

Request for Proposals (RFP)

CM/GC Owner's Representative and Construction Management Services Scope of Work

Vasquez Blvd 60th to 64th Avenues



PROJECT NUMBERS: NHPP 006A-069

PROJECT LOCATION: Vasquez & 60th Commerce City, CO

PROJECT CODE: 22922

August 23, 2023

Colorado Department of Transportation
4670 Holly Street
Denver, CO 80216



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INSTRUCTIONS

This Scope of Work is to serve as a template for Colorado Department of Transportation (CDOT) to develop and negotiate solid contracts with Consultant teams on projects and tasks. The Consultant shall coordinate all activities, tasks, meetings, communications, and deliverables with the CDOT/Project Manager (PM) (or his or her designee) for this Project. All submittals will be through the CDOT/PM or a designee, who will make appropriate distribution. Upon notice to proceed (NTP), the Consultant shall be responsible and will account for all effort contained in the Final Scope of Work.

This Draft Scope of Work has been reviewed by the Department and reflects a plan of approach based on the known goals. One factor determining the selection of a Consultant is the ability of that Consultant to analyze the project goals, evaluate the work elements, and formulate a work plan. This process may produce new approaches or modification to the Project work elements. Because of that, all Consultants should be aware that the Final Scope of Work for a project will be produced with input from the selected Consultant. The Final Scope of Work submitted will be generated by CDOT personnel and be on CDOT letterhead.



SECTION 1 – PROJECT SPECIFIC INFORMATION

1.1. PROJECT BACKGROUND

Vasquez Boulevard is a principal arterial that ultimately spans 5.3 miles between 46th Avenue (I-70) to the south and US 85 to the north. Vasquez Boulevard is a continuation of US 85 as well as SH 2. 60th Avenue is classified by Commerce City as a minor/residential collector. Within the study area it has two through-lanes, attached sidewalks, and an approximate ROW width of 60 to 90 feet. The intersection of Vasquez and 60th Avenue is shared with Parkway Drive and adjacent frontage roads, creating a signalized intersection with eight approaches. The number of turning movements at this intersection cause confusion and excessive delay. The current status of the project can be found at the following link: <https://www.codot.gov/projects/vasquezimprovements-i270-to-64th>.

1.2. PROJECT LIMITS

The Project is located within Adams County and Commerce City on Vasquez Blvd between 58th and 64th Avenues.

1.3. PROJECT GOALS

The CDOT Project Goals reflect the values that this Project holds and expects. An exceptional proposal will demonstrate how each of the Project Goals will be pursued by the Proposer.

1. Improve the reliability of traffic movements through the 60th Ave. intersection
2. Balance access between the transportation network and adjacent business access and other land uses
3. Effectively connect current and future modes and networks, including roads, bicycles, pedestrians and transit
4. Improve the ability of freight to efficiently travel through and within the area
5. Minimize and mitigate impacts to the built environment consistent with local master plans
6. Avoid and minimize impacts to the natural environment

1.4. PROJECT FUNDING

This project is fully funded through Local, State and Federal resources including CMAQ, Freight, HSIP, CDOT RPP, Commerce City Economic Forum Development, Highway Infrastructure Programs (HIP) US Senate Contributed Dollars, and CDOT Strategic 10-Year Plan funding sources.



1.5. PROJECT INFORMATION AND DEFINITION

The goal of the Project is to construct the below Project scope elements in their entirety while minimizing impacts to the traveling public and other stakeholders. The Project Scope Elements may be modified based on packaging, CM input, Stakeholder input, and final design refinements.

Project Scope Elements

Project Scope Elements include but are not limited to:

- Reconfiguration of the signalized intersection of Vasquez Blvd and 60th Ave. to reduce the number of turning movements and improve traffic and multimodal operations and safety.
- Creation of a signalized T-intersection at Vasquez and 62nd for improved circulation and replacement of the Parkway Drive traffic movements to southbound Vasquez.
- Construction of new local access roads to the West of Vasquez Blvd and 60th Ave. to replace the functionality of existing two-way frontage roads along Vasquez.
- ROW/Easements for permanent features and temporary construction access.

Major work items may include but are not limited to: earthwork, roadway construction and resurfacing, traffic signals, drainage features, ITS infrastructure, signing/stripping, and revegetation.

1.6. PROJECT ROLES

Lead and Supporting Agencies: CDOT is the lead agency and Owner of the Project. Oversight is provided by FHWA.

