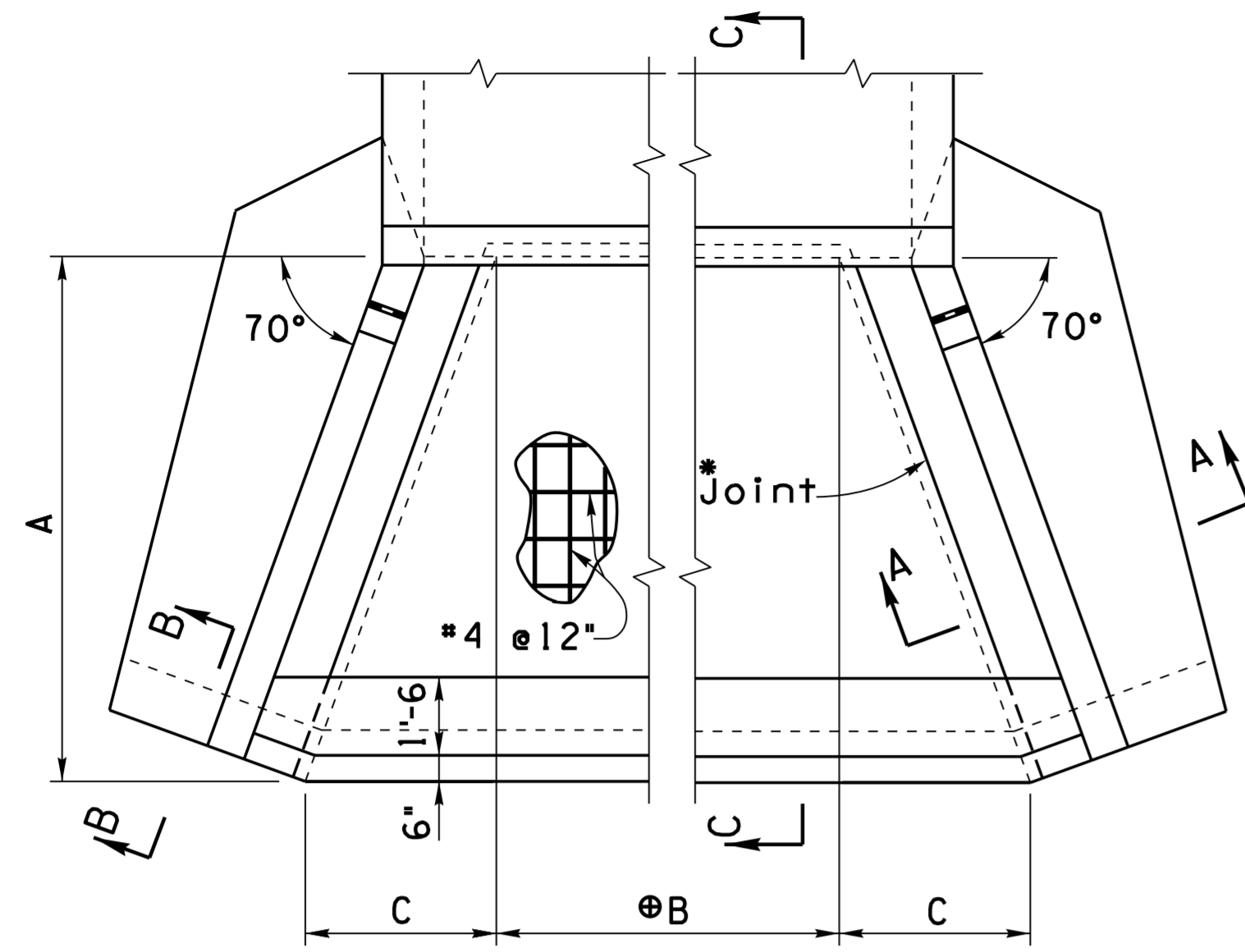
