



**COLORADO**  
Department of Transportation

**CONSTRUCTION MANAGEMENT, CONSTRUCTION INSPECTION  
AND MATERIALS TESTING ENGINEERING SERVICES  
PROJECT-SPECIFIC SCOPE OF WORK**

Date: November 14, 2019

**CDOT Region 2  
I-25/SH 94 Safety Improvement Projects  
Various Project numbers anticipated**

Project Code: NHPP 0252-452

Project Number: 21249

Estimated Start Date: March 2020

The Contract Administrator for this Contract will be:

Daniel Hunt  
Resident Engineer  
1480 Quail Lake Loop, Suite A  
Colorado Springs, CO 80906  
Phone: 719.227.3231

Active day-to-day administration will be delegated to:

Lesley Mace  
Project Manager  
1480 Quail Lake Loop, Suite A  
Colorado Springs, CO 80906  
Phone: 719.227.3249

**General Scope of Work**

CDOT has need of a consultant to provide construction administration support, project management services (construction management), inspection, and materials-testing services required for construction of the I-25/SH 94 Safety Improvement Projects in El Paso County, Colorado.

The Project has four primary areas of focus:

- State Highway 94: The project component comprises the introduction of a west bound passing lane of approximately one mile beginning at mile post 5.5, intersection improvements at Enoch Road and installation of a signalized jug handle at Blaney Road. The addition of this infrastructure will improve visibility and allow for the safe passing of vehicles along this stretch of highway which has seen several fatalities in recent years.
- South Academy Blvd: The project component comprises the widening of several aspects of this county owned facility to three lanes to alleviate recurring congestion. These works will be done largely through striping, expanding into shoulders on roadway and bridges, and modifying merge lanes. Further improvements include undertaking bridge scour work.
- Interstate 25: The largest and most comprehensive component of the project will comprise the 9-inch PCCP overlay concrete overlay and installation of median barriers on the 7.5-mile stretch of interstate between the South Academy and South Santa Fe Avenue Exit/Fort Carson Gate 19 exit, the widening to 12 feet of the inside and outside shoulders, the full replacement of two bridges crossing South Academy, deck rehabilitation to six other bridges along the alignment, and the installation of ITS components.
- Charter Oak Ranch Road: This last component of the BUILD application project comprises improvements to the intersection with Santa Fe Avenue and complete reconstruction of Charter Oak Ranch Road from the aforementioned intersection to Gate 19 of Fort Carson. This reconstruction includes safety and roadway improvements and pedestrian facilities.

Construction Traffic Control and Public Relation will be a major part of this project and will require a dedicated team to review and coordinate Public Relation with the Contractors Public Information Officer. A traffic control operation team will be needed to monitor the demanding daily traffic and help to resolve issues.

Due to the high visibility of this project, its proximity to military installations and other critically sensitive areas, an environmental specialist will be required to help coordinate and resolve environmental issue during construction.

Several Senior and Junior Inspectors and specialists will be needed to meet the QA requirements over the next three years. The CDOT and Consultant Team will be responsible for all QA documents, including all final Construction as-built documentation as well as full Materials testing QA as described under LIMS by the CDOT Materials Lab or as otherwise directed by the CDOT Resident Engineer. A massive amount of data generated by the project will need to be managed and controlled in the office as part of the project.

This project is being delivered using the Construction Manager/General Contractor (CM/GC) process in packages. The Contractor shall be responsible for the maintenance of construction of I-25 in Spring 2020. Delivery of one or more packages are expected to begin in construction by Summer of 2020 with project completion scheduled for 2023. The Contractor, SEMA, has been selected. It will be expected that the selected Construction Management Consultant will also be involved in the final design review and cap negotiation process.

**General Requirements**

This Scope of Work (SOW) has been carefully reviewed by the Department and reflects a plan of approach based on the known goals. The Consultant's analysis of the project goals, its evaluation of the work elements, and its formulation of the work plan, coupled with its understanding of and sensitivity to the key issues may produce new approaches or modifications to the project's work elements. Therefore, the Final Scope of Work for the project may change in some details to incorporate the Consultant's input. This work is located primarily in CDOT Region 2, Colorado Springs metropolitan area.

**Definitions:**

**CDOT Resident Engineer** – The CDOT Resident Engineer is responsible to the Region Program Engineer for the quality and successful completion of a transportation project. The CDOT Resident Engineer authorizes interim and final payments and all changes to Contracts for all Consultants and Contractors.

**CDOT Project Manager** – The CDOT Project Manager is responsible for the project management and successful completion of a transportation project.

**CDOT Project Engineer** - The CDOT Project Engineer is responsible for the quality and construction aspects of the project.

