EXHIBIT "A"

CONSTRUCTION ENGINEERING AND INSPECTION

SCOPE OF SERVICES

FOR

Project Description

SR 8 (I-10) New Jackson County Rest Areas

Financial Project ID(s):

452185-1-62-01 (Westbound) and 452185-2-62-01 (Eastbound)

Federal Project No.:

N/A

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SCOPE OF SERVICES
CONSTRUCTION ENGINEERING AND INSPECTION

1.0 PURPOSE:

This scope of services describes and defines the Construction Engineering and Inspection (CEI) services which are required for contract administration, inspection, and materials sampling and testing for the construction projects listed below.

2.0 SCOPE:

Provide services as defined in this Scope of Services, the referenced Department manuals, and procedures.

The projects for which the services are required are:

Financial Project IDs: 452185-1-62-01 (WB) and 452185-2-62-01 (EB)
Descriptions: Rest Area Improvements
County: Jackson County

Serve as the Department's representative on the project and faithfully represent the Department's interest in all matters, with special emphasis given to issues involving public safety, quality, timely completion of the work, and financial responsibility. Exercise independent professional judgment in performing obligations and responsibilities under this Agreement. Pursuant to Section 4.1.5 of the Construction Project Administration Manual (CPAM), the authority of the Consultant's lead person, such as the Senior Project Engineer, and the Consultant's Project Administrator shall be identical to the Department's Resident Engineer and Project Administrator respectively and shall be interpreted as such.

Services provided by the Consultant shall comply with Department manuals, procedures, and memorandums found at the State Construction Office's website.

On a single Construction Contract, it is a conflict of interest for a professional firm to receive compensation from both the Department and the Contractor either directly or indirectly.

At the Department's discretion, CEI services for the following project(s) may be added to the contract by supplemental amendment: *(Financial Project Numbers(s) – 452185-4 Westbound Rest Area Landscape and 452185-5 Eastbound Rest Area Landscape Projects.*

3.0 LENGTH OF SERVICE:

The services for each Construction Contract shall begin upon written notification to proceed by the Department.

Track the execution of the Construction Contract such that the Consultant is given timely authorization to begin work. While no personnel shall be assigned until written notification by the Department has been issued, the Consultant shall be ready to assign personnel within 14 calendar days of notification. For the duration of the project, coordinate closely with the Department and Contractor to minimize rescheduling of Consultant activities due to construction delays or changes in scheduling of Contractor activities.

For estimating purposes, the Consultant will be allowed an accumulation of 30 calendar days to perform preliminary administrative services prior to the issuance of the Contractor's notice to proceed on the first project and 30 calendar days to demobilize after Final Acceptance of the last Construction Contract.

The anticipated letting schedules and construction times for the projects are tabulated below:

Construction Contract Estimate			
Financial Project ID	Letting Date (Mo/Day/Yr)	Start Date (Mo/Day/Yr)	Duration (Days)
45218515201	1/26/2027	6/112027	617
45218525201	1/26/2027	9/2027	678

4.0 DEFINITIONS:

A. Agreement: The Professional Services Agreement between the Department and the Consultant setting forth the obligations of the parties thereto, including but not limited to, the performance of the work, furnishing of services, and the basis of payment.

B. Contractor: The individual, firm, or company contracting with the Department for performance of work or furnishing of materials.

C. Construction Contract: The written agreement between the Department and the Contractor setting forth the obligations of the parties thereto, including, but not limited to, the performance of the work, furnishing of labor and materials, and the basis of payment.

D. Construction Project Manager: The Department employee assigned to manage the Construction Engineering and Inspection Contract and represent the Department during the performance of the services covered under this Agreement.

E. Construction Training/Qualification Program (CTQP): The Department program for training and qualifying technicians in Aggregates, Asphalt, Concrete, Earthwork, and Final Estimates Administration. Program information is available at CTQP website.

F. Consultant: The Consulting firm under contract to the Department for administration of CEI services.

G. CEI Project Administrator/Project Engineer: The employee assigned by the Consultant to be in charge of providing Construction Contract administration services for one (1) or more Construction Projects.

H. CEI Resident Compliance Specialist: The employee assigned by the Consultant to oversee project specific compliance functions.

I. CEI Senior Project Engineer: The Engineer assigned by the Consultant to be in charge of providing Construction Contract administration for one (1) or more Construction Projects. This person may supervise other Consultant employees and act as the lead Engineer for the Consultant.

J. District Construction Engineer: The administrative head of the District’s Construction Offices.

K. District Contract Compliance Manager: The administrative head of the District Contract Compliance Office.

L. District Consultant CEI Manager: The Department employee assigned to administer the Consultant Construction Engineering and Inspection (CCEI) Program in the District.

M. District Director of Transportation Operations: The Director of Construction, Maintenance, Traffic Operations, Materials, and Safety.

N. District Final Estimates Manager: The administrative head of the District Final Estimates Office.

O. District Procurement Services Manager: The administrative head of the District Professional Services Office.

P. District Secretary: The Chief Executive Officer in each of the Department's eight (8) Districts.

Q. Districtwide Contract Compliance Specialist Consultant: The Consultant hired under a separate agreement with the Department to ensure Contractors comply with the requirements of the Federal Highway Administration and USDOL.

R. Engineer of Record: The Engineer noted on the Construction plans as the responsible person for the design and preparation of the plans.

S. Operations Engineer: The Engineer assigned to a particular County or area to administer Construction and Maintenance Contracts for the Department.

T. Public Information Office: The Department's office assigned to manage the Public Information Program.

U. Resident Engineer: The Engineer assigned to a particular County or area to administer Construction Contracts for the Department.

V. Complex Category Two (CC2) Bridge Structures: Bridge structures that are complex and require advanced designs and construction engineering and inspection. A full definition is provided in the FDOT Design Manual.

5.0 ITEMS TO BE FURNISHED BY THE DEPARTMENT TO THE CONSULTANT:

A. The Department, on an as-needed basis, will furnish the following Construction Contract documents for each project. These documents may be provided in either paper or electronic format:

1. Construction Plans
2. Specifications Package
3. Computer Aided Drafting and Design (CADD) Files
4. Copy of the Executed Construction Contract

5. Utility Agency's Approved Material List (if applicable)

B. The Department will allow connection to the FDOT Network by the Consultant through either online access, authorized Virtual Private Network (VPN) or approved leased lines. Appropriate approvals must be received from the Department prior to their use.

C. The Department will furnish and support the software packages for AASHTOware Project Construction (PrC) or any subsequent system.

6.0 ITEMS FURNISHED BY THE CONSULTANT:

6.1 Department Documents:

All applicable Department documents referenced herein shall be a condition of this Agreement. All Department documents, directives, procedures, and standard forms are available through the Department's Website or through the District.

6.2 Office Automation:

Provide all software and hardware necessary to efficiently and effectively carry out the responsibilities under this Agreement.

Provide each inspection staff with a laptop computer (or tablet) running PrC or any subsequent application through Citrix connection using a mobile broadband connection at the jobsite.

All computer coding shall be input by Consultant personnel using equipment furnished by them.

All informational, contractual and other business required for this project will be through a system of paperless electronic means. When the specifications require a written submission of documentation, such documents must be submitted electronically.

All documents requiring a signature must be executed electronically by both parties in accordance with Chapter 668, Florida Statutes, and have the same force and effect as a written signature. The Department will provide a web-based collaboration site to facilitate the electronic document exchange. All persons requiring access to the collaboration site shall be identified during the preconstruction conference. All persons that normally sign paper documents, and will be using the site, must acquire digital signature certificates.

Ownership and possession of computer equipment and related software provided by the Consultant shall remain with the Consultant at all times. The Consultant shall retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Field office equipment shall be maintained and operational at all times.

6.3 Field Office:

Engineer's Field Office will be included in the Construction Contract as a per day pay item. The Contractor shall obtain all necessary permits for setting up the field office and making connections to city, county or local facilities and the cost of such permits shall be included

in the pay item for the construction field office. The field office will be furnished and will meet the requirements of the Construction Contract.

