

Special Specification 4012

Under Deck Precast Panel Support



1. DESCRIPTION

Place epoxy or cementitious grout in void between soffit of precast concrete bridge deck panels and top of prestressed concrete beams to provide support for an existing bridge deck.

2. MATERIALS

Provide epoxies in accordance with DMS-6100, "Epoxies and Adhesives" and as approved suitable for the proposed application and as shown on the plans. Provide epoxy paste to seal panel bedding area and contain the injection epoxy and epoxy to inject into void under panel. Provide dry coarse sand meeting the requirements of Table 1 to be placed in void prior to injecting epoxy.

Table 1
Aggregate Gradation Requirements*

	Sieve No. 4	Sieve No. 8	Sieve No. 16	Sieve No. 30
% by weight passing sieve	100%	30-75%	0-5%	0-1%

*based on the washed sieve analysis given in Tex-200-F, Part II.

Provide non-shrink grout/mortar in accordance with DMS-4675, "Cementitious Grouts and Mortars for Miscellaneous Applications."

3. EQUIPMENT

Provide equipment able to remove the asphalt fiber bedding material between precast panel and top of beam as approved.

For epoxy injection method, provide equipment to place coarse sand in void between precast panel and top of beam and injection pumps able to penetrate the coarse sand matrix and fill the void.

4. CONSTRUCTION

Submit procedures to remove existing bedding strips between the top of precast concrete beam flange and bottom of precast panel for approval.

Submit procedure, including proposed materials, to fill void between the top of the prestressed concrete beam and the bottom of the panel to the Engineer for approval. Use one of the following methods to fill the void between the top of the beam flange and the bottom of the precast panel.

Remove all asphalt fiber bedding material existing between top of beam and soffit by an approved method. Probe the void to ensure the space extends a minimum of 2" from face of beam. Fill the remaining void by one the following methods.

Notify the engineer if vertical movement of the panel is observed during removal of the bedding material.

4.1 Epoxy Injection Method.

Fill the void with coarse sand.

Place epoxy paste to close gap between beam top flange and bottom of precast panel. Place injection ports/tubes into the void and embedded in the coarse sand at a spacing not exceeding 6 inch spacing along the panel support lengths as shown on the plans.

Starting with the first port along the repair length, inject epoxy into the port until epoxy comes out the next port. Cap the injection port and move to the next port where epoxy has come out and inject in this port until epoxy reaches the next port. Continue this process until the end of the repair length is reached.

4.2 Dry Pack Grout Method.

Mix non-shrink cementitious grout to obtain a stiff consistency in accordance with manufacturers specifications.

Pack the grout/mortar material in the void flush with outside of top flange. Ensure grout/mortar material is in contact with bottom of panel.

4.3 Contractor Proposed Method. Propose method of filling void to the Engineer for approval.

5. MEASUREMENT

Precast panel support will be measured by the foot of support provided on each side of the beam.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Precast Panel Support." Payment for "Precast Panel Support" is full compensation for accessing the location, removing the compressible bedding material, preparing the void; filling the void with either epoxy or non-shrink cementitious grout; and for materials, tools, equipment, labor, and incidentals.