
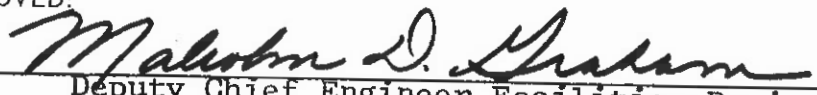


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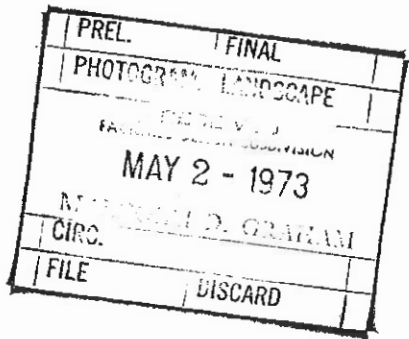
TO: Director, Preliminary Plan Review Bureau SUPERSEDED BY EI 78-009 EFFECTIVE 2/8/1978	 <h2 style="margin: 0;">ENGINEERING INSTRUCTION</h2> <p style="margin: 0;">NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p>
Distribution: <input checked="" type="checkbox"/> Main Office <input checked="" type="checkbox"/> Regions <input type="checkbox"/> Special	Code: <u> EI 73-29 </u> Date: <u> 4/26/73 </u>
APPROVED:  <u>Malcolm D. Graham</u> Deputy Chief Engineer Facilities Design	Supersedes: Instruction 71-57.2

Attached are the revised specifications for Cement Concrete Pavement Stress Relief Joints. These joints replace Item 47SR which was issued by Instruction 71-57.2.

We have developed four types of pressure relief joints. Three of these joints are intended solely for new construction (Types E, F & G), the fourth (Type H) may be used for new construction or reconstruction projects where the existing concrete pavement remains. Drawings showing the details of installation for the various types of joints may be found on page 3 of 6 through page 5 of 6 of the attached specification. The joint types shown on pages 5-29 through 5-31 of the Design Manual. Type E fig. 5-E, Type F fig. 5-F etc.

For the general criteria for use of these joints refer to section 5.05.09 of the Highway Design Manual, Volume #1.

MDG:WEH:MAK
 Attachements



- (continued)
- ITEM 47SRA - CEMENT CONCRETE PAVEMENT STRESS RELIEF JOINT (TYPE E)
 - ITEM 47SRB - CEMENT CONCRETE PAVEMENT STRESS RELIEF JOINT (TYPE F)
 - ITEM 47SRC - CEMENT CONCRETE PAVEMENT STRESS RELIEF JOINT (TYPE G)
 - ITEM 47SRD - CEMENT CONCRETE PAVEMENT STRESS RELIEF JOINT (TYPE H)

1. Description. Under this item the Contractor shall construct cement concrete pavement stress relief joints in accordance with the plans, specifications or in a manner approved by the Engineer.

2. Materials.

- A. Asphalt Concrete. Asphalt concrete used in this item shall meet the material requirements for Item 51, Asphalt Concrete--Type 1A or Item 51F, Asphalt Concrete--Type 1A.
- B. Portland Cement Concrete. Concrete placed for this item shall comply in all respects to the requirements given under Section 7, "Portland Cement Concrete--General Specifications" and the subdivision thereof designated as, "Pavement Concrete."

Details of the materials permitted are shown in the table "Composition of Concrete Items" under "Portland Cement Concrete--General Specifications." The Contractor may elect to use concrete proportioned as Class A or Class C concrete.

- C. Metal Reinforcement for Concrete Pavement. The reinforcement used in this work shall meet the requirements given under M17A, Bar Reinforcement for Cement Concrete Pavement, or M17AB, Wire Fabric Concrete Reinforcement.
- D. Asphalt. The asphalt used for the bond break shall meet the requirements given under M5, Bituminous Materials, for Items 64V, Item 65V, Item 69M--Grade A or B, or Item 70B--Grade C.
- E. Joint fillers and sealers are shown in a list of approved materials contained herein.

3. Construction Details. The details for constructing and maintaining the cement concrete pavement stress relief joints shall be in accordance with the General Specifications for Portland Cement Concrete, Section 7, and Bituminous Concrete, Section 8 and as shown herein for the various types of joints.

ITEM 47SRA ETC. (Continued)

The ends of the cement concrete shall be normal to the pavement center line, perpendicular to the surface and lie in a straight line across the full width of the pavement. The upper edges shall be beveled in a manner shown, unless otherwise approved by the Engineer. The concrete along the joint shall be carefully consolidated and finished to a true surface. The surface of the concrete at the joint shall be tested with a 10 foot straight edge or template immediately after forming. Any variations from the true surface shall be corrected immediately.

