

SECTION OF BOX CULVERT

SECTION OF WALL

NOTE

A 3/4" Vee Joint is equivalent to and can be used instead of a Construction Joint for box culvert construction. The term Joint shall refer to either and shall be determined by the Project Engineer.

No Joint is required for box culverts up to 60 ft. long. Box culverts 60 ft. to 90 ft. long require one (1) joint, 90 ft. to 135 ft. two (2) joints, and 135 ft. to 170 ft. three (3) joints. For box culverts over 170 ft. long place joints at approximate equal intervals of not less than 40 ft. nor more than 55 ft. The joints shall be normal to the centerline of the box culvert with longitudinal reinforcing extending through the joint. Use no key or expansion material in joints.

VEE OR CONSTRUCTION JOINT

GENERAL NOTES

SPECIFICATIONS: Current Alabama Standard Specifications For Highway Construction.

DESIGN LOADING: A. A. S. H. T. O. , H15-44 to HS20-44.

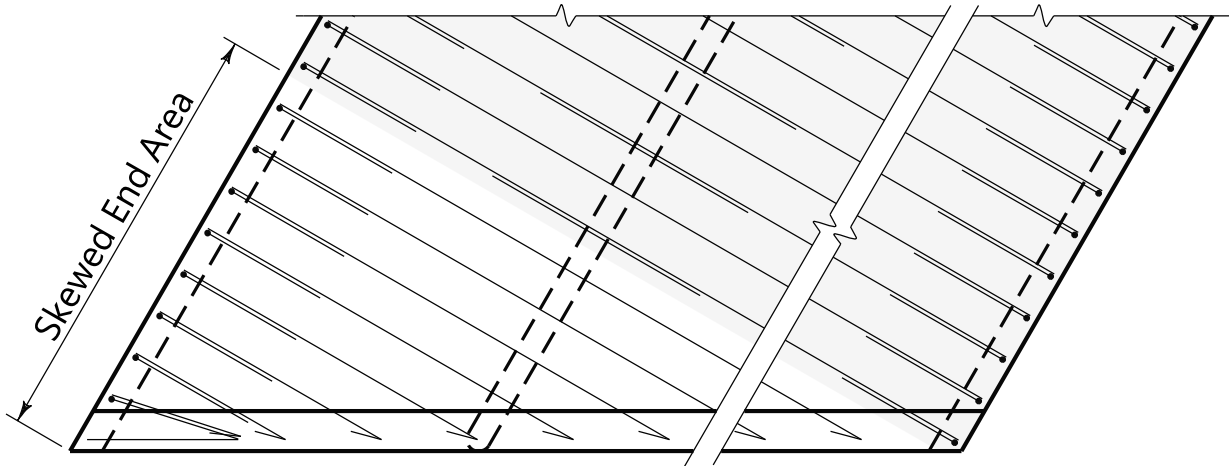
CONCRETE: Culvert Concrete.

QUANTITIES: Length of barrel is measured out to out of curbs for quantities.

CONSTRUCTION: The bottom slab shall be placed and allowed to set before the remainder of the culvert is constructed. The walls shall be carried up four to six inches monolithic with the base. Construction Joints in the walls shall be carefully made, well bonded and waterproof.

WEEPHOLES: Weepholes shall be provided as follows: (1) They shall be spaced along C of barrels in the top of the slab 4'-0" from the curb and 5'-0" ± o. c. between and shall be covered with rough stones or concrete blocks grooved to permit water seepage. (2) Weepholes shall be placed in the side walls and wing walls at a maximum spacing of 5' - 0" at 1'-0" above flowline elevation or as directed by the Engineer to best drain the backfill. (3) All weepholes shall be 3" Ø.

STEEL REINFORCEMENT: All reinforcement shall conform to Section 835 of the current Alabama Standard Specifications For Highway Construction. All longitudinal reinforcing steel (bars type "E") shall be spliced 35d.



CULVERT PLAN VIEW - ON SKEW

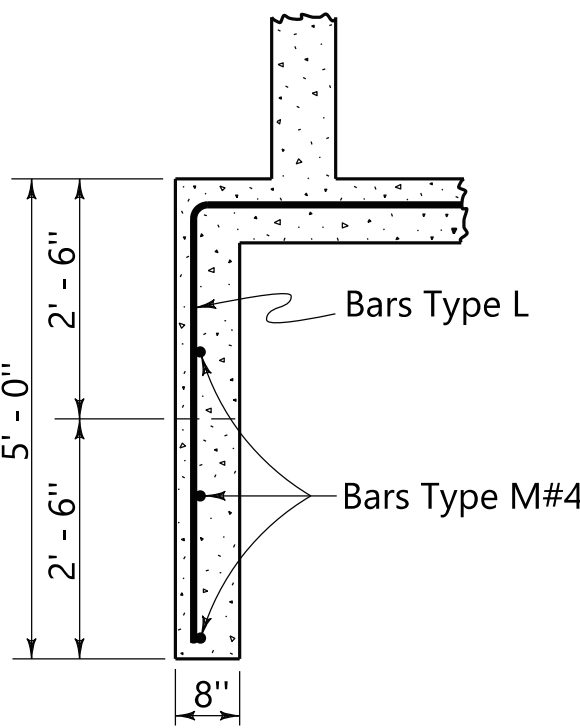
NOTE

Eliminate truss bars (marked "A") and bars marked "B", "N", and "N1" in the "Skewed End Area". Replace bars "A" with bars type "AA" and bars "B" with bars type "BB" and space at one-half (1/2) the required spacing shown in the Design Box on the Box Culvert Standard Drawing used.

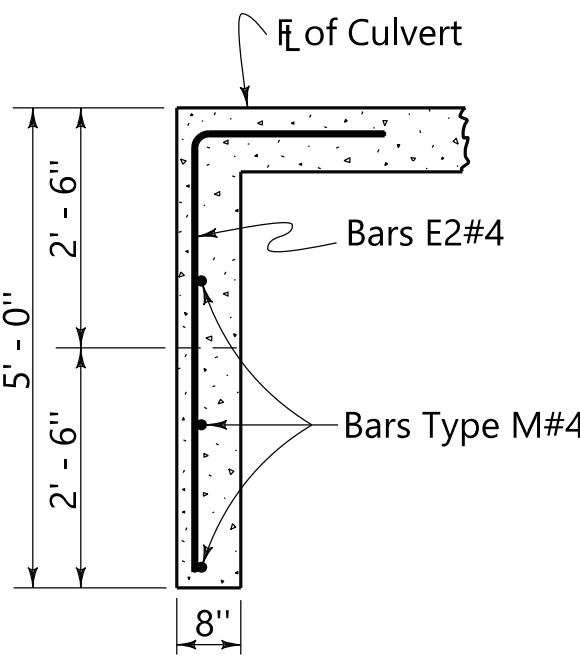
BOX CULVERT SKEWED END AREA

DETAIL FOR FIVE FOOT (5') CONCRETE TOEWALL

FOR BOX CULVERTS AND WINGS



CULVERT WING TOEWALL



CULVERT BARREL TOEWALL

ADDITIONAL SUMMARY QUANTITIES

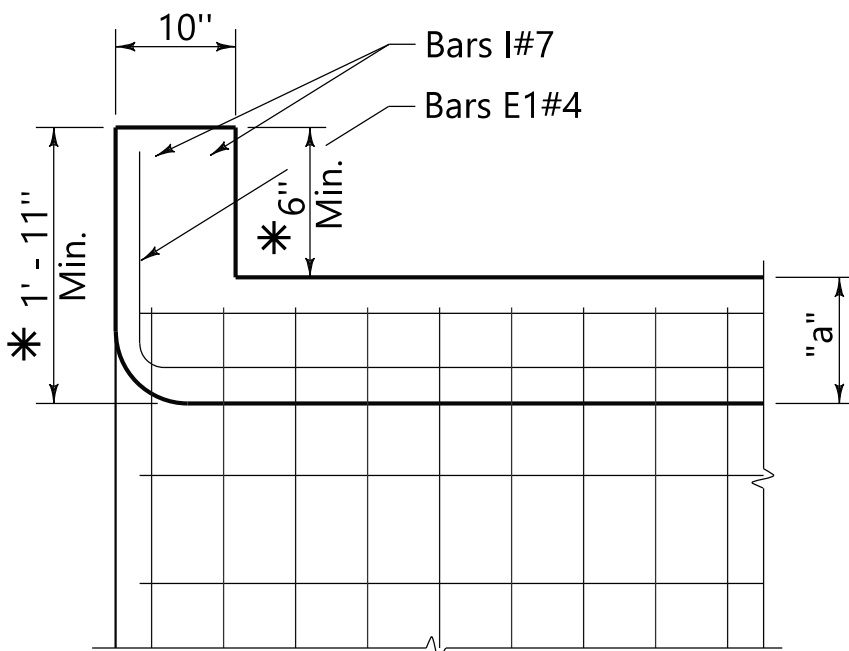
FOR 5' REINF. CONC. TOEWALL

ADD . . . 2' - 6" to each bar "E2"
ADD . . . 2' - 6" to each bar type "L"
ADD . . . two (2) each bar type "M"
(Wings and Barrel)

ADD . . . 2' - 6" to toewall for Concrete

BOX CULVERT CONCRETE TOEWALL EXTENSION

USE WHEN REQUIRED IN CONTRACT PLANS



See Box Culvert Std. Dwg.
For This Dimension.

* A minimum height of one foot and eleven inches (1'-11") is required.

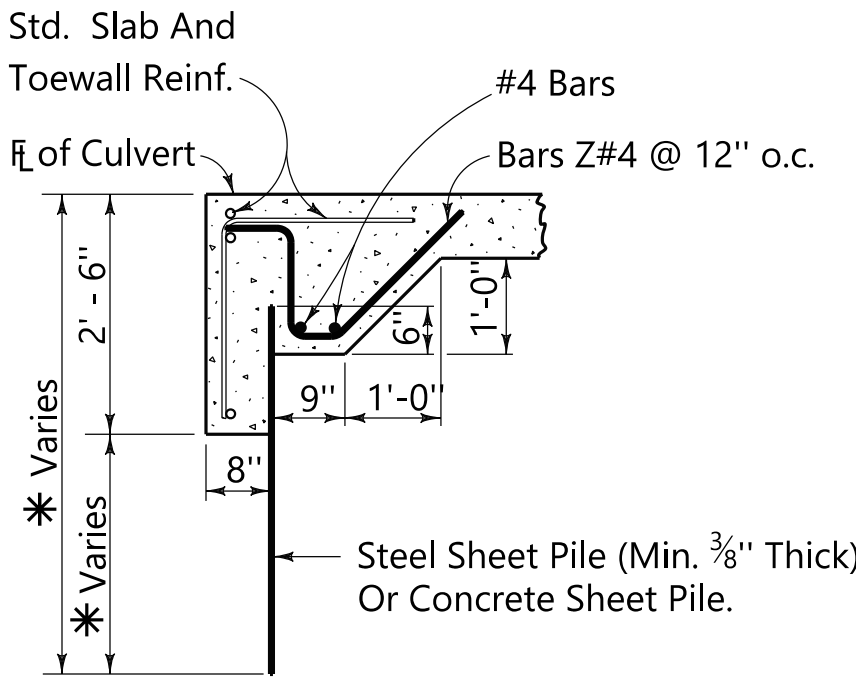
If the height of curb above the top of slab is less than six inches (6"), the curb height shall be "a" + 6".

The concrete and steel reinforcement quantities shall be adjusted when the curb height of one foot and eleven inches (1'-11") is increased.

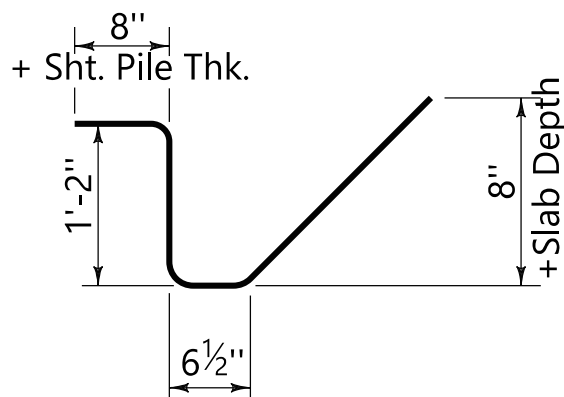
BOX CULVERT CURB DETAIL

DETAIL FOR STEEL SHEET PILE TOEWALL

FOR BOX CULVERTS AND WINGS



* See Contract Plans For Sheet Pile Length.



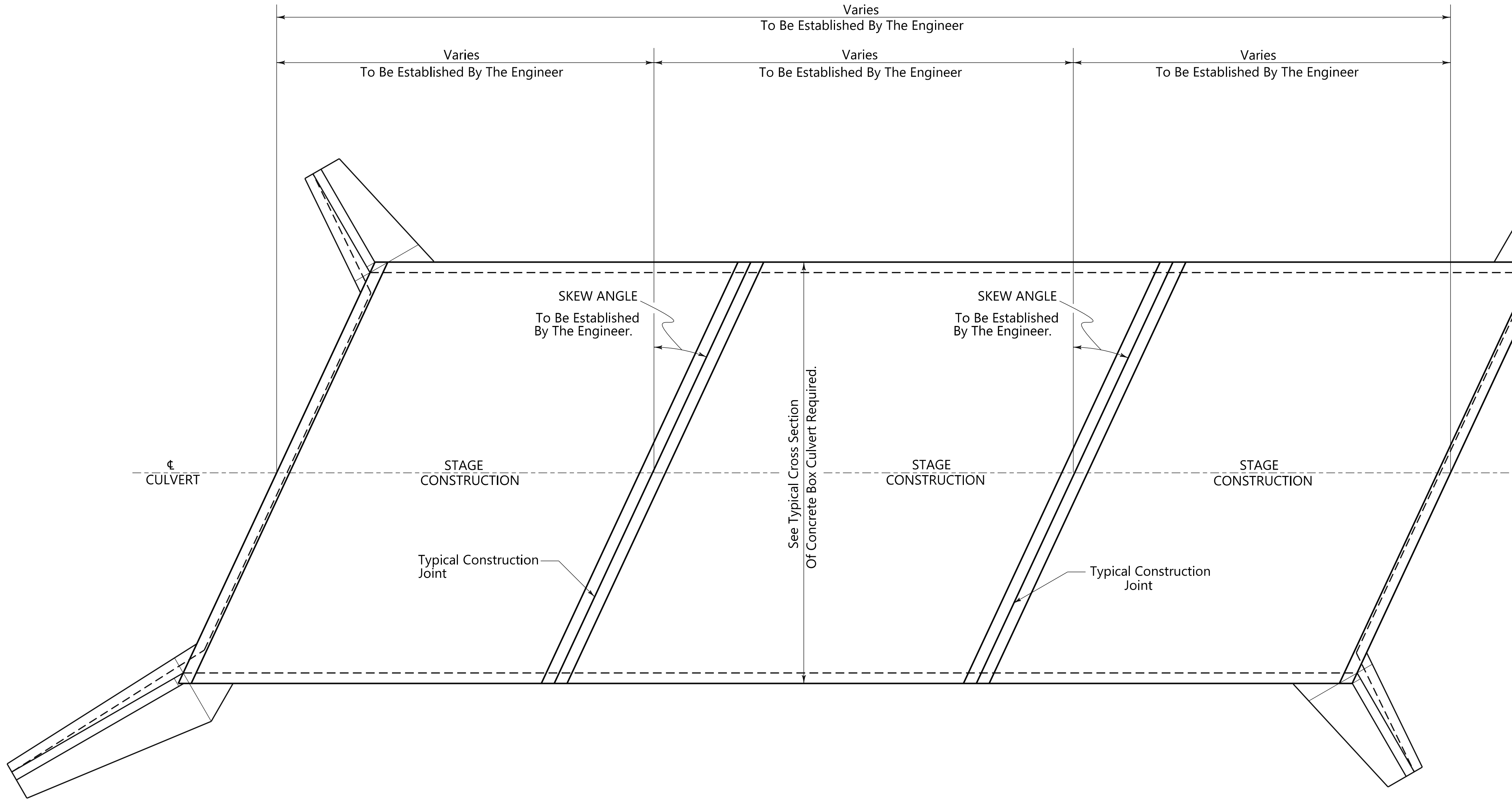
BAR Z

BOX CULVERT SHEET PILE TOEWALL EXTENSION

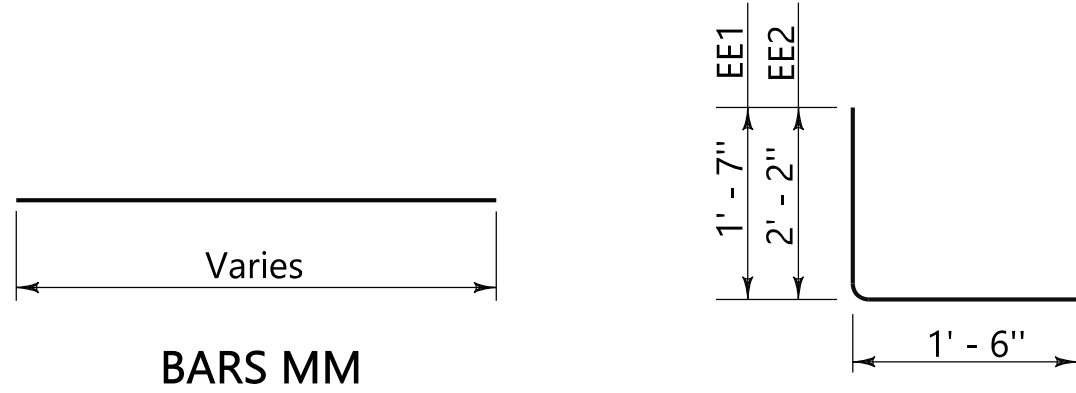
USE WHEN REQUIRED IN CONTRACT PLANS

If sheet pile alternate is chosen by the contractor for construction of the 5 ft. toewall, payment will be made as cubic yards of culvert concrete and pounds of reinforcing steel based on the theoretical quantities for these items required for the concrete toewall alternate.

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER



PLAN
N. T. S.

