

ITEM 01502.02 M - CROSS STITCHING LONGITUDINAL CRACKS IN PORTLAND CEMENT CONCRETE PAVEMENT

DESCRIPTION. Drill holes and anchor deformed bar reinforcement diagonally across longitudinal cracks.

MATERIALS AND EQUIPMENT.

Deformed Bar Reinforcement, Grade 420 709-01

Anchoring Material and Dispensing Equipment. Use a pourable, two component, 100% solids structural epoxy meeting §701-07, Anchoring Materials - Chemically Curing, dispensed:

- From side-by-side cartridges by manual or pneumatically powered injection guns.
- Through a static nozzle that homogeneously mixes the material without any hand mixing.

Drills. Use a hydraulic drill with tungsten carbide bits. Control the forward and reverse travel of the drills by mechanically applied pressure. Mount the drill on a suitable piece of equipment such that it is quickly transported and positioned. Rest and reference the drill rig frame on and to the pavement surface such that the drilled holes are cylindrical and repeatable in terms of position and alignment on the surface being drilled. Hand-held drills are not permitted.

CONSTRUCTION DETAILS.

Drilling Holes. Drill the end holes in a slab 450 mm - 500 mm from the transverse joints. Drill interior slab holes at 300 mm spacings, maximum. Drill such that the:

- Holes are oriented at a 30° angle to the pavement surface.
- Hole centerlines are perpendicular to the crack at each location being drilled.
- Adjacent holes are drilled in opposite directions across the crack.
- Longitudinal centers of drilled holes are at the crack.
- Hole diameters are in accordance with the anchoring material Manufacturer's written recommendations. Give those recommendations to the Engineer before drilling any holes.
- Hole bottoms are no more than 25 mm from the slab bottom.

Repair cracks that result from drilling with a full depth repair as indicated in the contract documents.

Cleaning Holes. Clean the drilled holes in accordance with the anchoring material Manufacturer's written recommendations. Give those recommendations to the Engineer before drilling any holes. As a minimum, clean holes with oil-free and moisture-free compressed air. The Engineer will check the compressed air stream purity with a clean white cloth. The compressor must deliver air at a minimum pressure of 3.4 m³ per minute and develop a minimum nozzle pressure of 0.63 MPa. Insert the nozzle to the back of the hole to force out all dust and debris. Also, clean any chipped areas at the surface resulting from drilling holes at an angle. Repair chipped area with the anchoring material.

Deformed Bar Installation. Use 19 mm bars of sufficient length such that, when anchored, the top of the bar is 45 mm - 50 mm from the pavement surface and the center of the bar is at the crack. When using new cartridges of anchoring material, ensure the initial material exiting the nozzle appears uniformly mixed. If it is not uniformly mixed, waste the material until uniformly mixed

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material extrudes. Place the anchoring material in the back of the hole using a nozzle or wand of sufficient length. Insert the bar such that the anchoring material is evenly distributed around the bar and slightly extrudes out the hole as the bar is inserted. Trowel the anchoring material smooth to the pavement surface, filling any chipped areas.

METHOD OF MEASUREMENT. The Engineer will count the number of deformed bars installed.

BASIS OF PAYMENT. In the unit bid price, include the cost of all labor, materials, and equipment necessary to complete the work. No payment will be made for items required by the Engineer to repair damage to the adjacent pavement incurred during drilling.

This specification is
DisApproved