Stakeholders: Primary Project stakeholders and their role or involvement in the Project are listed in the following table:



Stakeholders

| Agency/Stakeholder | Role or Involvement |
|---|---|
| Federal Highway Administration (“FHWA”) | <ul style="list-style-type: none">● Project oversight● Member of the Project Leadership Team (PLT) and Technical Team (TT) |
| Adams County | <ul style="list-style-type: none">● Member of the Project Leadership Team (PLT) and Technical Team (TT) |
| City of Commerce City | <ul style="list-style-type: none">● The project limits fall within City limits● Member of the Project Leadership Team (PLT) and Technical Team (TT) |
| Colorado Motor Carriers Association | <ul style="list-style-type: none">● Input on freight consideration, HazMat route maintenance and temporary detour decisions● Member of the Technical Team (TT) |



Additional Coordination Contacts

| Other Stakeholders | Role or Involvement |
|---------------------------------------|--|
| Private Property Owners | <ul style="list-style-type: none"> ● ROW/Easement impacts ● Will want to know travel impacts/delays/detours |
| RTD and Traveling Public | <ul style="list-style-type: none"> ● Roadway safety/trip reliability input ● Will want to know travel impacts/delay/detours |
| Emergency Responders/Incident Command | <ul style="list-style-type: none"> ● Emergency response/access input ● Will want to know travel impacts/delay/detours ● Members of local emergency responders are on the Project’s Technical Team ● Incident Management and Planning for all potential impacts |
| Utilities | <ul style="list-style-type: none"> ● See table below. |

Anticipated Utility Coordination/Relocations

| Utility Identification | Facility type | Relocation Required? |
|--|---|----------------------|
| Electric (Xcel Energy) | Xcel Energy has two main feeder lines and numerous smaller distribution lines in the western part of the study area | Yes |
| Telecommunications (CDOT, Zayo) | CDOT and Zayo have buried fiber optic and copper cable lines throughout the study area. | Yes |
| Gas (Xcel Energy) | Low and High Pressure lines are potentially within the project area | Not Anticipated |
| Sanitary Sewers (South Adams County Water & Sanitation District) | Location and potential conflicts to be further investigated | Not Anticipates |
| Water | Location and potential conflicts to be further investigated | TBD |
| Storm Sewer (CDOT) | CDOT has a storm sewer collection system within the corridor | Yes |

1.7. WORK DURATION

It is estimated that the Project construction will take 30 months. CDOT anticipates that the start of construction on the Project will begin no later than early 2024. The CM shall explore opportunities to measurably reduce the construction duration to minimize impacts to the traveling public and to reduce costs.



1.8. COLLABORATION

This project will be delivered via Construction Management/General Contractor (CM/GC) procurement. The Consultant will need to work with CDOT in conjunction with the Construction Manager (CM) and Designer to collaborate on innovation and constructability throughout the duration of the design of the project. Throughout construction, the Consultant will need to work with CDOT in conjunction with the CM and Designer to ensure the work is completed per the completed plans and specifications.

1.9. CONSULTANT RESPONSIBILITY AND DUTIES

All work shall be in accordance with CDOT's latest manuals, directives, and generally accepted practices. The Consultant shall work closely with CDOT's Project Director, CDOT Construction Manager, CDOT Design Manager, ICE, Construction Manager, and Designer.

The Consultant shall develop an all-encompassing scope and prepare a written recommendation of activities that coincide with the Project costs, goals, and planned improvements for each Task Order developed to complete the Project.

The Consultant shall provide construction administration support, project engineering services (construction management), inspection, and materials-testing services required for construction of the Project. The Consultant must work in conjunction with the CM/GC and Designer to collaborate on innovation, constructability, schedule, and risk throughout the duration of the project.

The Consultant shall be prepared for the following duties:

- Provide a full time Assistant Project Engineer and Project Team capable of assisting CDOT in providing a complete project deliverables on time for each construction package
- Program management
- Attend project meetings
- Meet all project milestones
- Monitor and evaluate project CPM schedules for design and construction
- Develop concepts and quantities for cost estimates
- Participate in public outreach meetings
- Provide environmental support to complete the Project.
- Attend site meetings and site visits, documenting critical decisions.
- Review FIR, DOR, FOR, and final project design, specifications, and quantities for constructability and estimate review
- Track project action items and deliverables
- Provide inspection and testing services throughout construction
- Closeout all final documentation as required per CDOT specifications

1.10. PERSONNEL QUALIFICATIONS

- The Consultant PM must be approved by the CDOT Contract Administrator.
- Certain tasks must be done by Licensed Professional Engineers (PE) who are registered with the Colorado State Board of Registration for Professional Engineers and Land Surveyors. National Institute for Certification in Engineering Technology (NICET) or other certifications may be required for project inspectors and testers.
- All tasks assigned to the Consultant must be conducted by a qualified person on the Consultant team. The qualified person is a professional with the necessary education, certifications



(including registrations and licenses), skills, experience, qualities, or attributes to complete a particular task.

