

DESIGN DATA

	ABUTMENT 1	PIER X	ABUTMENT XX
◆ Joint opening "A"			
★ Predicted Horizontal Movement			

- ◆ Joint opening "A" for new structure shall be determined based on predicted movements from shrinkage, creep, and temperature changes.
- ★ The maximum predicted horizontal joint movement is based on a temperature drop of 60°F for concrete girders and 80°F for steel girders.

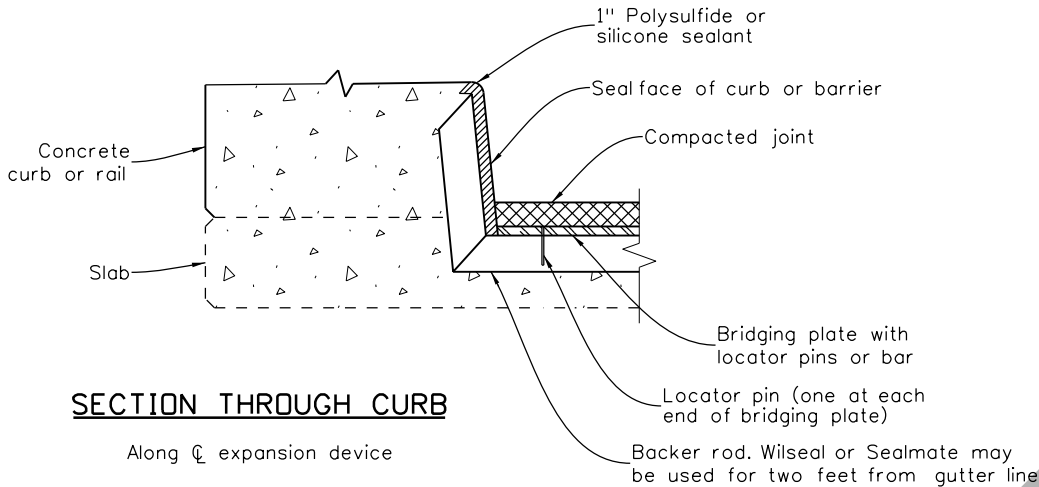
BRIDGING PLATE SIZES:

"A"	THICKNESS	WIDTH	MINIMUM LENGTH
0"-1"	1/4"	5"	4'-0"
1"-2"	3/8"	7"	4'-0"

Designer/Detailer:
Replace the underlined text with the appropriate words and numbers to describe your structure and joint location.

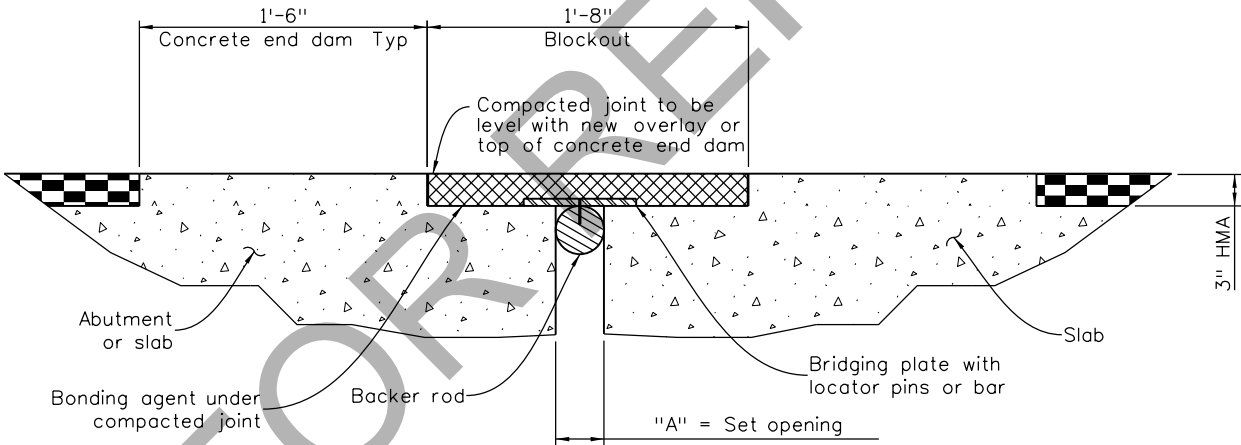
Plug Joint having a maximum horizontal movement exceeding 1/2" may not function as intended.