**Consultant** - The firm or corporation providing personnel under this agreement to perform construction services as outlined herein.

**Consultant Construction Manager** - The Consultant Construction Manager directs the consultant services for the administration and satisfactory completion of the project improvements.

**Consultant Professional Engineer** - The Consultant employee in responsible charge of Consultant services performed as described in this Contract. The Consultant Professional Engineer administers the Consultant contract.

**Consultant Discipline Leads** – The Consultant Discipline Leads will be responsible for all project construction deliverables and documentation and shall be prepared and submitted throughout the duration of construction in accordance with CDOT requirements.

**Consultant Senior Inspector** – The Consultant Senior Inspector shall report directly to the Consultant Discipline Leads.

**Consultant Inspector or Materials Testing Technician (MTT)** - Consultant employee who performs construction inspection, construction materials testing services, and other project-related services under the direction of the Consultant Discipline Lead.

**Contractor** - The individual, firm, or corporation contracting with CDOT to construct a transportation project.

**CDOT Region Materials Engineer** – The CDOT Region Materials Engineer (RME) assists the CDOT Resident Engineer and CDOT Project Engineer on this project with materials related issues including earthwork, concrete, asphalt and steel.

**Work Duration**

The period for the work described in this scope of work covers approximately January 2020 through July of 2023. Work will be required on weekends, nights and holidays. Concurrent day and night work is very likely throughout most of the project duration. Construction start is anticipated in March 2020 for first package.

**Authorization to Proceed**

Work shall not commence until written Notice to Proceed is received by the Consultant, and shall be completed in the time specified.

**Routine Billing & Reporting**

The Consultant shall provide the following on a regular basis:

1. Monthly billing formats, suitable to the CDOT Project Manager, for all contract activities performed by the Consultant.
2. Periodic reports and billings required by CDOT Procedural Directive 400.2.
3. Weekly time cards for consultant personnel. The Consultant Professional Engineer, prior to billing, must sign these time cards.

**Status of Contract**

The Consultant shall monitor the fiscal status of the contract, and advise the CDOT Resident Engineer of any potential for supplementing their contract or negotiating an additional task order. Failure to monitor contract status and provide timely notification may result in discontinuation of the Consultant's services on the project until a supplemental agreement can be procured.

**Project Standards**

All documentation shall be in accordance with the latest versions of the Colorado Department of Transportation's Construction Manual, Field Materials Manual, CDOT Laboratory Manual of Test Procedures, Colorado Department of Transportation Inspector's Checklist, Standard Specifications for Road and Bridge Construction, the Supplemental Specifications, applicable M & S standards, MUTCD and

the plans and specifications currently in use when the construction project is advertised or revised under advertisement.

References to “the specifications” shall include all applicable CDOT Standard Specifications for Road and Bridge Construction including standard specifications, supplemental specifications, standard special provisions, project special provisions, and project plans.

Consultant’s proposed work procedures shall be coordinated with the CDOT Project Manager prior to the start of work.

**Labor, Materials, Vehicles & Equipment**

Personnel qualifications, staffing level, and number and types of vehicles shall be subject to the approval of the Engineer. The Consultant shall assign personnel for the duration of the Contract unless otherwise approved by the Engineer. Employees required to operate vehicles must possess and maintain a valid State of Colorado driver's license. The Consultant Inspectors permanently assigned to a project shall be competent in road and bridge construction and be thoroughly familiar with CDOT specifications, manuals, forms, and documentation requirements including Site Manager or as otherwise directed by the CDOT Project Engineer. The level of qualification provided shall be as requested and approved by the CDOT Resident Engineer.

A short summary bio of work experience and list of Certifications and/or Licenses of each proposed consultant staff member shall be provided to the CDOT Project Manager. Personnel provided by the Consultant who do not meet all of the specified requirements, or who fail to perform their work in an acceptable manner, shall be removed from the project when determined and directed by the CDOT Project Manager or CDOT Project Engineer.

It is anticipated that CDOT will require several full time lead persons (Consultant Construction Managers) and multiple full time Sr. and Jr. inspectors in the field as well as personnel to perform duties of an Office Engineer, Administrative Assistants, Public Relation/Social Media Specialist, and Environmental Specialist. All work performed by consultant staff will be under the responsible charge of the Consultant Professional Engineer.

The Consultant shall furnish all personnel with all equipment and transportation required to perform the work. Consultant personnel shall have appropriate vehicles equipped with programmable LED light bars (Large flashing amber beacon arrays), Newer “Smart” Cell Phone, computers, and other miscellaneous equipment (calculator, office and lab supplies, safety equipment, etc.) required for performing the work.