- This contract requires that the prime firm or any member of its team, be pre-qualified in the following disciplines for the entire length of the contract:
 - CE – Civil Engineering
 - GE – Geotechnical Engineering
 - MA – Engineering Management (Contract Admin)
 - MC – Engineering Management (Construction)
 - MT - Materials Testing
 - VE – Value Engineering
- Key Personnel in the Statement of Interest section of the Proposal, see **Section 6** of the Owner's Representation RFP, constitutes an agreement by the Proposer to make the Key Personnel available to complete the services of the contract at the level the Project requires. CDOT requires that all Key Personnel be engaged to perform their specialty for all services required by this contract, and the Key Personnel shall be retained for the life of this contract to the extent practicable and to the extent that such services maximize the quality of work hereunder.

If the Consultant or a subconsultant decides to replace any of its Key Personnel, the Consultant shall notify the Project Director in writing of the desired change. No such changes shall be made until at least two qualified replacement candidates are recommended by the Consultant and a replacement is approved in writing by the Project Director or its designated representative. The approval shall not be unreasonably withheld. Failure of the Consultant to comply with the requirements of this provision may be the cause for CDOT's termination of the contract.

The Project Director or its designated representative will respond to the Consultant's written notice regarding replacement of Key Personnel within fifteen working days after receipt of the list of proposed changes. If the Project Director or its designated representative does not respond within that time, the listed changes shall be deemed to be approved.

If, during the term of the contract, the Project Director or its designated representative determines that the performance of approved Key Personnel is not acceptable, a notification shall be sent to the Consultant. The notification shall include a reasonable timeframe to correct such performance. Thereafter the Consultant may be required to reassign or replace such Key Personnel. If the Project Director or its designated representative notifies the Consultant that certain Key Personnel of a subconsultant should be replaced, the Consultant shall use its best efforts to replace such Key Personnel within a reasonable time, but not to exceed fifteen working days from the date of the notice.

1.11. COMPUTER SOFTWARE INFORMATION

The Consultant shall utilize the most recent CDOT adopted software (if applicable). The primary software used by CDOT is as follows:

- SiteManager/LIMS
- ProjectWise (a/k/a ProjectWise Explorer or ProjectWise Cloud)
- Microsoft Word/Excel/PowerPoint/One Note
- Scheduling - Microsoft Project or Primavera
- LCP Tracker for Project Payroll tracking
- B2GNow System for DBE/ESB tracking and prompt payment
- Adobe Acrobat/BlueBeam Revu
- Sharepoint



The data format for submitting computer files shall be compatible with the latest version of the adopted CDOT software as of Notice to Proceed for the contract. The Consultant shall immediately notify the CDOT/PM if the firm is unable to produce the desired format for any reason and cease work until the problem is resolved.

1.12. PROJECT COORDINATION AND MEETINGS

The Consultant will be required to coordinate with the CDOT Construction Manager and specialty units as approved. There is an extensive list of stakeholders for this project for each PLT, TT and ITF as well as local agencies that are interested in the project. This list is included in **Section 1.6 Project Roles** in this SOW.

Meetings and frequencies will be established as design progresses and the construction portion begins. The Consultant shall be prepared to participate as requested by CDOT with the essential personnel requested.

1.13. SUPPLEMENTAL WORK

The consultant shall not perform work out of scope without prior written approval from the PM. Per the contract, subconsultants and vendors may not go over task order or contract budget.

1.14. ADDITIONAL PROJECT INFORMATION

Additional information regarding this project is included downloadable documentation found under the Project Delivery tab at the following link: <https://www.codot.gov/projects/vasquezimprovements-i270-to-64th>.