Field office expenses will be compensated in accordance with Exhibit "B", Method of Compensation.

Provide a private office (minimum of 150 square feet) for the Construction Project Manager with office furniture, telephone, and broadband internet access.

Engineer's Field Office will be provided by the Department.

Field office expenses will be compensated in accordance with Exhibit "B", Method of Compensation.

6.4 Vehicles:

Equip vehicles with appropriate safety equipment and to effectively carry out the requirements of this Agreement. Vehicles shall have the Consultant's name and phone number visibly displayed on both sides of the vehicle.

6.5 Field Equipment:

Supply survey, inspection, and testing equipment essential to perform services under this Agreement; such equipment includes non-consumable and non-expendable items.

Hard hats and safety vests shall have the Consultant's name visibly displayed.

Equipment described herein and expendable materials under this Agreement will remain the property of the Consultant and shall be removed at completion of the work.

Handling of nuclear density gauges shall be in compliance with license requirements.

Retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Maintain field office equipment at all times.

6.6 Licensing for Equipment Operations:

Obtain proper licenses for equipment and personnel operating equipment when licenses are required. The license and supporting documents shall be available for verification by the Department, upon request.

Radioactive Materials License for use of Surface Moisture Density Gauges shall be obtained through the State of Florida Department of Health.

7.0 LIAISON RESPONSIBILITY OF THE CONSULTANT:

For the duration of the Agreement, keep the Department's Construction Project Manager informed of all significant activities, decisions, correspondence, reports, and other communications related to its responsibilities under this Agreement.

Facilitate communications between all parties (i.e. architectural, mechanical, materials, landscaping, local agencies, etc.), ensuring responses and resolutions are provided in a timely manner. Maintain accurate records to document the communication process.

Inform the designated Department project personnel of any design defects, reported by the Contractor or observed by the Consultant.

Submit all administrative items relating to Invoice Approval, Personnel Approval, User IDs, Time Extensions, and Supplemental Amendments to the Construction Project Manager for review and approval.

8.0 PERFORMANCE OF THE CONSULTANT:

During the term of this Agreement and all Supplemental Amendments thereof, the Department will review various phases of the Consultant's operations, such as construction inspection, materials sampling and testing, and administrative activities, to determine compliance with this Agreement. Cooperate and assist Department representatives in conducting the reviews. If deficiencies are indicated, immediately implement remedial action. Document the Department's recommendations and the Consultant's responses/actions. No additional compensation shall be allowed for remedial action taken by the Consultant to correct deficiencies. Remedial actions and required response times may include, but are not limited to, the following:

A. Further subdivide assigned inspection responsibilities, reassign inspection personnel, or assign additional inspection personnel, within seven (7) calendar days of notification.

B. Immediately replace personnel whose performance has been determined by the Consultant and/or the Department to be inadequate.

C. Immediately increase the frequency of monitoring and inspection activities in phases of work that are the Consultant's responsibility.

D. Increase the scope and frequency of training of the Consultant personnel.

9.0 REQUIREMENTS OF THE CONSULTANT:

9.1 General:

Administer, monitor, and inspect the Construction Contract such that the project is constructed in conformance with the plans, specifications, and special provisions for the Construction Contract.

Observe the Contractor's work to determine the progress and quality of work. Identify discrepancies, report significant discrepancies to the Department, and direct the Contractor to correct such observed discrepancies.

Pursuant to Section 337.11(9)(a), Florida Statutes, the Consultant is hereby designated by the Secretary of the Department to negotiate and approve Supplemental Agreements within the thresholds established in the CPAM. Seek input from the Construction Project Manager relating to all Supplemental Agreement requests. Supplemental Agreements must be determined to be in accordance with Florida law by the Department prior to approval by the Consultant. For any Supplemental Agreement which exceeds the thresholds, prepare

the Supplemental Agreement as a recommendation to the Department, which the Department may accept, modify or reject upon review. Consult with the Construction Project Manager as necessary and direct all issues which exceed delegated authority to the Construction Project Manager for Department action or direction.

Inform the designated Department project personnel of any significant omissions, substitutions, defects, and deficiencies noted in the Contractor's work and the corrective action that has been directed to be performed by the Contractor.

9.2 Independent Engineering Judgment:

Exercise independent engineering judgment in pursuit of the project. Personnel are expected to gather information from project inspection personnel and make informed, technically sound decisions to promote timely, successful completion of the project without sacrificing quality. For technical issues which require coordination with the Department, all levels of CEI Project Engineer shall be expected to present options for consideration along with a preferred option. Engineering experience and expertise are considerations for the selection of Consultant staff. It is the Department's expectation that this experience and expertise will be employed by Consultant staff to make sound engineering judgments and recommendations throughout the project.

9.3 Public Safety:

Hold public safety paramount throughout the project. If the Consultant determines that any activity of the Contractor poses an imminent hazard to the public, the Consultant shall direct the Contractor to immediately cease the activity and to close the affected lanes of traffic until the deficiency is addressed.

9.4 Timely Resolution:

Prioritize the Department's goal of the timely and successful completion of the project. Work to actively develop solutions to issues encountered on the project in an expedient manner and work to ensure that issues do not persist for long periods without resolution.

9.5 Survey Control:

Check or establish the survey control baseline(s) along with sufficient baseline control points and bench marks at appropriate intervals along the project in order to: (1) make and record measurements necessary to calculate and document quantities for pay items, (2) make and record pre-construction and final cross section surveys of the project site in those areas where earthwork (i.e., embankment, excavation, subsoil excavation, etc.) is part of the construction project, and (3) perform incidental engineering surveys.

Provide survey data in LandXML format.

Any questions or requests for "Waiver of Survey" should be directed to the District Final Estimates Manager.

9.6 On-site Inspection:

Monitor the Contractor's on-site construction activities and inspect materials in accordance with the Contract Documents for the Construction Contract to determine that the projects are constructed in reasonable conformity with such documents. Maintain detailed accurate records of the Contractor's daily operations and of significant events that affect the work. The Department will monitor off-site activities and fabrication unless otherwise stipulated by this Agreement.

Inspect the Construction Contract with Financial Project Number(s) xxxxxxx-x-52-xx in accordance with Article 5-9.1.1 of the Construction Contract Special Provisions as it pertains to the Witness Points and Hold Points specifications.

Monitor and inspect Contractor's Temporary Traffic Control Plan and review modifications to the Temporary Traffic Control Plan, including Alternate Traffic Control Plan, in accordance with the Department's procedures. Consultant employees performing such services shall be qualified in accordance with the Department's procedures.

9.7 Sampling and Testing:

Perform sampling and testing of component materials and completed work in accordance with the Contract Documents. The minimum sampling frequencies set out in the Department's Materials Sampling, Testing and Reporting Guide shall be met. In complying with the aforementioned guide, provide daily surveillance of the Contractor's Quality Control activities and perform the sampling and testing of materials and completed work items for verification and acceptance.

The Department will perform inspection and sampling of materials and components at locations remote from the project site and the Department will perform testing of materials normally performed in a laboratory remote from the project site.

Determine the acceptability of all materials and completed work items on the basis of either test results or verification of a certification, certified mill analysis, DOT label, DOT stamp, etc.

The Department will monitor the effectiveness of the Consultant's testing procedures through observation and independent assurance testing.

Sampling, testing and laboratory methods shall comply with the Contract Documents.

Prepare and submit sampling and testing documentation reports to the Department the same week that the construction work is performed.

Transport samples to be tested in a Department laboratory to the appropriate laboratory or appropriate local FDOT facility within 24 hours after the initial cure. The Project Administrator will provide the VT Laboratory ID number for sample delivery. Transmittal card must accompany the sample. A chain of custody (if provided by the VT firm) must be signed by the CCEI and VT representatives for sample tracking purposes and maintained by both the CCEI and VT firms.

Input verification testing information and data into the Department's Materials Acceptance and Certification (MAC) database within 24 hours of sampling using written instructions provided by the Department.

