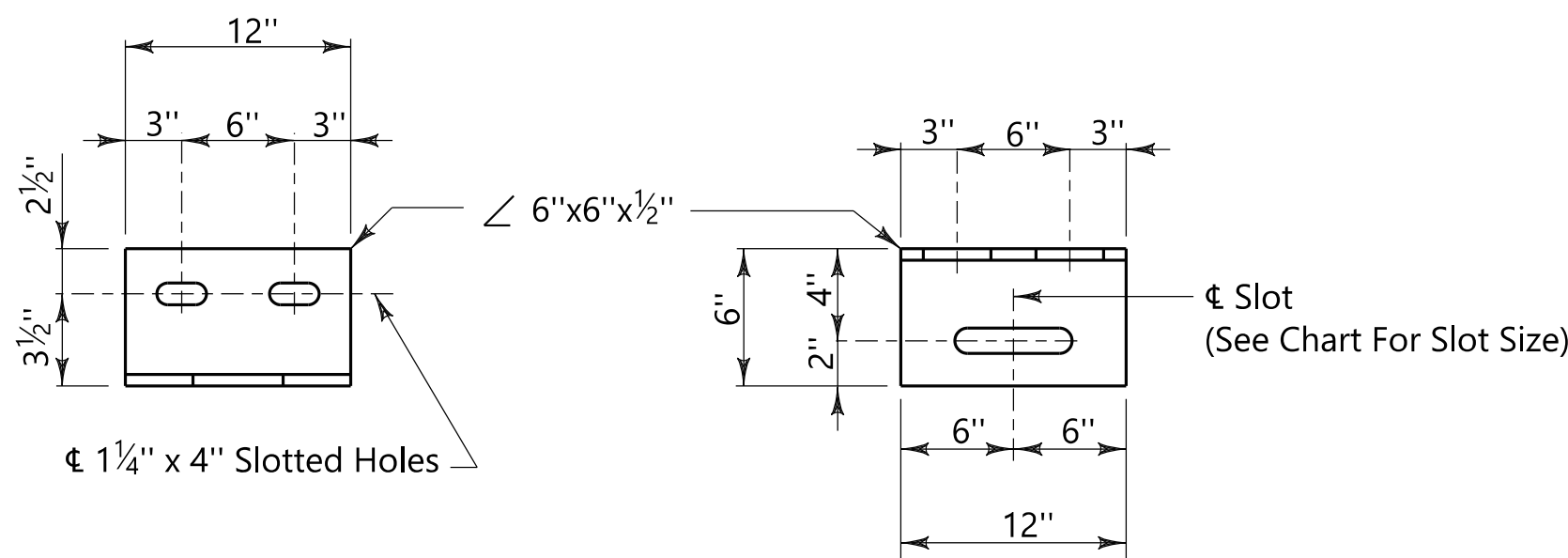
AASHTO TYPE GDR. CLIP ANGLE (FIXED)



BULB TEE TYPE GDR. CLIP ANGLE (FIXED)