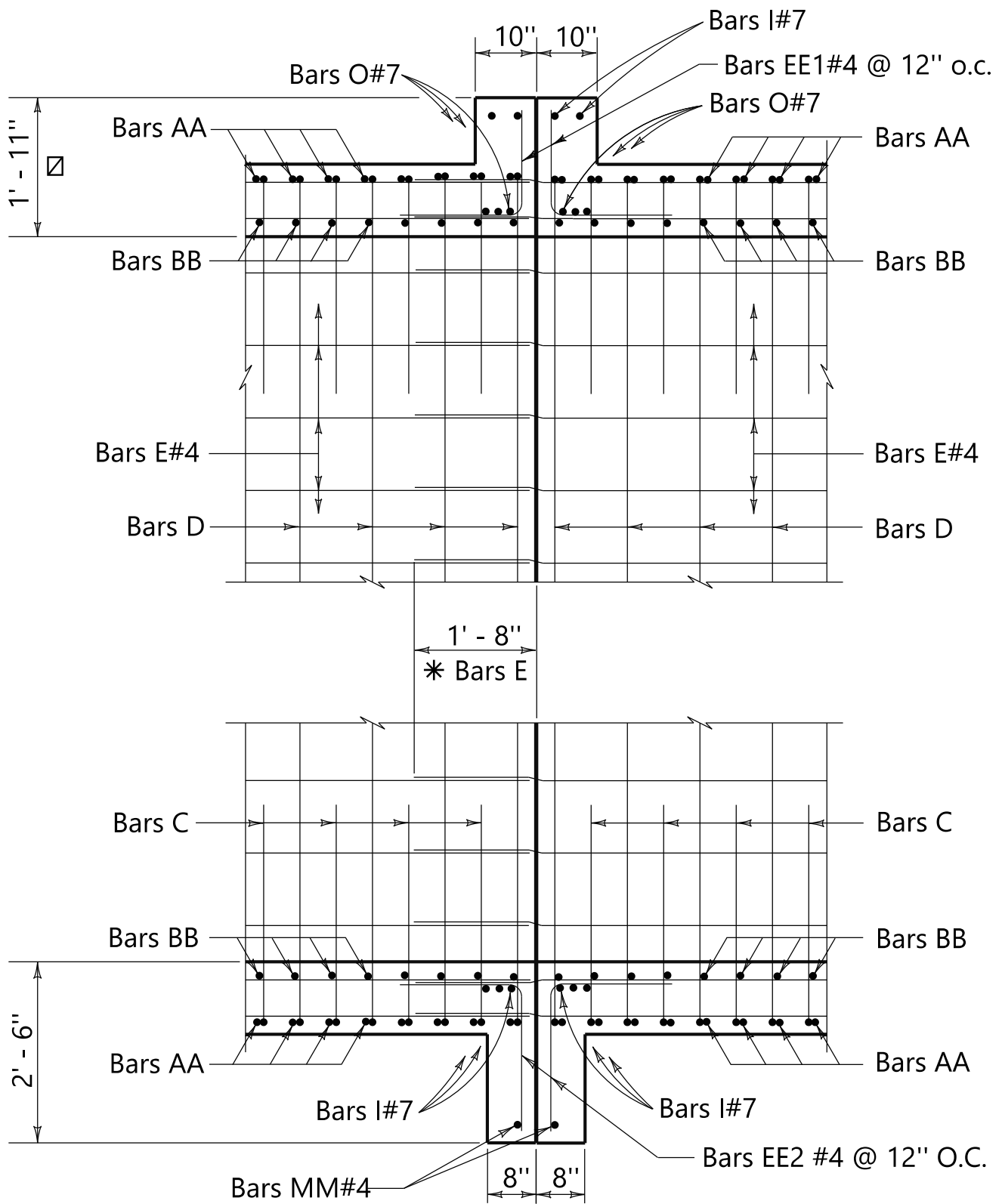


BARS MM

NOTE: THIS DRAWING WILL BE USED FOR ANY SKEWED REINFORCED CONCRETE BOX CULVERT (CAST IN PLACE) THAT IS BUILT IN STAGE CONSTRUCTION.

IN SPECIAL CASES WHERE FILL COVER IS NOT AVAILABLE, THIS STANDARD WILL NOT APPLY.

Ø IN SPECIAL CASES WHERE FILL COVER IS NOT AVAILABLE, NOTIFY THE BRIDGE ENGINEER FOR OTHER DETAILS.

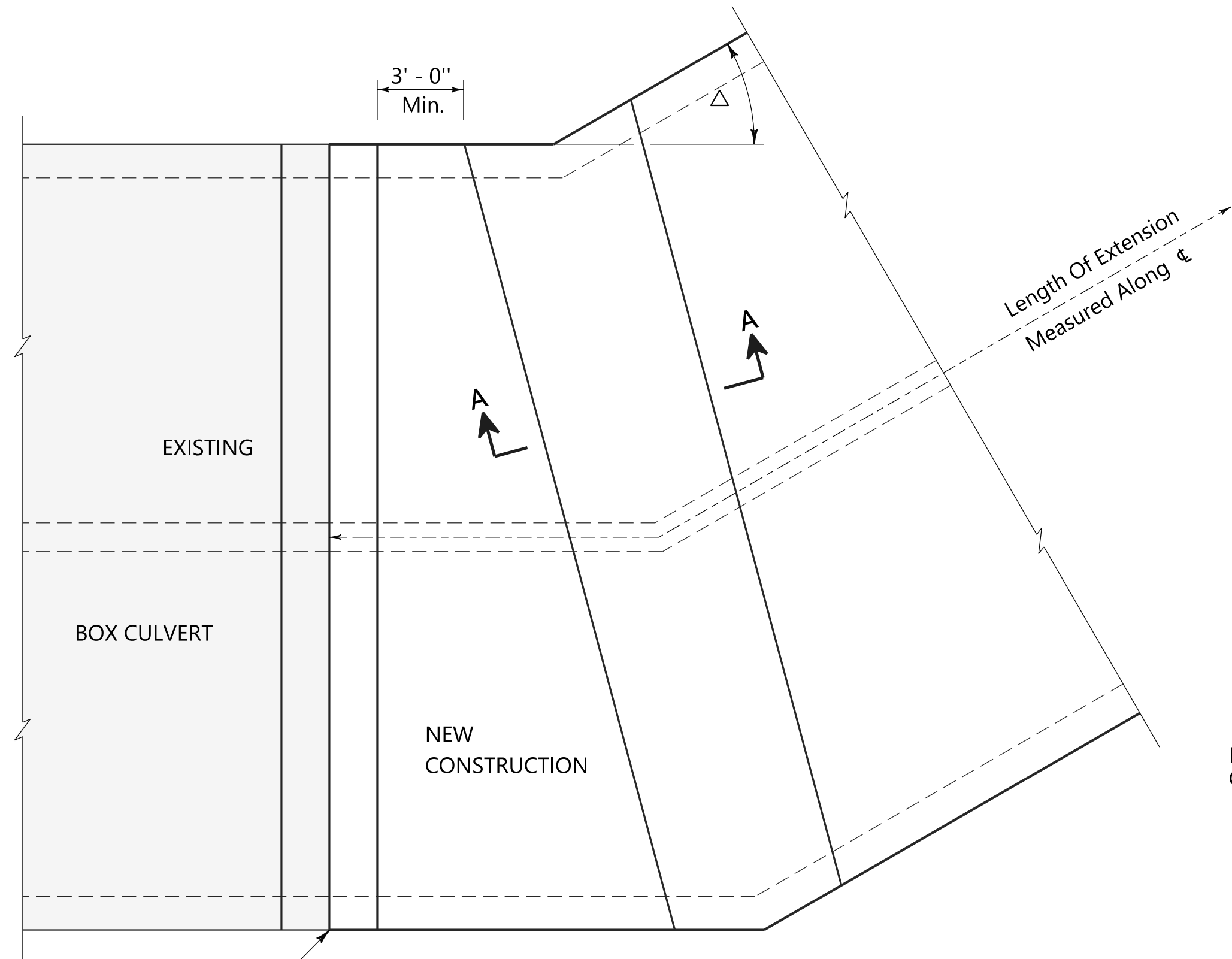


SECOND STAGE OF CONSTRUCTION

FIRST STAGE OF CONSTRUCTION

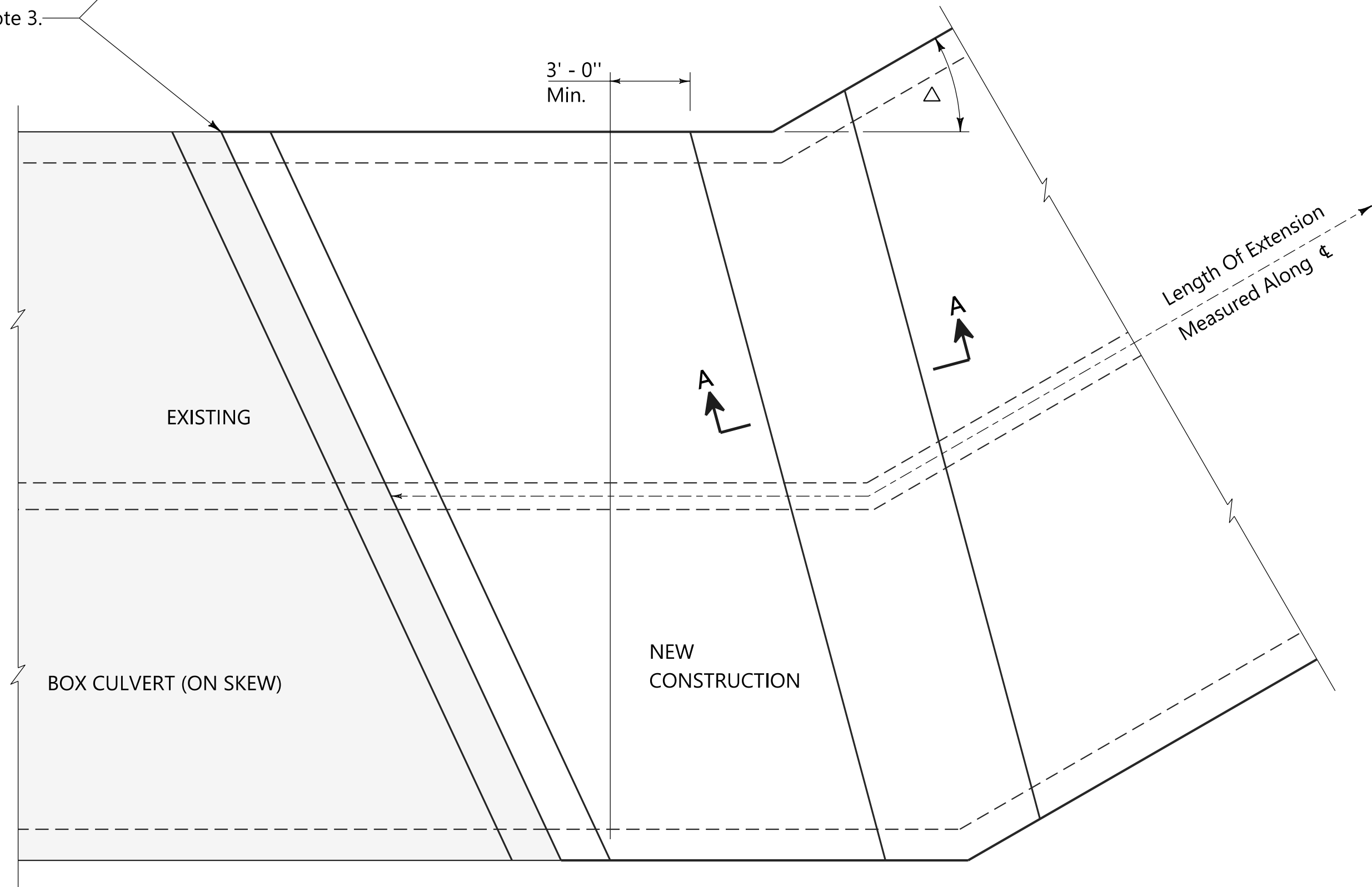
TYPICAL CONSTRUCTION JOINT
N T S

* EXTEND ALL BARS TYPE "E" FOR SECOND STAGE OF CONSTRUCTION



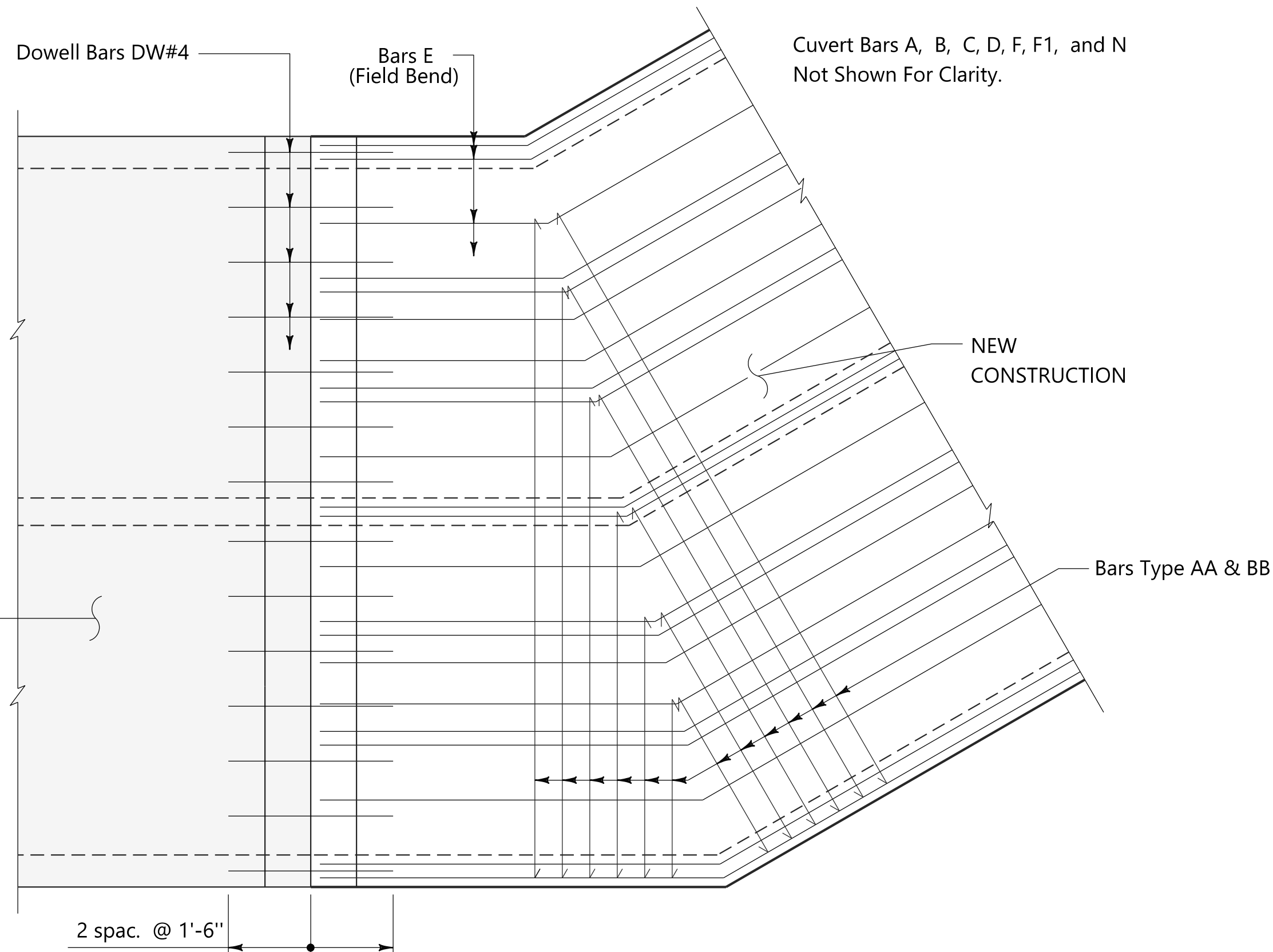
PLAN VIEW - NO SKEW

See Note 3.