SECTION 2 – PROJECT MANAGEMENT AND COORDINATION

2.1. CDOT CONTACT

The Consultant shall utilize the following project administration contacts for the Project:

- A. The Contract Administrator for this project is:
Adam Parks, PE
Resident Engineer
4670 Holly Street
Denver, CO, 80216
W: 303-398-6732
Adam.parks@state.co.us

- B. Active day-to-day administration of the contract will be delegated to the CDOT/PM:
Jason Lucerna, PE
Construction Manager of Vasquez Blvd Project 58th to 69th
4670 Holly Street
Denver, CO, 80216
W: 303-941-3515
jason.lucerna@state.co.us

2.2. GENERAL SCOPE OF WORK

Consultant services are requested to provide construction administration support, project engineering services (construction management), inspection, and materials-testing services required for construction of the Vasquez Blvd Project located in Adams County, 58th to 69th Avenues.

The major Work components of this project are outlined in **Section 1.5 Project Information and Definition** in this SOW.

CDOT is seeking supplemental construction administration support staff from the Consultant to augment the CDOT staff as required for the Vasquez Blvd Project. CDOT staffing on this project could vary as conditions change through the duration of construction work. It is expected that approximately 4 consultant staff may be required full time to meet the project's QA requirements, depending on project needs. 1 Assistant Project Engineer, 2 Inspectors, and 1 project tester. Exact personnel requirements will be based upon the approved construction schedule.

The Owner's Representative staff, composed of CDOT and Consultant team members, will be responsible for completing all construction contract administration tasks. They will fulfill all inspection, materials testing, and documentation responsibilities including project final and as-built requirements.

Construction Traffic Control and Maintenance of Traffic (MOT) will be a major part of this project and will require a team member to review Method-of-Handling-Traffic (MHTs) and coordinate traffic control inspections with the Contractor to ensure conformance to the MUTCD. The project team will need to monitor the daily traffic demands and help to resolve issues that may arise in the project corridor.

This Project will be delivered using the Construction Manager/General Contractor (CM/GC) process in multiple construction packages. The first package is expected to begin construction by Spring 2024 with an approximate duration of 30 months. The selected Construction Manager is Jalisco International, Inc. It will be expected that the selected Owner's Representative Consultant will also be involved in the design



review process including innovation, risk, cost estimating, and specification development meetings.

This Scope of Work (SOW) has been carefully reviewed by the Department and reflects a plan of approach based on the project goals. The Consultant's analysis of the project, 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.

2.3. GENERAL WORK DESCRIPTION

The construction administration of the project will require Consultant personnel to have specific experience in the following activities:

- Earthwork
- Roadway construction
- Resurfacing
- Traffic Signals
- Drainage
- Permanent traffic control device installation
- ITS Infrastructure
- Signing and striping
- Environmental impact mediation - revegetation
- Erosion control inspection
- Temporary traffic control MHT review and inspection
- Construction traffic phasing plan review and implementation

The Consultant personnel shall be prepared to work in adverse weather conditions. Additional experience in the CM/GC project delivery method will be beneficial.

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

The Consultant shall provide support to the CDOT Construction Manager through assignment of personnel to construction administration and inspection responsibilities. The Consultant will be expected to provide support for the following activities:

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
- Responsible for all document control on the project
- Assist CDOT with other duties/tasks as requested
- Generation of meeting minutes to memorialize discussions and decisions

Construction Activities include but are not limited to:

- Progress Reports: Prepare weekly progress reports for the CDOT Construction Manager and Consultant 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 Consultant Project Engineer 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 Construction Manager 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 Construction Manager 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
- 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 Construction Manager and CDOT Project Director
- 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 Project Engineer 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, Project Director, 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, MHT review and approval, traffic phasing plan review and implementation
- 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
- 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 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.

Management of Consultant Project Construction Inspection

The consultant, CDOT Construction Manager, and CDOT Project Director shall meet, coordinate and schedule the required work. The consultant shall complete all work in accordance with their approved schedule.

Project Standards

All inspection and documentation shall be in accordance with the Colorado Department of Transportation (CDOT) Field Materials Manual, Construction Manual, CDOT M&S Standards, CDOT Inspector's Checklist and applicable Project and Standard Special Provisions in the construction project contract and the applicable CDOT Standard Specifications for Road and Bridge Construction. The applicable CDOT Field Materials Manual, including Colorado Procedures and Colorado Procedure-Laboratory, shall be the one currently in use when the construction project is advertised. If the required method is not described in the CDOT Field Materials Manual, the required work shall be completed in accordance with the current AASHTO Standard Specifications for Transportation Materials and Methods of Sampling and Testing (as revised and supplemented) or the ASTM Standards and Tentatives. Proposed work procedures shall be coordinated with the CDOT Construction Manager prior to the start of work.