Each consultant staff shall be supplied with a computer running Windows 7 or later Windows operating systems capable of wired and wireless network connections, a writeable CD, a color printer (that can be networked for all staff or black/white for other staff) and loaded with the most current version of MS Office software (Microsoft Project & Site Manager or other QA/QC program if applicable), and Adobe Pro/DC for editing and mastering PDF files. Consultant shall provide an overhead projector to the project for project meetings and presentations. Consultant shall provide and maintain some form of “Cloud Storage” system for project documentation, the actual details of this will be coordinated with

CDOT Post-Award. Consultant shall also provide several external data storage devices capable of storing all data on each device for the back-up of project documentation. Other office equipment may be requested by CDOT and supplied by the consultant.

**Labor, Materials, Vehicles & Equipment (Continued)**

The Consultant shall have a phone with a digital camera with GPS cache ability that can be downloaded to a central location and available for staff to review at all times. Written and photo and documentation of the project shall be made available to the CDOT Project Manager and CDOT Project Engineer on a regular basis.

The following equipment shall be furnished by the Consultant in sufficient quantity and in good working order (with current calibration) to ensure accurate performance of all work required in a timely manner:

- Nuclear Asphalt Content Gauge
- Nuclear Moisture-Density Gauge
- Concrete air meter, slump cone, and other concrete testing equipment
- Sieves for aggregates and soil gradations
- Electronic scales
- Asphalt & A/C sample containers and small tools
- Proctor equipment for soil curves and one point tests
- Atterburg, Rice value, and Sand Equivalent equipment
- Sample drying equipment
- Concrete cylinder molds which meet AASHTO requirements except that paper molds shall not be used, and plastic molds shall not be reused
- Miscellaneous equipment for performing the required soils, asphalt and concrete tests

**Work Description**

The Construction Administration of the project will require Consultant personnel to have a combination of CDOT construction experience and roadway and bridge construction experience. Specific experiences should include bridge replacement, reinforced concrete, pavements and bases, retaining walls, caissons, piling, environmental constraints, erosion control, embankment, HMA, ITS installations, permanent traffic devices, and temporary traffic control management. The Consultant personnel shall be prepared to work in a mountain environment and adverse weather conditions. Additional experience in the Construction Manager/General Contractor (CM/GC) project delivery method will be beneficial.

A separate consultant will be providing Design Support for the project during construction, but Consultant CM staff will be required to provide details of any project encountered issue to them for evaluation and proposed changes to the design plans.

The Consultant shall provide support to the CDOT Project Manager and CDOT Project Engineer through assignment of personnel to construction administration and inspection responsibilities. Construction

Administration and Inspection responsibilities include:

- **Pre-Construction Activities include but are not limited to:**
  - Review and provide comments on design plans and specifications;
  - Attend and participate in the design review meetings and as directed by the CDOT project manager or CDOT Project Engineer;
  - Assist with the development of project specifications; and
  - Assist CDOT with other duties/tasks as requested;
  
- **Construction Activities include but are not limited to:**
  - Progress Reports: Prepare weekly progress reports for the CDOT Resident Engineer, Project Manager and Project Engineer documenting project progress in accordance with the Basic Contract. Project Status Report shall include all activities that transpired during the previous week, a forecast of the upcoming week, project budget and schedule updates, outstanding RFI's and CMO's, known and/or possible claim or dispute issues, and any other issues of possible concern;
  - Preparing and transmitting updates of construction activities to the Project Manager for CDOT's Public Information Office;
  - Monitoring contractor payroll compliance requirements as they relate to B2G and LCP Tracker;
  - Weekly Progress Meeting agenda and minutes;
  - Daily Work Diaries by all staff members;
  - Securing project documentation from the contractor;
  - Anticipating project problems, then formulating and implementing solutions;
  - Reviewing drawings and data submitted by the construction contractor and suppliers for conformance with the specifications. Inform and obtain concurrence as needed from the CDOT Project Manager or CDOT Project Engineer and keep relative documentation for project records;
  - Maintaining accurate notes reflecting actual construction details to be used in preparation of as-constructed plans;
  - Communicating with adjacent landowners as required to resolve issues that arise due to construction;
  - Monitoring compliance with and taking appropriate action to preserve safety on the project for all workers and traveling public in accordance with Methods of Handling Traffic (MHT);
  - Initial, follow up, and final inspections of work in progress including interim and final measurements;
  - Notifying contractors and CDOT Project Manager and CDOT Project Engineer of non-compliance with the contract plans and specifications;
  - Performance of special tests, investigations, or monitoring which are required to fulfill the intent of the CDOT inspection program;
  - Ensure compliance with permits such as 404 and NPDES;
  - Inspection of erosion control, review of SWMP notebook, and participation in Erosion Control Compliance Reviews;

