

ORIGINATION FORM

Date: **5 October 2012**

Originator: **Larry Jones**

Contact Information: Larry.Jones@dot.state.fl.us

Specification Title: **Structures Foundations**

Specification Section, Article, or Subarticle Number: **Specification 105 for Design Build**

Why does the existing language need to be changed? **Clarify requirements for Design Build projects formerly included in the Request for Proposal**

Summary of the changes: **Design Build Specific items incorporated**

Are these changes applicable to all Department jobs? No

If not, what are the restrictions? Design Build Projects with Structure Foundations only

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? Materials, Construction

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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ANANTH PRASAD, P.E.
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M E M O R A N D U M

DATE: October 17, 2012

TO: Specification Review Distribution List

FROM: Trey Tillander, State Specifications Engineer

SUBJECT: Proposed Design Build Specification: **1050813 CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS.**

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

This change was proposed by Larry Jones of the State Structures Design Office to update Section 105 for Design Build Projects.

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 SP965TT or trey.tillander@dot.state.fl.us. Comments received after **November 14, 2012**, may not be considered. Your input is encouraged.

TT/cah
Attachment

CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS.
(REV 10-1-12)

ARTICLE 105-8 (Pages 138 – 146) is expanded by the following.

105-8.13 Geotechnical Foundation Services Personnel For Design Build Projects:

105-8.13.1 General: Provide qualified personnel to design foundations and provide geotechnical analyses and recommendations for the design of roadways and structures for the project. Provide qualified and trained personnel to perform foundation testing, inspection of the construction activities and oversight of the foundation construction operations. Ensure the personnel provided meet the registration and qualification requirements specified herein and these requirements are maintained throughout the duration of the design and construction of the project elements where these personnel are required to work.

Submit qualification statements for the geotechnical, dynamic testing, load testing and non-destructive testing personnel to be used on the project for acceptance by the Engineer. The Department will review these qualification statements, provide comments or request additional information within 15 working days, excluding weekends and Department observed holidays. Do not begin Design or Construction until the qualifications of supervisory personnel have been approved by the Engineer. Acceptance of the Design-Build Firm's personnel does not relieve the Design-Build Firm of the responsibility for obtaining the required results in the completed work.

105-8.13.2 Geotechnical Foundation Design Engineer of Record (GFDEOR): Provide a Geotechnical Foundation Design Engineer of Record in responsible charge of the geotechnical exploration, analysis, design and recommendations for the roadways and structures on the project. The GFDEOR shall also supervise and certify the constructed foundations. The GFDEOR must be a Professional Engineer registered in the state of Florida and must have a minimum of five years of design experience with the type of foundation proposed for the project. For bridges founded on piles and drilled shafts, the GFDEOR must possess verifiable responsible charge experience in the interpretation and utilization of data from the types of load tests (dynamic, static, Osterberg Cell and/or Statnamic load tests) used on the project on at least three Department bridge projects.

105-8.13.3 Dynamic Testing Engineer: Provide a Dynamic Testing Engineer in responsible charge of the performance of the dynamic load testing of driven piles, evaluation, signal matching and analysis of the dynamic load test data, the establishment of the production pile lengths (when these are to be determined based on test pile information) and driving criteria. Production pile lengths and driving criteria shall be developed by the same engineering firm, and under the same Dynamic Testing Engineer analyzing the dynamic pile testing data in conjunction with the GFDEOR. The Dynamic Testing Engineer must be a Professional Engineer registered in the state of Florida with responsible charge experience of geotechnical foundation construction engineering and dynamic testing of driven piles for a period of not less than three years including at least three Department bridge projects. This "responsible charge" experience shall include verifiable experience using the test methods that will be utilized on the project.

105-8.13.4 Dynamic Testing Operator: Provide a Dynamic Testing Operator to perform the dynamic load testing of instrumented piles and test piles in the field. When EDCs will be used to monitor piles and/or test piles, EDC monitoring shall be performed by an operator who has passed EDC Monitoring Certification as evidenced by a Smart Structures

valid Certification Card and ID. The operator must have experience in geotechnical foundation construction and dynamic testing of driven piles for a period of not less than three years including at least three Department bridge projects. The experience may have been obtained while working under the supervision of another qualified operator. The Dynamic Testing Operator shall work under the supervision of the Dynamic Testing Engineer.

***105-8.13.5 Foundation Inspectors:** Provide qualified foundation inspectors, working under the supervision of the GFDEOR, to monitor and record the construction of foundations. Pile Driving inspectors must possess CTQP Pile Driving Inspector qualification. Drilled Shaft inspectors must possess CTQP Drilled Shaft Inspector qualification. Auger Cast Pile inspectors must have completed and passed the CTQP based training class for auger cast piles.*

***105-8.13.6 Pile Driving Superintendents:** Use pile driving superintendents in responsible charge of pile driving operations, with experience in installing driven piles of the type, size and depth proposed for the project and for a period of not less than two years.*

***105-8.13.7 Drilled Shaft Superintendents:** Use drilled shaft superintendents in responsible charge of drilling operations with experience in installing drilled shafts of the size and depth proposed and for the project for a period of not less than three years.*

***105-8.13.8 Auger Cast Pile Superintendents:** Use auger cast pile superintendents in responsible charge of auger cast pile installation operations with experience in installing auger cast piles of the size and depth proposed for the project and for a period of not less than one year.*