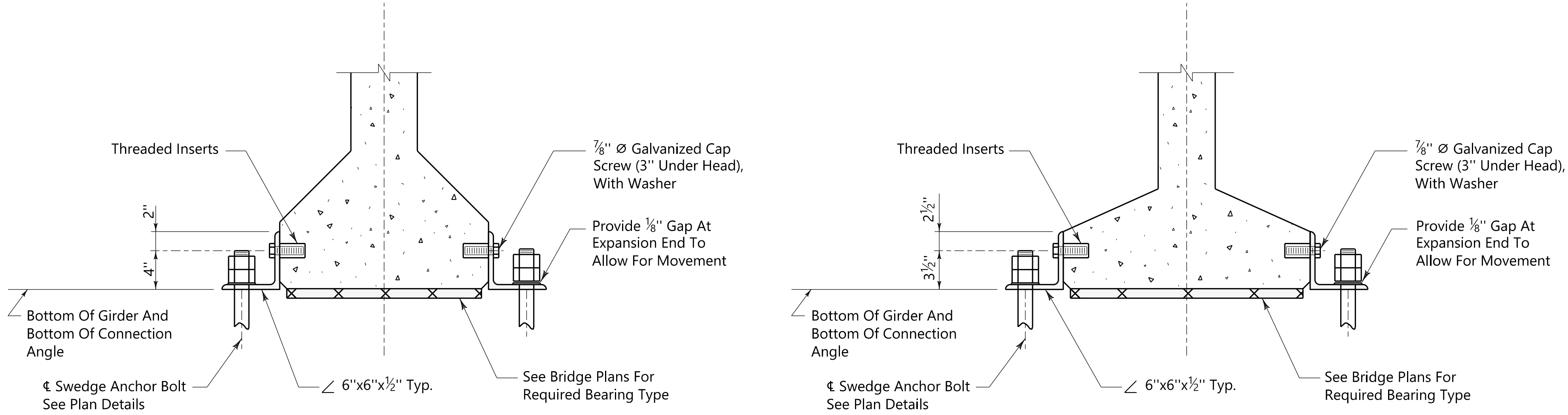


AASHTO TYPE GDR. CLIP ANGLE (EXP.)



BULB TEE TYPE GDR. CLIP ANGLE (EXP.)

CLIP ANGLE HOLE & SLOT SIZE		
BOLT	ROUND	SLOT
AB-1	1 1/4"	1 1/4" x 7"
AB-2	1 1/2"	1 1/2" x 7"
AB-3	1 3/4"	1 3/4" x 7"

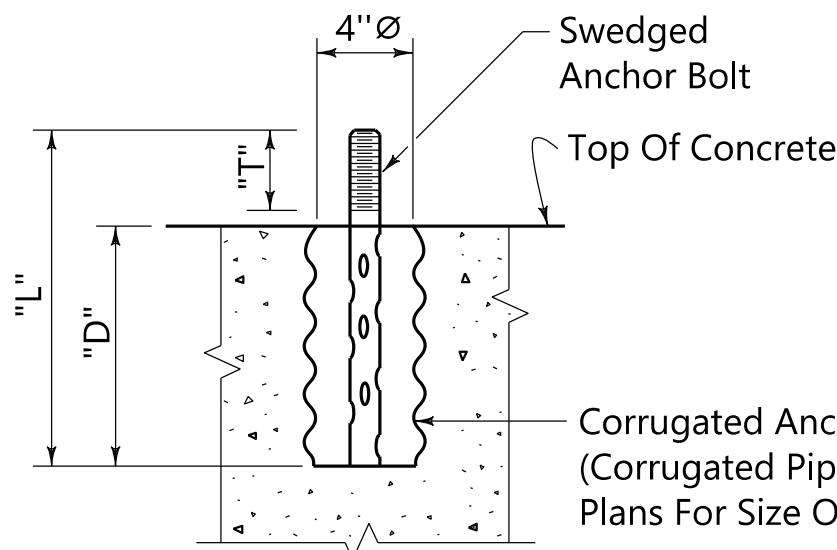


END VIEW AASHTO TYPE GDR.

END VIEW BULB TEE TYPE GDR.

CONNECTION ANGLE DETAILS

NOTE: Threaded inserts and 7/8" Ø x 3" Cap Screws with 1-washer each are to be included in the price bid per lin. ft. of P.P.C. girder. Swedge Anchor Bolts w/2 hex nuts and 1-washer each, and Connection Angles 6" x 6" x 1/2" are to be included in pay item 508-A pounds of structural steel. Shop drawings as required by ALDOT Standard Specifications for pay item 508-A are required for Swedge Anchor Bolts and Connection Angles. Connection Angles 6" x 6" x 1/2" shall be hot -dipped galvanized in accordance with AASHTO M-111. 7/8" Ø Cap Screws, Swedge Anchor Bolts and washers shall be hot -dipped galvanized in accordance with AASHTO M-232. Damaged galvanized surface not to be encased in concrete, shall be repaired in accordance with Standard Specification 855.15.



