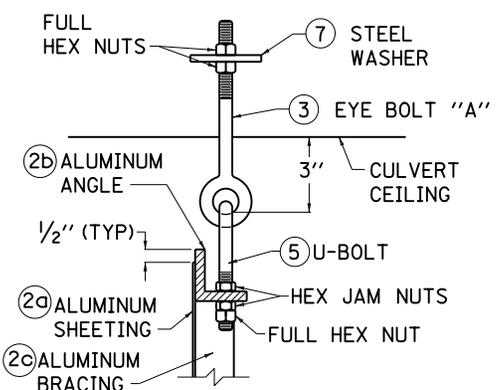
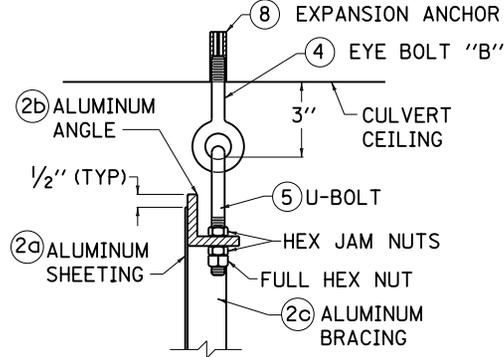


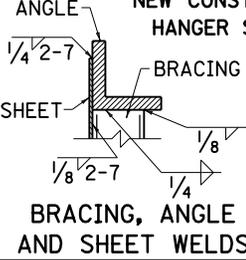
TYPICAL WATER GATE INSTALLATION



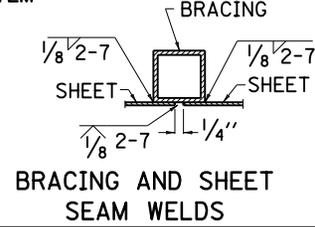
SECTION A-A
NEW CONSTRUCTION
HANGER SYSTEM



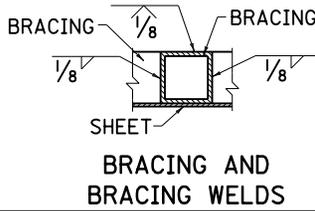
SECTION A-A
EXISTING CONSTRUCTION
HANGER SYSTEM



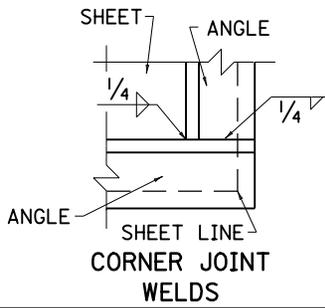
BRACING, ANGLE
AND SHEET WELDS



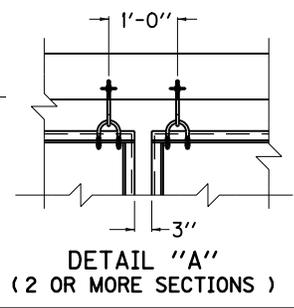
BRACING AND SHEET
SEAM WELDS



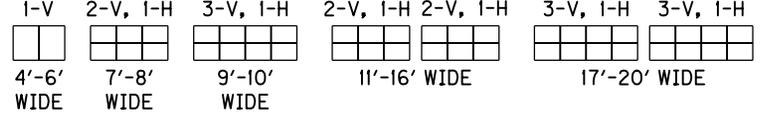
BRACING AND
BRACING WELDS



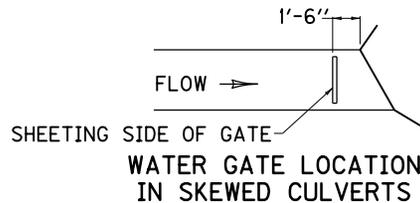
CORNER JOINT
WELDS



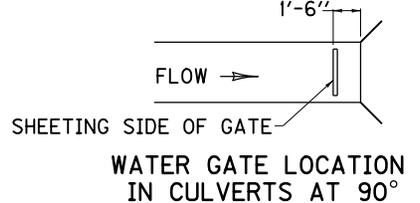
DETAIL "A"
(2 OR MORE SECTIONS)



MINIMUM HOR. AND VER. BRACING SYSTEMS FOR VARIOUS WIDTH CULVERT OPENINGS.
ONE (1) ADDITIONAL HOR. BRACE REQUIRED FOR CULVERT OVER 10' IN HEIGHT.



WATER GATE LOCATION
IN SKEWED CULVERTS



WATER GATE LOCATION
IN CULVERTS AT 90°

NOTES

1. PAY ITEM AND UNIT TO BID: WATER GATE TYPE 3, EACH (2 OR MORE SECTIONS PER CULVERT OPENING EQUALS ONE WATER GATE TYPE 3)
 - 1a. INCLUDES LABOR, MATERIALS, INSTALLATION, AND NECESSARY INCIDENTALS.
2. COMMERCIAL GRADE ALUMINUM
 - 2a. SHEETING - 0.090" THICK, MILL FINISH.
 - 2b. ANGLES - 2" x 2" x 3/8" @ 1.60 LBS./LIN. FT.
 - 2c. BRACING - 1 1/2" x 1 1/2" x 1/8" SQUARE TUBING @ 0.826 LB./LIN. FT.
3. EYEBOLT "A" - GALVANIZED, WELDLESS, 1/2" DIA., 6" SHANK, 1" EYE I.D., 3" THREAD.
4. EYEBOLT "B" - GALVANIZED, WELDLESS, 1/2" DIA., 2 1/2" SHANK, 1" EYE I.D., 1" THREAD.
5. U-BOLTS - CADMIUM PLATED STEEL, 3" BETWEEN LEGS, 4 1/2" INSIDE LENGTH, 5" OUTSIDE LENGTH, 2 1/4" THREAD, 1/2" DIA.
6. HEX FULL NUTS AND JAM NUTS - 1/2" DIA., 13 THREADS/IN., FINISHED, DOUBLE CHAMFERED.
7. STEEL WASHER - 5/8" I.D., 2 3/4" O.D.
8. EXPANSION ANCHORS - 6000 LBS. MINIMUM HOLDING POWER.
9. WELD ANGLE AND BRACE CONNECTIONS FULLY ON ALL EXPOSED SIDES.
10. WELD SHEETING ON BOTH SIDES TO ANGLES AND BRACING AS SHOWN.
11. CULVERT OPENINGS GREATER THAN 10' IN WIDTH - USE MINIMUM OF 2 EQUAL WIDTH SECTIONS PER OPENING WITH 3" GAP BETWEEN SECTIONS (SEE DETAIL "A"). NO SECTION SHALL EXCEED 10' IN WIDTH.
12. USE OF ONE CONTINUOUS ALUMINUM SHEET IS DESIRABLE; HOWEVER IF MORE THAN ONE SHEET IS USED AND THE SEAMS DO NOT FIT THE MINIMUM REQUIRED BRACING DIAGRAM, ADDITIONAL SYMMETRICALLY PLACED BRACING SHALL BE REQUIRED. NO SEAMS SHALL BE VISIBLE FROM THE BRACING SIDE OF THE GATE.

KENTUCKY DEPARTMENT OF HIGHWAYS		
WATER GATE TYPE 3		
STANDARD DRAWING NO. RFG-011-05		
SUBMITTED:	<i>Bill West</i> DIRECTOR DIVISION OF DESIGN	11-21-07 DATE
APPROVED:	<i>November Mathews</i> STATE HIGHWAY ENGINEER	11-21-07 DATE