Labor, Vehicles, Materials, and Equipment

Personnel qualifications, staffing level, and number and types of vehicles shall be subject to the approval of the CDOT Construction Manager. The Consultant shall assign personnel for the duration of the Contract unless otherwise approved by the CDOT Construction Manager. Employees required to operate vehicles must possess and maintain a valid 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 SiteManager. The level of qualification provided shall be as requested and approved by the CDOT Construction Manager.

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 Construction 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



Construction Manager.

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 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 10 or later Windows operating systems capable of wired and wireless network connections and loaded with the most current version of MS Office software (Microsoft Project & Site Manager or QA/QC program if applicable), and Adobe Pro/DC for editing and mastering PDF files.

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 documentation of the project shall be made available to the CDOT Construction Manager on a regular basis.

2.4. GENERAL WORK DESCRIPTION FOR PROJECT MATERIALS TESTING

The consultant shall sample, test and inspect those specified materials utilized in construction. Test results and inspection observations shall be documented and approved by the CPE in accordance with the references cited below under **Project Standards**. Project specific work will be defined by task order, prior to work commencing.

Management of Consultant Project Materials Testing

The Consultant, CPE, CDOT Construction Manager and Head Tester shall follow the requirements of CP-16 to meet, coordinate and schedule the required work. The Consultant shall complete all work in accordance with their approved schedule. The consultant materials testing evaluation form shall be completed by the CPE and Head Tester, and distributed as described in CP-16. The CPE shall forward a copy of the completed Pre-Testing Meeting Agenda for Consultant Materials Testing to the Region Materials Engineer.

Project Staffing Authority

The CPE is in direct charge of the work and is responsible for administration of the project contract as defined in the CDOT Standard Specifications. This includes approving and setting work hours for both project construction and the materials testing.

Project Standards

All sampling, testing, and documentation shall be in accordance with the Colorado Department of Transportation (CDOT) Field Materials Manual, Construction Manual, CDOT M&S Standards and applicable Project and Standard Special Provisions in the construction project contract and the applicable CDOT Standard Specifications for Road and Bridge Construction. The applicable CDOT Field Materials Manual, including Colorado Procedures and Colorado Procedure-Laboratory, shall be the one currently in use when the construction project is advertised. If the required method is not described in the CDOT Field Materials Manual, the required work shall be completed in accordance with the current AASHTO



Standard Specifications for Transportation Materials and Methods of Sampling and Testing (as revised and supplemented) or the ASTM Standards and Tentatives. Proposed work procedures shall be coordinated with the CDOT Construction Manager prior to the start of work.

Field Laboratory

CDOT will provide a field laboratory and the required traffic control for the Project. The CDOT Construction Manager will advise the Materials Specialist on the availability of the field laboratory.

The following equipment and supplies shall be furnished by the Consultant in sufficient quantity to ensure performance of all work required in a timely manner. Such equipment and supplies shall remain the property of the Consultant. All equipment shall have current calibration and be maintained in satisfactory condition.

1. A.C. content gauge and/or extraction equipment and solvents
2. Nuclear Moisture/Density gauge
3. Concrete air meter, slump cone, and other concrete testing equipment
4. Sieves for aggregates and soil gradations
5. Scales
6. Sample containers and small tools
7. Proctor equipment for soil curves and 1 point tests
8. Atterberg equipment
9. Sample drying equipment
10. Miscellaneous equipment for performing the required soils, concrete and asphalt field tests
11. Concrete cylinder molds, which conform to AASHTO requirements, except that PAPER MOLDS SHALL NOT BE USED, AND PLASTIC MOLDS SHALL NOT BE REUSED
12. Cell Phone for each MTT
13. Computer and printer for each test lab (CDOT or Consultant). This equipment needs to have capability to operate all current CDOT project software as defined in the current migration plan. This includes Site Manager.

Personnel staffing level and qualifications of testing personnel and laboratories for the project shall be subject to the approval of the CDOT Construction Manager. The CDOT Construction Manager shall receive and review the testing personnel and consultant laboratory qualifications prior to commencement of testing on the project.

Sampling and testing personnel qualifications shall be in conformance with the requirements of the applicable CP-10. Additionally, each MTT must possess a current and valid driver's license.