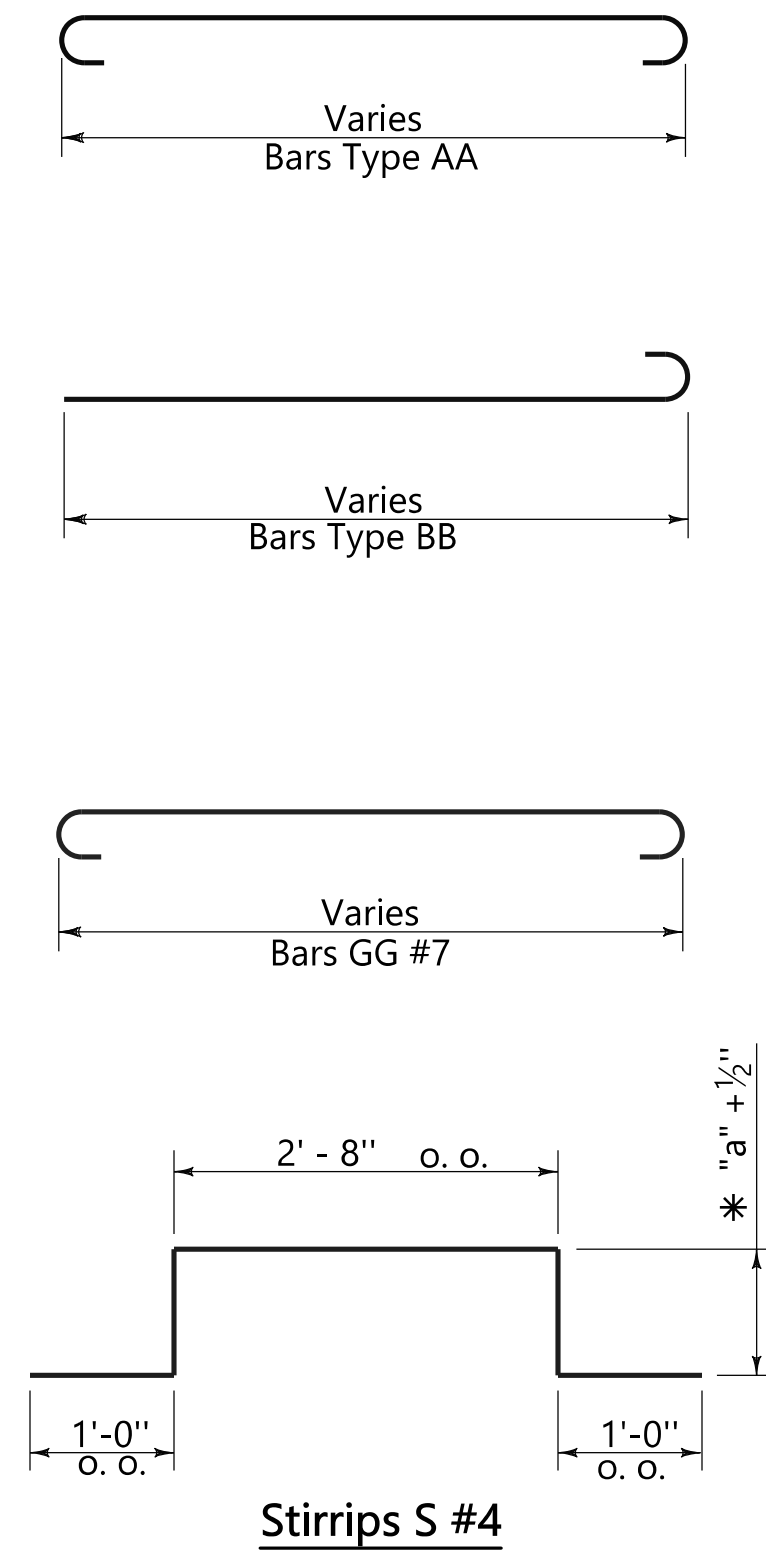


PLAN VIEW - ON SKEW

EXISTING REINF.
CONC. BOX CULVERT

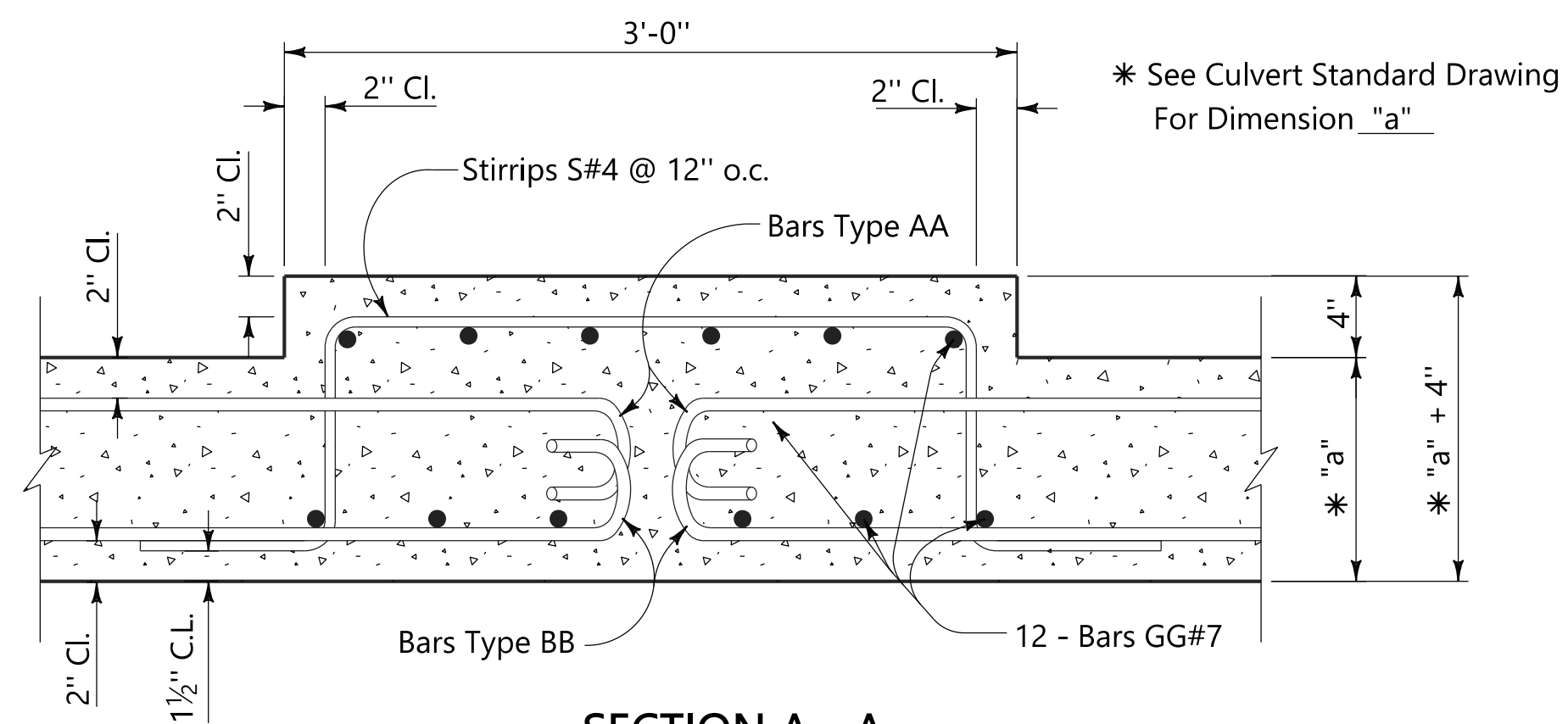


PLAN VIEW OF SLAB REINFORCEMENT - NO SKEW



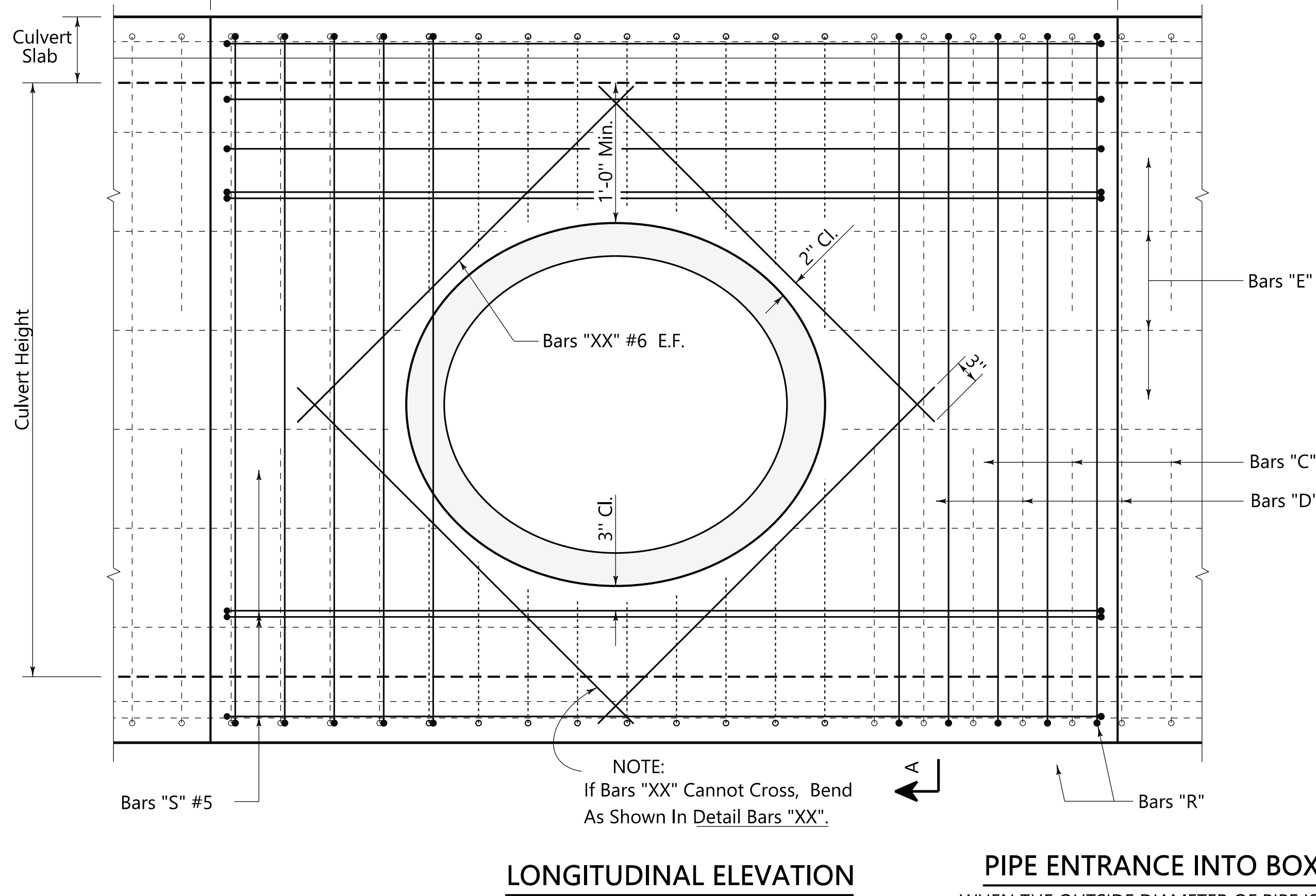
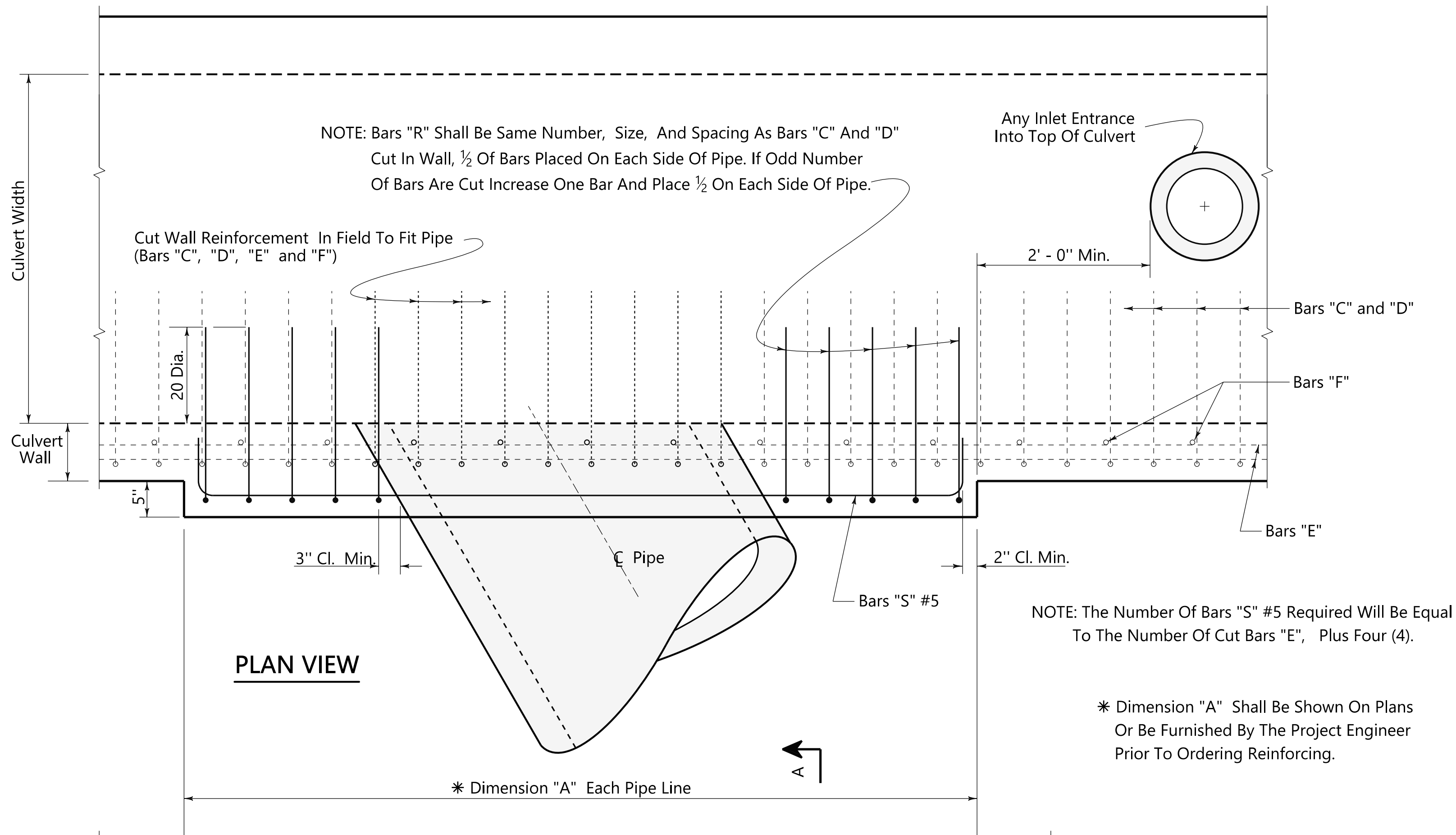
GENERAL NOTES

- See STD. DWG. CS-3-1 For Details Regarding Bars AA and BB.
- Max. $\Delta = 30^\circ$ per 50 foot section of culvert.
- See Standard Drawing CX For Details On Culvert Extension/Splicing.
- This Drawing Shall Be Used In Conjunction With A Standard Culvert Drawing Of The Required Size. Single Or Multiple Barrel Culvert Of Any Skew May Be Used. Stirrups Shall Be Evenly Spaced At 1'-0" o.c. Max. Bars "E" shall Be Field Bent To Fit.
- Dowels Bars DW #4 (3'-0") @ 12" o.c. Max. Shall Be Used, Extending At Least 1'-6" Into Old Concrete Exterior Walls And Slabs And Shall Be Secured In Existing Structure With An Approved Epoxy Grout. Dowel Bars Are Not To Be Placed Directly Above Mid-Walls For Multiple Barrel Culverts.
- Center Dowel Bars DW#4 In Slab And Walls.



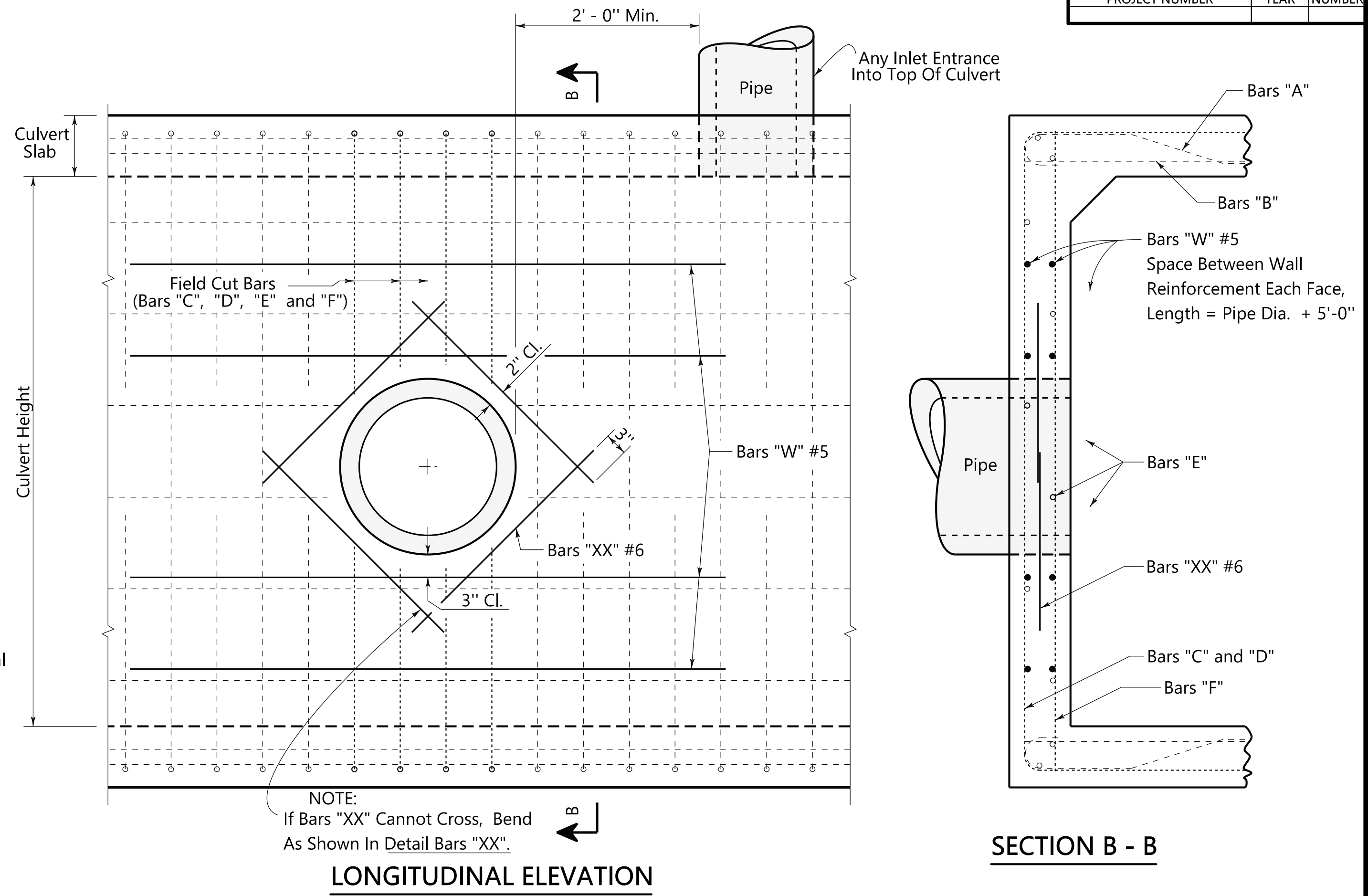
SECTION A - A
TOP SLAB SHOWN (INVERT FOR BOTTOM SLAB)

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER
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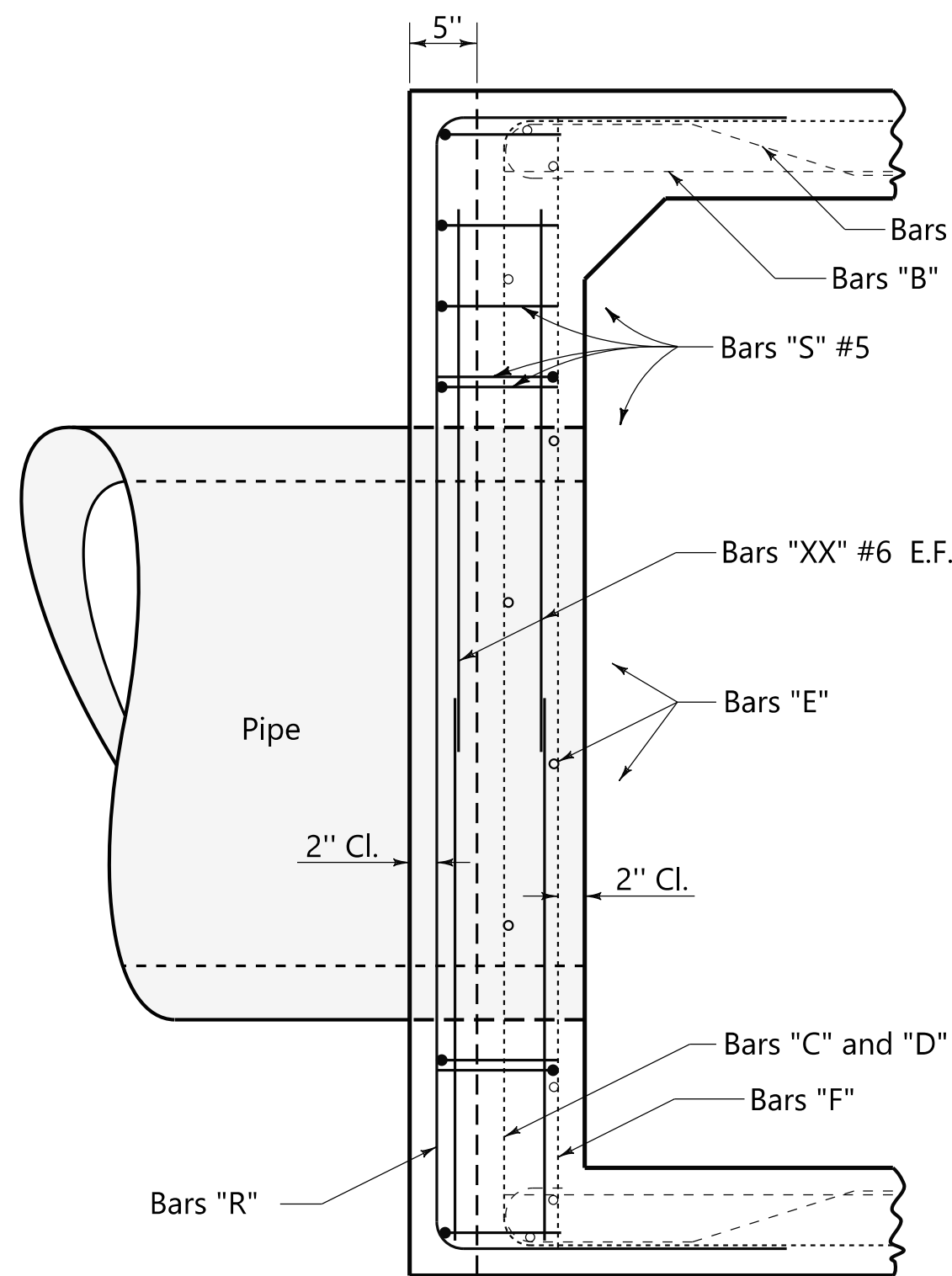
PIPE ENTRANCE INTO BOX CULVERT SIDES

WHEN THE OUTSIDE DIAMETER OF PIPE IS GREATER THAN $\frac{1}{3}$ THE BOX CULVERT HEIGHT AND NOT MORE THAN THE BOX CULVERT HEIGHT MINUS ONE (1) FOOT, USE THIS METHOD OF CONSTRUCTION.