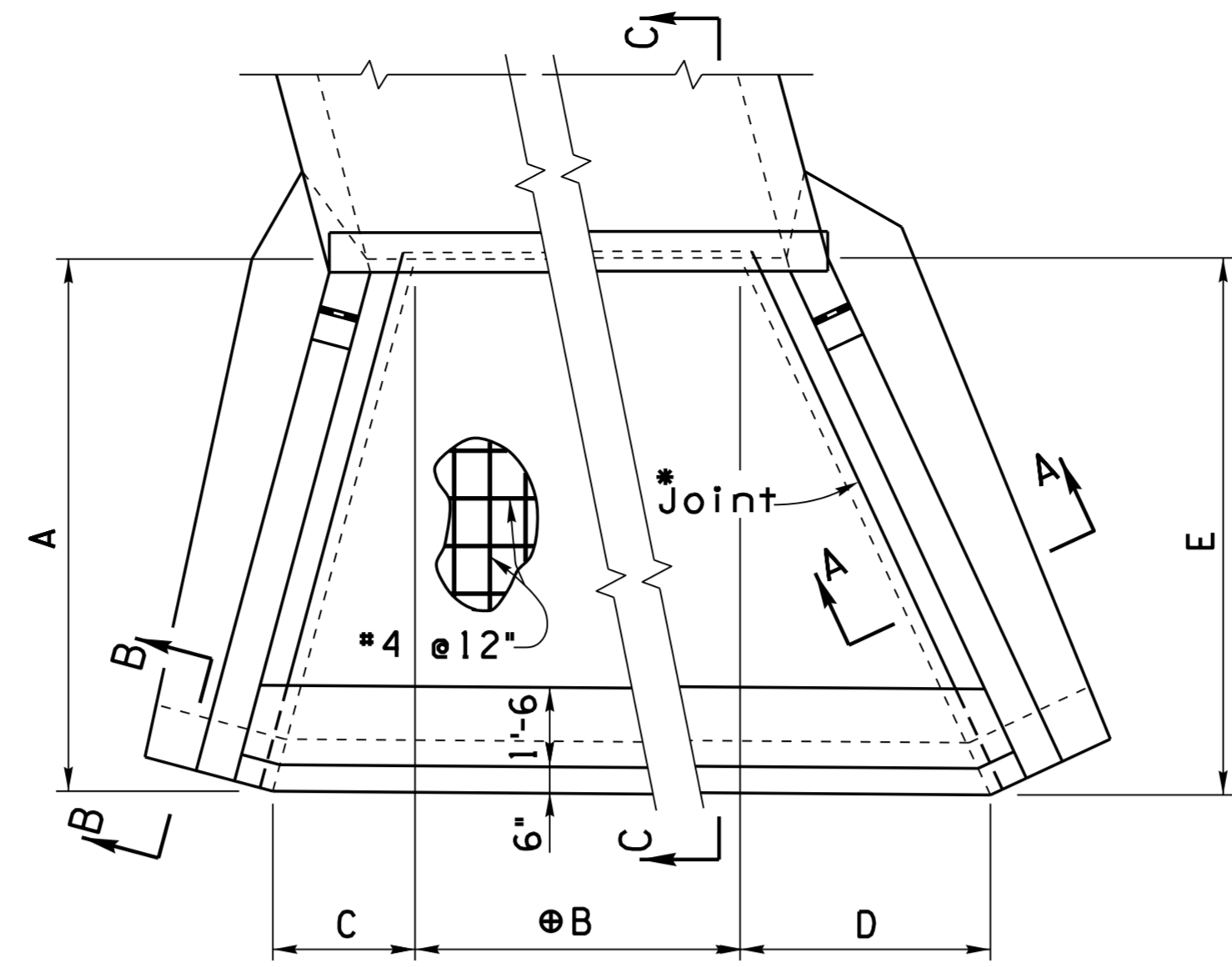