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- Preparation of inspection documentation for development of progress payments for the contractor in accordance with prescribed procedures;
  - Submittal of standard documentation reports no later than the following working day
  - Aiding in the preparation of correspondence to the contractor, CDOT Staff, local agencies, etc.;
  - Providing communication to contractor field crews;
  - Preparation of final “As Constructed” plans upon project completion;
  - Perform miscellaneous project related duties as requested by the CDOT Project Manager and CDOT Project Engineer;
  - Assist in preparing punch lists of uncompleted work, non-conformance reports, and deficiency notices;
  - Assist in preparing responses to contractors' and suppliers' requests for information, submittals, change notices, claims, and correspondence;
  - Evaluate the project schedule;
  - Assist CDOT Project Manager and CDOT Project Engineer and with coordination of all construction contract activities, assist in the supervision of other project staff and assignment of duties and responsibilities;
  - Review, give comments, and acknowledge completeness of required submittals
  - Maintaining of project files, project diaries and time counts;
  - Prepare periodic reports and billings required by CDOT Procedural Directive 400.2;
  - Participate in and ability to facilitate (as necessary) weekly progress meetings with contractor, subcontractors, utilities and other interested parties;
  - Change Orders/MCR – discussions with: Contractor, Area Engineer, RE, Specialties as necessary. Also write CMO and justification letter, prepare package with attachments, price justification/negotiation, form 90, etc.;
  - Review/Monitor Schedule (baseline, updates and narrative reviews);
  - Weekly meetings (agendas, minutes, preparation, facilitation, etc...);
  - Pre-con meetings (agendas, minutes, distribution, preparation, facilitation, etc...);
  - Review inspectors work (diaries, 266's, DWR's, calculations, spreadsheets, etc...);
  - Participate in Traffic Control Reviews;
  - Review inspectors work (diaries, 266's, DWR's, calculations, spreadsheets, etc...);
  - Erosion control management and oversight, bi-weekly reviews, post-storm event reviews, MAR;
  - Submittal review and approve and forward to specialties as appropriate for review/approval; and
  - Manage the receipt, filing, storage, cataloging and review of all project Contractor Submittals.
- **Post Construction Activities include but are not limited to:**
- As-Constructed Drawings: Complete 11”x 17” as-constructed drawings of work completed by the Contractor, including final pay quantities.
  - Preparation of Final Pay Estimate: Assist in determining final pay quantities with appropriate supporting documentation and checks.



- Preparation of Materials Final: Prepare the final materials documentation for closing the project.

### **Project Personnel Descriptions**

#### **Office Engineer**

- The Office Engineer (OE) will be responsible for the development of all change orders with the oversight of the CDOT project engineer in compliance with the Contract requirements and established CDOT Policies and practices.
- Work closely with the scheduler to ensure timely completion of the Project based on the original project schedule and approved schedule revisions.
- Ensure Contract Time is managed in a way that benefits the Project.
- Prepare all estimates per the direction of the CDOT Project Manager.
- Ensure the Contractor is paid timely for all Contract items that are satisfactorily completed in accordance with the Contract.
- The Office Engineer will ensure that all Work and Materials used on the Project, and applicable Project documentation conform to Contract requirements and established CDOT Policies and practices. Document and bring to the attention of the CDOT Project Manager or CDOT Project Engineer all items that do not meet the Contract or accepted CDOT guidelines.
- The Office Engineer will develop and maintain a physical and electronic structured system for all documentation of the project. The OE will input all Inspector Reports, Change Orders, Stockpile Materials request, B2G, LCP Tracker and any other required information as needed from the Project Manager and Project Engineer.
- Review all certified payroll documentations as provided by the Contractor for conformance to the specifications and functional uses, conduct random interviews of Contractor employees to determine if the Contractor is in conformance with CDOT's DBE, EEO/Labor Compliance policies, assist FHWA with all requested documentation, Manage the OJT requirements of the contract and write reports for progress estimates when approved.
- The Office Engineer will also be responsible for the assembly of the Project Final Documentation (As-Built) for delivery to the Finals Engineer. The Office Engineer will ensure all project data is collected, scanned, filed, archived and distributed to project personnel.