The Consultant's work shall be under the direction of, and shall be reviewed, stamped and signed by a Professional Engineer registered in the State of Colorado. Prior to acceptance, the Professional Engineer shall be responsible for sealing each contract's Form 473/474 materials certification. The CPE may request that additional forms be stamped. The Professional Engineer shall be available to review work, resolve problems, and make decisions in a timely manner as requested by the CPE, and must be experienced and competent in road and bridge construction materials testing.

Copies of the MTTs required certifications and a resume, with references, including their materials testing experience shall be provided to the CDOT Construction Manager.



The MTTs shall be thoroughly familiar with CDOT testing procedures, forms and documentation requirements. If oversight is necessary, the Consultant shall provide the supervision and guidance needed for completion of the work. Oversight required by the Consultant will not be paid for by CDOT.

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 Construction Manager. Failure to perform the testing and documentation processes may result in termination of the task order as determined by the CDOT Construction Manager.

Specific Testing Requirements

The Consultant shall sample, test, inspect, and document all materials generated and produced on the project. This includes: materials delivered to the project that are listed in the Summary of Approximate Quantities in accordance with the SCHEDULE (Owner Acceptance) in the Field Materials Manual; materials that may be added to the project through contract modification; and altered material quantities whether increased or decreased. The Materials Specialist, MTTs, and the CPE shall be required to review project quantities on a monthly basis to ensure that sufficient tests have been performed for the material placed to date. The Consultant shall also provide any other services as requested by the CDOT Construction Manager.

Testing of materials that are specifically designated to be pre-inspected or pre-tested by this or any other Department of Transportation shall remain the responsibility of CDOT. The Consultant shall document and transport samples of any and all materials to the CDOT Central Laboratory that are required to be tested by CDOT regardless of pre-inspection or pre-testing responsibilities. The items and test frequencies of Department tested materials shall be in accordance with the column titled “Central Laboratory” in the SCHEDULE.

Documentation

Each of the MTTs shall maintain a daily diary for each day they perform work on the project. They may use CDOT's Form 103, Project Diary, or a form as approved by the CPE. The contents of the diary shall be a brief and accurate statement 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 shall be given to the CAPE - Office within three working days of its date. Test results, sample submittals and inspection documentation transmitted to CDOT's Region or Central Laboratory shall be recorded on appropriate CDOT Forms.

The Materials Specialist and MTTs will be required to review project quantities on a weekly basis to ensure that sufficient tests have been performed for the material placed to date. The Consultant may use CDOT worksheets or worksheets approved by the CPE. CDOT Forms and worksheets are available online at CDOT's website.

The Materials Specialist shall furnish the CAPE - Office with copies of all worksheets on a daily basis. The Materials Specialist shall also keep the CDOT Form 626 up to date at all times and provide copies of this form to the CPE and the Contractor within 12 hours for any material found to be out of compliance with the specifications.

The Materials Specialist shall coordinate the schedule for Independent Assurance Tests for the project in accordance with CDOT Form 379, with the Head Tester, or directly with the Region IAT person.



Submittal of Final Documentation

Final documentation shall be submitted to the CPE within 20 working days after Project Acceptance. A completed CDOT Form 250 shall be submitted to the CPE 10 days after the Materials Specialist has been notified of final quantities. Failure to submit final documentation as required may result in withholding any and all Consultant payments.

2.5. PROJECT COORDINATION

In addition to the stakeholders listed in **Section 1.6.**, the Consultant shall partner and coordinate with the groups below. The CDOT Project Management Team (defined below) shall be included in all coordination.

- Executive Oversight Committee
- CDOT Project Management Team
 - CDOT Project RE – Adam Parks, PE
 - CDOT Regional Environmental Manager – Basil Ryer
 - CDOT Design Manager – Matt Fink, PE
 - CDOT Construction Manager – Jason Lucerna, PE
- CDOT Specialty Groups
 - Region 1 Materials
 - Region 1 Traffic
 - Region 1 Hydrology and Hydraulics
 - Region 1 Survey
 - Region 1 Environmental
 - Region 1 Right-of-Way
 - Region 1 Utilities
 - CDOT Staff Bridge
 - CDOT Staff Geotech
 - CDOT Public Information Office
 - CDOT Operations Center
- Design Consultant and Subconsultants
- CM/GC Contractor and any subcontractors
- ICE
- CDOT Engineering Estimates and Market Analysis (EEMA) Group
- CDOT Maintenance Forces
- Headquarters and Regional Civil Rights Manager
- CTIO



- Bridge & Tunnel Enterprise

2.6. PROJECT CO-LOCATION

Plans to co-locate with the Design Team and CM for the preconstruction phase of this Project and throughout construction will be determined after selection. The location and timeframe for co-location is to be determined but is anticipated to be in the Denver Metro or within the Project vicinity. Co-location is at the discretion of CDOT.