9.8 Engineering Services:

Coordinate the Construction Contract administration activities of all parties other than the Contractor involved in completing the construction project. Notwithstanding the above, the Consultant is not liable to the Department for failure of such parties to follow written direction issued by the Consultant.

Services shall include maintaining the required level of surveillance of Contractor activities and interpreting the Contract Documents for the Construction Contract. Maintain complete, accurate records of all activities and events relating to the project and properly document all project changes. The following services shall be performed:

(1) Attend a pre-service meeting for the Agreement in accordance with CPAM. Provide appropriate staff to attend and participate in the pre-service meeting. At the time of this meeting submit the FDOT Computer Security Access Request for use of FDOT Data Center Facilities and access to the Department's computer systems to the Construction Project Manager for approval.

(2) Schedule and coordinate a Final Estimate informational meeting with the District Construction Final Estimates Office. Provide appropriate staff to attend and participate in this meeting.

(3) Monitor each Contractor's and Subcontractor's compliance with specifications and special provisions of the Construction Contract regarding payment of predetermined wage rates in accordance with Department procedures.

(4) Provide a Resident Compliance Specialist (RCS) for surveillance of the Contractor's compliance with Construction Contract requirements. The Resident Compliance Specialist is responsible for reviewing, monitoring, evaluating, and acting upon documentation required for Construction Contract compliance, and maintaining the appropriate files thereof. Typical areas of compliance responsibility include EEO Affirmative Actions for the prime contractor and subcontractor, DBE Affirmative Action, Contractor Formal Training, Payroll, and Subcontracts. The Resident Compliance Specialist must keep all related documents and correspondence accurate and up to date, attend all compliance reviews and furnish the complete project files for review, and assist the District Contract Compliance Manager as requested.

(5) Provide Community Outreach Services and be proactive in keeping the community aware of the status and traffic impacts of the referenced project. With approval from the Department's designee, prepare and disseminate information to the public, elected officials, and the media of any upcoming events, which will affect traffic flow. Produce and distribute all publications (letters, flyers, brochures, and news releases) necessary for this contract. Prior to release, the Department's designee will approve all responses, letters, news releases, etc. Provide timely, professional responses to project inquiries including emails, telephone calls, etc. Coordinate public information meetings, open houses, community meetings as

directed by the Department's representatives. Notify Florida 511 of lane closures and detours and notify TeleAtlas of permanent roadway changes.

(6) Prepare and submit to the Construction Project Manager a monthly status report, in a format to be specified by the Department.

(7) Provide a digital video recording of the pre-construction conditions throughout the project limits. Provide a digital photo log or video of project activities, with heavy emphasis on potential claim items/issues and on areas of real/potential public controversy.

(8) Provide a digital camera for photographic documentation of pre-construction state and of noteworthy incidents or events during construction.

These photographs will be filed and maintained on the Consultant's computer using a digital photo management system.

Photographs shall be taken the day prior to the start of construction and continue as needed throughout the project. Photographs shall be taken the days of Conditional, Partial and Final Acceptance.

OPTION A:

Aerial photographs shall be taken prior to commencement and bi-monthly thereafter. Provide six (6) aerial photographs per mile to reflect the construction operations and progress of the work. Photographs shall be clean, sharp, and clearly show details. All images shall have a minimum of 10 megapixels and a spatial resolution of 300 dpi horizontally and vertically. Each frame shall allow for a 15% to 25% overlap. The shutter speed should be such that all motion is eliminated. Digital images shall be preserved by the aerial company for at least three (3) years from Final Acceptance of the project. The name and date of the company that performed the work shall be included with all photographs. The photographs shall be reviewed by the Construction Project Manager and archived in EDMS.

9.9 Geotechnical Engineering:

The prime Consultant may engage the services of a geotechnical subconsultant to perform some of the services indicated in this section. However, the prime Consultant will be responsible to the Department for the satisfactory performance and timeliness of these services.

The prime Consultant will be required to interact with the District Geotechnical Engineer (DGE) office and any geotechnical subconsultant assigned to the project by the DGE office under a District-wide contract. All references to the DGE in the following sections implicitly include the DGE and his/her delegated representative on the project, who may be the DGE office in-house personnel or a subconsultant working for the DGE office.

Become familiar with the existing site conditions and the Contract Documents. Observe and record the progress and quality of foundation work to determine that the foundations are constructed at the correct locations and elevations, identify discrepancies, and direct the Contractor to correct such observed discrepancies. Attend the Preconstruction

Conference and/or special geotechnical meeting for the Construction Contract. All services under this section will be performed in accordance with FDOT Specification Section 455. Inspect and verify that the Contractor has performed the foundation work in accordance with applicable FDOT Specification Section 455 and other Contract Documents. Provide qualified Geotechnical Engineers and CTQP-qualified inspectors in Drilled Shaft/Pile Driving/Auger Cast Pile inspection, relevant to the foundation type(s) required in the plans. Schedule and coordinate meetings and facilitate communications between the Contractor and any Specialty Contractors, the CEI, and the DGE as needed. Observe and verify that all work is performed in accordance with the Contract Documents. Ensure that any specialty work is completed as necessary to accomplish its intent.

The following geotechnical engineering services shall be performed:

1) Drilled Shafts:

- Process and review the Drilled Shaft Installation Plan in accordance with CPAM.
- Schedule and coordinate a pre-drilled shaft installation meeting to review and discuss the drilled shaft installation procedures. Make sure that the Contractor's field superintendent, CEI's drilled shaft inspector(s), and the DGE are invited. Prepare and distribute meeting minutes to the attendees.
- Inspect installation of test holes (methods shafts), load test shafts, and production shafts and ensure they are constructed in accordance with Contract Documents for the Construction Contract. Report to the DGE any problems observed during the installation of the test holes, deviations from the Drilled Shaft Installation Plan or Contract Documents, and construction quality issues associated with the Contractor's methods.
- If there are pilot holes in the project, advise the DGE on the pilot hole schedule. Verify the pilot hole locations. Inspect the performance of the pilot holes and complete the proper FDOT inspection form, describing accurately the soils/rocks encountered and corresponding depths, the results of field testing performed (Standard Penetration Test blow counts, Cone Penetration Tests, or other, if applicable) and the results of the rock coring performed (coring time, recovery and RQD).
- Analyze the load test data, pilot holes and any other available soils/rock data as required to establish final drilled shaft tip elevations and minimum rock socket lengths. Submit report(s) recommending production shaft tip elevations, minimum rock socket lengths and any other recommendations that may be required in the project (such as rock socket material definition and impact of permanent or temporary casing on the required minimum socket lengths) to the DGE for approval.
- Inspect the bottom of the shafts for cleanliness using manual soundings or shaft inspection device as required in the Contract Documents.
- Complete all necessary drilled shaft inspection forms and keep a log of all inspections made of the shafts. Observe the performance of any load tests and verify that the details are implemented as planned.
- Provide completed drilled shaft inspection forms for all production and test shaft installations to the DGE upon completion of the drilled shaft installation.
- When conditions occur which are different from those indicated on the plans, immediately report them to the Geotechnical Engineer of Record and the DGE.

Recommend adjustments to the authorized depths as necessary to obtain the shaft capacity to the DGE for approval.

- Review the drilled shaft logs and the concrete placement logs to identify possible shaft integrity problems and potential causes. Communicate identified issues to the DGE.
- Hire a Specialty Engineer to perform non-destructive integrity testing of drilled shafts as required to estimate shaft uniformity and to detect possible shaft defects. Report results to the DGE.
- Evaluate problems encountered during construction, and coordinate with the DGE and the Contractor to resolve such problems, including possible withdrawing Drilled Shaft Installation Plan approval.