#### **Safety Critical Work**

- The Consultant Discipline Structure Lead shall assume the responsibilities of the Safety Critical Work.
- Review the safety critical work plans, method statements, procedures, working drawings, shop drawings, PE engineered plans and drawings, demo plans, erection plans, etc. for compliance with contract requirements. Provide a written report of each work item to the engineer, with comments and a recommendation to approve, reject/revise/resubmit, or accept with comments. Participate in pre-construction meetings for all safety critical work items. Assist CDOT in maintaining full-compliance with CDOT policies and procedures and contractual

compliance. Perform periodic Project Safety Reviews for overall project safety and compliance. Participate in other on-site inspection activities associated with safety critical work items. Assist, as needed or requested by the CDOT Project Manager and CDOT Project Engineer, with inspection of safety critical work as the work transpires and progresses. Assist and review safety critical elements of a special nature as related to Railroad requirements, policies, procedures, etc. Assist the Engineer in any other areas or special requests. Maintain documentation of all safety critical work, analysis, comments, reviews, documentation, meetings, etc. Be able to attend meetings, give presentations, and provide input and comments as requested.

### **Public Relations Specialist**

Responsible for reviewing and commenting on all public information campaigns to be distributed by the Contractor. This person will review the Contractors PIO information for conformance to the PIO specification, attend project meetings as directed by the CDOT Project Manager, and provide comments to Contractors proposed campaign. A social Media campaign will be implemented by this person (or an additional person) to provide “real time” Traffic updates while daily project work is active. It is expected that all forms of current “popular” Social Media outlets will be utilized to distribute project information. Specific details of this effort will be finalized post award and in coordination with the Region 2 Communications Manager.

### **Consultant Discipline Leads (General Description)**

- Consultant Discipline Lead personnel will be required to prepare weekly progress reports for the CDOT Resident Engineer, CDOT Project Manager and CDOT Project Engineer documenting project progress in accordance with the Basic Contract. Project Lead personnel will be responsible for all project deliverables such as project diaries, inspection reports, photos, quantity records, and other documentation shall be prepared and submitted throughout the duration of construction in accordance with CDOT requirements. Consultant Discipline Leads will supervise others in the work they are tasked with and provide all necessary information to the Office Engineer if a CO is determined to be necessary. Consultant Discipline Leads will be responsible for all project QA documentation and its timely submittal to the Office Engineer for inclusion into progress estimates.

### **Environmental Specialist**

- Review, monitor, and manage all environmental requirements of the contract including but not limited to, managing of all erosion control documentation, Hazmat compliance, noise compliance, issuance of 105's for non-compliance, and attendance of all inspections required by the permit. The Environmental Specialist will ensure compliance of mitigation of all biological and endangered species issues on the project. This person(s) is expected to be qualified in all aspects of Environmental concerns related to the project with the ability to support the CDOT Project Manager and CDOT Project Engineer to maintain full environmental compliance on the project.

**Traffic Control Lead**

- The Traffic Control Lead will be responsible for monitoring the Contractors day to day traffic operation for compliance to all CDOT and Federal standards. Duties will include review and approval of MHT's prior to the Contractor performing the required work, enforcement of MHT's, tracking and documenting all traffic devices and operations. All required CDOT documentation will be required to be kept current daily and not limited to TCS diaries, form 7's, and daily traffic inspection logs. Video and photo logs shall be required.  
The Traffic Control Lead will be required to communicate all traffic related issues, immediately, to the CDOT Project Manager, CDOT Project Engineer and Public Relations Specialist.

**Structural Lead**

- The Structure Lead shall be responsible for monitoring the structural construction for compliance to all CDOT and Federal standards. The Structure lead shall be a Registered Professional Engineer in the State of Colorado with a minimum of 10 years of relevant experience in bridge construction, bridge deck repair and bridge joint inspection.

**Documentation**

The Consultant shall provide all correspondence and applicable CDOT forms to the CDOT Project Manager or his/her authorized representative for review and signature. The Consultant personnel shall be capable of preparing CMO's, justifications for CMO's and MCR's; price justification (force account analysis); review of MHT's, construction quantity calculations required for this type of project; inspection reports; daily diaries; review of 205's; and other construction administration documentation required per CDOT construction manual.

Each of the Consultant's personnel shall maintain a daily diary with photos for each day they perform work on the project. They shall use CDOT's Automated Form 103a - Project Diary unless otherwise approved by the CDOT Project Manager or their designee. The contents of the diary shall be brief and accurate statements of progress and conditions encountered during the prosecution of the work. Editorial comments are not to be incorporated in the diaries or on any written correspondence applicable to the project. A copy of the daily diary and photos shall be given to the Office Engineer within one working day of its date.

**Personnel Qualifications**

CDOT is seeking supplemental construction administration support staff from the Consultant to augment the CDOT staff as required for the I25/SH 94 Safety Improvement Projects. CDOT staffing on this project will vary as conditions change through the duration of construction work. It is expected that 22 or more consultant staff may be required full time to meet the project's QA requirements, depending on project needs. It is anticipated that the project will have multiple shift work, 24 hours a day, 7 days a week. Working nights, weekends and holidays will be required. The exact personnel requirements will be based upon the CM/GC construction schedule.

