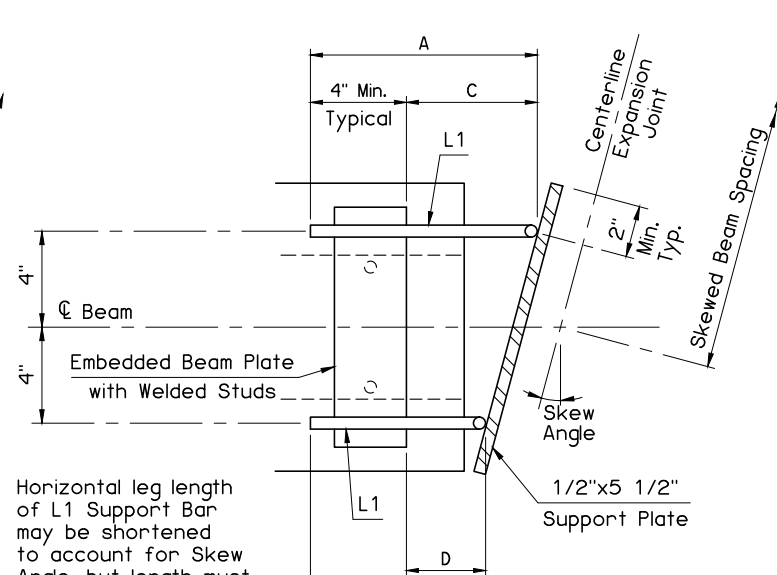


ROLLED BEAMS AND PLATE GIRDERS



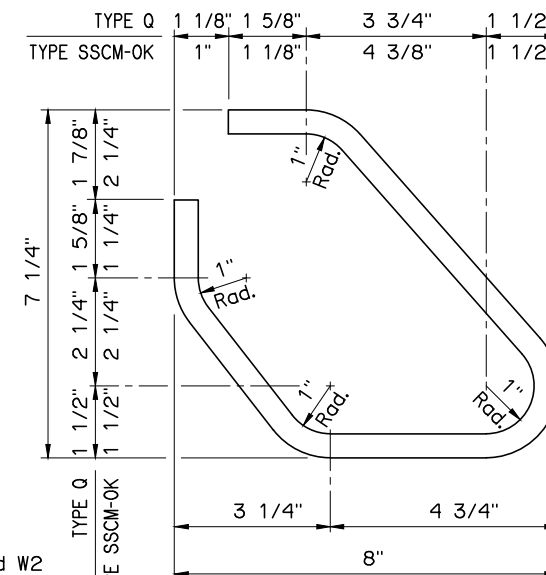
P.C. BEAMS

① Horizontal leg length of L1 Support Bar may be shortened to account for Skew Angle, but length must be at least 4" + D(MIN.) dimension shown in L1 SUPPORT BAR PIN DIAMETER SCHEDULE.

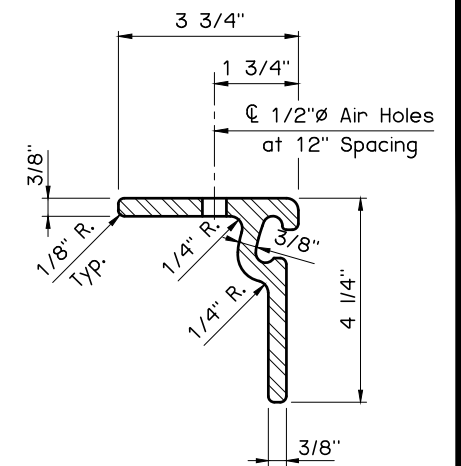
SEALED EXPANSION JOINT SUPPORT PLANS

SUPPORT PLATE SCHEDULE	
SKEW ANGLE	PLATE LENGTH
0°	1'-0"
1° thru 25°	1'-1"
25° thru 35°	1'-2"
35° thru 45°	1'-4"
45° thru 55°	1'-6"
60° thru 65°	2'-0"
65° thru 70°	2'-4"

NOTE: Fabricate W1 and W2 bars from W20 Deformed Steel Wire.



