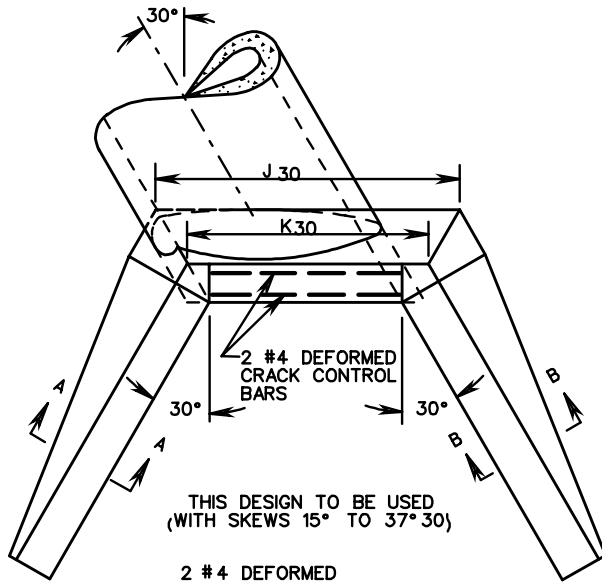
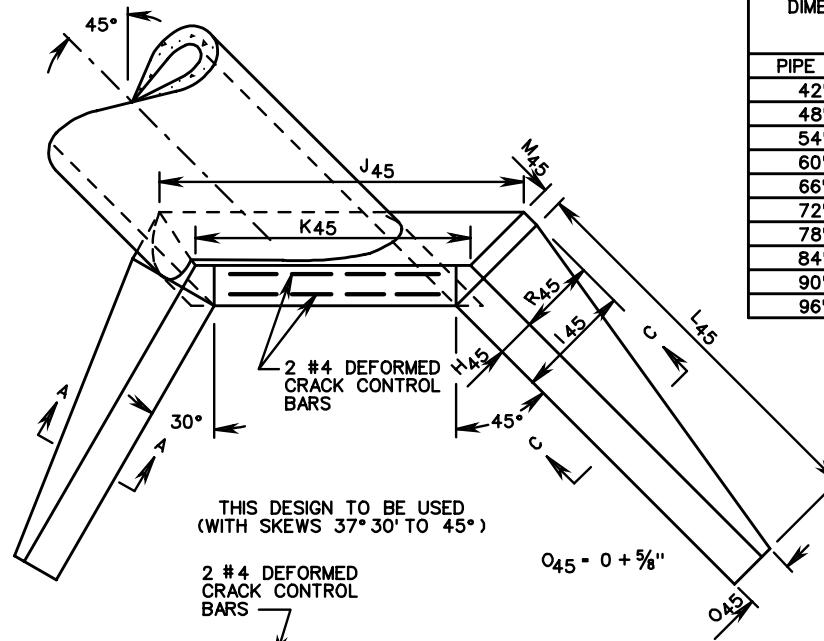


NOTES:

1. ALL DETAILS AND DIMENSIONS NOT SHOWN ARE THE SAME AS STANDARD EW-2. FOR TABLES OF DIMENSIONS AND VOLUMES SEE SHEET 2 OF 2. FOR DETAILS OF BEVEL REFER TO STANDARD EW-1, 1APC SHEET 101.02.
2. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
3. ALL CAST IN PLACE CONCRETE TO BE CLASS A3. FOR PRECAST SEE SHEET 101.10.
4. COST OF BARS FOR CRACK CONTROL TO BE INCLUDED IN PRICE BID PER CUBIC YARD CONCRETE.
5. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT OR WINGWALLS OCCUR.
6. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT (WHERE THE FLOW ENTERS THE CULVERT).
7. HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE EITHER SQUARE EDGE OR BEVEL EDGE.
8. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1' OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
9. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
10. 3/4" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.

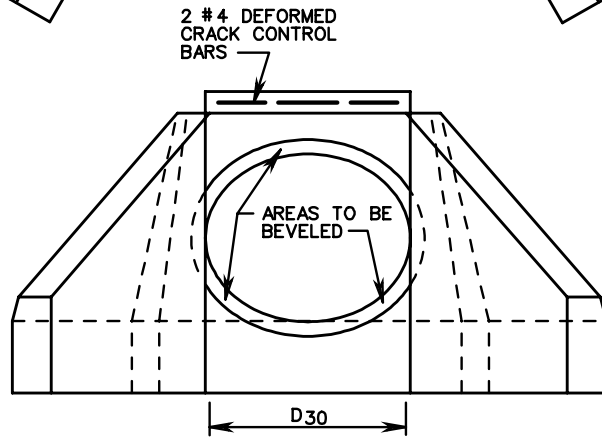


THIS DESIGN TO BE USED
(WITH SKEWS 15° TO 37° 30')

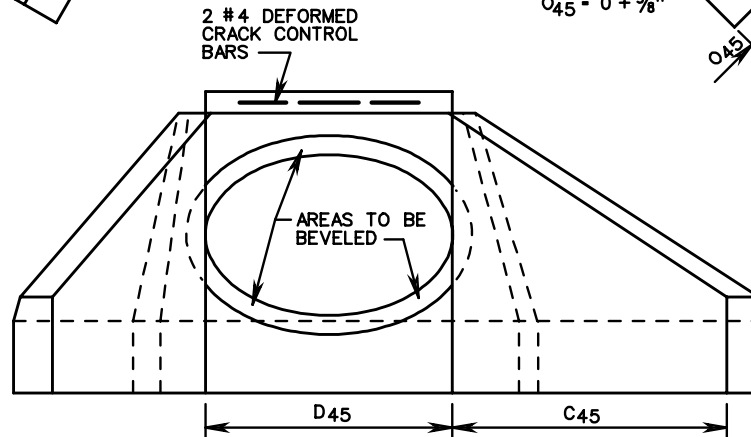


THIS DESIGN TO BE USED
(WITH SKEWS 37° 30' TO 45°)

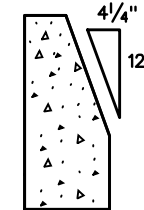
DIMENSIONS FOR BEVEL ON HEADWALL		
PIPE I.D.	a	b
42"	0'-4 1/2"	0'-3 1/2"
48"	0'-5"	0'-4"
54"	0'-5 3/4"	0'-4 1/2"
60"	0'-6 1/4"	0'-5"
66"	0'-7"	0'-5 1/2"
72"	0'-7 1/2"	0'-6"
78"	0'-8 1/4"	0'-6 1/2"
84"	0'-8 3/4"	0'-7"
90"	0'-9 1/2"	0'-7 1/2"
96"	0'-10"	0'-8"



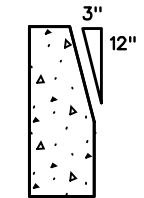
30° SKEW



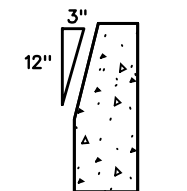
45° SKEW



SECTION C-C



SECTION B-B



SECTION A-A



ROAD AND BRIDGE STANDARDS

STANDARD ENDWALLS FOR PIPE CULVERTS

42" - 96" CIRCULAR PIPES WITH 30° AND 45° SKEW

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

105
302

SHEET 1 OF 2

REVISION DATE

101.08