

**TDOT
PROPOSED SCOPE OF WORK
ON-CALL CONSTRUCTION ENGINEERING
INSPECTION AND SURVEYING**

PURPOSE:

The intent of this contract is for the retained firm for each respective Region to provide continuous construction inspection and surveying services on selected projects over a two year period. This contract will be utilized where TDOT has a need to supplement its own forces on a project.

The assigned tasks may include any that are currently being conducted by TDOT field office staff. Several types of work classifications may be required to conduct assigned tasks depending on the difficulty and level of expertise needed.

After a need for on-call CEI service is identified, a work order will be issued to the Consultant. The work order will include selected tasks including but not limited to those on the list below:

SCOPE:

- 1. Erosion Control and Preconstruction Conferences:** Prepare for and conduct the Erosion Control and Preconstruction Conferences. Address and resolve all issues that arise at the meeting with appropriate offices, agencies and divisions. Prepare and distribute detailed minutes of the meeting.
- 2. Weekly Progress meeting:** Prepare the agenda, attend, and conduct a progress meeting every week with TDOT personnel, contractor, sub-contractors, utility personnel and other agencies affected by the project. The discussion should include recent progress, upcoming events in the schedule, and problems associated with the project. Record significant information revealed and discussed at the meeting and distribute written minutes to the attendees and appropriate agencies.
- 3. Project Administration:** Provide project administration and coordinate with the assigned TDOT Project Supervisor. Prepare for and attend, when requested, any periodic or in-depth FHWA inspections that may be conducted on the project related to project work, progress or records. Prepare for, cooperate with, and assist auditors that may be assigned to review project records, payments, reports, etc. Provide ample inspectors and assistance to adequately oversee all work being done on the contract. Monitor Consultant hours worked on the project and justify need for overtime. Prior to starting work, submit to TDOT Project Supervisor a listing of personnel assigned to the project for review and approval. In addition, a list of persons with emergency phone numbers should always be supplied to the

TDOT Project Supervisor and be available at any time in the case of an emergency on the project. The project Administrator should also obtain from the contractor a list of contractor's personnel that will be responsible for any occurrence that may arise on the project for the life of the project.

4. **Provide Construction Inspection:** Provide effective and qualified supervision of all inspection services being conducted by Consultant and sub-consultants. All field technicians must be certified in the applicable TDOT certification workshops listed below:

Asphalt Roadway Paving Inspector
Asphalt Plant Inspector
ACI Class 1 Concrete Technician
Concrete Plant Technician
Soils and Aggregate Technician
Nuclear Gauge Training

Certification from another State Highway Department, nationally recognized institution, or other approved agency may be acceptable in lieu of the TDOT certification. Prior approval is required.

5. **Conduct Field Surveys:** Establish horizontal and vertical control on the project to be utilized by the contractor for construction layout. Conduct original and final cross-sections in order to calculate and document earthwork quantities for monthly progress payment estimates. Perform construction staking layout as requested. Check the contractor's construction layout as requested by the TDOT Project Supervisor.
6. **Supplemental Agreements/Construction Change, Force Account, VECP:** Notify the TDOT Project Supervisor of the necessity of any Supplemental Agreements/Construction Changes. Negotiate prices for additional pay items with the contractor while adhering to the "Average Unit Price" listing when possible. Coordinate acceptance of prices with the TDOT Project Supervisor. For Regions 1, 2, & 3, prepare the Supplemental Agreement/Construction Change on the supplied standard form and submit to the TDOT Project Supervisor for final review and submittal for processing. Any work that cannot be successfully negotiated with the prime contractor will be pursued by Force Account as defined in the Standard Specifications and recorded on forms supplied by the Department. Submit Value Engineering Change Proposals to the TDOT Project Supervisor for analysis and distribution to the appropriate division(s).
7. **Shop Drawings:** See Special Provision 105A
8. **Quality Assurance, Testing for Acceptance, and Training:** Provide certification training to Consultant personnel for all necessary field testing and inspection. Monitor the testing provided by the contractor in the field as defined

in the Contract, Plans or Specifications. Document Consultant testing on standard forms provided by the Department and distribute as required. Monitor documentation of testing by the contractor. Field testing by the Consultant includes, but is not limited to, all ACI tests for concrete including concrete plant for acceptance by the Department, nuclear density testing of earthwork, base stone, asphalt, structural backfill, and pipe backfill as defined in the Standard Specifications and the Departments sampling and testing schedule. The Consultant will also provide aggregate analysis and moisture testing for roadway embankment and base stone materials as defined in the Standard Specifications and the Departments sampling and testing schedule. Also included as the responsibility of the consultant is miscellaneous checking of application rates and dimensions and bearings to assure conformance to Plans and Specifications. In case of notification of defective concrete as defined in the Specifications, the Consultant will submit the initial information on forms supplied by the Department and receive the final disposition of the material after review. Certifications of material submitted by the contractor will be reviewed by the Consultant for conformity to the Specifications. The certification documents submitted to the Department will also be reviewed for completeness and conformance to the Department's standard form of submission. A Final Materials and Tests Certification will be submitted to the Materials and Tests Manager with the Final Records.