- At these structures:
- Temperature Extremes:
☐ Cold for mountains
☐ Hot for plains
- Truck Traffic:
☐ ≥ 2500 ADTT For high truck traffic
☐ < 2500 ADTT For moderate truck traffic
- Stop and Go Traffic:
☐ Common for controlled intersections
☐ Uncommon for everything else



SECTION THROUGH CURB

Along ϕ expansion device



NEW EXPANSION JOINT DETAIL WITH END DAMS

NOTES:

- The plug joint system shall include all labor and materials to install the expansion joint according to the Manufacturer's directions and according to these plans.
- The blockout shall be formed to full depth and ground down to provide a uniform bearing surface for the bridging plate.
- Bridging plates shall not rock on their supports prior to placing plug joint material.
- The bridging plate shall be A36 steel as shown on the Table A or equivalent approved by the Engineer. It shall be installed in accordance with the Manufacturer's directions. All bridging plates shall have locator pins or bars for centralizers.
- The backer rod shall be secured and sealed according to the Manufacturer's directions.
- The joint bonding agent shall be the type recommended by the Manufacturer for the joint system being installed. It shall be applied according to the Manufacturer's recommendations.
- All surfaces in joint opening shall be cleaned according to the Manufacturer's directions.
- The joints shall be installed and compacted according to the Manufacturer's procedures. The finished joint, after compacting and sealing, shall be flush with the top of the adjacent wearing surface.
- A representative of the Manufacturer shall be on site prior to and during installation of the plug joints and shall approve the methods and materials before work commences.
- The Asphaltic Binder shall not be overheated, either by absolute temperature limits of the material, or by extended time at a lower high temperature. Overheated material shall be disposed of safely.
- For construction requirements see section 518.08 of Standard Specifications.
- Seal top of curb as directed by the Engineer.
- Sealing the face of the curb or barrier will not be paid for separately, but will be included in the work.
- For information only: it is estimated that xxx CF of compacted joint material is required.

ACCEPTABLE EXPANSION DEVICE ALTERNATES

All Asphaltic Plug Joint materials need a Certified Test Report (CTR) from an independent laboratory showing passing test results on all referenced tests within the most recent ASTM D 6297 using granite blocks for each lot of material to be included on the APL.

A list of current Pre-Approved Lot numbers, Suppliers, and the Procedure to register new suppliers can be found on CDOT Approved Products List Web site at:

<https://apl.codot.gov/>

3/99	11/99	4/02	6/04	11/07	5/13	3/23	9/24
Revision Dates							

INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						

All seals for this set of drawings are applied to the cover page(s)	Print Date: \$DATE\$	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	Sheet Revisions			Colorado Department of Transportation <div> 2829 West Howard Place, 3rd Floor Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197</div> <div>Staff Bridge Branch</div> <div>Initials</div>	As Constructed	BRIDGE EXPANSION DEVICE (PLUG JOINT)				Project No./Code
	File Name: Sheet_B-518-P.dgn		Date:	Comments	Init.		No Revisions:	Project Number				
	Horiz. Scale: None Vert. Scale: As Noted						Revised:	Designer: XXXXXXXX	Structure	X-XX-XX	Code	
	Unit Information Unit Leader Initials						Void:	Detailer: XXXXXXXX	Numbers	X-XX-XX	Sheet Number	
								Sheet Subset: BRIDGE	Subset Sheets: BXX	of XXX		