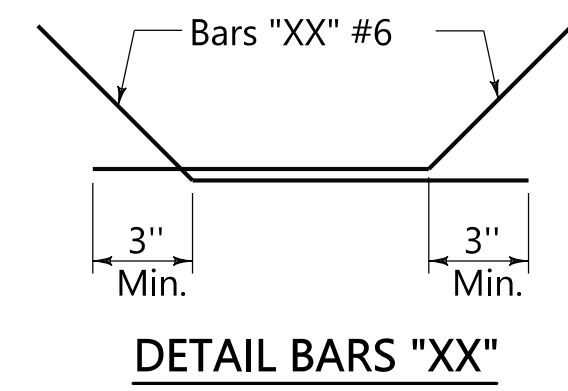


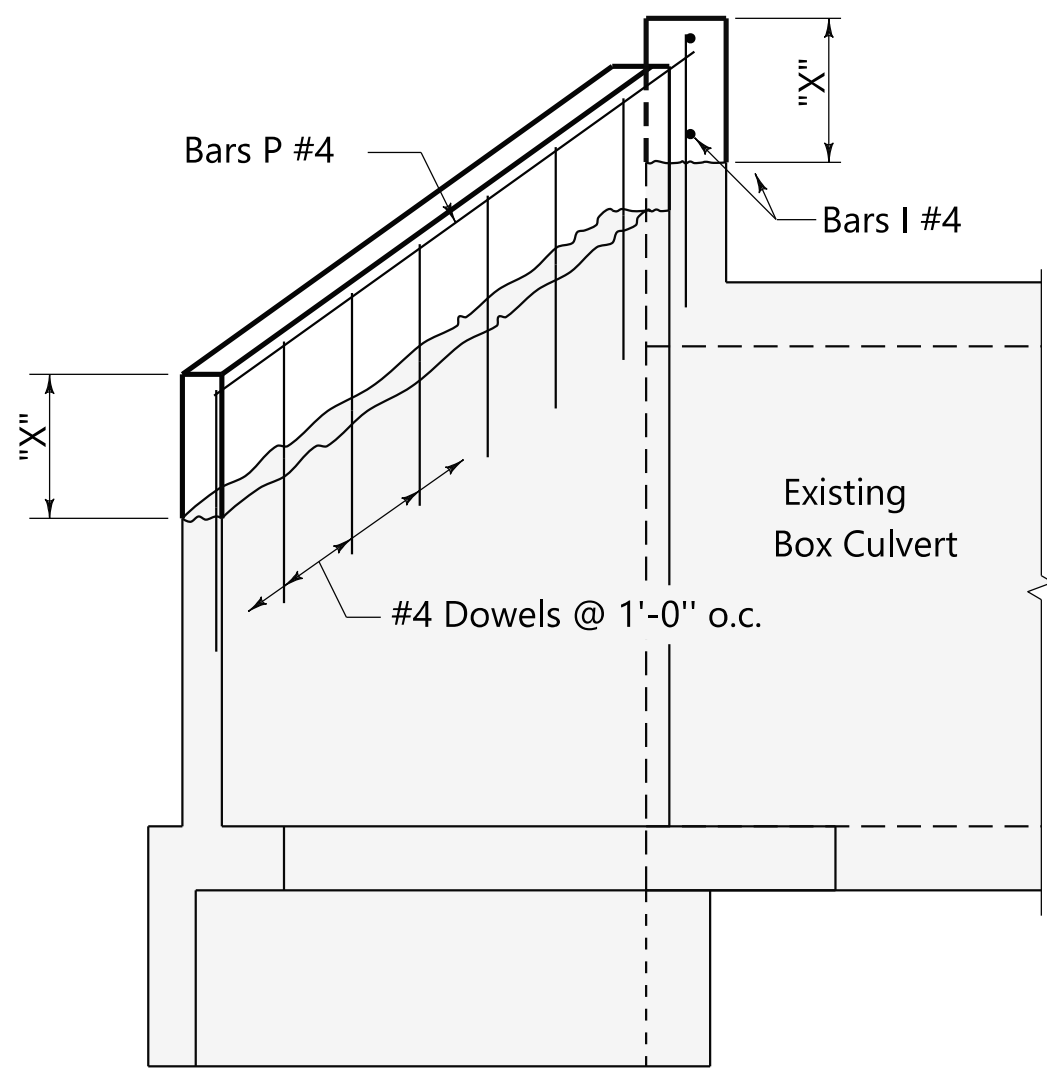
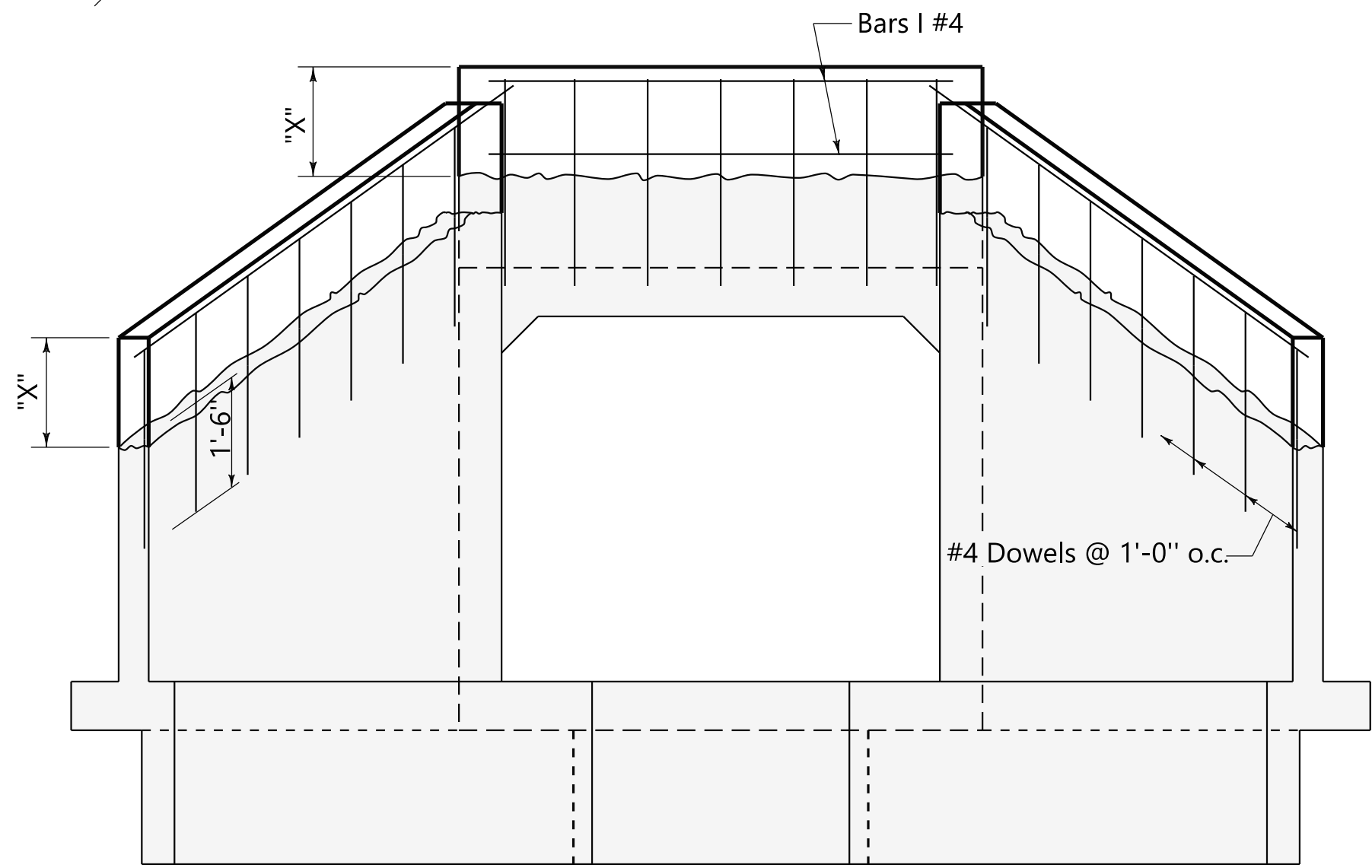
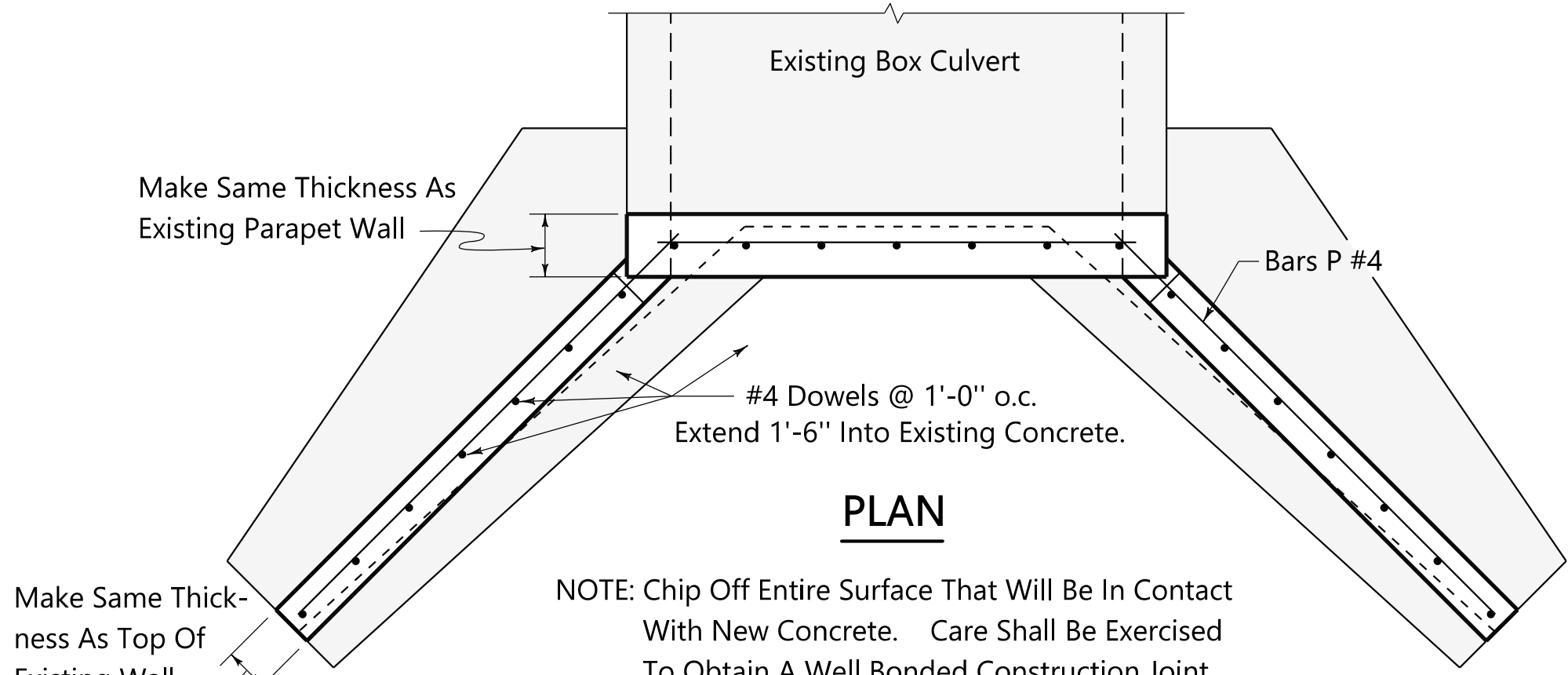
PIPE ENTRANCE INTO BOX CULVERT SIDES

WHEN OUTSIDE DIAMETER OF PIPE IS LESS THAN $\frac{1}{3}$ THE BOX CULVERT HEIGHT, USE THIS METHOD OF CONSTRUCTION.

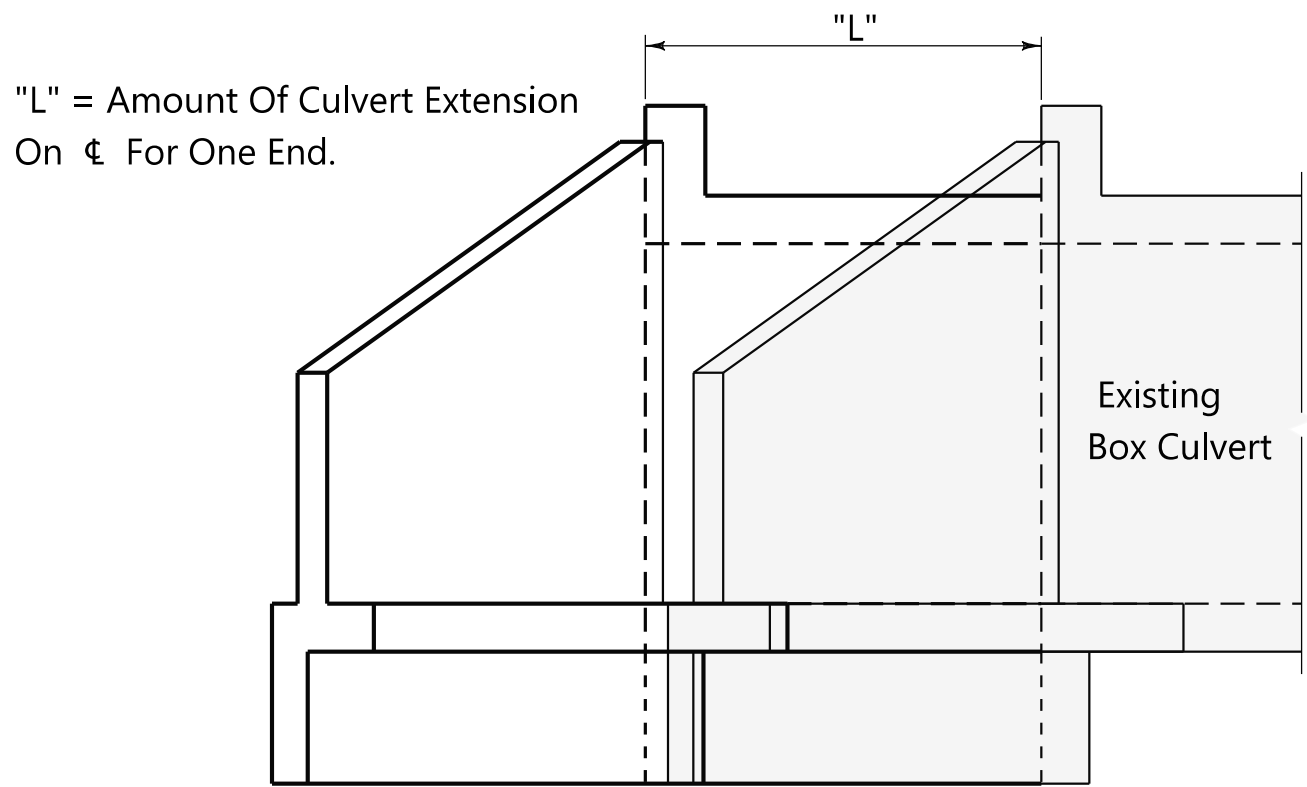
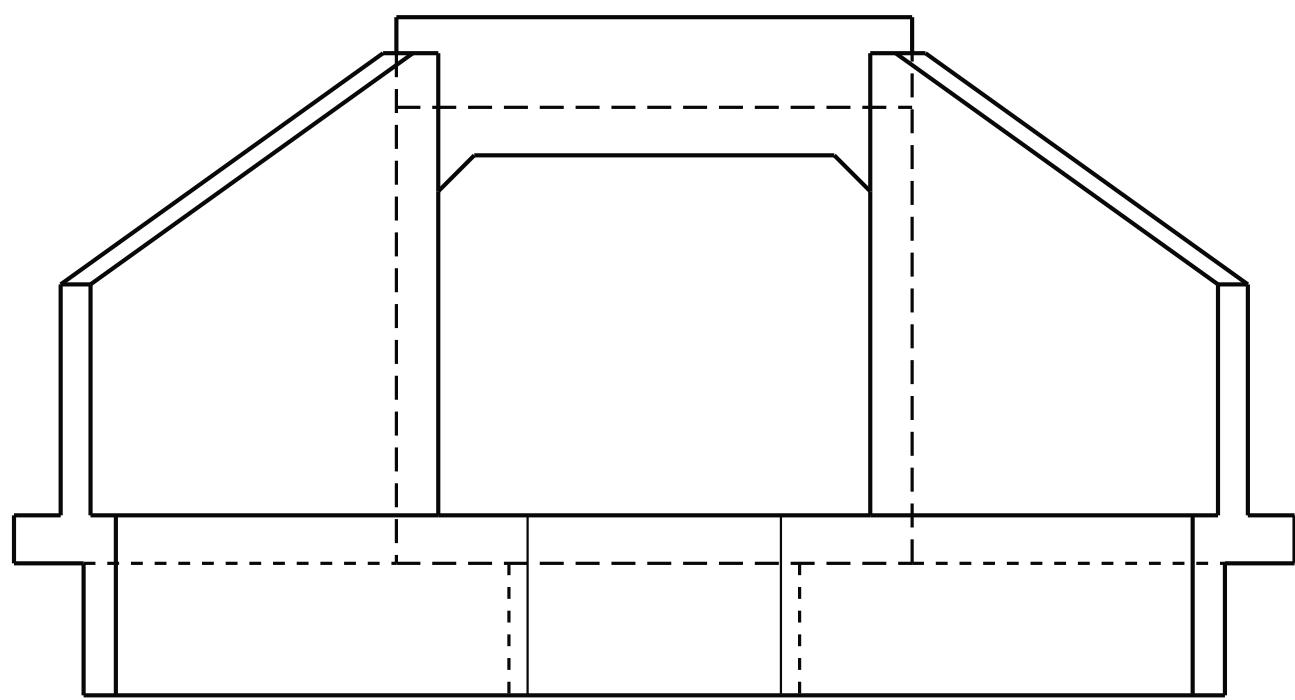
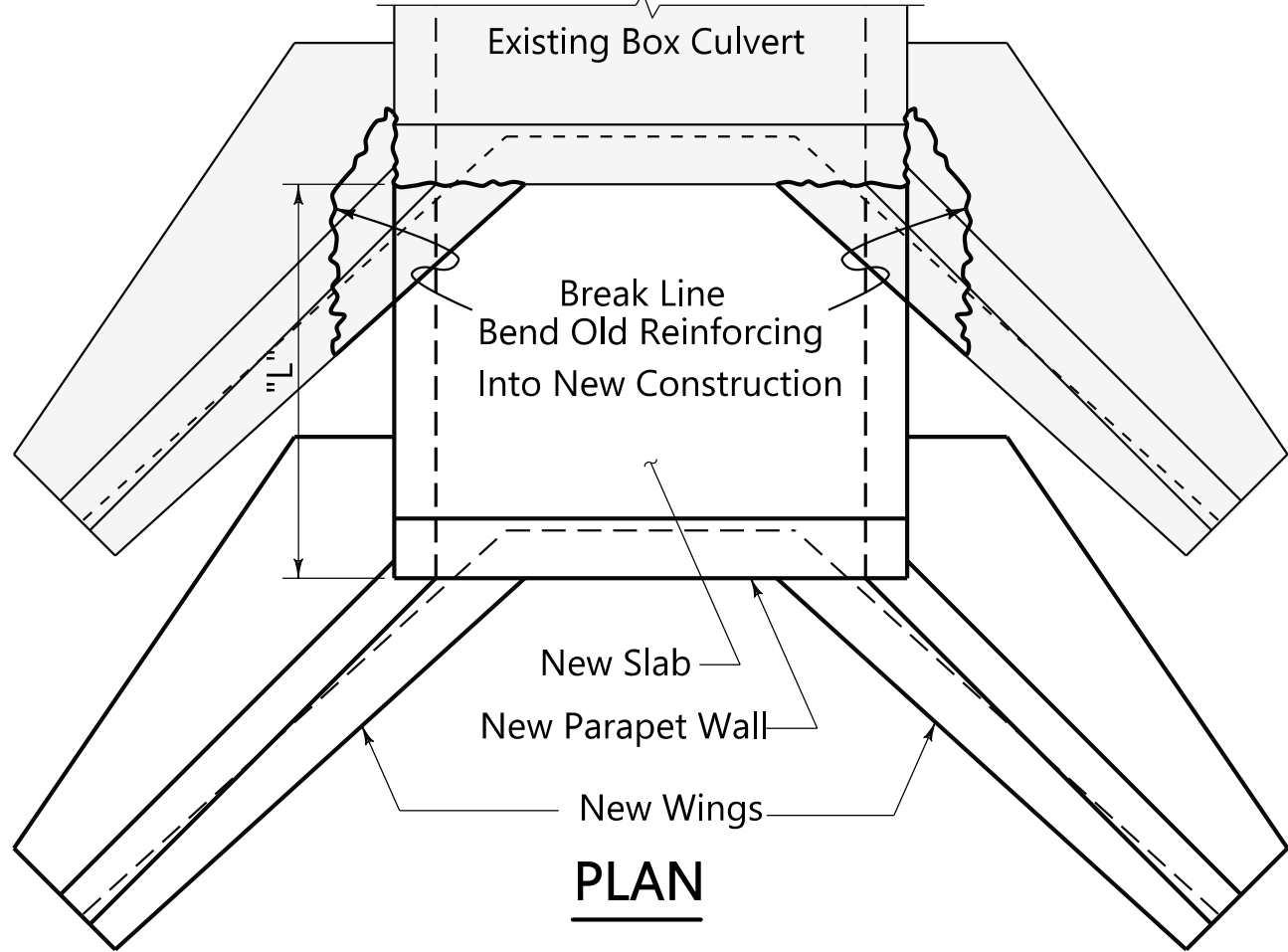


