

Materials Inspection, Sampling, and Testing Scope of Services

A. Objective:

To provide inspection, sampling and testing services as required in connection with construction materials that will be utilized in Florida Department of Transportation (FDOT) construction and maintenance operations at facilities and locations throughout the United States. This contract may also be used for all inspection, sampling, and laboratory testing services that the firm can provide. Inspection services beyond the United States may be required. All services shall conform to the requirements of the contract documents of the Department's construction contracts for which commercial inspection services are assigned and the desires of the Department have been made known to the consultant. The Department may during the life of this agreement issue statements which clarify specification requirements. These statements will apply to all specifications which may be pertinent to Consultants' inspection, sampling, and laboratory testing services.

B. Services:

The Consultant will be qualified to provide services not limited to the following elements as required by the Department:

1. The inspection of structural steel and miscellaneous metal products. This shall include all investigations, recommendations, observations of fabrication or work in progress, sampling and laboratory testing together with the proper recording and reporting which are necessary to ensure that the work is fabricated of accepted materials by approved processes, completed through shipment where required in accordance with the requirements of the Contract Documents and applicable FDOT Specifications.
2. Coatings inspections and analysis of metalizing, galvanizing, powder coating, and wet painting or other applicable methods.
3. Precast Concrete, Prestressed Concrete, and Cementitious Materials: Performs Independent Assurance (IA), evaluations for qualifications (concrete field and concrete strength) to the active FDOT technicians assigned as described in department procedures and the Federal Aid Policy Guide. Document report findings.
4. Participate with the FDOT Districts when required/planned in the inspections, troubleshooting, and problem solving of the identified problems in the production of cementitious materials and precast/prestressed concrete products at the plants and/or project sites. Provide technical recommendations.
5. Review of the following documents: quality control plans, construction plans, specifications, procedures, and other appropriate documents as required.
6. Provide materials related technical **support** to district and central office in the area of concrete precast pipe and drainage structures. Provided technical

Materials Inspection, Sampling, and Testing

Scope of Services

support to the District Material Office during the review of the producer's quality control plans.

7. Perform field inspection of the pipe and precast drainage structure plants during the initial and routine annual plant qualification reviews.
8. The Consultant shall furnish the Department with records and reports covering the various work inspected, sampled, and tested. Such records shall be submitted in Portable Document Format (PDF) to the Project Manager.
9. Provide engineering expertise to FDOT or the Engineer of Record in helping to solve project related problems related to engineering, design, structural, welding, or other problems that may arise during fabrication.
10. When shipped to the job site, major components and all Bills of Lading for inspected and accepted material shall bear marks which will identify the Consultant and the inspector.
11. Laboratory testing should assist in materials identification and analysis. The scope would include destructive and non-destructive testing. Prices shall be included for the following tests:
 - a. Composition/chemistry analysis
 - b. X-ray fluorescence (XRF) / X-ray diffraction (XRD) analysis
 - c. Cutting and sectioning sample
 - d. Yield, tensile and elongation testing
 - e. Scanning Electron Microscopy (SEM) preparation and photomicrograph
 - f. Hardness testing
 - g. Hydrogen embrittlement testing
 - h. Forensic Evaluation

C. Qualifications

1. Demonstrate knowledge, experience, and abilities of American Welding Society (AWS) D1.1 Structural Welding Code Steel
2. Demonstrate knowledge, experience, and abilities of AWS D1.5 Bridge Welding Code.
3. Demonstrate knowledge, experience, and abilities of AWS D1.2 Structural Welding Code Aluminum
4. Demonstrate knowledge, experience, and abilities of AWS D1.6 Structural Welding Code Stainless

