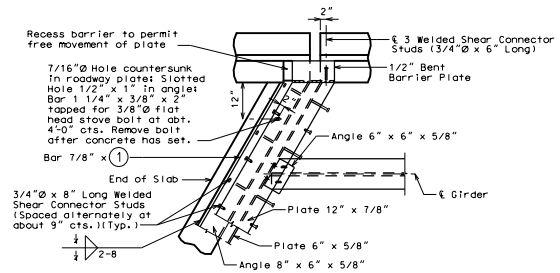


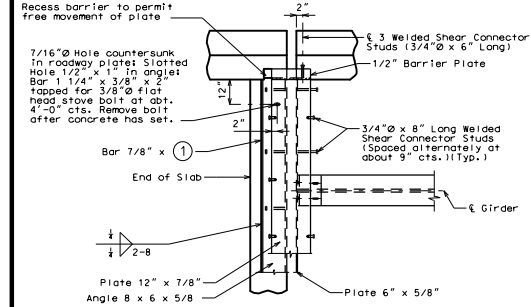
PART PLAN
Note: Concrete vent holes not shown for clarity.

LA TYPE D BARRIER

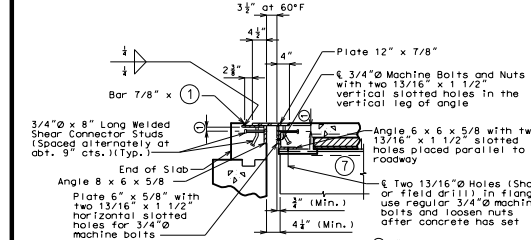


PART PLAN
Note: Concrete vent holes not shown for clarity.

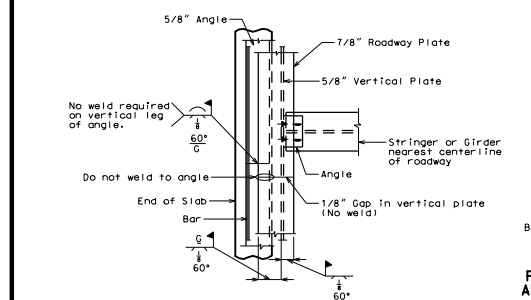
LA TYPE B BARRIER (SBC)



PART PLAN
Note: Concrete vent holes not shown for clarity.



SECTION AT END BENT

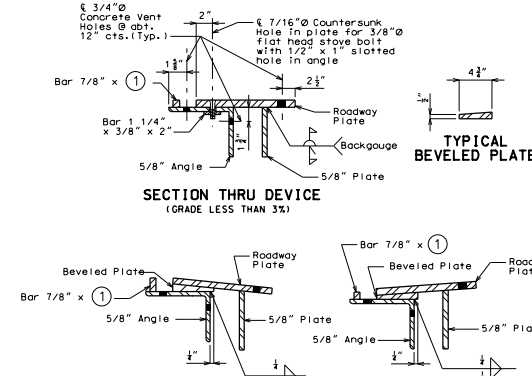


PERMISSIBLE FIELD SPLICE AT END BENT

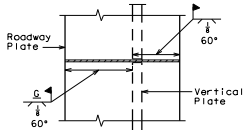
Detailed Checked

FLAT PLATE EXPANSION DEVICE AT END BENT NO.

Note: This drawing is not to scale. Follow dimensions.



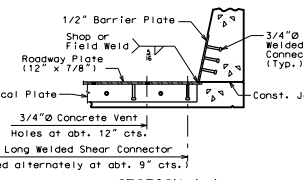
SECTIONS THRU DEVICE (GRADE 3% OR MORE)



PART PLAN SHOWING ROADWAY PLATE AND VERTICAL PLATE



PART PLAN OF ANGLE AND BAR

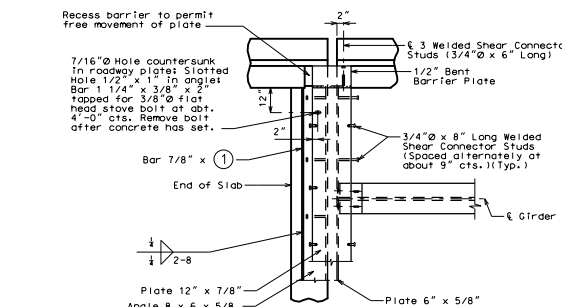


SECTION A-A

ELEVATION OF BARRIER

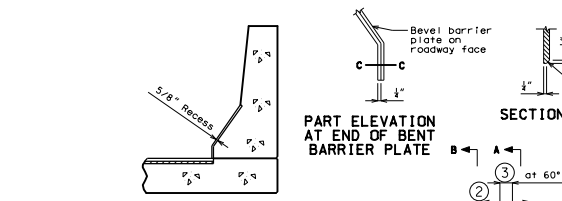
GENERAL NOTES:
Expansion device shall be fabricated in one section, except for slope construction and when the length is over 50 feet. A complete joint penetration groove weld splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion device shall be fabricated and 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 1/4" for each 10° fall or rise in temperature at installation.
Material for the expansion device shall be ASTM A709 Grade 36 structural steel. Anchors for the expansion device shall be in accordance with Sec 1037.
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 1" from vertical plate and the vertical leg of the angle at the expansion device.
Complete joint penetration welds utilized in the fabrication of the expansion device shall be nondestructively tested by an approved method.