SECTION A - A





STANDARD METHOD OF RAISING PARAPET WALLS AND WING WALLS OF EXISTING CULVERTS. DIMENSION "X" SHALL NOT EXCEED 2'-0"

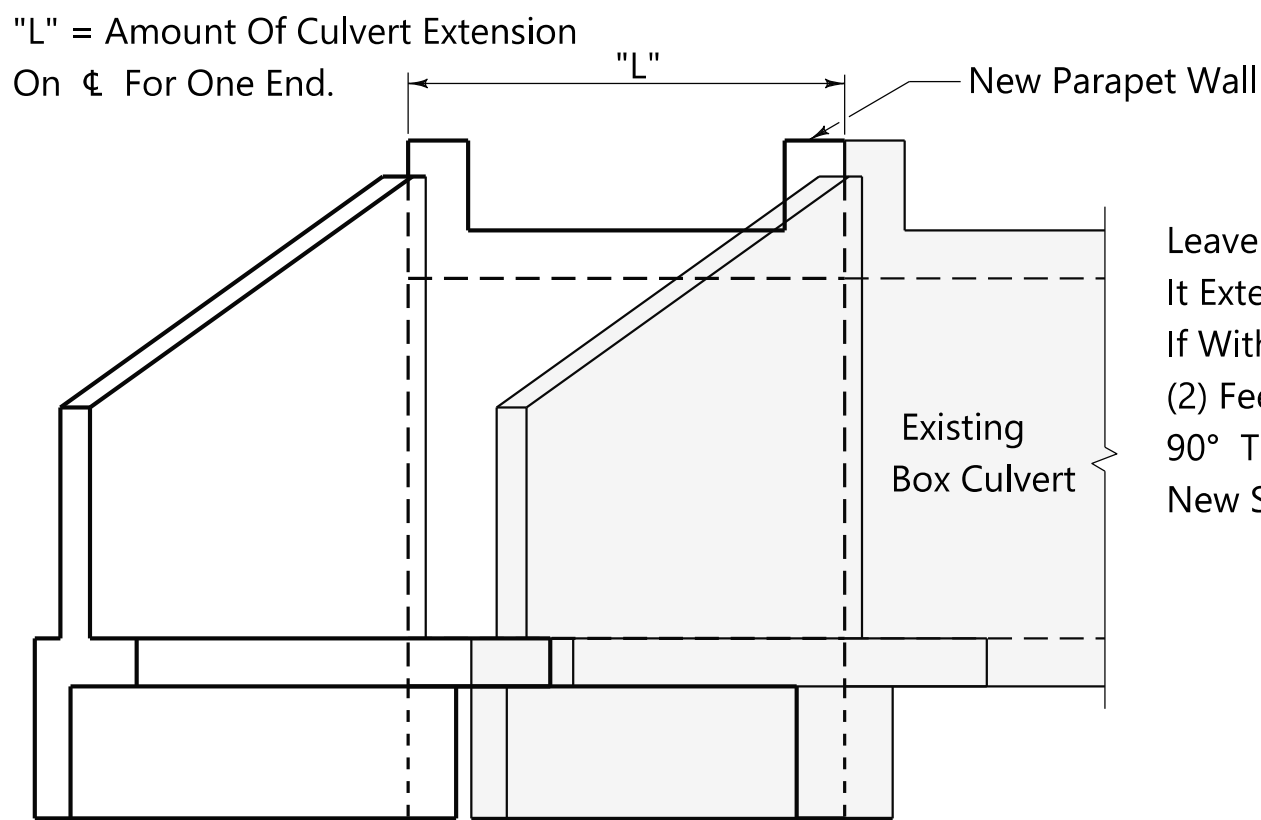
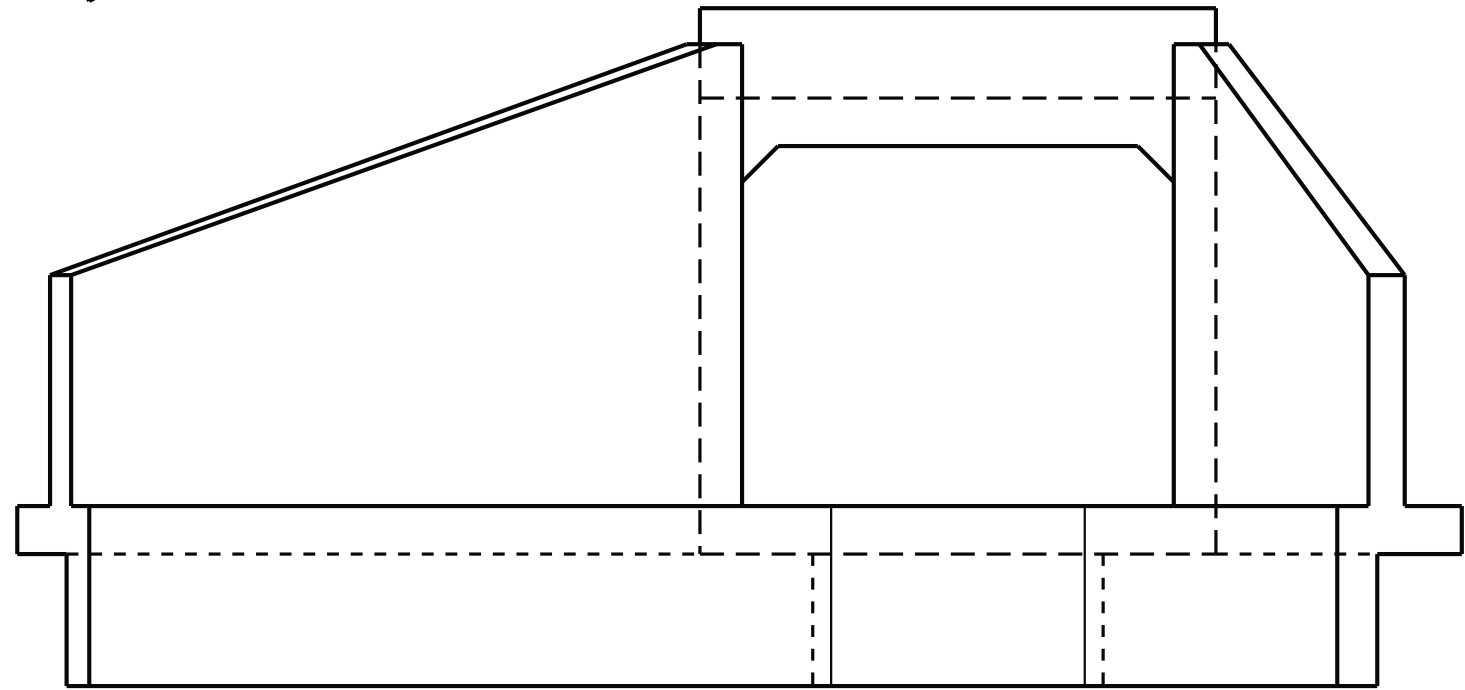
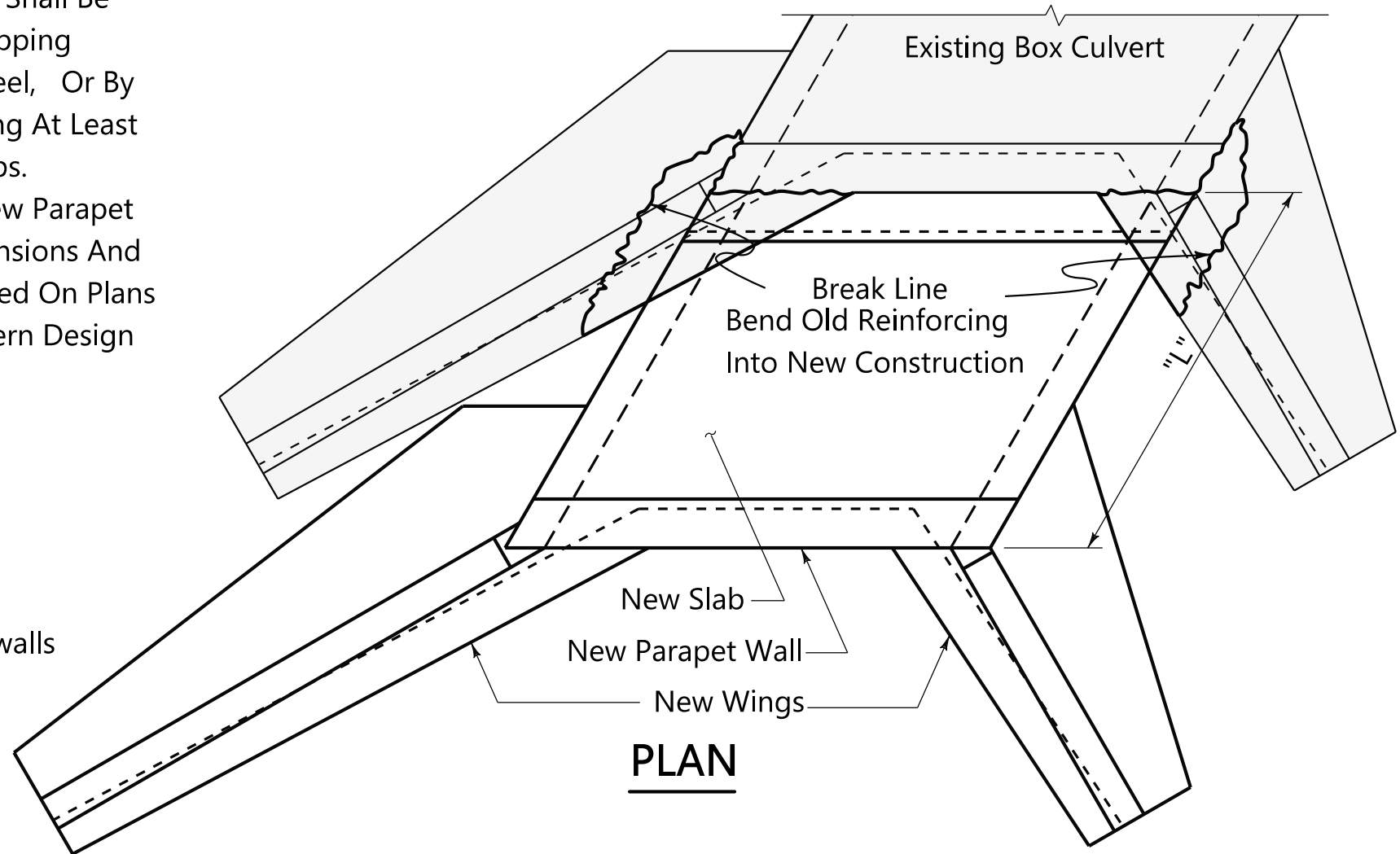


STANDARD METHOD OF EXTENDING EXISTING CULVERTS 0° SKEW

New Construction Shall Be Of Same Dimensions And Reinforced In Same Manner In Accordance With Plans For A Standard Single Barrel Box Culvert. Similar Methods Shall Be Used To Extend Double Barrel Culverts, Triple Barrel Culverts, etc.

NOTE: Reinforcing Steel In New Construction Shall Be Connected To Existing Structure By Lapping (Minimum 35 Diameters) With Old Steel, Or By Dowels #4 (3'-0") @ 12" o.c. Extending At Least 1'-6" Into Old Concrete Walls And Slabs. Extend Slabs And Side Walls; Build New Parapet Apron And Wing Walls Of Same Dimensions And Reinforced In Same Manner As Specified On Plans For Existing Culvert Unless More Modern Design Is Indicated By Plans.

Remove Portion Of Wings, Footings And Toewalls From Existing Structure In Area That Will Interfere With New Construction. After Removing Old Wing And Footing, Scarify Remaining Surface Of Old Culvert In Contact With New Concrete. Leave Remaining Portion Of Existing Wings In Place.



Leave Existing Parapet Wall In Place Unless It Extends Too Close To New Grade Line. If Within Roadbed Area And Less Than Two (2) Feet Clearance, Break Off Old Culvert 90° To Ɔ. Bend Steel Reinforcement Into New Slab And Eliminate New Parapet Wall.