Note to Designer:  
 The information presented in this Standard Detail has been prepared in accordance with recognized engineering principles and is for general use. It should not be used for specific application without competent professional examination and verification of its suitability and applicability by a licensed professional engineer. Contents within the inner border line shall not be altered.

NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	Original Issue	SJH	2-12
2			
3			
4			



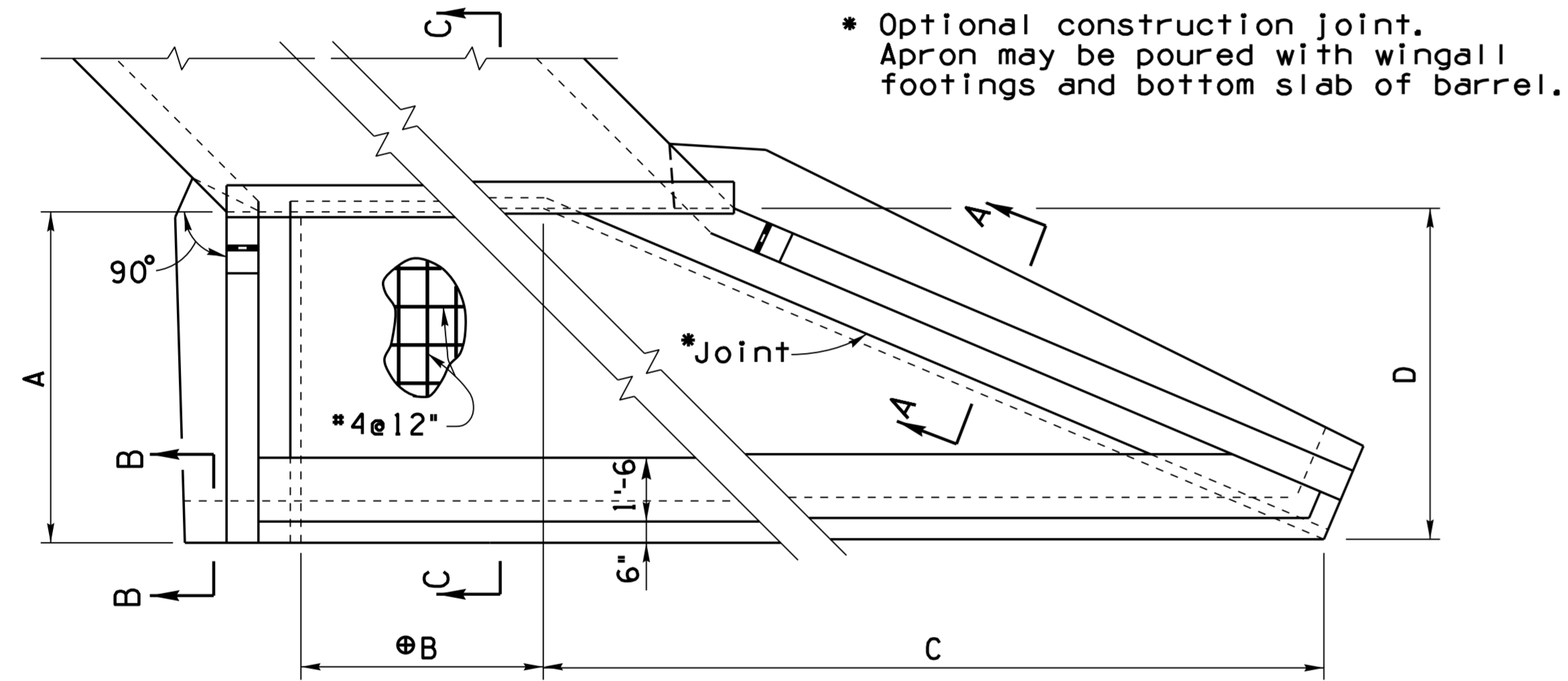
PLAN  
Apron for 0° skew box culvert



PLAN  
Apron for 0° to 15° skew box culvert

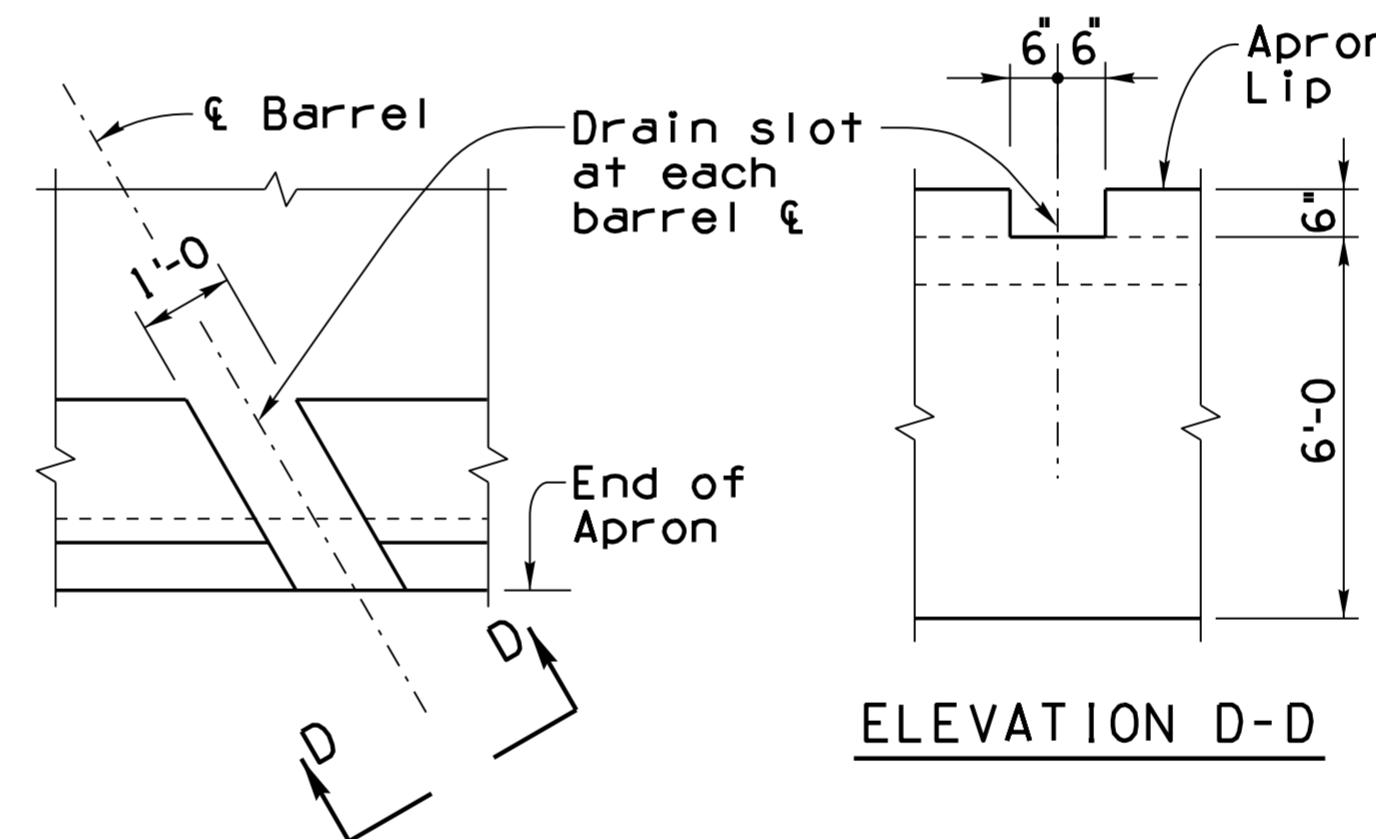
Span	Δ									
	0° Skew	5° Skew	10° Skew	15° Skew	20° Skew	25° Skew	30° Skew	35° Skew	40° Skew	45° Skew
6'	6'-8"	6'-8 1/4"	6'-9 1/4"	6'-10 1/8"	7'-1 1/8"	7'-4 1/4"	7'-8 3/8"	8'-1 1/8"	8'-8 3/8"	9'-5 1/8"
8'	8'-9"	8'-9 3/8"	8'-10 3/8"	9'-0 3/4"	9'-3 3/4"	9'-7 7/8"	10'-1 1/4"	10'-8 3/8"	11'-5 1/8"	12'-4 1/2"
10'	10'-11"	10'-11 1/2"	11'-1"	11'-3 3/8"	11'-7 3/8"	12'-0 1/2"	12'-7 1/4"	13'-3 3/8"	14'-3"	15'-5 1/4"
12'	13'-1"	13'-1 1/2"	13'-3 3/8"	13'-6 1/2"	13'-11 1/8"	14'-5 1/4"	15'-1 1/4"	15'-11 1/8"	17'-1"	18'-6"

⊕ Dimension varies with number of barrels. Δ equals length to be added to dimension 'B' for each additional barrel.