Personnel qualifications and staffing levels for the project shall be subject to the approval of the CDOT Resident Engineer. CDOT will reserve the right to review the resume and interview any new proposed staff to the project. The Consultant shall be certified as defined by the requirements set.

The Consultant Construction Manager(s) will be on the project site for the duration of the project and will assist the CDOT Project Manager and CDOT Project Engineer in administration activities and management of inspectors and material testing technicians.

Other skills to be highly considered for all personnel:

- CDOT experience with the federal project requirements such as OJT, review of 205's, performance of interviews to complete CDOT form 280, and review of Davis-Bacon wages
- Temporary traffic controls and reviewing and approving Methods of Handling Traffic and have taken the Traffic Control Supervision class.
- Survey experience
- Excellent documentation and communication skills
- Utility coordination experience
- ITS systems and devices

The Consultant Materials Testing Technicians (MTT or Testers) shall have experience in cast in place concrete, PCCP, asphalt, earthwork, as well as the requisite certifications. The Consultant MTT shall review project plans, specifications, and the current version of the CDOT Field Materials Manual and the project specific CDOT Form 250 to assist the CDOT MTT in completing the project with the number and type of tests that will need to be performed on the project. The Consultant MTT, the CDOT Project Manager, CDOT Project Engineer and the Consultant Construction Manager shall meet on a regular basis to address any questions or issues involving testing procedures, frequency, or documentation. Additional testing may be required if requested by the Consultant Construction Manager or the CDOT Project Engineer. The Consultant MTT shall be thoroughly familiar with CDOT forms and documentation requirements. The consultant-supplied Materials Testing Technicians shall be available to the project and report to the project site when requested by the CDOT Project Engineer.

Personnel provided by the consultant who do not meet all of the specified requirements, or who fail to perform their work in an acceptable manner, shall be removed from the project as determined and directed by the CDOT Resident Engineer. Back-up Consultant resources should be available in case of loss of staff, sickness, or vacations or as required for the project.

#### **Vehicle Mileage and per diem**

Compensation for mileage shall be for all necessary project related work while on project site and for required travel to and from the project site for required meetings. Mileage for consultant staff commuting when the commute is less than 35 miles to the project site on a daily basis shall commence from the closest equivalent distance of either the Consultants home office, the CDOT Residency, listed herein, or the Consultant staff's residence, whichever is less.

With the CDOT Project Manager's concurrence, Consultant may include project personnel that live greater than 35 miles from project. Consultant manager and CDOT Project Manager shall agree to compensation for mileage in this instance. The compensation shall not be greater than the total one-way mileage nor greater than the cost of lodging plus per diem.

Per diem expenses for consultant staff shall not be covered by CDOT but may be approved by the CDOT Resident Engineer for specific personnel cases as requested by CDOT.

**Consultant Team Organization**

To complete the work of the four primary focus areas, CDOT anticipates the following will be required or more Consultant staff required full time to complete the project:

- 1 Consultant Construction Manager
- 4 Consultant Discipline Leads
  - Roadway, Structures (PE), Traffic Control (PE), Environmental
- 3 Consultant Senior Inspectors
  - Roadway (2), Structures (1)
- 3 Consultant Inspectors
  - Roadway (2) and Structures (1)
- 3 Materials Testing Technicians
  - Roadway (2) and Structures (1)
- Project Administration
  - 1 Office Engineer
  - 1 Public Relations Specialist

Please review the above Consultant Team Organization please prepare your proposal for this project based on this team organization. If you choose to do so, you may propose suggested changes to the team organization and CDOT will take them into consideration. If your team is selected, CDOT may or may not accept any of your proposed changes in whole, or in part. The final organizational structure, the actual positions needed and the consultant personnel selected will be negotiated with the selected consultant but the final team selections will be at the sole discretion of CDOT. The quantity of consultants, positions of need, and actual consultant personnel needed may change during the course of the project. CDOT will require the consultant team to be adaptable and dynamic with staffing and be able to adjust as necessary to either increased or decreased personnel loading.

**CONSTRUCTION MANAGEMENT REQUIREMENTS  
CHECKLIST**

The following checklist shall be used to establish the Construction Management responsibilities of the individual parties for this project.

The checklist shall be prepared by placing an “x” under the responsible party opposite each of the tasks listed below. When a task does not apply to the project, not-applicable “NA” shall be placed under both parties.

Tasks that will be performed by CDOT Headquarters staff will be so indicated.

