



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE KOPELOUSOS
SECRETARY

May 4, 2009

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section 462
Proposed Specification: 4621105 Post-Tensioning

Dear Ms. Gourdine:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

These changes were proposed by Tim Ruelke, FDOT District 2 Construction Engineer to clarify that if voids are detected in tendon ducts or anchorages during inspection, they must be repaired within 48 hours by vacuum grouting and drill holes made for inspection purposes need to be filled within 4 hours after completion of inspections.

Please review and transmit your comments, if any, within four weeks. Comments should be sent via Email to ST986RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4110.

Sincerely,

Rudy Powell, Jr., P.E.
State Specifications Engineer

RP/dt

Attachment

cc: Gregory Jones, Chief Civil Litigation
Florida Transportation Builders' Assoc.
State Construction Engineer

POST-TENSIONING (REV 2-19-09)

SUBARTICLE 462-11.5.8 (of the Supplemental Specifications) is deleted and the following substituted:

462-11.5.8 Post-Grouting Operations and Inspection: Do not remove or open inlets and outlets until the grout has cured for 24 to 48 hours. Remove all outlets located at anchorages and high points along the tendon to facilitate inspection and perform inspections within one hour after the removal of the inlet/outlet. Drill and inspect all high points along the tendon as well as the inlets or outlets located at the anchorages. Depending on the geometry of the grout inlets, drilling may be required to penetrate to the inner surface of the trumpet or duct. Use drilling equipment that will automatically shut-off when steel is encountered. Unless grout caps are determined to have voids by sounding, do not drill into the cap. Perform inspections in the presence of the Engineer using endoscopes or probes. *If voids are detected in tendon ducts or anchorages during inspection* ~~Within four hours of completion of the inspections, fill all duct and anchorage voids using the volumetric measuring vacuum grouting process.~~ *within 48 hours.* *If no voids are detected in tendon ducts or anchorages,* seal and repair all anchorage and inlet/outlet voids that are produced by drilling for inspection purposes as specified in 462-12.2 *within 4 hours of completion of the inspections.* Remove the inlet/outlet to a minimum depth of 2 inches. Use an injection tube to extend to the bottom of the drilled holes for backfilling with epoxy.

Post grouting inspection of tendons having a length of less than 150 feet may utilize the following statistical frequency for inspection:

1. For the first 20 tendons, inspect all outlets located at anchors and tendon high points by drilling and probing with an endoscope or probe. If one or more of the inspection locations are found to contain a defect (void), continue testing all tendons until 20 consecutive tendons have been inspected and no voids have been found.

2. When no defects are detected as defined in No. 1 above, the frequency of inspection can be reduced to inspect every other tendon (50%). If a defect is located, inspect the last five tendons grouted. Return to step 1 above and renew the cycle of 100% tendon inspection.

If tendon grouting operations were prematurely terminated prior to completely filling the tendon, drill into the duct and explore the voided areas with an endoscope. Probing is not allowed. Determine the location and extent of all voided areas. Install grout inlets as needed and fill the voids using volumetric measuring vacuum grouting equipment.

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