EXHIBIT "A"

CONSTRUCTION ENGINEERING AND INSPECTION

SCOPE OF SERVICES

FOR

CEI Services for Hurricane Matthew Restoration of SR-A1A south of Sebastian Inlet

Project Description

Restoration of SR-A1A including installation of new signing and pavement markings, retaining walls specifically vinyl sheet piling with associated concrete cap, potential temporary utility provisions, restoration of paved and unpaved shoulders, and reinstallation of damaged sidewalks.

Financial Project ID(s):

440554-2-62-01 & 440554-2-62-02

Federal Project No.:

171-007-E

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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:	440554-2-62-01 & 440554-2-62-02
Descriptions:	Hurricane Matthew Restoration of SR-A1A south of Sebastian Inlet
County:	Indian River

Exercise independent professional judgment in performing obligations and responsibilities under this Agreement. Pursuant to Section 4.1.4 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 in effect as of the date of execution of the Agreement unless otherwise directed in writing by the Department. Such Department manuals, procedures, and memorandums are 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, the following services may be added to the contract by supplemental amendment:

> 438042-1-62-01 – CEI services for SR-A1A/Tides Rd., from north of SR-60 to North of CR-510. Scope includes mill and resurfacing, new pavement markings, upgrade ADA ramps, upgrade sidewalk and pedestrian features.

Other projects developing within the geographical area of Martin, St. Lucie and Indian River County may be added at the Department's discretion. The Consultant must perform to the satisfaction of the Department's representatives for consideration of additional CEI services.

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 two weeks 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 thirty (30) calendar days to perform preliminary administrative services prior to the issuance of the Contractor's notice to proceed on the first project and thirty (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)
440554-2-62-01	1/30/2019	6/7/19	375
440554-2-62-02	1/30/2019	6/7/19	375

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 Construction Engineering and Inspection 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 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 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 Professional Services Administrator: The Administrative Head of the 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 on multiple contracts are in compliance 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.

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. Specification Package,

3. Copy of the Executed Construction Contract, and

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

B. The Department will allow connection to the FDOT Network by the Consultant through either dialup communications, 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 SiteManager.

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 Internet website. Most items can be purchased through the following address. All others can be acquired through the District Office or on-line at the Department's website.

Florida Department of Transportation
Maps and Publication Sales
605 Suwannee Street, MS 12
Tallahassee, Florida 32399-0450
Telephone No. (850) 414-4050

http://www.fdot.gov/construction/

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 SiteManager 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, which is provided by the Consultant, shall remain at all times with the Consultant. The Consultant shall retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Field office equipment should be maintained and operational at all times.

Current technical specifications for office automation can be viewed at:
http://www.fdot.gov/Construction/DesignBuild/ConsultantCEI/OfficeAutomation.shtm

6.3 Field Office:

The Department will provide the field office.

6.4 Vehicles:

Vehicles will be equipped with appropriate safety equipment and must be able to effectively carry out requirements of this Agreement. Vehicles shall have the name and phone number of the consulting firm 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 shall have the name of the consulting firm 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 their license.

Retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Field office equipment shall be maintained and in operational condition 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 in Responsible Charge 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 Consultant 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, remedial action shall be implemented immediately. Department recommendations and Consultant responses/actions are to be properly documented by the Consultant. 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 necessarily limited to the following:

A. Further subdivide assigned inspection responsibilities, reassign inspection personnel, or assign additional inspection personnel, within one week 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:

It shall be the responsibility of the Consultant to administer, monitor, and inspect the Construction Contract such that the project is constructed in reasonable conformity 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 work of the Contractor and the corrective action that has been directed to be performed by the Contractor.

9.2 Survey Control:

Surveying services will be provided through a separate District-wide contract or in-house personnel. No surveying services will be performed on this contract.

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

9.3 On-site Inspection:

Monitor the Contractor's on-site construction activities and inspect materials entering into the work in accordance with the plans, specifications, and special provisions 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.