ANCHOR BOLT DIMENSIONS				
BOLT TYPE	DIAM.	LENGTH "L"	THREADS "T"	EMBED "D"
AB-1	1"	1'-10"	5"	1'-4"
AB-2	1 1/4"	2'-1"	6"	1'-6"
AB-3	1 1/2"	2'-4"	6"	1'-9"

NOTE: Swedge anchor bolts shall be set in 4" Ø blockouts, or drilled or cast-in-place using a template.

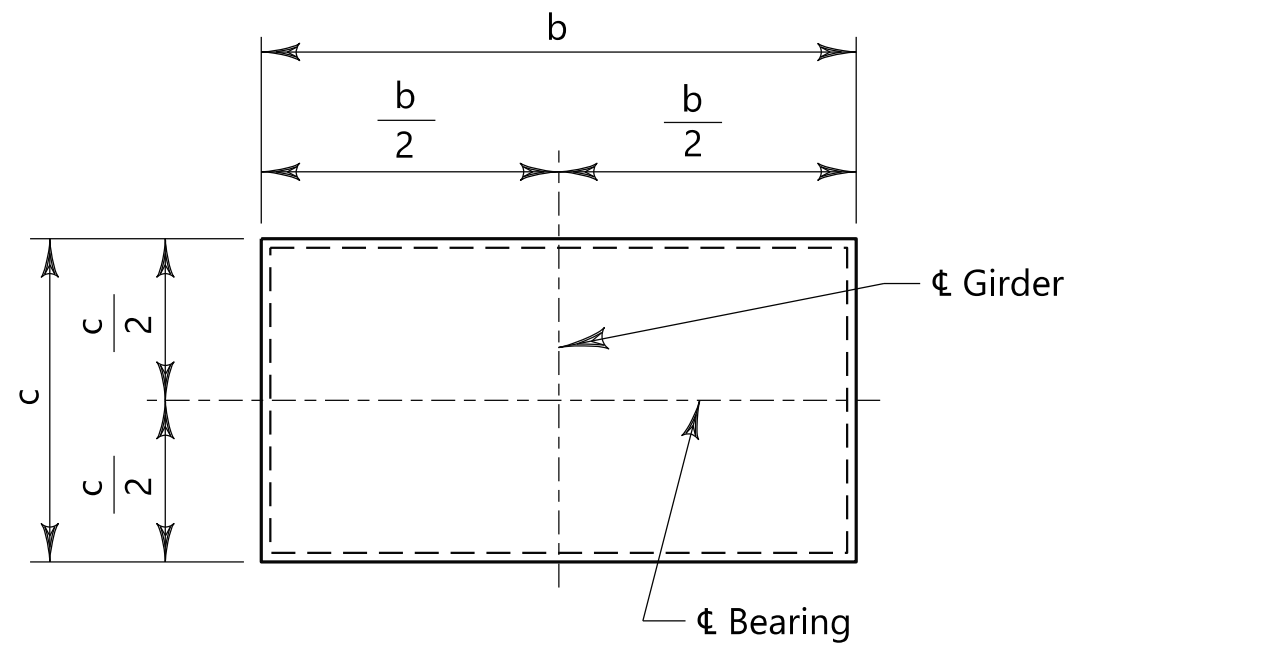
Provide each anchor bolt well with a readily removable watertight cap. Details to be approved by the engineer. The formwork, debris and standing water shall be removed from each well immediately prior to capping. It is mandatory that caps be in place throughout periods during which below freezing temperatures can be expected to occur. The contractor shall ensure that any water trapped in the wells does not freeze.

Remove corrugated well form prior to grouting around anchor bolts. Do not grout anchor bolts until girders have been completely erected, adjusted if necessary after erection, and approved by the engineer.