2.7. STAKEHOLDER EFFORTS

The Consultant shall collaborate with CDOT and the Contractor to prepare for distribution of public information and stakeholder outreach.



SECTION 3 – EXISTING FEATURES

3.1. NOTICE TO PROCEED

Note: This Section lists known features in the area. It should not be considered as complete, and should include, as appropriate, information from Section 2 Project Management and Coordination. The Consultant should be alert to the existence of other possible conflicts.

3.2. UTILITIES

Anticipated Utility Coordination/Relocations

| Utility Identification | Facility type | Relocation Required? |
|--|---|----------------------|
| Electric (Xcel Energy) | Xcel Energy has two main feeder lines and numerous smaller distribution lines in the western part of the study area | Yes |
| Telecommunications (CDOT, Zayo) | CDOT and Zayo have buried fiber optic and copper cable lines throughout the study area. | Yes |
| Gas (Xcel Energy) | Low and High Pressure lines are potentially within the project area | Not Anticipated |
| Sanitary Sewers (South Adams County Water & Sanitation District) | Location and potential conflicts to be further investigated | Not Anticipates |
| Water | Location and potential conflicts to be further investigated | TBD |
| Storm Sewer (CDOT) | CDOT has a storm sewer collection system within the corridor | Yes |

3.3. PERMANENT WATER QUALITY CONTROL MEASURES

Location and potential conflicts to be further investigated

3.4. WATER FEATURES



SECTION 4 – GENERAL INFORMATION

4.1. NOTICE TO PROCEED

Work shall not commence until the written Notice-to-Proceed is issued by CDOT. Work may be required, night or day, and/or weekends, and/or holidays, and/or split shifts. CDOT must concur in time lost reports prior to the time lost delays being subtracted from time charges. Subject to CDOT prior approval, the time charged may exclude time lost for:

- Reviews and Approvals
- Response and Direction

4.2. PROJECT COORDINATION

See Section 2 – Project Management and Coordination

4.3. ROUTINE REPORTING AND BILLING

The Consultant shall provide the following on a routine basis:

- Coordination:
 - Coordination of all contract activities by the Consultant's Project Manager
- Periodic Reports and Billings:
 - The periodic reports and billings required by CDOT Procedural Directive 400.2 (Monitoring Consultant Contracts), including monthly drawdown schedules.
 - Consultant Invoicing Guidelines. Please provide the following seven sections and information in each invoice in the following order:
 1. Form 1313
 2. Invoice
 - a) Provide invoice in a similar format to the original PCW
 - Noting each employee, time worked, multiplier, Fee
 - Sum total hours worked and labor, subtotal fixed fees, subtotal sub-consultants, subtotal vendor under prime (sub consultants should note their own vendors on their invoices), provide invoice total, total billed to date and total amount left on TO for Prime, Sub and Vendor for ease of tracking
 - b) Provide columns next to employees ensuring Consultant has reviewed for:
 - Employee on original TO
 - Employee on MPA and date
 - Employee added to TO by letter and date
 - Employee added to MPA Date and documentation
 - c) Provide a header for the invoice noting:
 - SAP OL#, SAP PO#, Invoice Date, Invoice #, Project # and subaccount #, current billing period, TO# and any other pertinent information
 3. Progress Report shall be submitted per the contract documents. The progress report shall also summarize all the work performed by the Prime, Sub Consultants and Vendors. Provide header as noted in 2c. Each item below requires a section in the Progress Report.
 - Report on Progress of each work activity or milestone identified in the contract, to show the amount of work accomplished during the current month and the amount of work accomplished overall.