9.4 Sampling and Testing:

Perform sampling and testing of component materials and completed work in accordance with the Construction 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 done 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 be as required by the Department's Standard Specifications, Supplemental Specifications or as modified by the Special Provisions of the Construction Contract.

Documentation reports on sampling and testing performed by the Consultant shall be submitted during the same week that the construction work is done.

Transport samples to be tested in a Department laboratory to the appropriate laboratory or appropriate local FDOT facility.

Input verification testing information and data into the Department's database using written instructions provided by the Department.

9.5 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, interpreting plans, specifications, and special provisions 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 attend a Final Estimate informational meeting with the District Construction Final Estimates Office. Provide appropriate staff to attend and participate in this meeting.

(3) Schedule and attend SiteManager/EDMS informational meeting with the District Construction Office. Provide appropriate staff to attend and participate in this meeting.

Provide personnel proficient in the use of computers and scanner operation to input construction documents into an EDMS. This will require familiarity with the documents and guidelines posted on the Department's website for EDMS. Duties will include scanning, attributing and retrieving documents that are to be archived electronically.

(4) Schedule and conduct a meeting with the District Construction Environmental Liaison prior to the Pre-construction conference and another meeting prior to project final acceptance. The purpose of these meetings is to discuss the required documentation, including as-builts, necessary for permit(s) compliance.

(5) Verify that the Contractor is conducting inspections, preparing reports and monitoring all storm water pollution prevention measures associated with the project. For each project that requires the use of the NPDES General Permit, provide at least one inspector who has successfully completed the "Florida

Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors". The Consultant's inspector will be familiar with the requirements set forth in the FEDERAL REGISTER, Vol. 57, No. 187, Friday, September 5, 1992, pages 4412 to 4435 "Final NPDES General Permits for Storm Water Discharges from Construction Sites" and the Department's guidelines.

(6) Analyze the Contractor's schedule(s) (i.e. baseline(s), revised baseline(s), updates, as-built, etc.) for compliance with the 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 concerns as detailed in CPAM.

(7) Analyze problems that arise on a project and proposals submitted by the Contractor; work to resolve such issues, and process the necessary paperwork.

(8) Monitor, inspect and document utility relocation self-performed by the contractor for conformance with Utility Agency's Standards and the Utility Agency's Approved Materials List. Document utility construction progress to be performed by Utility Agencies. Facilitate coordination and communication between Utility Agency's representatives, Department's staff and Contractors executing the work. Identify potential utility conflicts and assist in the resolution of utility issues including Department and Local Government owned facilities.

Identify, review, and track progress of Joint Project Agreements, and/or other Department and utility agreements. Address work progress, track reimbursement activities, and address betterment and salvage determination. Prepare all necessary documentation to support reimbursement activities and betterment and salvage determination.

(9) Produce reports, verify quantity calculations and field measure for payment purposes as needed to prevent delays in Contractor operations and to facilitate prompt processing of such information in order for the Department to make timely payment to the Contractor.

(10) Prepare and make presentations for meetings and hearings before the Dispute Review Boards in connection with the project covered by this Agreement.

(11) The Department will provide the functions of the Resident Compliance Specialist. The Consultant shall perform the field interviews, provide work space and supplies for project compliance files.

(12) The Department will provide Public Information Services.

(13) Prepare and submit to the Construction Project Manager monthly, a Construction Status Reporting System (CSRS) report, in a format to be provided by the Department.

(14) Video tape 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.

(15) 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.

9.6 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 to 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 CTQP qualified inspectors in Drilled Shaft/Pile Driving/Auger Cast Pile inspection, relevant to the foundation type(s) required in the plans. Schedule 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:

1) Drilled Shafts:

- Process and review the Drilled Shaft Installation Plan in accordance with CPAM.
- Schedule 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 the bottom of the shafts for cleanliness using manual soundings or shaft inspection device as required in the contract documents.
- 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.
- 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.
- 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.
- Schedule 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.
- Inspect and record the test pile driving process in accordance with CPAM.
- 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 contract documents.
- Inspect the pile driving installation. Complete the FDOT pile driving logs.
- 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 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.