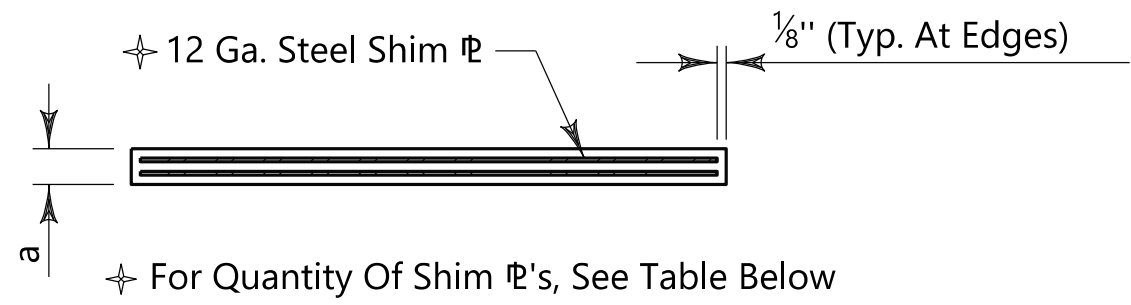
ANCHOR BOLT AND WELL DETAILS

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0 1" 2" SHEET REFERENCE

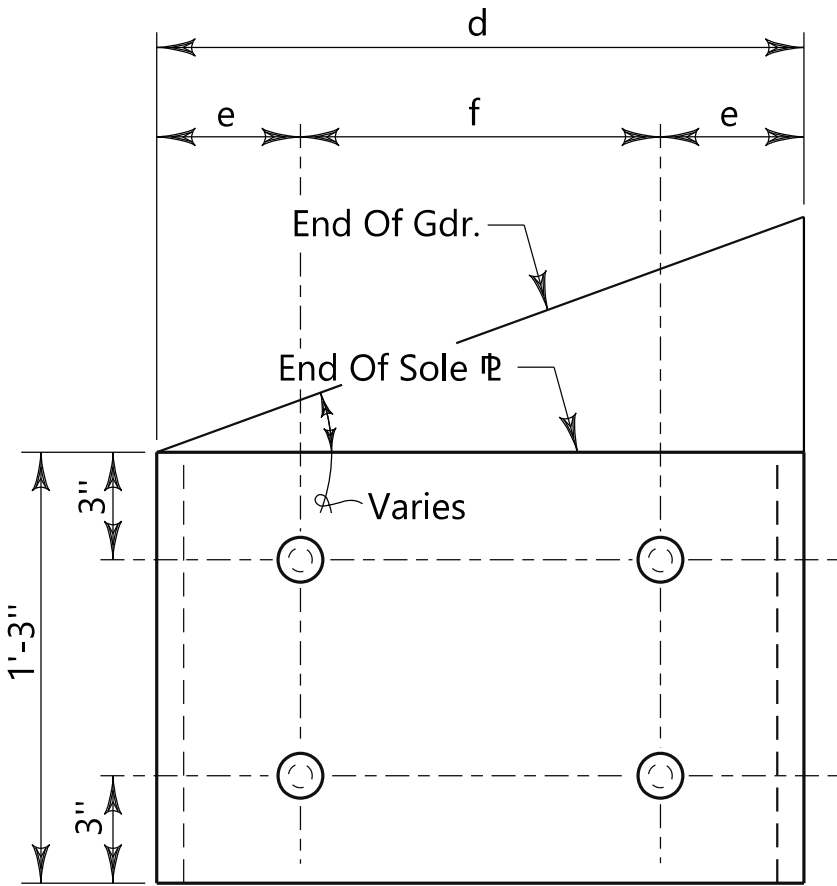


PLAN

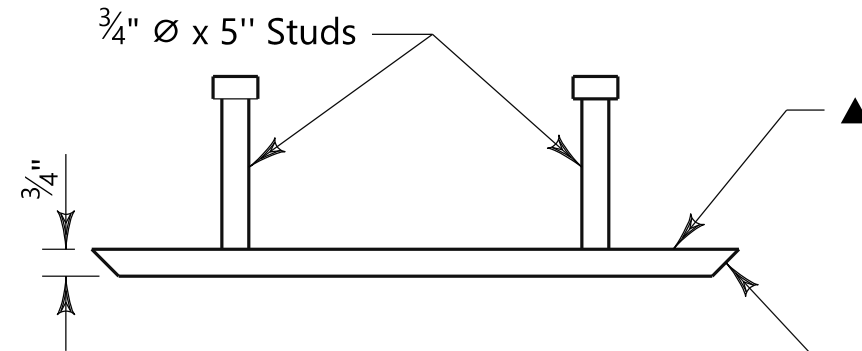


ELEVATION

ELASTOMERIC BEARING PAD DETAIL
(FOR BEARING MARK "B" & "VB")

