



*Florida Department of Transportation*

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GOVERNOR

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Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.  
SECRETARY

January 4, 2022

Khoa Nguyen  
Director, Office of Technical Services  
Federal Highway Administration  
3500 Financial Plaza, Suite 400  
Tallahassee, Florida 32312

Re: State Specifications Office  
Section: **452**  
Proposed Specification: **4520402 Precast Segmental Bridge Construction.**

Dear Mr. Nguyen:

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

The changes are proposed by Ben Goldsberry from the Structures Design Office to allow PT systems to be accepted through the shop drawing submittal process instead of through a pre-approved list. The proposed specification change is associated with the changes made to Section 5, 462, and 960.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to [daniel.strickland@dot.state.fl.us](mailto:daniel.strickland@dot.state.fl.us).

If you have any questions relating to this specification change, please call me at (850) 414-4130.

Sincerely,

Signature on file

Daniel Strickland, P.E.  
State Specifications Engineer

DS/ra

Attachment

cc: Florida Transportation Builders' Assoc.  
State Construction Engineer

## PRECAST SEGMENTAL BRIDGE CONSTRUCTION (REV 11-10-21)

SUBARTICLE 452-4.2 is deleted and the following substituted:

**452-4.2 Information Required:** Submit integrated detailed shop drawings, calculations, manuals and other information, including, but not limited to, the following:

### 452-4.2.1 Segment Shop Drawings:

1. A schedule of materials for segment fabrication including concrete, reinforcing steel, prestressing steel, duct filler, and other similar items.
2. Each segment number and the direction of erection.
3. Segment dimensions including widths, lengths, thicknesses, tapers, fillets, radii, working points, post-tensioning, clearances, rebar dimensions and spacing, embedded items, holes, anchorage positions, and other similar items.
4. Post-tensioning hardware components meeting the requirements as outlined in Section 462. ~~Check post tensioning for consistency with pre approved post-tensioning hardware and provide part numbers for Department pre approved systems on the shop drawings. Substitution of parts or materials is not allowed.~~
5. The volume of concrete, weight of reinforcement and weight of post-tensioning in each precast segment and the total weight for reinforcement and post-tensioning for both the superstructure and substructure summarized and tabulated on the shop drawings.
6. Details and calculations for any localized strengthening for concentrated supports and loads or reactions from any special erection equipment placed in locations not already allowed for in the Plans.
7. Details and supporting calculations for any modifications to segment geometry, cross section dimensions, or segment length including any required changes to reinforcing and post-tensioning.
8. Details of permanent and temporary embedded items including inserts, blockouts, temporary openings, holes, and other similar items; and any localized required strengthening and the materials and methods to fill and finish the holes.

SUBARTICLE 452-5.2 is deleted and the following substituted:

**452-5.4 Post-Tensioning Systems:** Use post-tensioning hardware components meeting the requirements of Section 462 and used in field mock-up testing. Components are not interchangeable and must comply with the details of the approved shop drawings.

**PRECAST SEGMENTAL BRIDGE CONSTRUCTION**  
**(REV 11-10-21)**

SUBARTICLE 452-4.2 is deleted and the following substituted:

**452-4.2 Information Required:** Submit integrated detailed shop drawings, calculations, manuals and other information, including, but not limited to, the following:

**452-4.2.1 Segment Shop Drawings:**

1. A schedule of materials for segment fabrication including concrete, reinforcing steel, prestressing steel, duct filler, and other similar items.
2. Each segment number and the direction of erection.
3. Segment dimensions including widths, lengths, thicknesses, tapers, fillets, radii, working points, post-tensioning, clearances, rebar dimensions and spacing, embedded items, holes, anchorage positions, and other similar items.
4. Post-tensioning hardware components meeting the requirements as outlined in Section 462.
5. The volume of concrete, weight of reinforcement and weight of post-tensioning in each precast segment and the total weight for reinforcement and post-tensioning for both the superstructure and substructure summarized and tabulated on the shop drawings.
6. Details and calculations for any localized strengthening for concentrated supports and loads or reactions from any special erection equipment placed in locations not already allowed for in the Plans.
7. Details and supporting calculations for any modifications to segment geometry, cross section dimensions, or segment length including any required changes to reinforcing and post-tensioning.
8. Details of permanent and temporary embedded items including inserts, blockouts, temporary openings, holes, and other similar items; and any localized required strengthening and the materials and methods to fill and finish the holes.

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**452-5.4 Post-Tensioning Systems:** Use post-tensioning hardware components meeting the requirements of Section 462 and used in field mock-up testing. Components are not interchangeable and must comply with the details of the approved shop drawings.