10.0 PERSONNEL:

10.1 General Requirements:

Provide prequalified personnel necessary to efficiently and effectively carry out its responsibilities 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 in writing 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: salary, education, and experience. The Consultant Action Request form for personnel approval shall be submitted to the Construction Project Manager at least two weeks 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 one week of Department notification.

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.

Minimum qualifications for the Consultant personnel are set forth as follows. Exceptions to these minimum qualifications will be considered on an individual basis. However, a Project Administrator working under the supervision and direction of a Senior Project Engineer or an Inspector working under the supervision and direction of a Senior Inspector shall have six months from the date of hire to obtain the necessary

qualifications/certifications provided all other requirements for such positions are met and the Consultant submits a training plan detailing when such qualifications/certifications and other training relative to the Department's procedures, Specifications and Design Standards will be obtained. The District Construction Engineer or designee will have the final approval authority on such exceptions.

Complex Category Two (CC2) Bridge Structures: Bridge structures that are complex and require advanced designs and construction engineering and inspection. The following structures are classified as CC2 bridge structures:

- Concrete Post-Tensioned Segmental Box Girder (CPTS)
- Concrete Post-Tensioned Continuous Beam (CPTCB)
- Movable Bridges (MB)
- Post-tensioned Substructures (PTS)

CEI SENIOR PROJECT ENGINEER - A Civil Engineering degree and registered in the State of Florida as a Professional Engineer (or if registered in another state, the ability to obtain registration in the State of Florida within six months) and six (6) years of engineering experience [(two (2) years of which are in major road or bridge construction)] or [(five (5) of which are in major bridge construction) - for Complex Bridge Projects with the exception of PTS projects which require two (2) years of major bridge construction], or for non-degreed personnel the aforementioned registration and ten (10) years of engineering experience (two (2) years of which are in major road or bridge construction). Qualifications include the ability to communicate effectively in English (verbally and in writing); direct highly complex and specialized construction engineering administration and inspection program; plans and organizes the work of subordinate and staff members; develops and/or reviews policies, methods, practices, and procedures; and reviews programs for conformance with Department standards. Also must have the following:

QUALIFICATIONS:
Attend the CTQP Quality Control Manager course and pass the examination.

CERTIFICATIONS:
FDOT Advanced MOT

OTHER:
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

A Master's Degree in Engineering may be substituted for one (1) year engineering experience.

CEI PROJECT ADMINISTRATOR/PROJECT ENGINEER - A Civil Engineering degree plus two (2) years of engineering experience in construction of major road or bridge structures, or for non-degreed personnel eight (8) years of responsible and related engineering experience, two (2) years of which involved construction of major road or bridge structures with the exception of Complex Category 2 (CC2) bridge structures.

For CC2 bridge structures, a Civil Engineering degree and registered in the State of Florida as a professional engineer (or if registered in another state, have the ability to

obtain registration in Florida within six (6) months) plus five (5) years general bridge construction experience, two (2) years of which must have been with the type of CC2 bridge construction project for which CEI services are being provided by this scope **or** for non-degreed and/or non-registered personnel eight (8) years of general bridge construction experience, (4) years of which must have been with the type of CC2 bridge construction project for which CEI services are being provided by this scope. Additionally, a minimum of one (1) year of experience as the Project Administrator in primary control of the type of CC2 construction project for which CEI services are being provided by this scope. As an exception, only one (1) year of PTS bridge experience will be required for registered project administrators and two (2) years of PTS bridge experience for non-registered project administrators. Post-tensioning experience is not required for precast prestressed concrete flat slab superstructures but successful completion of an FDOT accredited grouting and post-tensioning course is required. To be in primary control, a Project Administrator must have supervised two or more inspectors as well as two or more support staff (Office Manager, Resident Compliance Specialist, and Secretary) and must have been directly responsible for all CEI services assigned.

