

## **ITEM 15502.4511 M - CEMENT CONCRETE PAVEMENT PRESSURE RELIEF JOINTS**

**Description.** The Contractor shall construct cement concrete pavement pressure relief joints in accordance with the plans, specifications and in a manner approved by the Engineer.

### **Materials.**

**Asphalt Concrete.** Asphalt concrete used in this item shall meet the requirements of 403-2, Asphalt Concrete, Types 1, 3, 6, 6F, 7, or 7F.

**Asphalt Emulsion** shall meet the material requirements of subsection 702-3001, 702-3401, 702-3601 or 702-4501.

**Asphalt.** The asphalt used as the bond breaker shall meet the material requirements of subsection 702-0300, 702-0500 or 702-3101.

**Construction Details.** The details for constructing and maintaining the cement concrete pavement pressure relief joints shall be in accordance with Section 401, Plant Mix Pavements - General, Section 502, Portland Cement Concrete Pavement, and as shown herein.

The ends of the cement concrete shall be normal to the pavement centerline, perpendicular to the surface and lie in a straight line across the full width of the pavement. The upper edges shall be beveled as 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 3 meter straight edge or template immediately after forming. Any variations from the true surface shall be corrected immediately.

The surface of the sleeper slab shall be steel trowelled until smooth and coated with 0.8 mm of asphalt bond breaker.

All vertical contact surfaces between asphalt concrete and portland cement concrete around the perimeter of the joint shall be painted with a uniform coating of Asphalt Emulsion. The application of the asphalt emulsion shall be made to a clean and dry surface and at a rate as ordered by the Engineer.

The construction details for the asphalt concrete shall comply with the requirements specified in Subsection 401-3.01 through 401-3.15, except as modified by the following:

Type 1 Dense Base or Type 3 Dense Binder shall be placed and leveled in a manner approved by the Engineer. These mixes shall be placed to achieve a maximum compacted lift thickness of 102 mm. When the lifts of Dense Base or Dense Binder have been placed and compacted, a final lift of Type 6, 6F, 7 or 7F Top Course shall be placed and compacted so that it is level with the top of the pavement.

The bituminous concrete joint material shall be compacted transversely across the pavement by a self-propelled, dual drum vibratory roller approved by the Deputy Chief Engineer, Technical Services. The roller shall be capable of achieving 95% of Marshall density. Walk behind dual drum vibratory rollers having a minimum drum width of 610 mm wide are considered to be acceptable for this work provided that they have demonstrated that they are capable of achieving the required 95% Marshall density, in accordance with Department written instruction. A minimum of six (6) passes shall be required over each lift of bituminous material. Additional passes may be required by the Engineer.

In areas not accessible to the roller, the joint material shall be thoroughly compacted with mechanical tampers as directed by the Engineer. However, this method of compaction shall be kept to an absolute minimum.

**Method of Measurement.** The pressure relief joint will be measured as the number of meters of cement concrete pavement pressure relief joints constructed. Measurement will be taken transversely across the pavement along the centerline of the joint to the nearest one-hundredth of a meter.

**Basis of Payment.** The unit price bid per linear meter shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work. There will be no deduction in the subbase courses for materials removed to construct these joints.

The payment for this item shall include all asphalt concrete mixtures, the asphalt bond breaker, the labor to steel trowel finish the upper surface of the bridge approach slab where it is to receive the asphalt bond breaker, and the asphalt emulsion used to seal the perimeter of the joint.

DISAPPROVED BY EI 09-0006