2) Piles:

- Process and review the Pile Installation Plan in accordance with CPAM.
- Perform preliminary Wave Equation Analyses to assess and provide comments regarding the suitability of hammer driving system(s) included in the Pile Installation Plan. Provide analyses results (estimated blow count ranges for the nominal bearing resistances, installation stresses etc.) to the DGE.
- Schedule and coordinate a pre-pile installation meeting to review and discuss the pile installation procedures. Make sure the Contractor's field superintendent, CEI's pile inspectors, and the DGE are invited. Prepare and distribute meeting minutes to the attendees.
- Provide personnel proficient in operation of the PDA or EDC monitoring equipment required for the project, for data collection, interpretation and analysis. Utilize the most current version of equipment and software for dynamic testing and dynamic data analysis.
- Perform dynamic testing per the Contract Documents during initial driving and re-drives. Submit electronic Pile Driving Analyzer (PDA) and Embedded Data Collector (EDC) files upon completion of the test pile installation.
- Inspect and record the test pile driving process in accordance with CPAM.
- Perform signal matching analysis on test pile data for selected blows, using the latest software version. At a minimum, signal matching analysis shall be performed on initial drive data where required resistance is obtained below the minimum tip elevation and on set-check data (if any). If requested in special circumstances, the end of drive signal matching analysis will be performed in the field upon completion of the drive; otherwise, it shall be completed within 24 hours of driving the instrumented pile.
- Analyze the test data and available soils data as required to establish production pile lengths and driving criteria. The analysis must include signal matching analysis and wave equation calibration analysis to determine a pile driving-soil system model that will predict accurately driving resistance with stroke (or pressure) and blows per foot while matching transferred energy and dynamic stresses with the ones measured in the field. Submit preliminary report(s) recommending production pile lengths and driving criteria to the DGE for approval. The preliminary report shall include printed & plotted Signal Matching and Wave Equation Analysis outputs, and electronic files (Windows compatible) of all raw data obtained by the PDA and EDC equipment and the signal matching and wave equation analyses.

- Furnish final written letters, signed and sealed, for production pile lengths and the driving criteria in accordance with CPAM. When applicable, include recommendations to determine “firm bearing material”.
- Inspect the conditions of the piles prior to installation, including any pile splices.
- Observe and verify that concrete piles were properly supported during storage and handled with appropriate pick-up details per the Contract Documents.
- Inspect and record the pile driving installation. Provide a pile inspection device that displays and stores electronically for every hammer blow along with a timestamp: stroke for open-ended diesel hammers and blows per foot and blows per minute for all hammers. The device must auto-generate the Department’s Pile Driving Record form and export the non-editable electronic data in a format compatible with the Pile Driving Record form. Use this device during the inspection of test piles and production piles.
- Observe the performance of any static or statnamic load tests and review the details are implemented as planned.
- Evaluate problems encountered during construction and coordinate with the DGE and the Contractor to resolve such problems, including possible additional testing and withdrawing the Pile Installation Plan.

3) Spread Footings:

- Observe construction of spread footing foundations and verify that they are founded at the required elevation and on the proper soil/rock material.
- Verify the Construction Plan requirements and the applicable specifications are followed throughout the spread footing construction.
- Evaluate problems encountered during construction and coordinate with the DGE and the Contractor to resolve such problems.

4) Auger Cast Piles for Sound Barrier Walls:

- Process and review the Auger Cast Pile Installation Plan in accordance with CPAM.
- Schedule and coordinate a pre-pile installation meeting to go over the auger cast pile installation procedures. Make sure the Contractor’s field superintendent, CEI’s auger cast pile inspectors and the DGE are invited. Prepare and distribute minutes to the attendees.
- Observe installation of demonstration pile and production piles. Submit the demonstration pile records to the DGE. Work with the DGE to ensure that the letter of acceptance or recommendations of the production pile installation is issued in accordance with CPAM.
- Inspect and verify the requirements on the Construction Plans and applicable specifications are followed throughout the auger cast pile installation.
- Cast cylinders for grout strength testing in accordance with the specifications
- Complete the FDOT auger cast pile field installation logs and forward them to the DGE upon completion of the auger cast pile installation.
- Verify the quality control processes of the Auger Cast Pile Installation Plan are followed during construction.
- Examine the records and evaluate problems encountered during construction and coordinate with the DGE and the Contractor to resolve such problems, including possible withdrawing the Auger Cast Pile Installation Plan approval.

The prime Consultant may engage the services of a geotechnical subconsultant to perform some of the services indicated in this section. However, the prime Consultant will be responsible to the Department for the satisfactory performance and timeliness of these services.

The prime Consultant will be required to interact with the District Geotechnical Engineer (DGE) office and any geotechnical subconsultant assigned to the project by the DGE office under a District-wide contract. All references to the DGE in the following sections implicitly include the DGE and his/her delegated representative on the project, who may be the DGE office in-house personnel or a subconsultant working for the DGE office.

Become familiar with the existing site conditions and the Contract Documents. Observe and record the progress and quality of foundation work to determine that the foundations are constructed at the correct locations and elevations, identify discrepancies, and direct the Contractor to correct such observed discrepancies. Attend the Preconstruction Conference and/or special geotechnical meeting for the Construction Contract. All services under this section will be performed in accordance with FDOT Specification Section 455. Inspect and verify that the Contractor has performed the foundation work in accordance with applicable FDOT Specification Section 455 and other Contract Documents. Provide qualified Geotechnical Engineers and CTQP qualified inspectors in Drilled Shaft/Pile Driving/Auger Cast Pile inspection, relevant to the foundation type(s) required in the plans. Schedule and coordinate meetings and facilitate communications between the Contractor and any Specialty Contractors, the CEI, and the DGE as needed. Observe and verify that all work is performed in accordance with the Contract Documents. Assure that any specialty work is completed as necessary to accomplish its intent.

The following geotechnical engineering services shall be performed:

<u>1) Drilled Shafts:</u>

- Forward the Drilled Shaft Installation Plan submitted by the Contractor to the DGE. Ensure the deadlines required by the Contract Documents to review this submittal are met.
- Review and accept or reject the Contractor's Drilled Shaft Installation Plan for conformance with the Contract Documents of the project and the Release for Construction (RFC) plans. Incorporate the comments and recommendations provided by the DGE. Ensure that comments and rejection or acceptance letters are sent to the Contractor within the deadlines required by the Contract Documents.
- Schedule and coordinate a pre-drilled shaft installation meeting to go over the drilled shaft installation procedures Make sure the Contractor's field superintendent(s), CEI field representative(s), CTQP drilled shaft inspector(s) of the Geotechnical Foundation Designer of Record (GFDOR), and the DGE office, including DGE's subconsultants are invited. Prepare and distribute meeting minutes to the attendees within three (3) working days after the meeting.
- Observe construction of test holes, load test shafts, and production shafts. This includes review or verification testing of drilling slurry, core drilling and core logs, pilot hole drilling, and other procedures as required. Ensure that they are constructed in accordance with the RFC plans, applicable specifications, and other Contract Documents. Report to the DGE any problems and construction quality

issues observed during the installation of drilled shafts within one (1) working day of completion of drilled shaft construction.

- Forward to the DGE the recommended production drilled shaft tip elevations and minimum rock socket lengths. Coordinate with the DGE to make sure the review is performed within the deadlines required by the Contract Documents.
- Review the recommended production drilled shaft tip elevations and minimum rock socket lengths and provide comments to the DGE office for its concurrence.
- Observe and ensure that the shaft bottom is at the required elevation and is properly inspected for cleanliness using manual soundings or shaft inspection device as required in the contract documents.
- Review drilled shaft excavation logs and concrete placement records to identify possible shaft integrity problems and possible causes.
- Verify the requirements on the RFC plans, applicable specifications, and other Contract Documents are followed throughout drilled shaft construction.
- Forward all drilled shaft inspection forms to the DGE without delay to allow selection of CSL testing. Coordinate with the DGE in the selection of shafts for CSL or other integrity testing prior to certification submittal.
- Observe the performance of any load tests and verify that the details are implemented as planned.
- Verify the quality control processes of the Drilled Shaft Installation Plans are followed during construction.
- Evaluate problems encountered during construction and coordinate with the DGE and the Contractor to resolve such problems, including possible verification testing and withdrawing the Design-Build (DB) Firm's Drilled Shaft Installation Plan.
- Forward the Foundation Certification Packages to the DGE. Ensure these submittals are forwarded to the DGE timely so that their review can be performed within the deadlines required by the Contract Documents.
- Review certification packages submitted by the Contractor and coordinate with the DGE to submit rejection comments or verification testing requests on the certification packages to the DB Firm. Coordinate with the DGE to select appropriate shaft(s) for verification testing. Ensure the deadlines required by the Contract Documents for review are met
- Coordinate verification activities. Make sure the deadlines required by the Contract Documents are met.
- Perform verification testing (including integrity testing) following the process and time frame outlined in the Contract Documents.
- Ensure that deficiencies found by the verification program are resolved.

