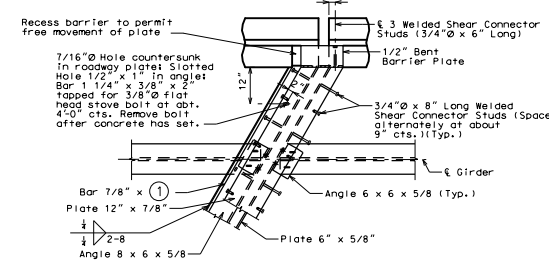
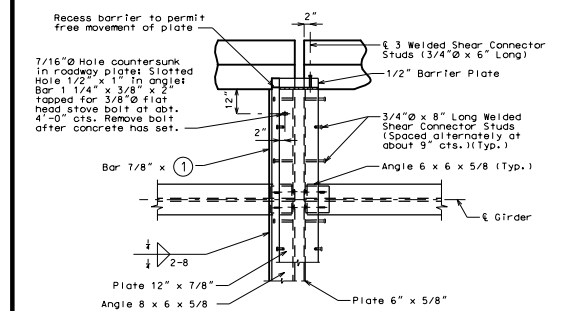


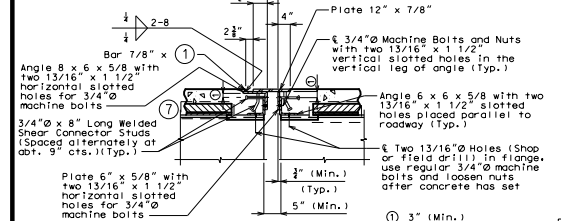
LA TYPE D BARRIER



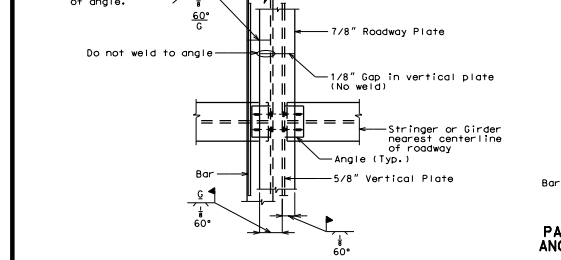
LA TYPE B BARRIER (SBC)



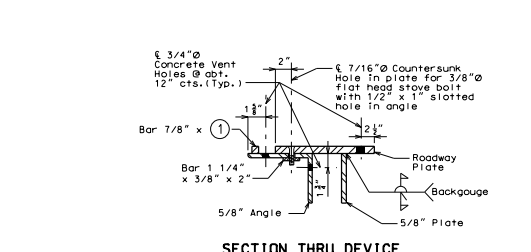
SECTION THRU DEVICE



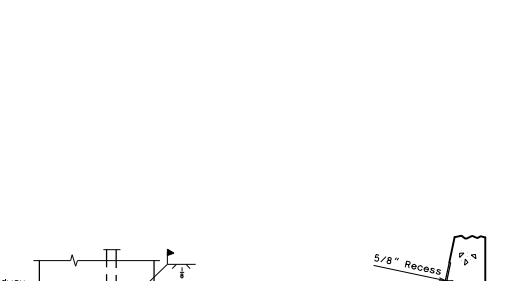
SECTION AT INTERMEDIATE BENT



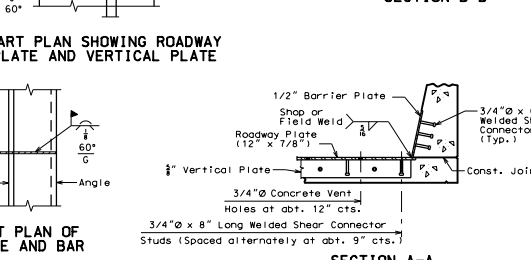
PERMISSIBLE FIELD SPLICE AT INT. BENT



SECTION THRU DEVICE

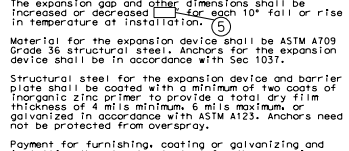


SECTION AT INTERMEDIATE BENT

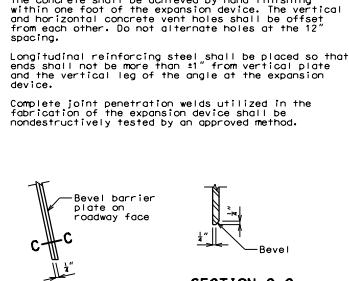


PERMISSIBLE FIELD SPLICE AT INT. BENT

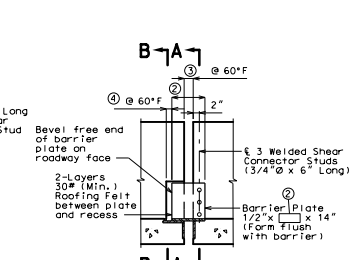
GENERAL NOTES:
Expansion device shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove weld splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion device shall be fabricated and installed to the crown and grade of the roadway.
Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased for each 10° fall or rise in temperature at installation.
Material for the expansion device shall be ASTM A709 Grade 50 structural steel. Anchors for the expansion device shall be in accordance with Sec 1037.
Structural steel for the expansion device and barrier plate shall be coated with a minimum of two coats of inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum, or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.
Payment for furnishing, coating or galvanizing and installing the structural steel for the expansion device will be considered completely covered by the contract unit price for Expansion Device (Flat Plate) per linear foot.
Concrete shall be forced under and around flat plate, anchors and angles. Proper consolidation shall be achieved by localized internal vibration. Finishing of the concrete shall be achieved by hand finishing within one foot of the expansion device. The vertical and horizontal concrete vent holes shall be offset from each other. Do not alternate holes at the 12" spacing.
Longitudinal reinforcing steel shall be placed so that ends shall not be more than 14" from vertical plate and the vertical leg of the angle of the expansion device.
Complete joint penetration welds utilized in the fabrication of the expansion device shall be nondestructively tested by an approved method.