W1 ANCHOR BAR DETAIL



WATSON BOWMAN AND ACME TYPE Q STEEL EXTRUSION RECEPTOR DETAIL

GUIDE FOR SIZING SEALED EXPANSION JOINT SUPPORT MEMBERS

- After determining Skewed Beam Spacing and C, find Support Bar diameter from L1 SUPPORT BAR DIAMETER SCHEDULE.
- Knowing Support Bar diameter, find Pin Diameter from L1 SUPPORT BAR PIN DIAMETER SCHEDULE. Adjust the location of the Embedded Beam Plate for P.C. Beams if actual D dimension is less than D(MIN.) scheduled. No check of D(MIN.) from the end of Rolled Beams and Plate Girders is required.
- Dimension A of Support Bars is 4" minimum plus C or D. Horizontal leg length of L1 Support Bar may be shortened to account for Skew Angle, but length must be at least 4" + D(MIN.) dimension shown in L1 SUPPORT BAR PIN DIAMETER SCHEDULE.
- Dimension B of Support Bar is dependent upon Haunch Thickness as shown in L1 SUPPORT BAR DIMENSION B SCHEDULE.
- Length of Support Plate is dependent upon Skew Angle as shown in SUPPORT PLATE SCHEDULE.

SEALED EXPANSION JOINT NOTES

Use a Sealed Expansion Joint which has a total movement range of 4" and seals the deck to prevent moisture or other contaminants from descending onto the lower structure components.

Provide either the Watson, Bowman and Acme Type Q Steel Extrusion Receptor or the D.S. Brown Type SSCM-OK Steel Extrusion Receptor as shown on this sheet.

MATERIALS

Provide Steel Receptors, Support Plates and L1 Support Bars conforming to AASHTO M270 (ASTM A709), Grade 36, 50 or 50W (Charpy V-Notch testing not required).

Provide W1 and W2 Anchor Bars conforming to AASHTO M225 (ASTM A496). Include all bar dimensions in the shop drawings.

Use Preformed Neoprene Gland lubricant and adhesive in accordance with the manufacturer's published literature.

FABRICATION OF JOINT

Perform welding of Steel Receptors, Support Plates, L1 Support Bars and W1 and W2 Anchor Bars in accordance with Subsection 724.03 of the Specifications.

Apply two shop coats - one an inorganic zinc rich (IZ) primer, the other an inorganic zinc rich (IZ) intermediate coat - to the entire surface of the Steel Receptor, Support Plates, L1 Support Bars and W1 and W2 Anchor Bars. Apply one field application of urethane topcoat to all exposed surfaces after installation. Perform all painting in accordance with Section 512 of the Specifications.

At locations where joint is shown to be mitered at any angle for turn-up at traffic rail or for skew, shop splice Neoprene Gland with heat vulcanizing or other method of equal effectiveness as recommended by the listed joint manufacturer or approved equal and approved by the Engineer.

BASIS OF PAYMENT

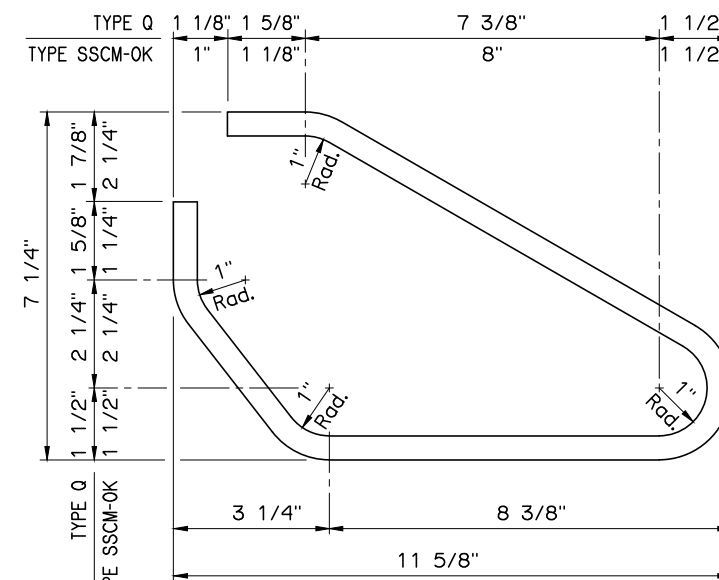
The Department will consider the cost of the complete joint including Neoprene Gland, Support Plates, Steel Receptors, L1 Support Bars, W1 and W2 Anchor Bars, welding, equipment, labor and any other incidentals to be included in the contract unit price of SEALED EXPANSION JOINT.

