



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

December 20, 2012

REVISED

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

Re: Office of Design, Specifications
Section **105**
Proposed Specification: **1050813 CONTRACTOR QUALITY CONTROL,
GENERAL REQUIREMENTS, (Design Build).**

Dear Ms. Gourdine:

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

These changes were proposed by Larry Jones of the State Structures Design Office to update Section 105 for Design Build Projects. **Changes were made in response to Rafiq Darji comments.**

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965TT or trey.tillander@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4140.

Sincerely,

Signature on File

V. Y. "Trey" Tillander, III, P.E.
State Specifications Engineer

TT/cah

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS.**(REV ~~120-31-12~~12-20-12)**

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 accepted~~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 (DTE): 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~~DTE analyzing the dynamic pile testing data in conjunction with the GFDEOR. The ~~Dynamic Testing Engineer~~DTE 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~~DTE.*

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 or foremen 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 or foremen in responsible charge of drilling operations with experience in installing drilled shafts of the size and depth proposed for the project and for a period of not less than three years.*

105-8.13.8 Auger Cast Pile Superintendents: *Use auger cast pile superintendents or foremen 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.*

CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS.
(REV 12-3-12)

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 accepted 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 (DTE): 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 DTE analyzing the dynamic pile testing data in conjunction with the GFDEOR. The DTE 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 DTE.

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 or foremen 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 or foremen in responsible charge of drilling operations with experience in installing drilled shafts of the size and depth proposed for the project and for a period of not less than three years.

105-8.13.8 Auger Cast Pile Superintendents: Use auger cast pile superintendents or foremen 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.