2) Piles:

- Forward the Pile Installation Plan submitted by the Contractor to the DGE.
- Review and accept or reject Contractor's Pile Installation Plan for conformance with the Contract Documents and the RFC plans. Incorporate the comments and recommendations provided by the DGE. Ensure that comments and rejection or acceptance letters are sent to the Contractor within the deadlines required by the Contract Documents.
- Schedule and coordinate a pre-pile installation meeting to go over the pile installation procedures. Make sure the Contractor's field superintendent(s) and pile driving representative(s), CEI field representative(s), CTQP pile inspector(s) of the GFDOR, and the DGE office, including DGE's subconsultants, are invited.

Prepare and distribute meeting minutes to the attendees within three (3) working days after the meeting.

- Observe installation of test piles and production piles and communicate any concerns to the DGE.
- Verify the requirements on the RFC plans, applicable specifications, and other Contract Documents are followed throughout pile installation.
- Forward the driving criteria and pile length letters to the DGE within the same working day of receiving them. Ensure these submittals are forwarded to the DGE timely so that the review can be performed within the deadlines required by the Contract Documents.
- Review driving criteria and pile length letters. Discuss with the DGE any concerns regarding the criteria. Submit concern comments to the DB Firm if any within one (1) working day of receiving the driving criteria letters.
- Verify that uninstrumented production piles have satisfied the authorized driving criteria during installation and that instrumented piles have achieved the required nominal bearing resistance.
- Forward all pile driving logs and certification packages submitted by the Contractor to the DGE. Ensure these submittals are forwarded to the DGE timely so that the review can be performed within the deadlines required by the Contract Documents.
- Evaluate problems encountered during construction and coordinate with DGE to resolve such problems, including possible verification testing/review and withdrawal of the Design Build Firm's Pile Installation Plan.
- Forward the Foundation Certification Packages to the DGE. Ensure these submittals are forwarded to the DGE timely so that their review can be performed within the deadlines required by the Contract Documents.
- Review certification packages submitted by the Contractor and coordinate with the DGE to submit rejection comments or verification testing requests on the certification packages within the deadlines required by the Contract Documents.
- Coordinate with the DGE to select appropriate pile(s) for verification testing within the deadlines required by the Contract Documents.
- Perform verification testing following the process and timeframe outlined in the Contract Documents. Ensure the deadlines required by the Contract Documents are met.
- Ensure that deficiencies found by the verification program are resolved.

3) Spread Footings:

- Observe construction of spread footing foundations and verify that they are founded at the required elevation and on the proper soil/rock material.
- Verify that the requirements of the RFC plans, applicable specifications, and other Contract Documents are followed throughout the spread footing construction.
- Forward certification packages submitted by the Contractor to DGE.
- Evaluate problems encountered during construction and coordinate with the DGE and the Contractor to resolve such problems.
- Review certification packages submitted by the Contractor and coordinate with DGE to determine the acceptability of the spread footing foundations within the deadlines required by the Contract Documents.

4) Auger Cast Piles for Sound Barrier Walls:

- Forward the Auger Cast Pile Installation Plan submitted by the Contractor to the DGE for concurrent review.
- Review, make comments, and approve or reject the Contractor's Auger Cast Pile Installation Plan for conformance with the RFC Plans and applicable Contract Documents. Incorporate the comments and recommendations provided by the DGE. Ensure the deadlines required in the Contract Documents are met
- Schedule and coordinate a pre-pile installation meeting to go over the auger cast pile installation procedures. Make sure the Contractor's field superintendent and auger cast pile representative, CEI's auger cast pile inspectors, and the DGE office, including DGE's subconsultants are invited. Prepare and distribute minutes to attendees within three (3) working days after the meeting.
- Observe the installation of demonstration pile and production piles.
- Verify the requirements in the RFC plans, applicable specifications, and other Contract Documents are followed throughout the auger cast pile installation.
- Verify the quality control processes of the Auger Cast Pile Installation Plan are followed during construction.
- Evaluate problems encountered during construction and coordinate with DGE to resolve such problems, including possible withdrawal of the DB Firm's Auger Cast Pile Installation Plan approval.
- Forward all field installation logs and certification packages submitted by the Contractor to the DGE. Ensure these submittals are forwarded to the DGE timely so that the review can be performed within the deadlines required by the Contract Documents.
- Review the certification packages submitted by the Contractor and coordinate with the DGE to determine the acceptability of the auger cast piles. Ensure the deadlines required by the contract documents to review certification packages are met.

9.10 Schedule Development and Review:

The Consultant may be required to develop a CPM schedule and pay-out curve. Provide a qualified CEI Scheduler experienced in Primavera scheduling software. The CEI Scheduler will be provided all necessary information for this assignment, including confidential engineering estimates. The CEI Scheduler will be responsible for preserving any confidential information provided to them. The Consultant will participate and assist in workshops hosted by the Department intended to provide guidance, examples, and details for utilizing various critical path method software relative to construction sequencing and operations. Analyze Contractor's schedule(s) (i.e. baseline(s), revised baselines(s), updates, as-built, etc.) for compliance with contract documents. Elements including, but not limited to, completeness, logic, durations, activity, flow, milestone dates, concurrency, resource allotment, and delays will be reviewed. Verify the schedule conforms with the construction phasing and MOT sequences, including all contract modifications. Provide a written review of the schedule identifying significant omissions, improbable or unreasonable activity durations, errors in logic, and any other concern as detailed in CPAM.

10.0 PERSONNEL:

10.1 General Requirements:

Provide prequalified personnel necessary to carry out its responsibilities efficiently and effectively under this Agreement. Method of compensation for personnel assigned to this project is outlined in Exhibit "B."

Unless otherwise agreed to by the Department, the Department will not compensate straight overtime or premium overtime for the positions of Senior Project Engineer, Project Administrator/Project Engineer, Contract Support Specialist and Assistant or Associate to any of these positions.

10.2 Personnel Qualifications:

Provide competent personnel qualified by experience and education. Submit to the Construction Project Manager the names of personnel proposed for assignment to the project, including a detailed resume for each containing at a minimum: certifications, TIN number, education, and experience. The Consultant Action Request Form (ARF) along with any needed electronic access approval requests for personnel approval shall be submitted to the Construction Project Manager at least 14 calendar days prior to the date an individual is to report to work.

Personnel identified in the Consultant technical proposal are to be assigned as proposed and are committed to performing services under this Agreement. Personnel changes will require written approval from the Department. Staff that has been removed shall be replaced by the Consultant within seven (7) calendar days of Department notification.

Minimum qualifications for the Consultant personnel are set forth as follows:
Exceptions to these minimum qualifications will be considered on an individual basis. For CTQP certifications which require training specifically developed for Department specifications, the Consultant may propose project staff possessing an equivalent certification from a national or other state DOT accreditation program. These exceptions may be granted under the stipulation that the appropriate CTQP certification be obtained prior to the corresponding work activity or such other time as approved by the District Construction Engineer. The District Construction Engineer or designee shall have the final approval authority on such exceptions.

Except as noted herein, before the project begins, all project staff shall have a working knowledge of the current CPAM and must possess all the necessary qualifications/certifications for fulfilling the duties of the position they hold. Cross training of the Consultant's project staff is highly recommended to achieve a knowledgeable and versatile project inspection team but shall not be at any additional cost to the Department and should occur as workload permits. Visit the training page on the State Construction Office website for training dates.