4. Method of Measurement. Cement concrete pavement stress relief joints shall be measured along the transverse centerline of the joint and shall be the number of linear feet of stress relief joints incorporated in the work in accordance with the plans and specifications.
5. Basis of Payment. The unit price bid per linear foot shall include the cost of furnishing all labor, materials, and equipment necessary for placing cement concrete pavement stress relief joints as described below:

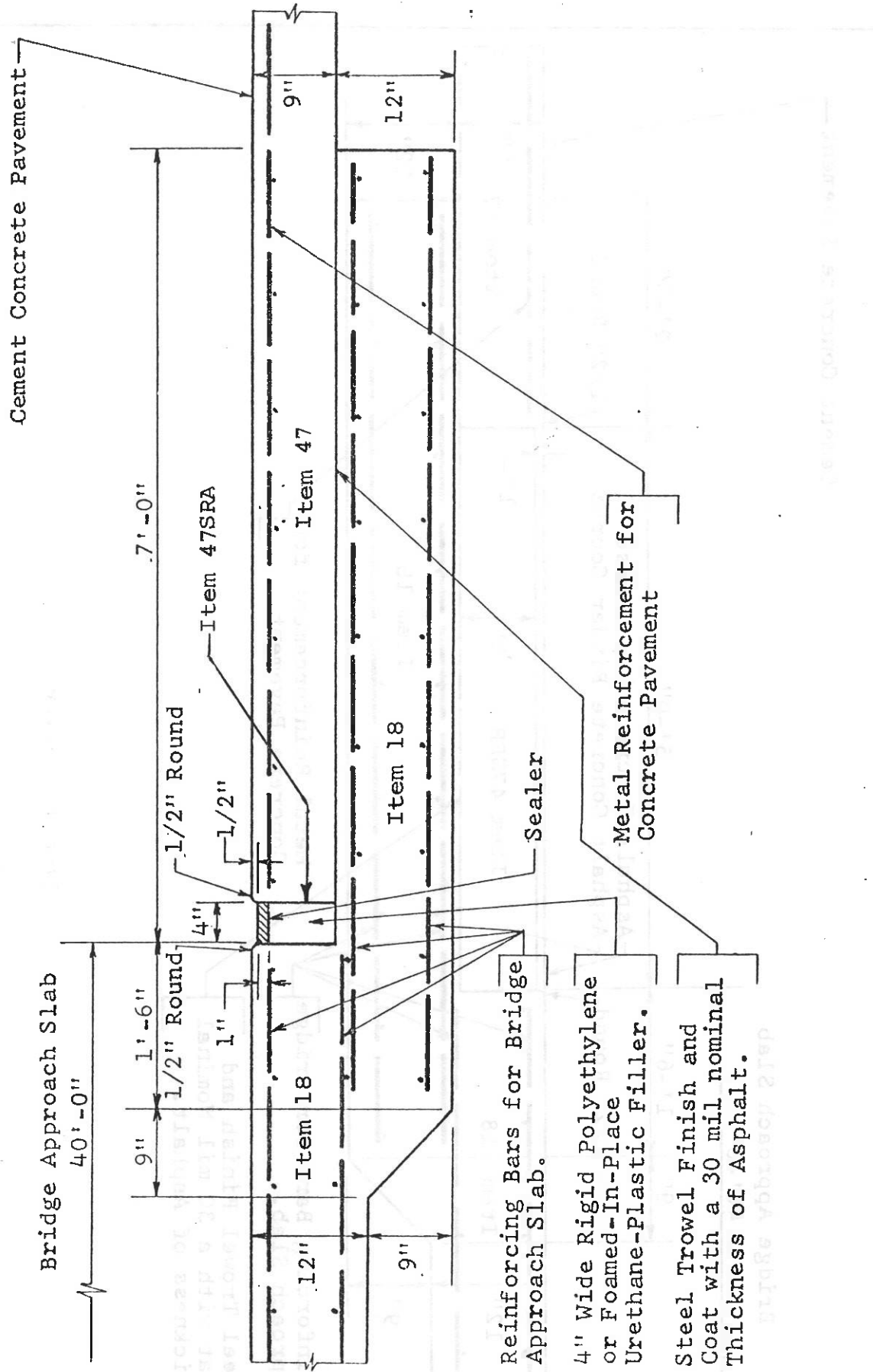
Item 47SRA (Type E). The payment for this item includes the 4" wide rigid polyethylene filler or the 4" wide foamed-in-place urethane-plastic filler, sealer, asphalt bond break and labor to steel trowel finish the upper surface of the bridge approach slab where it is to receive the asphalt bond break.