L1 SUPPORT BAR DIAMETER SCHEDULE		
SKEWED BEAM SPACING	C (MAX.)	SUPPORT BAR DIAMETER
8'-0" or Less	3"	3/4"
	6"	1"
	1'-3"	1 1/4"
	1'-9"	1 1/2"
	2'-0"	1 3/4"
Over 8'-0" to 11'-0"	3"	3/4"
	6"	1"
	1'-0"	1 1/4"
	1'-6"	1 1/2"
	2'-0"	1 3/4"
Over 11'-0" to 14'-0"	6"	1"
	1'-0"	1 1/4"
	1'-6"	1 1/2"
	1'-9"	1 3/4"
	2'-0"	2"
Over 14'-0" to 20'-0"	3"	1"
	9"	1 1/4"
	1'-3"	1 1/2"
	1'-9"	1 3/4"
	2'-0"	2"
Over 20'-0" to 25'-0"	3"	1"
	6"	1 1/4"
	1'-0"	1 1/2"
	1'-6"	1 3/4"
	2'-0"	2"

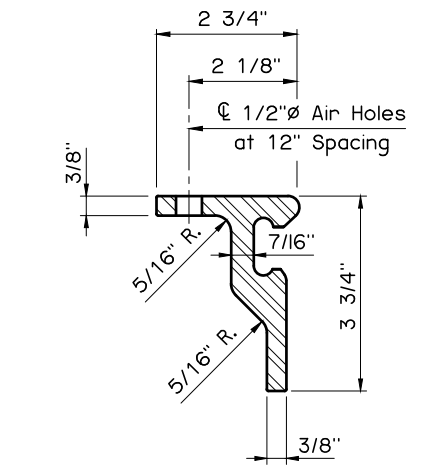
L1 SUPPORT BAR PIN DIAMETER SCHEDULE		
SUPPORT BAR DIAMETER	PIN DIA. ②	D (MIN.) ③
3/4"	2 1/4"	2 3/8"
1"	3"	3"
1 1/4"	3 3/4"	3 5/8"
1 1/2"	4 1/2"	4 1/4"
1 3/4"	5 1/4"	4 7/8"
2"	6"	5 1/2"

L1 SUPPORT BAR DIMENSION B SCHEDULE	
HAUNCH ④ THICKNESS	B ⑤
1"	6 3/4" ⑥
2"	7 1/2" ⑦
3"	8 1/2"
4"	8 1/2"

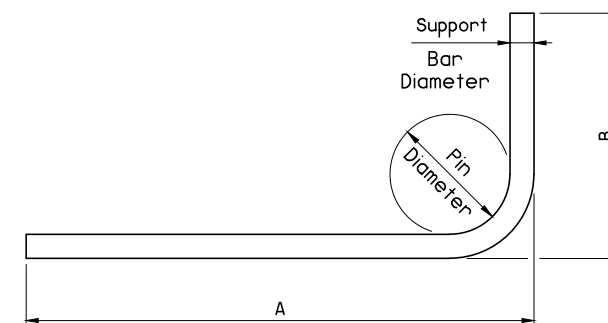
- Pin Diameter shown is based on ASTM A6, Appendix X4 for Grade 36 steel.
- D dimension required to maintain minimum weld of Support Bar to Embedded Beam Plate for P.C. Beams.
- Haunch Thickness measured from top of Beam to bottom of Deck Slab.
- Dimension B assumes an 8" Deck Slab. If a different Deck Slab thickness is used, adjust Dimension B accordingly.
- 1 3/4" and 2" L1 Support Bars cannot be used with 1" Haunch unless L1 Support Bars are hotbent around 3 1/2" Pin maximum.
- 2" L1 Support Bars cannot be used with 2" Haunch unless L1 Support Bars are hotbent around 5 1/2" Pin maximum.



W2 ANCHOR BAR DETAIL



D.S. BROWN TYPE SSCM-OK STEEL EXTRUSION RECEPTOR DETAIL



L1 SUPPORT BAR DETAIL

APPROVED BY BRIDGE ENGINEER *Sto. J.* DATE 12-20-16

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)

SEALED EXPANSION JOINT DETAILS

2009 SPECIFICATIONS EJ-DTL 02E B-10E