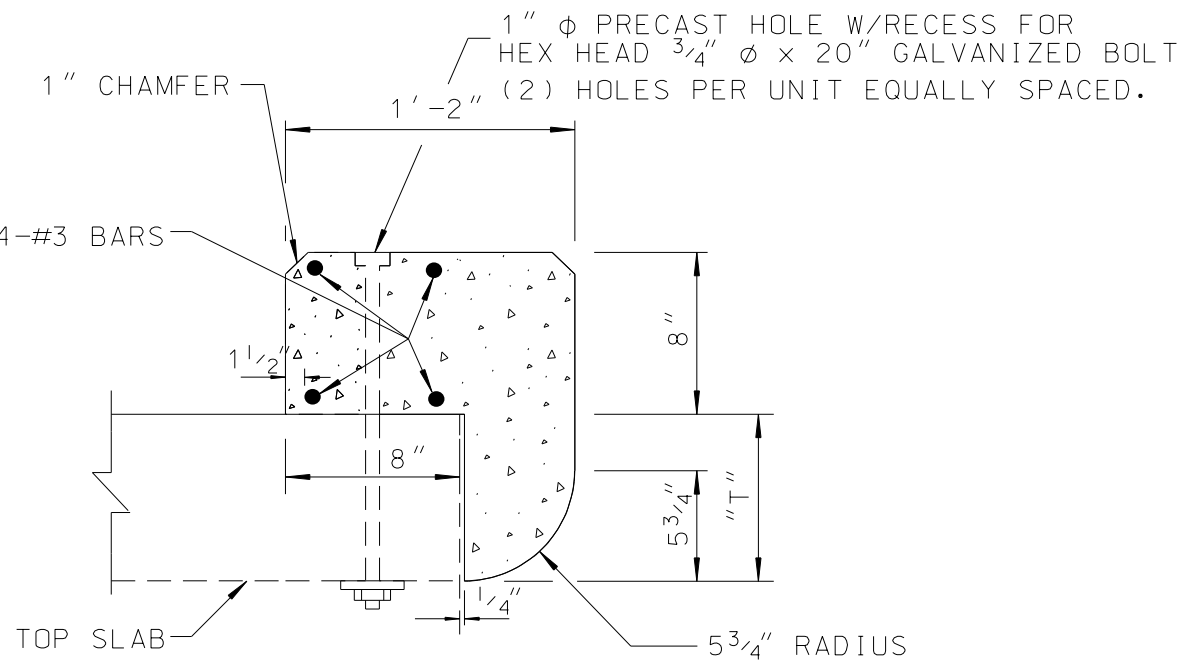
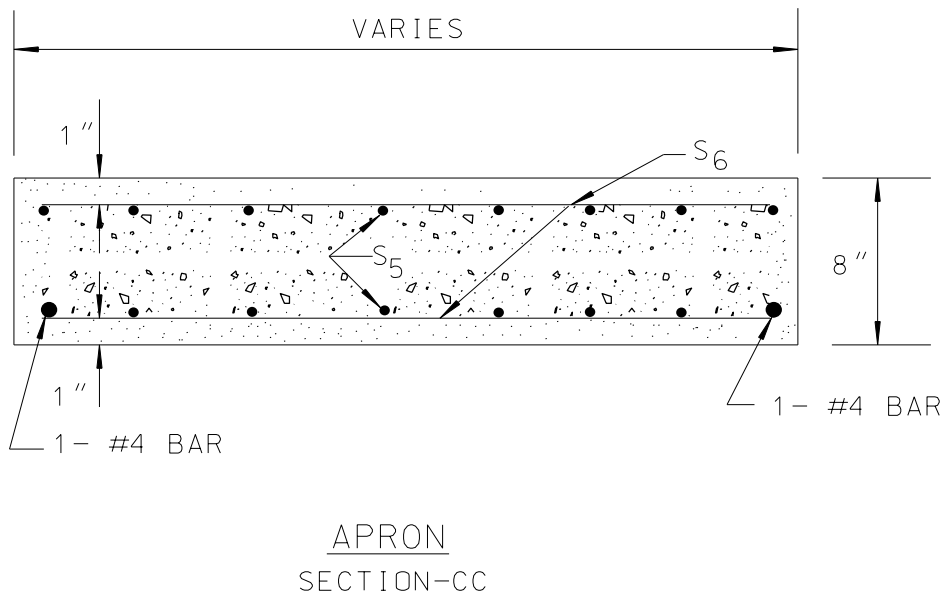
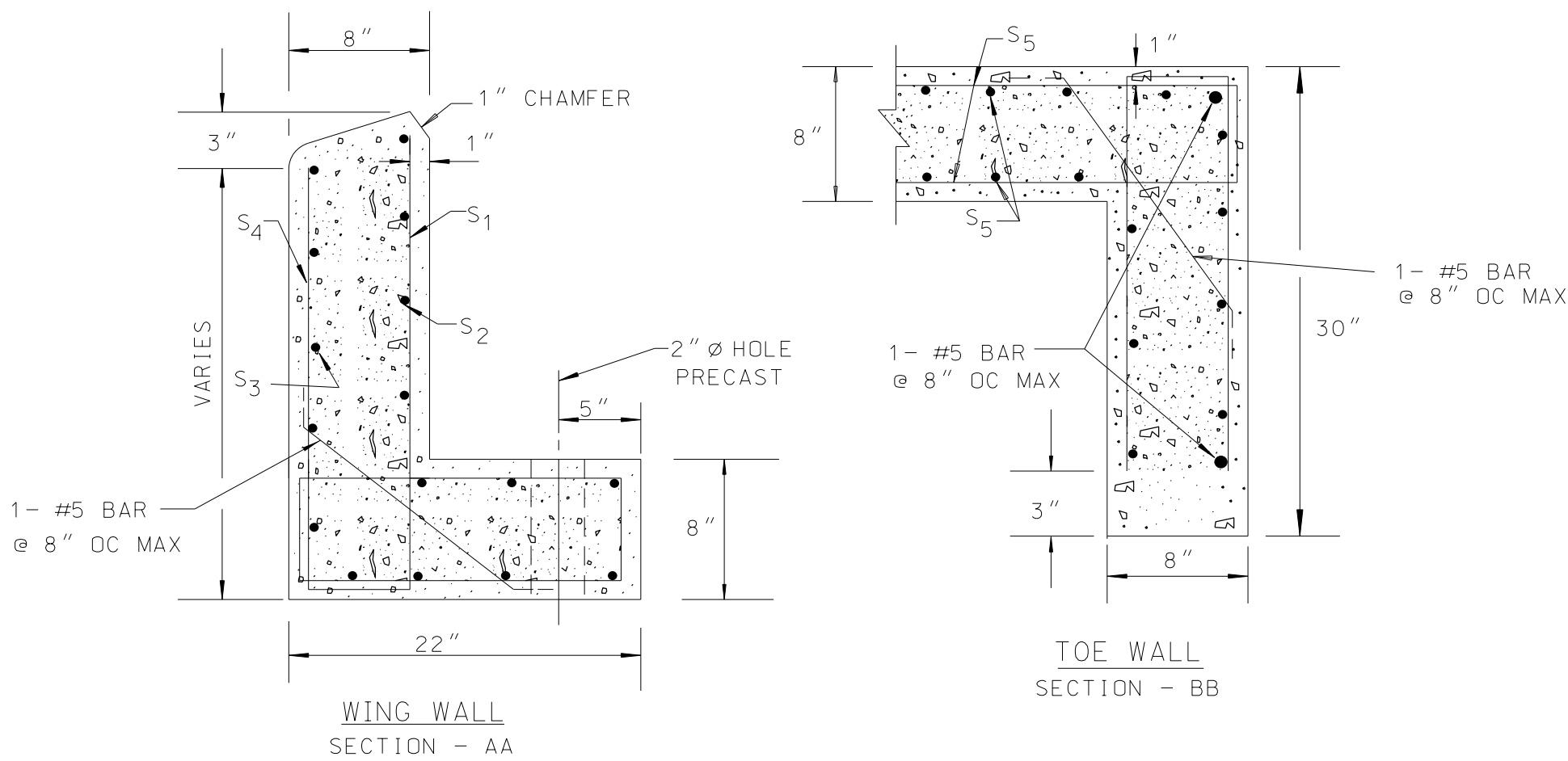
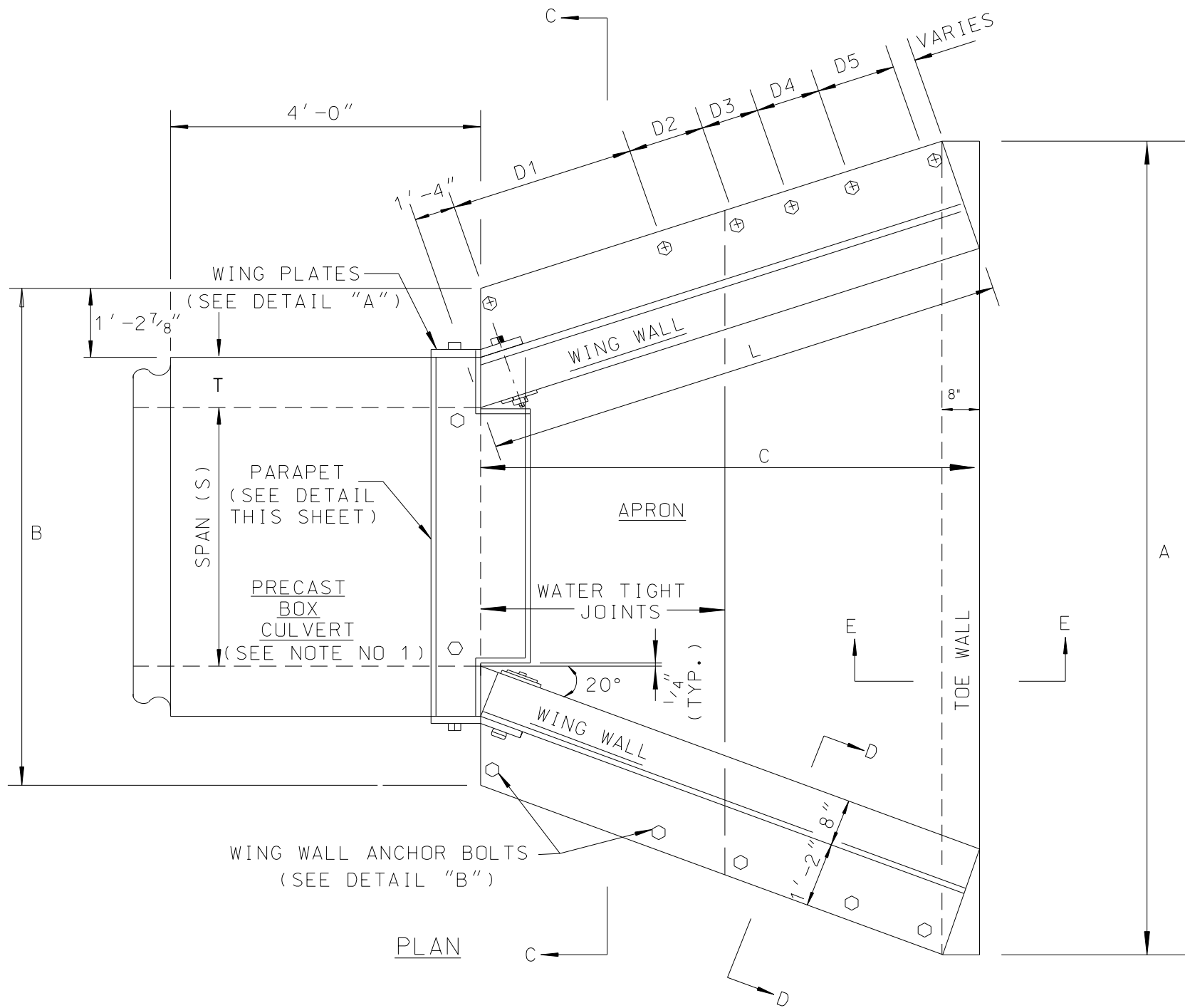
STANDARD METHOD OF EXTENDING EXISTING SKEWED CULVERTS

GENERAL NOTES

Specifications: State Of Alabama Highway Department

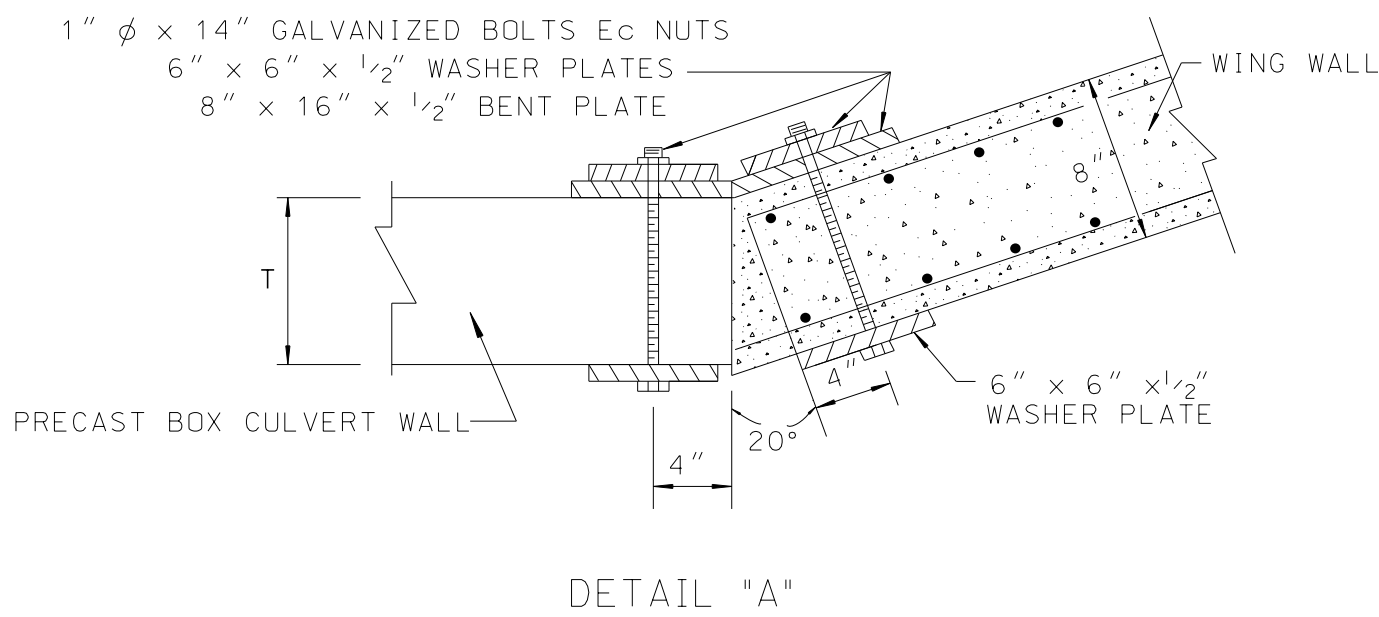
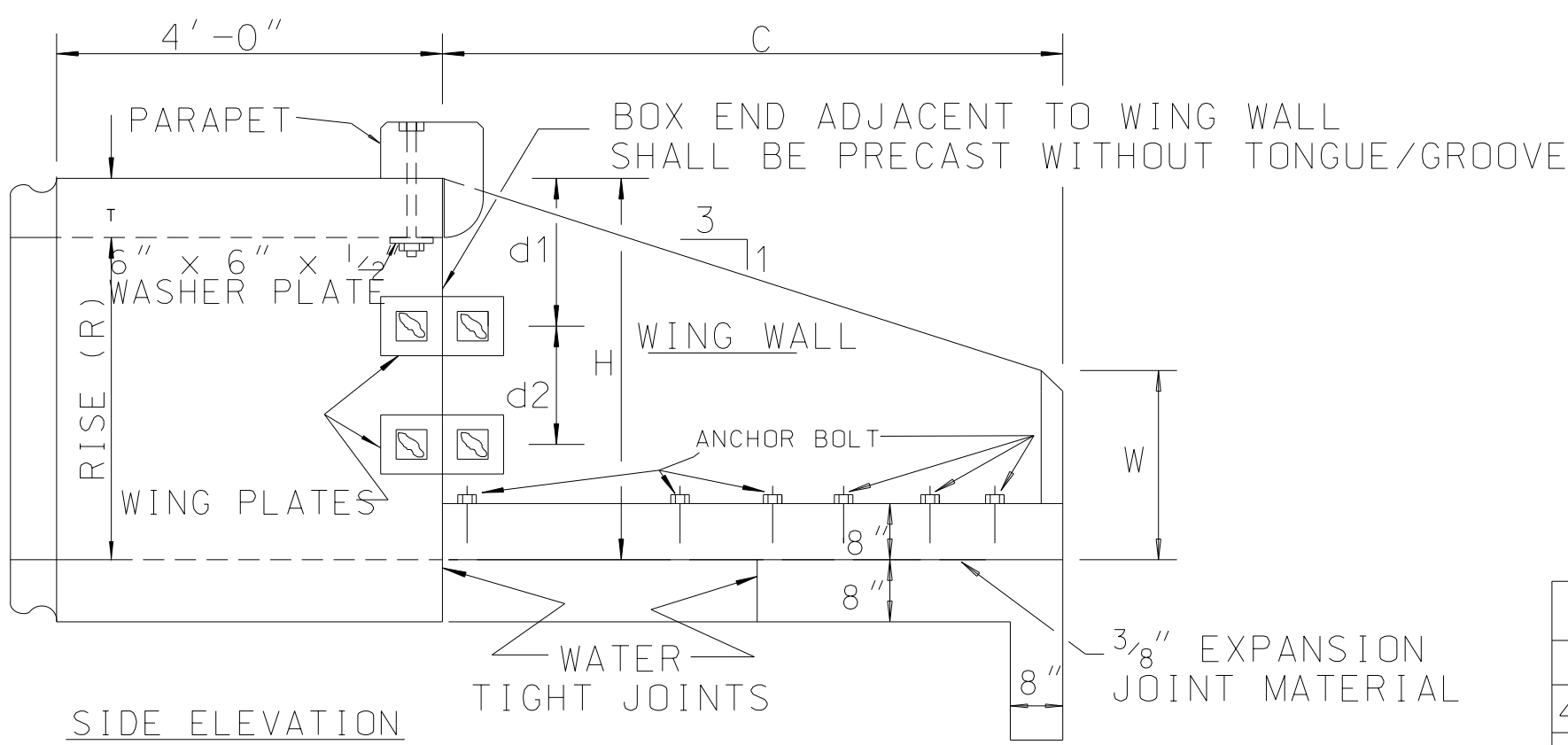
The Cost Of Removing All Necessary Old Concrete And Reinforcement Steel, Scarifying, Doweling Into Existing Concrete, And All Incidentals Necessary To Complete The Work Shall be Included In Unit Price Bid For Reinforced Culvert Concrete Extension - per Cubic Yard.

The Use Of Explosives In Removing Old Concrete Prior To Making Reinforced Culvert Extension Is Specifically Prohibited.

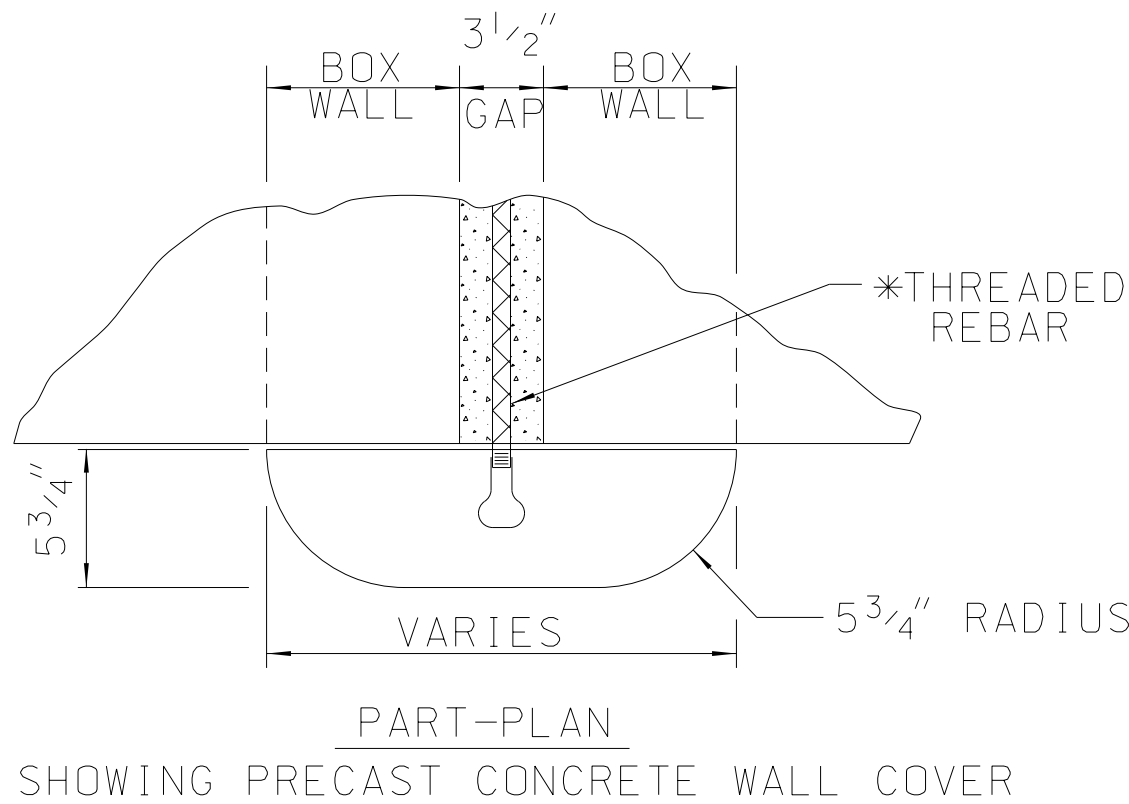
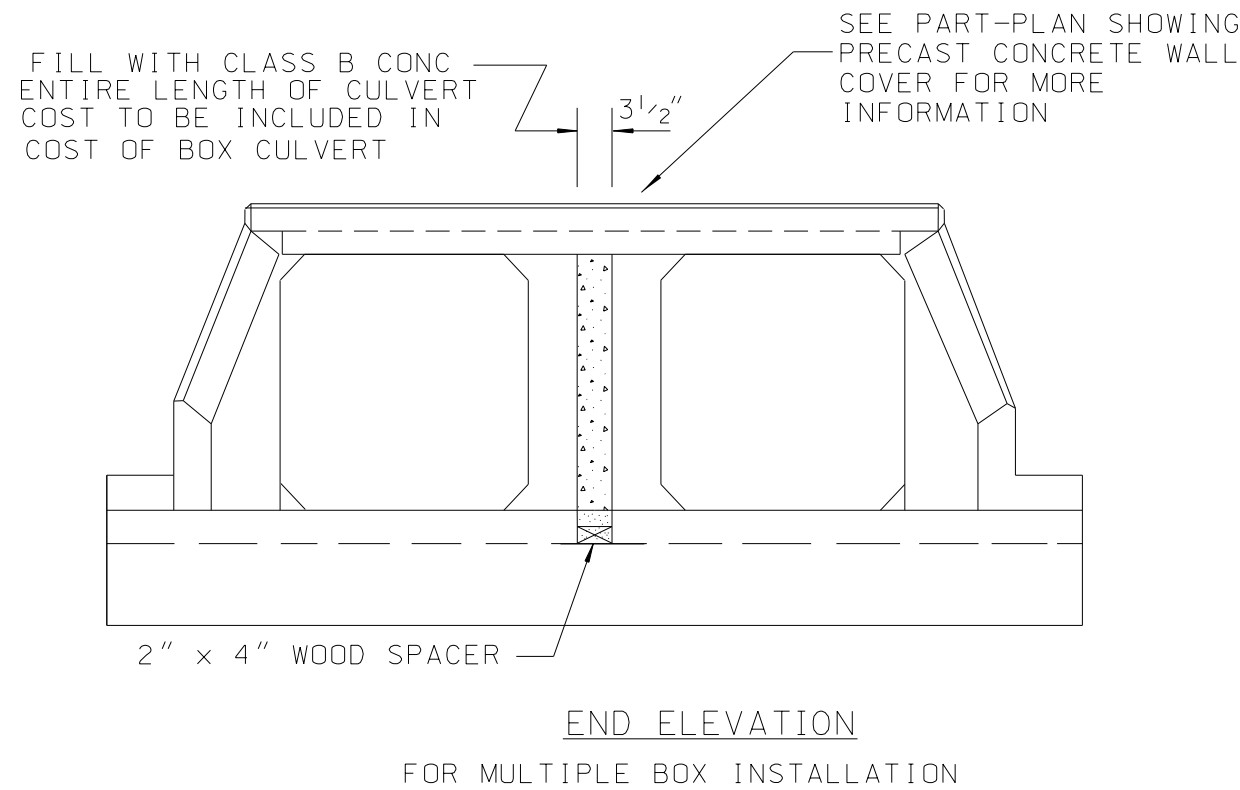