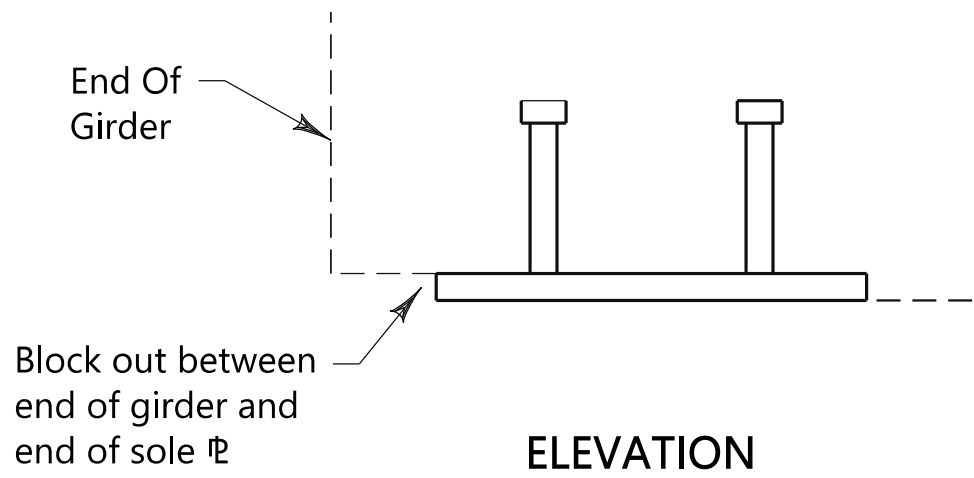


PLAN

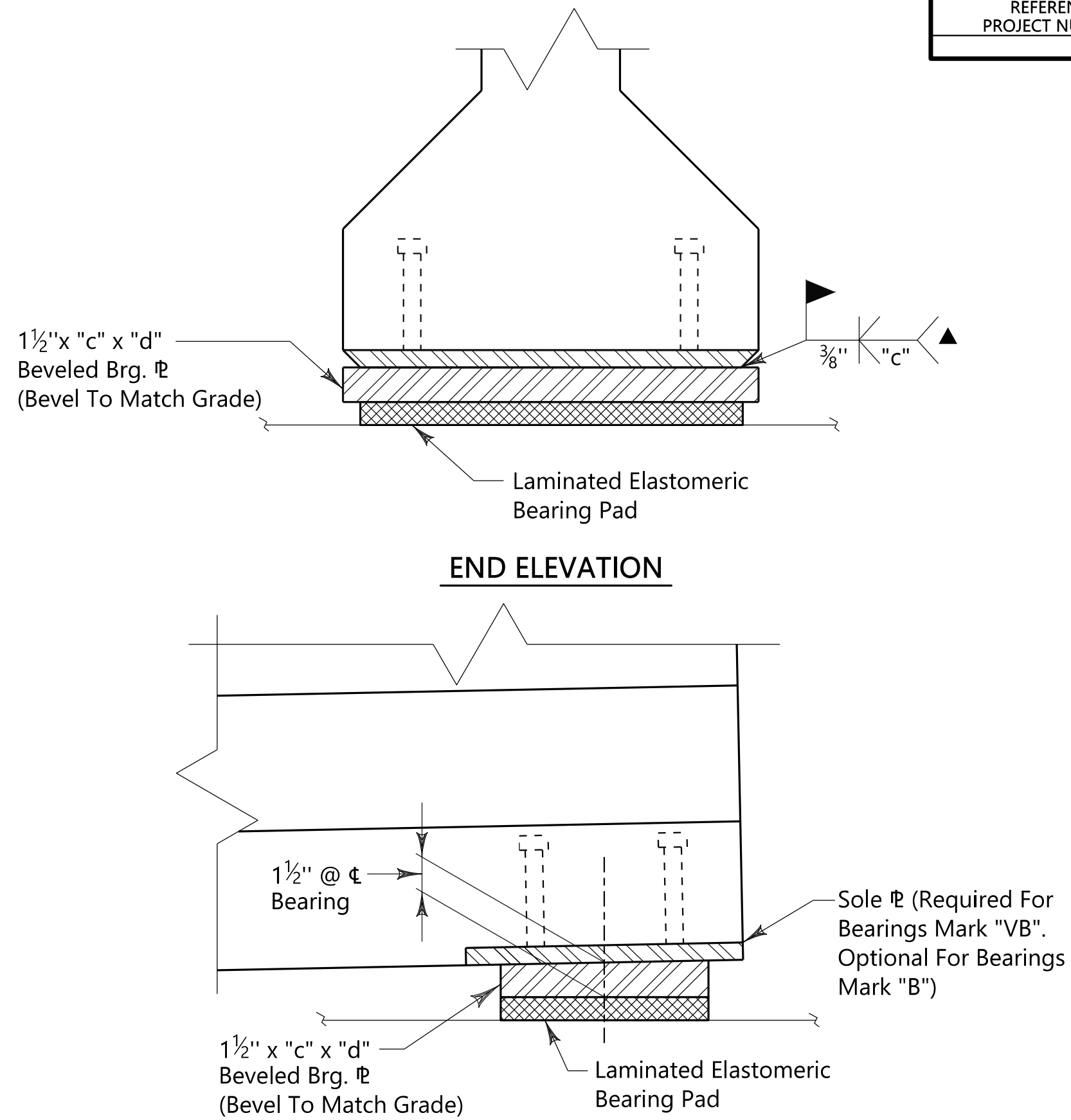


END VIEW

SOLE PLATE DETAIL
(FOR ALL GIRDER TYPES)



ELEVATION



END ELEVATION

SIDE ELEVATION

BEARING MARK "VB" DETAIL

▼ NOTE: A Bearing Layout (Erection Plan) Shall Be Provided By The Manufacturer Of The Bearings Whenever Type 4 Mark "VB" Elastomeric Bearings Are Specified In The Bridge Drawings. The Layout Shall Be Included In The Bearing Pad Fabrication Drawings Submitted To The Bridge Engineer For Approval And Shall Include All Bearings (Mark "VB" And Mark "B" If Applicable) For Each Structure. The Layout Shall Locate Each Bearing With Respect To Mark Number And Shall Indicate Correct Placement Of Bearing With Respect To Beveling.

▲ NOTE: Sole Plates Shall Be Hot-Dipped Galvanized In Accordance With AASHTO M-111. Beveled Edges Of The Sole Plate To Receive Field Welding Shall Be Ground To Bare Metal Before Being Cast In Girder. Reference Sections 511 & 837 Of The Standard Specifications For Bearing Plate Preparation Requirements.