- 9. Progress Payments:** The Consultant will document and assemble accurate quantities for Monthly Progress Payments to the prime Contractor from actual project field records, as directed by Special Provisions in the contract, from Supplemental Agreements/Construction Changes or Force Accounts. The quantities for payment will be referenced to field records prior to submission for payment. Test reports will be on file prior to payment. The TDOT Project Supervisor must approve any waiver of testing documents prior to payment. Pay quantities will be submitted to the TDOT Project Supervisor for review and payment on a printout from the "Final Record Book" program provided by the Department. Payments for stockpiled material may be made as defined in the Standard Specifications and approved by the Project Supervisor. Estimate "cut-off" will be as follows:

Region 1: the 20th of each month (15th day for June, November, and December).

Region 2 & 3: the last day of each month, except for the month of June with the submission of the quantities to the TDOT Project Supervisor for review and payment by the sixth of each month.

Region 4: the 15th of each month.

Copies of approved subcontracts as well as copies of actual DBE subcontractor's

contracts should be on file prior to the first Progress Payment.

10. Revisions to the Contract Plans: Any revisions to the contract plans or cross sections will be submitted to the TDOT Project Supervisor for processing.

11. Distribution of Correspondence: Submit to the TDOT Project Supervisor a copy of all correspondence between the Consultant, contractor, subcontractors, or others concerning matters related to the project. Maintain an office file copy for submission with the project Final Records.

12. Inspection of Work: Provide inspection services for conformance to Plans and Specifications for all roadway, structures, and specialty items that are being incorporated into the project. Observe, measure and record all quantities for payment. Record field measurements in project records for review by the Department or auditors. The records will be recorded on a standard form (field book) supplied or defined by the Department and/or on field inspection forms to be submitted to the Department. Check traffic control daily, and additionally as required or requested. Notify the contractor of deficiencies or problems immediately. Document weekly (or as often as necessary) project traffic control on forms supplied by the Department and distribute as required. Inspect daily erosion control items for conformance to the plans as well as effectiveness in the field. Notify the contractor of deficiencies. Prepare to justify any and all pay quantities in the case of questions by the contractor or Department. Prepare an accurate daily diary, signed by the inspector, consisting of:

- A record of the contractors on the project
- Their personnel (number and classification)
- Equipment (number and type or size)
- Location and work performed by each contractor or subcontractor
- Orders given the contractor
- Events of note on the project
- Accidents on the project and any details surrounding the accident such as police report number, fatalities, causes, time, etc. Obtain a copy of the police report for the project records whenever possible.
- Weather, amount of precipitation, temperature at morning, noon, and evening, cloudy, clear, etc.
- Days charged, with explanation if not charged
- Equipment arriving or leaving the project, idle equipment
- Any other details that may be important later in the project life

13. Contractor's Payrolls, Employee Interviews and Contract Compliance: Receive and check the contractor's payrolls for conformance to state wage rates as defined in the contract. Late payrolls (two weeks late) are justification to withhold progress payment. Notify the prime contractor of late payrolls and request immediate submission. Notify the TDOT Project Supervisor prior to withholding payments. Conduct employee interviews on the forms submitted by

the Department and compare to the submitted payrolls for accuracy. Notify the prime contractor of inaccuracies and resolve discrepancies. Adhere to Special Provisions concerning reports to be submitted to the Contract Compliance office.

- 14. Reports:** There are numerous reports, documents, etc., that must be generated in the process of contract administration. A copy (electronic or paper) will be provided by the Department prior to construction, or as needed. Any questions regarding the requirements can be forwarded to the TDOT Project Supervisor for clarification at any time.
- 15. Final Records:** Submit a compilation of project records in the Department's standard format to the Final Records Department after project completion. Make corrections when/if notified and resubmit the records and a final estimate for the project at the appropriate time. Submit all final forms (FHWA-47, CC3, etc.) with the final records. Coordinate consultant hours after the project completion with the TDOT Project Supervisor for approval.
- 16. Project Claims:** Prepare documentation and assist in the defense of the Department, when requested, in preparation for Claims or possible Claims resulting in the execution of the contract.
- 17. Utility Relocations:** Utility relocations that are reimbursable shall be inspected for quantities that will be reviewed and verified comparing utility company records prior to payment by the Department.

The responsibilities of the Tennessee Department of Transportation on this project are:

- 1. TDOT Project Supervisor:** Provide a project supervisor to oversee and coordinate with CEI Supervisor.
- 2. Public Information/Relations:** Provide public information/relations for project development.
- 3. Materials Testing Laboratory:** Provide designated materials testing laboratory for all applicable testing requirements.
- 4. Offsite Fabrication Inspection:** Provide inspection services for all materials manufactured off site (i.e. bridge beams, concrete pipe, etc.)
- 5. Geotechnical Services:** Provide all Geotechnical services needed to complete project.