GENERAL NOTES

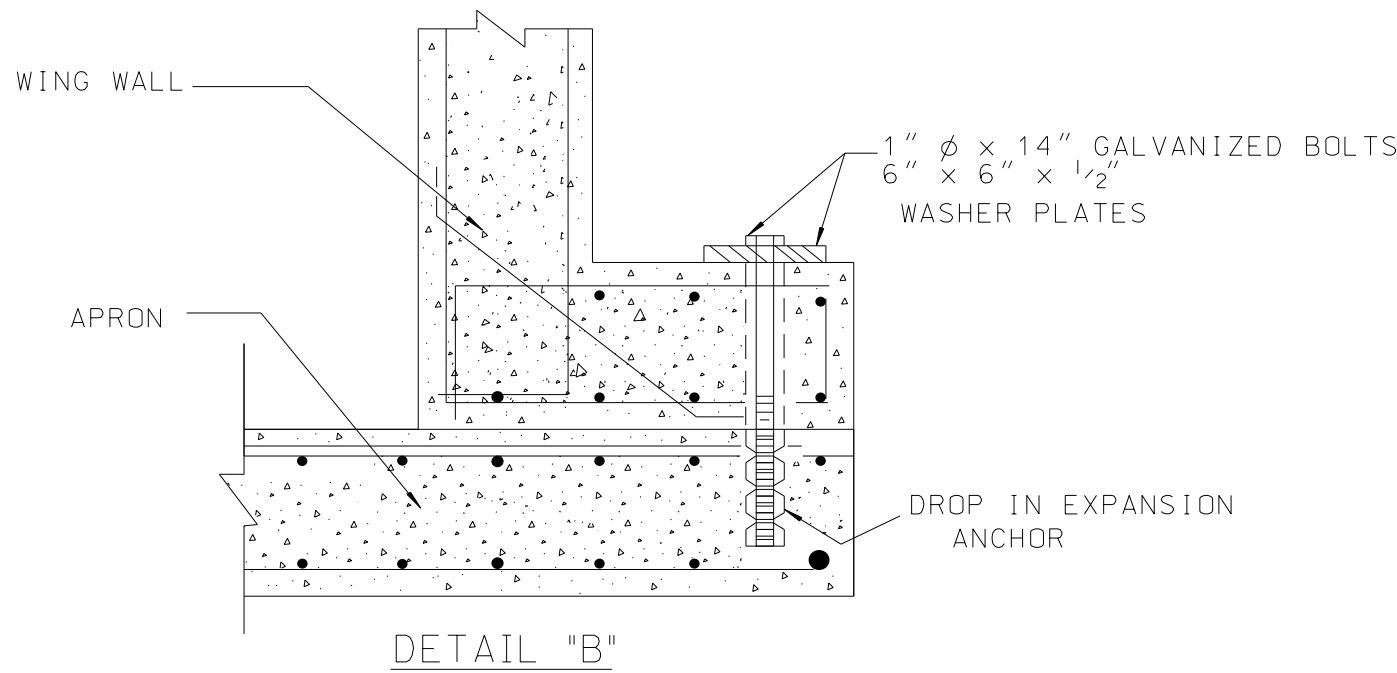
- FOR BOX CULVERT SECTION DESIGN AND TABLE OF DIMENSIONS, SEE AASHTO M-273 AND M-259. NOTE - IF LOAD AND RESISTANCE FACTOR DESIGN (LRFD) IS REQUIRED, THEN USE ASTM C - 1577.
- CONCRETE SHALL HAVE 5000 P.S.I. COMPRESSIVE STRENGTH.
- REINFORCING WIRE SHALL HAVE A MIN. YIELD STRENGTH OF 65000 P.S.I.
- STEEL PLATES SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, BOLTS AASHTO M298, CLASS 50.
- PRECAST APRON JOINTS SHALL BE INSTALLED WITH A WATER TIGHT SEAL.
- BEVELED PRECAST BOX CULVERT END SECTIONS MAY BE USED IN LIEU OF PRECAST END SECTIONS AS DETAILED, PRIOR APPROVAL FOR USE WILL BE REQUIRED
- ALTERNATE PRECAST WINGWALL DESIGNS SHALL BE SUBMITTED PRIOR TO APPROVAL.
- CAST IN PLACE CULVERT WING WALLS, PARAPETS AND APRONS MAY BE USED IN LIEU OF PRECAST END SECTIONS AS DETAILED, DRILL AND GROUT IN NO 5 DEFORMED BARS- 24" LONG @ 6" OC FOR ATTACHING.
- APRONS WITH TOE WALL AS DETAILED MAY BE CAST IN PLACE IN LIEU OF PRECASTING. JOINTING WILL NOT BE REQUIRED. FOR EXTRA DEPTH TOE WALLS (TOE WALL EXTENSION) SEE STD-DWG NO CS-3-1.
- DETAILS AND DESIGN CALCULATIONS, SEALED BY A LICENSED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED AS WORKING DRAWINGS IN ACCORDANCE WITH ALL OF THE REQUIREMENTS GIVEN IN ARTICLE 105.02 WHEN PRECAST BOX CULVERTS, THE CONDITIONS OF LOADING, SIZE (SPAN OR RISE), WALL AND SLAB THICKNESS (T) FALL OUTSIDE THE ASTM TABLES INCLUDED IN GENERAL NOTE NO. 1.
- "TABLE OF DIMENSIONS" IS NOT RESTRICTED TO PRECAST BOX SIZES LISTED. OTHER SPANS AND RISES ARE INDUSTRY STANDARDS.
- UNLESS OTHERWISE INDICATED ON THE PLANS, THE CONTRACTOR MAY SUBSTITUTE PRECAST BOX SECTIONS MEETING THE REQUIREMENTS OF NOTE 1 ABOVE, FOR ALL FILL HEIGHTS FOR CAST IN PLACE CONCRETE BOX SECTIONS.



APRON LENGTH AND JOINT SCHEDULE			
RISE	INSIDE	MIDDLE	END W/TOE WALL
4' & 5'	—	—	8'-0"
6'	8'-0"	—	4'-0"
8'	8'-0"	—	8'-0"
10'	8'-0"	4'-0"	8'-0"



*NOTE: THE THREADED REBAR IS PLACED AS NEEDED TO MEET THE PRECAST MANUFACTURERS ATTACHMENT REQUIREMENTS FOR THE CONCRETE COVER



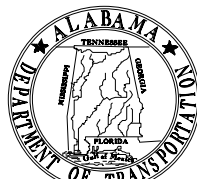
--SPECIFICATIONS--

CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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REVISIONS

- Added diagonal #5 Bar In Wingwall Section-AA & Toe Wall Section-BB on 03-18-10 by J.F.T.
- Edited "PARAPET DETAIL", added "PART-PLAN" detail and moved "TABLE OF DIMENSIONS" to another sheet. Edited notes to meet LRFD and other cosmetic stuff on 11-05-13 by J.F.T.
- Added clarification note on "Part-Plan" detail for threaded rebar on 08-18-17 by L.V.S.



ALABAMA DEPARTMENT OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

DETAILS FOR PRECAST CONCRETE BOX CULVERT AND END SECTION

Bureau Std Engr: D.J.W.
DRAWN BY: J.F.T. DATE DRAWN: 10-23-98

SPECIAL DRAWING NO
PCC-524 (SHEET 1 OF 2)

INDEX NO
52416

NOT TO SCALE

TABLE OF DIMENSIONS																												
SPAN (S)	RISE (R)	T	SINGLE BOX		DOUBLE BOX		TRIPLE BOX		QUADRUPLE BOX		APRON LENGTH Ⓢ C	WING HEIGHT Ⓢ H	WING LENGTH Ⓢ L	WING HEIGHT Ⓢ W	WING WALL ANCHORS						WING PLATE		* REINFORCING STEEL					
			APRON Ⓢ A	APRON Ⓢ B	APRON Ⓢ A	APRON Ⓢ B	APRON Ⓢ A	APRON Ⓢ B	APRON Ⓢ A	APRON Ⓢ B					D1	D2	D3	D4	D5	D6	d1	d2	S1	S2	S3	S4	S5	S6
6'	3'	7"	15'-0¼"	9'-7¾"	22'-6"	17'-1⅞"	29'-11⅜"	24'-6¾"	37'-4¾"	32'-0¼"	8'-0"	4'-8"	8'-6"	1'-2"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
6'	4'	7"	15'-0¼"	9'-7¾"	22'-6"	17'-1⅞"	29'-11⅜"	24'-6¾"	37'-4¾"	32'-0¼"	8'-0"	4'-8"	8'-6"	1'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
6'	5'	7"	15'-0¼"	9'-7¾"	22'-6"	17'-1⅞"	29'-11⅜"	24'-6¾"	37'-4¾"	32'-0¼"	8'-0"	5'-8"	8'-6"	2'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.12	.10	.10	.10	.10	.10
6'	6'	7"	17'-11¼"	9'-7¾"	25'-4¾"	17'-1⅞"	32'-10¼"	24'-6¾"	40'-3¼"	32'-0¼"	12'-0"	6'-8"	12'-9¼"	2'-5"	6'-2"	2'-4"	1'-11"	—	—	—	2'-0"	2'-0"	.20	.10	.10	.10	.10	.10
8'	3'	8"	17'-2¼"	11'-9¾"	26'-9¾"	21'-5¼"	36'-5¼"	31'-0¾"	46'-0¾"	40'-8¼"	8'-0"	3'-8"	8'-6"	1'-2"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
8'	4'	8"	17'-2¼"	11'-9¾"	26'-9¾"	21'-5¼"	36'-5¼"	31'-0¾"	46'-0¾"	40'-8¼"	8'-0"	4'-8"	8'-6"	1'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
8'	5'	8"	17'-2¼"	11'-9¾"	26'-9¾"	21'-5¼"	36'-5¼"	31'-0¾"	46'-0¾"	40'-8¼"	8'-0"	5'-8"	8'-6"	2'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.12	.10	.10	.10	.10	.10
8'	6'	8"	20'-1¼"	11'-9¾"	29'-8¾"	21'-5¼"	39'-4¼"	31'-0¾"	48'-11¾"	40'-8¼"	12'-0"	6'-8"	12'-9¼"	2'-5"	6'-2"	2'-4"	1'-11"	—	—	—	2'-0"	2'-0"	.20	.10	.10	.10	.10	.10
8'	8'	8"	23'-0⅞"	11'-9¾"	32'-7¾"	21'-5¼"	42'-3⅞"	31'-0¾"	51'-10¾"	40'-8¼"	16'-0"	6'-8"	17'-0¼"	3'-0"	6'-2"	2'-4"	1'-11"	2'-4"	1'-11"		2'-0"	2'-0"	.45	.10	.10	.10	.10	.10
10'	3'	10"	19'-6¼"	14'-1¾"	31'-6"	26'-1⅜"	43'-5⅜"	38'-0¾"	55'-4¾"	50'-0¼"	8'-0"	3'-10"	8'-6"	1'-2"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
10'	4'	10"	19'-6¼"	14'-1¾"	31'-6"	26'-1⅜"	43'-5⅜"	38'-0¾"	55'-4¾"	50'-0¼"	8'-0"	4'-10"	8'-6"	1'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
10'	5'	10"	19'-6¼"	14'-1¾"	31'-6"	26'-1⅜"	43'-5⅜"	38'-0¾"	55'-4¾"	50'-0¼"	8'-0"	5'-10"	8'-6"	2'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.12	.10	.10	.10	.10	.10
10'	6'	10"	22'-5¾"	14'-1¾"	34'-4¾"	26'-1⅜"	46'-4¼"	38'-0¾"	58'-3¼"	50'-0¼"	12'-0"	6'-10"	12'-9¼"	2'-7"	6'-2"	2'-4"	1'-11"	—	—	—	2'-0"	2'-0"	.20	.10	.10	.10	.10	.10
10'	8'	10"	25'-4⅞"	14'-1¾"	37'-3¾"	26'-1⅜"	49'-3⅞"	38'-0¾"	61'-2¾"	50'-0¼"	16'-0"	8'-10"	17'-1"	3'-2"	6'-2"	2'-4"	1'-11"	2'-4"	1'-11"	—	2'-0"	2'-0"	.45	.10	.10	.10	.10	.10
10'	10'	10"	28'-3⅞"	14'-1¾"	40'-2½"	26'-1⅜"	52'-2⅞"	38'-0¾"	64'-1½"	50'-0¼"	20'-0"	10'-10"	21'-3½"	3'-9"	6'-2"	2'-4"	1'-11"	2'-4"	6'-2"	—	2'-0"	2'-0"	.91	.10	.10	.10	.10	.10
12'	3'	12"	21'-10¼"	16'-6"	36'-1¾"	30'-9¼"	50'-5⅜"	45'-0¾"	64'-8¾"	59'-4½"	8'-0"	4'-0"	8'-6"	1'-2"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
12'	4'	12"	21'-10¼"	16'-6"	36'-1¾"	30'-9¼"	50'-5⅜"	45'-0¾"	64'-8¾"	59'-4½"	8'-0"	5'-0"	8'-6"	1'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.10	.10	.10	.10	.10	.10
12'	5'	12"	21'-10¼"	16'-6"	36'-1¾"	30'-9¼"	50'-5⅜"	45'-0¾"	64'-8¾"	59'-4½"	8'-0"	6'-0"	8'-6"	2'-10"	6'-2"	—	—	—	—	—	2'-0"	—	.12	.10	.10	.10	.10	.10
12'	6'	12"	24'-9¼"	16'-6"	39'-0¾"	30'-9¼"	53'-4¼"	45'-0¾"	64'-8¾"	59'-4½"	12'-0"	7'-0"	12'-9¼"	2'-9"	6'-2"	2'-4"	1'-11"	—	—	—	2'-0"	2'-0"	.20	.10	.10	.10	.10	.10
12'	8'	12"	27'-8¼"	16'-6"	41'-11¾"	30'-9¼"	56'-3⅞"	45'-0¾"	70'-6½"	59'-4½"	16'-0"	9'-0"	17'-0¼"	3'-4"	6'-2"	2'-4"	1'-11"	2'-4"	1'-11"	—	2'-0"	2'-0"	.47	.10	.10	.10	.10	.10
12'	10'	12"	30'-7"	16'-6"	44'-10⅝"	30'-9¼"	59'-2⅞"	45'-0¾"	73'-5½"	59'-4½"	20'-0"	11'-0"	21'-3½"	3'-11"	6'-2"	2'-4"	1'-11"	2'-4"	6'-2"	—	2'-0"	2'-0"	.91	.10	.10	.10	.10	.10
12'	12'	12"	30'-7"	16'-6"	44'-10⅝"	30'-9¼"	59'-2⅞"	45'-0¾"	73'-5½"	59'-4½"	20'-0"	13'-0"	25'-6¾"	4'-6"	6'-2"	2'-4"	1'-11"	2'-4"	6'-2"	4'-3"	3'-0"	1.60	.10	.10	.10	.10	.10	


* REINFORCING STEEL SCHEDULE-SQUARE INCHES OF STEEL PER LINEAR FOOT OF WING.

NOTE: SPACE BETWEEN MULTI-BARRELS IS 3½"

--SPECIFICATIONS--
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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REVISIONS
1. Added "TABLE OF DIMENSIONS" to sheet and enlarged view of table on 11-05-13 by J.F.T.