- A report on the time scheduled for each work activity or milestone identified in the contract to show planned time completion and actual times used to do the work.
- A description of the cause for delays beyond the planned completion of time of work activities or milestones contained in the project.
- A report on the cost incurred to date on each work activity or milestone contained in the contract and a comparison to the cost estimates for such activity or milestone. Monthly billings will include a monthly budget forecast sheet showing invoicing from start estimated through completion tracking the project budget. In other words, verify the burn rate of prime, subs, and vendors to ensure they are on track and on task.
- A description of possible remedies to get activities or milestones that are behind schedule, back on schedule, and to get activities or milestones that are exceeding cost estimates, back within planned costs.
- Documentation of meetings that were held during the subject time period.
- A report on the participation of DBE sub-consultants.
- 4. Letter(s) adding employee(s) to task order with all required information (should have been approved by CDOT PM prior to any work done by employee per HQ Contract/Agreement Unit-see Add Employee Process document)
- 5. Labor backup – timesheets
 - The Prime, Sub-consultants and Vendors shall submit detailed hourly back up of effort noting time/date of activities and number of hours or costs. Lodging backup shall be submitted through ODC backup.
- 6. ODC backup – Only Submit documentation pertaining to the project and the invoice
 - Provide a summary of ODC Cover sheet
 - Purpose of trip, Date of Trip, Who went
 - mileage logs, per diem and/or meals documents (listing of days and rates or receipts for actuals), lodging receipts, receipt or documentation of other ODC items including vendor receipts/invoices.
- 7. Sub-consultant billings and Vendors - should have the same documentation as prime, except Form 1313, which is optional.
- General Reports and Submittals:
 - In general, all reports and submittals must be approved by CDOT prior to their content being utilized in follow-up work effort.

APPENDIX A: DEFINITIONS

Note: For other definitions and terms, refer to Section 101 of the CDOT Standard Specifications for Road and Bridge Construction and the CDOT Design Guide.

CDOT Project Director – The CDOT Project Director is responsible to the Deputy Director of Program Delivery for the quality and successful completion of the I-270 Critical Bridges Project.

CDOT Construction Manager – The CDOT Construction Manager is responsible for the quality and successful completion of the I-270 Critical Bridges Project. The CDOT Construction Manager authorizes interim and final payments and all changes to Contracts for all Consultants and Contractors. The CDOT Construction Manager will also be responsible for all CDOT personnel management on the Project.

Construction Management, Construction Inspection, and Construction Testing (CM, CI, CT) - The activities associated with the roles assigned for the monitoring, testing, documentation and other administrative project-related services under the responsible charge of the Consultant Project Engineer, and at the direction of the CDOT Construction Manager to ensure conformance with the Project Standards.

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

Assistant Construction Manager - The Consultant employee in responsible charge of Consultant services performed as described in this Contract. The Consultant Project Manager administers the Consultant contract and must be licensed in the State of Colorado.

Consultant Project Engineer (CPE) – The Consultant Project Engineer shall be assigned full time on the project site. The Consultant Project Engineer works directly for the CDOT Construction Manager. The duties of the CPE are limited to those duties in the scope of work and as delegated by CDOT Construction Manager. The CPE shall be licensed in the State of Colorado, unless otherwise approved by the CDOT Construction Manager, and is in responsible charge of construction.

Consultant Assistant Project Engineer (CAPE) – The CAPE(s) shall be assigned full time on the project site. The Consultant Assistant Project Engineer works directly for the CPE. The duties of the CAPE are limited to those duties in the scope of work and as delegated by the CDOT Construction Manager. The CAPE shall be licensed in the State of Colorado, unless otherwise approved by the CDOT Construction Manager.

Consultant Inspector - The Consultant's employee(s) who perform(s) inspection services under the responsible charge of the CPE and at the direction of the CDOT Construction Manager.

Consultant Tester - The Consultant's employee(s) who perform(s) materials testing and inspection services under the responsible charge of the CPE and at the direction of the CDOT Construction Manager.

Consultant Schedule Specialist – The Consultant employee in charge of schedule review and documenting review processes for all Contractor submitted schedules per the Standard Specifications. The Consultant Schedule Specialist shall be proficient in Microsoft Project and Primavera software and have experience with CDOT highway construction.

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

Region I.A.T. Staff – Individual assigned by the State to be responsible for administering the Independent Assurance Program and the Independent Assurance Sampling-Testing and Witnessing of Testing Sampling as defined in Appendix D of the Field Materials Manual.

CDOT Region Materials Engineer – The CDOT Region Materials Engineer (RME) assists the CDOT Construction Manager and CPE on this project with materials related issues including earthwork, concrete, asphalt and steel. The RME is in responsible charge of the region laboratory units and is required to review the Form 1324 (Consultant Tester Evaluation).

Head Tester – The CDOT Employee that is assigned to assist the CPE with oversight of project testing and testing and materials documentation.

Work – The engineering and materials testing services that are the subject of this contract.