Materials Inspection, Sampling, and Testing Scope of Services

5. All in-shop and field welding inspectors providing services to the Department at a minimum will have an active AWS Certified Welding Inspector certificate. Other certifications may be required but not limited to the following, depending on assignment:
 - i. American society of Non-Destructive Testing (ASNT) Magnetic Particle Testing (MT) Level I or II
 - ii. ASNT Penetrant Testing (PT) Level I or II
 - iii. ASNT Ultrasonic Testing (UT) Level I or II
 - iv. ASNT Radiographic Testing (RT) Level I or II
 - v. AWS Certified Radiographic Interpreter
 - vi. Society of Protective Coatings (SSPC) Bridge Coatings Inspector (BCI) Level I or NACE International (NACE) Coating Inspector Program (CIP) Level I with a minimum of 2 years documented shop work experience.
 - vii. SSPC BCI level II
 - viii. NACE Level II, or III
 - ix. Skidmore-Wilhelm Certified Pre-Installation Verification Inspector
 - x. Skidmore-Wilhelm Bolt Tension Training with a minimum of 2 years of documented work experience
6. Precast Concrete, Prestressed Concrete, and Cementitious Materials
 - i. Minimum two-year experience in precast/prestressed operations
 - ii. Construction Training and Qualification Program (CTQP) Concrete Field Technician – Level I
 - iii. CTQP Concrete Laboratory - Level I
 - iv. Precast/Prestressed Concrete Institute (PCI) Quality Control Personnel Certification - Level II
7. Fiber Reinforced Polymers
 - i. Minimum two year experience in Fiber-Reinforced Polymer (FRP) fabrication, quality control and processes.
 - ii. Knowledge of utilizing Non-destructive evaluation (NDE) techniques for FRP inspection.
8. Demonstrate knowledge, experience, and abilities of the following:
 - i. Florida Department of Transportation Materials Manual
 - ii. Florida Methods, 5-581 Performing Rotational Capacity Test – Long Bolts in Tension Calibrator, 5-582 Rotational Capacity Test Bolts to Short to Fit into Tension Calibrator, 5-583 Direct Tension Indicator Device Performance
 - iii. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, applicable issues
 - iv. Florida Department of Transportation Design Standards
 - v. Other Methods, Standards, Codes, and Manuals as required by work assignments.
9. The Consultant(s) will supply a list of inspectors containing at a minimum all inspectors' names, locations, and certifications held by each inspector to the

Materials Inspection, Sampling, and Testing Scope of Services

Project Manager. All inspectors shall be approved prior to beginning work. The Project Manager will be notified of any changes prior to the beginning of any work. The list will be kept current.

D. Authorization of Services

The Department will request Consultant services on an as needed basis by a Task Work Order (TWO) for Professional Services. Services to be provided by the Consultant under this Agreement will be initiated and completed as directed by the Project Manager. Individual projects will be completed by the completion date indicated on the TWO. There is no guarantee that any or all the services described in this scope will be assigned during the term of this agreement. Further, the Consultant is providing these services on a nonexclusive basis. The Department, at its option, may elect to have any of the services set forth herein performed by other consultants or Department staff.

The TWO will specify the work to be done and the authorized funds. No work shall be commenced by the Consultant until a TWO is executed.

Invoice substantiating documents will be scanned and submitted via e-mail to the Project Manager. After inspection services are completed for each TWO the consultant will furnish the Department a Final Status Summary Report. The Department will execute a Task Work Order Amendment between the Consultant and Department that specifically closes that TWO.

E. Responsibilities of the Department

The Department shall provide a Project Manager who shall be responsible for all coordination with the Consultant pertaining to all contractual matters, invoicing and reporting. The Department may also designate a manager for each Task Work Order who shall be responsible for working with the Consultant Project Manager to define the specific work to be performed and the schedule for completion of each task, the Consultant staffing to be provided, and the cost. The Department Project Manager shall be responsible for approval of any additional staffing to be provided including additional Consultant staff (approval must be coordinated with the Procurement Office), and shall give approval of all work products and services.