CEI SENIOR PROJECT ENGINEER -
LICENSURE:

- Professional Engineer (PE) registered in the State of Florida
  - Ability to obtain endorsement in the State of Florida within six months of Project NTP if registered in another state

EXPERIENCE:

- Six (6) years of engineering experience
  - Two (2) of those years involved in relevant transportation projects
  - Exception: Five (5) years for Complex Category 2 (CC2) and PTS bridge structures
- A Master's Degree in Engineering may be substituted for one (1) year engineering experience.

QUALIFICATIONS/ CERTIFICATIONS:

- FDOT Advanced MOT
- CTQP Quality Control Manager (Attend and pass the examination)
  - To be achieved by Project NTP, if CEI Project Administrator/ Project Engineer holds qualification at time of proposal

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Directing a highly complex and specialized construction engineering administration and inspection program;
- Responsible for: Planning and organizing the work of subordinate and staff members;
- Responsible for: Developing and/or reviewing policies, methods, practices, and procedures;
- Responsible for: Reviewing programs for conformance with Department standards.

CEI PROJECT ADMINISTRATOR/PROJECT ENGINEER -

EDUCATION:

- High School Diploma or Equivalent

LICENSURE (FOR CEI PROJECT ENGINEER):

- Professional Engineer (PE) registered in the State of Florida
  - Must obtain endorsement in the State of Florida within six (6) months of Project NTP if registered in another state

EXPERIENCE:

For personnel with Engineering, Engineering Technology or Construction Management degrees:

- Two (2) years of engineering experience in relevant transportation projects.
- A Master's Degree in Engineering, Engineering Technology, or Construction Management may be substituted for one (1) year of engineering experience

For personnel without Engineering, Engineering Technology or Construction Management degrees:

- Eight (8) years of CEI or roadway or bridge construction experience,
- Two (2) of those years involved in relevant transportation projects.

QUALIFICATIONS/ CERTIFICATIONS:

Qualifications/certifications for this position may be obtained within six (6) months from the date of hire provided that this position works under the supervision and direction of a Senior Project Engineer, all other requirements for the position are met, and a training plan is submitted detailing when the qualifications/certifications will be obtained.

- FDOT Advanced MOT
- CTQP Final Estimates Level II
- CTQP Quality Control Manager (Attend and pass the examination)

ABILITIES/ RESPONSIBILITIES:
- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general instructions regarding assignments and exercising initiative and independent judgment in the solution of work problems.
- Responsible for: Directing and assigning specific tasks to administrative and field staff and assisting in all phases of the construction project.
- Responsible for: Progress estimates and final estimates throughout the construction project duration.

CEI ASSISTANT PROJECT ADMINISTRATOR/PROJECT ENGINEER –
EDUCATION:
- High School Diploma or Equivalent

LICENSURE (FOR CEI ASSISTANT PROJECT ENGINEER):
- Professional Engineer (PE) registered in the State of Florida
    - Ability to obtain endorsement in the State of Florida within six (6) months of Project NTP if registered in another state

EXPERIENCE:
For personnel with Engineering, Engineering Technology, or Construction Management degrees:
- One (1) year of engineering experience in relevant transportation projects.

For personnel without Engineering, Engineering Technology, or Construction Management degrees:
- Six (6) years of responsible and related engineering experience
    - Two (2) of those years involved in construction of relevant transportation projects

QUALIFICATIONS/ CERTIFICATIONS:
- FDOT Advanced MOT
    - May obtain with six (6) months after Project NTP if holding a current FDOT Intermediate MOT certificate
- CTQP Final Estimates Level II

ABILITIES/ RESPONSIBILITIES:
- Ability to: Communicate effectively in English (verbally and in writing)

CEI CONTRACT SUPPORT SPECIALIST -
EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
For personnel with Engineering, Engineering Technology, or Construction Management degrees:
- No prior experience is required

For personnel without Engineering, Engineering Technology, or Construction Management degrees:

- Four (4) years of CEI experience having performed/assisted in project related duties (i.e., Materials Acceptance and Certification (MAC) System input, progress and final estimates, EEO compliance, processing Construction Contract changes, etc.); or
- Two (2) years of experience with 3D Modeling and CADD

QUALIFICATIONS/CERTIFICATIONS:

- CTQP Final Estimates Level II

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Exercising independent judgment in planning work details and making technical decisions related to the office aspects of the project
- Responsible for: Familiarity with the Department's Procedures covering the project related duties as stated above and proficient in the computer programs necessary to perform those duties.
- Ability to: Become proficient in Trimble Business Center - Heavy Construction Edition (HCE) or approved surface to surface comparison software and Engineering Menu.
    - Proficiency is the knowledge and expertise to:
        - Understand which surfaces are needed from the designer
        - Understand the survey data from the field
        - Prepare the survey data as needed for use in the software
        - Generate accurate earthwork quantities from the software

CEI ASSISTANT CONTRACT SUPPORT SPECIALIST –

EDUCATION:

- High School Diploma or Equivalent

EXPERIENCE:

- Two (2) years of secretarial and/or clerical experience
- Experienced with standard word processing and data management software

QUALIFICATIONS/CERTIFICATIONS:

- CTQP Final Estimates Level I
    - Achieve prior to starting on the project

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Exercising independent initiative to help relieve supervisor of clerical detail
- Responsible for: Assisting the Project Administrator in office related duties (i.e., MAC, progress meetings, monthly and final estimates, EEO compliance, processing construction contract changes, data upload, submittal tracking, staff certifications, etc.)
- Responsible for: Project specific work under the general supervision of the Senior Project Engineer and staff

CEI SENIOR INSPECTOR -

EDUCATION:
- High school graduate or equivalent

EXPERIENCE:
- Four (4) years of CEI experience in roadway or bridge construction

QUALIFICATIONS/ CERTIFICATIONS:
Must have the following as required by the scope of work for the intended assignment on the project at the time of NTP:
- CTQP Final Estimates Level I
- CTQP Concrete Field Technician Level I
- CTQP Concrete Field Inspector Level II (Bridges)
- CTQP Asphalt Roadway Level I
- CTQP Asphalt Roadway Level II
- CTQP Earthwork Construction Inspection Level I
- CTQP Earthwork Construction Inspection Level II
- CTQP Pile Driving Inspection
- CTQP Drilled Shaft Inspection
    - Required for inspection of all drilled shafts including miscellaneous structures such as sign structures, lighting structures, and traffic signal structure foundations
- FDOT Intermediate MOT
- IMSA Traffic Signal Inspector Level I
- Nuclear Radiation Safety
- Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

Recommended when the scope of the project includes concrete pavement, grinding concrete pavement, or concrete pavement slab replacement. Courses are available from the Transportation Curriculum Coordination Council (TC3).

- PCC Paving Inspection (TC3CN004-15-T1)
- Diamond Grinding and Grooving (TC3MN009-15-T1)
- Curing, Sawing and Joint Sealing (TC3CN032-16-T1)

ABILITIES/ RESPONSIBILITIES:
- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Performing highly complex technical assignments in field surveying and construction layout, marking, and checking engineering computations, inspecting construction work, and conducting field tests
- Responsible for: Coordinating and managing the lower level inspectors
- Responsible for: Performing work under the general supervision of the Project Administrator

CEI SENIOR ENGINEER INTERN –

EDUCATION:

- Engineering or Engineering Technology degree
- Senior Engineer Intern classification requires an EI certificate.