SECTION THRU DEVICE

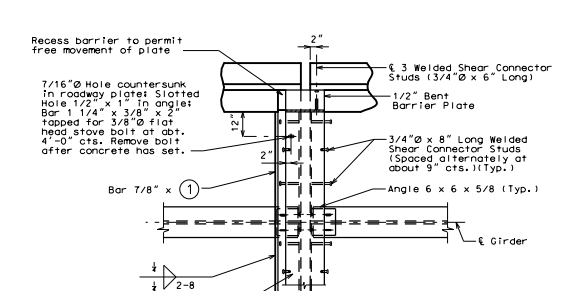


SECTION AT INTERMEDIATE BENT

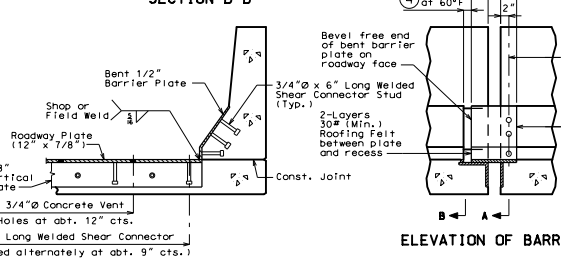
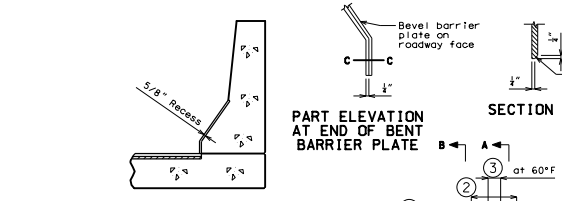


PERMISSIBLE FIELD SPLICE AT INT. BENT

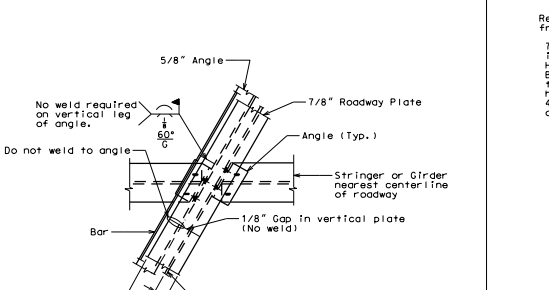
THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.	
DATE REVISION	12/28/2020
ROUTE	MO
COUNTY	BR
DISTRICT	
SHEET NO.	
JOB NO.	
CONTRACT ID.	
PROJECT NO.	
DRAWING NO.	FLAT04
DESCRIPTION	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
DATE	09/27/2020
DESIGNED BY	US WEST CAPITAL
CHECKED BY	1-888-686-6868



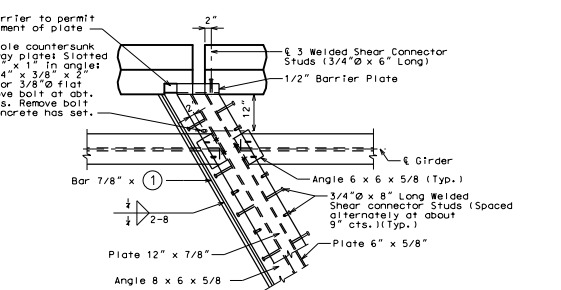
SQ TYPE B BARRIER (SBC)



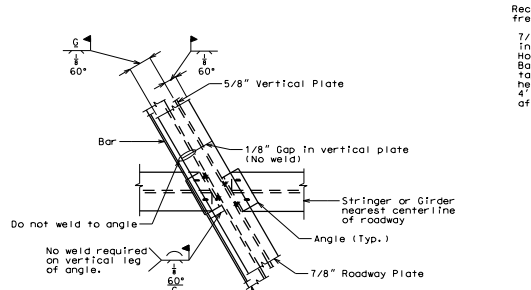
ELEVATION OF BARRIER



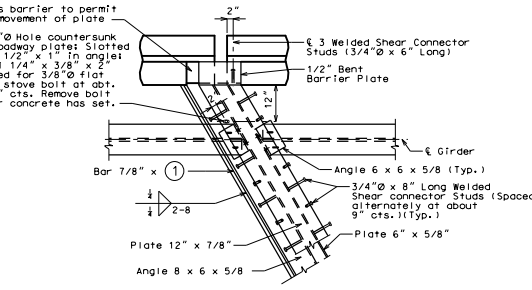
PERMISSIBLE FIELD SPLICE AT INT. BENT



PERMISSIBLE FIELD SPLICE AT INT. BENT



PERMISSIBLE FIELD SPLICE AT INT. BENT



PART PLAN

RA TYPE B BARRIER (SBC)

RA TYPE D BARRIER

- STANDARD DRAWING GUIDANCE (do not show on plans):**
- ① Bar height.
 - ② Plate length = $12"/\cos(\text{skew})$ [12" for 0° skew]
 - ③ Barrier gap = $3 1/2"/\cos(\text{skew})$ [3 1/2" for 0° skew]
 - ④ Barrier recess gap = $2 3/8"/\cos(\text{skew})$ [2 3/8" for 0° skew]. Assume recess ends at front edge of bar.
 - ⑤ Installation gap adjustment for temperature: normal to joint.
 - ⑥ Check and revise locations of slotted wells to clear girder end section reinforcement.
 - ⑦ Delete panel for CIP slab.