Item 47SRB (Type F). The payment for this item includes the asphalt concrete top course; the asphalt concrete binder course, the asphalt bond break and labor to steel trowel finish the upper surface of the bridge approach slab where it is to receive the asphalt bond break.

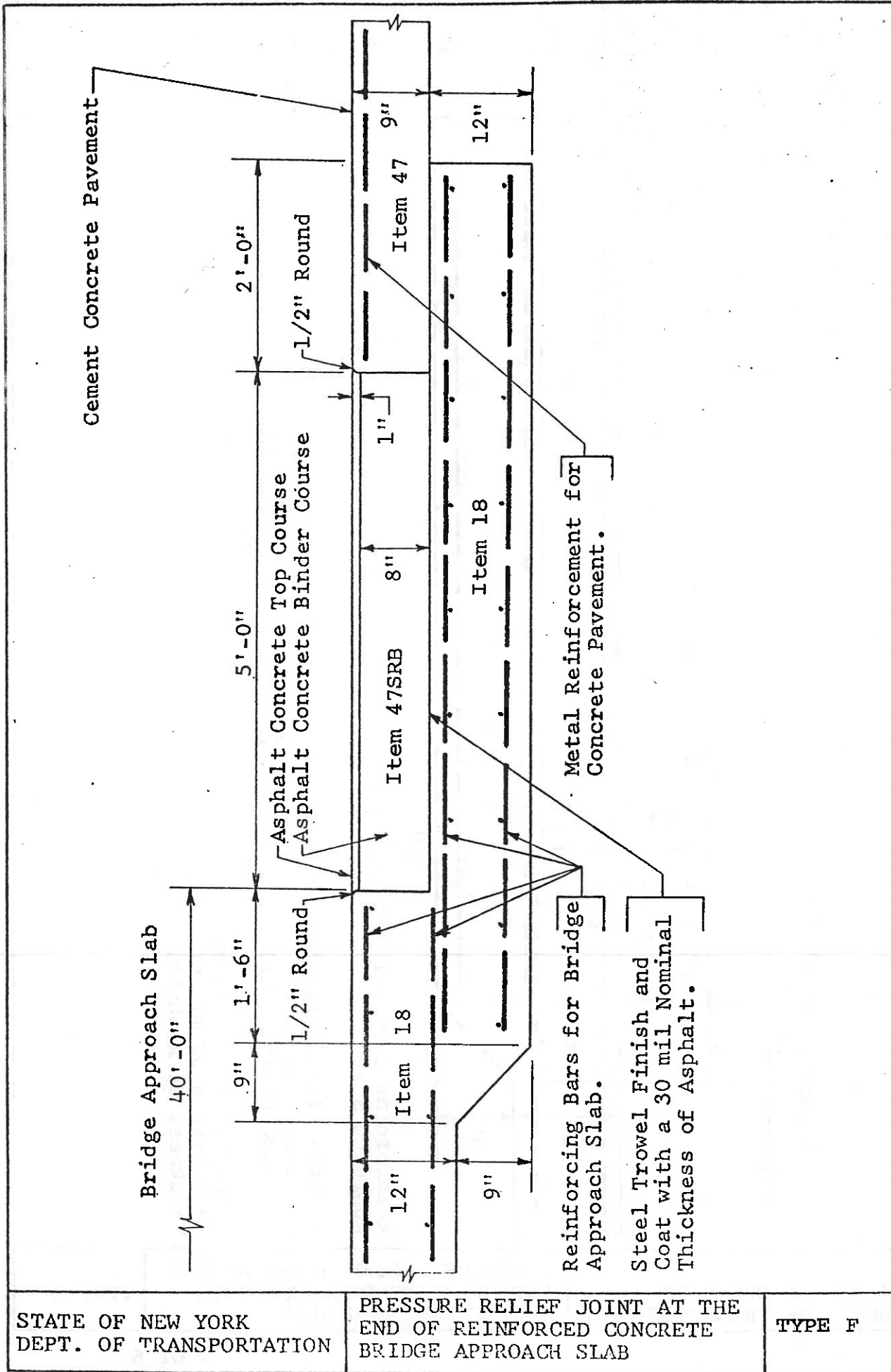
Item 47SRC (Type G). The payment for this item includes the 4" wide rigid polyethylene filler or the 4" wide foamed-in-place urethane-plastic filler, sealer, reinforced portland cement concrete support slab and the asphalt bond break.

Item 47SRD (Type H). The payment for this item includes the 4" wide rigid polyethylene filler or the 4" wide foamed-in-place urethane-plastic filler, sealer, and the cost of saw-cutting pavement on reconstruction projects.

There will be no deduction in the select granular material sub-base course for materials removed to construct these joints.