EXPERIENCE:
- One (1) year of CEI experience in construction of roadway or bridge structures

QUALIFICATIONS/ CERTIFICATIONS:
Must have the following as required by the scope of work for the intended assignment on the project at the time of NTP:
- CTQP Final Estimates Level I
- CTQP Concrete Field Technician Level I
- CTQP Concrete Field Inspector Level II (Bridges)
- CTQP Asphalt Roadway Level I
- CTQP Asphalt Roadway Level II
- CTQP Earthwork Construction Inspection Level I
- CTQP Earthwork Construction Inspection Level II
- CTQP Pile Driving Inspection
- CTQP Drilled Shaft Inspection
    - Required for inspection of all drilled shafts including miscellaneous structures such as sign structures, lighting structures, and traffic signal structure foundations
- FDOT Intermediate MOT
- IMSA Traffic Signal Inspector Level I
- Nuclear Radiation Safety
- Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

Recommended when the scope of the project includes concrete pavement, grinding concrete pavement, or concrete pavement slab replacement. Courses are available from the Transportation Curriculum Coordination Council (TC3).

- PCC Paving Inspection (TC3CN004-15-T1)
- Diamond Grinding and Grooving (TC3MN009-15-T1)
- Curing, Sawing and Joint Sealing (TC3CN032-16-T1)

ABILITIES/ RESPONSIBILITIES:
- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Performing highly complex technical assignments in field surveying and construction layout, marking, and checking engineering computations, inspecting construction work, and conducting field tests
- Responsible for: Coordinating and managing the lower level inspectors
- Responsible for: Performing work under the general supervision of the Project Administrator

CEI INSPECTOR –

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:

- Two (2) years of experience in construction inspection,
    - One (1) year of which shall have been in bridge and/or roadway construction.

QUALIFICATIONS/ CERTIFICATIONS:
Qualifications/certifications for this position may be obtained within six (6) months from the date of hire provided that the position works under the supervision and direction of a Senior Inspector or Senior Engineer Intern, all other requirements for the position are met, and a training plan is submitted detailing when the qualifications/certifications will be obtained.

Must have the following as required by the scope of work for the intended assignment on the project at the time of NTP:

- CTQP Final Estimates Level I
- CTQP Concrete Field Inspector Level I
- CTQP Asphalt Roadway Level I
- CTQP Earthwork Construction Inspection Level I
- CTQP Pile Driving Inspection
- CTQP Drilled Shaft Inspection
    - Required for inspection of all drilled shafts including miscellaneous structures such as sign, lighting, and traffic signal structure foundations
- IMSA Traffic Signal Inspector Level I
- FDOT Intermediate MOT
- Nuclear Radiation Safety
- Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

Recommended when the scope of the project includes concrete pavement, grinding concrete pavement, or concrete pavement slab replacement. Courses are available from the Transportation Curriculum Coordination Council (TC3).

- PCC Paving Inspection (TC3CN004-15-T1)
- Diamond Grinding and Grooving (TC3MN009-15-T1)
- Curing, Sawing and Joint Sealing (TC3CN032-16-T1)

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general supervision from and assisting the Senior Inspector in the performance of their duties

CEI ENGINEER INTERN -

EDUCATION:

- Engineering or Engineering Technology degree

EXPERIENCE:

- Engineering intern classification requires an EI certification
    - Must obtain within three (3) months of Project NTP
- Ability to earn the required qualifications and certifications listed below within one year.

QUALIFICATIONS/ CERTIFICATIONS:

- Qualifications/Certifications for this position may be obtained within one year from the date of hire provided that the position works under the supervision and direction of a Senior Inspector or Senior Engineer Intern, all other requirements for the position are met, and a training plan is submitted detailing when the qualifications/certifications will be obtained

If not working under the direction of a Senior Inspector or Senior Engineer intern, must have the following as required by the scope of work for the intended assignment on the project at the time of NTP:

- CTQP Final Estimates Level I
- CTQP Concrete Field Inspector Level I
- CTQP Asphalt Roadway Level I
- CTQP Earthwork Construction Inspection Level I
- CTQP Pile Driving Inspection
- CTQP Drilled Shaft Inspection
    - Required for inspection of all drilled shafts including miscellaneous structures such as sign, lighting, and traffic signal structure foundations
- IMSA Traffic Signal Inspector Level I
- FDOT Intermediate MOT
- Nuclear Radiation Safety
- Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

Recommended when the scope of the project includes concrete pavement, grinding concrete pavement, or concrete pavement slab replacement. Courses are available from the Transportation Curriculum Coordination Council (TC3).

- PCC Paving Inspection (TC3CN004-15-T1)
- Diamond Grinding and Grooving (TC3MN009-15-T1)
- Curing, Sawing and Joint Sealing (TC3CN032-16-T1)

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general supervision from and assisting the Senior Inspector in the performance of their duties

CEI INSPECTORS AIDE –

EDUCATION:

- High School Diploma or Equivalent

EXPERIENCE:

- No prior experience necessary

QUALIFICATIONS/ CERTIFICATIONS:

- FDOT Intermediate MOT - Must obtain within the first six months of the assignment

ABILITIES/ RESPONSIBILITIES:
- Ability to: Perform basic mathematical calculations and follow simple technical instructions
- Responsible for: Assisting higher-level inspectors

SUR CREW CHIEF –

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
- Four (4) years of experience in construction surveying
  - Two (2) years as Crew Chief
- Experienced in field engineering and construction layout, making and checking survey computations, and supervising a survey party

ABILITIES/ RESPONSIBILITIES:
- Ability to: Communicate effectively in English (verbally and in writing)
- Ability to: Perform work under general supervision of the Project Administrator

SUR INSTRUMENT OPERATOR –

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
- Three (3) years of experience in construction surveying
  - One (1) year as Instrument Person
- Experienced in field engineering and construction layout, making and checking survey computations, and supervising a survey party

ABILITIES/ RESPONSIBILITIES:
- Responsible for: Receiving general supervision from and assisting the Crew Chief

SUR ROD PERSON –

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
- Some survey experience or training preferred

ABILITIES/ RESPONSIBILITIES:
- Responsible for: Receiving general supervision from and assisting the Crew Chief

CEI SECRETARY/CLERK TYPIST-

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
- Two (2) years of secretarial and/or clerical experience

QUALIFICATIONS:
- Experienced in the use of standard word processing software

ABILITIES/ RESPONSIBILITIES:
- Ability to: Communicate effectively in English (verbally and in writing)
- Ability to: Exercise independent initiative to help relieve the supervisor of clerical detail
- Responsible for: Working under the general supervision of the Senior Project Engineer and staff

CEI SENIOR INSPECTOR BUILDING STRUCTURES-

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
- Eight (8) years of experience in inspection of building construction
- Four (4) years of experience in performing highly complex technical assignments in field surveying and construction layout, making and checking engineering computations, inspecting construction work, and conducting fields tests

ABILITIES/RESPONSIBILITIES:
- Responsible for: Being fully knowledgeable of all aspects of the building construction to include masonry work and familiarization with the local and State building codes and ordinances
- Responsible for: Performing under the general supervision of the Project Administrator

CEI BUILDING INSPECTOR/ ELECTRICAL -

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:
- Five (5) years' experience as a qualified building inspector or general contractor
  - Must have actual field experience as a job superintendent

ABILITIES/ RESPONSIBILITIES:
- Responsible for: Being fully knowledgeable of all local and State building codes and ordinances

CEI SURVEY MODELER –

EDUCATION:
- High School Diploma or Equivalent

EXPERIENCE:

For personnel with Engineering, Engineering Technology or Construction Management degrees:

- One (1) year of engineering experience in relevant transportation projects.

For personnel without Engineering, Engineering Technology or Construction Management degrees:

- Four (4) years of CEI or roadway or bridge construction and/or survey experience,
- Two (2) of those years involved in relevant transportation projects.
  - Experienced in field engineering and construction layout, making, and checking survey computations.

QUALIFICATIONS/ CERTIFICATIONS:
Qualifications/certifications for this position may be obtained within one (1) year from the date of hire provided that this position works under the supervision and direction of a Senior Project Engineer, all other requirements for the position are met, and a training plan is submitted detailing when the qualifications/certifications will be obtained.