DATE REVISION	12/28/2020
NO.	1
BY	MO
CHECKED	BR
COUNTY	*
JOB NO.	*
CONTRACT NO.	*
PROJECT NO.	FLAT03
BRIDGE NO.	FLAT03
DESCRIPTION	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
DATE	12/28/2020
DESIGNED BY	MO
CHECKED BY	BR
SCALE	AS SHOWN
PROJECT NO.	FLAT03
BRIDGE NO.	FLAT03
DESCRIPTION	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
DATE	12/28/2020
DESIGNED BY	MO
CHECKED BY	BR
SCALE	AS SHOWN



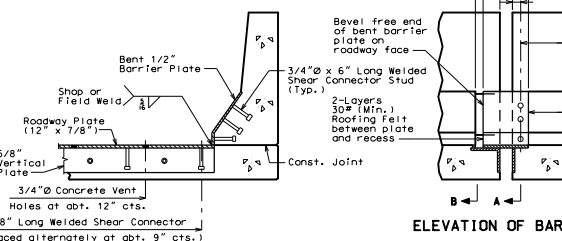
PART PLAN
Note: Concrete vent holes not shown for clarity.

SQ TYPE B BARRIER (SBC)



SECTION B-B

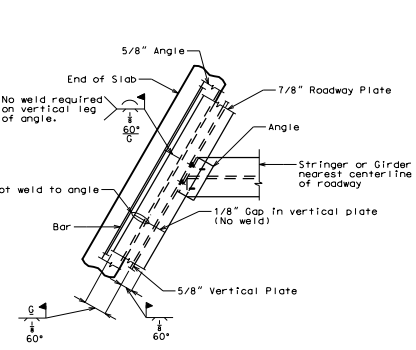
SECTION C-C



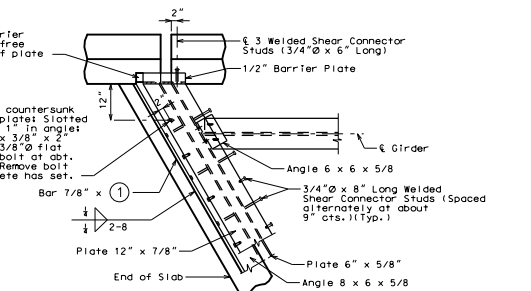
ELEVATION OF BARRIER

SECTION A-A

TYPE B BARRIER (SBC) (ALL)

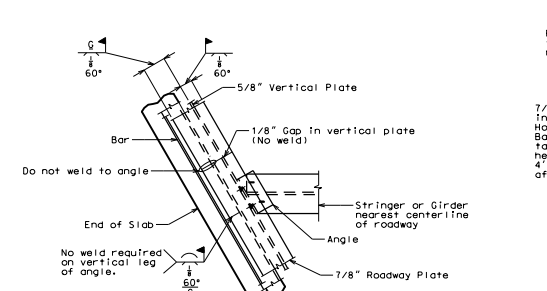


PERMISSIBLE FIELD SPLICE AT END BENT

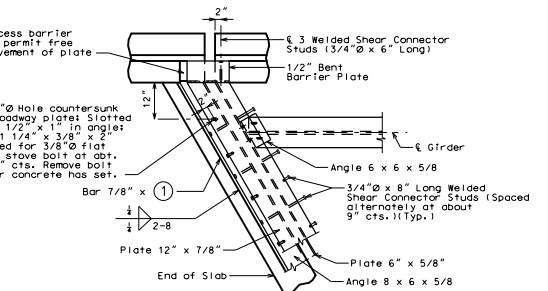


PART PLAN
Note: Concrete vent holes not shown for clarity.

RA TYPE D BARRIER



PERMISSIBLE FIELD SPLICE AT END BENT



PART PLAN
Note: Concrete vent holes not shown for clarity.

RA TYPE B BARRIER (SBC)

STANDARD DRAWING GUIDANCE (do not show on plans):

- Bar height.
- Plate length = $12''/\cos(\text{skew})$ [12" for 0° skew]
- Barrier gap = $3\frac{1}{2}''/\cos(\text{skew})$ [$3\frac{1}{2}''$ for 0° skew]
- Barrier recess gap = $2\frac{3}{8}''/\cos(\text{skew})$ [$2\frac{3}{8}''$ for 0° skew]. Assume recess ends at front edge of bar.
- Installation gap adjustment for temperature: normal to joint.
- Check and revise locations of slotted wells to clear girder end section reinforcement.
- Delete panel for CIP slab.