F. Responsibilities of the Consultant

The Consultant shall provide and maintain an up-to-date list of staff with agreed-to classifications and approved salaries (subject to the contract Exhibit "B") that would be available to be assigned to specific Task Work Orders. No Consultant staff, except those specifically identified in a Task Work Order or those specifically agreed to by the Department Project Manager, shall charge time to that particular Task Work Order.

Materials Inspection, Sampling, and Testing Scope of Services

Consultant must request approval from the Department's Project Manager for any modifications or additions to the list of available staff prior to the initiation of any work by that individual. If applicable, new job classifications may be added to the contract via contract amendment. Consultant shall submit a copy of the resume and payroll register before new staff can be added.

For a Task Work Order where Consultant staff are anticipated to work the majority of a 40 hour week at Department facilities, the Consultant will be reimbursed at the field rate, and staff who are anticipated to work on average the majority of the week at the home office should be reimbursed at the home rate.

G. Personnel Qualifications

The Consultant shall assign only competent technical and professional personnel qualified by the necessary experience and education to perform assigned work. The Consultant is responsible for ensuring that staff assigned to work under this Agreement has the training established by the Department as a prerequisite for Consultant staff to perform work. If the required training is such that it can be applied by the trainee to work on other contracts, (regardless of whether or not the trainee would work on other agreements), the cost of the trainee's time and expenses associated with the training is not directly billable to the Department on this contract, and shall only be recoverable through overhead for the Consultant firm.

H. Subconsultant Services

Services assigned to any subconsultants must be approved in writing and in advance by the Department Project Manager, Procurement Office, and the Consultant Project Manager in accordance with this Agreement. All subconsultants must be technically qualified by the Department to perform all work assigned to them. Additional subconsultants with specialized areas of expertise may be required to complete specific Task Work Order assignments. Any subconsultant to be hired and all work assignments to be performed, and all rates of compensation shall be agreed to by the Department Project Manager, Procurement Office and the Consultant Project Manager and documented in the contract file prior to any work being performed by the subconsultant.

Any new subconsultant must be added to the contract via contract amendment (in coordination with the Procurement Office) prior to any issuance of work on a Task Work Order.

I. Consultant Not Employee or Agent

The Consultant and its employees, agents, representatives, or subconsultants/subcontractors are not employees of the Department and are not entitled to the benefits of State of Florida employees. Except to the extent expressly authorized

Materials Inspection, Sampling, and Testing Scope of Services

herein, Consultant and its employees, agents, representatives, or subconsultants/subcontractors are not agents of the Department or the State for any purpose or authority such as to bind or represent the interests thereof, and shall not represent that it is an agent or that it is acting on the behalf of the Department or the State. The Department shall not be bound by any unauthorized acts or conduct of Consultant.

J. Ownership of Works and Inventions

The Department shall have full ownership of any works of authorship, inventions, improvements, ideas, data, processes, computer software programs, and discoveries (hereafter called intellectual property) conceived, created, or furnished under this Agreement, with no rights of ownership in Consultant or any subconsultants/subcontractors. Consultant and subconsultants/subcontractors shall fully and promptly disclose to the Department all intellectual property conceived, created, or furnished under this Agreement. Consultant or subconsultant/subcontractor hereby assigns to the Department the sole and exclusive right, title, and interest in and to all intellectual property conceived, created, or furnished under this Agreement, without further consideration. This Agreement shall operate as an irrevocable assignment by Consultant and subconsultants/subcontractors to the Department of the copyright in any intellectual property created, published, or furnished to the Department under this Agreement, including all rights thereunder in perpetuity. Consultant and subconsultants/subcontractors shall not patent any intellectual property conceived, created, or furnished under this Agreement. Consultant and subconsultants/subcontractors agree to execute and deliver all necessary documents requested by the Department to effect the assignment of intellectual property to the Department or the registration or confirmation of the Department's rights in or to intellectual property under the terms of this Agreement. Consultant agrees to include this provision in all its subcontracts under this Agreement.