

ITEM 04502.803401 M - INSTALLATION OF LONGITUDINAL JOINT TIES FOR FULL DEPTH PORTLAND CEMENT CONCRETE PAVEMENT REPAIRS

DESCRIPTION: Furnish and install longitudinal joint ties as shown in the contract documents or as directed by the Engineer.

MATERIALS AND EQUIPMENT:

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| Longitudinal Joint Ties | 705-14 |
| Anchoring Materials - Chemically Curing | 701-07 |

Use one piece drop in type longitudinal joint ties depicted in the Standard Sheets, except substitute 700 mm long ties for 900 mm long ties.

Anchoring Material and Dispensing Equipment. Use a pourable, two component, 100% solids structural epoxy from the Approved List. The anchoring material must be dispensed

- from side-by-side cartridges using either manually or pneumatically powered injection guns and
- through a static nozzle that homogeneously mixes the two components without any hand mixing.

Drills. Use hydraulic gang drills with a minimum of two independently powered and driven drills capable of drilling the required holes in approximately 30 seconds. Use tungsten carbide drill bits. The forward and reverse travel of the drills must be controlled by mechanically applied pressure. Mount the drill on a suitable piece of equipment such that it is quickly transported and positioned at each repair. The drill rig frame must rest atop the pavement when holes are being drilled. The drill may not rest on pneumatic tires during drilling. Hand-held drills are not permitted.

CONSTRUCTION DETAILS:

Tie Placement. Place the end ties in a slab 300 - 375 mm from the transverse joints. Space the ties between the end ties 610 mm apart, maximum.

Drilling Holes. Drill holes such that 300 mm of tie is embedded in existing concrete and 400 mm of tie protrudes from the drilled concrete face. Drill holes such that the hole diameters are in accordance with the anchoring material Manufacturer's written recommendations. Supply those recommendations to the Engineer before drilling any holes. Replace worn bits if when necessary. Perform full depth repairs if drilling cracks the existing concrete pavement to remain in place.

Cleaning Holes. Follow the anchoring material Manufacturer's written recommendations for cleaning the holes. Supply those recommendations to the Engineer. As a minimum, clean the drilled holes with oil-free and moisture-free compressed air. The Engineer will check the compressed air stream purity with a clean white cloth. Use a compressor that delivers air at a minimum of 3.4 m³ per minute and develops a minimum nozzle pressure of 0.63 MPa. Insert the nozzle to the back of the hole to force out all dust and debris.

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Tie Installation. Place the anchoring material at the back of the hole using a nozzle or wand of sufficient length. Push the tie into the hole while twisting such that the air pocket within the hole bursts and the anchoring material is evenly distributed around the bar. Use sufficient amounts of anchoring material such that it slightly extrudes out the hole as the bar is inserted.

METHOD OF MEASUREMENT: The number of longitudinal joint ties furnished and installed.

BASIS OF PAYMENT: In the unit bid price, include the cost of all labor, materials, and equipment necessary to complete the work.

This specification is
DisApproved