The Contractor Shall Remove Any Rust That Appears In The Field Weld Areas Of The Bearing Plate and Sole Plate By Wire Brushing Just Prior To Field Welding These Plates. All Deck Pours Shall Be Completed Prior To Welding Bearing Plate To Sole Plate.

NOTE: For Anchor Bolt, Anchor Bolt Well, And Clip Angle Details See Std. Dwg. I-131 Sheet 7 of 8.

					Elastomeric Bearing Pad Data										Sole Plate & Bearing Plate Data		
Girder Type (AASHTO)	Maximum Span Length *	Maximum Load DL + LL	▼ Elastomeric Bearing		Bearing Pad Dimensions			Individual Layers **				Required 12 Gauge Steel Shim Plates			Sole Pl & Bevel Pl Length "d"	Connection Stud Spacing	
					Thickness "a"	Length "b"	Width "c"	Exterior		Interior						"e"	"f"
			Mark	Type				Number	Thickness	Number	Thickness	Number	Length	Width			
Type I	45 ft.	105 kips	VB1	4	0.75"	14.5"	9.0"	2	0.375"	- - -	- - -	1	14.25"	8.75"	16.0"	4.0"	8.0"
Type II	60 ft.	125 kips	VB2	4	0.75"	16.5"	9.0"	2	0.375"	- - -	- - -	1	16.25"	8.75"	18.0"	5.0"	8.0"
Type III	85 ft.	135 kips	VB3	4	1.00"	20.5"	9.0"	2	0.250"	1	0.500"	2	20.25"	8.75"	22.0"	5.0"	12.0"
BT-54	100 ft.	220 kips	VB4	4	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"	26.0"	5.0"	16.0"
BT-63	125 ft.	220 kips	VB4	4	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"	26.0"	5.0"	16.0"
BT-72	140 ft.	220 kips	VB4	4	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"	26.0"	5.0"	16.0"
BT MOD.	300 ft.	289 kips	VB5	4	3.00"	26.5"	10.0"	2	0.2500"	5	0.500"	6	26.25"	9.75"	28.0"	6.0"	16.0"

					Elastomeric Bearing Pad Data									
Girder Type (AASHTO)	Maximum Span Length *	Maximum Load DL + LL	Elastomeric Bearing		Bearing Pad Dimensions			Individual Layers **				Required 12 Gauge Steel Shim Plates		
					Thickness "a"	Length "b"	Width "c"	Exterior		Interior				
			Mark	Type				Number	Thickness	Number	Thickness	Number	Length	Width
Type I	45 ft.	105 kips	B1	2	0.75"	14.5"	9.0"	2	0.375"	- - -	- - -	1	14.25"	8.75"
Type II	60 ft.	125 kips	B2	2	0.75"	16.5"	9.0"	2	0.375"	- - -	- - -	1	16.25"	8.75"
Type III	85 ft.	135 kips	B3	2	1.00"	20.5"	9.0"	2	0.250"	1	0.500"	2	20.25"	8.75"
BT-54	100 ft.	220 kips	B4	2	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"
BT-63	125 ft.	220 kips	B4	2	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"
BT-72	140 ft.	220 kips	B4	2	1.50"	24.5"	9.0"	2	0.1875"	3	0.375"	4	24.25"	8.75"
BT MOD.	300 ft.	289 kips	B5	2	3.00"	26.5"	10.0"	2	0.2500"	5	0.500"	6	26.25"	9.75"

* Length Used To Calculate Shear Deformation Of Elastomer.

** Exterior Layer Thickness Measured From Outside Surface Of Pad To Pl Shim Pl.
Interior Layer Thickness Measured From Pl Shim Pl To Pl Shim Pl.

ALABAMA DEPARTMENT
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REVISIONS

STANDARD DETAILS

BRIDGE STANDARD DRAWING

INDEX NO.

FHWA APPROVED
8-29-16

I-131

SHEET
8 OF 8

51011

PLOTTED: 11-SEP-2019