CPTS years of experience must have included a minimum of twelve (12) months experience in each of the following areas: (1) casting yard operations and related surveying; (2) segment erection and related surveying, post-tensioning (PT) of tendons and grouting of prestressing steel.
CPTCB years of experience must include monitoring of the following: girder erection, safe use of girder erection cranes, stabilization of girders after erection, false work for temporary girder support, and PT and grouting operations.
PTS years of experience must include monitoring of the following: installation of PT ducts and related hardware and post-tensioning and grouting of strands or be the level of experience that meets the criteria for CPTS or CPTCB bridges.
MB years of experience must have been in MB mechanical and/or electrical construction.

Receives general instructions regarding assignments and is expected to exercise initiative and independent judgment in the solution of work problems. Directs and assigns specific tasks to inspectors and assists in all phases of the construction project. Will be responsible for the progress and final estimates throughout the construction project duration. Must have the following:

QUALIFICATIONS:
CTQP Final Estimates Level II

CERTIFICATIONS:
FDOT Advanced MOT

OTHER:
Attend CTQP Quality Control Manager Course and pass the examination.
Attend a FDOT accredited post-tensioning training course and pass the examination (for post-tensioned CC2 projects)
Attend a FDOT accredited grouting training course and pass the examination (for post-tensioned CC2 projects)
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

A Master's Degree in Engineering may be substituted for one (1) year of engineering experience

CEI CONTRACT SUPPORT SPECIALIST - A High School diploma or equivalent and four (4) years of road & bridge construction engineering inspection (CEI) experience having performed/assisted in project related duties (i.e., Materials Acceptance and Certification (MAC) System, progress and final estimates, EEO compliance, processing Construction Contract changes, etc.) or a Civil Engineering Degree. Should exercise independent judgment in planning work details and making technical decisions related to the office aspects of the project. Should be familiar with the Department's Procedures covering the project related duties as stated above and be proficient in the computer programs necessary to perform these duties. Shall become proficient in Trimble Business Center - Heavy Construction Edition (HCE) or approved surface to surface comparison software and Engineering Menu.

QUALIFICATIONS:
CTQP Final Estimates Level II

CEI SENIOR INSPECTOR/SENIOR ENGINEER INTERN – High school graduate or equivalent plus four (4) years of experience in construction inspection, two (2) years of which shall have been in bridge and/or roadway construction inspection with the exception of Complex Category 2 (CC2) bridge structures or a Civil Engineering degree and one (1) year of road & bridge CEI experience with the ability to earn additional required qualifications within one year. (Note: Senior Engineer Intern classification requires one (1) year experience as an Engineer Intern.)

For CC2 bridge structures, be a high school graduate or equivalent and have five (5) years of general bridge construction experience of which two (2) years must have been with the type of CC2 bridge construction project for which CEI services are being provided by this scope. As an exception, only one (1) year of PTS bridge experience will be required. Additionally, a minimum of twelve (12) months of experience as the Senior Inspector in primary control of the type CC2 construction project for which CEI services are being provided by this scope. To be in primary control, a Senior Inspector must have supervised two or more inspectors and must have been directly responsible for all inspection requirements related to the construction operations assigned.

CPTS years of experience must have included a minimum of twelve (12) months of inspection experience in one or both of the following depending on which area the inspector is being approved for: (1) casting yard inspection; (2) erection inspection. In addition, two (2) years of geometry-control surveying experience is required for inspectors that perform or monitor geometry control surveying in a casting yard.
CPTCB years of experience must include monitoring and inspection of the following: girder erection, safe use of girder erection cranes, girder stabilization after erection, false work for temporary girder support, and PT and grouting operations.
PTS years of experience must include monitoring of the following: installation of PT ducts and related hardware and post-tensioning and grouting of strands or be the level of experience that meets the criteria for CPTS or CPTCB bridges.
MB years of experience must have included the inspection of MB mechanical components for machinery inspectors and MB electrical components/systems for electrical inspectors.