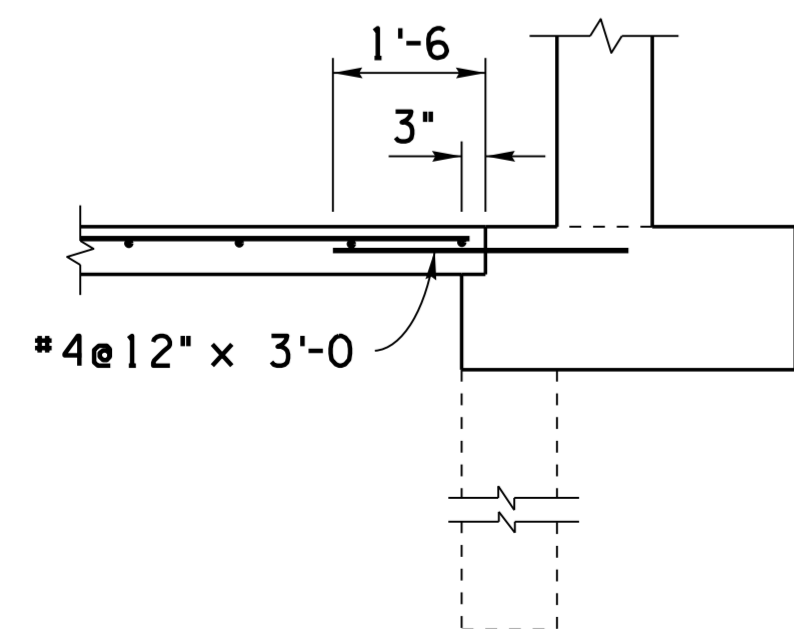
PLAN  
Apron for 20° to 45° skew box culvert

\* Optional construction joint.  
Apron may be poured with wingwall footings and bottom slab of barrel.