ALABAMA DEPARTMENT
OF TRANSPORTATION
1409 COLISEUM BOULEVARD
MONTGOMERY, AL 36130-3050

DESIGN BUREAU SPECIAL DRAWING

DETAILS FOR PRECAST CONCRETE BOX
CULVERT AND END SECTION

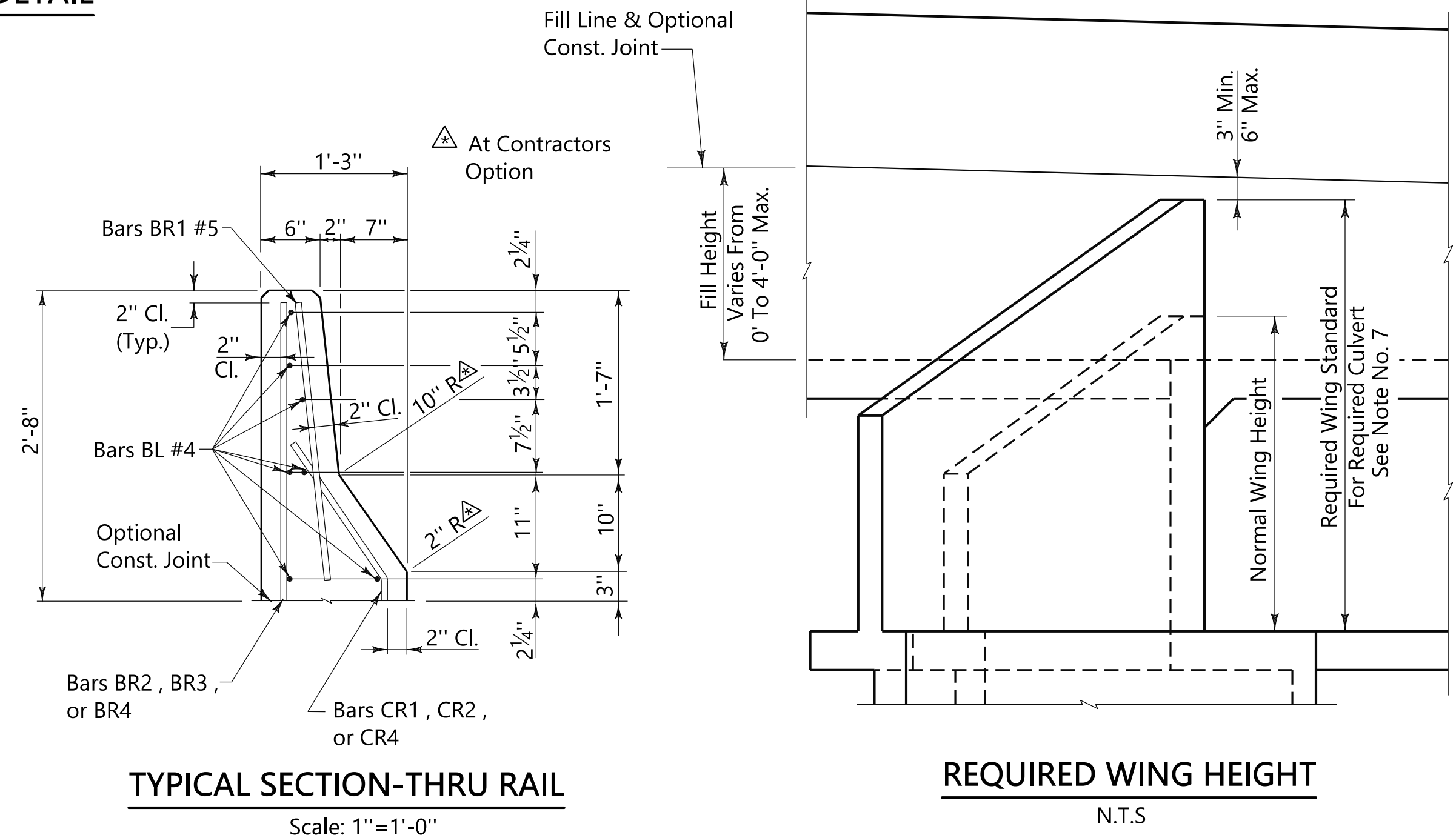
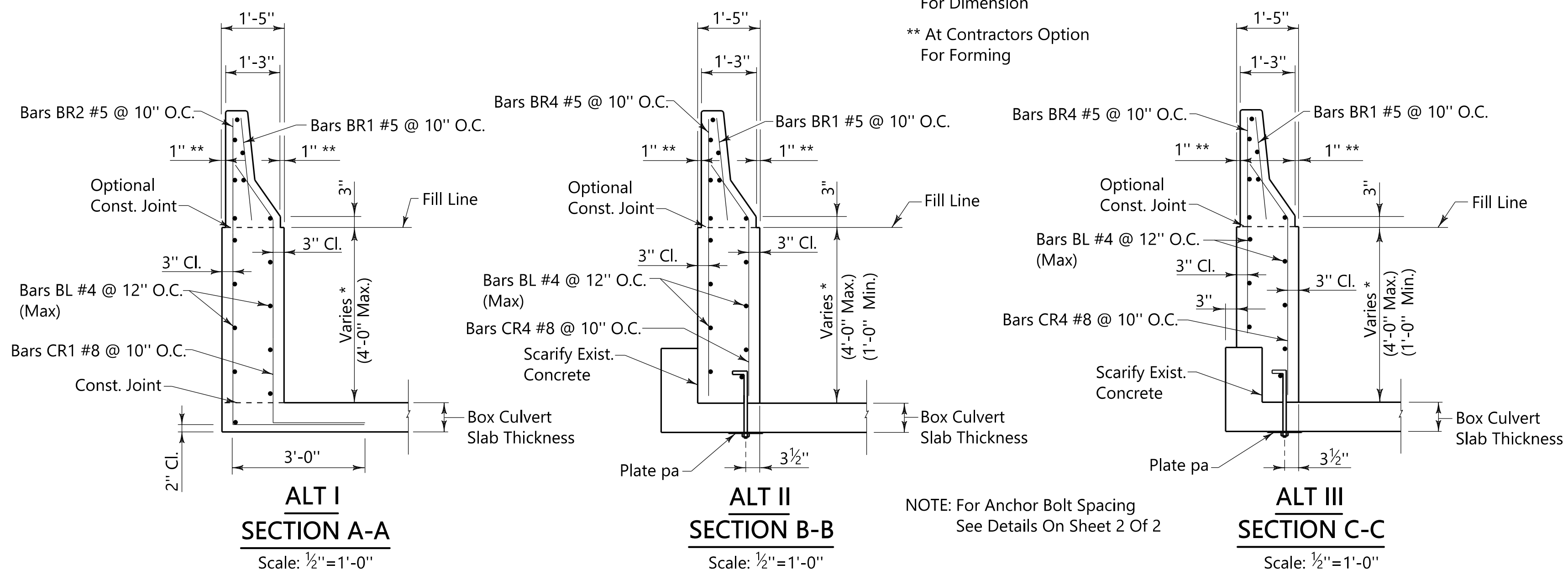
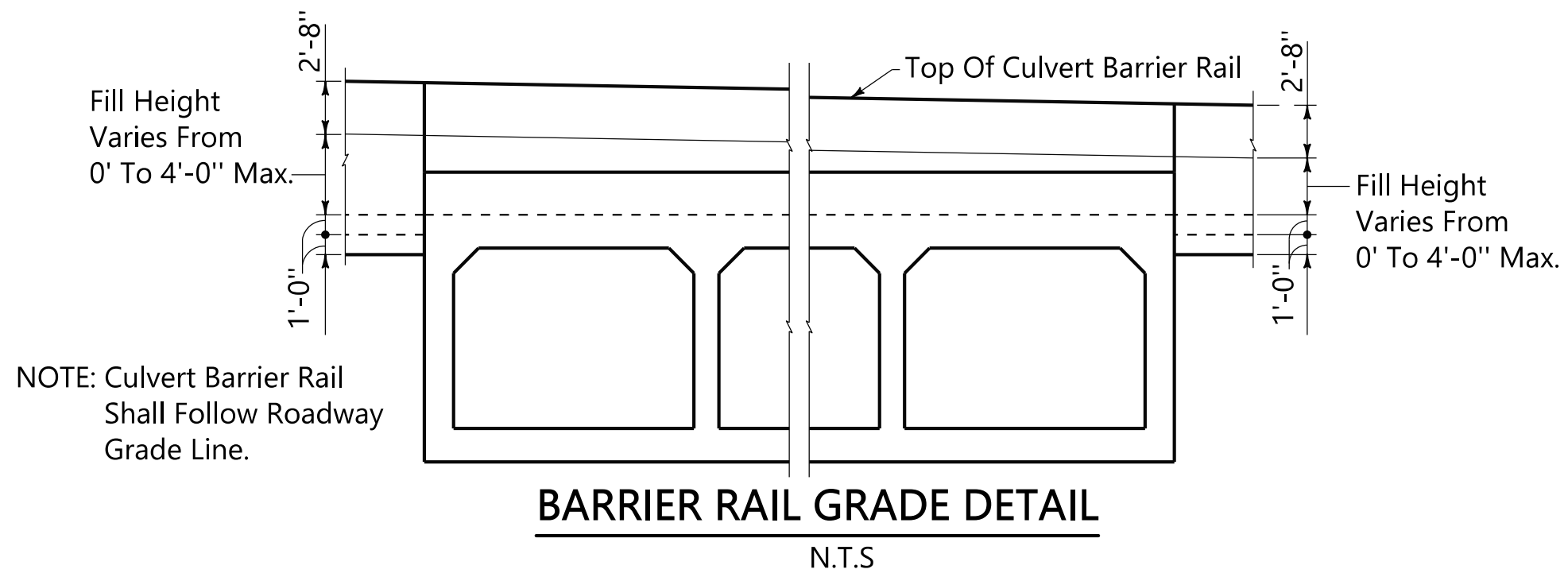
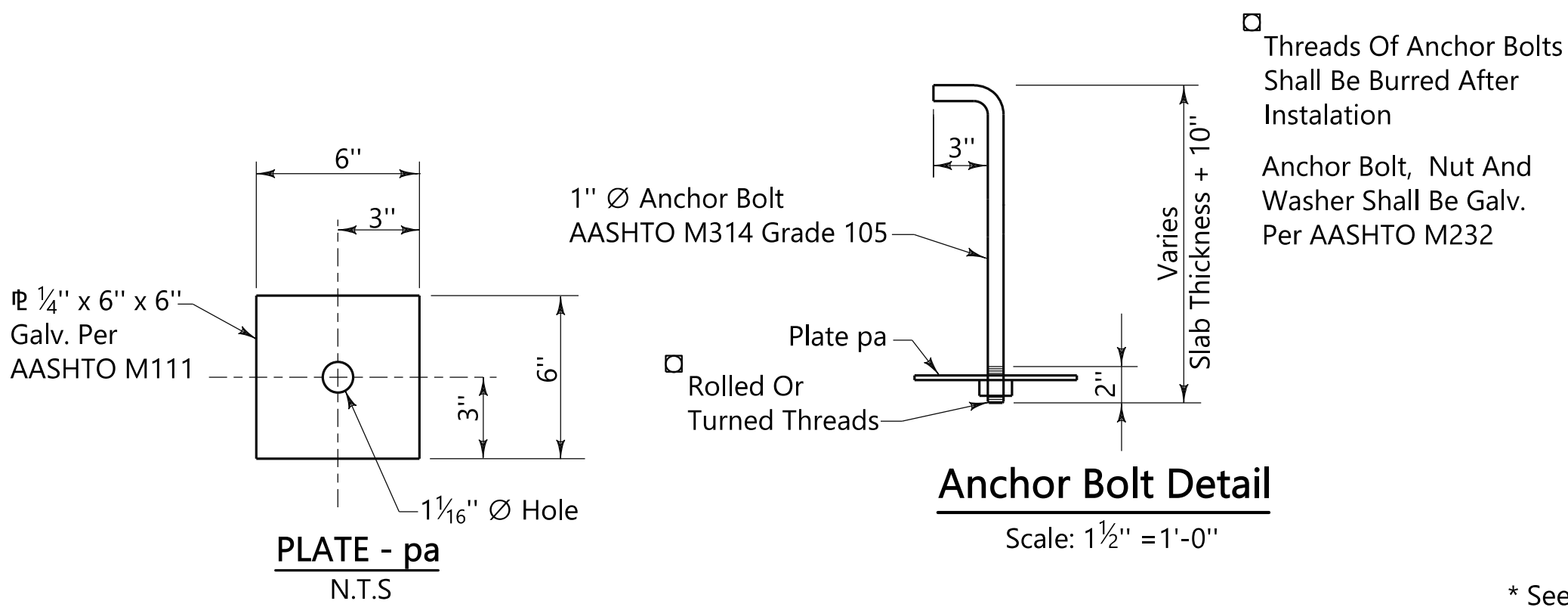
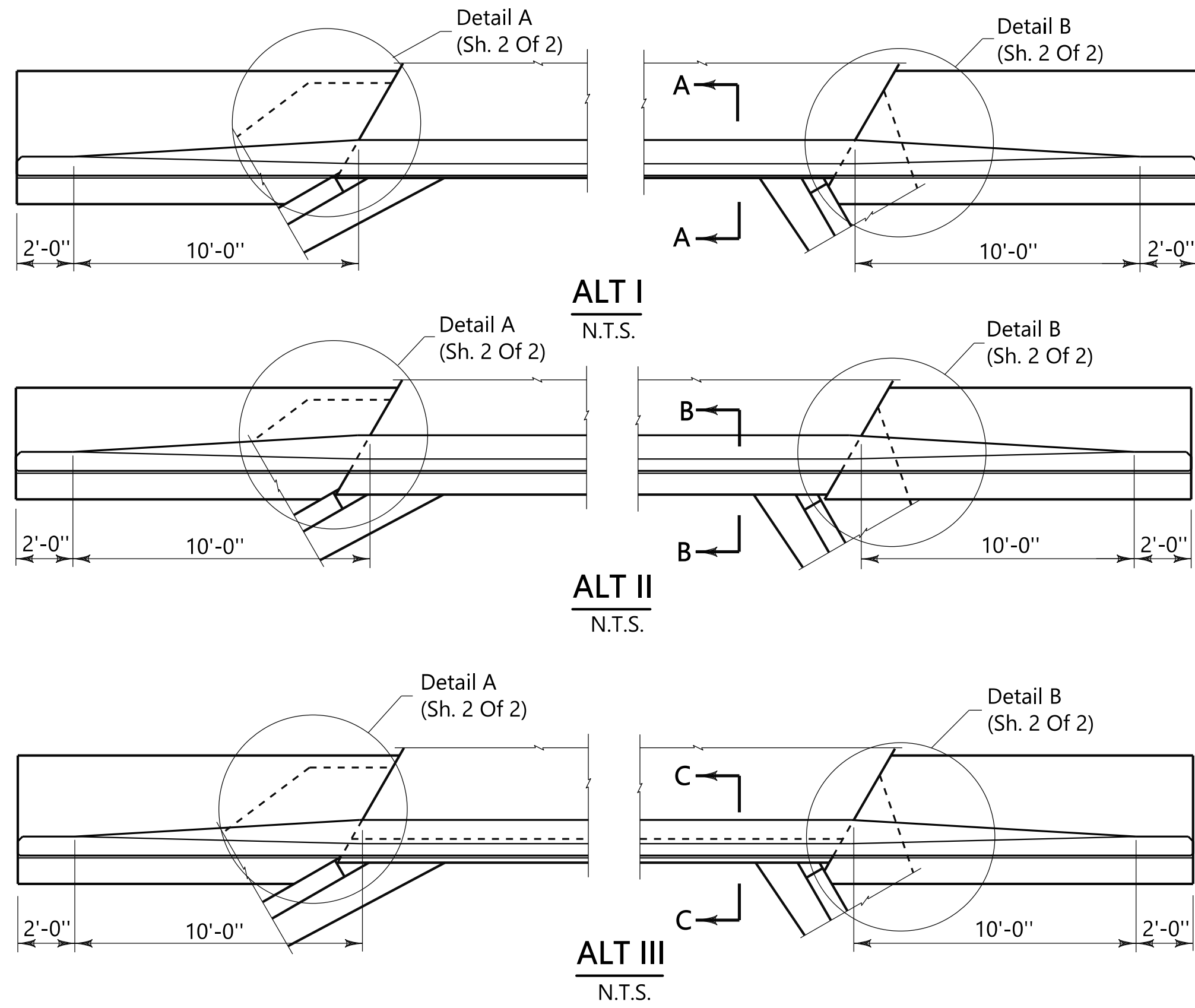
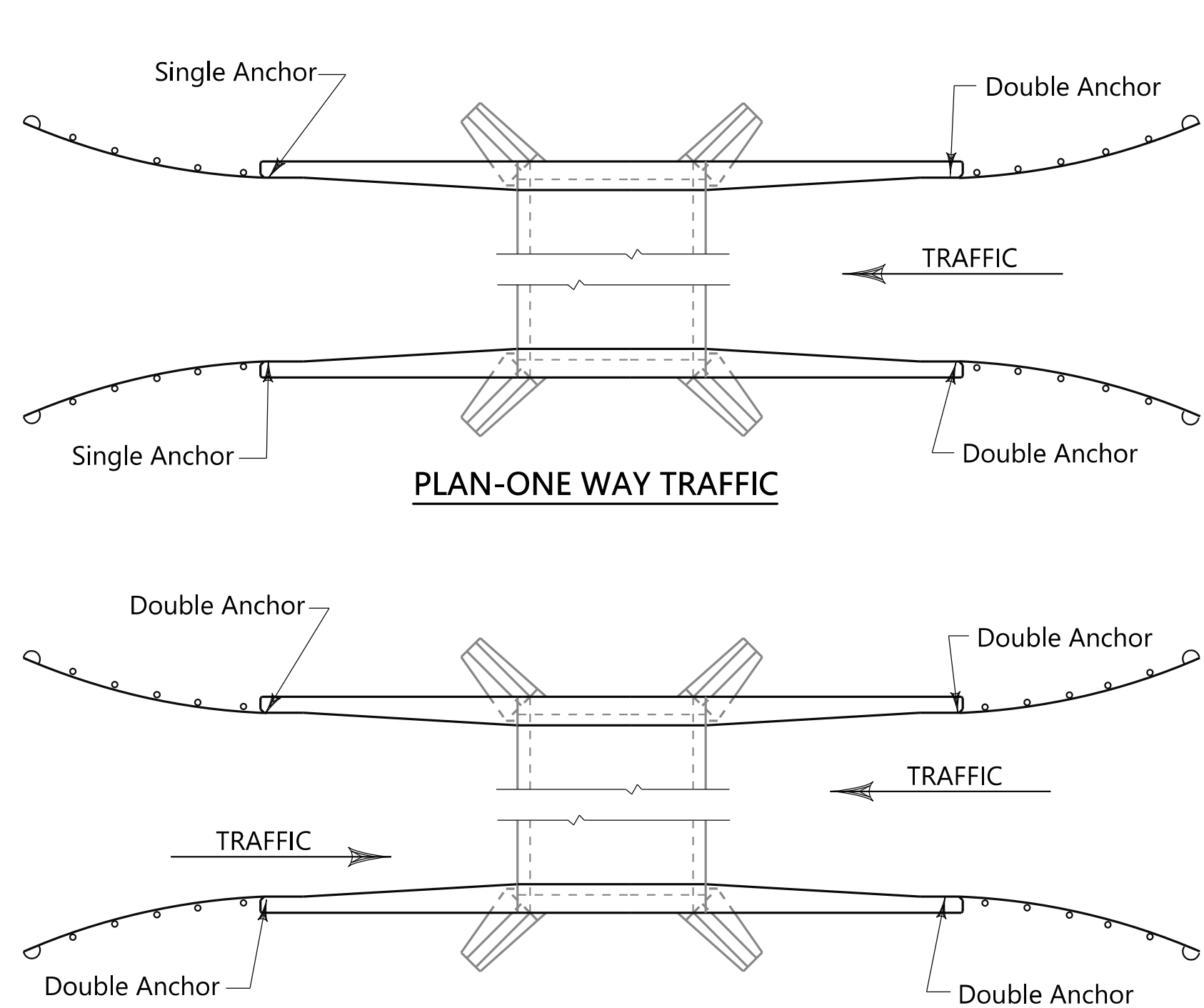
Bureau Std Engr: D.J.W.
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SPECIAL DRAWING NO
PCC-524 (SHEET 2 OF 2)

INDEX NO
52417

NOT TO SCALE

REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NUMBER
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The diagram illustrates the typical section of the end of a barrier. Key dimensions and components include:

- Overall Height:** 2'-8"
- Top Flange:** 9" wide, 2 1/4" high.
- Reinforcement:**
 - Bars CR3 #5:** Located in the top flange.
 - Bars BL #4:** Vertical reinforcement bars in the main body.
 - Bars BR3:** Reinforcement at the base.
- Dimensions:**
 - 2" Cl. (Typ.) for top flange reinforcement.
 - 2" Cl. for vertical reinforcement spacing.
 - 7 1/2" and 11" vertical segments.
 - 3 1/2" and 5 1/2" horizontal segments.
 - 2" Cl. for base reinforcement.
- Optional Const. Joint:** Indicated by a horizontal line across the main body.

**TYPICAL SECTION
END OF BARRIER**

Scale: 1" = 1'-0"

BRIDGE STANDARD DRAWING			INDEX NO.
FHWA APPROVED 8-25-10	CBR-1	SHEET 2 OF 2	52421