Must have the following as required by the scope of work for the project:

QUALIFICATIONS:
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 structures)
CTQP Grouting Technician Level I
CTQP Post-Tensioning Technician Level I
IMSA Traffic Signal Inspector Level I
CTQP Final Estimates Level I

CERTIFICATIONS:
FDOT Intermediate MOT
Nuclear Radiation Safety
IMSA Traffic Signal Inspector Level I

OTHER:
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

Responsible for performing highly complex technical assignments in field surveying and construction layout, making, and checking engineering computations, inspecting construction work, and conducting field tests and is responsible for coordinating and managing the lower level inspectors. Work is performed under the general supervision of the Project Administrator.

CEI INSPECTORS AIDE - High School graduate or equivalent and able to perform basic mathematical calculation and follow simple technical instructions. Duties are to assist higher-level inspectors. Must obtain FDOT Intermediate MOT within the first six months of the assignment

10.3 Staffing:

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 ten (10) days maximum to demobilize, relocate, or terminate such forces.

11.0 QUALITY ASSURANCE (QA) PROGRAM:

11.1 Quality Assurance Plan:

Within thirty (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 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 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 done in accordance with FDOT specifications, plans, standard indexes, 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 shall be 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 be CTQP Final Estimates Level II.

Duly authorized representative of the Consultant firm will provide a notarized certification on a 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 Package 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 the an accounting of the 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.

Estimated Staffing for CEI Services

Note: Estimated schedule

Project #	440554-2-62-01	440554-2-62-02	3	4	5	6	7	8
Letting Date	1/30/2019	1/30/2019						
CEI Start Date	5/7/2019	5/7/2019						
CEI End Date	7/15/2020	7/15/2020						
Construction Duration	375	375						
Total Duration (days)	435	435						
Calendar Months	14.5	14.5						

	2019												2020												TOTAL	TOTAL
Staff - (cal days)	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	MM	MH
Total all Projects																										
Sr Proj Engr					0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05						1.4	231
Project Administrator					0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5						14	2310
Cont Support Spec/SRI							0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5						6.5	1072.5
RCS																									0	0
Sr Bridge/Rdwy Inspector						1	1	1	1	1	1	1	1	1	1	1	1	1	0.5						13.5	2227.5
Bridge/Rdwy Inspector																									0	0
Inspector Aide								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5								5	825
Environmental Specialist																									0	0
																									0	0
																									0	0
Total					0.55	2.1	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.6	1.55						40.4	6666

Project 1

440554-2-62-01	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
Sr Proj Engr																									0	0
Project Administrator																									0	0
Cont Support Spec/SRI																									0	0
RCS																									0	0
Sr Bridge/Rdwy Inspector								0.5	0.5	0.5	0.5	0.5													2.5	412.5
Bridge/Rdwy Inspector																									0	0
Inspector Aide																									0	0
Environmental Specialist																									0	0
																									0	0
																									0	0
subtotal								0.5	0.5	0.5	0.5	0.5													2.5	412.5

Project 2

440554-2-62-02	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
Sr Proj Engr					0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05						1.4	231
Project Administrator					0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	0.5						14	2310
Cont Support Spec/SRI						0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5						6.75	1113.75
RCS																									0	0
Sr Bridge/Rdwy Inspector						1	1	0.5	0.5	0.5	0.5	0.5	1	1	1	1	1	1	0.5						11	1815
Bridge/Rdwy Inspector																									0	0
Inspector Aide								0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5								5	825
Environmental Specialist																									0	0
																									0	0
																									0	0
subtotal					0.55	2.35	2.6	2.6	2.6	2.6	2.6	2.6	3.1	3.1	3.1	3.1	3.1	2.6	1.55						38.15	6294.75