STATE OF NEW YORK DEPT. OF TRANSPORTATION	PRESSURE RELIEF JOINT AT THE END OF REINFORCED CONCRETE BRIDGE APPROACH SLAB	TYPE E
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STATE OF NEW YORK
DEPT. OF TRANSPORTATION

PRESSURE RELIEF JOINT AT THE
END OF REINFORCED CONCRETE
BRIDGE APPROACH SLAB

TYPE F

Steel Trowel Finish and Coat with a 30 mil Nominal Thickness of Asphalt

Sealer

4" Wide Rigid Polyethylene or Foamed-In-Place Urethane-Plastic Filler

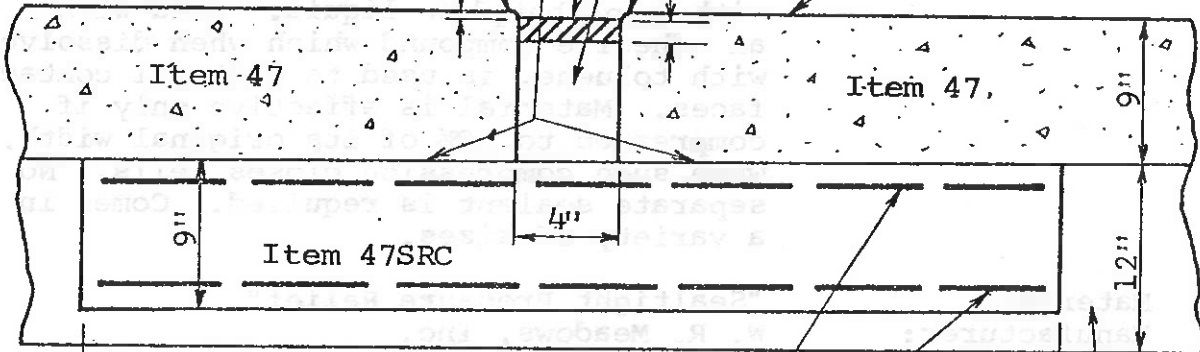
1/2" Round

1/2" Round

1/2"

1"

Cement Concrete Pavement



TYPE G

Metal Reinforcement for Concrete Pavement, 2-1/2" Cover

Granular Subbase

4" Wide Rigid Polyethylene or Foamed-In-Place Urethane-Plastic Filler

Sealer

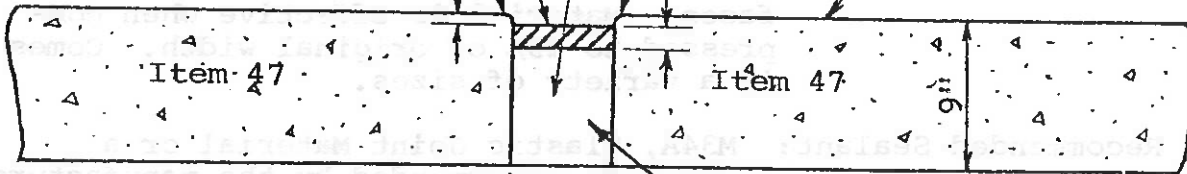
1/2" Bevel

1/2" Bevel

1/2"

1"

Cement Concrete Pavement



TYPE H

APPROVED MATERIALS FOR
PRESSURE RELIEF JOINTS

The following is a list of approved materials for use in the pressure relief joints required under this contract.

1. **Materials:** "Poly-tite"
Manufacturer: Sandell Mfg. Co., Inc.
26 New St.
Cambridge, Massachusetts 02138
Type of Material: Open-cell polyurethane foam, saturated with a polybutylene liquid. Sold with an adhesive compound which when dissolved with toluene, is used to coat all contact faces. Material is effective only if compressed to 50% of its original width, when such compression closes cells. No separate sealant is required. Comes in a variety of sizes.

 2. **Material:** "Sealtight Pressure Relief"
Manufacturer: W. R. Meadows, Inc.
2 Kimball St.
Elgin, Ill. 60120
Type of Material: Flexible, low density, expanded, extruded polyethelene foam plank. Sealtight Pressure Relief Joint Lubricant & Adhesive is used to coat all contact faces. No separate sealant is required. Comes in 9' nominal lenghts with a cross section of 4" x 10-1/2".

 3. **Material:** "Compriband"
Manufacturer: Phoenix Building Products, Inc.
65 West Street Road
Warminster, Pa. 18974
Type of Material: Open-cell polyester urethane foam with an asphalt saturant. Used in connection with "NS-115" adhesive applied to contact faces. Material is effective when compressed to 25% of original width. Comes in a variety of sizes.
- Recommended Sealant:** M34A, Plastic Joint Material or a material recommended by the manufacturer of "Compriband"

In all instances the materials should be handled, prepared and installed in conformance to the manufacturers' instructions.