The Region in accordance with established policies and procedures shall determine who will perform all other tasks that are the responsibility of CDOT.

Tasks may be adjusted periodically as required by changing and/or challenging project conditions, Consultant may be asked to revise assignments and/or staff to help manage the tasks at hand.

DESCRIPTION OF TASK	CONSULTANT	CDOT
1. Conduct the Pre-Bid conference, answer all questions, and maintain a log of all decisions given and/or made.		x
2. Attend design meetings related to CM/GC project delivery method.	x	x
3. Coordinate all construction contract activities with appropriate stakeholders.	x	x
4. Distribute ten award sets of plans and specifications to the CDOT Resident Engineer.		x HQ
5. Issue Notice to Proceed to the Contractor.		x HQ
6. Schedule, conduct and prepare minutes of all project meetings as follows:		
a. Job Showing	NA	NA
b. Pre-construction Conference	x	x
c. Partnering Workshop (if required)	x	x
d. Weekly Project Meetings	x	x
e. Pre-Survey Conference (if required):		
(1) Construction Staking	x	x
(2) Survey Documentation	x	x
f. Bridge Construction Communications	x	x
g. Safety Critical Pre-Work Meetings	x	x
h. Structural Concrete Pre-pour Conference	x	x
i. Concrete Pavement Preparing Conference	x	x
j. HBP Preparing Conference	x	x
k. Attend Contractor Weekly Safety “Tool Box” Meeting	x	x

DESCRIPTION OF TASK	CONSULTANT	CDOT
7. Public Relations:		
a. Prepare and coordinate with CDOT and others to publish and distribute public notices of all planned construction activities and schedules to the media, property owners, local residents, tenants, and other appropriate stakeholders affected by the project.	x	x
b. Perform public relation tasks with appropriate individuals as requested by CDOT.	x	x
c. Explain construction and work with adjacent property owners to resolve issues that arise during construction.	x	x
8. Review, comment, accept and/or approve as appropriate the following submittals: <i>Note: This list is not all-inclusive and other submittals may require action as directed by CDOT.</i>		
a. CDOT Form # 205 – Sublet Permit Application after Form #713 has been checked by the Region EEO Administrative Program Specialist.	x	x
b. Method of Handling Traffic	x	x
c. Progress Schedules	x	x
d. Method Statements	x	x
e. Shop drawings per 105.02	x	x
f. Working drawings per 105.02	x	x
g. Other submittals per 105.02	x	x
h. All EEO, Labor compliance requirements	x	x
i. Other submittals as directed	x	x
9. Construction inspection including calculations, measurements, and documentation of interim and final pay quantities as directed by the Project Manager.	x	x
10. Perform required EEO/AA/DBE/OJT or labor compliance tasks as requested as follows:		
a. Conduct Contractor/Subcontractor reviews to ensure conformance with the Equal Employment Opportunity (EEO)/Affirmative Action (AA)/DBE/OJT requirements contained in the contract. (Standard Special Provisions, Project Special Provisions and FHWA Form 1273.)	x	x
b. Complete and submit to the CDOT Resident Engineer, the required number of CDOT Forms 280 – Equal Employment Opportunity and Labor Compliance Verification.	x	x
c. Monitor DBE participation to ensure compliance with the “commercially useful function” requirements.	x	x
d. Complete and submit to the CDOT Region EEO Administrative Program Specialist, the applicable number of CDOT Forms #200 – OJT Training Questionnaire, when project utilizes OJT’s.	x	x
e. Check certified payrolls to verify contractor/subcontractor compliance with contract requirements. Project personnel trained in payroll checking shall complete the checking. (Contact the Region EEO Administrative Program Specialist for training requirements.)	x	x

