

ORIGINATION FORM

Date: 12/01/10

Originator: Steven Plotkin

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Specification Title: Concrete Post-tensioned Segmental Box Girder (CPSBG) Construction Supervision – New Construction (New)

Specification Section, Article, or Subarticle Number: ~~5-8.4~~, 1050808 (New)

Why does the existing language need to be changed? This is a new sub-article that is needed in order to be clear about the Department's expectations for supervision of CPSBG bridge projects. On occasion, Contractors have interpreted the current specification as not requiring that a registered professional engineer meeting the experience and training requirements of 105-8.8 for CPSBG bridges be present on the actual site of construction on a full time basis and in responsible charge of all CPSBG engineering activities though that is the Department's intent. These concerns also apply to the CPSBG Superintendant and Casting Yard Engineer.

Summary of the changes: The level and scope of authority, on site presence, duration of involvement and work station location for supervisors is specified.

Are these changes applicable to all Department jobs? Yes If not, what are the restrictions?

Will these changes result in an increase or decrease in project costs? No If yes, what is the estimated change in costs?

With who have you discussed these changes? David Sadler

What other offices will be impacted by these changes? None

Are changes needed to the PPM, Design Standards, SDG, CPAM or other manual? No

Is a Design Bulletin, Construction Memo, or Estimates Bulletin needed? No

Contact the State Specifications Office for assistance in completing this form.
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**OFFICE OF THE
SECRETARY**

M E M O R A N D U M

DATE: April 7, 2011

TO: Specification Review Distribution List

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

SUBJECT: Proposed Specification: 1050808 Contractor Quality Control General Requirements – Concrete Post-Tensioned Segmental Box Girder Construction.

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Steven Plotkin of the State Construction Office to be clear about the Department's expectations that Supervisors of concrete post-tensioned box girder bridges be present on the actual site of construction on a full time basis and in responsible charge of all CPSBG engineering activities.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at SP965RP or rudy.powell@dot.state.fl.us. Comments received after **May 5, 2011** may not be considered. Your input is encouraged.

RP/cah
Attachment

**CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS – CONCRETE
POST-TENSIONED SEGMENTAL BOX GIRDER CONSTRUCTION.**

(REV 3-28-11)

SUBARTICLE 105-8.8.4 (Pages 146-148) is deleted and the following substituted:

105-8.8.4 Concrete Post-Tensioned Segmental Box Girder Construction:

Ensure the individuals filling the following positions meet the minimum requirements as follows:

105-8.8.4.1 Project Engineer-New Construction: Ensure the Project Engineer is a registered professional engineer with five years of bridge construction experience. Ensure a minimum of three years of experience is in Segmental Box Girder Construction Engineering and includes a minimum of one year in segmental casting yard operations and related surveying, one year in segment erection and related surveying, including post-tensioning and grouting of longitudinal tendons and a minimum of one year as the Project Engineer in responsible charge of Segmental Box Girder Construction Engineering. *Ensure this individual is present at the site of construction, at all times while segmental box girder construction or segment erection is in progress.*

105-8.8.4.2 Project Engineer-Repair and Rehabilitation: Ensure the Project Engineer is a registered Professional Engineer with five years of bridge construction experience. Ensure a minimum of three years of experience is in Segmental Box Girder Construction Engineering and includes one year of post-tensioning and grouting of longitudinal tendons and a minimum of one year as the Project Engineer in responsible charge of Segmental Box Girder rehabilitation engineering or Segmental Box Girder new construction engineering.

105-8.8.4.3 Project Superintendent/Manager-New Construction: Ensure the Project Superintendent/Manager has a minimum of ten years of bridge construction experience or is a registered professional engineer with five years of bridge construction experience. Ensure that a minimum of three years of experience is in Segmental Box Girder construction operations and includes a minimum of one year in the casting yard operations and related surveying, one year in segment erection and related surveying including post-tensioning and grouting of longitudinal tendons and a minimum of one year as the Project Superintendent/Manager in responsible charge of Segmental Box Girder construction operations. *Ensure this individual is present at the site of construction, at all times while segmental box girder construction or segment erection is in progress.*

105-8.8.4.4 Project Superintendent/Manager-Repair and Rehabilitation: Ensure the Project Superintendent/Manager has a minimum of five years of bridge construction experience or is a registered professional engineer with three years of bridge construction experience. Ensure that a minimum of two years of experience is in Segmental Box Girder construction operations and includes a minimum of one year experience performing post-tensioning and grouting of longitudinal tendons and a minimum of one year as the Project Superintendent/Manager in responsible charge of Segmental Box Girder rehabilitation operations or Segmental Box Girder new construction operations.

105-8.8.4.5 Foreman-New Construction: Ensure that the Foreman has a minimum of five years of bridge construction experience with two years of experience in Segmental Box Girder Operations and a minimum of one year as the foreman in responsible charge of Segmental Box Girder new construction Operations. *Ensure this individual is present*

at the site of construction, at all times while segmental box girder construction or segment erection is in progress.

105-8.8.4.6 Foreman-Repair and Rehabilitation: Ensure the Foreman has a minimum of five years of bridge construction experience with two years of experience in Segmental Box Girder Operations and a minimum of one year as the foreman in responsible charge of Segmental Box Girder rehabilitation operations or Segmental Box Girder new construction operations.

105-8.8.4.7 Geometry Control Engineer/Manager: Ensure that the Geometry Control Engineer/Manager for construction of cast-in-place box segments is a Registered Professional Engineer with one year of experience, a non-registered Engineer with three years of experience or a Registered Professional Land Surveyor with three years of experience in geometry control for casting and erection of cast-in-place box segments. Credit for experience in cast-in-place box girder geometry control will be given for experience in precast box girder geometry control but not vice versa.

Ensure that the Geometry Control Engineer/Manager for precast box segments is a Registered Professional Engineer with one year of experience or non-registered with three years of experience in casting yard geometry control of concrete box segments.

The Geometry Control Engineer/Manager must be responsible for and experienced at implementing the method for establishing and maintaining geometry control for segment casting yard operations and segment erection operations and must be experienced with the use of computer programs for monitoring and adjusting theoretical segment casting curves and geometry. This individual must be experienced at establishing procedures for assuring accurate segment form setup, post-tensioning duct and rebar alignment and effective concrete placement and curing operations as well as for verifying that casting and erection field survey data has been properly gathered and recorded. *Ensure this individual is present at the site of construction, at all times while cast-in-place segmental box girder construction is in progress or until casting yard operations and segment erection ~~is~~ are complete.*

105-8.8.4.8 Surveyor: Ensure that the Surveyor in charge of geometry control surveying for box segment casting and/or box segment erection has a minimum of one year of bridge construction surveying experience. *Ensure this individual is present at the site of construction, at all times while segmental box girder construction or segment erection is in progress.*