- CTQP Final Estimates Level II

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general instructions regarding assignments and exercising initiative and independent judgment in the solution of work problems.
- Become proficient in approved surface to surface comparison software, such as Trimble Business Center - Heavy Construction Edition (HCE).
- Proficiency, knowledge and ability to:
  - Understand which surfaces are needed from the contract documents
  - Understand the survey data from the field and ability to prepare the survey data as needed for use in the software
  - Read, review and interpret project plans, maps, aerials and other data
  - Create, process, adjust and refine 3D model linework, points and surfaces, if required
  - Spot check accuracy of design files, supporting documentation, and design quantities
  - Compare design existing surfaces and pre-construction survey surfaces to check for changed conditions
  - Compare design finished graded surfaces with as-built surfaces to establish compliance with plan dimensions
  - Edit master design files, 3D surface design models and supporting digital files for as-built 3D surface features, if required
  - Validate and generate accurate earthwork quantities from software along with backup required for Final Estimate Documentation
  - Build a model and assist staff with equipment usage
  - Ensure compatibility between design files, applications, and equipment

10.3 <u>Staffing:</u>

Once authorized, the Consultant shall establish and maintain appropriate staffing throughout the duration of construction and completion of the final estimate. Responsible personnel, thoroughly familiar with all aspects of construction and final measurements of

the various pay items, shall be available to resolve disputed final pay quantities until the Department has received a regular acceptance letter.

Construction engineering and inspection forces will be required of the Consultant while the Contractor is working. If Contractor operations are substantially reduced or suspended, the Consultant will reduce its staff appropriately.

In the event that the suspension of Contractor operations requires the removal of Consultant forces from the project, the Consultant will be allowed up to ten (10) calendar days to demobilize, relocate, or terminate such forces.

11.0 QUALITY ASSURANCE (QA) PROGRAM:

11.1 Quality Assurance Plan:

Within 30 days after receiving award of an Agreement, furnish a QA Plan to the Construction Project Manager. The QA Plan shall detail the procedures, evaluation criteria, and instructions of the Consultant's organization for providing services pursuant to this Agreement. Unless specifically waived, no payment shall be made until the Department approves the Consultant's QA Plan.

Significant changes to the work requirements may require the Consultant to revise the QA Plan. It shall be the responsibility of the Consultant to keep the plan current with the work requirements. The Plan shall include, but not be limited to, the following areas:

A. Organization:

A description is required of the Consultant's QA Organization and its functional relationship to the part of the organization performing the work under the Agreement. The authority, responsibilities and autonomy of the QA organization shall be detailed as well as the names and qualifications of personnel in the quality control organization.

B. Quality Assurance Reviews:

Detail the methods used to monitor and achieve organization compliance with Agreement requirements for services and products.

C. Quality Assurance Records:

Outline the types of records which will be generated and maintained during the execution of the QA program.

D. Control of Subconsultants and Vendors:

Detail the methods used to control subconsultant and vendor quality.

E. Quality Assurance Certification:

An officer of the Consultant firm shall certify that the inspection and documentation was performed in accordance with the Contract Documents and Department procedures.

11.2 Quality Assurance Reviews:

Conduct semi-annual Quality Assurance Reviews to ensure compliance with the requirements of the Agreement. Quality Assurance Reviews shall be conducted to evaluate the adequacy of materials, processes, documentation, procedures, training, guidance, and staffing included in the execution of this Agreement. Quality Assurance Reviews shall also be developed and performed to achieve compliance with specific QA provisions contained in this Agreement. The semi-annual reviews shall be submitted to the Construction Project Manager in written form no later than one (1) month after the review.

On short duration CCEI projects (nine (9) months or less), the CCEI shall perform an initial QA review within the first two (2) months of the start of construction.

On asphalt projects, the CCEI shall perform an initial QA review on its asphalt inspection staff after the Contractor has completed ten (10) full work days of mainline asphalt paving operations, or 25% of the asphalt pay item amount (whichever is less) to validate that all sampling, testing, inspection, and documentation are occurring as required of the CCEI staff.

11.3 Quality Records:

Maintain adequate records of the quality assurance actions performed by the organization (including subcontractors and vendors) in providing services and products under this Agreement. All records shall indicate the nature and number of observations made, the number and type of deficiencies found, and the corrective actions taken. All records shall be available to the Department, upon request, during the Agreement term. All records shall be kept at the primary job site and subject to audit review.

12.0 CERTIFICATION OF FINAL ESTIMATES:

12.1 Final Estimate and As-Built Plans Submittal:

Prepare documentation and records in compliance with the Agreement, Statewide Quality Control (QC) Plan, or Consultant's approved QC Plan and the Department's Procedures as required by CPAM.

Submit the Final Estimate(s) and one (1) set of final "as-built plans" documenting the Contractor's work in accordance with CPAM.

Revisions to the Certified Final Estimate will be made at no additional cost to the Department.

12.2 Certification:

Consultant personnel preparing the Certified Final Estimate Package shall have the CTQP Final Estimates Level II certification.

Duly authorized representative of the Consultant firm will provide a digitally signed form pursuant to Department's procedures.

12.3 Offer of Final Payment:

Prepare the Offer of Final Payment package as outlined in CPAM. The package shall accompany the Certified Final Estimates Documentation submitted to the District Final Estimates Office for review. The Consultant shall be responsible for forwarding the Offer of Final Payment Package to the Contractor.

13.0 AGREEMENT MANAGEMENT:

13.1 General:

(1) With each monthly invoice submittal, the Consultant will provide a status report for the Agreement. This report will provide an accounting of additional Agreement calendar days allowed to date, an estimate of the additional calendar days anticipated to be added to the original schedule time, an estimate of the Agreement completion date, and an estimate of the Consultant funds expiration date per the Agreement schedule for the prime Consultant and for each subconsultant. The Consultant will provide a printout from the Equal Opportunity Reporting System showing the previous month's payments made to subconsultants. Invoices not including this required information may be rejected.

(2) When the Consultant identifies a condition that will require an amendment to the Agreement, the Consultant will communicate this need to the Construction Project Manager for acceptance. Upon acceptance, prepare and submit an Amendment Request (AR), and all accompanying documentation to the Construction Project Manager for approval and further processing. The AR is to be submitted at such time to allow the Department 12 weeks to process, approve, and execute the AR. The content and format of the AR and accompanying documentation shall be in accordance with the instructions and format to be provided by the Department.

(3) The Consultant is responsible for performing follow-up activities to determine the status of each Amendment Request submitted to the Department.

14.0 OTHER SERVICES:

Upon written authorization by the District Construction Engineer or designee, the Consultant will perform additional services in connection with the project not otherwise identified in this Agreement. The following items are not included as part of this Agreement, but may be required by the Department to supplement the Consultant services under this Agreement.

A. Assist in preparing for arbitration hearings or litigation that occurs during the Agreement time in connection with the construction project covered by this Agreement.

B. Provide qualified engineering witnesses and exhibits for arbitration hearings or litigation in connection with the Agreement.

C. Provide inspection services in addition to those provided for in this Agreement.

D. Provide services determined necessary for the successful completion and closure of the Construction Contract.

15.0 POST CONSTRUCTION CLAIMS REVIEW:

In the event the Contractor submits a claim for additional compensation and/or time after the Consultant has completed this Agreement, analyze the claim, engage in negotiations leading to settlement of the claim, and prepare and process the required documentation to close out the claim. Compensation for such services will be negotiated and effected through a Supplemental Amendment to this Agreement.

16.0 CONTRADICTIONS:

In the event of a contradiction between the provisions of this Scope of Services and the Consultant's proposal as made a part of their Agreement, the provisions of the Scope of Services shall apply.

17.0 THIRD PARTY BENEFICIARY

It is specifically agreed between the parties executing this Agreement that it is not intended by any of the provisions of any part of the Agreement to create in the public or any member thereof, a third party beneficiary hereunder, or to authorize anyone not a party to this Agreement to maintain a claim, cause of action, lien or any other damages or any relief of any kind pursuant to the terms or provisions of this Agreement.

18.0 DEPARTMENT AUTHORITY

The Department shall be the final authority in considering modifications to the Construction Contract for time, money or any other consideration except matters agreed to by the Contractor through contract changes negotiated by the Consultant, as authorized in Section 9.1 herein.