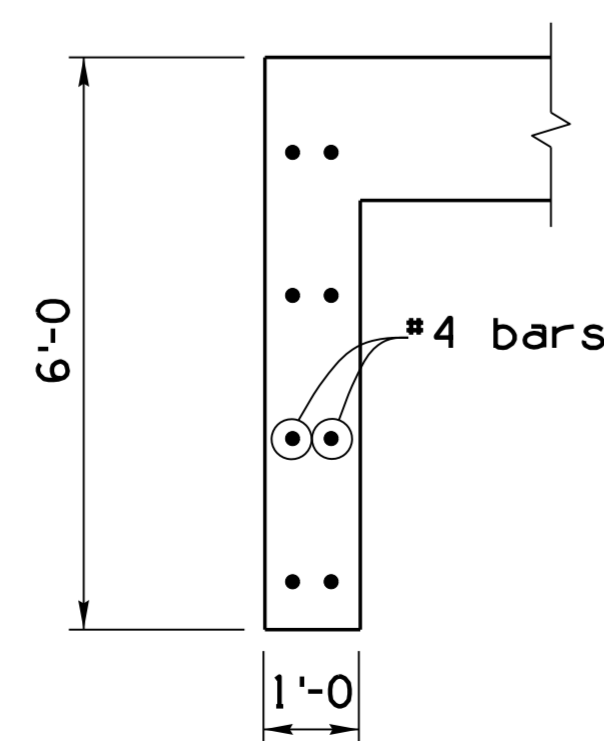


APRON DRAIN DETAIL

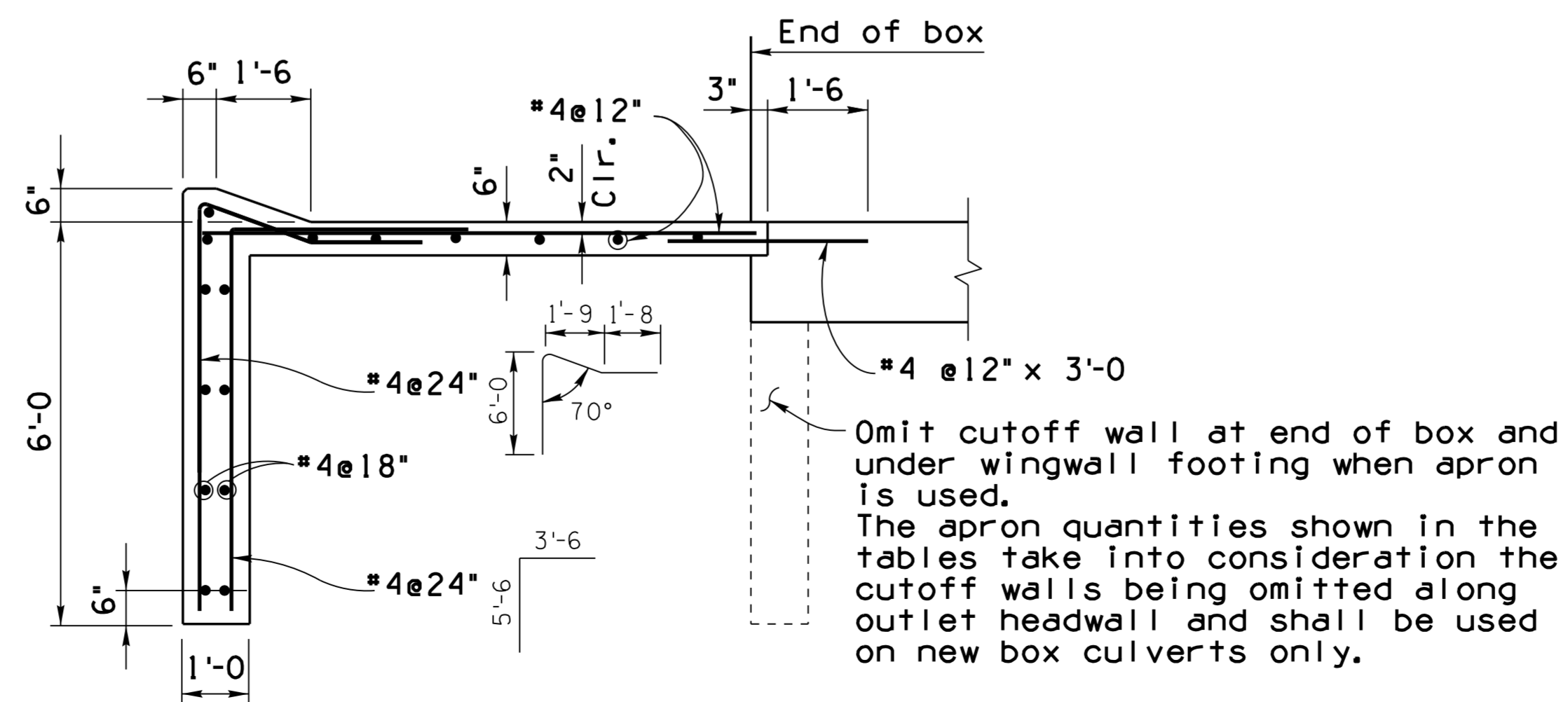
ELEVATION D-D



SECTION A-A



SECTION B-B



SECTION C-C

Omit cutoff wall at end of box and under wingwall footing when apron is used.  
The apron quantities shown in the tables take into consideration the cutoff walls being omitted along outlet headwall and shall be used on new box culverts only.

**NOTE:**

For General Notes, Dimensions, and additional Details, see SD 6.01 (1 & 2 of 5). For Apron Dimensions and Quantities see SD 6.11 (2 to 4).

DESIGN APPROVED <i>Shafiq U. Hasan</i>		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP STRUCTURE DETAIL	
APPROVED FOR DISTRIBUTION <i>Teon A. Nehme</i>		REINFORCED CONCRETE BOX CULVERTS OUTLET APRON DETAILS	
ROUTE	PROJECT NO.	FA NO.	DRAWING NO. SD 6.11 (1 of 4)
LOCATION			SHEET NO. OF