DESCRIPTION OF TASK	CONSULTANT	CDOT
f. Coordinate submittals by Contractor and all subcontractors of FHWA Form 1391 (Highway Construction Contractor’s Annual EEO Report) to the CDOT Region EEO Administrative Program Specialist.	X	X
11. Materials:		
a. CDOT Form # 250 – Materials Documentation Record:	X	X
(1) Fill out and distribute CDOT Form # 250 before the Contractor commences work.	X	X
(2) Complete Form # 250 after work is completed; distribute per instructions in CDOT Materials Manual.	X	X
b. Approve changes to the Typical Section (requires a CMO).		X
c. Development, checking and design mix approvals:	X	X
(1) Concrete	X	X
(2) Hot Bituminous Pavement	X	X
d. Acceptance of manufactured products	X	X
e. Inspecting fabrication of structural steel and pre-cast concrete structural components.	X	X
f. Inspecting fabrication of bearing devices	X	
g. Laboratory check testing.	X	X
h. Acceptance testing.	X	X
i. Independent assurance testing - develop, complete and distribute CDOT Form # 379 – Project Independent Assurance Sampling Schedule.		X
j. Approve sources of materials.	X	
12. Maintain time counts	X	X
13. Maintain project files for documentation; provide duplicate documentation to CDOT Resident Engineer when requested.	X	X
14. Obtain, accept, and approve all required material certifications.	X	X
15. Approve shop drawings	X	X
16. Perform Traffic Control Inspections	X	X
17. Approve traffic signal equipment		X
18. Construction surveying – quality control checking and quantity verification as needed.	X	
19. ROW Monumentation – quality control checking		X
20. Prepare monthly estimates of the Contractor’s work performed, materials placed or stockpiled materials on hand in accordance with the Contract. <i>Note: Only a CDOT Resident Engineer can approve and sign vouchers for interim and final Contractor pay estimates.</i>	X	X
21. Review interim and final billings for Utility relocation work. <i>Note: Only a CDOT Resident Engineer can approve and sign vouchers for interim and final Utility Company billings.</i>	X	X
22. Prepare CDOT Form # 90 [Contract Modification Order (CMO)] and/or # 90 [Minor Contract Revision (MCR)] including letter of explanation for CMO/MCR <i>Note: The Consultant may negotiate costs for extra work but only CDOT can approve costs. Only the CDOT Resident Engineer can approve and sign CMO/MCR’s for modifying CDOT’s Contract or paying the Contractor.</i>	X	X



DESCRIPTION OF TASK	CONSULTANT	CDOT
23. Monitor project financial status and submit monthly in a format acceptable to the Region, such as CDOT Form # 65a – Project Financial Status Report.	X	X
24. Prepare and submit monthly progress reports to the Region Program Engineer: CDOT Form # 110a – Status of Active Construction Projects and CDOT Form # 517a – Status of Construction Project Finals	X	X
25. Prepare appropriate responses to Contractor, subcontractor or supplier requests for information, submittals, disputes, claims, change notices, or other correspondence.	X	X
26. Prepare response for Project Manager status of claim & Claim Status Report Form	X	X
27. Prepare complete claim record	X	
28. Give oral or written presentation to Region Director for claims.	X	X
29. Give presentation for Dispute Review Board or AAA Arbitration board.	X	X
30. Conduct routine, random, project reviews to ensure the project is being administered in accordance with the terms of the construction contract.	X	X
31. Conduct final project inspection of completed or unacceptable work and prepare punch list for final acceptance.	X	X
32. Prepare and submit CDOT Form # 1212a – Final Acceptance Report	X	X
33. Prepare final project acceptance letter and distribute per procedures in the CDOT Construction Manual.	X	X
34. Advertise for final settlement.		X
35. Maintain accurate as constructed notes and prepare and distribute final as-constructed plans per procedures in the CDOT Construction Manual.	X	X
36. Check final quantities, final plans, and prepare the final pay estimate. <i>Note: Only CDOT can sign final pay estimate sheets and voucher.</i>	X	X
37. Check material records.	X	X
38. Submit final materials certifications	X	X
39. Obtain and review CDOT Form # 17 – Contractor DBE Payment Certification from the Contractor and submit to the Region.	X	X
40. Obtain and review FHWA Form PR 47 (Statement of Materials and Labor Used) from the Contractor, check and submit to the Region.	X	X
41. Complete and submit CDOT Form # 950 for project closure.		X
42. Submit original of all project records to the CDOT Resident Engineer. (CDOT will retain project records for six years from the date of project closure.)		X

In addition to the qualifications, requirements set forth above, the following certifications will also be required:

Class/Certification	Office Engineer & Lead Worker	Senior Inspector	Junior Inspector	Materials Testing Technician
Basic Highway Math	X *	X *	X *	X
Basic Construction Surveying	X *	X *	X *	X
Basic Highway Plan Reading	X *	X *	X *	X
Stormwater Management and Erosion Control	X	X	X	
Traffic Control Supervisor	X	X	X	
ACPA Concrete Pavement Inspector Certification		X	X	X
LabCAT Level A&B				X
Asphalt Paving Inspection LabCAT Level I			X	X
WAQTC				X
ACI Field Testing Tech I				X

\* Not required if the Consultant is a licensed Professional Engineer, or has an Engineering Degree from an accredited institution.

Scope of Work Nov. 14, 2019

Intern Inspector/Tester is entry level and personnel assigned to this position may not be required to possess all of the certification/qualifications, but is progressing in that direction. The Consultant firm and the CDOT Project Manager and CDOT Project Engineer will review candidates and agree to the assigned personnel in advance.